

# **Workplace Health and Safety, and Business Training: A case study of the light engineering sector in Bangladesh**

## **Analysis Plan**

**November 2018**

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### **Abstract**

The incidence of workplace injury is high in manufacturing in developing countries. In this project, we focus on the impact of intensive training and information on decent work environment among workers and firms. We partner with BRAC, which also collaborates with different trade associations, to understand and evaluate the workplace safety and awareness in the light engineering (LE) sector in Bangladesh. In order to understand the causal effects of information and training on the health and safety at the firm level, we randomly assign firms in LE sectors into two treatment arms: T1: Managers/owners of firms receive intensive training on occupational health and safety (OHS). T2: OHS + business training and financial linkages, C: the firms in the control group receive no training. We examine a range of outcomes related to workers' safety and health issues, working environment and safety standards of firm, cost, business growth, investment and profitability.

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# 1 Introduction

Small and micro enterprises (SMEs) account for a large portion of production and employment in low and middle income countries (LMICs), so the development of this sector has important aggregate development consequences. SMEs often face constraints that prevent them from growing: the entrepreneurs may lack technical knowledge, financial capital, and strong business practices (McKenzie and Woodruff 2014). Such firms also lack proper safety measures, resulting in work related injuries and fatalities and other long run consequences for workers (Ulutasdemir, Kilic, Zeki, & Begendi, 2015; Lucchini & Zimmerman, 2009; Hasle & Antonsson, 2009). The WHO (1994) recognized that a decent work environment that provides occupational health and well-being is a crucial prerequisite for enhancing the productivity of the work force and overall socio-economic development and sustainability. The International Labour Organization (ILO) has developed several programs and training packages for SMEs and firms in the informal sector in LMICs since the mid-eighties which incorporate the occupational safety and health (OHS) issues to promote decent work environment in this sector<sup>2</sup> (Hasle & Antonsson, 2009) . However, to the best of our knowledge, the impacts of implementing these programs in various countries are unclear as there has been no scientific evaluation of these programs. In this study, we conduct a randomized controlled trial (RCT) in collaboration with BRAC to examine the impact of addressing the OHS constraints, along with operational and credit constraints faced by SMEs in rural and semi-urban Bangladesh.

This research project has two main objectives. First, we focus on how the decent work environment training can improve the work environment – especially in addressing safety issues within the firms and among workers. Second, we examine the potential impact of the combination of business training and access to finance with OHS on firms. This project takes advantage of BRAC’s program, Pro-poor Growth of Rural Enterprises through Sustainable Skills-development (PROGRESS) supported by European Commission. The main purpose of PROGRESS is to develop a dynamic and competitive micro and cottage enterprises in rural and semi-urban Bangladesh by improving individual firm’s capacity in technical knowhow and providing a safe and decent work environment for its workers. The training will respond directly to the needs of the selected trades and enterprises and provide relevant orientation,

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<sup>2</sup> For example the Work Improvement in Small Enterprises (WISE) program, the Small Enterprise Development (SEED) program, the Improve Your Business (IYB) training package, the Participatory Action Training for the Informal Sector (PATRIS) training package etc.

business development, and decent work training. We embed a randomized controlled experiment in BRAC's *PROGRESS* program.

## **2. Context**

This project takes advantage of an existing program, *PROGRESS*, that focuses on an important thriving sector of the economy in Bangladesh: the light engineering (hereafter LE) sector. The LE sector is one of the largest sub-sectors of small and medium enterprise (SME) with 2 million workers in the sub-sector. The LE sector occupies a unique position in the economy of Bangladesh since the sector acts as a feeder or support industry to other industries, including agriculture and forestry, fishery, manufacturing, wholesale and retail trade, construction, transport, tourism, and communication. These industries rely on the LE sector at various stages of the supply chain. The sector plays a vital role in the socioeconomic development of the country as the sector creates increasing employment opportunities, making up 2% of the country's GDP. Because of its role in the economy, this project is highly policy relevant. In Industrial Policy 2009 and Industrial Policy 2005, the government of Bangladesh (GoB) considered this sector as a thrust sector for development. The sector has also been considered a priority in Export Policy 2006-09 and Export Policy 2009-12. The government believes that the country's economy will grow further if the LE products currently imported by major industries are manufactured within the country.

