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► Impact of ILO SCORE Training on management practices, working conditions and business results in Peruvian SMEs



**Impact of ILO SCORE Training on
management practices, working conditions
and business results in Peruvian SMEs**

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First published 2020

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Impact of ILO SCORE Training on management practices, working conditions and business results in Peruvian SMEs

ISBN: 978-9-22-033098-2 (Web PDF)

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► Preface

Small and medium-sized enterprises (SMEs) account for two-thirds of all jobs worldwide and make crucial contributions to income generation. However, in developing and emerging economies, they are generally far less productive than larger firms and provide inferior working conditions. Recent research points to factors within enterprises that contribute to low productivity. These include lower economies of scales, the use of less sophisticated machinery, lower skilled labour and outdated business management practices. Many firms in developing countries, especially SMEs, suffer from poor management.

Researchers have found a strong association between management practices and indicators of firm performance. There is also evidence that modern management practices lead to higher enterprise productivity and ultimately to improved enterprise performance and better working conditions.

Since 2009, the ILO Sustaining Competitive and Responsible Enterprises (SCORE) Programme has worked in over a dozen countries to deliver practical training and in factory consulting to help SMEs improve their productivity and working conditions. Through SCORE Training, the programme introduces best international practices in the manufacturing and services sectors and helps SMEs to participate in global supply chains.

From the very beginning, the SCORE Programme has endeavoured to generate concrete and robust evidence that SCORE Training works. The programme developed a solid theory of change and comprehensive monitoring and evaluation system to track indicators to measure the impact of SCORE Training on firm performance.

In 2016-17, the Programme conducted impact studies in selected samples of enterprises that had participated in SCORE Training in Ghana, Vietnam and India. These studies provided important insights into the impact of SCORE Training on participating SMEs. The next step was to conduct this larger two-year study on over 50 enterprises in Peru.

This current study is a major step forward toward improving our understanding of the impact of SCORE Training on the productivity and working conditions of SMEs. While there are certain limitations that need to be taking into account, this study shows that SCORE Training has a positive impact on the business operations, productivity and working conditions of the participating firms. It also provides important lessons learned, building on the lessons learned of the previous impact studies; these will be instrumental in the design of future programmes to improve productivity and working conditions in SMEs.

This impact study was implemented by members of the SCORE Team, consisting of Stephan Ulrich, Olga Orozco, Efrain Quicaña Navarro, Hernan Zeballos, Vladimir Infante, Nina Paustian, and Norma Potter. Thanks also goes to the SASE consultores research team and the SCORE Trainers who worked with the enterprises over several months. The ILO SCORE Programme is funded by SECO and NORAD and managed by the SME Unit in the ILO's Enterprises department.

Michael Elkin

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► Executive summary

The Sustaining Competitive and Responsible Enterprises (SCORE)¹ Programme was launched by the International Labour Organization (ILO) in July 2009. It is a global programme that aims to improve working conditions and productivity in small and medium-sized enterprises (SMEs). The Programme operates in 11 countries.² The main intervention is the implementation of SCORE Training which combines practical classroom training with in-factory consulting. The training focuses on developing cooperative relations at the workplace and consists of five modules: (1) workplace cooperation, (2) quality management, (3) clean production, (4) human resource management, and (5) occupational safety and health.

Over two years (2017-2019), the Programme conducted an extensive evaluation in Peru with the objective of providing direct evidence on whether SMEs that took SCORE Training experienced improvements in their management practices, as well as evidence that these improvements translate into higher manufacturing performance, improved firm level productivity and improved working conditions. The instruments used in the evaluation included a company profile sheet, a questionnaire on management practices, an enterprise self-assessment survey, a worker satisfaction survey and case studies. The instruments were applied at the baseline (2017), the midterm (2018) and the endline (2019). In total, 52 SMEs from different regions were included in the evaluation. Small enterprises and medium-sized enterprises contributed US\$500 and \$1,000 to the training cost per module respectively.

Management practices have improved in all 52 enterprises and across all modules and categories measured. The average global score, assigned by the evaluator based on interviews with managers and workers and direct observation, increased from 2.04 ("fair") to 3.06 ("good") between the baseline and the endline. For approximately half of the enterprises the score increased by more than one point. For most management practices the improvement has been statistically significant.

Enterprises that show greater improvements in their management practices associated with SCORE Module 1 also show greater improvements in practices linked to other modules. Enterprises stated that the most valuable aspect of Module 1 is that it generates more open communication between workers and top management, creating greater mutual respect, trust, and awareness of workers of the importance of doing their job well.

Over 80 per cent of enterprises believe that in the past two years there have been positive effects on working conditions (reduction in the number of accidents and worker absenteeism), on costs (decrease in production defects, waste of raw materials and costs per unit produced) and on productivity, sales, earnings and customer satisfaction. Most enterprises consider SCORE Training to have influenced these results.

Among enterprises that provided comparative data, accidents at work have dropped on average by 42 per cent, absenteeism by 34 per cent and labour turnover by 12 per cent. Indicators related to production have improved as well, for example endline production defects have dropped on average by 22 per cent, and raw material waste by 33 per cent. The cost per unit produced has mostly remained the same. A distinction can however be made between enterprises with labour-intensive and/or domestic input-intensive cost structures, which have reduced their costs slightly, and those with cost structures that are highly dependent on revalued imported or domestic inputs or raw materials, which have maintained or increased their unit costs due to the increase in the price of these inputs or raw materials.

Installed capacity usage increased on average from 63 to 72 per cent; annual sales from 7.05 million to 8.85 million Nuevos Soles (S/.), the number of workers from 33.7 to 42.5, and the monthly payroll cost from S/. 56,069 to S/. 71,000. In contrast, the annual sales/number of workers ratio has remained

1 For more information please visit: <https://www.ilo.org/empent/Projects/score/lang--en/index.htm>.

2 Bolivia, China, Colombia, Ethiopia, Ghana, India, Indonesia, Myanmar, Peru, Tunisia and Vietnam.

unchanged. The general absence of productivity indicators - less than 20 per cent of enterprises use productivity indicators - is a significant shortcoming.

In terms of gender equality, the average percentage of female workers in enterprises increased from 32 to 35 per cent. In addition, 18 enterprises stated that they have adopted policies and/or initiatives to promote gender equality in the enterprise.

The average overall score for worker satisfaction increased by 4 per cent from 3.64 to 3.79 (remaining between “good” and “very good”). A potential explanation for the relatively small improvement could be that due to turnover, workers filling the baseline and endline survey were not always the same.

According to the workers surveyed, the main favourable changes in their enterprises over the past two years have been increased tidiness and cleanliness, as well as better communication, most of which are linked to practices that have a relatively low implementation cost. Workers believe there has been less progress on practices linked to staff motivation and salaries, as well as infrastructure of the workspace, such as washrooms, dining and changing rooms, all of which have a higher monetary cost.

The results of the evaluation show that there are many positive changes associated with participating in SCORE Training. While the limitations of the methodology used for the study did not allow for causal links to be established, the close observations from the evaluator, perception-based surveys from workers and managers, firm-level data and anecdotal evidence from the case studies suggest that SCORE Training contributed to the improvement in management practices, manufacturing performance, productivity and working conditions.

► Abbreviations

BPA	<u>Bisphenol A</u>
CITE	<u>Centre for Productive Innovation and Technology Transfer</u>
EIP	<u>Enterprise Improvement Projects</u>
EIT	<u>Enterprise Improvement Team</u>
HACCP	<u>Hazard analysis and critical control points</u>
ILO	<u>International Labour Organization</u>
INDECI	<u>Instituto Nacional de Defensa Civil</u>
IPERC	<u>Identificación de Peligros, Evaluación de Riesgos y Medidas de Control</u>
ISO	<u>International Organization for Standardization</u>
MTPE	<u>Ministerio de Trabajo y Promoción del Empleo</u>
OHSAS	<u>Occupational Health and Safety Assessment Series</u>
OSH	<u>Occupational Safety and Health</u>
PPE	<u>Personal Protection Equipment</u>
PRODUCE	<u>Ministerio de la Producción del Perú</u>
SCORE	<u>Sustaining Competitive and Responsible Enterprises</u>
SIPPO	<u>Swiss Import Promotion Programme</u>
SMEs	<u>Small and Medium Enterprises</u>
SUNAFIL	<u>Superintendencia Nacional de Fiscalización Laboral</u>
ToC	<u>Theory of Change</u>



► Introduction

From the very beginning, the SCORE Programme has endeavoured to generate concrete and robust evidence that SCORE Training works. To support this goal, we assessed SCORE Training's impact in Peru for 52 enterprises who implemented nearly 500 improvement projects over two years (2017-2019).

This report details the assessment methodology, results, and lessons learned. Each chapter focuses on specific components of the assessment to allow readers to find relevant information efficiently.

Chapter 1 introduces the SCORE Programme and outlines the study objectives, method, constraints, and evaluative instruments. Chapter 2 describes the 52 enterprises and details their degree of participation in SCORE Training. Chapter 3 evaluates the direct effects that SCORE Training had on enterprise management practices like communication and worker training. Chapter 4 describes the benefits identified by owners and workers, such as improvements in gender equality and worker satisfaction. Chapter 5 reviews the study findings and highlights lessons learned for consideration in future projects. Finally, the Annexes include copies of the evaluative instruments, a summary of the participating enterprises and other reference material including an example case study.

This study is a major step forward toward improving our understanding of the impact of SCORE Training on the productivity and working conditions of SMEs. We encourage you to review its contents and connect with the SCORE Programme team if you are interested in learning more about SCORE Training.



► 1. Background, Objective and Methodology

1.1 Focus on SMEs

There is well-established evidence on the role of SMEs as a fundamental driver of job creation and inclusive economic growth (Ayyagari et al. 2007). Prosperous SMEs have a significant positive impact on innovation, productivity growth and competitiveness of economies and contribute to improved wage and income levels (OECD 2019).

However, SMEs often display lower levels of productivity (Marchese et al. 2019) and increasing global competition puts more pressure on SMEs.

One of the possible reasons for low productivity are weak managerial skills. There are large differences in the management practices used by firms within and across countries (Bloom and Van Reenen 2007).

Research on management practice measures from nearly 6,000 firms in 16 countries finds a strong association between management practices and indicators of firm performance (Bloom and Van Reenen 2010). According to some estimates, differences in management can account for 30 per cent of cross-country productivity differences (Bloom et al. 2014). Further, Bloom et al. (2019) find that management practices are very predictive of firm survival rates and Bruhn et al. (2018) find that a lack of managerial skills constitutes an important constraint to firm growth and the ability to withstand economic shocks.

While larger firms have better access to resources to improve their managerial skills, SMEs, especially those with no interaction with multinational firms, display low quality management practices (Bloom et al. 2019). However, as shown by Bloom et al. (2013 & 2018), targeted interventions can lead to improved practices, that can persist over time. Iacovone et al. (2018) compare different approaches to improve management practices in developing countries - intensive one-on-one consulting and consulting to small groups of firms - finding that while both lead to similar improvement in management practices, small group consulting dominates regarding the cost-benefit ratio and a positive effect on firm size and employment. These findings highlight the potential of scaling up trainings on management practices.

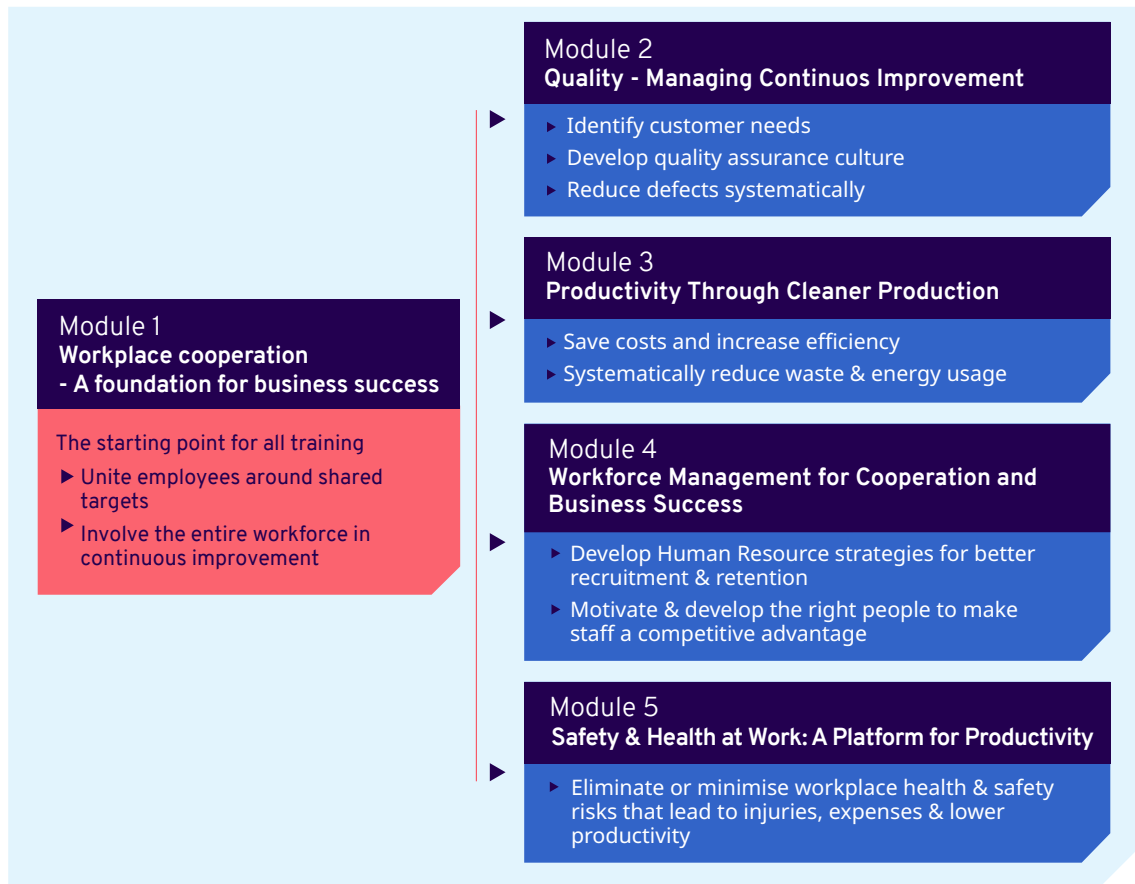
1.2 The SCORE Programme

The SCORE Programme is an ILO global programme aimed at increasing the productivity and working conditions in SMEs. The primary goal of the Programme is the effective implementation of SCORE Training which combines practical training with in-factory consulting.

SCORE Training is comprised of five modules which focus on good international practice in the manufacturing and service sectors on topics including lean manufacturing, quality management, clean production, human resources, and occupational health and safety (see **Figure 1**). SCORE Training targets SMEs with between 50 and 250 employees.

Each module includes a two-day classroom training for enterprise managers and workers. The training is facilitated by a trainer to introduce participants to the basic concepts of the topic and to provide them with an opportunity to learn about the various tools that can help them make improvements. The training is followed by the establishment of an Enterprise Improvement Team (EIT) consisting of managers and workers. During regular meetings, they discuss and monitor the implementation of Enterprise Improvement Plans (EIP) that lead to tangible improvements at the factory level. Classroom training is followed by on-site consultations during which the trainers support the enterprises to implement key productivity and working condition improvements included in the EIP. The combination of theoretical classroom learning and practical in-factory application ensures that learning can translate into action and continuous improvement.

► Figure 1: The SCORE Training modules

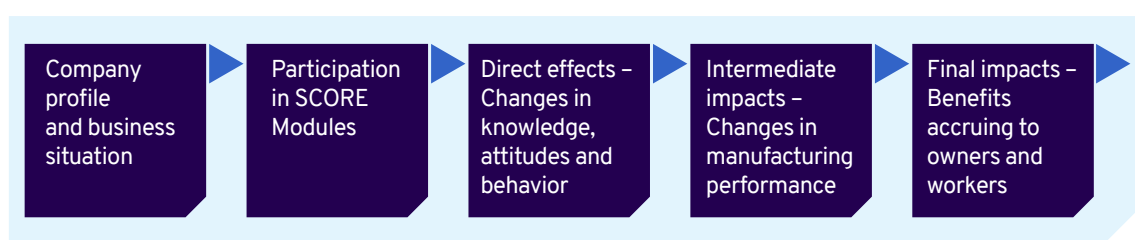


The implementation of the SCORE Programme started in 2009 in China and Indonesia, with new countries added gradually until 2013 (see **Figure 3**, page 4). Peru joined the Programme in 2014. Within Peru, the Programme's geographical coverage includes the following provinces: Lima, Arequipa, Ayacucho, Ica, Junín, La Libertad, Lambayeque, Moquegua, Piura, Puno, Ucayali and San Martín.

1.3 Evaluation Objective

SCORE Training is based on a theory of change (ToC) that connects learning outcomes to final impacts on SME productivity (see **Figure 2**). Managers and workers who participate in SCORE Training gain new knowledge, attitudes, and behaviours. This knowledge is retained and put into practice in the workplace by adopting or improving management practices. Changes in management practices translate into enterprise-level productivity improvements, which can lead to higher profits, wages and better working conditions.

► Figure 2. SCORE Logic Model



This evaluation investigates whether SMEs that participated in SCORE Training improved their management practices and whether these improvements translated into enhanced manufacturing performance, productivity and working conditions.

1.4 Evaluation methodology and constraints

In an ideal impact evaluation, we would have conducted a randomized controlled trial (RCT) by randomly selecting one group of SMEs who receive SCORE Training and another group who does not. A comparison of firm-level outcomes across these two groups would show the causal impact of SCORE Training. However, feasibility studies to conduct an RCT or a quasi-experiment found that these approaches would be inappropriate for the following reasons:

- a. *Unrealistic sample size requirements:* An RCT requires at least 224 enterprises to achieve statistically valid results.³ The entire greater Lima region has about 1,200 enterprises between 21 and 200 employees in the targeted sectors. It is unlikely that 224 enterprises could be convinced to participate in the programme within the implementation period. In addition, half of the enterprises would be assigned to a control group and receive data collection visits but no training support, further reducing the likelihood that they would agree to participate. For this study, 63 enterprises signed up to participate in the training and 11 dropped out by 2019.
- b. *Impractical adjustments to the SCORE Training approach:* A key feature of SCORE Training is that it is demand-driven – enterprises take various combinations of modules according to their needs. Under an RCT, enterprise treatment must be standardized to meet the requirements of an experiment. For example, each enterprise must follow a pre-determined module set (same number, same topics) regardless of their needs. This approach would require a version of SCORE Training that does not exist. As a result, the usefulness of the findings would be limited.
- c. *Alternative approaches not feasible:* The team also reviewed quasi-experimental evaluation techniques like Difference in Differences (DID), Propensity Score Matching and Instrumental Variable Design. It is unlikely that these techniques would have been sufficient to address the shortcomings and lead to robust enough findings.⁴
- d. *Prohibitive costs for experimental or quasi-experimental evaluation designs:* The estimated costs of an RCT were US\$ 560,000 for the evaluation and US\$ 960,000 for the treatment. The estimated quasi-experiment costs were USD\$ 720,000. Unfortunately, the SCORE Programme did not have sufficient resources to contemplate these options. Given the uncertainty of whether these designs would have led to robust results, the risks and opportunity costs were considered too high. The actual costs for this study were US\$ 260,000 for evaluation and treatment combined.

Due to the constraints described above, the team opted for a theory-based evaluation approach, which sets out a theory of change explaining what changes the intervention expects to produce. Indicators measure whether changes are happening in alignment with the predicted theory of change. If the theory of change is evidence-based, and monitoring shows that changes are happening as expected, then the theory of change is validated. The better the theory of change and the indicators, the higher the certainty that observed changes are attributable to the intervention (the Donor Committee for Enterprise Development (DCED) calls this “plausible attribution”).⁵ While experimental approaches can better quantify and attribute results, theory-based methods can better explain why (or why not) specific results occur.

3 Innovations for Poverty Action (2015): Propuesta de Evaluación de Impacto del Programa SCORE

4 CISEPA (2016): Propuesta de Evaluación SCORE Peru; and peer reviews by ILO Economists Veronica Escudero, Jonas Bausch and ILO Impact Evaluation Support Facility.

