The Effect of Labour Turnover in Brewery Industries in Nigeria (A Study of Guinness Brewery Industries Plc and Bendel Brewery Ltd in Benin City)

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Abstract: This research study investigated the effect of labour turnover in Brewery industries in Nigeria. Labour turnover is a costly problem and an economic drain to Brewing Industries. Labour turnover costs Brewing industries in Nigeria huge sum of money in recruiting and training replacements. Additional costs are incurred through new employees that are more subject to accidents, causes more breakages and make more errors than experienced worker. Brewing industries incur losses through reduced production, work disruption and increases scrap and overtime as a result of departed workers. A cross-sectional survey was utilized to collect data for answering research questionnaires and testing hypothesis in this research work. The data collected from questionnaire instrument were also analyzed using percentage. The research finding showed that the effect of labour turnover were reduced production, increase cost of recruitment, work disruption, increased scrap and overtime and additional labour turnover. Reduced production was found to have the foremost effect on labour turnover and this affects output and profit. A comparison of the effect of labour turnover between Bendel Brewery and Guinness Brewery showed that Bendel Brewery rated increase cost of recruitment and training replacements as the major effect of labour turnover while Guineas Brewery rated reduced production. The variables that were hypothetically tested as the causes of turnover had significant effect on brewery industries in Nigeria.

Key words: Labour retention, labour turnover, response rate, turnover cost, turnover effect, turnover solution

INTRODUCTION

Background of study: Labour turnover is the rate at which an employer gains and loses employee. Simple ways to describe it are “how long employees tend to stay”. Turnover is measured for individual companies and for their industries as a whole. High turnover may be harmful to a company’s productivity, if skilled workers are often leaving and the worker population contains a high percentage of novice workers (Hutchinson and Jand Beruvides, 1997). Turnover can be voluntary and involuntary.

The instance of voluntary turnover is initiated at the choice of the employee while employee has no choice at the instance of involuntary turnover. The employee has no choice in their termination, such as long term sickness, death, moving overseas or employer initiated termination (Martin, 2003). Typically, the characteristics of employees who engage in involuntary turnover are no different from job strangers (Joseph, 1972; Testa, 2008). However, voluntary turnover can be predicted, and in turn controlled by the construct of turnover intent.

Ruby (2002) classified labour turnover into internal or external. Internal turnover involves employees leaving their current positions and taking new position within the same organisation. Both positive (such as increased moral from the change of task and supervisor) and negative (such as project/rational disruption exists, and therefore, it may be equally important to monitor this form of turnover as it is to monitor its external counterpart. Internal turnover might be moderated and controlled by typical human resource mechanics, such as an internal recruitment policy or formal succession planning.

In the U.S., for the period of December 2000 to November 2008, the average total non seasonally adjusted monthly turnover rate was 3.3%. However rates vary widely when compared over different periods of time or different job sectors. For instance, during the period 2001-2006, the annual turnover rate for all industry sectors averaged 39.6% before seasonal adjustments, during the same period the leisure and hospitality sector experienced an average annual rate of 74.6% (Bureau of Labour statistics, 2008). This corroborates the findings of Joseph (1972) which stated that Labour turnover cost American
industry 11 billion dollar a year. This figure includes items as recruitment, hiring and training of replacements. In addition, new employees are more subject to accidents, causes more breakages and makes more errors than experienced workers, so that the cost of replacing a man greatly exceed the hiring estimate (Stessin, 1961). Nigerian industries are experiencing similar effect of labour turnover, and most employers recognizes that it is a serious and on going problem of great concern, hence it is appropriate to undertake this study.

When accounting for the costs (both real costs,) such as time taken to select and recruit a replacement, and also opportunity costs; such as lost productivity, the cost of employee turnover to for-profit organisations has been estimated to be up to 150% of employees remuneration package. These are both direct and indirect costs. Direct costs relate to the leaving costs, replacement costs and transitions costs, and indirect costs relate to the loss of production, reduced performance levels, unnecessary overtime and low morale US Department of labour, (Bureau of labour statistics, 2008). These are direct and indirect effects of labour turnover which we want to study in Brewery industries in Nigeria namely Guinness Brewery plc and Bendel Brewery Limited.

