

Determinants of Labour Productivity of Handloom Based Micro-Enterprises in Assam

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Abstract

The handloom industry in India is based on a large number of artisanal skill-based enterprises. Most of the workers in the sector are self-employed micro-entrepreneurs who produce a wide range of fabrics reflecting their culture and identity. In the current liberalized and competitive environment, the handloom sector needs to utilise resources efficiently and increase the level of productivity. Due to the labour-intensive nature of handloom products, it is necessary to raise labour productivity and take other measures to increase the profitability of the enterprises. The present paper examines the employment pattern in the handloom micro-enterprises and tries to identify the factors influencing labour productivity of handloom micro-enterprises in Assam. The study is based on primary data collected from four districts of Assam through a multi-stage sampling technique. It is observed that creation of mandays and labour productivity of multi loom enterprises are more than single loom enterprises. Regression result found that higher sales revenue, increasing labour cost and entrepreneurs with training trend to increase the labour productivity of handloom enterprises significantly. In contrast, higher capital intensity of the handloom enterprises trend to decline the labour productivity significantly

Introduction

The handloom industry is spread across the rural and semi-urban areas in India and is a crucial source of livelihood for many people in the country. The handloom industry employed 35.23 lakhs handloom weavers and allied workers in the country in 2019-2020 and constitutes nearly 12 percent of total supply of cloth in India (Ministry of Textile, 2020). However, the industry face competition from the power loom and is affected

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with various challenges such as low productivity, obsolete technology, unorganised production system, inadequate working capital, weak marketing link, conventional product range, overall stagnation of production and sales (Sudalaimuthu and Devi 2006; Dev, Golab, Reddy & Vinayan, 2008; Ramswamy & Kumar 2013; Nadh, Rao & Harshavardhan 2013; Goswami & Jain, 2014). Over the years employment in handloom industries have fallen continuously (Baruah & Saha, 2022). Despite the challenges, the industry has enormous advantages, such as less capital intensive, unique, eco-friendly, less use of power, flexibility of small production, openness to innovation and flexibility to market requirements (Ministry of Textiles, 2020). In order to be competitive, the handloom sector needs to utilize resources efficiently and increase the level of productivity. Due to the labour-intensive nature of handloom products, it is necessary to prevent declining employment, raise labour productivity, and take other measures to increase the profitability of the enterprises.

The performance of a firm or industry unit is usually measured in terms of productivity or efficiency. Productivity refers to the amount of output per unit of input achieved by a production unit. Labour productivity implies a firm's capability to generate higher production or value added (Heshmati & Rashidghalam, 2018). Higher labour productivity of small medium enterprise shows the higher likelihood for growth of enterprises (Okumu & Buyinza, 2018). In the case of single factor productivity, it is commonly estimated as the ratio of outputs to single input. The different studies measure inputs and output of labour productivity differently. Labour productivity can be measured in terms of labour hours or mandays or per workers. Studies like Grzes (2019); Susilowati, Ananda, Ashsar & Susilo (2020) defined labour productivity by dividing production by the number of employees in a manufacturing sector. Thomas & Sudhakumar, (2014), measured labour productivity by dividing output by labour hours and mandays.

Although labour productivity has been widely studied in economic literature, but studies on labour productivity of handloom sector at the national and international levels are few. A study (Chowdhary, 1989) in Bangladesh found that technology, finance, value of production and environment variable have significant positive influence on labour productivity of handloom industry. Another study (Shetgaokar, 2022) in India found that capital intensity, skill, wage, and capacity utilisation have significant positive impact on labour productivity of textile industry. Regarding employment pattern of handloom sector in Assam, it is observed that annual labour mandays employed in cooperative handloom households are more than in independent handloom households. It is also noted that family labour employment is negatively related to firm size, while hired labour is positively associated with firm size (Gogoi & Saikia, 2014). A study (Khasnabis & Nag, 2002) in West Bengal observed that the skill-based division of labour and hired labour are highly employed in multi-loom enterprises. Subhan (1989) observed that small handloom enterprises with less number of looms are plagued by surplus labour and underemployment problems in Bangladesh. It is noted that large enterprises earn two times higher profits than small enterprises