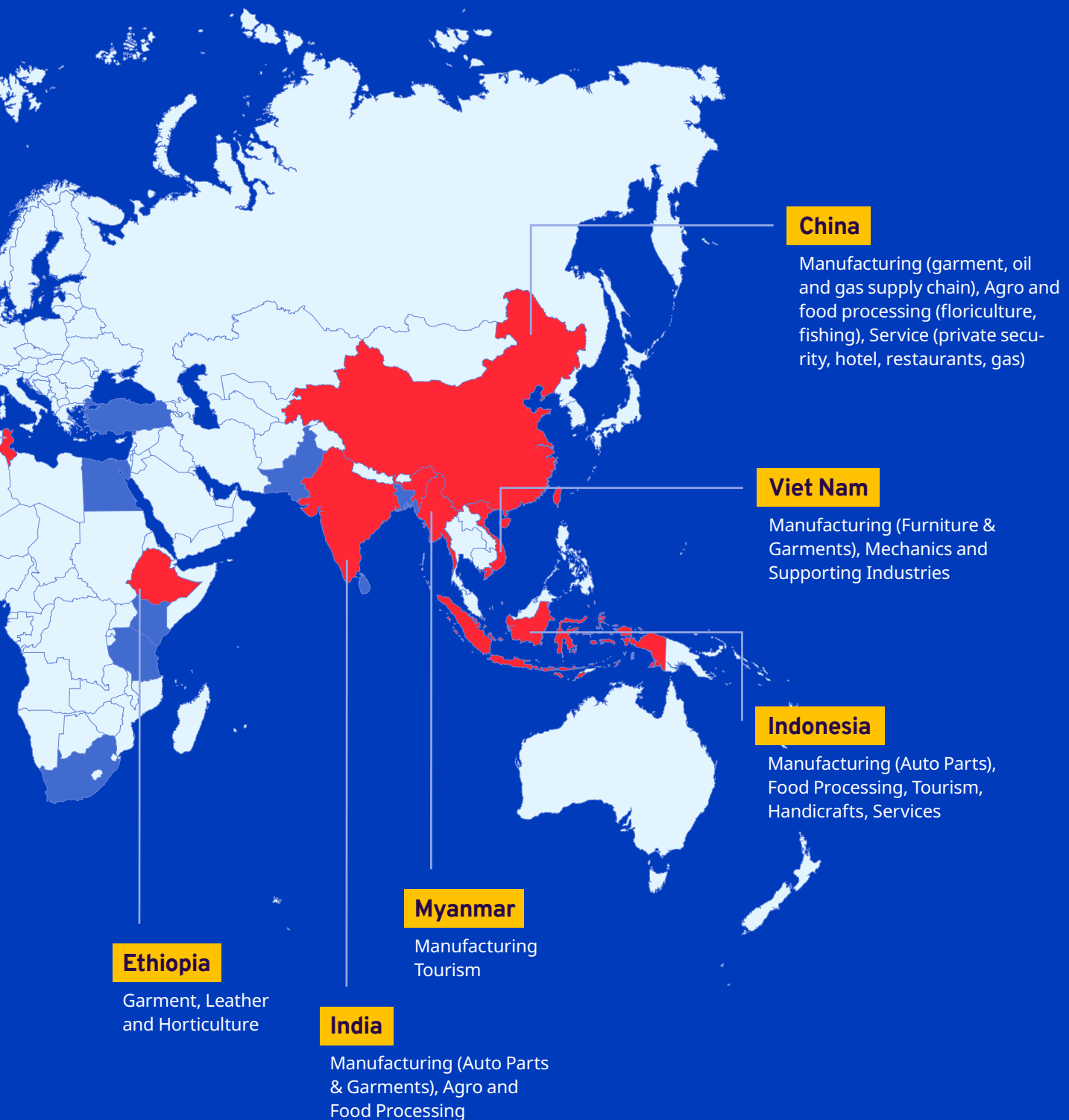
5 DCED (2018): Guideline to the DCED Standard for Results Measurement: Estimating Attributable Changes

► Figure 3: SCORE Training countries



 Programme Countries **Other Countries**

Algeria, Bangladesh, Brazil, Dominican Republic, Egypt, Kenya, Mauritius, Pakistan, Paraguay, South Africa, Sri Lanka, Suriname, Tanzania, Turkey, Zimbabwe



There are downsides to theory-based evaluation approaches. First, it is not possible to assess the net impact of an intervention. A theory of change tends to get weaker further along the theory as more and more external factors dilute attribution of changes to the intervention. Higher-level enterprise improvements cannot be attributed to SCORE Training in the way they could be through an RCT. Second, other changes may occur during the same period (for example changes in regulatory frameworks, different training, economic factors) which affect managerial practices and outcomes, such as productivity and working conditions. As a result, changes may be equally observable in enterprises that did not participate in SCORE Training.

The following additional constraints apply regardless of the evaluation approach used:

- a. *Attrition*: 11 enterprises from the baseline sample did not participate in the final data collection.⁶ Attrition attributed to SCORE Training cannot be ruled out (feasibility studies for the RCT expected attrition rates of up to 50% for the control group).
- b. *Evaluator bias*: External observers and data collectors might show bias in judging managerial practices, especially in the absence of a control group where this bias could cancel out.
- c. *Self-assessment bias*: Self-assessment of managers and workers can potentially bias the results for different reasons. Depending on whether they liked SCORE Training or not, respondents could exaggerate or diminish the changes experienced. Social experiment literature reveals psychological biases that unconsciously influence the type of response given by respondents, highlighting the *Hawthorne effect* and the *social desirability bias*.⁷
- d. *Worker turnover*: The number of workers surveyed was lower at endline (on average, seven per enterprise) than at baseline (on average, ten per enterprise), mainly due to worker turnover.

Missing data: The company profile sheet collects objective data about the same variables asked in the self-assessment survey. While the great majority of enterprises provided comparative data for installed capacity usage, annual sales, number of workers, and monthly payroll costs, they often did not provide information related to costs or working conditions.

1.5 Evaluation instruments

The evaluation uses several instruments to measure and assess changes (Table 1). Baseline data was collected in 2017 and endline data was collected between June and October 2019. Qualitative case studies complemented the quantitative data collected in the sheets, questionnaires, and surveys.

⁶ Mainly because they failed to implement SCORE Training, did not agree to the visit, or significantly reduced their operations and/or closed down.

⁷ The *Hawthorne effect* refers to the tendency of some people to work harder and perform better when they are participating in an experiment as they may change their behavior due to the attention they receive from researchers rather than because of a manipulation of independent variables. *Social desirability bias* is a type of response bias in which people tend to answer questions according to how their answers will be viewed by others instead of answering truthfully. In order to reduce these biases, adjustments were made to the instruments: (1) the enterprise self-assessment survey begins with questions that measure the perception of the changes that have taken place (working conditions, costs, productivity, sales and profits, gender), and it is only on completion of these questions that the perception of the influence of SCORE on these changes is investigated. At the end of the survey, the completed SCORE modules are recorded, along with the EIPs implemented; (2) the baseline and endline values for cost, work environment and customer satisfaction indicators, as well as the baseline and endline values for number of workers, payroll costs, installed capacity, production volume and sales turnover are collected starting from the enterprise's profile sheet.

► **Table 1. Instruments for collecting information used in the final evaluation**

Instrument	Main focus	Who does it apply to?	Who filled out the profile sheet or responded to the survey?	Baseline	Midterm	Endline
Company profile sheet	Quantitative	52 enterprises	Enterprise (objective data)	✓	✓	✓
Questionnaire on enterprise management practices	Quantitative	52 enterprises	Evaluator (perception)	✓	✓	✓
Enterprise self-assessment survey	Quantitative	52 enterprises	Enterprise (perception)		✓	✓
Worker satisfaction Survey	Quantitative	52 enterprises	Worker (perception)	✓	✓	✓
Case study	Qualitative	10 enterprises	Evaluator			✓

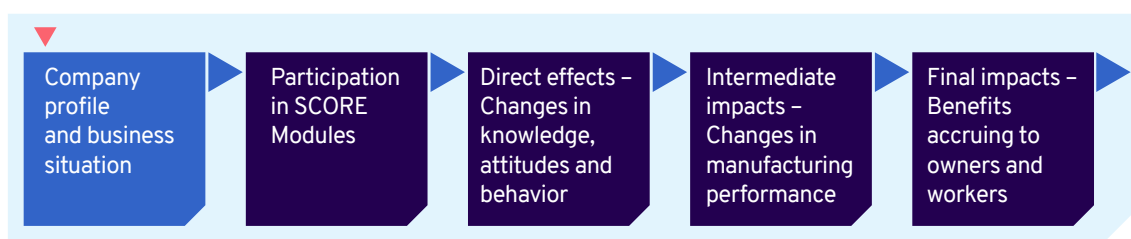
Explanation of instruments:

1. *Company profile sheet* (Annex 1). This instrument captures general data on the enterprise and its activities. Data collected include main products, years in operation, type of ownership, primary clients, exports, certifications, affiliations and unionisation, worker numbers and demographics, production capacity, annual sales, cost, working conditions, client satisfaction and exposure to other technical assistance programs. An enterprise representative completed this sheet at the baseline, midterm and endline.
2. *Enterprise management practices questionnaire* (Annex 2). This questionnaire scores 35 enterprise practices across ten categories, grouped according to each SCORE module. Each practice is graded on a 5-point scale: 1 (poor), 2 (fair), 3 (good), 4 (very good) and 5 (excellent). The score is assigned by the evaluator based on interviews with managers and workers, direct observation, and the criteria and parameters set out in the questionnaire. Enterprises completed this questionnaire at the baseline, midterm and endline.
3. *Enterprise self-assessment survey* (Annex 3). This survey reflects the enterprises' assessment of their achievements and the extent to which they believe these achievements are attributable to their participation in SCORE Training. Enterprise owners or general managers typically complete this survey, although other managers also participate. Owners and managers completed this survey at the midterm and endline.
4. *Worker satisfaction survey* (Annex 4). This survey monitors changes in employee perception based on 29 questions related to (a) changes in employee attitudes or behaviour; (b) changes in administration or leadership attitudes or behaviour; (c) changes in working conditions; (d) improvements in worker satisfaction; and (e) improvements in worker productivity. Workers completed this survey at the baseline, midterm and endline.
5. *Case studies*. Eight case studies were completed and two existing case studies were updated at the endline assessment to inform the qualitative evaluation.⁸ Case study enterprises were selected based on the following characteristics: (a) they were exceptionally high or low-performing in terms of productivity, efficiency, costs, human resources and gender equality, (b) they either had productivity indicators in place and or had zero productivity indicators, (c) they were located both in and outside Lima, and (d) they work in different sectors. The case studies collected information through interviews to contrast with observed behaviour in enterprise visits.

⁸ See list of case study enterprises in Annex 7.



► 2. Characteristics of the enterprises included in the evaluation

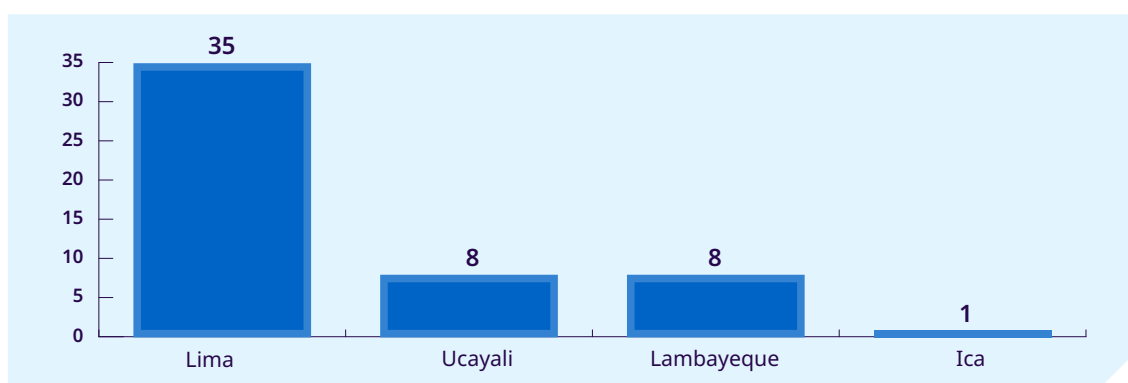


2.1 Geographic location, years of operation and sector of activity

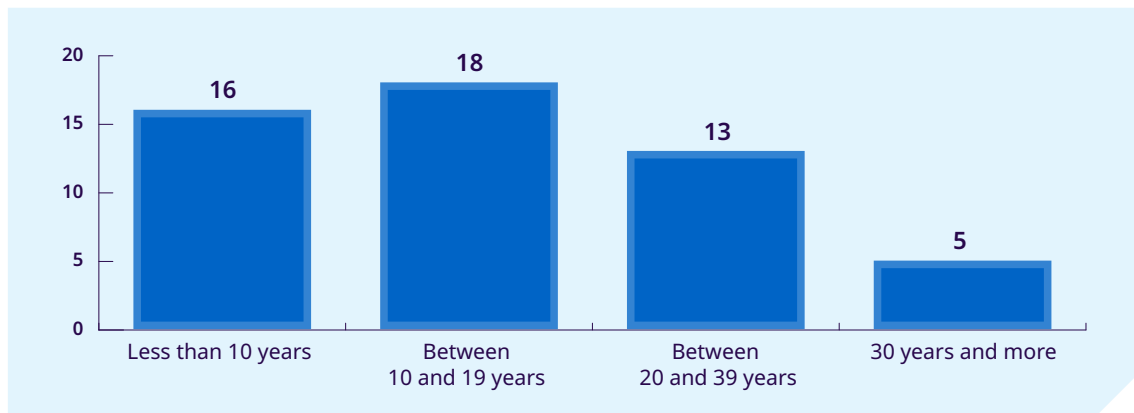
According to the company profile sheets, of the 52 enterprises:

- two out of three (67 per cent) are in Lima (see **Figure 4**);
- approximately 30 per cent have been in operation for less than ten years, 35 per cent between 10 and 19 years, 25 per cent between 20 and 29 years, and the remaining 10 per cent for at least 30 years (see **Figure 5**); and
- all enterprises belong to the textiles and clothing, agribusiness/food, timber, metalworking, manufacturing and commerce/services sectors. In each of these sectors, there are between 5 and 14 enterprises (see **Figure 6**).

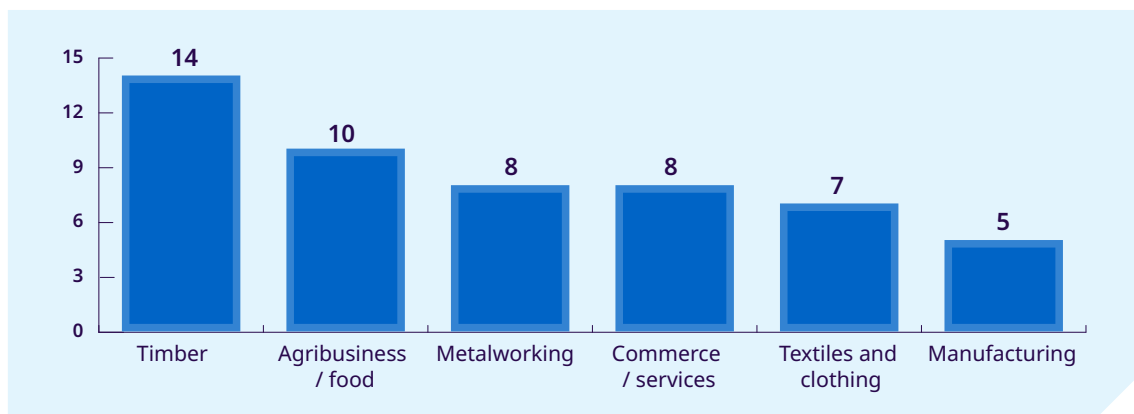
► **Figure 4. Geographic location of enterprises evaluated**



► Figure 5. Enterprises' years in operation



► Figure 6. Enterprises' sector of activity



2.2 Other enterprise characteristics

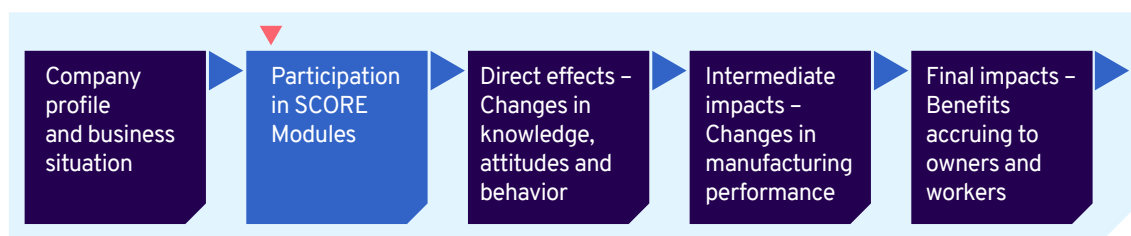
Other notable enterprise characteristics:

- 42 enterprises (81 per cent) engaged in manufacturing; the remaining enterprises engaged in trading and retailing;
- all 52 enterprises reported that their investment sources were primarily domestic;
- 40 enterprises (77 per cent) were members of a professional association;
- just one enterprise had a workers' union,⁹ and none had a collective bargaining agreement; and
- 19 enterprises (37 per cent) reported female managers.

⁹ La Universidad Católica Santo Toribio de Mogrovejo de Lambayeque.

2.3 Enterprise participation in SCORE Training

As mentioned above, SCORE Training delivers classroom training and practical in-factory consultation to SMEs in five modules (workplace cooperation, quality management, productivity through cleaner production, human resource management and occupational safety and health).

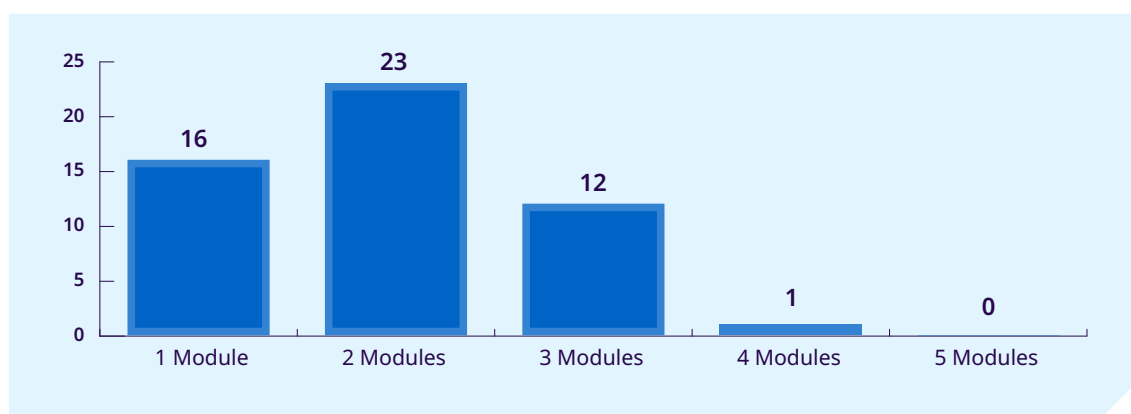


Number of SCORE modules completed by enterprises

Of the five training modules, Module 1 is mandatory for all enterprises. Enterprises select other modules according to their priorities and demands. At the heart of SCORE Training is the development of cooperative workplace relationships between management and workers, helping enterprises focus on the constructive engagement of managers and workers in production planning, quality assurance and implementation of improvement projects.

None of the 52 enterprises completed all five modules, and just one enterprise completed four. Thirty-five enterprises completed two or three modules (67 per cent) and 16 (31 per cent) completed one module (Figure 7).

► Figure 7. Number of modules completed by enterprises



Types of SCORE modules completed by enterprises

All 52 enterprises completed Module 1 because it is mandatory. Less than half (22) completed Module 2, which is about the same as the number of enterprises that initially expressed their intention to complete Module 2. Less than a quarter of enterprises (12) completed Module 4, which is less than the number that were initially interested. Fourteen enterprises completed Module 5 and just two enterprises completed Module 3, even though many enterprises initially expressed interest in taking Module 3. One factor that

likely contributed to this is the supply of SCORE trainers specialized in each module.¹⁰ More trainers specialize in Module 2, and much fewer trainers specialize in Module 3. Another reason for a lower number of modules taken, according to owner/manager interviews, could be that some enterprises preferred to apply for other programmes like INNOVATE PERU, which finances 70-80 per cent of HACCP, ISO, and OHSAS certifications.

The 52 enterprises implemented 491 enterprise improvement projects. On average, the number of projects implemented per enterprise varies between four and five depending on the module¹¹, except for Module 3, where the average number of projects implemented is two to three (**Table 2**).

► **Table 2. Enterprise improvement projects by completed SCORE Training modules**

Modules	No. of enterprises that completed the module	No. of improvement projects implemented	Average no. of projects implemented per enterprise
Module 1 – Workplace Cooperation	52	255	4.9
Module 2 – Quality Management	22	104	4.7
Module 3 – Productivity through Cleaner Production	2	5	2.5
Module 4 – Human Resource Management	12	55	4.6
Module 5 – Safety and Health at Work	14	72	5.1
Total	52	491	4.36

Costs and willingness to pay for SCORE Training

Small enterprises and medium-sized enterprises contributed \$500 and \$1,000 per module, respectively. The full cost for each module is \$2,000, and the SCORE Programme covers the difference for all SMEs. Managers of all ten case study enterprises stated that the amount they paid was a good investment, noting that increases in profits were higher than what they paid for SCORE Training.¹²

¹⁰ According to the ILO-Geneva 16th bi-annual Technical Cooperation Progress Report on Sustaining Competitive and Responsible Enterprises (SCORE) of March 2019, by December 2018, SCORE Peru had 18 active certified trainers, of which 33% were women.

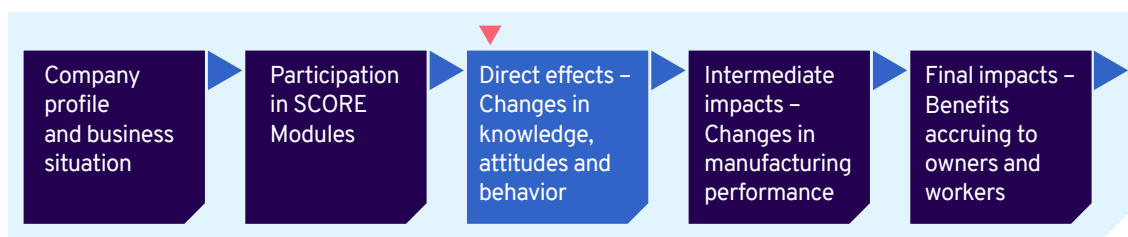
¹¹ In Module 1 the most frequent projects were the implementation of suggestion boxes, warehouse orderliness and cleanliness, signage and labels for products, implementation of the business improvement team with regular team meetings; and the implementation of bulletin and notice boards in all areas of the enterprise.

