

Relationship Between Quality Control (Strict Supervision) and Employees Efficiency (Productivity)

Bekoe Bernard Boamah Liu Shuanqin Akrofi Tete
Business School, Hohai University, Focheng West Rd. No.8, 211100, Nanjing P.R.China

Abstract

Quality affects all aspects of a company from productivity to profitability. It can affect the public perception of the company and customer satisfaction. The numerous literature surrounding the relationship between Supervisors practices on employees and the latter's efficiency portrays a direct relationship between strictness (high quality control) and efficiency (high productivity). This study however employs SPSS correlation analysis of responses of self-administered questionnaires to find out employees position on supervision and efficiency. Based on the responses, we can assert that a greater percentage of experienced workers agree that, strict supervision is necessary high employees' efficiency. Moreover about 40% of the respondents opposed permissive supervision as against the 24% who supported it. This indicates that, even though employees enjoy work-freedom, they however agree that, supervision is necessary for employee efficiency. Basing our inferences on the Kendalls' tau_b correlation analysis, we found out that, employees who believe that, human resource is intuitive and needs less strict supervision have actually experienced efficiency in a permissive-supervision work environment. We can therefore posit that, strict control is necessary for employee efficiency, permissive working environment can also result in the same.

Keywords: Employees, supervision, quality control, productivity.

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1. Background of the study

Quality affects all aspects of a company from productivity to profitability. It can affect the public perception of the company and customer satisfaction. In general, quality is a primary component that should be considered by the leadership of every company that wants to be successful in their industry

In an effort to find out what great managers and employers think about and do to create a quality working workplace, the Gallup Organization conducted a research in which over 80,000 managers and employees were studied. When employers were asked 'Are you committed to quality?', they all answered in the affirmative. This corresponds with employee's natural instincts and tendency to think highly of their work input and output. How an organization defines quality eventually set the tone and balls rolling for the organizational culture. If an organization or a manager views quality as an absence of mistake or defect, employees will be indirectly encouraged to cover up mistakes and hide problems instead of paying attention to them. When managers and supervisors realize that humans are fallible, they might define quality as the process of recognizing and solving problems.

The role of supervision in quality control in an organization can never be overemphasized. Supervision can be defined as the means of guiding, monitoring, instructing and observing employees while they are performing their duties in an organization. Among the numerous duties of the supervisor is facilitating control in the association. By this we imply that he or she has a duty to match the planned output of the firm with actual employee outputs. Supervisors therefore tend to put workers under constant monitoring by a step-by-step checkup in order to keep them from deviating from the plan of the organization or firm. Another important role of supervisors is to ensure employees or subordinates optimize the utilization of resources. When workers are checked regularly, they tend to use resources efficiently to ensure the best of quality output of the firm. Instilling discipline in subordinates is a recipe for efficient and quality work output, which also falls into the roles of supervisors. Some proponents believe that, strict supervision and guidance encourages discipline by following fixed timetables and abiding by organizational ethics, which in the long run fosters high and quality output; others however believe that strict supervision might eventually lead otherwise. Supporters of the latter believe that, supervisors should rather serve as motivators if they want workers to perform to their best capacity.

In exercising such duties, most supervisors arrive at a dilemma or conundrum where they can either be strict to ensure 'work quality output' or be liberal or lax to reduce work stress of employees. Based on their mode of supervision in instilling discipline, supervisors can be categorized into either being authoritative, authoritarian or Permissive. A permissive supervisor is one who shows a lot of warmth to supervisees and doesn't give much attention to discipline, whereas an authoritarian supervisor shows a lot of discipline and no warmth. Striking a perfect balance between the two would be an ideal choice which is referred to as Authoritative, thus ensuring a balance discipline and warmth among your workers. Inasmuch as it is difficult to strike a perfect balance between the two, some supporters of authoritative supervision believes that, allowing employee independence and freedom

in the working environment would reduce work stress, foster respect and love for their supervisors and in the long run work to the best of their abilities to ensure high and quality productivity eventually. On the other hand, supporters of authoritarian supervision asserts that, Humans are naturally lazy and indiscipline, and therefore need strict supervision to draw forth the best out of them. This corresponds with what McGregor explained in his book 'The Human side of enterprise' as Theory X. In his theory X, McGregor explains that, supervisors and managers who share the view that, workers naturally dislike their work; avoid responsibility; have to be controlled, forced and threatened to deliver work; need to be supervised at every step; have no incentive to work or ambition, and therefore need to be enticed by rewards to achieve organizational goals and product quality.