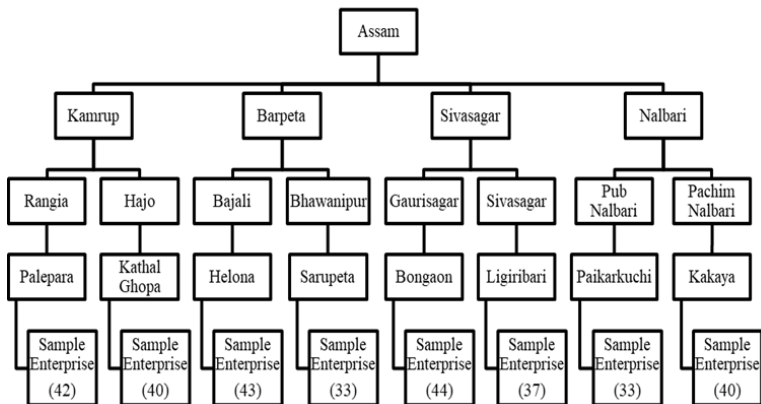
In India, more than one third (12.84 lakhs) of total handloom workers live in Assam where majority of the workers are self-employed micro-entrepreneurs (Ministry of Textile, 2020a). Assam is the third largest state in India in terms of silk production. Assam is the largest producer of muga silk in the world and produces 85 percent of the world’s muga silk. Regarding eri silk production, Assam ranks highest in the nation and produces 62 percent of eri silk in India (Central Silk Board, 2019). The weavers in Assam produce diversified handloom products using different types of yarn like cotton, mulberry silk, muga silk, eri spun silk, etc. Assamese handloom products have high demand at the local, regional and national levels. Weaving activity also occupies an important space in Assamese culture. The weavers in the state are preserving their traditional arts and skills and representing culture through their weaving fabrics and designs. The level of artistry and complexity accomplished in handloom fabrics is unmatched, and it cannot be mechanically reproduced on a large scale.

In the current liberalized and competitive environment, the handloom sector needs to utilise resources efficiently and increase the level of productivity. It is thus important to locate the determinants of labour productivity, which is the primary objective of the present paper. In this background the present paper intend to examine the employment pattern in the handloom micro-enterprises and tries to identify the factors influencing labour productivity of handloom micro-enterprises in Assam.

The paper is consists of four sections including introduction. In Section 2 presented the methodological issues such as data source, sampling design and analytical framework. The empirical findings are reported and discussed in the section 3 and the section 4 contained concluding observation and few policy suggestions in the light of the finding.

Methodology

Sources of Data and Sampling Technique



The study is based on primary data. It is obtained through a field survey of 312 handloom enterprises spread over four districts of Assam using semi structural interview schedule, during October, 2021 to February 2022. A multi stage sampling technique is used for selection of samples for the study. In the first stage four districts of Assam are selected purposively on the basis of the concentration of the highest number weavers as data obtain from Handloom Weaver Information System, Office of the Development Commissioner (Handloom), Ministry of Textile (Government of India). Further, two development blocks from each selected district and one village from each selected development block are selected based on commercial concentration of handloom activities as per information of District Handloom and Textile Department. At the village level, lists of handloom micro-entrepreneurs were prepared after discussions with the head of the village, master weavers, and ward members. From the prepared list of each chosen sample village, 50 per cent of handloom micro-entrepreneurs were selected randomly. The handloom entrepreneur is defined as an individual who owns a micro enterprise with minimum one operating loom and produced cloth using family labour or hired labour

Analytical Framework

The labour productivity is estimated as the ratio of gross value added to the number of mandays worked for each enterprise or number of employees for each enterprise.

$$\text{Labour productivity} = \text{Gross Value Added (GVA)} / \text{Mandays worked}$$

Or

$$\text{Labour productivity} = \text{Gross Value Added (GVA)} / \text{No.of employees}$$

The mandays is calculated as follows

$$\text{Mandays} = \text{Working hours per day} \times \text{Number of working days in a year} / \text{Eight hours}$$

The gross value added shows the economic contribution of a particular sector. The GVA of a handloom micro-enterprise is calculated as

$$\text{GVA} = (\text{Total sales revenue} + \text{addition of inventory}) - (\text{Cost of raw material} + \text{other intermediate cost})$$

Other intermediate cost includes the cost of colours, electricity consumption and miscellaneous. Inventory included mainly unsold products during the time of the survey.