¹² Some pointed out that they would not have been able to pay more than this amount since they have allocated significant financial resources to invest in machinery; others mentioned that the investment they made in the SCORE Training is slightly higher than that required for example by the Centre for Productive Innovation and Technology Transfer (CITE) for a market study course; and a few argued that as a small enterprise they cannot pay for all SCORE modules, so they decided to apply to PROCOMPITE (Government fund to co-finance business plans with the aim to improve competitiveness of production chains through the development, adaptation, improvement or transfer of technology) to improve their equipment and train staff in the improvement of production processes.



► 3. Improvements in management practices

3.1 Direct effects of SCORE Training on enterprise management practices



The Enterprise Management Practices Questionnaire measures changes in 35 enterprise management practices across ten categories grouped according to the five SCORE Modules (**Table 3**). Each practice is graded on a 5-point scale: 1 (poor), 2 (fair), 3 (good), 4 (very good) and 5 (excellent). The evaluator assigns a score based on workplace interviews, direct observation, and the criteria and parameters set out in the questionnaire.¹³

► **Table 3. Management practices evaluated**

Module 1 – Workplace Cooperation
1. Communication
1.1. Direct communication between owner/manager and employees
1.2. Employee participation in workplace committees
1.3. Meetings of supervisors and workers
1.4. Use of information boards and/or other means for sharing information with workers
1.5. Gender and diversity policy
2. Workplace maintenance/organization (the 5s)
2.1. Keeping the enterprise clean, tidy and well organised
3. Continuous improvement (kaizen)
3.1. Process for inviting workers to submit suggestions for improvement
3.2. Rapid improvement events (<i>kaizen blitz</i>)
4. Measuring progress
4.1. Measurement by indicators

¹³ Scores are calculated as follows: (a) to obtain the score of a given category, a simple average of the score for each of the practices included in the category is computed; (b) to obtain the score of a given module, a simple average of the score for each of the practices included in the module is computed; and (c) to obtain the overall score, a simple average of the score for each of the five modules is computed.

Module 2 – Quality Management

5. Productive process

5.1. Process organization and planning

5.2 Preventive maintenance of machinery, equipment and processes following technical standards

6. Quality assurance

6.1 Specification of quality standards and process standardization

6.2 The role of workers and others in quality assurance

6.3 Quality control procedures

6.4 Process for identifying root causes and determining corrective actions

Module 3 – Productivity through Cleaner Production

7. Cleaner production

7.1 Waste reduction, waste recovery/reuse and recycling

7.2 Replacement of hazardous materials with safer and healthier alternatives

7.3 Water conservation

7.4 Power conservation

Module 4 – Human resource management

8. Worker training

8.1 Worker training

9. Worker remuneration

9.1 Remuneration policy

9.2 Employee incentive scheme

9.3 Payroll

Module 5 - Safety and Health at Work

10. Safety and health at work

10.1 Health and safety at work policy

10.2 Joint Occupational Safety and Health Committee (OSH)

10.3 Hazard identification, risk assessment and determination of IPERC control measures

10.4 Storage and labelling of hazardous materials

10.5 Washing facilities and drinking water

10.6 Heating and cooling systems

10.7 Ventilation systems

10.8 Emergency and fire safety response procedures

10.9 Use of guards or security devices on machinery and equipment

10.10 Using appropriate personal protective equipment

10.11 Provision of first aid for injured workers

10.12 Reporting and investigation of workplace incidents and accidents

The average overall score of the 52 enterprises increased by 50 per cent, from 2.04 (“fair”) at the baseline to 3.06 (“good”) at the endline (**Figure 8**).

Enterprise Improvement Projects for Module 1 touch on all areas of the enterprise. As a result, Module 1 impacts approximately 20 of the 35 assessed management practices, unlike other modules whose projects affect between four and eight practices. According to most enterprise managers, this may be why Module 1 generates greater worker engagement and satisfaction with the SCORE Training than other modules.

RASIL SRL is a Peruvian family enterprise founded in 2000 by Mr. Raul Medina and his daughter Silvia Medina Mendivil. The company has 31 full-time employees. The product lines it manufactures and sells include extruded and expanded cereals and snacks; quinoa, amaranth and mixed energy bars; and dehydrated fruit snacks.



Following SCORE Training the warehouse is very well organized, with separate areas for each product and allergen.

Variation in scores by module and practice categories

The overall score from baseline to endline increased across all five modules and all ten practice categories, most notably in Module 1 (mainly in “continuous improvement”) and in Module 4 (mostly in “worker training”) (see Figures 8 and 9 and Table 4 below).

The significant increase in Module 1 scores likely relates to the module’s relatively simple production line process improvements (notice boards, suggestion mailboxes, warehouse tidiness and cleanliness, signage and labels for each product, creation of improvement teams). These actions present minimal costs to firms; unlike, for example, Module 3 practices regarding the reuse of waste, water, energy-efficient production, and hazardous materials management. Enterprises tended to give less priority to more costly practices that do not improve the main production line.¹⁴

¹⁴ For example, setting up bulletin boards and suggestion boxes and holding regular meetings with managers and employees are all practices linked to Module 1, costing no more than S/. 50 or S/. 70 to implement. In contrast, implementing practices linked to Module 3 is much more costly. For example, making changes in the energy matrix can cost S/. 20,000 if lighting is changed to LED; S/. 70,000 per capacitor bank; water treatment plants can cost S/. 200,000, and water saving systems in sinks and toilets approximately S/. 5,000.

► **Impact of ILO SCORE Training on management practices, working conditions and business results in Peruvian SMEs**

TECNIASES S.A.C. provides infrastructure solutions for the electrical, mining and telecommunications industries. Based in Lima, Peru, they employ 18 full-time people.



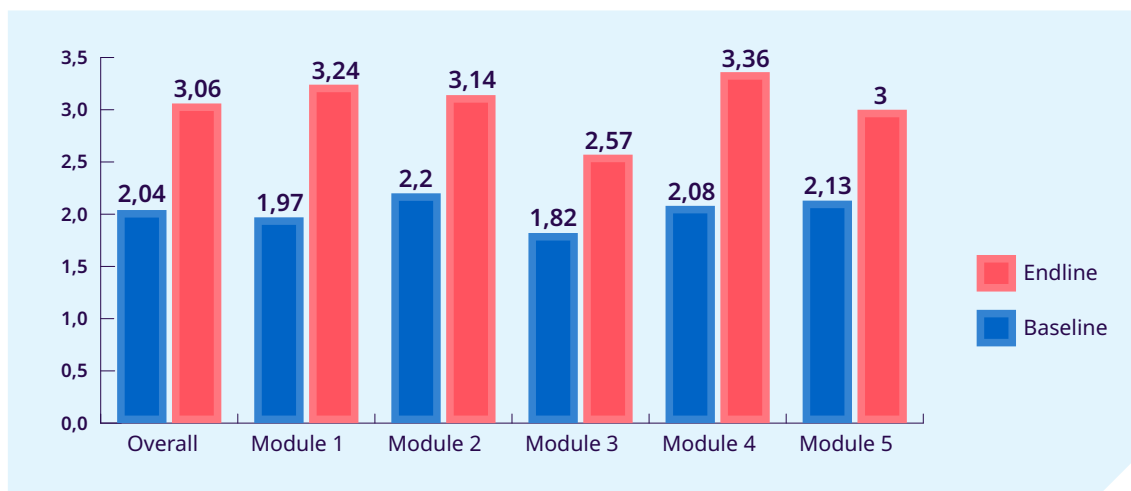
▼
5S implementation was a major milestone for the company, both in terms of housekeeping and cleanliness; pictured here is the main tool cabinet in the assembly area.



▼
As part of 5S implementation, a series of clearly marked areas were established to store implements and tools. Other key measures included posting informative signs and company values on stairs and walls throughout the factory.

Module 4 highlights good labour practices and formalization strategies.¹⁵ The Ministry of Labour and Employment Promotion (Ministerio de Trabajo y Promoción del Empleo (MTPE)) and the National Superintendent of Labour Inspection (Superintendencia Nacional de Fiscalización Laboral (SUNAFIL)) also advocate for the formalization of labour practices in the assessed enterprises (contracts, job descriptions, remuneration policy, training).¹⁶ Certification programs such as HACCP, ISO, and OHSAS emphasize the importance of training programs and organizational records and may have also contributed to improvements related to Module 4.

► **Figure 8. Overall and disaggregated scores by module linked to enterprise management practices**



Note: All enterprises are evaluated on each of the modules, regardless of whether they completed the module or not.

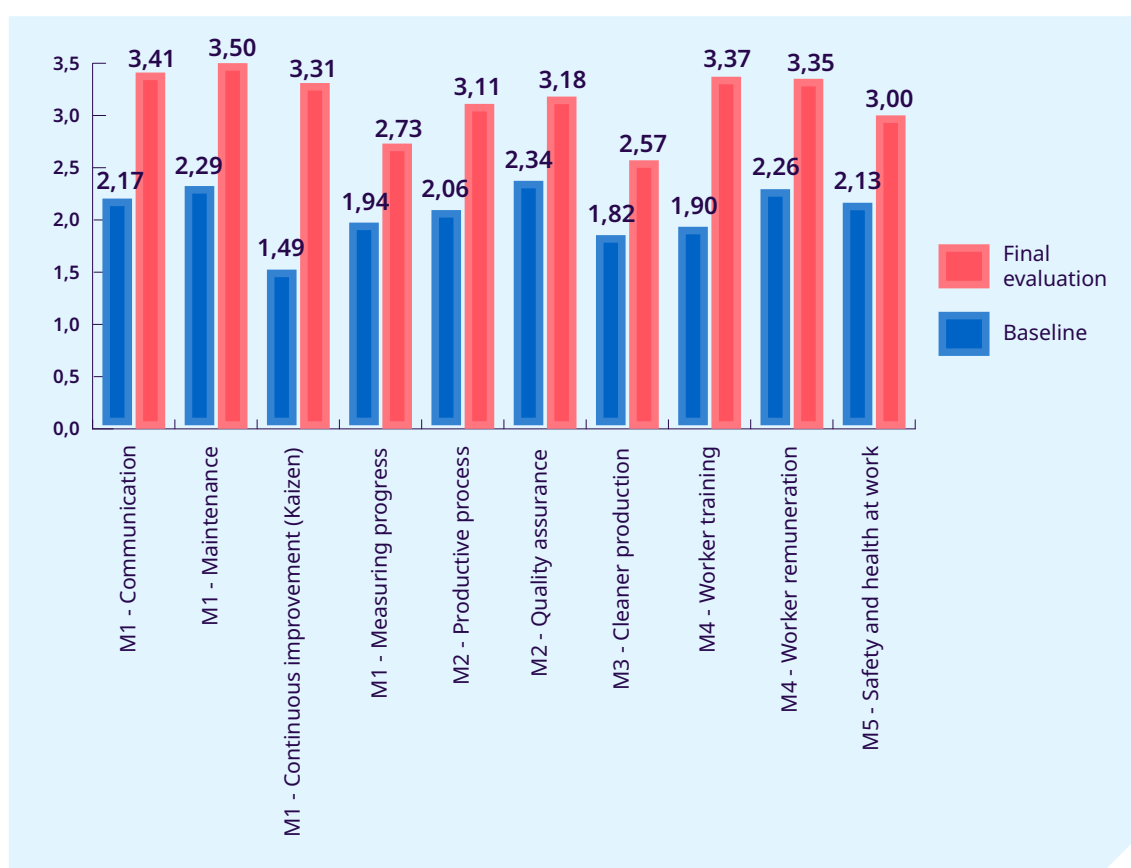
¹⁵ Some are included in Module 1, such as infrastructure improvement projects for workers.

¹⁶ Although it is not known exactly how many of the 52 enterprises were visited by SUNAFIL, we estimate approx. 60 per cent, taking into account that this is the proportion of enterprises with 20 or more workers that SUNAFIL prioritises.

► Table 4. Percentage increase in enterprise management practices scores, overall and by module

	Average score at baseline	Average score at final evaluation	Percentage change
Overall score	2.04	3.06	50%
Module 1 – Workplace Cooperation	1.97	3.24	64%
Module 2 – Quality Management	2.20	3.14	43%
Module 3 – Productivity through Cleaner Production	1.82	2.57	41%
Module 4 – Human Resource Management	2.08	3.36	62%
Module 5 – Safety and Health at Work	2.13	3.00	41%

► Figure 9. Overall and disaggregated scores, by enterprise management practice category



Generally, enterprises with more remarkable improvements in management practices in one module (particularly Module 1) also demonstrate improvements in practices related to other modules.¹⁷

¹⁷ Correlation table available upon request.

Management practice improvements occurred across all modules and categories as well as all enterprises. All 52 enterprises showed increases in their overall score. For over 40 per cent of enterprises, the overall score improved by more than 1 point. Most enterprises also increased their score for each of the modules, with a few exceptions (**Table 5**).¹⁸

► **Table 5. Variation in management practices scores at baseline and endline, overall and by SCORE module**

Variation in scores between baseline and final evaluation	Global	Module 1	Module 2	Module 3	Module 4	Module 5
The score dropped	0	1	1	1	3	5
The score remained the same	0	0	1	10	2	1
The score increased between 0 and 0.5 points	8	5	16	12	11	16
The score increased between 0.5 and 1 points	22	15	15	18	6	8
The score increased by more than 1 point	22	31	19	11	30	22
Total	52	52	52	52	52	52

Score variation by management practice

The average score for each of the 35 management practices increased. For most management practices, we observe a statistically significant increase in the score between the baseline and the endline.¹⁹

Management practices with greater increases

Percentage increases are more notable for the following practices: worker training; remuneration policy; preventive machinery, equipment and process maintenance; worker participation in workplace committees; direct communication between owners/management and workers; and worker suggestion processes. Those scores increased by 65-85 per cent. The *kaizen blitz* or rapid improvement events increased by 178 per cent (**Table 6**).

The increase in the scores of worker training and remuneration policy was likely motivated by the inspection and supervision work of SUNAFIL and MTPE.²⁰ The rest of the practices correspond to changes promoted by enterprise improvement projects under Module 1 and, to a lesser extent, Module 2. *Kaizen blitz*, or rapid improvement events, includes projects with an enterprise or process improvement component.

¹⁸ One enterprise in Module 1, two in Module 2, eleven in Module 3, five in Module 4, and six in Module 5.

¹⁹ The comparison of the average baseline and endline scores shows that in 31 of these 35 practices the increase has been significant. For 28 practices the difference was significant at 99%; for 2 at 95%; and for 1 at 90% (results available upon request).

²⁰ Remuneration policy does not imply raising worker's remuneration, but it's rather a recent requirement of the MTPE to make remuneration for all staff and worker profiles transparent.

KING KONG MOCHICA S.A.C. is engaged in the production and marketing of regional sweets with a commitment to quality and hygiene to ensure customer satisfaction. Based in Lambayeque, Peru, they have 10 full-time employees.



▼ The batches of manjar blanco are poured into numbered trays that are traceable throughout production, and placed on carts for transport.



▼ The assembly area is very well lit and has ample space for the preparation of sweets and King Kongs. Note the strict use of PPE and, at the bottom of the photograph, the arrangement of the product on carts for transport.

According to management, these projects were motivated by critical thinking on enterprise management resulting from SCORE Training.²¹

Management practices with moderate increases

The following management practices display moderate improvements: safety devices on machinery; substituting hazardous materials with safer alternatives; and water conservation. Scores for these practices increased between 15 and 25 per cent. Ventilation systems increased by 6 per cent. The relatively high cost of using safety devices on machines is a likely explanation for the lower improvement uptake.²² Regarding the substitution of hazardous materials, a few enterprises made fundamental changes to their production inputs.²³ However, these changes are usually costly and are mainly encouraged in Module 3, which was taken by just two enterprises. Water conservation refers to saving water or reincorporating treated water into the production process. Most enterprises only use water for toilets and washing facilities for staff. Enterprises often had production lines that use mostly natural ventilation. A small number of enterprises use fans and air conditioning and even fewer enterprises use air injectors in production areas.²⁴

21 Some examples are: RASIL's application to INNOVATE PERU for automating its industry, using systems for measuring saturated oils to make product lines without octagons; King Kong Mochica's implementation of a system for tracing gaps in the production of *manjar blanco* and measuring brix degrees; CIMMSA's implementation of remote access electronics to its medicine refrigerators to monitor their operation from their plant and provide better service; AMFA's creation of a Business Improvement Team of 20 people who monitor the entire factory and have improvement plans in place every 4 months; or Tecniases' review of critical points in their production and purchase of digital manufacturing machines to standardise, provide better finishing, increase productivity and provide service to third parties in downtime, thus diversifying their income.

22 Significant improvements have only been observed in enterprises that have acquired new state-of-the-art machinery, which already comes with these factory devices. Other enterprises have sought to improve the existing machinery to some extent, prioritising the use of PPE as a complementary measure. Little has been done to implement guards, although enterprises did install emergency stop buttons as a valid palliative measure.

23 For example, replacing the chemicals used to clean metal sheets or placing industrial gas tanks in appropriate locations instead of domestic tanks that were previously inside the production area.

24 These are mainly packing plants and food processing enterprises in compliance with HACCP and OHSAS

Gender equality

The overall score for management practice 1.5 “Gender and diversity policy” increased from 1.83 to 2.71. This score considers (a) whether a gender and diversity policy is in place; (b) awareness of gender equality, diversity and non-violence against women amongst workers; (c) whether communication rules are in place and enforced; (d) female participation in training; (e) building of teams and committees; and (f) active encouragement of women to participate in enterprise processes. For 28 enterprises the score increased, for 21 it remained the same, and for 3 it dropped.

► **Table 6. Average scores by management practice at baseline and final assessment**

Enterprise management practice	Baseline	Final evaluation	% change	Explanation
Module 1 – Workplace Cooperation				
1. Communication				
1.1. Direct communication between owner/ manager and employees	2.29	4.04	76%	Improvements in the interactions of staff with top management, for example, number of extra-office get-togethers; at baseline, there were almost no such meetings, and after three years they were a common occurrence (for example town hall meetings, birthday celebrations); at these events managers often talk about company achievements and/or weaknesses
1.2. Employee participation in workplace committees	1.81	3.13	73%	At baseline, most companies did not have workplace committees (groups of workers who meet regularly to discuss productivity, safety, quality, etc.); at the mid-term evaluation EITs ²⁵ were in place and at the endline companies had often further established OSH committees, ISO, OHSAS and / or quality teams
1.3. Meetings of supervisors and workers	2.58	3.65	41%	At baseline, these meetings were held with a certain frequency (usually once a week); in the following 2 years they shifted gradually to daily meetings of 10 to 30 minutes each depending on the enterprise
1.4. Use of information boards and/or other means for sharing information with workers	2.33	3.50	50%	At baseline more than half of the enterprises had some type of written communication (such as bulletin boards) to keep workers informed; over time more enterprises were using information boards and updated them periodically (every 1 to 6 months); some established production monitoring and other data boards, for example to keep track of production losses
1.5. Gender and diversity policy	1.83	2.71	48%	Often, only certain practices on mutual respect were stated and only few enterprises had a separate gender and diversity policy in place ²⁶

²⁵ EITs were promoted by SCORE Training as well as MTPE policies.

²⁶ Often a requirement for fair trade certifications.