There are about forty thousand industrial units of LE firms, most of them are small. Products include metal products and electrical, electronic and electromechanical products. Part of the manufacturing process or machine parts of the LE sector may be made of ceramics, rubber or plastic. The LE sector supports other sectors of the economy by producing a wide range of spare parts, casting, moulds and dyes, oil and gas pipeline fittings, light machinery, and by providing repair services. Spare parts produced by the LE sector have been used by cement factories, paper mills, jute mills, textile mills, sugar mills, food processing industry, plastic industry, printing industry, fertilizer factories, railway, shipping, marine transport, automobiles, construction machinery, and the pharmaceutical industry.

### **2.1 Work Environment in the LE sector**

The majority of firms in the LE sector are informal. The LE sector is characterized by its high dependence on semi to unskilled labour, relatively low production cost, absence of formal rules

and regulations, long and strenuous working hours, lack of innovative work practices, and lack of labour rights like minimum wage, health insurance, unemployment compensation and old age pension and absence of occupational health and safety (OHS) regulation. Most of their production process involves (but not limited to) welding or working with hazardous substances, and under the current circumstances, these can result in frequent work related injuries and fatalities.

**Welding:** use of oxy-fuel gas systems to generate high temperatures

Welding may result in the following injuries or harm to health:

- *electric shock* through contact with electrically live parts
- *radiation burns* to the eyes or body due to the welding arc
- *body burns to unprotected skin* from hot metal surfaces, metal fragments and sparks

**Work with Hazardous substances and dangerous goods**

- such as paint, glue, solvents, gases for welding, cleaning liquids and powders.
- may irritate or burn skin, be absorbed through skin or fumes and odors inhaled.
- Some chemicals, metal fumes and gases are flammable and exposure to a naked flame, cigarette or spark may result in a fire or explosion.

**Manual handling**

- lifting or carrying items such as containers of chemical substances, tools and metal materials, or holding objects during grinding or buffing.

**Electricity**

- The machinery, equipment and tools used in the metals and engineering industry are usually operated by electricity.

**Noise**

- work with noisy power tools and machinery such as angle grinders, power presses, metal guillotines and cutting, buffing and punching tools.
- exposed to noise levels that can lead to permanent hearing loss.

The characteristics of the LE sector provide a unique opportunity for improving health and safety conditions, and developing capacity building for entrepreneurs and workers. BRAC's Skills Development Programme, in collaboration with European Commission, will implement *PROGRESS* that seeks to increase the overall growth of this sector. The main objectives of *PROGRESS* are:

- Building the management capacities: provide training and financial linkage to LE firms.
- Improving working environment by promoting decent work environment