Model Specification and Variable Descriptions

Multiple regression model is used to identify the factors influencing labour productivity of handloom micro-enterprises. Different factors might affect the labour productivity of the handloom enterprises. Capital intensity, production (sales revenue) and wage (Labour cost) are considered important determinants of labour productivity in

the existing literature. In addition to these, the study also considers factors such as experience, education, access to training and sex of entrepreneurs. The sales revenue of an enterprise is defined as the annual sales value and it is expected to impact on labour productivity positively. Labour cost is expected to be a positive impact on productivity. The imputed cost of family labour and self-employed workers are calculated based on the actual wage rate of hired workers in the particular survey area. The capital intensity of an enterprise is defined as the price ratio of fixed capital expenditure (looms and other accessories) to labour. Level of education of entrepreneurs is expected to be important determinate of labour productivity of handloom enterprises. The higher level education of entrepreneurs may have higher level of productivity as educated person is expected to acquire more skilled and manageable knowledge compared to low level of educated persons. It is measures as numbers of years spent in schooling. Like education working experience of entrepreneurs are expected to be positive impact on labour productivity. It is measures in terms of number of years working in the handloom activities. The variable such as the sex of entrepreneurs and access to training is taken as dummies.

The following regression model is used to investigate these manners in which the factors influence labour productivity of handloom micro-enterprises of Assam. The model considered the natural log of labour productivity as the dependent variable. Similarly, the independent variables, namely sales revenue and labour cost are also taking natural log for normalisation of data.

$$\ln LP = \beta_0 + \beta_1 \ln SR + \beta_3 \ln LC + \beta_2 CI + \beta_4 EXP + \beta_5 EDU + \beta_6 SEX + \beta_7 TRNG + e_i$$

Where,

$\ln LP$ = Natural log of labour productivity of i^{th} handloom enterprises (Rs.)

$\ln SR$ = Natural log of sales revenue of i^{th} handloom enterprises in a year (Rs.).

$\ln LC$ = Natural log of labour cost of i^{th} handloom enterprises in a year (Rs.)

CI = Capital intensity of i^{th} handloom enterprises (Rs.)

EXP = Years of working experience in handloom activities of i^{th} enterprise owners

EDU = Number of years spent in the school of i^{th} enterprise owners

SEX = Sex dummy for i^{th} entrepreneurs (Female =1, Male =0)

$TRNG$ = Access to training of i^{th} enterprises owners (Yes =1, No =0)

e_i = Error term

Results and Discussion

Handloom Based Micro-Enterprises: Sample Profile

The production units of the sample handloom enterprises in Assam are the self-employed micro-entrepreneurs. Table 1 shows the some important economic characteristics of sample handloom enterprises of Assam. It is observed that multi loom enterprise owners are engaged with minimum of two operating loom and maximum of 13 operating looms. The single loom enterprises are operated their production process within the household with the help of exclusively family labour. The multi loom enterprises are having separate loom sheds and produces fabrics with help of both hired labour and family labour.

Moreover, average expenditure on fixed capital (Excluding land and building) of multi-loom enterprises is Rs. 28420, while it is Rs. 20450 in case of single loom enterprises. It is mainly due to most of multi loom enterprise adopted jacquard machine with loom. The average annual consumption of raw materials by single loom enterprises is Rs. 50220 while it is Rs. 90910 for multi loom enterprises. It is might be due to use of high quality yarn and high volume of production. Thus it is observed that investment on both fixed capital and working capital of multi loom enterprises are more than single loom enterprises. As a return annual sales turnover and GVA of multi loom enterprises are more than single loom enterprises. The annual sales turnover of single loom enterprises is Rs. 1.39 lakhs and multi enterprises is Rs. 2.44 lakhs.