2. Workplace maintenance/organization (the 5s)

2.1. Keeping the enterprise clean, tidy and well organised	2.29	3.50	53%	Daily organization, standardization and cleaning of the workplace (including keeping daily records on maintenance); this took place mainly in enterprises that have implemented ISO, OHSAS and HACCP; several enterprises abandoned these practices due to turnover of initially trained staff
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3. Continuous improvement (kaizen)

3.1. Process for inviting workers to submit suggestions for improvement	1.79	3.31	85%	SCORE has been mentioned by most enterprises as a key contributor to the significant improvements through its promotion of horizontal management structures; in some cases, suggestion boxes were set up, but most commonly, specific meetings were held or digital tools such as WhatsApp groups were used to collect suggestions
3.2. Rapid improvement events (<i>kaizen blitz</i>)	1.19	3.31	178%	Enterprises usually carry out this type of project as part of the SCORE Training; in addition, at the endline it was found that some enterprises were developing improvement projects for optimizing production within 3-10 months

4. Measuring progress

4.1. Measurement by indicators	1.94	2.73	41%	Most enterprises improved in this area; however, records were often kept in ad hoc formats and enterprises generally had few indicators in place; at the endline it was found that many of these enterprises did not have a full understanding of what an indicator is; data was kept as a record rather than used as a tool for analysis
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Module 2 – Quality Management**5. Productive process**

5.1. Process organization and planning	2.42	3.40	40%	This involves a comprehensive and efficient organization of the productive process; the production flows of many enterprises were disorderly and disjointed, sometimes across different locations with most production flowing non-sequentially, sometimes in loops between workstations, generating significant bottlenecks and delays
5.2 Preventive maintenance of machinery, equipment and processes following technical standards	1.69	2.81	66%	Most enterprises do not do preventive maintenance, only corrective maintenance, meaning they have to stop production in the event of a breakdown of their critical machinery; even though SCORE Module 1 emphasises this practice, few enterprises implemented preventive maintenance; they preferred to hire or to train in-house staff to perform corrective maintenance (for example cleaning, oiling and changing parts and spares)

6. Quality assurance

6.1 Specification of quality standards and process standardization	2.33	3.52	51%	It is not common for enterprises to record their product designs in writing or drawings, especially technical specifications; at the baseline it was found that enterprises had some basic designs, work orders and verbal indications, which were then, in some cases, systematised in order to apply for ISO and/or HACCP certifications; only in those cases improvements were observed
6.2 The role of workers and others in quality assurance	2.77	3.33	20%	Only in some enterprises workers have enough autonomy to stop the production line when the expected quality goals are not being met, and thus prevent defective parts from reaching the next stages of the process; often, owners or managers determine daily production targets and workers must reach these even if products begin to show defects; avoiding this implies a paradigm shift from prioritising quantity of production to prioritizing quality
6.3 Quality control procedures	2.56	3.35	31%	Most enterprises only check the final product for quality, neglecting previous steps in the production process, which could require corrective measures; larger enterprises have often implemented controls at each stage of production, as well as visual quality standard verification guidelines, before moving to the next production stage
6.4 Process for identifying root causes and determining corrective actions	1.69	2.52	49%	All enterprises stated that they implemented this type of process, but without using a systematic methodology ²⁷ and generally more oriented towards identifying those responsible than finding the cause of the problem; even enterprises that have implemented ISO and HACCP didn't seem to have implemented standardized processes

Module 3 – Productivity through Cleaner Production**7. Cleaner production**

7.1 Waste reduction, waste recovery/reuse and recycling	2.21	3.48	57%	Half of the enterprises engaged in cleaner production of some sort; some have used scraps, pieces, and solid and liquid residues in the production of alternative products
7.2 Replacement of hazardous materials with safer and healthier alternatives	1.58	1.88	19%	It often requires a technological change to use another type of input and/or raw material (paints, solvents, acids, etc.) and thus often implies increased costs; however, a metalworking enterprise reported that it had replaced acid with zinc-coated plates that, although more expensive, made the production faster, critical to the fulfilment of client contracts on time

²⁷ E.g. Ishikawa, Fishbone, Problem Tree

7.3 Water conservation	1.52	1.90	25%	Only a few enterprises that implemented water treatment plans in their productive processes improved; the remaining enterprises only reduced the use of water and most do not use it in their productive processes but only in their hygiene facilities; usually little technical but more behavioural interventions are undertaken to prevent the waste of water
7.4 Power conservation	1.92	3.04	58%	Most enterprises made the switch to LED lighting, often phasing out older lighting; in other cases, especially for industrial enterprises in rural areas, behavioural techniques were used so that production only takes place during "low consumption" periods, when the power company charges less; other enterprises improved their electrical system by implementing a capacitor bank to avoid electrical peaks that cause surges in average consumption and therefore higher power bills

Module 4 – Human Resource Management

8. Worker training

8.1 Worker training	1.90	3.37	77%	Progress has been made due to 2 initiatives: i) the hours dedicated to SCORE, as well as free training opportunities offered by the Chamber of Commerce and some CITEs; and ii) the plan for mandatory training related to the implementation of certifications such as ISO, HACCP, and OHSAS
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9. Worker remuneration

9.1 Remuneration policy	1.77	3.17	79%	Most enterprises have developed internal work regulations and contracts detailing tasks, obligations and penalties, although they are reluctant to let workers know what other workers are earning; some enterprises also have an operations manual and a job descriptions manual
9.2 Employee incentive scheme	1.85	2.92	58%	Most enterprises implemented some type of incentives (monetary and non-monetary), such as transportation, lunch, prizes for outstanding workers, or bonuses for specific tasks or achieving certain goals; employee of the month contests which can generate competition and higher productivity were also held
9.3 Payroll	3.17	3.96	25%	Some enterprises increased the payroll

Module 5 - Safety and Health at Work

10. Safety and health at work

10.1 Health and safety at work policy	2.06	2.96	44%	Progress made was often motivated by SUNAFIL requiring enterprises with more than 20 employees to implement this type of manual as well as sanctions enforced by MTPE for non-compliance; several SCORE enterprises with less than 20 employees did not have it or did not distribute it to all their employees
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10.2 Joint Occupational Safety and Health Committee (OSH)	1.67	2.65	59%	This is compulsory for enterprises with more than 20 employees; however, in some enterprises with less than 20 employees, the top management indicated that the EIT should serve this purpose too, which is why the improvement has been greater than that in the area of the health and safety at work policy
10.3 Hazard identification, risk assessment and determination of IPERC control measures	1.83	2.75	50%	Many enterprises have implemented the IPERC matrix, often with the intention of making the company appear more formal before INDECI rather than in compliance with OSH regulation of the MTPE; around 10 enterprises hired external OSH experts to develop this product, but without any verifiable practical purpose in productive operations
10.4 Storage and labelling of hazardous materials	2.17	3.21	48%	This is one of the most widespread improvements linked to Module 1; most of the trainers implemented EIPs aimed at improving tidiness and cleanliness of the enterprise's supply and final product warehouses, such as well-marked, orderly, and clearly labelled shelves
10.5 Washing facilities and drinking water	2.65	3.35	26%	At baseline, the state of the washrooms in most of the enterprises visited ranged from "fair" to "poor", although there were separate washrooms for men and women; men's washrooms were the most neglected (lack of toilet paper and soap); at the endline, the presence of cleaning staff was verified; in two enterprises, new washroom blocks were built to provide workers with better facilities
10.6 Heating and cooling systems	2.33	3.00	29%	Most enterprises have only implemented natural ventilation systems and fans; improvements observed in some enterprises include increased forced-fan ventilation throughout the plant and air-conditioning units (often only in administrative areas which was not well seen by workers in other areas)
10.7 Ventilation systems	2.17	2.30	6%	Specialized systems are not common in Peru; however, a few enterprises installed air injection, filtering, and extraction systems
10.8 Emergency and fire safety response procedures	2.27	2.81	24%	Improvements include the increased implementation of fire control equipment; few enterprises showed changes in this area over the past 3 years; there were a few enterprises that outsourced fire control systems triggered by alarms, video security surveillance and other systems
10.9 Use of guards or security devices on machinery and equipment	2.10	2.46	17%	This involves the renewal of equipment or investment in productive infrastructure; between the baseline and the endline few enterprises made investments in this area

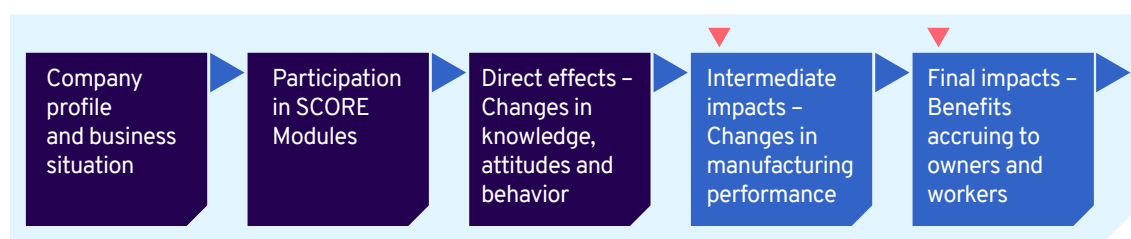
10.10 Using appropriate personal protective equipment	2.61	3.39	30%	This has been one of the most common practices in the SCORE EIP, but it faced a lot of resistance from workers, who did not want to use the equipment stating that it made them uncomfortable and their work less productive; but the majority of enterprises still complied with this practice
10.11 Provision of first aid for injured workers	2.23	3.10	39%	Enterprises updated their first-aid kits and took further measures, such as having the phone number and address of the nearest medical centre on hand; in addition, some of the staff were trained to provide basic medical care (such as treating cuts and bruises, dressing wounds, etc.)
10.12 Reporting and investigation of workplace incidents and accidents	1.60	2.50	56%	Similar to the OSH manual and committee, reports of accident investigations are often motivated by enforced regulations; SUNAFIL carries out inspections and imposes fines; therefore, SCORE enterprises that are bound by SUNAFIL regulations usually have reporting in place; in contrast, SCORE enterprises not subject to SUNAFIL regulations, i.e., those with less than 20 workers, generally did not report and investigate workplace incidents

Note 1: Differences in scores are not significant at the 99%, 95% or 90% level for practices 7.2, 8.6, 8.7, and 8.9.

Note 2: The parameters for evaluating each management practice (from "1" = poor to "5" = excellent) are detailed in Annex 2.



► 4. Changes in manufacturing performance and benefits for owners and workers



The changes in manufacturing performance relate to (a) working conditions; (b) costs; (c) production, productivity, sales turnover, profits and customer satisfaction; (d) gender equality; and (e) worker satisfaction. When interpreting the aggregate data, it is essential to keep in mind that each SME is unique in size, location and capacity; therefore, the potential for productivity improvements, cost savings and workplace improvement, among others, will differ.

There are three sources of information on intermediate effects of SCORE Training: (a) the enterprise self-assessment survey; (b) the company profile sheet; and (c) the worker satisfaction survey (**Table 7**).

The enterprise self-assessment survey captures the business owner/manager's perception of the changes and SCORE Training's level of influence. Fourteen aspects were investigated that can be grouped into (a) aspects linked to efficiency, costs and productivity; (b) aspects related to working conditions; (c) aspects linked to the promotion of gender equality; and (d) aspects linked to sales, profits and customer satisfaction. The magnitude of the changes and the contribution of SCORE Training are assessed as very low, low, medium, high or very high.

The company profile sheet contains objective data as declared by the enterprise about those same variables from the self-assessment survey.

The worker satisfaction survey provides information on the perception of workers regarding changes in the enterprise. It lists 29 questions divided into five categories, linked to the ToC elements of SCORE. Each question is rated on a scale of 5 points: 1 (very poor), 2 (poor), 3 (fair), 4 (good) and 5 (very good).²⁸

► **Table 7. Sources of information on the intermediate effects of SCORE Training on enterprises**

Type of impact	Source of information		
	Enterprise self-assessment survey	Company profile sheet	Worker satisfaction survey
Working conditions	✓	✓	
Costs	✓	✓	
Production, productivity, sales turnover, profits and customer satisfaction	✓	✓	
Gender equality	✓	✓	
Worker satisfaction			✓

²⁸ Scores are calculated as follows: (a) to obtain the score of a given category, a simple average of the score for each of the questions included in the category is computed; (b) to obtain the overall score, a simple average of the score for each of the five categories is computed.

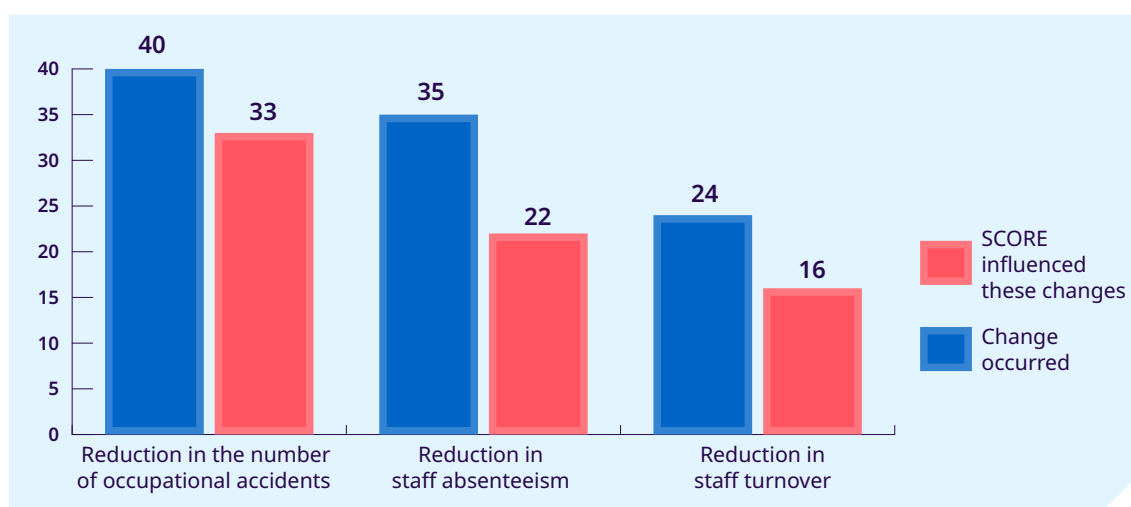
a. Working conditions

In terms of safety, 40 enterprises indicated that there was a reduction in work accidents in the past two years, and 33 of them (83 per cent) stated that SCORE Training influenced this outcome. Further, 35 enterprises indicated that staff absenteeism had dropped, and 22 of them (63 per cent) said that SCORE Training influenced this outcome. Staff turnover had declined in 24 enterprises, and 16 of those enterprises (67 per cent) believed that SCORE Training influenced this outcome (see **Figure 10**).



The use of Personal Protection Equipment (PPE) has been implemented in all stages of production in order to achieve certification for this type of industry: full protective clothing, steel-toed shoes, hard hats, areas with ample natural ventilation. TECNIASES S.A.C.

► **Figure 10. Number of enterprises that reported a change in working conditions over the past two years and that state that SCORE Training influenced these changes (self-assessment)**



Eleven enterprises provided comparative data in terms of accidents at work, absenteeism or labour turnover. Of these, accidents at work dropped by 42 per cent, absenteeism by 34 per cent, and labour turnover by 12 per cent (see **Table 8**).

► **Table 8. Enterprise self-reported information on changes in working conditions over the past two years**

	Accidents in the workplace	Absenteeism	Labour turnover
Number of enterprises that reported the value of the indicator in 2016 and 2018	11	8	8
Number of enterprises for which the value of the indicator dropped	6	4	3
Number of enterprises for which the indicator value remained the same	4	3	2
Number of enterprises for which the value of the indicator increased	1	1	1
Average percentage change in the indicator	-42%	-34%	-12%

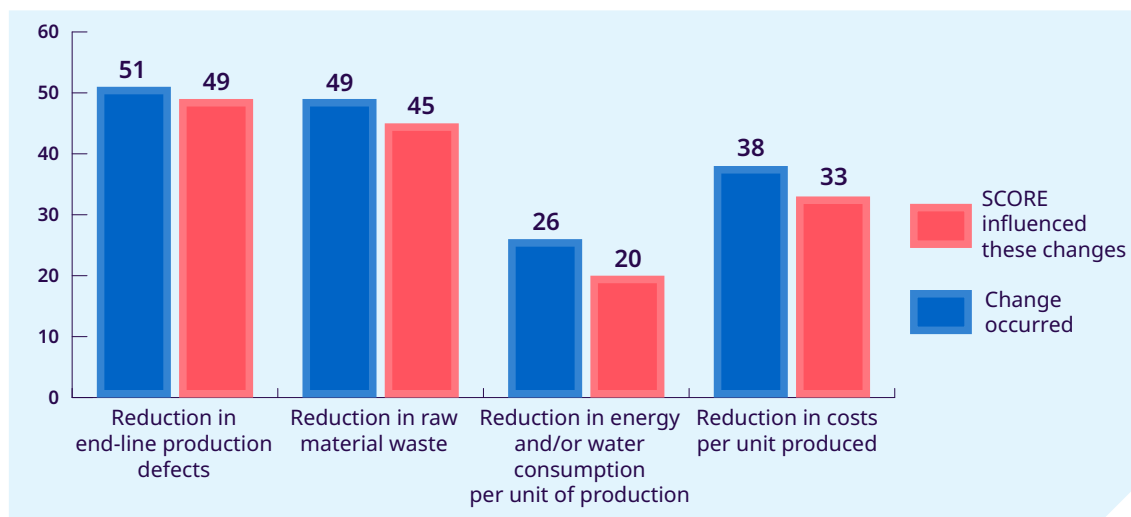
During enterprise visits carried out as part of the evaluation, managers stated that the reduction of absenteeism is mainly due to the greater engagement of workers as a result of SCORE Training, especially Modules 1, 4 and 5.

Regarding worker turnover, enterprise managers (especially those further away from urban areas such as Pucallpa, Lurín or the cones of Lima) mentioned that exogenous factors impact turnover. These include alternative work options that offer higher wages, are closer to home or require shorter working hours.

b. Costs

Nearly all enterprises (51) reduced endline production defects over the past two years. Of these, 96 per cent say that SCORE Training influenced this result. Further, 49 enterprises say they reduced raw material waste, and 45 of them (92 per cent) believe that SCORE influenced this outcome. By contrast, only 26 enterprises indicated that electricity or water consumption per unit has decreased, although 77 per cent of those enterprises stated that SCORE influenced this reduction. Lastly, 38 enterprises report cost reductions, and 33 of them (87 per cent) said that SCORE influenced this (see **Figure 11**).

► Figure 11. Number of enterprises that reported changes in working conditions over the past two years and that state that SCORE Training influenced the changes (self-assessment)



Eighteen enterprises provided comparative data about their situation at the endline and baseline for production defects, 15 for waste materials, 26 for electricity or water usage per unit produced and 32 for cost per unit. Among these enterprises, endline production defects have dropped on average by 22 per cent and waste of raw materials by 33 per cent. Electricity or water usage per unit and the cost per unit has almost remained unchanged (see **Table 9**).²⁹ Cost reductions seem to depend on firm inputs. Enterprises that mostly use domestic labour or inputs reduced costs by around 10 per cent.³⁰ On the other hand, enterprises that are highly dependent on value-added imported or domestic raw materials saw unit costs stay the same or increase.³¹ In some cases, costs increased by up to 25 per cent, due to raw material price spikes.

► Table 9. Enterprise self-reported information on the magnitude of changes in costs over the past two years

	End-of-line defects	Quantity of raw material waste	Amount of electricity and/or water usage per unit produced	Cost per unit produced
Number of enterprises that reported the value of the indicator in 2016 and 2018	18	15	26	32
Number of enterprises for which the value of the indicator dropped	14	14	14	20
Number of enterprises for which the indicator value remained the same	1	0	2	3
Number of enterprises for which the value of the indicator increased	3	0	10	9
Average percentage change in the indicator	-22%	-33%	+1%	-1%

29 That there had been no change in average cost per unit produced is not at odds with the figure above showing that 38 enterprises indicated that the cost had decreased, since this data is based exclusively on the entrepreneurs' perception. Furthermore, only five of these enterprises indicated that this drop had been significant.

30 Includes producing milk candy, handicrafts, chemicals, poultry, snacks, service

31 Includes furniture, melamine, metalworking, alpaca yarn

c. Productivity, sales turnover, profits and customer satisfaction

Productivity at work increased in 46 enterprises over the past two years, and 43 of them (94 per cent) stated that SCORE Training influenced this outcome. Nearly all (51) enterprises reported that customer satisfaction with the quality of the products has increased and 45 of them (88 per cent) stated that SCORE Training influenced this outcome. Sales increased in 35 enterprises, and 22 of them (63 per cent) said that SCORE Training influenced this increase. Similarly, 35 enterprises reported that their profits had increased, while 22 of them (63 per cent) stated SCORE Training influenced this outcome (see **Figure 12**).

LEONCITO SOCIEDAD ANONIMA offers a full range of furniture comforts for the home, always thinking of improving the lifestyle and preferences of the people of the Lambayeque region in Peru. They have 170 Full Time Employees.



▼
Trolleys implemented by SCORE are used for moving components from one point to another within the production facility



▼
Production facilities were streamlined while maintaining the original layout, despite the fact that enterprises across the sector still tend to be tolerant of a certain amount of clutter

► **Figure 12. Number of enterprises that reported changes in productivity, sales turnover, profits and customer satisfaction over the past two years and that reported that SCORE influenced the changes (self-assessment)**



In contrast to working conditions and costs, almost all enterprises provided comparative data about their situation regarding installed capacity usage, annual sales, number of workers, and monthly payroll costs. On average, installed capacity usage increased from 63 to 72 per cent; yearly sales from S/. 7.05 million to S/. 8.85 million; the number of workers from 33.7 to 42.5, and monthly payroll costs went from S/. 56,069 to S/. 71,000. The sales-per-worker ratio was unchanged (see **Table 10**).

Regarding customer satisfaction, only 14 enterprises provided comparative data. On average, it increased from 74 to 88 per cent between baseline and endline.



Following SCORE Training these information boards are set up in the production area, with messages referencing 5S, and are aimed at enhancing productivity and fostering a good work environment. TECNIASES S.A.C.

Just over half of all enterprises (29) use productivity indicators. However, only ten implemented key productivity indicators such as production/staff-hours, production/machine-hours, production/projects, or labour performance. Others capture quantities produced, sales turnover, profits, wastage, production costs, service quality, assistance, delays and staff turnover.³² The absence of productivity indicators is a significant shortcoming in many of the enterprises.