Chruden (1980) stated that unskilled positions often have high turnover, and employee can generally be replaced without the organization or business incurring any loss of performance. The ease of replacing these employees provides little incentive to employers to offer generous employment contracts, conversely, contracts may strongly favour the employer and lead to increase turnover as employees seek, and eventually find more favourable employment.

However, high turnover rates of skilled professionals can pose as a risk to the business or organization, due to human capital (such a skills, training and knowledge) cost. Notably, given the natural specialization of skilled professionals, these employees are likely to be re-employed within the same industry by a competitor. (Chruden, 1980; Testa, 2008).

High turnover is caused by unhappiness with the work, inadequate compensation, unsafe and unhealthy conditions, unrealistic expectations, inappropriate processes or tools, and poor candidate screening. Other causes are lack of career opportunities and challenges, dissatisfaction with the job-scope or conflict with management (Jackson, 1981; Stear, 1991).

Continual training and reinforcement develops a workforce that is competent, consistent, competitive, effective and efficient. Beginning in the first day of work, providing individual with the necessary skills to perform their job is important. Before the first day, it is important the interview and hiring process expose new hires to an explanation of the company, so individuals know whether the job is their choice. Not working and strategizing with the company provides ongoing performance management and helps build relationships among co-workers. It is also important to motivate employees to focus on customer success, profitable growth and the company well being. Employers can keep their employees informed and involved by including them in future plans, new purchases, policy changes as well as introducing new employees to the employees who have gone above and beyond in meetings (Dijkstra, 2008). Early engagement and engagement along the way, shows employees they are valuable through information or recognition rewards, making them feel included.

When companies hire the best people, new talents hired and veterans are enabled to reach company goals, maximizing the investment of each employee. Taking the time to listen to employees and making them feel involved will create loyalty, in turn reducing turnover, allowing for growth (Costello, 2006).

Controlled turnover can be healthy as it clears dead wood and brings new blood and flesh ideas and approaches to the organization. Most organisations do not usually attach monetary value to the loss caused by labour turnover. They usually feel very reluctant to attack the problem. Some organizations are ignorant of the problem. Considerable time, effort and money are poured into attracting, selecting and training employee, but also too little of the same are directed towards keeping them. It is worthwhile carrying out this study because of the numerous problems associated with labour turnover and its attendant effect on the productivity and effectiveness of an organisation.

The findings from this study cannot be generalized to other brewery industries or other industries because the circumstances are not the same. It will require much larger study to be able to generalize. But at least, the result can form the basis for further study and a contribution to ongoing research experiments on the effect of labour turnover.

Statement of problem:
- Much money is incurred in recruiting, hiring and training replacements.
- New employees are more subject to accidents, causes more breakages and makes more errors than experienced worker.
- There is work disruption, increased scrap and overtime as a result of departed staff.
- There is reduced production, decreased output and profit as a result of labour turnover.
- There is additional turnover and difficulty in recruiting good employees.

Objectives of study:
- To research into the effect of labour turnover in brewing industries in Nigeria.
- To find out the most serious effect of labour turnover in brewery industries in Nigeria.
• To compare the effect of labour turnover in the two breweries that are under investigation.

Research questions: The study did utilize the following research questions:

• Why are employees terminated in the organisation
• Has exit of employee any effect in your organisation.
• What effect has labour turnover in the organisation
• Does turnover occur more in some departments.