Table 1: Profile of Sample Handloom Micro-Enterprises in Assam

Particulars	Single Loom Enterprises	Multi Loom Enterprises
Number of enterprises	202	110
Number of loom/looms	1	2 to 13
Nature of work place	Within the household	Separate loom shed
Type of labour	Family labour	Both family and hired labour
Fixed capital expenditure per loom (Rs./year.)	20450	28420
Cost of raw materials per loom (Rs./year)	50220	90910
Sales turnover per loom (Rs./year)	1.39 lakhs	2.44 lakhs
Gross Value Added per loom (Rs./year)	88360	155540

Source: Computed from primary data, 2021-22

Employment Pattern in the Sample Handloom Enterprises

In the present study, employment refers to total persons engaged in the sector, including self-employed workers, family workers, and hired workers. The distribution of workers by type and gender is presented in Table 2. In the sample enterprises, 579 persons

are engaged in the sector, including self-employed (owners), family workers and hired workers. It is observed that 69.78 per cent of the workers in the sample enterprises are family workers and 30.22 per cent are hired workers. The proportion of female workers is higher than male workers. The female workers constituted 72.28 per cent in family labour and 70.29 per cent in case of hired labour. It is also observed that out of 164 male workers, 31.71 per cent are comprised of hired labour. Again out of 415 female workers, hired labour constituted 29.64 percent. Thus, the employment of female labour is higher than that of male labour in both the cases of family and hired labour. This is in conformity with the Handloom Census findings that proportion of women workers is high in handloom sector.

Table 2: Employment Pattern of Handloom Micro-Enterprises in Assam

Labour	Male	Female	Total
Family labour (Including self-employed workers)	112	298	404
	(27.72)	(72.28)	(100)
	(68.29)	(70.36)	(69.78)
Hired labour	52	123	175
	(29.71)	(70.29)	(100)
	(31.71)	(29.64)	(30.22)
Total	164	415	579
	(28.32)	(71.68)	(100)
	(100)	(100)	(100)

Source: Computed from primary data, 2021-22

Note: First rows of parenthesis represent the row percent and second rows of parenthesis represent the columns percent

Employment of Labour and Production Stages

Generally the production stages of handloom industry involved three types of activities: (i) pre-loom activities (dying of yarn, bobbin and pirn winding, warping etc.), (ii) loom activities (weaving and designing) and (iii) post-loom weaving activities (bleaching, calendaring, packaging etc.).

In the sample handloom enterprises in Assam, the production processes are classified into six stages. Firstly, rolling the yarn in a bobbin through a hand charkha (Jattor) or winding machine. Secondly, the threads are warping for the desired width and length of the warp sheet by combining many bobbins with the help of a warp machine or traditional system. The warp sheet's length and width depend on the fabrics produced. Thirdly, after the completion of the warping process, the warp sheet fits into the loom. In this stage, a highly skilled worker is needed. Fourthly, the yarns are rolled in pirns for weaving on the stage using charkha. Fifthly, weaving and designing are the crucial stages of the production process. The skilled weavers perform the weaving and designing. Weavers used either a modern jacquard/dobby machine or manually create

design on the clothes. Six, after completion of the weaving process, the products are calendared and packed for sale in the market.