► **Table 10. Enterprises that self-reported information on the magnitude of changes in installed capacity, sales turnover, number of workers and customer satisfaction over the past two years**

	Installed capacity usage	Annual sales (S/.)	Number of workers	Monthly payroll cost	Sales/ number of employees	Customer satisfaction
Number of enterprises that reported the value of the indicator in 2016 and 2018	51	50	52	51	47	14
Number of enterprises for which the value of the indicator dropped	14	20	13	13	18	0
Number of enterprises for which the indicator value remained the same	5	3	6	1	1	2
Number of enterprises for which the value of the indicator increased	32	27	33	37	26	12
Average value of the indicator in 2016	63%	S/. 7'049,912	33.7	S/. 56,069	S/. 209,196	74%
Average value of the indicator in 2018	72%	S/. 8'847,480	42.5	S/. 71,000	S/. 208,176	88%

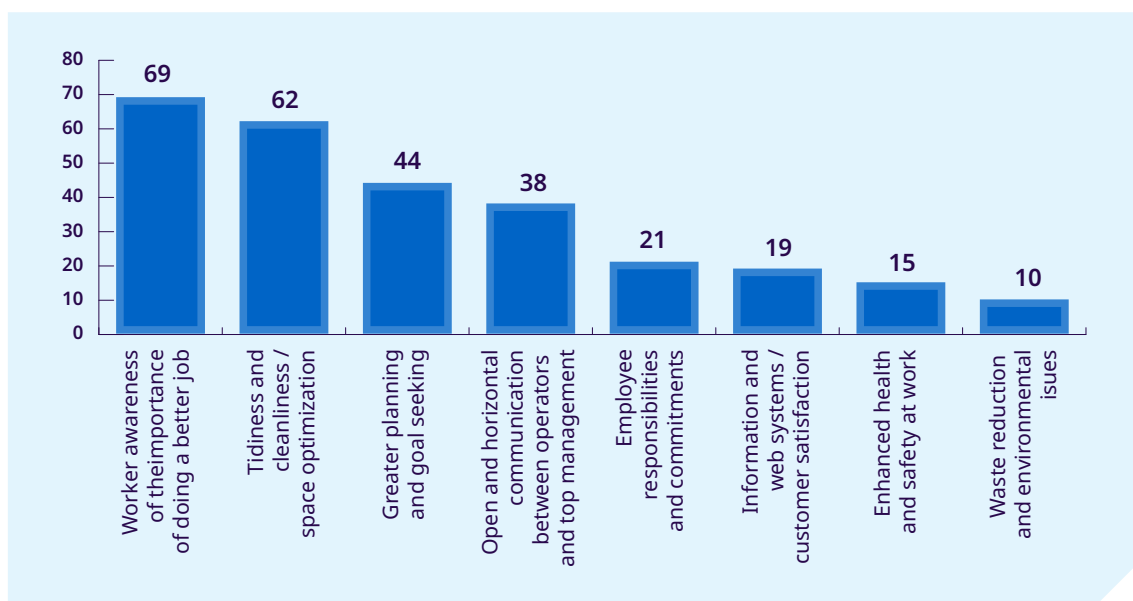
³² Most of the enterprises assessed in the case studies use the endline production defect indicator: at RASIL there was an increase from 9% to 15% in the past two years; at CIMMSA, there was a reduction from 15% to 5%; at Leoncito a reduction from 5.5% to 1%; at INFORHUAY a reduction from 14% to 8%; and at AMFA VITRUM a reduction from 40% to 18%). Only in the case of INFORHUAY the production volume per machine indicator was used in addition (the volume increased from 15 containers per month to 25 containers per month).

The self-assessment survey at the endline included several open-ended questions regarding enterprise changes over the past two years. One question asked respondents:

What are the main positive changes that have occurred in the enterprise in the past two years?

Most answers to this question referenced the importance of doing a better job (69 per cent) and workplace tidiness, cleanliness and optimization (62 per cent). Forty-four per cent of respondents mentioned better planning, while 38 per cent said open communication between workers and management (Figure 13).

► **Figure 13. Enterprises' most frequent responses to the question "What do you believe have been the main positive changes that have occurred in the enterprise in the past 2 years?"**

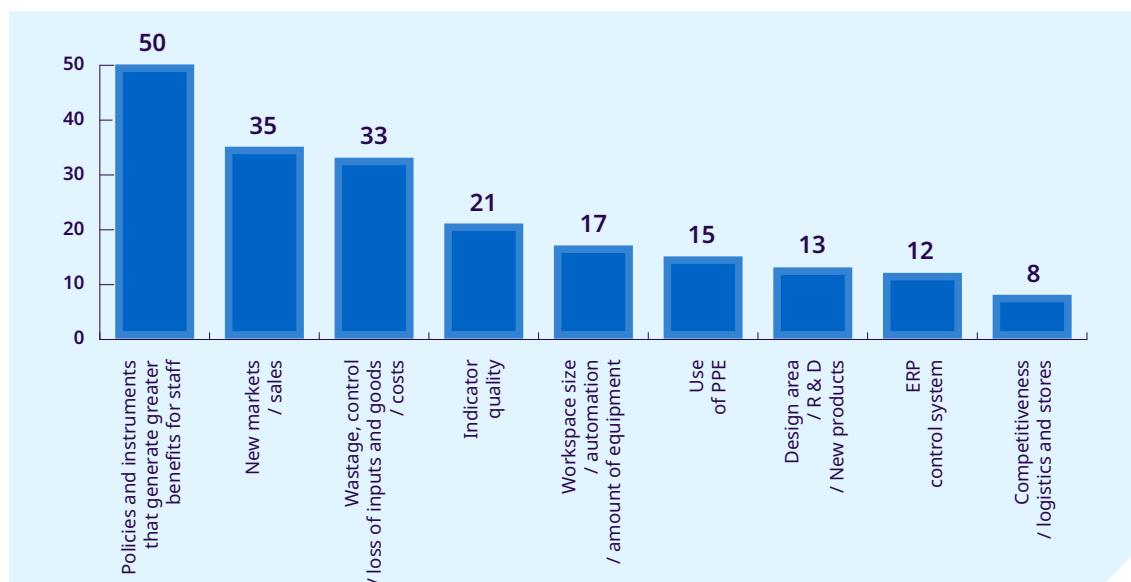


Note: The sum of the percentages is greater than 100% because an enterprise can identify more than one change.

When asked In what aspects do you believe the enterprise has made no progress or has regressed in the past two years?

Most respondents answered the lack of policies and instruments that generate more significant benefits for staff (50 per cent). About one-third of respondents (30-35 per cent) also mentioned low competitiveness, shortcomings in logistics and warehouse management, the lack of new markets and stagnant sales (Figure 14).

► Figure 14. Enterprises' most frequent responses to the question "In what aspects do you believe there has been no progress or regression in the enterprise over the past two years?"

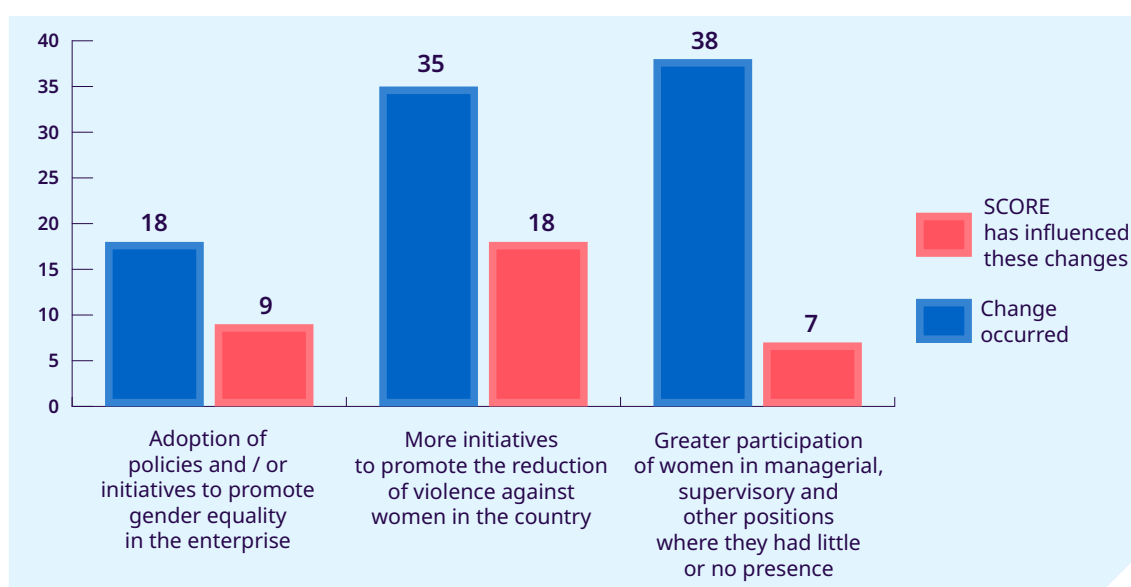


Note: The sum of the percentages is greater than 100% because an enterprise can identify more than one change.

d. Gender equality

The participation of women in management, supervision, or other positions where they had little or no presence increased in 38 enterprises over the past two years. Of these, seven (18 per cent) stated that SCORE Training influenced this outcome. Initiatives to promote the reduction of violence against women increased in 35 enterprises, and 18 of them (51 per cent) stated that SCORE Training influenced this outcome. Only 18 enterprises adopted policies or initiatives to promote gender equality. Of those, 50 per cent reported that SCORE Training influenced this outcome (Figure 15).³³

► Figure 15. Number of enterprises that reported changes in gender issues over the past two years and their perceived influence of SCORE on these changes



³³ This outcome is influenced by the fact that there is no legal, business or labour requirement in the country for a corporate gender policy.

Forty-three enterprises provided data on the percentage of female workers in their enterprise. On average, female worker percentages increased from 32 to 35 per cent (**Table 11**).

► **Table 11. Enterprise self-reported information on the change in the proportion of women workers over the past two years**

	Percentage of women workers
Number of enterprises that reported the value of the indicator in 2016 and 2018	43
Number of enterprises for which the value of the indicator dropped	16
Number of enterprises for which the indicator value remained the same	2
Number of enterprises for which the value of the indicator increased	25
Average value of the indicator in 2016	32%
Average value of the indicator in 2018	35%

According to the evaluator, in some enterprises, women were able to position themselves as leaders during the implementation of SCORE Training and get a promotion or greater recognition by their peers and superiors. In the evaluator's opinion, female workers placed much more importance on meetings and the opportunity to make suggestions, potentially because they had fewer opportunities for participation in the past.

e. Worker satisfaction

The number of worker satisfaction survey responses varied across the study period. Completed baseline surveys were received from 517 workers, while 272 were completed at midterm, and 239 at endline. This amounts to an average of ten workers per enterprise completing the surveys at baseline, five per enterprise at midterm, and seven per enterprise at endline.³⁴

Approximately 66 per cent of workers surveyed were men, and 34 per cent were women.³⁵ This distribution is representative of the broader worker profile.

- On average, the workers surveyed had been working in the enterprise for 50 months.³⁶
- Just over one-third (34 per cent) of the workers previously completed the survey at midterm or baseline.³⁷
- About 26 per cent of workers participated in the SCORE Module 1 Training, while less than 5 per cent attended training for any of the other modules. Fifteen per cent were members of the EIT.

³⁴ The main reason why fewer workers were surveyed during the final evaluation than at baseline was the reduced collaboration of enterprises for the evaluator to contact workers to complete the worker satisfaction survey. This may have been influenced by the fact that at the endline assessment, due to labour turnover, several of the workers surveyed at baseline were no longer there; the enterprises had already received the services and support, so they had less incentives to collaborate; and the ILO did not accompany the visits (as it did in the baseline evaluation).

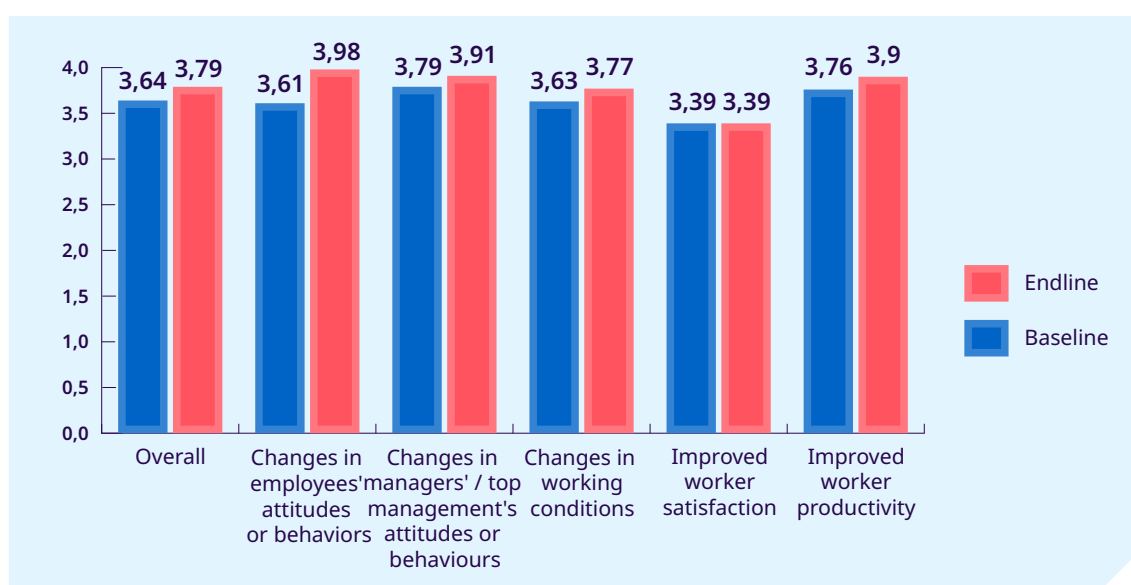
³⁵ The proportion of male respondents at midterm was 71% compared to 61% at baseline.

³⁶ This average was 52 months at midterm and 50 months at baseline.

³⁷ The worker satisfaction survey was administered to 15% of workers at midterm. At baseline this proportion was 9%. The percentage of workers surveyed both at midterm and baseline was 10%.

The average enterprise score on the worker satisfaction survey increased by 4 per cent from the baseline to endline (ranking between “good” and “very good”). The score increased slightly in most categories: by 10 per cent in the category “changes in employee attitude or behaviour” and between 3 and 4 per cent in the categories “changes in managers/top management’s attitude or behaviour”, “changes in working conditions” and “improvements in worker productivity”. The “improvements in worker satisfaction” category was unchanged. This category assesses whether workers received additional pay or bonuses, whether they would like to stay with the company in the long term, and whether they were motivated to work hard (**Figure 16**).

► **Figure 16. Average scores from the enterprise worker satisfaction survey administered at baseline and endline, overall and by categories linked to the ToC elements**



► **Table 12. Percentage increase in the scores of the worker satisfaction survey**

	Average score at Baseline	Average Score at Endline	Percentage change
Overall score	3.64	3.79	4%
Changes in employee attitude or behaviour	3.61	3.98	10%
Changes in managers/top management's attitudes and behaviour	3.79	3.91	3%
Changes in working conditions	3.63	3.77	4%
Improvements in worker satisfaction	3.39	3.39	0%
Improvements in worker productivity	3.76	3.90	4%

Worker satisfaction increased; however, it is still lower than the overall improvement in management practices and the positive perception of employers of changes in their enterprises. One reason for this might be that the enterprise management practices revealed more critical issues (overall score of 2.04

points and between 1.97 and 2.20 points per module) than that of worker satisfaction (overall score of 3.64 points and between 3.61 and 3.79 points per category).³⁸ Another reason might be that workers seemed more empowered to share their thoughts at the endline satisfaction survey, according to the evaluator's observations. At the baseline, workers seemed to be more concerned that their answers could be used against them.³⁹ Further complicating things, the satisfaction survey was not always completed by the same individuals due to worker turnover. In contrast, the practices questionnaire was completed at baseline and endline by the same evaluator.

Workers whose satisfaction increased with the factors related to a particular category are generally more satisfied with the remaining categories. In particular, greater satisfaction with improvements in worker productivity is associated with greater satisfaction with changes in worker and management attitudes and behaviours, changes in working conditions and progress in worker satisfaction.⁴⁰

Unlike the previous section, which revealed improvements across all enterprises, the increase in worker satisfaction was not widespread. In 22 enterprises (42 per cent) the overall score dropped (see **Table 13**).

► **Table 13. Enterprise distribution according to variation in the scores from the worker satisfaction survey administered at baseline and endline, overall and by categories**

Variation in scores between baseline and final evaluation	Global	Element 1 = Changes in employee attitude or behaviour	Element 2 = Changes in management attitude or behaviour	Element 3 = Changes in working conditions	Element 4 = Improved worker satisfaction	Element 5 = Improved worker productivity
The score dropped	22	13	26	20	24	23
The score remained the same	0	0	1	0	1	0
The score rose	30	39	25	32	27	29
Total	52	52	52	52	52	52

Variation in scores by question on the worker satisfaction survey

The average score for all 52 enterprises increased for 21 of the 29 questions. For 11 of the 21 questions, the increase in the score between the baseline and the endline was significant.⁴¹

Questions that report improved results over time include “noise and vibration levels”, “temperature at your workstation”, “dining room or eating facilities” “training from a superior or technician on how to do your work”, “have you received training in safety and health issues”, and “movement and storage of raw

38 However, the significance of the score is not the same across instruments. For example, a rating of “good” is assigned a score of 4 points on the worker satisfaction survey and 3 points on the management practices questionnaire, and a rating of “very good” is assigned a score of 5 and 4 points on these instruments, respectively.

39 This outcome was also influenced by the fact that, while at the baseline some enterprise owners were present during the administration of the worker satisfaction survey (even though it was explained to them that it was better for them not to be present in order for the results to be more impartial), at the endline they were no longer present as most understood the importance of impartiality of workers' responses.

40 Correlation table available upon request.

41 In five practices, the difference was significant at 99%; in five practices at 95%; and in one practice at 90% (results available upon request).

materials". The average score for these questions increased by between 10 and 15 per cent. The question regarding "possibility to use an internal communication system such as a suggestion box", increased by 23 per cent.

For eight questions, the average score either did not increase or decreased between -1 and -5 per cent. These referred to the "amount you are paid", "working hours", "lighting at your workstation", "possibility to take breaks during working time", "possibility to request sick leave", "motivation to work hard", "team-work is encouraged in the enterprise" and "desire to stay in the enterprise in the long term".

► **Table 14. Average scores from the worker satisfaction survey at baseline and at the final evaluation, by question**

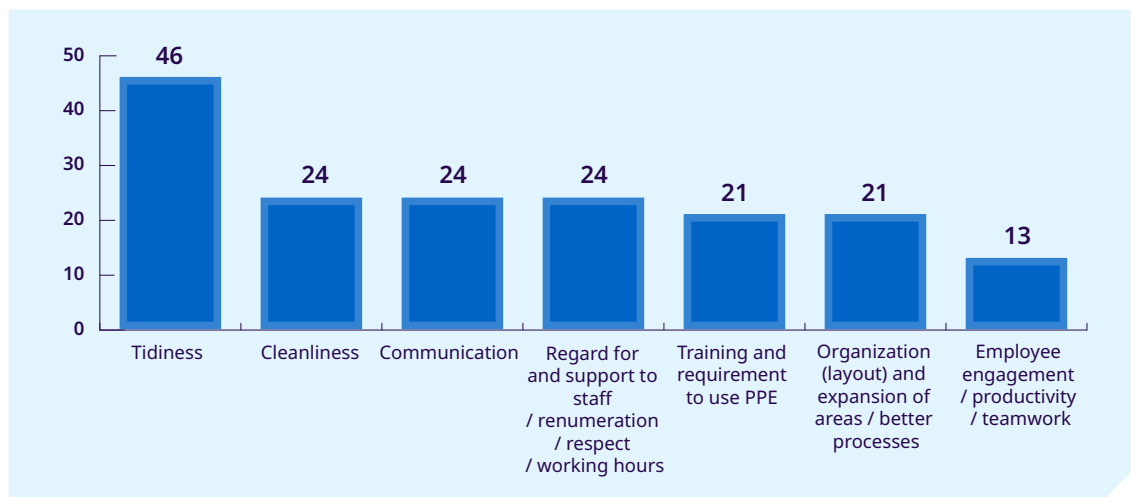
	Baseline	Endline	Percentage change
Element 1- Employee attitudes and behaviours			
Is it possible to discuss work-related problems or improvement ideas with colleagues?	3.82	3.97	+4%
Is there a possibility to use an internal communication system such as a suggestion box, for example?	3.13	3.84	+23%
As an employee, have you played a role in solving work-related problems?	3.89	4.11	+6%
Element 2 - Management attitudes and behaviours			
Have you participated in meetings with one or more superiors to solve workplace problems or generate improvements?	3.83	4.09	+7%
Did you feel that your ideas and opinions are valued by your superiors?	3.61	3.77	+4%
Did you feel that teamwork is promoted in your enterprise?	3.93	3.87	-2%
Element 3 - Working conditions			
Have you received training in health and safety issues?	3.46	3.93	+14%
Did you feel safe from harassment, abuse or intimidation?	4.26	4.36	+2%
Have you felt safe from harassment or intimidation in your workplace because of your religion, race, sexual orientation or beliefs?	4.34	4.37	+1%
How do you rate the way raw materials are moved or stored?	3.39	3.79	+12%
How do you rate the lighting in your workstation?	4.00	3.89	-3%
How do you rate the temperature at which you work?	3.22	3.55	+10%
How do you rate the air quality in your workplace?	3.29	3.57	+9%
How do you rate the noise and vibration levels?	2.94	3.22	+10%
Is your personal protective equipment accessible and adequate?	3.55	3.74	+5%
How do you rate the opportunity you have to take breaks during work time (using the toilets, drinking water, or breastfeeding)?	4.27	4.15	-3%

How do you rate the amount you are paid including any in-kind contributions (food, transportation, etc.)?	3.46	3.46	0%
How do you rate your work schedule?	3.90	3.83	-2%
How do you rate your ability to take leave in case of illness or justified absence?	4.13	3.92	-5%
How do you rate your access to fresh drinking water during working hours?	3.77	4.05	+7%
How do you rate the enterprise's sanitary facilities?	3.42	3.51	+3%
How do you rate the enterprise's dressing rooms?	3.23	3.33	+3%
How do you rate the enterprise's dining area or eating facilities?	3.05	3.43	+12%
Element 4 - Worker satisfaction			
Have you received additional payments or bonuses as a reward for meeting goals or good performance (not including overtime pay)?	2.58	2.76	+7%
Have you felt that you would like to stay with this enterprise for the long term?	3.80	3.66	-4%
Have you felt motivated to work hard?	3.77	3.74	-1%
Element 5 - Worker productivity			
Have you received training from a superior or technical staff on how to do your job duties?	3.39	3.74	+10%
Have you felt that the way you do your job is efficient and productive?	4.08	4.11	+1%
Has your job been made easier due to the way the production area is organized?	3.79	3.85	+2%

For the endline, the self-assessment survey included several open-ended questions on the overall assessment of changes in the enterprise over the past two years. Regarding the question: *What do you consider to be the main changes in favour of workers that have taken place in the enterprise over the past two years?*

The most frequent answer (by almost half of the workers surveyed) was increased tidiness. Other frequent responses were improved cleanliness, communication, regard for and support to staff, training and requirement to use protective equipment, and organization and expansion of the workspace.