Statement of hypotheses: The following hypotheses were also formulated to guide this study:

• $H_0$: Labour turnover does not increase cost of recruitment, hiring and training replacement in Brewery sector.
• $H_A$: Labour turnover increase cost of recruitment, hiring and training replacement in Brewery sector.
• $H_0$: Labour turnover does not reduce production, decrease output and profit in Brewery sector.
• $H_A$: Labour turnover reduce production, decrease output and profit in Brewery sector.
• $H_0$: Labour turnover does not cause work disruption, increased scrap and overtime in Brewery sector.
• $H_A$: Labour turnover causes work disruption, increased scrap and overtime in Brewery sector.
• $H_0$: New employees are not more subject to accidents, causes not more breakages and make note more errors than experienced worker in Brewery Sector.
• $H_A$: New employees are more subject to accidents, causes more breakages and make much errors than experienced worker in Brewery Sector.

Significance of the study:
• To know the effect of labour turnover in the brewery industries in Nigeria.
• To know how to tackle the problem of labour turnover.

LITERATURE REVIEW

Labour turnover affects both workers and organizations. Workers experience disruption, they need to learn new job specific skills and find different career prospects (Alogoskoufia et al., 1995). Organisations suffer the loss of job-specific skills disruption in production and incur costs of hiring and training new workers. But incoming workers may be educated, more skilled and have greater imitative and enthusiasm than those who leave. The effect of turnover on workers is quite well understood. However we know very little about the impact of turnover on organizations. This is due to limited availability of data, which has allowed only sporadic study to these issues (turnover and hiring cost have been studied by (Burgess and Dorado, 1989; Hammermesh, 1995; Hammermesh and Pfann, 1996; Hutchinson and Jand Beruvides, 1997; Kersley and Martin, 1997), have analysed the impact of labour turnover on productivity).

Haskel and Martin (2001) stated that a large hiring cost results where there is difficult in filing vacancies, they used variables that indicates whether managers report that the establishment experienced difficulty in hiring workers in the preceding years as a simple measure of hiring costs. To represent training costs, Haskel and Martin (2001) used a measure whether workers who have done similar work before receive training that last for 7 days or longer when they joined the establishment. This can indicate establishment where workers require specific skills and thus where training costs are higher.

In this research work, demographic classification of respondents were done to help the researcher and the reader to understand the characteristic of the samples in which the research questionnaire or instrument were administered (Onwe, 1998). The responses on the variables that have effect as a result of labour turnover on the two Breweries were analysed. A cross sectional design was used to collect data to answer research questions and relationship among variables (Asika, 1991). It was used to collect data for hypothesis testing. Descriptive method of analysis was used to distribute the relevant research variables using percentages. This research work is investigating the extent each variables, such as increase cost of recruitment and training, reduced production, work disruption, increased scrap and overtime as a result of labour turnover have effect on Guinness Brewery Plc and Bendel Brewery Limited. We have not come across where this method of investigation was adopted in the literature on the effect of labour turnover in organisations. The literature have always cited the effect of turnover and hiring cost in organisations as earlier mentioned on the sporadic research on this issues.

Garino and Martin (2007) analysed the impact of labour turnover on profit using the efficiency wage model of Salop (1979) by separating incumbent and newly hired workers in the production function. They showed that an exogenous increase in turnover rate can affect increase in profit, but only where organizations do not choose the wage. This effect of turnover varies across organizations as it depends on turnover costs; the substitutability of incumbents and new hires and other factors. Their model was tested in UK Cross sectional establishment level data and they found out that their productions were consistent with the data. Turnover rate is a given function of wage and other factors, in practice it may be endogenous. Martin (2003) used econometric model to generate predicted values of the actual turnover rate. High turnover is prevalent among those groups who have skills that are in short supply and among the young and also new staff
(Bolton, 1991). Bolton went further to state that turnover rate may not be a problem if staff can be cheaply and effectively replaced and that low turnover rate will be a problem if it is expensive to replace staff and if training staff takes sometimes.

Bolton (1991) gave the formula for calculating turnover as labour turnover is equal to the number of employee leaving, divided by the average total number of employee multiplied by 100 (in order to give a percentage value). The number of employees leaving are measured over one calendar year.