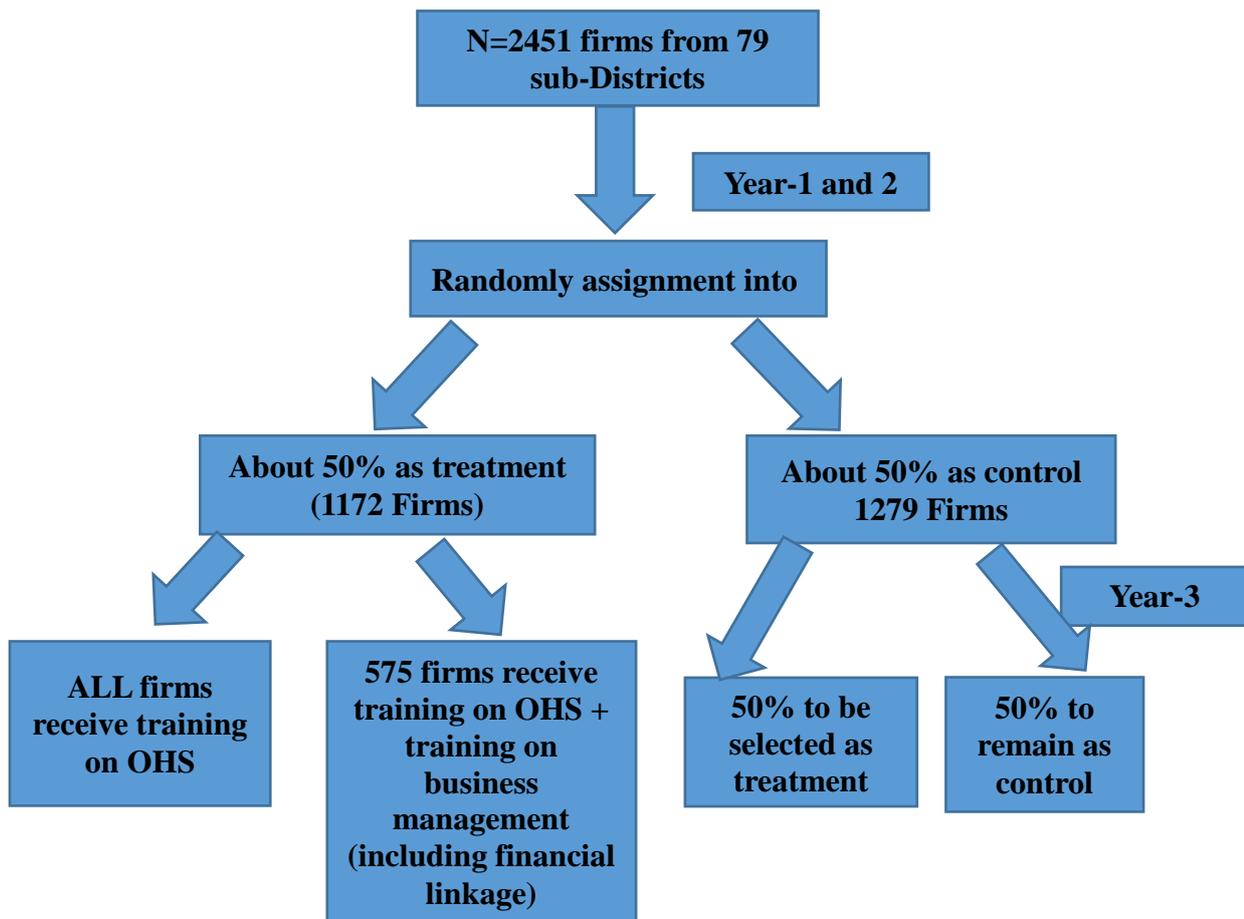
Our project is of general interest to BRAC and the government. Our randomized control trial would provide stakeholders with evidence on the potential benefits of addressing specific constraints faced by SMEs beyond the LE sector. With funding from GLM LIC, we collaborate with BRAC in PROGRESS project to conduct RCTs and focus on the health and safety training components of the intervention.

### **3 Experimental Design**

There were 2451 firms selected for randomization in 1356 market places, located in 79 sub-districts from 20 districts. The randomization was carried out at the market level so that all firms in a market were either considered as treatment or control groups. There were 650 markets selected for treatment and 706 markets for control. The treatment comprised 1172 firms and 1279 firms in control. The treatment firms are further randomly divided into two treatment arms T1 and T2. T1 has 597 firms and T2 has 575 firms. Randomization was done at the market level, and the fraction of firms treated within an area were assigned randomly to identify spillover effects.

**Intervention T1:** The owners/managers of the firms in treatment group T1 receive intensive training on occupational health and safety. A training module was developed with videos demonstrating safety awareness of firms and workers. The managers/owners receive a week-long training on the module considering the hazardous working environment of the firms.