Table 3: Annual Mandays Created Per Loom at Different Production Stages

Production Stages	Single loom enterprises	Multi loom enterprises	All sample enterprises
Bobbin winding	17.31	20.14	18.31
	(5.59)	(6.03)	(5.75)
Warping and Drumming	9.17	7.41	8.55
	(2.96)	(2.22)	(2.69)
Fitting into the loom	12.75	10.09	11.81
	(4.11)	(3.02)	(3.71)
Prin winding	35.79	35.50	35.69
	(11.54)	(10.64)	(11.21)
Weaving and Designing	221.15	248.29	230.72
	(71.34)	(74.41)	(72.47)
Separation and Packaging	13.82	12.26	13.27
	(4.46)	(3.68)	(4.17)
Total	310.00	333.69	318.35
	(100)	(100)	(100)

Source: Computed from primary data, 2021-22

Note: Parenthesis represents the percentage (1 mandays = 8 hours)

Table 3 revealed that on average 318.35 mandays are created per loom annually by the enterprises studied. It is observed mandays created in multi loom enterprises is relatively higher than single loom enterprises. The multi loom enterprises created annually 333.69 mandays while single loom enterprises created annually 310.00 mandays. In both types of enterprises it is the weaving and designing processes, that absorb more labour, being more labour intensive processes. As a result more than 70 per cent of mandays are created in these works. Stages of warping & drumming, separation and packaging process require relatively lower proportion of mandays. Thus, it is clarified that a higher proportion of labour supply is required in the weaving and designing process, followed by pirn winding and bobbin winding process. Since, pirn winding and weaving is a regular process for producing a piece of cloth. Thus the employment of mandays in multi loom enterprises is more than in single loom enterprises. It is might be due to involvement of hired labour in the multi loom enterprises.

Labour Productivity

Labour productivity is an essential indicator of performance of the enterprises. Labour productivity of handloom micro-enterprise may be defined either as the ratio of gross value added to mandays or as the ratio of gross value added to number of workers. In the first case, it is the productivity level per day per worker. In the second, it is annual productivity per worker. The average labour productivity of single loom and multi loom enterprises are presented in Figure 1 and 2.

The average labour productivity of all enterprises is Rs.386.45 per mandays and Rs. 109859 per employees in year. The labour productivity of multi loom enterprises is more than single loom enterprises in both figure 1 and figure 2. It might be due to the use of skilled hired labour, relatively large scale of production and other marketing advantages of multi loom enterprises. In contrast the single loom enterprises entirely based on family labour and scale of production is very low. This finding is similar to the finding of Subhan (1989), who observed that productivity and income of small handloom enterprises are less than large enterprises.

Figure 1: Labour Productivity as the Ratio of GVA (in Rs.) to Mandays

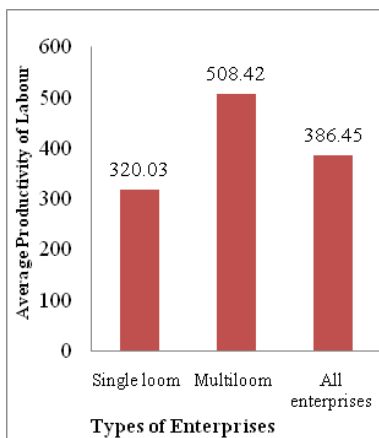
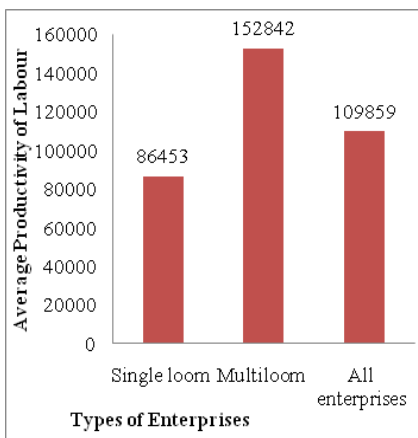


Figure 2: Labour Productivity as the Ratio of GVA (in Rs) to Number of Workers



Source: Computed from primary data, 2021-22

Determinants of Labour Productivity

The productivity of labour may depend on different factors. The present paper considered factors such as sales revenue, capital intensity, labour cost, experience, education, sex, types of enterprises and access to training, which may influence the labour productivity of handloom micro-enterprises in Assam. The descriptive statistics of the determinants of labour productivity of handloom micro-enterprises in Assam are presented in Table 4. The average annual sales revenue of sample handloom enterprises

is Rs. 386644.25, the capital intensity is Rs. 22901.37, and the average annual labour cost is Rs. 46383.09. The standard deviation of sales revenue, capital intensity, and labour cost are very high. It might be due to the factors such as the scale of operation, the number of looms, values of fabrics and the use of different types of yarn etc. The mean value of work experience is 10.43 years and the minimum and maximum years of schooling of handloom entrepreneurs were 0 and 15 years.