Employees are important in any running of a business; without them the business would be unsuccessful. However, more and more employers today are finding that employees remain for approximately 23 to 24 months, according to the Bureau of Labour statistics. The Employment policy Foundation states it costs a company an average of $15,000 per employee, including separation costs, paperwork, unemployment; vacancy costs, including overtime or temporary employees and replacement costs including advertisement, interview time, relocation, training and decreased productivity when colleagues depart. Providing a stimulating workplace environment, which fosters happy, motivated and empowered individuals, lowers employee turnover and absentee rates, promoting a work environment that fosters personal and professional growth, promotes harmony and encouragement at all levels, so the effects are felt company wide.

Another effect of labour turnover is that organizational effectiveness diminishes if employees cannot stay on the job (Stear, 1991). This corroborates the finding of Ovadge (1998), which stated that today’s highly competitive and chaotic environment requires retention of people who will be willing to perform if organization are to survive and Chruden (1980) also acknowledge that employee turnover is good indicator of the effectiveness of an organization staff function.

Bureau of Labour Statistics (2008) when accounting for the costs of labour turnover in organizations, has estimated the cost of employee turnover to for-profit to be up to 150% of employees remuneration package. These are both direct and indirect costs. Direct costs are leaving costs, replacement costs and transition costs and indirect costs are loss of production, reduced performance levels, unnecessary overtime and low moral. The extent of the effect of these costs is what we want to study in Brewery industries in Nigeria, namely Guinness Brewery Plc and Bendel Brewery Limited.

Testa (2008) in his research work, noted that high turnover rates of skilled professional is not desirable and can pose as a risk to organisation due to human capital cost. He emphasized that these employees by their skillful ability are likely to be re-employed within the same industry by the competitor.

Turnover has its consequences apart from the cost implication as a result of recruiting new staff and training replacement. Ubeku (1975) stated leakage of vital information to competitors by the departing staff as one of the consequences of labour turnover. He also emphasized that the training giving to the departing staff may not be realized and that this might encourage other staff in organisation to resign their appointment for other establishment.

Chruden (1980) corroborated the findings of Testa (2008) by stating that the cost of turnover for competent people is high, since replacement of key employee means that a new employee must be able to carryout to those rules and responsibilities which were formally performed by the employees. And to undergo a learning process may take 3 to 6 months, depending on replacement ability to acclimate to new job. For an outsider, this involves learning the business, culture and workflow within an enterprise, for an insider it may involve new responsibilities and tools. This also bothers on loss of human capital through training, skill and knowledge as postulated by Testa.

Although, labour turnover increase organisational cost, disrupt organisation plan, ongoing projects and cause untold hardship to organisation, but there are some advantages to it. These advantages are replacement of separated employees with new ones who could bring experiences, knowledge, practice and skill. Turnover can be driver to organizational renewal. Although high turnover is expensive, low rate can be cost saving. Also competent ones with lower remuneration could replace employees with higher remuneration. The organisation can undergo some form of restructuring, merger of some positions, which can improve bottom line. Turnover can enable organisation eliminate poor performances, unmotivated workers and people who are difficult to get along with.

**RESEARCH DESIGN AND METHODOLOGY**

**Methodology:** A cross sectional design was used in this study. A cross sectional design is explanatory and exploratory and entails collection of data to answer research questions and relationship among variables (Asika, 1991). It was used to collect data for hypothesis testing. Descriptive method of analysis was used to distribute the relevant research variables using percentages. Z-test statistics was used for hypothesis testing about proportion of one or two samples Z-test statistics was used in hypothesis testing because of large sample.