**Intervention T2:** Managers/owners of the firms in this arm receive training on business management and will be provided with financial linkages in addition to the training on decent work received by the T1 firms.



PROGRESS will be implemented in phases over three years, with a target of training all the firms by the end of third year. During the first two years, only the treatment firms as described above will receive training (and financial linkages for T2 firms). In the third year, half of the control firms will also be provided decent work training. We will evaluate the firms to be trained in the first two years of PROGRESS. A midline survey at the end of year 1 will be conducted for all treatment and control firms. We plan to conduct another survey of all firms at the end of third year depending on the availability of funds. Our primary objective is to examine the effects after two years following the intervention.

The intervention was carried out in 2017 (September-November). A follow up survey will be carried out in December 2018. The second round of survey is being planned at the end of 2019. Subject to the availability of funding, we plan to do another survey in early 2021.

### **Training materials:**

#### *Workplace health and safety*

- 5 day training to managers/owners of the firms
- Preparing a training module

- Information of what safety measures would do
- Videos to demonstrate the appropriate health and safety practices in their working environment
- Personalized sessions for firm-specific safety measures

*Business Training and financial linkage*

- Standard business practices, accounts maintaining, information on backward and forward linkages
- Financial linkage with the banks and other financial organization

For the business training, PROGRESS provided a nine-day workshop using a well-established microenterprise training curriculum. This covers marketing, accounting, business plans, and cost structures. This program is designed to impart skills and attitude to enable entrepreneurs start a new business or expand an existing one. It focuses on access to information for technical up-grade, financial linkages and value chain development. The materials are also geared to improve skills in project development, decent work and sustainable business development, and improve knowledge-transfer.

PROGRESS also provided key financial information to existing enterprise owners to increase awareness on how financing can benefit their businesses and provide knowledge of the financial landscape (institutions, available products). BRAC Microfinance and other providers will facilitate the provision of financial products, including loans that are specifically tailored for enterprise owners, insurance, and savings products. LE owners under the treatment will receive a loan of \$500 from BRAC with interest rates lower than the market rate. Each enterprise will receive residential training, follow-up workshops, support for backward and forward linkages and weekly follow-up visits on implementation of learning from PROGRESS staff. The training will respond directly to the needs of the selected trades and enterprises and provide relevant orientation, business development, and decent work.

The Enterprise Productivity Improvement Module, developed during the inception phase (presented in Appendix A), was delivered through a 9-day residential training (3 phases, each consisting of a 3-day training). Training is being conducted at BRAC Learning Centres (BLC).

**Baseline/Pre-treatment survey**

For the purpose of evaluation of the PROGRESS project, BRAC's Research and Evaluation Division (BRAC-RED), in collaboration with Monash University, conducted a baseline survey. The firm survey focused on firm characteristics, including:

1. Year of entry/establishment, industry, occupation codes in the firm,
2. Owner characteristics—demographic characteristics, previous experience—industry, occupation, employment type
3. Number of employees and type of employees—occupation, paid/unpaid/contract, benefits (monetary or in kind), employee tenure. Employer tenure is a proxy for the match quality between workers and employers.
4. Upstream supplier and cost structure to estimate unit cost
5. Backward and forward linkages to understand the value chains
6. Unit price of the final product and the quantity produced to estimate revenue
7. Firm revenue, the adoption of new technology, access to financing
8. Business practices, including hazardous work practice and workplace injury
9. Knowledge of owners/managers regarding safety protocols in the workplace

The survey instrument is attached in Appendix B.

## **4 Outcomes of Interest and Hypothesis**

### **4.1 Primary outcomes**

Our primary outcomes of interest are owners/managers' knowledge and workers' perception and experience of working environment of the firms. We will also examine changes and practices of firms in improving the working conditions, the incidence of accidents, revenue, sales, profits, number of employees, and other potential outcomes. For measuring decent and safe work environment, our primary outcomes of interest are ventilation system, cleanliness of the workplace, use of safety equipment such as gloves, helmets etc., access to fire extinguisher, access to clean drinking water, clean toilets, timely wage payment, employment agreement, weekly off days, etc. Owners/managers' knowledge of OSH includes knowing the protocols in case of accidents such as short-circuit, fire, injury etc.

