Factors Affecting Job Satisfaction and Productivity of Sewing Line Workers: A Study on Selected Readymade Garment Industries in Myanmar

Aung Myo Lwin, Yin Yin Tun

Department of Mechanical Engineering, Yangon Technological University, Yangon, Myanmar

ABSTRACT

A basic requirement for job satisfaction among sewing line workers is a working environment that allows workers to perform their work at an optimal level in a comfortable environment. The working environment plays an essential role in workers job satisfaction and the impact of job satisfaction on productivity. A causal study was conducted to examine the impact of the working environment on job satisfaction and productivity of workers in the garment manufacturing industries. In this study, six factors of the work environment were considered for job satisfaction, which are, working conditions, remuneration, job security, psychosocial work environment, ergonomics and work participation. Data was collected from four readymade garment industries in Myanmar using random sampling. Multiple regression analysis and simple linear regression were used to predict the correlation. Based on the finding, this study showed that working conditions, remuneration and psychosocial work environment have strong casual effect on workers' job satisfaction and job security and ergonomics are moderate and work participation is low casual effect on workers' job satisfaction.

KEYWORDS: job satisfaction; working environment; productivity; multiple regression analysis

INTRODUCTION

Myanmar's garment manufacturing sector is one of the most important sector for the sustainable development, which creates a number of formal jobs to the women. The Myanmar Garment Manufacturers Association estimates that its nearly 600 member factories provide jobs for approximately 500,000 workers. The majority of these workers are young women, so their empowerment is vital. The country exports (cut-make-pack) CMP products mainly to Japan, followed by some European countries, South Korea, The U.S and China. The CMP system has been practiced over the last 20 years in Myanmar, with authorities planning to export garment through the Free on Board (FOB) system in the future. Leading the country's manufactured goods export sector, Myanmar's apparel exports increased from US $ 349 million in 2010 to almost US $ 4.6 billion in 2018, which represents about 10 precents of export earnings of the country [1]. Production line efficiency is below that of competitors in neighbouring ASEAN nations. The combination of a cost-effective labour force and a strict adherence to product quality are two important factors, which make Myanmar an attractive place to source garment and apparel products. Myanmar has set a target to become a competitive location for high quality and sustainable garment production and improve productivity with 25% during the next 10 years [2].

Garment industries in Myanmar are facing low productivity, long production lead-time, and low motivation. Results from Centre for Economic and Social Development CESD (2018) survey report; the average labour turnover rate of garment sector in Myanmar was at 7% per month. The worker turnover rate in Myanmar is very high. The results of the company's survey show that the average turnover rate in the garment sector is 57% [3]. This means that an average factory saw nearly half of its workforce. This analysis suggests that employee turnover often starts. However, the survey does not contain specific data on the causes of a high turnover rate. This may be due to job dissatisfaction, such as low wages, poor working conditions, long working hours, or other factors. This may also reflect the abundance of employment opportunities in other factories. Such a high turnover rate creates problems for companies and disrupts the production process by reducing productivity and incentives to invest in human resource development. The main reasons behind the reducing productivity were dissatisfaction of the workers and shortage of skilled workers. So, it is vital to take action for the job satisfaction of the workers in garment industries in Myanmar. In this study, six determinants are considered for job satisfaction of garment workers. Out of these six factors, three factors have high influences on job satisfaction. So, finding of this research will be helpful to the garment manufacture to keep

job satisfaction of workers. As a results, workers are satisfied their job and they can produce more productivity.

LITERATURE REVIEW

Job satisfaction refers to workers' perceptions of their activities. Job satisfaction represents the extent to which expectations coincide with real rewards and are closely related to the individuals' behaviour at work [4]. To meet customer requirements, organizations must increase workers' productivity by ensuring the satisfaction of workers [5]. Related studies have shown that worker's satisfaction and performance are positively correlated [6]. Furthermore, it can be agreed that the more employees are satisfied with their work and work environment, the more productive they will be. A number of factors have an impact on worker's job satisfaction, including working conditions, remuneration, job security, psychosocial work environment, ergonomics, and work participation. In developing countries, people think, not because of their brains but because of their stomachs due to unemployment and economic destabilization, the only definite source of job satisfaction is salary and promotion [7]. Working conditions of the organization are considered infrastructure and equipment such as heating and cooling, ventilation systems, controlled noise levels, office furniture, security, etc. This condition can affect employees and can contribute or distract their job performance [8].Remuneration is the type of compensation or payment that a person or employee receives as payment for their services or work they do for an organization or company. This includes the basic salary received by employees, along with other forms of payment obtained during their work, including expense account funds, bonuses, and stock options. Seventy precents of the studies initiated a positive effect on employee satisfaction and performance. This is based on their analysis of remuneration and the most significant aspects of employee compensation and performance are examined [9]. Job security is the probability that someone will keep his or her job, a job with a high level of job security, so that someone with a job has a small chance of becoming unemployed. Job security depends on the economy, prevailing business conditions and individual personal skills. The psychosocial work environment is related to interpersonal and social interactions that influence behaviour and development in the workplace. In other words, a positive and supportive psychosocial work environment is beneficial for employees of occupational organizations. The workplace is very important in establishing and maintaining social interaction with others in employee satisfaction. Achieving organizational goals and to be successful depends entirely on effective interactions, which can also increase the level of satisfaction [10]. Ergonomics is a scientific discipline that deals with understanding interactions between humans and other elements of a system. This is a profession that applies theories, principles, and design methods to optimize human welfare and increase the level of employee satisfaction in relation to their individual work. Good ergonomic design has been shown to increase employee wellbeing, satisfaction and productivity [11]. Worker participation has an important influence on decision-making for organizational effectiveness. If they participate in this fact, the workers will feel valued in the company. Worker participation can have a statistically significant effect on employee performance and satisfaction. Employees are more interested in participating in decision-making; problem-solving activities, which further