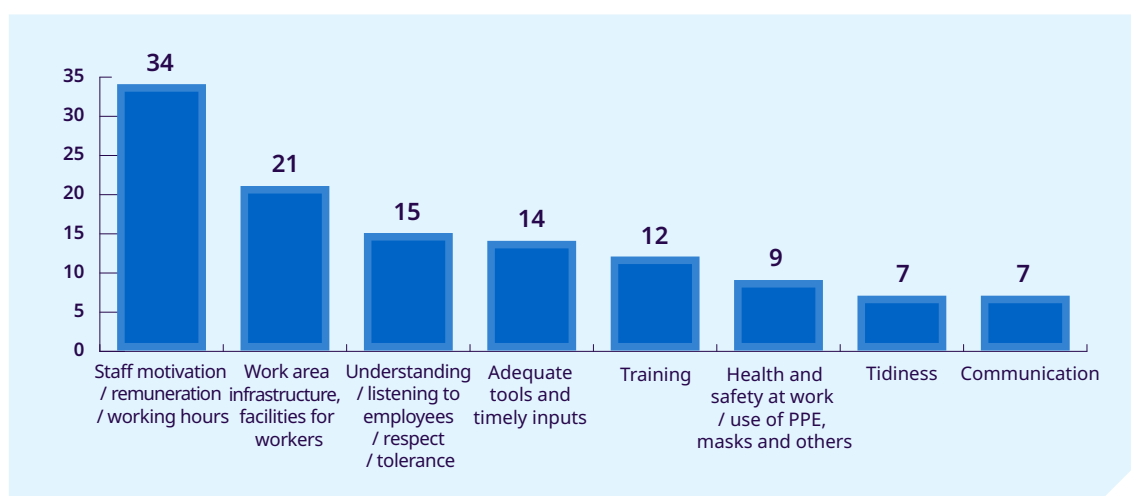
► **Figure 17. Workers' most frequent responses (in %) to the question "What do you consider to be the main changes in favour of workers that have taken place in the enterprise over the past two years?"**



Note: The sum of the percentages is greater than 100% because an enterprise can identify more than one change.

To the question *In which aspects related to the workers' situation do you believe there has been no progress or regression over the past two years?* The most frequent answer (34 per cent) was the lack of motivation for the staff, higher salaries and more reasonable working hours. The second most frequent answer (21 per cent) was the lack of better workspace infrastructure, including facilities for workers (washrooms, dressing rooms).

► **Figure 18. Workers' most frequent responses (in %) to the question "In what aspects linked to the situation of workers do you believe there has been no progress or a regression in the enterprise over the past two years?"**



Note: The sum of the percentages is greater than 100% because an enterprise can identify more than one change.

Most of the positive changes perceived by workers (tidiness, cleanliness, increased communication) relate to practices with lower implementation costs. Most of the areas where workers do not perceive progress relate to higher-cost practices, such as remuneration and infrastructure investment in washrooms, dining rooms, or changing rooms.

Other positive developments

Other positive changes include innovations in activities, processes, equipment, organizational forms; compliance with national and international norms, technical regulations and standards for products and processes; access to more demanding markets; links to other supporting programmes and instruments in Peru; knowledge and use of the services of financial entities or funds to finance investments.

The ten enterprise case studies investigated the positive developments noted above and identified several innovations:

- ▶ Equipment and machinery: measurement of polar compounds, compressors, sawdust vacuum extractors, systems for detecting anonymous blisters;
- ▶ Forms: for production control, quality, traceability plan;
- ▶ Products: sale of dried vegetables, dry wood;
- ▶ Production lines and processes: movement and storage, laboratory, research and development, inventory;
- ▶ Speed of production and delivery to customers; and
- ▶ Market and manufacturing quality management systems.

CIMMSA CORPORATION S.A. is a Peruvian SME located in Lima. They employ 24 full-time staff. The company manufactures and sells refrigeration products (display coolers, wine coolers, supermarket cold cases, freezers, floral coolers and Visicoolers), bakery machines and commercial kitchen equipment.



▼
Before: the cooling area was disorganized and did not have clearly marked walkways.



▼
After: Prior to packing, all machines are rigorously checked for correct operation. Correct floor marking is used in all areas throughout the site

Enterprises also implemented certifications (ISO, HACCP, OHSAS, BPA, fair trade, the Peru brand) to comply with the norms and standards required by Government and private enterprises so that they can be part of the supply chain and thus expand their possibilities of accessing new markets. Several of the certifications have been obtained through the INNOVATE PERU programme.



► 5. Summary and lessons learned

Summary

Enterprises' participation in SCORE Training

1. Approximately 30 per cent of the enterprises completed only Module 1 ("Cooperation in the Workplace"), and 45 per cent completed an additional module, usually Module 2 ("Quality"). Few enterprises completed Module 4 ("Human Resource Management") or 5 ("Occupational Safety and Health") and even fewer completed Module 3 ("Productivity through Cleaner Production"). A critical factor in the difference between the number of enterprises that completed Modules 2, 3, 4 or 5 is the availability of SCORE trainers specialized in the module content.
2. Enterprises see SCORE Training as an investment and not an expense. However, some still decided not to take additional SCORE Training modules as they preferred to apply for programmes like INNOVATE PERU, which finance 70 - 80 per cent of certification programmes such as HACCP, ISO, OHSAS and focus on improving market access.

Direct effects of SCORE Training: enterprise management practices

3. Enterprises made significant improvements in management practices. The average score, which was assigned by the evaluator based on interviews with managers and workers and direct observation, increased from 2.04 ("fair") to 3.06 ("good") between baseline and endline assessment – a 50 per cent increase.
4. All 35 management practices showed clear improvement. In 31 of these practices, the effect was statistically significant. All 52 enterprises improved, and in approximately half the score increased by more than one point.
5. The magnitude of improvement is most significant in practices linked to Modules 1 and 4. Module 1 is faster and less expensive to implement than other modules. The advocacy and supervision work of MTPE and SUNAFIL, as well as the HACCP, ISO and OHSAS certifications, positively influenced labour formalization.
6. Enterprises that show more significant improvements in Module 1 practices also show greater improvements in practices linked to other modules, highlighting the importance of Module 1. The most beneficial impact of Module 1, according to enterprises, is that it generates more open communication between workers and management, which in turn yields mutual respect, trust, and awareness in workers about the importance of doing their job well.

Intermediate effects of SCORE Training: working conditions

7. Forty enterprises believed that accidents at work had reduced over the past two years, of which 33 believed that SCORE Training had influenced this outcome. Thirty-five enterprises reported reductions in staff absenteeism, while 62 per cent believe that SCORE Training influenced this. Twenty-four enterprises report reductions in staff turnover and 67 per cent thought that SCORE Training influenced this reduction.
8. Approximately 20 per cent of the enterprises provided comparative data between baseline and endline. Of these enterprises, occupational accidents reduced by an average of 42 per cent, absenteeism by 34 per cent and labour turnover by 12 per cent. According to interviews conducted during enterprise visits, reduced absenteeism is due to increased worker engagement, and a better working

atmosphere to which SCORE Training contributed. Many exogenous factors impact labour turnover, such as employment options with higher wages, closer proximity to home or shorter working hours.

Intermediate effects of SCORE Training: costs

9. Fifty-one enterprises believed that end-line production defects declined between 2017 and 2019, and 49 of them stated that SCORE Training influenced this result. Forty-nine enterprises indicated that raw material waste reduced and 92 per cent believed that SCORE Training influenced this. Thirty-eight enterprises said that costs per quantity reduced and 87 per cent of them believed that SCORE influenced this outcome.
10. Approximately 40 per cent of the enterprises provided comparative data to support their statements: end-line production defects dropped on average by 22 per cent, and raw material waste by 33 per cent. The cost per unit produced remained almost unchanged. However, enterprises with labour-intensive or domestic input-intensive cost structures reduced their costs slightly, while those that are highly dependent on revalued imported or domestic inputs maintained or increased their unit costs. This is due to the increase in the price of raw material inputs.

Intermediate effects of SCORE Training: productivity, sales, profits and customer satisfaction

11. Fourty-six enterprises believed that labour productivity had increased in the past two years, of which 93 per cent stated that SCORE Training had influenced this outcome. Customer satisfaction with product quality improved in nearly all (51) enterprises and 88 per cent said that SCORE influenced this. Sales and profits increased in 35 enterprises and 63 per cent stated that SCORE Training influenced this increase.
12. Approximately 95 per cent of the enterprises provided comparative data to support these statements: installed capacity usage increased on average from 63 to 72 per cent; annual sales went from S/. 7.05 million to S/. 8.85 million; the number of workers increased from 33.7 to 42.5, and the monthly payroll cost went from S/. 56,069 to S/. 71,000; on the other hand, the ratio of annual sales/number of workers, remained unchanged. The increase in sales turnover could be explained by a rise in sales prices or production levels, which generates more investment in assets and installed capacity usage, which leads to hiring more workers.
13. Less than 20 per cent of enterprises have established productivity indicators (i.e., production/staff-hours, production/machine-hours, production/projects, labour performance, efficiency, etc.).

Intermediate effects of SCORE Training: gender equality

14. Thirty-eight enterprises indicate the participation of women in managerial, supervisory or other positions where they had little or no presence has increased, of which seven stated that SCORE Training influenced this outcome. Of the 80 per cent of enterprises who provided data, the percentage of women workers increased from 32 to 35 per cent. One of the explanations for this increase could be that 18 enterprises adopted policies or initiatives to promote gender equality, including the hiring of female staff in cases where female applicants possessed similar qualifications to male applicants in terms of education, training, work experience and job skills.
15. The evaluation also considered gender and diversity policies, such as whether a policy exists, are women involved, and how workers learn about gender equality and non-violence against women. In this practice, the average score of the enterprises increased from 1.83 ("poor") to 2.71 ("fair").

Intermediate effects of SCORE Training: worker satisfaction

16. Workers' satisfaction with different aspects related to their workplace increased by 4 per cent between baseline and final assessment - the overall average score went from 3.64 to 3.79 (remaining between "good" and "very good").
17. A potential reason why the overall improvement has been relatively small could be that the same workers were not completing the satisfaction survey at the baseline and the endline due to worker turnover. Further, according to the evaluator's observation, workers felt more empowered at the endline to share their thoughts, while at baseline, they were more concerned about what their managers might say. Some changes in working conditions might also require more time in comparison to management practices with more immediate results.
18. According to the workers surveyed, the main positive changes in the past two years have been greater tidiness and cleanliness, better communication, training opportunities and the requirement to use protective equipment, most of which have a lower implementation cost. They believe there has been little or no progress in improving staff motivation, salaries and working hours, as well as workplace infrastructure and facilities (for example washing and changing rooms) which have a higher implementation cost.

Other positive developments observed

19. According to the case studies, enterprises introduced some innovations to their equipment and machinery, products, processes or management systems. Some enterprises implemented certifications (ISO, HACCP, OHSAS, BPA, fair trade, Peru brand) to comply with the norms and standards required by the Government and private enterprises. These certifications enhance their ability to access new markets.

Key learnings

1. **To attract enterprises who will genuinely benefit from SCORE Training, a more diagnostic approach and thorough selection process may be needed.** In line with previous findings from SCORE impact assessments in Ghana, India and Vietnam, results depend to a large extent on enterprises' needs as well as their level of engagement. The time allocated to classroom training and in-factory counselling is not enough to cover a module in detail. Focusing on the relevant factors for a specific enterprise and exploring ways to assess the motivation and commitment of owners and managers could achieve better results. A shorter introductory module could allocate more time to discuss enterprise-specific challenges. Alternatively, targeted and more concise modules could focus on critical topics. These could be sector-specific (for example, tourism, agro-processing, food) or content-specific (for example, the creation of basic monitoring systems).
2. **To accurately measure changes in productivity and working conditions, and better track results, focus on promoting the implementation of appropriate indicators.** The evaluation found that less than 20 per cent of enterprises established productivity indicators. These indicators can help identify weaknesses and improve operational efficiency. However, the data must not be collected solely for the sake of having data. There must be a clear framework for how the data is used. In line with the findings from the Ghana impact assessment, this evaluation identifies the need for SCORE trainers to take a more hands-on approach to help enterprises collect and analyze the necessary data to estimate the impact of particular practices. However, given the limited time available within the scope of SCORE Training, there is a trade-off between how much time trainers spend on supporting enterprises with indicator measurement and the time they spend on identifying and advising on issues affecting those indicators. One option could be to complement the traditional SCORE Training with a short e-learning course on basic monitoring systems, data gap assessment, and action plans. SCORE trainers could then provide additional support based on the knowledge

acquired in the e-learning course. SCORE Training could offer incentives to enterprises in the form of advice on how to use the data to improve their performance. Mentoring partnerships with more successful SMEs could also be a possible incentive. Generating credible data and evidence is a crucial element of ensuring sustainability.

3. **Link SCORE Training more closely to public policy objectives, institutions and programmes to ensure scalability and sustainability.** While SCORE Training has always emphasized close collaboration with its implementing partners, more could be done to link SCORE Training to specific government programmes with shared objectives. For example, there could be synergies to work closer with MTPE and SUNAFIL on labour practices and labour formalization. The evaluation shows that enterprises choose training programs which allow them to obtain certifications that open up new markets. While SCORE Training has a different focus, it can complement these training programs very well. More could be done to assess under what circumstances it would make sense to partner with relevant institutions and programmes. This would also help to further raise the profile of SCORE Training at the national level. In other cases where the objectives and training methods are too different, it may make more sense to focus on improving coordination with other programmes. The price of SCORE Training should also be aligned with government-subsidized programs to ensure that enterprises are not choosing a particular program based on the level of subsidy provided.
4. **Despite some progress, more work is needed to strengthen gender equality through SCORE Training.** While more than 70 per cent of enterprises reported that women's participation in management, supervision and other roles increased, few enterprises had comprehensive gender and diversity policies. Measures that could further strengthen SCORE Training's impact in this area include: (a) a stronger emphasis on gender equality in the Training of Trainers; (b) fostering greater participation and involvement of female workers in SCORE Training; (c) increasing the number of female SCORE trainers⁴²; and (d) making a more compelling case for why enterprises should focus on gender equality and how to do it. Potential topics include harassment and violence at the workplace, family-friendly labour policies, inclusive hiring, and equal pay for equal work. However, given that improving gender equality is not the primary objective of SCORE Training, it is important to be realistic about what can be achieved within a limited time frame. The core SCORE Training can create awareness as well as raise interest for a new SCORE Module on gender equality where these topics are dealt with in more depth.
5. **While rigorous evaluations might help establish the causal relationship between SCORE Training and the results observed, they come at a high cost in terms of requirements and resources.** A randomized control trial was considered for this evaluation. However, after a thorough assessment of a third party proposal, a randomized control trial was judged a non-feasible option for several reasons. First, the sample size of enterprises participating in SCORE Training was too small to establish large enough treatment and control groups. Second, it would have been challenging to explain to enterprises in the control group that SCORE Training will not be offered to them and still create sufficient incentives for them to share their data. Third, a randomized control trial would have required a more standardized training approach and not a demand-based approach where enterprises take the combination of SCORE modules that they consider most relevant. Also, the interventions varied depending on the sector, trainers, and capacity of the enterprise. Finally, enterprises that participate in a randomized control trial need to track proxies for productivity. Unfortunately, most SMEs cannot reliably track these kinds of indicators.
6. **A better match between the availability of SCORE Training modules and enterprises' demands could increase take-up of the training.** The type of modules taken up by the enterprises correlates with their location and availability of trainers. Trainers need incentives to specialize in more than one module, particularly where there is demand combined with an insufficient number of trainers. Options could include discounts for more training modules taken. The move towards new delivery

42 As of July 2020, 8 out of 29 certified trainers are women.

modalities such as blended learning or virtual training significantly increases the reach of trainers. Modules that are not available in a region due to the lack of a specialized trainer could run virtually. Making all SCORE Training modules more widely available will also help better understand the actual demand for each of the modules. Because of the limited availability of trainers for certain modules, it is unclear whether the low uptake of some modules is due to limited trainer supply or limited demand.

7. **Assessing opportunities (as well as drawbacks) arising from new delivery modes, such as blended learning and virtual courses could help reduce cost and increase scale.** The evaluation has shown that while enterprises consider SCORE Training a worthwhile investment, their ability to pay for modules is limited. This might be even more true in the COVID-19 context. New training delivery options currently piloted by SCORE Training in various countries have the potential to reduce cost, increase flexibility for trainers and enterprises and increase the scale and reach of SCORE Training. Asynchronous self-paced courses or tutor-based courses could complement existing forms of SCORE Training. However, the drawbacks should be carefully assessed. While these tools offer significant potential for scale, reaching micro-enterprises that are often partially or fully informal might require different approaches such as partnerships on the ground with financial service providers, social security agencies, or community based learning.



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► Annexes

Annex I. Company Information sheet

Company Information Sheet

SECTOR ECONÓMICO:

Nombre del entrevistador:

Nombre y cargos de las personas entrevistadas de la empresa:

Nombre	Cargo	Correo

Fecha: DD/MM/AA

PERFIL DE LA EMPRESA

Nombre de la empresa:	Fotografía fachada empresa / Logo
RUC:	
Dirección:	
Teléfono:	
Correo electrónico:	
Productos principales:	1. 2. 3.
Año de creación:	
Tipo de Sociedad:	
Propietario / Grupo empresarial:	

Nombre del dueño/s principales:	1. 2.		
Nivel de educación del dueño/s principales:	1. 2		
Origen de la inversión:	Privada – Nacional ☐ Privada – Internacional ☐	Pública ☐	
Clientes principales:			
¿Exporta?:	No ☐ Sí ☐	¿desde qué Mes/año? _____	
Porcentaje de su producción que exporta: _____%			
Certificación:			
Afiliación / Gremio:			
Participación Comités Normas Técnicas (INACAL, otros)	Sí ☐ No ☐	¿Cuáles? _____	
¿Ha recibido asistencia técnica de organizaciones privadas o públicas? Sí ☐ No ☐ Nombre de la organización o programa / Tipo de asistencia recibida (fecha MM/AA) 1. 2. 3. 4.			
Sindicato:	Sí ☐ No ☐	Nombre del Sindicato:	
Acuerdo de negociación colectiva:	Sí ☐ No ☐	Última fecha: DD/MM/AA	
No. de trabajadores Total: ____ M: ____ H: ____	Tiempo completo: Total: ____ M: ____ H: ____	Temporales: Total: ____ M: ____ H: ____	
Gerentes: ____	Administrativos: ____	Supervisores: ____	Operativos: ____
Turnos de trabajo			
Horario de trabajo:	Área administrativa:		
	Área operativa:		

OTROS DATOS SOBRE LA EMPRESA:

Resumen de la empresa - Características principales (a cargo del entrevistador)

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DATOS SOBRE COSTOS, CLIMA LABORAL Y SATISFACCION DE LOS CLIENTES

	(A) ¿Maneja la empresa algún indicador?	(B) ¿Qué indicador utiliza? <i>(en caso respondió que SÍ en la pregunta anterior)</i>	(C) ¿Cuál es el valor del indicador actualmente?	(D) ¿Cuál era el valor del indicador hace 24 meses?
Defectos de producción al final de la línea	a. Sí a. No			
Cantidad de desperdicios de materia prima	a. Sí a. No			
Cantidad de uso de energía y/o agua por unidad producida	a. Sí a. No			
Costo por unidad producida	a. Sí a. No			
Accidentes en el trabajo	a. Sí a. No			
Ausentismo	a. Sí a. No			
Rotación laboral	a. Sí a. No			
Satisfacción de los clientes	a. Sí a. No			

Annex II. Questionnaire on management practices

Included below is the English version of the SCORE questionnaire on management practices, developed by Eric Oldsman and Stephan Ulrich in 2016 as part of the SCORE Vietnam impact assessment. This tool was translated into Spanish for the Peru impact assessment and further adapted. Thus, the tool might not entirely reflect the data and structure of management practices reported in the main body of this publication. The actual questionnaire in Spanish can be made available upon request.