### **4.2 Secondary outcomes**

We will explore the mechanisms through which the intervention may change the behaviour of owners/managers. We examine owners/managers' attitude towards risk, general health risk and

safety concern, concern about the environment and others (altruism), self-esteem, resilience, competitiveness, entrepreneurial aspirations, and cognitive abilities.

A detail framework for measuring decent work has been provided by the ILO (Anker, Chernyshev, Egger, Mehran, & Ritter, 2002). We follow it in creating our measure of decent work environment. Appendix A provides a detailed description of the various outcome variables.

### **4.3 Main hypotheses**

**Hypothesis 1: The training on decent work will improve the perception of owners/managers of firms regarding the importance of decent and safe work environment in increasing productivity and growth.** In these firms, owners/managers should have better knowledge and perception regarding safe and decent working environment compared to the control firms.

**Hypothesis 2: The training on decent work will improve the behaviour of owners/managers and firm practice regarding decent work environment.** We expect firms that receive the training on decent and safe work environment to undertake more safety measures and abide by the pre-existing safety regulations than the control firms.

**Hypothesis 3: Given that the training brings changes in the working environment, the perception of workers regarding their work place will change.** It will increase their job satisfaction, which should lead to longer tenure and reduce the incidence of accidents and injuries. Literature shows that short tenure and job insecurity escalate the work related accident rates (Bohle, Quinlan, & Mayhew, 2001).

**Hypothesis 4: Business training will promote firm level investment, productivity and profitability and other practices.**

We expect firms to be more likely to take up loans and improve business practices. These should lead to higher profits either by reducing their cost or increasing sales revenue. They may have better inventory management, lower worker turnover (Bohle, Quinlan, & Mayhew, 2001), lower cost resulting from reduced accidents and injury rates (Dorman, 2000), improved market linkages etc. We will also compare the profitability of firms that receive OHS training versus that receive both OHS training and access to credit to isolate the effect of access to credit.

**Hypothesis 5: The training will bring positive changes among owners/managers in their attitude and perception toward life and business.** The program should improve the work environment and business practices, and this may also improve the attitude and perception of the trainees towards business and life as whole. Hamermesh (2001) shows that increased participation is correlated with higher job satisfaction.

**Multiple Testing:** Since there are numerous outcomes of interest, we will create index for various types of outcomes aggregating the relevant individual outcomes and perform multiple testing using the methods currently used in literature (for example the Holm – Bonferroni method (Holm, 1979), the Hochberg method (Benjamini & Hochberg, 1995) etc.).

## 5 Methodology

Randomization provides a clear and well-identified mechanism for identifying the impact of interventions. The average short-term effect of treatment on firms and workers can be carried out after the second year of surveys. The final follow-up survey will provide us with three waves of panel data that will allow us to examine the impact on outcomes mentioned above.

We will estimate the following to estimate the Intent to Treat parameter as follows:

$$y_{it} = \alpha + \beta_1 A_{it} + \beta_2 F_{it} + \gamma X_{it} + e_{it} \quad (1)$$

Where  $y_{it}$  is the outcome of interest for firm  $i$  at time  $t$ .  $A_{it}$  takes the value one if the firm is randomized into the OHS only intervention.  $F_{it}$  takes the value one if the firm is randomized into the OHS plus business training/financial linkage program.  $X_{it}$  includes firm characteristics. The regression will be clustered at the market level as the randomization was done at that level.