However productive an authoritarian supervision might be, supervisors needs to beware of legal issues associated with constant monitoring of workers. Computer monitoring, spying, video surveillance are common tools supervisors in manufacturing companies and other service companies uses in monitoring employees in this 21st century. In the later part of the 20th century, over 26 million American workers were either constantly monitored (Mishra, 1986) by these methods mentioned above and more, to track output, inventory, and general efficiency (Losey,1994). Sophisticated labor laws and employee privacy violation laws as well as employee privacy rights has raised legal concerns on unethical monitoring and supervision at workplaces.

Research has proven that, stress at the work place end up decreasing productivity and production quality. Different models has been proposed and validated to better understand and examine the causes of organizational stress (Cannon, 1929), (Lazarus 1966), (Selye 1976), (French et al 1982). However the model commonly referred to as the person-environment theory has almost 100 years of support in the literature (Kristov-Brown et al 2005). This model suggests that the degree of fit between individual and the job environment determines the stressfulness (or strain) that is experienced" (Gangster and Schaubroeck, 1991) This is manifested in two ways, firstly, by the outcomes of job to the needs, motives, and preferences of the worker, and secondly, by the demands of the job versus the abilities of the worker (French et al. 1982). When supervisors exercise strict control and supervision over workers, it might lead to encounter stress. Encounter stress refers to anxiety about interacting with people whom one perceives to be unpleasant. (Crichton 2017) It should be noted that both types of organizational stress are brought about differently.

The numerous literatures surrounding the effects of supervision on quality control seems to support that an authoritative and aesthetic working environment is more productive and quality assuring. For instance in Crichton's study to identify the effect of aesthetic in curbing work stress, he surveyed three most important US multinational corporations (Johnson and Johnson; The Walt Disney; & Google). His conclusion wasn't far from the obvious. He concluded that aesthetic practices go a long way in solving work stress, which in turn increases employee's productivity. This study employs empirical analysis of questionnaires by random sampling to find out what employees think about effect of strict supervision, which serves as a perfect proxy for quality control (quality productivity) on their efficiencies and work output.

This study is divided into four main chapters. The chapter one contain the introduction and research background of the study, whereas the chapter two contains the methodology and data analysis, chapter three is reserved for conclusions and recommendations and the final chapter four is reserved for references.

2. Data And Methodology

2.1 Data.

This study employs a methodology consisting of both primary and secondary data. This paper has been prepared using the analysis of secondary resources (scientific publications and business articles from authentic database, such as science direct) and primary resources from a field quantitative survey conducted in a random sampling by issuing self-administered questionnaires to group of employees and even students from across the globe who are perceived to have ever-worked under supervision before. The questionnaires were generated by the use of Google forms. The forms were administered online to with no limitation to age, education, race, type of work or working experience. Respondent were supposed to click the Google generated link and fill in their demography as well as their working experience and mode of supervision they enjoyed or enjoy at their various working places.

2.2 Methodology.

Out of the unlimited number of questionnaires that were administered, only 170 responses were collected and used in our analysis. Responses that came afterwards were not analyzed. In order to make a good analysis (Tabachnick & Fidell 2013) suggested that about 170 is a good number to use in a correlation or regression analysis, whereas the sufficient requirement for generalizing the research results is suggested 150 responses. So, 170 respondents is sufficient number to do our empirical correlation analysis. The questionnaires consisted of 13 straightforward questions. The first three questions requiring respondents to indicate their continental region of origin, their age group, and their education background. The remaining 10 questions basically required respondents to indicate their working experience, more of supervision they underwent, and indicate their preference of supervisors. Lastly, respondents were supposed to indicate from their working experience whether strict supervision, which is assumed

as a perfect proxy for organizational quality control, resulted in quality work output or the reverse is the case.