**The population of sample size:** The population of study was made up of 552 staff of Guinness Brewery Plc and 612 staff of Bendel Brewery Ltd. The entire size of population was 1164. The sample size was determined using Yamane (1964) formula which is stated as follow:

\[ n = \frac{N}{1+Ne^2} \]
where \( N \) = Population size
\( n \) = Sample size
\( e \) = Level of error = 0.05
\( I \) = a theoretical constant
\[
\frac{1164}{1+1164(0.05)^2}
\]
\[
\frac{1164}{3.91} = 297.69
\]
\[
= 298 \text{ samples}
\]

Calculation of Stratum Allocation using Kumar (1976) technique:

\[
h = n \times \frac{N_H}{N}
\]

where \( n_h \) = stratum allocation
\( n \) = sample size
\( N_H \) = stratum population
\( N \) = Overall population

Stratum Allocation for Guinness Brewery:

\[
298 \times \frac{552}{1164} = 141.32 = 141 \text{ samples}
\]

Stratum Allocation for Bendel Brewery:

\[
298 \times \frac{612}{1164} = 156.68
\]
\[
= 157 \text{ samples}
\]

Hence the sample size was 298 comprising 141 staff of Guinness Brewery Plc and 157 staff of Bendel Brewery Ltd.

**Sampling technique:** The simple random sampling technique was used to ensure that every member of the population has an equal chance of being selected into the sample.

**Instrument for data collection:** The data used for this research was obtained using a carefully prepared questionnaire. A total of 298 questionnaires were distributed to staff of Guinness Brewery Plc and Bendel Brewery Ltd, Benin and 166 responses were collected. 81 responses were collected from Guinness Brewery and 85 responses from Bendel Brewery. This represents 55.7% of sample size of the population which is a good representation for the population of study. The response rate in Guinness Brewery Plc and Bendel Brewery Ltd were 27.18 and 28.52%, respectively.

**Data presentation and analysis:**

**Demographic analysis of data:** The Table 1 gives the features of the respondents used in the research.

**Data analysis according to research questions:**

Question 20 in the questionnaire instrument was used to answer the second research question. Question 20 is, which of the following has the foremost effect on exit of employee in your organization?

<table>
<thead>
<tr>
<th>Feature</th>
<th>Number of respondents</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department: Accounting</td>
<td>17</td>
<td>10.24</td>
</tr>
<tr>
<td>Marketing</td>
<td>44</td>
<td>26.51</td>
</tr>
<tr>
<td>Administration</td>
<td>28</td>
<td>16.86</td>
</tr>
<tr>
<td>Production</td>
<td>58</td>
<td>34.94</td>
</tr>
<tr>
<td>Maintenance</td>
<td>19</td>
<td>11.44</td>
</tr>
<tr>
<td>Total</td>
<td>166</td>
<td>100</td>
</tr>
</tbody>
</table>

**Age bracket:**

- Below 30 years: 34 (20.48%)
- 30-39: 68 (40.96%)
- 40-49: 43 (25.90%)
- 50 and above: 21 (12.65%)

**Total: 166 (100%)**

**Education:**

- Primary: 14 (8.33%)
- Secondary: 34 (20.48%)
- Post secondary: 66 (39.76%)
- University: 52 (31.33%)

**Total: 166 (100%)**

**Sex:**

- Male: 120 (72.29%)
- Female: 46 (27.71%)

**Total: 166 (100%)**

**Marital status:**

- Married: 111 (66.87%)
- Single: 55 (33.13%)

**Total: 166 (100%)**

Reduced production was rated by (30.72%) of the respondents as the effect of exit of employee. This was the highest percentage score in the Table 2 and showed that reduced production had the foremost effect on the exit of employee in the organisation. Increase cost of recruitment and training had the next highest response of 30.12%, followed by additional turnover (19.28%). Work disruption and breakage of equipment had 11.45% response while increase scrap and overtime had 8.43%. Increase in Scrap and Overtime had the least response.

**Comparison of the effect of labour turnover in bendel and guinness breweries:** Question 20 in the questionnaire instrument was used to compare the responses from Bendel and Guinness Breweries. Question 20 is, which of the following has the foremost effect on exit of employee in your organization?