In order to measure spillover effects on other firms and workers, we employ the same equation (1) using the variation in treatment intensity. In our setting, we have areas where there were no firms treated, and there are areas with different fraction of firms in T1 and T2. Comparing untreated firms from treatment areas to firms from pure control areas (where no firms were treated) will provide estimates of the spillover effects. In addition, we will estimate how such spillover effects vary based on the intensity of the treatment.

We will also estimate the Local Average Treatment Effect using the random assignment of firms as an instrumental variable. The second stage of the regression model is then identical to model (1) but the *treatment* variables are replaced by the *participant* variables. So long as the assignment to the different groups does not have a direct impact on outcomes, controlling for treatment status identifies the local average treatment effect (LATE), which is the impact of participation for a firm/owner whose decision to participate changed because of the treatment assignment.

We will also examine heterogeneity in both treatment parameters by firm types, and characteristics such as size, location, and ownership type and also by owner/manager characteristics.

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## Appendix A

Defining the outcome variables:

We plan to measure four 6 categories of outcome variables. Within in each category there are several measure of pseudo-outcomes. These are described in the following table.

Measure	Survey <sup>a</sup>
Category 1: owner/manager's perception/knowledge of decent work environment	
A. Knowledge of safety issues	
i) How frequently to check the electricity connection?	Q3.3(1)
ii) Have the emergency contact numbers	Q3.3(3)
iii) What to do in case of fire	Q3.3(4)
iv) Earthquake precaution	Q3.3(5)
v) Protocol for mechanical or fire injury	Q3.3(6)
B. Perception of decent work environment	
vi) Separate toilets for male and female workers	Midline
vii) Provision of pure drinking water	Midline
viii) Provision for weekly leave	Midline
ix) Paternity leave	Midline
x) Maternity leave	Midline
xi) Not to engage children in risky activities	Midline
xii) Child labours should not work more than 7 hours a day	Midline
xiii) No wage discrimination for the same kind of work	Midline
xiv) Owners should take responsibility for work related injuries	Midline
xv) Decent (or safe) work environment improves productivity	Midline
xvi) Contracts should be written	Midline
xvii) Workers should be paid for any overtime	Midline
xviii) The minimum wage is required to maintain productivity	Midline
Category 2: Practice of decent work environment (owner/manager's view)	
A. Cleanliness	
i) Overall cleanliness of the work place	Q3.1(1)
ii) Use of bin for waste disposal	Q3.1(1.2)
iii) Number of times the place is mopped/cleaned/broomed	Q3.1(1.3)
iv) Number of windows	Q3.1(2.1)
v) Do the windows enable the flow of sufficient light and air?	Q3.1(2.2)
vi) Number of shutters	Q3.1(2,3)
vii) Do the shutters allow sufficient air and light inside?	Q3.1(2.4)
viii) Number of fan	Q3.1(2.5a)
ix) Number of light bulbs	Q3.1(2.5b)
B. Safety	
x) The factory has safe electricity connection	Q3.1(3)
xi) Short-circuit in electricity connection	Q3.1(3.1)
xii) Frequency of checking the electricity connection	Q3.1(3.2)
xiii) Quality of wiring in the factory	Q3.1(3.3)
xiv) Frequency of checking the wiring system	Q3.1(3.4)
xv) Electrical earthing	Q3.1(3.5)
xvi) First aid box	Q3.1(4)
xvii) The workshop is spacious	Q3.1(5)
xviii) Use of protective gear	Q3.1(6)
xix) Maintenance of machinery	Q3.1(6.4)
xx) Machine safeguard	Q3.1(6.6)