The 170 responses were analyzed empirically by the use IBM's SPSS (Statistical Package for Social Sciences). The Spearman and Kendall's tau_b correlation was adopted. The common Pearson correlation model was not applicable since most of responses or variables were mostly ordinary and nominal and fewer scale.

Based on the review literature in chapter one, we could deduce and propose an alternate hypothesis and a null hypothesis as follows;

H0; -The Null hypothesis states that, there is no correlation between quality control (strict supervision) and employee efficiency and quality output.

H1; -Strict supervision (quality control) has a direct correlation with Quality output and high productivity. (First Alternative hypothesis)

H2; -There is an indirect correlation between quality control and employee efficiency.

3. Results Analysis.

3.1 Demography of respondents.

Even though our sampling was not targeting an African working class, our results indicated that, about 93% of the 168 respondents who provided their continental region of origin were from African followed by Asia, North America and the remaining continental regions totaling 7%. Moreover, 168 respondents indicated their age group, out of which 50 % were between the ages of 26-34years, followed by a more youthful group of 18-25 years (32.1%). 13.7% were between the ages of 35-44 years, and the remaining belonged to an aging class of above 45 years. When it comes to the current role of respondents, 167 responded. About 34% were currently doing their graduate studies, 21% undergraduates, 19.2% post-graduates, about 24% working class while the remaining percentage belonged to the high groups.

What is the best range of your current age?

168 responses

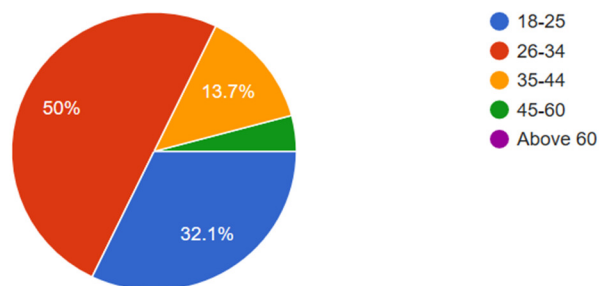


Figure 1. Age group of respondents.

Source; Author's field survey.

3.2. Working Experience of respondents.

Even though the demography of the respondents above indicated that, a greater percentage of them are students, however out of the 167 respondents who provided their working experience, about 86% had a working experience, whereas about 10% couldn't really indicated whether their past experience could be properly termed as working (not really). Moreover, about 51.2 % of these working class had worked between 2 to 5 years. Followed by the 1 year working experience group with about 25.3%. About 9.3% had a working a working experience between 6 to 10 years while a significant 11% had worked for more than 10 years.

How many years of Working Experience do you have?

162 responses

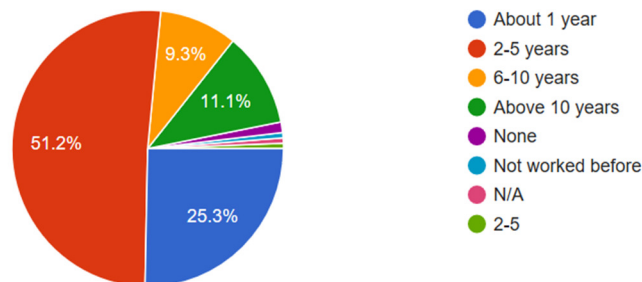


Figure 2. Working experience of respondents by years.

Source; Author's field survey.

When respondents were asked to indicate with a Yes, No or Not Sure whether they have worked under a supervisor before, about 93% chose yes, whereas the remaining 7% were either not sure or had never worked under a supervisor before. Respondents were furthermore ask to indicate the degree of strictness of their supervisors on a scale of 1-5 where 5 signifies strict supervision and vice versa. About 45% either chose 4 or 5 which indicates some strictness in their supervisors whereas the 18.2 % chose either 1 or 2 indicated less strictness from their supervisors. The remaining percentage (about 39%) chose 3.

On a scale of 1-5 where 1 signifies less strictness and 5 signifies strict supervision, how was your supervisor?