improve employee performance and job satisfaction [12].After analysis of the literature review, the conceptual framework of the research can be developed as shown in Figure 1.

Figure 1 Conceptual Framework of the Research

OBJECTIVES

The main aim of this study is to identify important factors influencing job satisfaction of workers in the garment industries in Myanmar. The objectives of this study are as follows:

➢ To analyse the individual factors that influence job satisfaction of workers in the garment sector.
➢ To investigate the effect of employee satisfaction on productivity in the garment factories.
➢ To find out how to improve job satisfaction for garment workers in Myanmar.

HYPOTHESES

According to the literature review, the following are the hypotheses that will be evaluated in this study to confirm the objective of the study:

➢ H_1: There is a positive and significant relationship between the six determinants of working environment and job satisfaction of workers.
➢ H_2: There is a positive and significant relationship that exists between the job satisfaction of workers and productivity.

METHODOLOGY

A Quantitative research method is used to approach in this study. A questionnaire was designed to investigate the effect of working environment factors on job satisfaction of workers and productivity. The questionnaire data was collected from four readymade garment industries in Myanmar. The respondents were asked to rate each statement of the item on a five-point Likert scale ranging from strongly disagree to strongly agree, to measure the variables. Reliability of the various factors was found to be statistically significant as shown in Table 2.

A. Data Collection

150 sewing line workers are selected from four garment industries to collect questionnaire data. After collecting the data, all items are tested for reliability. Multiple regression analysis is used to investigate the level of prediction made by the various predictor variables on the dependent variables. The following structural equations were formulated to test the hypotheses.

B. Hypothesis Testing (H1)

To determine the relationship of the six determinants of the working environment (independent variables) and job satisfaction (dependent variable), a multiple regression

model is proposed.

$$y(JS) = b_0 + b_1(x_1) + b_2(x_2) + b_3(x_3) + b_4(x_4) + b_5(x_5) + b_6(x_6) + e$$

$y(JS)$ = Dependent variable Job Satisfaction

b_0 = Intercept of $y(JS)$

b_1 = Average value of $y(JS)$ change for each one unit change in x_1 while other variables are held constant.

b_2 = Average value of $y(JS)$ change for each one unit change in x_2 while other variables are held constant.

b_3 = Average value of $y(JS)$ change for each one unit change in x_3 while other variables are held constant.

b_4 = Average value of $y(JS)$ change for each one unit change in x_4 while other variables are held constant.

b_5 = Average value of $y(JS)$ change for each one unit change in x_5 while other variables are held constant.

b_6 = Average value of $y(JS)$ change for each one unit change in x_6 while other variables are held constant.

e = Random error

C. Hypothesis Testing (H_2)
To determine the relationship of job satisfaction (independent variables) and productivity (dependent variable), a simple linear regression model is proposed.

$$y(P) = b_0 + b_1(x_1) + e$$

$y(P)$ = Dependent variable Productivity

b_0 = Intercept of $y(P)$

b_1 = Average value of $y(P)$ change for each one unit change in x_1

e = Random error

RESEARCH AND FINDING
A. Demographic Analysis
This study examines the relationship between demographic characteristics, for example, work experience and age as shown in Table 1. The results of the study show that young people between the ages of 18 and 30 years are motivated by a psychosocial work environment and remuneration. Most respondents noted that working conditions also play an important role in employee satisfaction. In the garment industry in Myanmar, due to the COVID-19 pandemic, job opportunities are lower. Therefore, job security is also very important because workers are guaranteed job stability and stable income at the end of the month.