xxi) Precaution in using chemicals	Q3.1(6.8)
xxii) Fire extinguisher	Q3.1(6.9)
xxiii) All the workers know about the relevant safety measures	Midline
xxiv) We take account of workers concerns regarding safety issues	Midline
xxv) We often discuss the safety issues with the workers	Midline
xxvi) Workers are trained in workplace safety	Midline
xxvii) We have a specific safety protocol in the workplace	Midline
C. Healthy environment	
xxviii) Provision of pure drinking water	Q3.1(7)
xxix) Provision of clean toilets	Q3.1(9)
xxx) Number of toilets	Q3.1(9.2)
xxxii) Distance of toilet from the workshop	Q3.1(9.3)
xxxiii) Are the toilets cleaned regularly?	Q3.1(9.4)
xxxiv) Scrap management	Q3.1(11)
xxxv) Safety signs inside the workshop	Q3.2(24)
xxxvi) Emergency stop switch	Q3.2(29)
xxxvii) Number of work related accidents in the last one year	
xxxviii) Number of work related injuries in the last one year	
D. Diversity and fairness	
xxxix) Appointment letter	Q3.1(18)
xl) Festival allowance	Q3.1(19)
xli) Weekly leave	Q3.1(20)
xlii) Work or injury related leave	Q3.1(21)
xliii) Paternity/maternity leave	Q3.1(22)
xliv) Earn leave	
xlv) Timely wage payment	Q3.1(23)
xlvi) Sex of the worker	
xlvii) Child labour	
xlviii) Working hour per day	
xliviii) Overtime per day	
xlix) Payment for overtime	
l) Separate toilet for female workers	
li) Wage discrimination	
Category 3: Practice of decent work environment (worker's view)	
A. Cleanliness	
i) Overall cleanliness of the work place	Q3.2(1)
ii) Use of bin for waste disposal	Q3.2(1.2)
iii) Number of times the place is mopped/cleaned/broomed	Q3.2(1.3)
iv) Number of windows	Q3.2(2.1)
v) Do the windows enable the flow of sufficient light and air?	Q3.2(2.2)
vi) Number of shutters	Q3.2(2,3)
vii) Do the shutters allow sufficient air and light inside?	Q3.2(2.4)
viii) Number of fan	Q3.2(2.5a)
ix) Number of light bulbs	Q3.2(2.5b)
B. Safety	
x) The factory has safe electricity connection	Q3.2(3)
xi) Short-circuit in electricity connection	Q3.2(3.1)
xii) Frequency of checking the electricity connection	Q3.2(3.2)

xiii)	Quality of wiring in the factory	Q3.2(3.3)
xiv)	Frequency of checking the wiring system	Q3.2(3.4)
xv)	Electrical earthing	Q3.2(3.5)
xvi)	First aid box	Q3.2(4)
xvii)	The workshop is spacious	Q3.2(5)
xviii)	Use of protective gear	Q3.2(6)
xix)	Maintenance of machinery	Q3.2(6.4)
xx)	Machine safeguard	Q3.2(6.6)
xxi)	Precaution in using chemicals	Q3.2(6.8)
xxii)	Fire extinguisher	Q3.2(6.9)
xxiii)	Safety signs inside the workshop	Q3.2(24)
xxiv)	Emergency stop switch	Q3.2(29)
C. Healthy environment		
xxv)	Provision of pure drinking water	Q3.2(7)
xxvi)	Provision of clean toilets	Q3.2(9)
xxvii)	Number of toilets	Q3.2(9.2)
xxviii)	Distance of toilet from the workshop	Q3.2(9.3)
xxix)	Are the toilets cleaned regularly?	Q3.2(9.4)
xxx)	Scrap management	Q3.2(11)
D. Diversity and fairness		
xxxi)	Appointment letter	Q3.2(18)
xxxii)	Festival allowance	Q3.2(19)
xxxiii)	Weekly leave	Q3.2(20)
xxxiv)	Work or injury related leave	Q3.2(21)
xxxv)	Paternity leave	Q3.2(22)
xxxvi)	Timely wage payment	Q3.2(23)
Category 4: Business Practices		
A. Accounting		
i)	Accounting for cost and revenues	Q3.1(15)
ii)	Accounting for raw materials	Q3.1(16)
iii)	Accounting for sales	Q3.1(17)
B. E-commerce		
iv)	Ownership of mobile phone	Q6(1)
v)	Is it a smart phone	Q6(2)
vi)	Mobile bank account	Q6(3)
vii)	Use of mobile bank account	Q6(4)
viii)	Access to internet in the workshop	Q6(5)
ix)	Use of computer/laptop	Q6(7)
x)	Access to internet in computer/laptop	Q6(8)
xi)	Use of internet	Q6(9 and 10)
C. Market linkage		
xii)	From where do you collect raw materials	Q7(1)
xiii)	Where do you sell your product	Q7(2)
xiv)	Member of the marketing management committee	Q7(4)
xv)	Member of a trade organization	Q7(5)
xvi)	Member of a cooperative	Q7(6)
D. Access to finance		
xvii)	Has savings	Q4.1(1)