165 responses

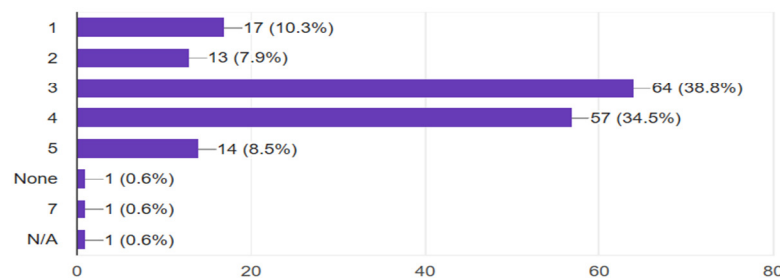


Figure 3. Degree of respondents' supervisors

Source; Author's field survey.

Out of 165 respondents, about 34% agreed that, they enjoy or enjoyed working under strict supervision. 41% were against strict supervision whereas a significant 22 % could not express their feelings properly on their past experience with strict supervision.

Figures 4 and 5 below shows the respondents' view on reasons why would prefer strict supervision to a permissive supervision (fig. 4), and reasons why they would prefer permissive supervision to strict supervision (fig.5)

Why would you opt for strict supervision instead of a liberal supervisor?

163 responses

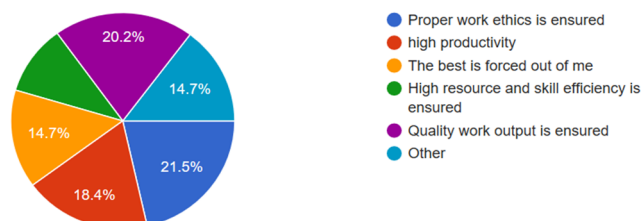


Figure 4. Reasons for strict supervision; respondents view.

Source; Author's field survey.

Why would you choose a liberal supervisor over a strict one?

162 responses

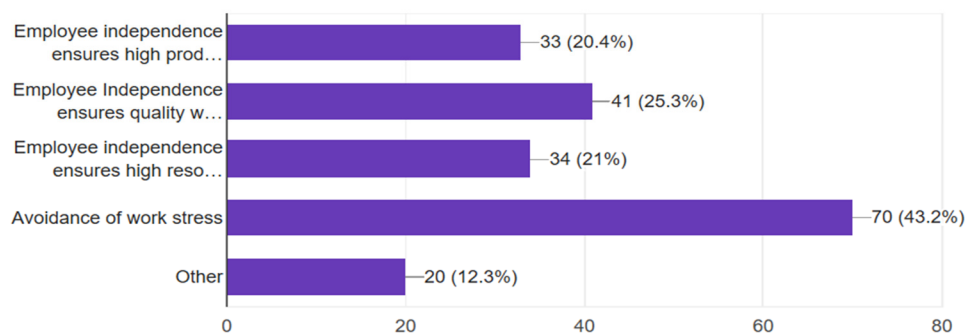


Figure 5. Reasons for permissive supervision; Respondents view.
 Source; Author's field survey.

When respondents were asked to choose between a Yes, No, and Maybe whether they agree from their working experience that, strict supervision is necessary for high productivity and quality output from employees; about 39% indicated a yes, while 29% opted for a no and a similar percentage were not sure. However, when employees were to decide from their working experience whether permissive supervision could lead to high productivity and quality output from employees, 40% were against it by indicating a No for answer. About 24% agreed on a Yes while a significant 36 were not sure. Lastly, respondents were supposed to indicate by either agreeing or disagreeing that, Human resource is intuitive and needs less stress from strict supervision for employees to give out their best. About 20% strongly agreed to this, while 47% agreed. About 22% were neutral on this issue while the remaining 11% either strongly disagreed or disagreed.

3.3. Correlation Analysis.

The empirical analysis of the responses was done by the use of SPSS spearman and Kendall's tau_b model. Arranging the responses in ascending order, thus 1 to 3, where 1 indicates a No, and 2 indicates a Maybe and 3 indicates a yes for the responses, a Bivariate correlation was done with the variables indicated in table 1 below to empirically ascertain how employees understand quality control and its influence on productivity and employees efficiency. Both correlation models have a variable coefficient values between -1 and 1, where -1 represents a perfect negative correlation between two variables been test and vice versa. That is to say that, the closer the coefficient is closer to 1, the positive, the relationship between the said variables, and vice versa. With a coefficient of -0.82 in the Kendall's tau_b model, employees believe in quality control for high productivity negatively relates with permissive supervision. However the correlation coefficient is not significant within both the 99% and the 95% confidence interval due to the high P-value of .219. The spearman result for the correlation gave a more negative correlation of -0.86, however it also passed neither the 95% nor the 99% significance test.