SCORE Management Practices Questionnaire (Revised Version – 27 January 2017)

The assessment tool includes ratings of 34 practices across ten categories. Each practice is rated on a five-point scale – 1 (poor), 2 (fair), 3 (good), 4 (very good) and 5 (excellent) Additional guidance is provided below. The assessment is based on interviews and direct observation. Unless otherwise noted, questions are intended for both managers and production workers. In addition, the tool includes a set of key performance indicators.

1. Communication

1.1 Direct communication between owner/CEO and production workers

How are production workers informed about the overall performance of the business? Do owners/CEOs meet directly with production workers? How often are meetings held and how long do they typically last? When was the last meeting held? What is discussed at the meetings? Do production workers have the opportunity to ask questions?

1 (Poor) = Meetings are held only once a year or not at all. Very little information is presented. There is little or no discussion between managers and production workers.

3 (Good) = Meetings are held 2-3 times per year. Presentations include information on market conditions and sales, but information on other goals is limited. There is some discussion between managers and production workers.

5 (Excellent) = Meetings are held at least quarterly. Information on market conditions, sales, profits and other non-financial goals is shared along with explanation of performance. Production workers ask questions and engage in extensive, open discussion with owner/CEO.

1.2 Involvement of production workers in joint labor-management committees

Has the company established a joint labor-management committee to deal with employment and working conditions, including grievances? Has the company established an improvement (kaizen) committee, quality management committee, and/or safety and health committee? If yes, are production workers represented on these committees? How are production workers named to these committees? How often are meetings held?

1 (Poor) = There are no committees which include production workers,

3 (Good) = There are committees which include production workers. Management appoints workers. Meetings are held quarterly at most.

5 (Excellent) = There are committees which include production workers. Workers are union representatives or otherwise elected by other workers. Meetings are held at least weekly.

1.3 Meetings between supervisors and production workers

Do supervisors meet with production workers at the beginning of each shift? Are these meetings held during regular work hours? What is discussed?

1 (Poor) = Meetings are rarely or never held.

3 (Good) = Meetings are held at least three days a week during regular (paid) work hours. Discussion focuses on production targets.

5 (Excellent) = Meetings are held every day during regular (paid) work hours. Discussion includes production targets, quality, 5S, kaizen, and safety and health.

1.4 Use of notice boards to share information with production workers

Where are notice boards located? Are notice boards located in each work area? What information is posted on the notice boards? How often are they updated?

Examine notice boards. Consider both the content and currency of information.

1 (Poor) = There is no notice board or postings are rarely updated.

3 (Good) = There is at least one notice board in the factory. Postings include data on production and quality. Most information is updated at least quarterly.

5 (Excellent) = There is a notice board in all work areas. Postings include data on production and a wide range of other subjects such as quality, 5S, kaizen, and safety and health. Information is updated at least weekly.

2. Housekeeping/Workplace Organization

2.1 Keeping the factory clean, tidy and well organized

What approach is used to keep the factory, clean, tidy and organized? How much responsibility do workers assume in the process? During the walkthrough, look to see whether a 5S program is well implemented and sustained.

1 (Poor) = No systematic process is in place. Containers, racks and shelves are rarely labeled. Material staging areas, production areas, material drop areas, and material handling aisles are not clearly identified using signs or painted lines. Tools, dies, fixtures, parts, and material are not organized and difficult to find. Most floors, machines, and aisles are not clean. Significant amount of unneeded machines, tools, parts, and material remain in the factory without justification. No time is set aside at the start or the end of each shift for housekeeping. Workers only clean, tidy and organize work areas if told to do so by supervisors.

3 (Good) = Elements of a systematic process are in place. Some containers, racks and shelves are labeled. Some material staging areas, production areas, material drop areas, and material handling aisles are identified using signs or painted lines. Tools, dies, fixtures, parts, and material are kept in the right place in some areas of the factory. Some, but not all, floors, machines, and aisles are kept clean. Some unneeded machines, tools, parts, and material remain in the factory without justification. Checklists are posted in some, but not all, areas to indicate required housekeeping activities; photos are used in some, but not all, areas to show what is acceptable. Less than 15 minutes is set aside at the start or the end of each shift for housekeeping. Workers sometimes clean, tidy and organize work areas without having to be told to do so by supervisors.

5 (Excellent) = A fully sustained, systematic process is in place and fully sustained. Containers, racks and shelves are clearly labeled. All material staging areas, production areas, material drop areas, and material handling aisles are identified using signs or painted lines. All tools, dies, fixtures, parts, and material are kept in the right place in all areas of the factory. All floors, machines, and aisles are kept clean. No unneeded machines, tools, parts, and material remain in the factory without justification. Checklists are posted in all areas to indicate required housekeeping activities; photos are used in all areas to show what is acceptable. At least 15 minutes is set aside at the start or the end of each shift for housekeeping. Workers almost always clean, tidy and organize work areas without having to be told to do so by supervisors.

3. Continuous Improvement (Kaizen)

3.1 Process to solicit suggestions for improvements from production workers

What is the process for soliciting improvement ideas from production workers? How often are suggestions made? What are some examples of ideas from production workers that were implemented in the past year? How are production workers' contributions rewarded? Do workers feel that rewards are adequate? (Note: continued participation of workers over time is evidence of adequacy of rewards)

1 (Poor) = There is no structured process and workers provide few, if any, suggestions.

3 (Good) = There is a structured process in place. However, workers make just a few suggestions a year; and only a few of those are implemented.

5 (Excellent) = There is a structured process in place, which yields a continuous stream of suggestions from workers. Most of these are implemented. Contributions from workers are rewarded and workers feel that rewards are fair.

3.2 Rapid improvement events (kaizen blitzes)

Are kaizen events – short duration projects lasting 3-5 days – organized to improve a particular aspects of performance in a work area or department? How often are these held and how long do they typically last. Who leads these events? How are production workers involved in the process? What are some examples of events during the past year?

1 (Poor) = Rapid improvement events (kaizen blitzes) are not held.

3 (Good) = A rapid improvement event (kaizen blitz) is held at least once per year in at least one area of the factory. Each event is undertaken by a cross-functional team, which includes production workers. Events focus on relatively simple issues such as 5S, set up reduction, and materials handling. Performance is sometimes, but not always, measured before and after each event to assess improvements.

5 (Excellent) = Rapid improvement events (kaizen blitzes) are held at least once per year in two or more areas of the factory. Each event is undertaken by a cross-functional team, which includes production workers. Some events focus on more complex issues such as material waste, workflow, and WIP reduction. Performance is always measured before and after each event to assess improvements.

4. Manufacturing Operations

4.1 Factory layout and scheduling

How is the factory organized? How is work scheduled? During the walkthrough, observe factory layout and production flow. Look to see whether all linked processes to produce a product are grouped together in cells/lines with very short distances between processing steps. Look to see whether visual signals are used as well whether there are inventory buildups or idle machines that are staffed.

1 (Poor) = The factory is organized into departments defined by equipment (press room, saw room, etc.). Individual processes are scheduled to meet separate production targets. Visual signals such as kanban cards, containers, or marked squares are not used. Inventories build up in front of some process steps and other process steps are idle waiting for parts. WIP and idle time is high.

3 (Good) = Linked processes are sometimes grouped together in cells/lines. Visual signals are used in some, but not all, cells/lines. Inventories build up in front of some processes and other process steps are idle waiting for material/parts. WIP and/or idle time is moderate.

5 (Excellent) = All linked processes are grouped together in cells/lines with very short distances between processing steps. Material/parts needed for each process step is replenished based on visual signals such as kanban cards, containers, or marked squares. There is very little inventory in front of process steps and no process steps are idle waiting for material/parts.

4.2 Preventative maintenance

When and how are machines maintained? What is done to avoid having machine break down, run improperly or pose safety risks? How does the company divide responsibility for maintenance among production workers and maintenance personnel? During walkthrough, look to see whether PM schedules are posted in work areas and check whether tasks have been performed in the most recent 60 days.

1 (Poor) = There is little or no preventive maintenance. Tests, adjustments, parts replacement, lubrication, and thorough cleaning are done almost entirely after machines break down or begin to produce bad parts. Maintenance personnel perform all machine maintenance tasks.

3 (Good) = A preventive maintenance schedule specifying the dates for specific activities -- tests, adjustments, parts replacement, lubrication, and thorough cleaning -- is in place for most machines and HVAC equipment. Preventive maintenance activities are usually, but not always, completed on schedule. A few production workers perform some routine maintenance on the machines they tend, but this is not the norm.

5 (Excellent) = A preventive maintenance program is in place throughout the factory, including all machines and HVAC equipment. The schedule is posted on machines/equipment and tracked by the maintenance department. The schedule is always followed. Production workers share responsibility with maintenance personnel for maintaining machines, i.e., production workers do routine tasks like cleaning machines, checking oil levels, reporting leaks, and flagging tools that are worn.

5. Quality Assurance

5.1 Specification of quality standards and process standardization

How are written product specifications, standard operating procedures, work instructions for specific orders prepared and communicated to production workers?

During walkthrough, look at examples of written product specifications, standard operating procedures, and work instructions that are posted in work areas. Look for displays of conforming samples.

1 (Poor) = Most, if not all, communication is verbal. Written product specifications, standard operating procedures, work instructions for specific orders are poorly written or do not exist at all. Examples of conforming parts/products are not displayed.

3 (Good) = Verbal communication is supplemented with fairly well written product specifications, standard operating procedures, and work instructions for how specific parts are to be made. Written documentation exists for most processes and parts/products. Documentation is posted in work areas. Examples of conforming parts/products are displayed for most parts/products.

5 (Excellent) = Verbal communication is supplemented with very well written product specifications, standard operating procedures, and work instructions for specific parts/products. Written documentation exists for all processes and parts/products. Documentation is posted in work areas. Examples of conforming parts/products are displayed for all parts/products.

5.2 Role of production workers in quality assurance

How does the company seek to prevent defective parts from advancing to subsequent process steps? What role do production workers have in this process? What authority, if any, do production workers have to stop the line? During the walkthrough, look to see whether production workers are inspecting and gauging parts going into and coming off the machines they tend. Look to see whether non-conforming materials are accepted or passed on.

1 (Poor) = Responsibility for quality control rests solely with final inspectors. Production workers do not inspect incoming or outgoing work.

3 (Good) = Production workers do in-process inspection for some, but not all, parts/products. The process is not standardized. Workers sometimes accept non-conforming material from upstream processes and pass on non-conforming material to downstream processes.

5 (Excellent) = Production workers do in-process inspection for all parts/products using a standardized process. Workers rarely accept non-conforming material from upstream processes and rarely pass on non-conforming material to downstream processes. Production workers are encouraged to stop the line when process variable values exceed thresholds/tolerances, when defects are found, or when they cannot complete the process in conformance to the SOP even if stoppage will cause shipments to be delayed.

5.3 Quality control procedures

How is quality assessed? At what points in the process does QC take place? Are QC inspectors provided with a list/description of unacceptable product defects? What criteria are used to determine whether finished products are shipped to the customer or, instead, separated out for sale as irregular (second), sent back for rework, or scrapped? What types of testing protocols are used? How are defects tracked? Are fault sheets/checklists used to record defects? What is done with data collected in fault sheets/checklists?

1 (Poor) = QC is only done at final inspection prior to packaging. Final inspection does not follow a standardized procedure. Checklists are not used. The criteria for determining whether finished products are shipped to the customer or, instead, separated out for sale as irregular (second), sent back for rework, or scrapped are not specified.

3 (Good) = QC points are located at key stages in the production process as well as final inspection. QC inspectors are provided with a list/description of unacceptable defects and use a standardized inspection procedure. The criteria for determining whether finished products may be shipped to the customer or, instead, separated out for sale as irregular (second), sent back for rework, or scrapped are fairly well specified.

5 (Excellent) = QC points are located at key stages in the production process as well as final inspection. QC inspectors are provided with a list/description of unacceptable defects and use a standardized inspection procedure. The criteria for determining whether finished products may be shipped to the customer or, instead, separated out for sale as irregular (second), sent back for rework, or scrapped are well specified. QC staff use fault sheets/checklists to record defects at each stage of production and final inspection. Defect data is entered into a computer database for subsequent analysis.

5.4 Process to identify root causes and take appropriate corrective action

How is defect data analyzed? What specific analytical techniques are used? What are some examples where this process has been used?

1 (Poor) = There is no process in place to analyze defects.

3 (Good) = A process is in place to analyze defect data. The analysis focuses on classifying defects in terms of the seriousness of the problem. A quality management team is responsible for identifying the cause of defects and determining corrective actions. Techniques such as 5 whys and fishbone diagrams are used occasionally to help identify root causes.

(Excellent) = A process is in place to analyze defect data. The analysis uses data on the type of defect, production step, machine used, materials used, and machine operator. A quality management team is responsible for identifying the cause of defects and determining corrective actions. Statistical techniques such as 5 whys and fishbone diagrams are frequently used to help identify root causes. Corrective action reports are prepared and the resolution of problems is tracked. Input from production workers is actively sought in this process.

6. Cleaner Production**6.1 Minimization of material waste, recovery/reuse waste material on site, and recycling of scrapped material**

How are opportunities to minimize, recover/reuse and recycle materials identified? What are some examples of actions that have been taken? During the walkthrough, ask about instances where this has been done.

1 (Poor) = There is no process in place to identify opportunities to minimize, recover/reuse or recycle materials.

3 (Good) = The process to identify opportunities to minimize, recover/reuse or recycle materials is ad hoc. There are some, but not many, examples of where this has happened. Material usage is measured, but not always systematically.

5 (Excellent) = A comprehensive, systematic process to identify opportunities to minimize, recover/reuse or recycle materials is in place. The process is continuous. There are numerous examples where this has happened. Materials usage is measured systematically.

6.2 Substitution of hazardous materials with safer alternatives

How are opportunities to replace hazardous materials that are used in products and/or processes with safer substitutes identified? What are some examples of actions that have been taken? During the walkthrough, ask about instances where hazardous materials have been replaced with safer substitutes.

1 (Poor) = There is no process in place to identify opportunities for replacing hazardous materials.

3 (Good) = The process to identify opportunities to replace hazardous materials is ad hoc. There are some, but not many, examples of where hazardous materials have been replaced. The use of hazardous materials is measured, but not always systematically.

5 (Excellent) = A comprehensive, systematic process to identify opportunities for replacing hazardous materials is in place. The process is continuous. There are numerous examples where hazardous materials have been replaced. The use of hazardous materials is measured systematically.

6.3 Water conservation

How are opportunities to conserve water identified? What are some examples of actions that have been taken? During the walkthrough, ask where water conservation measures are being used.

1 (Poor) = There is no process in place to identify opportunities to conserve water

3 (Good) = The process to identify opportunities to conserve water is ad hoc. There are some, but not many, examples of water conservation measures being used. Water usage is measured, but not always systematically.

5 (Excellent) = A comprehensive, systematic process to identify opportunities to conserve water is in place. The process is continuous. There are numerous examples of water conservation measures being used. Water usage is measured systematically.

6.4 Energy conservation

How are opportunities to conserve energy identified? What are some examples of actions that have been taken? During the walkthrough, ask where energy conservation measures are being used.

1 (Poor) = There is no process in place to identify opportunities to conserve energy

3 (Good) = The process to identify opportunities to conserve energy is ad hoc. There are some, but not many, examples of energy conservation measures being used. Energy usage is measured, but not always systematically.

5 (Excellent) = A comprehensive, systematic process to identify opportunities to conserve energy is in place. The process is continuous. There are numerous examples of energy conservation measures being used. Energy usage is measured systematically.

7. Safety and Health

7.1 Safety and health policy

What is the safety and health policy? When and how was it developed? Does the policy reflect national laws and regulations? How has the policy been communicated to production workers? Review written document, if it exists.

1 (Poor) = A written safety and health policy does not exist.

3 (Good) = A written safety and health policy exists. It centers on a statement of goals and focuses on meeting minimum standard as stipulated by law. It is worded fairly well and has been shared with production workers.

5 (Excellent) = A written safety and health policy exists. It is substantive and clearly worded. In addition to goals, the policy identifies major hazards/risks, outlines safety and health programs, lays out the responsibility of managers and production workers, and indicates the training to be provided to workers. The policy goes beyond minimum standards as stipulated in national law. When asked, production workers can explain the policy.

7.2 OSH committee

Has the factory established an OSH committee? Who serves on the committee? What are its responsibilities? How often does it meet?

1 (Poor) = There is no OSH Committee or it meets only once per year.

3 (Good) = An OSH Committee has been established and meets 3-4 times per year. The responsibilities of the committee are fairly well defined and include some, but not all, of the following: inspecting the workplace to identify hazards/risks; determining the root causes of problems; developing and submitting written recommendations to management; monitoring the progress of corrective actions; helping the employer establish safety and health programs; and assisting the employer in resolving worker safety and health complaints.

5 (Excellent) = An OSH Committee has been established and meets at least monthly. The committee includes production worker representatives. The responsibilities of the committee are well defined, and include the following: inspecting the workplace to identify hazards/risks; determining the root causes of problems; developing and submitting written recommendations to management; monitoring the progress of corrective actions; helping the employer establish safety and health programs; and assisting the employer in resolving worker safety and health complaints.

7.3 Hazard identification/risk assessment and safety audits

When and how has a hazard identification/risk assessment been conducted? When and how are safety audits carried out? To what extent are production workers encouraged to report safety and health concerns? Ask to see assessment/audits.

1 (Poor) = A hazard identification/risk assessment has never been done. A safety audits has not been conducted for more than three years. Production workers are discouraged from reporting safety and health concerns.

3 (Good) = A hazard identification/risk assessment has been done at least once in the past three years. Safety audits are conducted every two or three years. Production workers are invited to report safety and health concerns.

5 (Excellent) = A comprehensive hazard identification/risk assessment has been done with and is updated whenever major process changes occur. Safety audits are thorough and are conducted at least once a year. Production workers are strongly encouraged to report safety and health concerns.

7.4 Labeling and storage of hazardous material

How does the factory deal with labeling of hazardous materials? During the walkthrough examine labeling.

1 (Poor) = Hazardous material is rarely labeled or stored properly.

3 (Good) = Most hazardous materials is properly labeled and stored

5 (Excellent) = All hazardous material is properly labeled and storied

7.5 Toilet/washroom facilities and clean drinking water.

During the walkthrough, take a look at conditions in the toilets/washrooms. Ask productions workers (men and women) whether that have ready access to toilets/washrooms and clean water.

1 (Poor) = There are not enough toilets/washrooms. Facilities are not kept clean or stocked with soap for hand washing. There is insufficient clean drinking water or drinking water is not readily accessible.

3 (Good) = There are enough toilets/washrooms, but sometimes they are not clean or stocked with soap for hand washing. Production workers can access clean drinking water, but only during work breaks.

5 (Excellent) = There are enough toilets/washrooms. Facilities are always or almost always clean and stocked with soap for hand washing. Clean drinking water is sufficient and readily accessible to production workers to use at their discretion.

7.6 Heating/cooling systems

What heating/cooling systems have been installed in production areas? How does the factory ensure that temperature is maintained within acceptable bounds? During walkthrough, observe temperature.

1 (Poor) = The facility does not have adequate heating/cooling equipment. The temperature in production areas is frequently too hot or too cold.

3 (Good) = The factory has adequate heating/cooling equipment. Temperature in production areas is maintained at acceptable levels most of the time.

5 (Excellent) = The factory has adequate heating/cooling equipment and the temperature is always maintained at acceptable levels.

7.7 Ventilation systems

What ventilation equipment has been installed in production areas? How does the factory ensure that air quality is maintained within acceptable bounds? During walkthrough, observe air quality.

1 (Poor) = The facility does not have adequate ventilation equipment. Air quality is generally poor.

3 (Good) = The factory has adequate ventilation equipment. Air quality is maintained at acceptable levels most of the time.

5 (Excellent) = The factory has adequate ventilation equipment and air quality is always maintained at acceptable levels.

7.8 Fire safety and emergency procedures.

What measures are in place to prevent fires and deal with emergencies? During walkthrough look for fire alarms, fire extinguishers, emergency exits, and marked escape routes and meeting points.

1 (Poor) = The facility does not have fire alarms. Fire extinguishers are not readily accessible. Emergency exits are blocked.

3 (Good) = The facility has fire alarms. Fire extinguishers are readily accessible. Emergency exits are unobstructed.

The facility has fire alarms. Fire extinguishers are readily accessible. Emergency exits are unobstructed and well marked. Escape routes and meeting points are well marked. An emergency drill is conducted at least once per year.

7.9 Use of guards or other safety devices on production machinery.

What type of guards or other safety devices are installed on production machinery? During walkthrough, observe guards and other safety devices.

1 (Poor) = Machines that pose risks do not have functioning safety guards, lockout devices, or other injury avoidance features.

3 (Good) = Most machines that pose risks have functioning safety guards, lockout devices, or other injury avoidance features.

5 (Excellent) = All machines that pose risks have functioning safety guards, lockout devices, or other injury avoidance features.

7.10 Use of appropriate personal protection equipment.

Has the company purchased appropriate PPE for production workers, including, if required, head protection, hand and arm protection, foot and leg protection, eye and face protection, hearing protection, and respiratory/lung protection. How does the factory ensure that workers use appropriate PPE at all times? During walkthrough, observe use of PPE.

1 (Poor) = Production workers are not equipped with appropriate personal protection equipment.

3 (Good) = Production workers are equipped with appropriate personal protection equipment and wear them most of the time.

5 (Excellent) = Production workers are equipped with appropriate personal protection equipment and always wear them.