xviii) Amount of savings	Q4.1(2)
xix) Source of savings	Q4.1(3)
xx) Has loans	Q5.1
xxi) Amount of loans	Q5.1(4)
xxii) Amount outstanding	Q5.1(5)
xxiii) Source of loans	Q5.1(1)
xxiv) Purpose of loans	Q5.1(2)
Category 5: Growth	
A. Business premise	
i) Number of rooms in the workshop	Q2.1(4 and 7)
iii) Wall of the workshop	Q2.1(5)
iv) Ceiling of the workshop	Q2.1(6)
v) Area of the workshop	Q2.1(10)
vi) Market value of the workshop premise	Q2.1(11, 12)
vii) Monthly rent if the premise is rented	Q2.1(13)
viii) Value of furniture	Q2.1(14, 15)
ix) Value of inventory	Q2.1(19)
x) Invested capital	Q2.1(22)
B. Monthly revenue/income	
xi) Total sales	Q2.2(1)
xii) Total cost and costs by items	Q2.2(2)
xiii) Profit/loss	Q2.2(3 and 4)
C. Worksop asset	
xiv) Small machinery	Q2.3(1)
xv) Large machinery	Q2.3(2)
xvi) Furniture	Q2.3(3)
xvii) Land	Q2.3(5)
xviii) Vehicle	Q2.3(4)
xix) Workshop infrastructure	Q2.3(6)
D. Workers	
xx) Number of workers	Q2.4(1)
xxi) Average years of experience of the workers	Q2.4(11)
xxii) Working hours	Q2.4(10)
xxiii) Monthly wage	Q2.4(13)
xxiv) Type of employment	Q2.4(8)
xxv) Work experience in the current workshop	Q2.4(9)
xxvi) Wage disbursement method	Q2.4(14)
xxvii) Gender of the worker	Q2.4(3)
Category 6: Attitude	
A. Toward business	
i) I am always looking for ways to improve my business	Midline
ii) I always find solution to my problems	Midline
iii) I do not care about my clients	Midline
iv) I do not discuss my decision with others	Midline
v) I can convince people to come to my way	Midline
vi) I am eager to meet new people and networking	Midline
vii) To gain something you must lose something	Midline
viii) I will try new things even if I am not sure if would work or not	Midline

ix) I don't feel that I need to expand/improve my operation	Midline
B. Toward life	
x) I can socialize easily	Midline
xi) I do thing carefully and flawlessly	Midline
xii) I am good at finding new ideas	Midline
xiii) I am introvert	Midline
xiv) I can handle pressure	Midline
xv) I am very forgiving	Midline
xvi) I worry a lot about small things	Midline
xvii) I have strong imagination	Midline
xviii) I am a bit lazy	Midline
xix) Creativity is very important to me	Midline
xx) I am kind towards others	Midline
xxi) I do everything successfully and efficiently	Midline
xxii) I like to travel	Midline
xxiii) I sometimes misbehave with others	Midline
xxiv) I become agitated very often	Midline
xxv) I like to take risk	Midline
xxvi) I am satisfied with my life	Midline

Note: <sup>a</sup>Here 'Midline' means these are new questions added to the midline survey and the question number will be assigned when the survey instrument if finalized.