In testing for employees believe in strict supervision and their agreement to employees' freedom, the Kendall's tau-b model showed a 95% significant negative coefficient of -.132. Which shows that, workers who believed that, strict supervision is necessary for high and quality output didn't believe in employees' freedom. The spearman analysis of the same, gave a higher insignificant negative coefficient of -.146. Interestingly, a significant positive correlation was witness between employees who believe in permissive supervision and in employee independence towards higher productivity and quality. The Kendall's tau_b model had a significant positive coefficient of .195 within the 99% confidence interval. This corresponds to the Spearman results which had even a higher significant positive coefficient of correlation (.221).

Due to the multiple significance coefficient values of the Kendall's tau-b model, we are going to base our inference and analysis on the Kendall's model. We can therefore reject the null hypothesis and accept the first alternative hypothesis (H1). H2 however cannot be accepted in all circumstances, however based on the Kendall's tau_b correlation, it can sometimes be true.

Correlations

			From my work experience, Strict work supervision is necessary for high and quality productivity (output)	From my work experience, lax work supervision is necessary for high and quality productivity (output)	I believe Human Resource is mostly intuitive and and so Employees need less stress from supervisors to be able to give out their best.
Kendall's tau_b	From my work experience, Strict work supervision is necessary for high and quality productivity (output)	Correlation Coefficient	1.000	-.082	-.132*
		Sig. (2-tailed)	.	.219	.046
		N	170	170	170
	From my work experience, lax work supervision is necessary for high and quality productivity (output)	Correlation Coefficient	-.082	1.000	.195**
		Sig. (2-tailed)	.219	.	.003
		N	170	170	170
	I believe Human Resource is mostly intuitive and and so Employees need less stress from supervisors to be able to give out their best.	Correlation Coefficient	-.132*	.195**	1.000
		Sig. (2-tailed)	.046	.003	.
		N	170	170	170
Spearman's rho	From my work experience, Strict work supervision is necessary for high and quality productivity (output)	Correlation Coefficient	1.000	-.086	-.146
		Sig. (2-tailed)	.	.267	.057
		N	170	170	170
	From my work experience, lax work supervision is necessary for high and quality productivity (output)	Correlation Coefficient	-.086	1.000	.221**
		Sig. (2-tailed)	.267	.	.004
		N	170	170	170
	I believe Human Resource is mostly intuitive and and so Employees need less stress from supervisors to be able to give out their best.	Correlation Coefficient	-.146	.221**	1.000
		Sig. (2-tailed)	.057	.004	.
		N	170	170	170

*. Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Table 1. Spearman and Kendall's tau_b correlation results table.

Source; Authors calculation (by the use of SPSS)

4. Summary And Conclusion

Quality affects all aspects of a company from productivity to profitability. It can affect the public perception of the company and customer satisfaction. The numerous literature surrounding the relationship between Supervisors practices on employees and the latter's efficiency portrays a direct relationship between strictness (high quality control) and efficiency (high productivity). This study however employs SPSS correlation analysis of responses of self-administered questionnaires to find out employees position on supervision and efficiency. Based on the responses, we can assert that a greater percentage of experienced workers agree that, strict supervision is necessary high employees' efficiency. Moreover about 40% of the respondents opposed permissive supervision as against the 24% who supported it. This indicates that, even though employees enjoy work-freedom, they however agree that, supervision is necessary for employee efficiency. Basing our inferences on the Kendalls' tau_b correlation analysis, we found out that, employees who believe that, human resource is intuitive and needs less strict supervision have actually experienced efficiency in a permissive-supervision work environment. We can therefore posit that, strict control is necessary for employee efficiency, permissive working environment can also result in the same. The type of supervision need might depend on the preferences of employees and type of work involved. The literature moreover asserts that, excessive supervision would not only lead to work stress, but might also result on employee privacy right violations.

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