The factors influencing labour productivity of handloom micro-enterprises in Assam are presented in Table 5. The value of the F test in ordinary least square (OLS) estimation implies that the model is significant at a 1 per cent level with an F value of 103.27. The R square value is 0.70, which indicates that the regression model explains 70 per cent of the total variation in labour productivity.

Table 4: Descriptive Statistics of the Variables for the Regression Model

Name of the variables	Mean	Standard Deviation	Min	Max
Labour productivity	386.45	293.74	49.03	1635.81
Annual Sales Revenue	386644.25	567991.3	20300	4328700
Annual Labour cost	46383.09	28867.2	6000	171275
Capital intensity	0.52	0.22	0.20	1.42
Experience	10.43	6.41	2	40
Education	9.7	3.68	0	15
Sex Dummy	0.76	0.43	0	1
Access to Training Dummy	0.41	0.49	0	1

Source: Computed from primary data, 2021-22

The influence of sales revenue on labour productivity is found to be significant at a 1 percent level. It implies that, keeping other factors constant, 1 percent increase in sales revenue leads to a 0.37 per cent increase in labour productivity per day. A similar result in the context of handloom industry in Bangladesh is reported by Chowdhary (1989). Thus productivity level of handloom enterprises can be improve by increasing the sales revenue as sales maximization leads to high profit and it gives incentives to weavers or entrepreneurs for more production. It means that by maximizing sales revenue, higher amount of incentives shall be offered to weavers which in turn will enhance their productivity.

The co-efficient of labour cost is found to be significant with a positive sign. It implies that a 1 per cent increase in labour cost leads to a 0.27 per cent increase in labour productivity, while other factors remained unchanged. It might be so that high increases in wage may increase the willingness to work. From the evidence of field survey, it is also observed that majority of weavers getting wages on fixed rate per piece. As a result the weavers who gets high wage rate per piece might give more efforts and time in productions. Studies like Chowdhary (1989), Ngoc & Huoc (2017) found similar result of which labour cost positively influenced on labour productivity.

Table 5: Determinants of Labour Productivity of Handloom Micro- Enterprises in Assam

Explanatory variable	Co-efficient	Standard Error	t-statistics	p value	VIF
Constant	-1.393**	0.573	-2.43	0.016	
Sales Revenue (SR)	0.370***	0.032	11.623	0.000	2.789
Labour cost (LC)	0.266***	0.063	4.246	0.000	3.143
Capital intensity (CI)	-0.308***	0.125	-2.464	0.014	1.561
Experience (EXP)	-0.006	0.004	-1.453	0.147	1.538
Education (EDU)	-0.008	0.008	-1.114	0.266	1.586
Sex (SEX)	0.076	0.058	1.297	0.195	1.257
Training (TRNG)	0.118**	0.05	2.364	0.019	1.226
F value	103.27***				
R- squared	0.704				
Adjusted R-squared	0.697				
Observation	312				

Source: Computed from primary data, 2021-22

Note: Dependent variable is the labour productivity as the ratio of GVA (in Rs.) to mandays

***and ** Significant at 1 and 5 per cent levels.

The influence of capital intensity on productivity of labour is found to be negative and it is statistically significant at 1 percent level. It indicates that more capital expenditure in comparison to labour leads to decreased productivity. It is because most of the handloom industry is household-based and labour-intensive nature. Thus, it is noticed that, with available fixed capital, the handloom micro-enterprises in Assam have the potentiality to increase productivity by creating more mandays. But in case textile industry in India, Shetgaokar (2022) found that capital intensity has a positive impact on labour productivity. It might be due to growth of powerloom and mill sector.