Table 1 Demographic Characteristics

Variables	Description (years)	Frequency	Percentages (%)
Age	18 -25	80	53%
	26 - 30	30	20%
	31 - 35	25	17%
	36 - 40	15	10%
Experiences	Less than 1	30	20%
	1- 3	60	40%
	3- 5	40	27%
	Greater than 5	20	13%

B. Reliability Analysis
The use of Cronbach's alpha coefficient tests the reliability of the questionnaire. Reliability tests were carried out on all total quality management practices and on job satisfaction of workers. The reliability coefficient of 0.70 is acceptable reliability, 0.80 for good reliability and 0.90 for excellent reliability [13]. Therefore, the reliability coefficient of 0.70 and higher is considered "acceptable". Cronbach's alpha coefficients are shown in Table 2, showing that all alpha (α) values are greater than 0.80, indicating that the research instrument has good to high reliability coefficients.

Table 2 Reliability Analysis

No	Independent Variables	Number of Questionnaire	Cronbach's Alpha Value (α)
1	Working Conditions	5	0.91
2	Remuneration	4	0.81
3	Job Security	3	0.87
4	Psychosocial	8	0.92
5	Ergonomics	9	0.82
6	Work Participation	6	0.83
7	Job Satisfaction	3	0.86
8	Productivity	3	0.88

C. Multiple Regression Analysis
The multiple regression analysis as shown in Table 3 identifies the relationship between predictors (determiners of the work environment) and the dependent variable (worker's job satisfaction). The correlation coefficient R-value is 0.8724, which is the high positive linear relationship between independent variables (six determinant of working environment) and dependent variable (job satisfaction). The coefficient of determination R Square is an estimate of the percentage variation in the dependent variable (JS), which can be predicted from the independent variables (determinant of the work environment). The R Square value of 0.761 in Table 3 shows that 76.1% of the variation in job satisfaction is explained by the variation in working condition, remuneration, job security, psychosocial work environment, ergonomics and work participation. The adjusted R Square value of 0.751 in Table 3 shows that 75.1% of the variation in job satisfaction is explained by the variation in working condition, remuneration, job security, psychosocial work environment, ergonomics and work participation taking into account the sample size and number of independent variables. The estimated multiple regression model is given in the regression equation derived from the bvalues as shown in Table 5.

$$y(JS) = 0.52 + 0.177(x_1) + 0.185(x_2) + 0.128(x_3) + 0.285(x_4) + 0.137(x_5) + 0.036(x_6) + 0.3922$$

JS = Job Satisfaction

x_1 = Working conditions

x_2 = Remuneration

x_3 = Job security

x_4 = Psychosocial work environment

x_5 = Ergonomics

x_6 = Work participation

e = Random error

The coefficients reflected in Table 5 are the values of the regression equation to predict the dependent variable from the independent variables. The highest coefficient value is 0.285, corresponding to psychosocial work environment (independent variable), which means an increase in the

standard deviation in psychosocial work environment, followed by an increase in the standard deviation of 0.285 in job satisfaction. Similarly, other positive coefficients corresponding to working conditions (0.177), remuneration (0.185), job security (0.128), ergonomics (0.137) and work participation (0.036), mean that an increase in standard deviation of one of the coefficients will result in a standard deviation increase in job satisfaction. In the ANOVA test, the F value as shown in Table 4 is 75.89. The p value associated with this F value is 0.000, which is less than the alpha value of 0.05 (5% significance level). Thus, there is a significant influence of these independent variables on the dependent variable and the model is significantly applied to predict the dependent variable. Therefore, based on the multiple regression analysis, H_1 is supported.

Table 3 Regression Statistics of Hypotheses 1

Multiple R	0.8724
R Square	0.7610
Adjusted R Square	0.7510
Standard Error	0.3922
Observations	150

Table 4 ANOVA of Hypotheses 1

	df	SS	MS	F	Significance F
Regression	6	70.0582	11.6764	75.8903	0.0000
Residual	143	22.0018	0.1539		
Total	149	92.0600			

Table 5 Coefficients of the dependent variable (JS)

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.520	0.194	2.685	0.008	0.137	0.903
Working condition	0.177	0.080	2.215	0.028	0.019	0.334
Remuneration	0.185	0.064	2.894	0.004	0.059	0.312
Job security	0.128	0.055	2.350	0.020	0.020	0.236
Psychosocial	0.285	0.055	5.159	0.000	0.176	0.394
Ergonomics	0.137	0.057	2.410	0.017	0.025	0.250
Work participation	0.036	0.040	0.888	0.376	-0.044	0.116