7.11 Availability of first aid for injured workers.

How are accidents dealt with? Who provides first aid? How have these people been trained? How regularly are first aid boxes checked and restocked? Observe where first aid boxes are located and what's in them.

1 (Poor) = First aid boxes are poorly stocked or are not readily accessible. Only a few people, if any, are capable of administering first aid and then only for minor incidents.

3 (Good) = First aid boxes are reasonably stocked and accessible. There are people on each shift that are capable of administering first aid, but only for minor incidents.

5 (Excellent) = Fully stocked first aid boxes are located in readily accessible locations throughout the factory. There are people on each shift that are capable of administering first aid, including for serious injuries.

7.12 Reporting and investigation of injuries and near misses.

What system is in place to report injuries and near misses? What is done after an incident is reported? How are incidents investigated? What corrective actions are taken? Provide examples.

1 (Poor) = There is no formal reporting system in place for accidents and near misses.

3 (Good) = A process for reporting incidents is in place, but only major accidents are reported. Most, but not all, major accidents are investigated. Corrective action is taken most of the time.

5 (Excellent) = Every incident is reported and investigated by following a formal, systematic process. Corrective action is always taken to address the cause of the incident.

8. Production Worker Training**8.1 Production worker training**

How does the factory ensure that workers have the skills needed to perform their jobs? What training do new and existing workers receive? How is this delivered? How many hours of training do workers receive, on average, per year?

1 (Poor) = There is no standardized training program. New production workers receive very little training (less than eight hours). Training focuses exclusively on skills required for specific operations and is done on-the-job, i.e., there is no classroom training. Once on the job, workers receive little or no additional training.

3 (Good) = There is a standardized training program for production workers, whose content is laid out in a written document. The training to be provided to workers is described in general terms. Training is primarily in the form of on-the-job training, focusing on skills required for specific operations. All production workers receive safety training, including fire safety and use of personal protection equipment. On average, each worker receives 8-16 hours of training per year.

5 (Excellent) = There is a standardized training program for production workers, including an "induction" or "on-boarding" program for all new workers. The training program is laid out in a written document, which includes detailed information on training topics, training curricula, and worker eligibility. Training consists of both classroom and on-the-job training. All production workers receive safety training, including fire safety and use of personal protection equipment. Many workers are cross-trained and able to perform several different jobs in a cell or line. On average, each worker receives more than 16 hours of training per year.

9. Production Worker Compensation

9.1 Compensation policy

What is the compensation policy for production workers? How does the company ensure that the policy complies with legal requirements? How has the policy been communicated to production workers? Review written document, if it exists. Examine how the policy deals with minimum wage, overtime wages, premium pay, wage information, paid leave, and social insurance.

1 (Poor) = There is no written compensation policy.

3 (Good) = A written compensation policy exists and has been shared with all production workers. The policy is compliant with most legal requirements with respect to minimum wage, overtime wages, premium pay, wage information, paid leave, and social insurance.

5 (Excellent) = A written compensation policy exists and has been shared with all production workers. The policy is compliant with all legal requirements with respect to minimum wage, overtime wages, premium pay, wage information, paid leave, and social insurance.

9.2 Incentive pay scheme for production workers

What type of incentive pay is provided to production workers, if any?

1 (Poor) = Individuals production workers are paid an hourly wage; there is no additional pay based on the level of output produced or other aspects of job performance.

3 (Good) = Individual production workers are an hourly wage plus a premium based on output produced. If piece rates are used, these are based on standard output, which allow for workers to earn at least the minimum wage.

5 (Excellent) = The factory has an incentive pay scheme based on individual and group performance, which is tied to multiple goals such as output, quality, attendance, and safety.

9.3 Pay slips

Does the company use pay slips? Do these document all wages, deductions and bonuses? Do workers understand how pay is calculated? Review example.

1 (Poor) = The factory does not use pay slips.

3 (Good) = The factory uses pay slips, but calculations are not completely clear.

5 (Excellent) = The factory uses pay slips and all calculations are clear.

10. Performance Measurement System

10.1 Performance measurement system

How is factory performance measured? What and how often are specific KPI tracked? How do managers use KPI to help manage the factory? During the walkthrough, ask to see reports provided to owner/CEO and production manager.

1 (Poor) = Factory performance is measured primarily in terms of sales and profit.

3 (Good) = Factory performance is assessed along several dimensions such as financial performance, customer satisfaction, productivity, and quality. Targets for some, but not all, KPI are established. Managers receive reports no more than quarterly.

5 (Excellent) = Factory performance is assessed along multiple dimensions such as financial performance customer satisfaction, productivity, capacity utilization, resource efficiency, internal quality, worker safety, and employee satisfaction. Targets are established for each KPI. Managers receive reports at least monthly. KPIs are used to identify issues for management attention and inform decisions.

Annex III. Enterprise Self-Assessment Survey

Instructions for the interviewer: Responsible for the answers is the owner or the General Manager who coordinates the answers with the staff:

I. Perception on changes occurred in the enterprise in the last 24 months

Changes in the enterprise	(1) Have changes occurred in the last 24 months?	(2) In which magnitude these changes occurred? (in case answered that YES in the previous question)				
		Very low	Low	Medium	High	Very high
Production manager						
1. Reduced production defects at the end of the line	a. Yes b. No					
2. Reduced raw material waste	a. Yes b. No					
3. Reduced energy and/or water consumption per production unit	a. Yes b. No					
4. Reduced costs per unit produced	a. Yes b. No					
5. Increased productivity at work	a. Yes b. No					
Human Resources Manager						
6. Reduced number of accidents in the job	a. Yes b. No					
7. Reduced absenteeism	a. Yes b. No					
8. Reduced labor turnover	a. Yes b. No					
9. Adoption of policies and/or initiatives to promote gender equality in the company	a. Yes b. No					
10. Increased initiatives to promote the reduction of violence against women in the country	a. Yes b. No					
11. Increased participation of women in management, supervision or other positions in the company where they had little or no presence	a. Yes b. No					

General Manager /owner

12. Increased customer satisfaction with product quality	a. Yes b. No
13. Increased sales	a. Yes b. No
14. Increased profits	a. Yes b. No

II. Perception on influence of SCORE Training on changes in the last 24 months

SCORE's influence on changes	(3) Do you consider that SCORE influenced in changes?	(4) How much influence do you consider SCORE had in changes? (in case answered that YES in question 3)				
		Very low	Low	Medium	High	Very high

Production manager

Reduced production defects at the end of the line	a. Yes b. No c. Does not apply
Reduced raw material waste	a. Yes b. No c. Does not apply
Reduced energy and/or water consumption per production unit	a. Yes b. No c. Does not apply
Reduced costs per unit produced	a. Yes b. No c. Does not apply
Increased productivity at work	a. Yes b. No c. Does not apply

Human Resources Manager

Reduced number of accidents in the job	a. Yes b. No c. Does not apply
Reduced absenteeism	a. Yes b. No c. Does not apply

► **Impact of ILO SCORE Training on management practices, working conditions and business results in Peruvian SMEs**

Reduced labour turnover	a. Yes b. No c. Does not apply
Adoption of policies and/or initiatives to promote gender equality in the company	a. Yes b. No c. Does not apply
Increased initiatives to promote the reduction of violence against women in the country	a. Yes b. No c. Does not apply
Increased participation of women in management, supervision or other positions in the company where they had little or no presence	a. Yes b. No c. Does not apply
General Manager /owner	
Increased customer satisfaction with product quality	a. Yes b. No c. Does not apply
Increased sales	a. Yes b. No c. Does not apply
Increased profits	a. Yes b. No c. Does not apply

V. General assessment of company changes in the last 2 years (2017 and 2018)

What do you believe have been the main positive changes that have occurred in the enterprise in the past 2 years? (maximum of 3)?

- a)
- b)
- c)

In what aspects do you believe the enterprise has made no progress or has regressed in the past two years? (maximum of 3)?

- a)
- b)
- c)

Annex IV. Workers Survey

Workers Survey

Surveyed in this study must be workers of the enterprise.

Questions about your workplace

How would you rate the following points in your workplace? Please check a box per question.



VERY BAD



BAD



REGULAR



GOOD



VERY GOOD

15. Is there opportunity to discuss work-related problems or ideas for improvement with coworkers?

16. Is there possibility to use an internal communication system as a suggestion box, for example? ^A

17. As an employee, have you played a role in solving work-related problems? ^A

18. Have you participated in meetings with one or more people to troubleshoot work issues or generate improvements? ^B

19. Did you feel that your ideas and opinions are valued by your superiors? ^B

20. Did you feel that teamwork is promoted in your company? ^B

21. Have you received training in health and safety? ^C

22. Did you feel safe from harassment, abuse or intimidation? ^C

23. Have you felt safe from discomfort or been bullied on your job site because of your religion, race, sexual orientation, or beliefs? ^C

24. How do you rate the way that raw materials move or store?

25. How do you rate lighting on your workstation?

26. How do you rate temperature in your workplace?

27. How do you rate air quality in your workplace?

How would you rate the following points in your workplace? Please check a box per question	 VERY BAD	 BAD	 REGULAR	 GOOD	 VERY GOOD
28. How do you rate noise and vibration levels?					
29. Is personal protection equipment accessible and suitable?					
30. How do you rate your opportunity to take breaks during working time (services, drinking water, or using your breast-feeding hours)?					
31. How do you rate the amount you are paid including any contribution in kind (food, transportation, etc.)?					
32. How do you rate your work schedule?					
33. How do you rate your possibility of requesting leave in case of illness or justified absence?					
34. How do you rate your access to drinkable fresh water during working hours?					
35. How do you rate the company's sanitary facilities?					
36. How do you rate your company's locker room?					
37. How does the company's dining room or dining facilities qualify?					
38. Have you received additional payments or bonuses as a reward for meeting goals or for good performance (does not include overtime payment) ^D					
39. Have you felt that you would like to stay in this company in the long term? ^D					
40. Have you been motivated to work hard? ^D					
41. Have you received training from a superior or technician on how to do your job duties? ^E					
42. Have you felt that the way you do your job is efficient and productive? ^E					
43. Has your work made easier due to the organization of the production area? ^E					
FOR THE RESPONDENT: Count the number of marks per column					

Part 3: general appreciation of company changes in the last 2 years (2017 and 2018)

What do you consider as main changes in favor of workers that have occurred in the company in the last 2 years (mention a maximum of 3)

- a)
- b)
- c)

In which aspects related to the situation of workers do you consider that there was not advances (or that it has regressed) in the company in the last 2 years (mention a maximum of 3)

- a)
- b)
- c)

Final question:

Have you previously answered this same survey?

- a. Yes, the last year and two years ago
- b. Yes, the last year
- c. Yes, two years ago
- d. No

Annex V. List of enterprises in which SCORE Training final evaluation instruments were applied

#	Enterprise	Province	Baseline date	Midterm Evaluation date	Final Evaluation date	Number of months from Baseline to Final Evaluation
1	MARINA MEJIA QUIÑONES	LIMA	22/03/2017	15/05/2018	24/06/2019	27
2	PERUVIAN CLOTHES & STYLE SAC	LIMA	23/03/2017	12/05/2018	25/06/2019	27
3	RASIL SRL	LIMA	27/03/2017	07/09/2018	26/06/2019	27
4	FITO PERU EXPORT IMPORT SAC	LIMA	18/04/2017	18/05/2018	27/06/2019	26
5	CORPORACION CIMMSA SA	LIMA	24/03/2017	15/05/2018	28/06/2019	27
6	NEO DETER DEL PERU SAC	LIMA	05/04/2017	14/08/2018	08/07/2019	27
7	VITALLANOS PERU SAC	LIMA	15/06/2017	17/07/2018	09/07/2019	25
8	B&C NEGOCIOS Y SERVICIOS	LIMA	24/10/2017	05/09/2018	10/07/2019	21
9	NOVATRONIC SAC	LIMA	26/06/2017	26/07/2018	12/07/2019	25
10	PAGUSSO GROUP SAC	LIMA	31/05/2017	14/06/2018	23/07/2019	26
11	AMFA VITRUM SA	LIMA	23/06/2017	24/07/2018	24/07/2019	25
12	JORDAN Y JORDAN INVERSIONES SAC - LAS CANASTAS	LIMA	23/06/2017	17/09/2018	25/07/2019	25
13	NUTRI BODY SAC	LIMA	10/05/2017	12/06/2018	02/08/2019	27
14	ALL CENTER EIRL	LIMA	27/04/2017	12/09/2018	12/08/2019	27
15	INDUSTRIAS GENERALES CHOQUE EIRL	LIMA	12/09/2017	24/08/2018	13/08/2019	23
16	MADERA TRANSFORMADA SA	LIMA	13/09/2017	27/08/2018	14/08/2019	23
17	METAX INDUSTRIA Y COMERCIO SAC	LIMA	03/05/2017	02/07/2018	16/08/2019	27
18	TECNIASES SAC	LIMA	10/04/2017	27/05/2018	22/08/2019	28
19	CABINETS & RACKS SAC	LIMA	18/04/2017	27/05/2018	22/08/2019	28
20	JYC CORPORACION INDUSTRIAL SAC	LIMA	03/05/2017	18/06/2018	23/08/2019	27

21	ALLPA SAC	LIMA	31/05/2017	27/06/2018	27/08/2019	27
22	MARC IMPORTACIONES SAC	LIMA	07/06/2017	28/08/2018	06/09/2019	27
23	INVERSIONES INDUSTRIALES MALQUI SAC	LIMA	10/05/2017	19/06/2018	09/09/2019	28
24	MEXTHON SAC	LIMA	19/04/2017	21/05/2018	13/09/2019	29
25	UN PILAR TRES TORRES SAC - FUNCIÓN LINEAL	LIMA	17/08/2017	13/09/2018	16/09/2019	25
26	GMBTMALTESE CUEROS Y TELARES EIRL	LIMA	09/06/2017	23/06/2018	17/09/2019	27
27	INTERACTIVE FURNITURE SAC	LIMA	16/08/2017	18/09/2018	18/09/2019	25
28	JHO SERVICIOS SAC	LIMA	22/06/2017	23/07/2018	18/09/2019	27
29	CASTELLANOS ACEROS Y MADERAS SAC	LIMA	25/07/2017	11/09/2018	19/09/2019	26
30	TRAPITOS KID EIRL	LIMA	27/06/2017	04/10/2018	19/09/2019	27
31	RAIZZA BONETTI EIRL	LIMA	06/06/2017	21/06/2018	21/09/2019	27
32	SF HERMANOS SRL	LIMA	16/03/2017	28/06/2018	23/09/2019	30
33	CREACIONES ALIZ EIRL	LIMA	22/08/2017	29/08/2018	24/09/2019	25
34	CORPORACION ELECTRO SVM EIRL	LIMA	26/04/2017	20/11/2018	25/09/2019	29
35	DISTRIBUIDORA DE AVES SOPHY SRL	LIMA	22/08/2017	20/11/2018	27/10/2019	26
36	ALPI INDUSTRIAS SAC	UCAYALI	04/04/2017	28/05/2018	15/07/2019	27
37	CONSORCIO MADERERO SAC	UCAYALI	05/04/2017	03/09/2018	15/07/2019	27
38	OLEAGINOSAS AMAZONICAS SA	UCAYALI	12/07/2017	30/08/2018	16/07/2019	24
39	INDUSTRIA FORESTAL HUAYRURO SAC	UCAYALI	06/04/2017	28/05/2018	17/07/2019	27
40	MADERERA MARAÑON SRL	UCAYALI	11/07/2017	31/08/2018	17/07/2019	24
41	INDUSTRIAS OLEAGINOSAS MONTE ALEGRE SA	UCAYALI	01/09/2017	01/09/2018	19/07/2019	23
42	OLEAGINOSAS PADRE ABAD SA	UCAYALI	02/09/2017	04/09/2018	18/07/2019	23
43	DISTRIBUIDORA PATITA PUCALLPA SAC	UCAYALI	01/09/2017	01/09/2018	20/07/2019	23

44	DULCERIA MANJAR REAL EIRL	LAMBAYEQUE	03/07/2017	20/07/2018	01/07/2019	24
45	MADERERA NUEVO MUNDO PERÚ SAC	LAMBAYEQUE	04/07/2017	20/07/2018	02/07/2019	24
46	HILADOS RICHARD SAC	LAMBAYEQUE	05/07/2017	20/07/2018	02/07/2019	24
47	FABRICACIONES LEONCITO SAC	LAMBAYEQUE	03/07/2017	21/07/2018	03/07/2019	24
48	UNIVERSIDAD CATÓLICA SANTO TORIBIO DE MOGROVEJO	LAMBAYEQUE	18/07/2017	19/07/2018	03/07/2019	24
49	KINGKONG MOCHICA	LAMBAYEQUE	04/07/2017	21/07/2018	04/07/2019	24
50	EL SUPER SAC	LAMBAYEQUE	05/07/2017	21/07/2018	04/07/2019	24
51	DELCOR FABRICACIONES SAC	LAMBAYEQUE	18/07/2017	19/07/2018	05/07/2019	24
52	CORPORACIÓN FRUTÍCULA DE CHINCHA SAC - FRUCHINCHA	ICA	17/08/2017	03/10/2018	11/07/2019	23

Annex VI. Case Study enterprises

Enterprise	Region
RASIL	Lima
CORPORACION CIMMSA	Lima
FABRICACIONES LEONCITO	Lambayeque
KING KONG MOCHICA	Lambayeque
INDUSTRIA FORESTAL HUAYRURO	Ucayali
NEO DETER	Lima
MADERERA MARAÑON	Ucayali
AMFA VITRUM	Lima
TECNIASES	Lima
MEXTHON	Lima

Annex VII. Case Study Example: Corporation CIMMSA

The benefit of collaborative work - Continuous Improvement

Inclusion and active collaboration of workers with improved working conditions proves key to continuous improvement



Company profile

SME: CIMMSA Corporation S.A

Location: Ate District, Lima, Peru

Staff: 24 workers (4 women)

Established: 2011

Refrigeration equipment



SCORE is driving change through increased motivation. SCORE Training has been a very good starting point, we were shown weaknesses in the company and put on track to achieve our goals.

► Mr. Villacriz Fernández Gilberto,
General Manager

What did they do?

CIMMSA Corporation S.A., located in Lima, is a family run business that manufactures and sells refrigeration equipment (refrigerator display cases, freezers, cold storage equipment, etc.). Its quality management is ISO 9001: 2015 certified, making it more competitive in the national market than pre certification.

CIMMSA participated in the SCORE and implemented two modules: "Workplace Cooperation" and "Safety & Health at Work".

In the initial stage of SCORE Training CIMMSA formed an Enterprise Improvement Team (EIT) composed of three managers and two production line operators, in order to accomplish objectives outlined in the Enterprise Improvement Plan. The Plan was jointly designed by workers, supervisors and managers of the company fostering exchange, mutual respect and communication.

The EIT conducted a diagnosis of the firm and identified the following **key areas for improvement**:

- Staff worked in a precarious & disorderly environment. there was no designated area for the workers to have lunch, and sanitary facilities were in a poor condition
- On average, 25% of the raw material (steel) was discarded as waste
- Customer satisfaction rates were not taken into consideration when considering the operations of the company; sales and high turnover of stock were the only metrics
- Worker motivation was low

The EIT identified and promoted the following actions in collaboration with a SCORE trainer:

- **Standardization of production processes**, labeling of tools, and calibration of machinery as a permanent and continuous process, as well as reduction of waste.
- **Analysis and reduction of delays** during the production process facilitating the implementation of ISO 9001 (quality management system). As part of this process satisfaction survey were performed to calculate satisfaction rate of customers.
- Implementation of **a laboratory for testing finished machines** in the last stage of production before distribution
- **Creation of a safe, clean and orderly work environment**: signs around the workplace, well organized and systematic storage, recovery of space for better mobilization of staff around the workplace
- Installment of proper sanitary facilities, dedicated workers' lunch space and drinking fountains

After the application of the 5s⁴³, cleaning and signaling of work areas and passage ways, the EIT proceeded to implement the security protocol with use of **appropriate and comfortable uniforms for workers and provision of protective equipment** to prevent accidents where risk could not be completely eliminated and to increase workers' awareness regarding security and safety.

SCORE Training in pictures



▼
Before SCORE Training: disordered and unclean cooling area



▼
After SCORE Training: more ordered and cleaner cooling area with specific space for finished products



▼
Before SCORE Training: there was no designated area for finished products



▼
After SCORE Training: finished goods test area with signage and clearly marked walkways

⁴³ 5S is a system for organizing spaces so work can be performed efficiently, effectively, and safely. This system focuses on putting everything where it belongs and keeping the workplace clean, which makes it easier for people to do their jobs without wasting time or risking injury.

Key results: increased quality & reduced costs



▲ The annual production capacity **increased by 48%**



▼ The defect rate **decreased from 15% to 5%**



▼ The annual electricity consumption **decreased by 10%**



▲ The overall customer satisfaction rate **increased by 20%**

A change of mindset leading to growth

CIMMSA has achieved a more collaborative approach within teams that has contributed to developing continuous improvement actions in the production process. Better working conditions characterized by better communication, respectful interactions among workers and managers as well as improved facilities have all contributed to the success and increased motivation of staff.



“The workplace is much more ordered and cleaner”... “There is more communication and organization among workers”

► A worker of CIMMSA's operation department



There is a perception of improvement, the feeling of inclusion and respect among all employees and the level of communication has improved a lot

► Mr. Villacruz Fernández
Gilberto, General Manager



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ISBN 978-9-22-033098-2



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