In the handloom enterprises of Assam, productivity of labour does not depends on work experience, years of schooling and sex of the entrepreneurs. The work experience of entrepreneurs is found to be insignificant having a p value of 0.15. It indicates that whether the entrepreneur has more experience or less, they will produce the same quantity simultaneously. It means that regardless of work experience, labour productivity depends on other factors. Similarly, the influence of education level on labour productivity is also found insignificant. It means that whether the entrepreneurs are more educated or less, their productive capacity will be the same. As discussed with the entrepreneurs in the field survey, it is the skilled and efficiency of the entrepreneur that matters in the handloom micro-enterprises of Assam rather than his or her work experience and education qualification.

Labour productivity of handloom micro-enterprises of Assam does not depend on sex of the entrepreneurs and sex dummy is found to be insignificant. It implies that the productivity of male and female labour in the handloom enterprises in Assam is the same. The influence of training of entrepreneurs on labour productivity of handloom enterprises is found to significant at 1 percent level, which implies that who are trained, are owner of enterprises with higher level of productivity compared to the enterprises where the owners did not attain any training programme.

This result is quite expected, because trained entrepreneurs are more skilled and in addition have managerial knowledge for running the enterprises. Though, there are many training programmes and training institutions operating under different government agencies, only 126 entrepreneurs out of 312 entrepreneurs in the sample, have received any training till the time of conducting the survey. Directorate of Handloom and Textiles of Assam operate 102 Handloom Training Centres (HTC) and 4 (Four) Handloom Training Institutions (HTI), located in different districts of Assam. These training centres and institutions provide training on weaving and designing, and total intake capacity of HTC is 1645 persons per year and that of HTI is 97 persons per year. During the last fifteen years from 2006-07 to 2020-21, a total of 12938 persons from HTC and 758 persons from HTI were trained. Thus, these institutions together imparted training to 913 weavers per year on average³.

Indian Institute of Entrepreneurship (IIE) also organise training programmes on weaving and entrepreneurship. During January to March, 2023, four such programmes were organised in each of the four districts of Assam namely Barpeta, Kamrup, Darang and Lakhimpur under Entrepreneurship Skill Development Programme (ESDP)⁴. IIE also organises Digi-Bunai skill training programs under the Ministry of Electronics and Information Technology to provide Computer Aided Design (CAD) training to traditional handloom weavers and artisans. As of March, 2023, IIE conducted seven Digi-Bunai Training programmes in Assam and Tripura where 210 participants were trained⁵.

Conclusion

The weavers included in the sample are self-employed micro-entrepreneurs that produce fabrics with the help of both family labour and hired labour. The multi loom enterprises are performed well in terms sales revenue, mandays creation and labour productivity than the single loom enterprises. Regression result found that higher sales revenue, increasing wages or labour cost and entrepreneurs with training trend to increase the labour productivity of handloom enterprises significantly. In contrast, higher capital intensity of the handloom enterprises trend to decline the labour productivity significantly.

³<https://dht.assam.gov.in/schemes/state-govt-schemes>

⁴<https://iie.gov.in/training/#gsc.tab=0>

⁵<https://iie.gov.in/pr/projects/awareness-building-and-training-to-designers--weavers--artisans-on-digibunaitm-cad-software#gsc.tab=0>

The above findings suggest that organizing the single loom enterprises into a collective will help them in reaping the economies of scale and other marketing benefits. It is observed that multi loom enterprises are more productive and producing more revenue than single loom enterprises. It is suggested that organising the single loom enterprises into a collective will help them in reaping the economies of scale and other marketing benefits. Policymakers may also take initiatives to establish institutional weaving units or loom sheds installed with modern jacquard looms and other common-use equipment for single loom enterprise owners.

Training of enterprise owners and the weavers is a significant factor in improving productivity of handloom enterprises. Though, there are many training programmes and training institutions operating under different government agencies, they are able to provide training to limited number of weavers and handloom entrepreneurs. Thus, there is a need for more training institutions and programmes. Policymakers may take initiatives to organise short-term training programmes in different handloom villages.

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