D. Simple Linear Regression Analysis

The simple linear regression analysis as shown in Table 6 identifies the relationship between independent variable (job satisfaction) and the dependent variable (productivity). The correlation coefficient R-value is 0.911, which is the very strong positive linear relationship between independent variables (job satisfaction) and dependent variable (productivity). The R Square value of 0.83 in Table 6 shows that 83% of the variation in productivity is explained by the variation in job satisfaction. The adjusted R Square value of 0.829 in Table 6 shows that 82.9% of the variation in productivity is explained by the variation in job satisfaction taking into account the sample size and number of independent variables. The estimated simple linear regression model is given in the regression equation derived from the b values in Table 8.

$$y(P) = 0.0754 + 0.958(x_1) + 0.3422$$

P = Productivity

x_1 = Job Satisfaction

e = Random error

The coefficients reflected in Table 8 are the values of the regression equation to predict the dependent variable from the independent variables. The coefficient value is 0.958,

corresponding to job satisfaction (independent variable), which means an increase in the standard deviation in job satisfaction, followed by an increase in the standard deviation of 0.958 in productivity. In the ANOVA test as shown in Table 7, the F value for the test is 720.801. The p value associated with this F value is 0.000, which is less than the alpha value of 0.05 (5% significance level). Thus, there is a significant influence of independent variable on the dependent variable and the model is significantly applied to predict the dependent variable. Therefore, based on the simple linear regression analysis, H_2 is supported.

Table 6 Regression Statistics of Hypotheses 2

Multiple R	0.9109
R Square	0.8297
Adjusted R Square	0.8285
Standard Error	0.3422
Observations	150

Table 7 ANOVA of Hypotheses 2

	df	SS	MS	F	Significance F
Regression	1	84.4252	84.4252	720.8013	0.0000
Residual	148	17.3348	0.1171		
Total	149	101.7600			

Table 8 Coefficient of Dependent Variables (Productivity)

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.0754	0.1503	0.5016	0.6167	-0.2216	0.3724
Job Satisfaction	0.9576	0.0357	26.8477	0.0000	0.8871	1.0281

CONCLUSION

In view of the research conducted, there is a strong correlation between job satisfaction and productivity. Determinants of the work environment were found to have a significant impact on workers' job satisfaction. Workers, who are satisfied with their job, will impact on organizational productivity. Satisfied workers tend to be more efficient and motivated to do their jobs, this will lead to higher productivity. Improving workers' job satisfaction adds value to the productivity. The results showed that employees were very satisfied with their job, because this was caused by good working condition, good remuneration, greater job security, good psychosocial work environment, good ergonomics and more work participation. Workers see this factory as a pleasant and comfortable place to work, as well as increasing job satisfaction, which leads to happier and more productive workers. A higher level of worker's satisfaction is the key to success for the factory.

REFERENCES

[1] Jason Thomas, "Revamping Myanmar's Garment Industry", 16 July, 2019.

[2] Myanmar Garment Industry 10-year Strategy 20152024.

[3] S Kanay De, Thomas Bernhardt, Mi Win Thida, 2017, Myanmar labour issues from the perspective of enterprises: Findings from a survey of food processing and garment manufacturing business.

[4] Davis K, Nestrom JW (1985) Human Behaviour at work: Organizational Behaviour, 7th edition, McGraw Hill, New York, 109.

[5] Fisher. C. D (2010), 'Happiness at work,' International Journal of Management Review, 12(40, pp. 384-412.

[6] Judge. T. A and Colquitt. J. A (2004), 'Organisational Justice and stress,' Journal of Applied Psychology,89(3), pp.395-404.

[7] Ehsan Malik, Muhammad, Danish, Rizwan, Munir, Yasin (2012) the Impact of Pay and Promotion on Job Satisfaction: Evidence from Higher Education Institutes of Pakistan. American Journal of Economics. 2. 6-9.10.5923/j, economics.20120001.02.

[8] Vischer. J. C (2008), 'towards an environmental psychology of workspace: How people are affected by Environments for work,' Architectural Science Review, 51(2), pp. 97-108.

[9] Stuurman. M, and Walsh. K (2014), 'Strengthening the employment relationship: the effects of work hours fit on key employee attitudes,' Journal of Organisational Bahvior, 35(6).

[10] Farhangi, A (2001). Human Communication (Foundation). First Volume. Fifth Edition, Publisher: Rasa cultural services Institute.

[11] Miles, A. K. (2000). The ergonomics and organizational stress relationship, Journal of Environmental Psychology, 23–45.

[12] Busck, O., Knudsen, H., & Lind, J. (2015). The transformation of employee participation: Consequences for the work environment. Economic and Industrial Democracy, 31(3), 285- 305.

[13] Cornbrash, L. J (1951), Coefficient Alpha and the internal structure of tests, Psychometrika, 16(3), 297334.https://doi.org/10.1007/BF02310555.