Eighty five percent (85%) respondents from Bendel Brewery which constitute 28.52% of response rate were asked to rate any of the variables in Table 3, they considered as the major effect of labour turnover. The highest response was recorded on increased cost of recruitment and training replacements (34.12%), followed by reduced production (29.41%). Additional turnover and...

Table 3: Distribution of responses on effect of labour turnover

<table>
<thead>
<tr>
<th>Variables</th>
<th>Responses from Bendel Brewery</th>
<th>%</th>
<th>Responses from Guinness</th>
<th>%</th>
<th>Total response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased cost of recruitment/training</td>
<td>29</td>
<td>34.12</td>
<td>21</td>
<td>25.92</td>
<td>50</td>
</tr>
<tr>
<td>Reduced production</td>
<td>25</td>
<td>29.41</td>
<td>26</td>
<td>32.09</td>
<td>51</td>
</tr>
<tr>
<td>Work disruption</td>
<td>10</td>
<td>11.76</td>
<td>9</td>
<td>11.11</td>
<td>19</td>
</tr>
<tr>
<td>Increase scrap and overtime</td>
<td>6</td>
<td>7.06</td>
<td>8</td>
<td>9.88</td>
<td>14</td>
</tr>
<tr>
<td>Additional turnover</td>
<td>15</td>
<td>17.65</td>
<td>17</td>
<td>20.99</td>
<td>32</td>
</tr>
<tr>
<td>Total</td>
<td>85</td>
<td>100</td>
<td>81</td>
<td>100</td>
<td>166</td>
</tr>
</tbody>
</table>

Field survey (2005)

Work disruption had 17.65 and 11.76% respectively, while increased scrap and overtime had the least response (7.06%).

Similarly, eighty one percent (81%) respondents from Guinness Brewery which constitutes 27.18% of response rate were asked to rate any of the variables in Table 3, they considered as the major effect of labour turnover. The highest response was recorded on reduced cost of recruitment and training replacement (25.92%). Additional turnover and work disruption had 20.99 and 11.11% respectively. The least response was recorded on increased scrap and overtime (9.88%).

Increased scrap and overtime had the lowest response in both companies. The response rate followed a set pattern in the two companies when comparing work disruption, increased scrap and overtime and additional turnover with each other. However, Bendel Brewery rated increased cost of recruitment and training replacements as the major effect of turnover, while Guinness Brewery rated reduced production. The responses were 29 and 26 for Bendel and Guinness Breweries. These figures represent 34.12 and 32.09% of the respondents from Bendel and Guinness Breweries respectively.

Test of hypotheses: The hypothesis of the study were formulated in form of Null (H₀) and Alternate (Hₐ) hypothesis. The data got from the questionnaire instrument had responses supporting either H₀ and Hₐ, hence we opted to use test of proportions. We also decided to use Z test statistics in testing hypothesis because of large sample. The appropriate sampling distribution for large sample is normal distribution. The mean of the distribution is the population proportion and the standard error of the distribution is:

\[ \sigma_p = \sqrt{\frac{p(1-p)}{n}} \]

The difference between sample proportion and the hypothesized population proportion is divided by the standard error of the sampling distribution of proportion to provide test statistics.

Test value of Z was computed thus:

\[ Z = \frac{X/n - p}{\sigma_p} \]

where

- \( Z \) = Calculated Z – statistic value
- \( X \) = Number of sample success (no of respondents supporting H₀)
- \( n \) = Sample size
- \( p \) = Hypothesized population proportion (probability for H₀ acceptance) (0.5)
- \( \sigma_p \) = Standard error of proportion.
- \( \alpha \) = Level of significance

The level of significance for the test is 95%. This makes the tabulated Z (i.e., Z_{α}) to be ±1.64. The acceptance region for the test becomes ±1.64.

Decision rule: Accept H₀ if the value of computed Z falls within the acceptance region. Reject it and accept Hₐ, if the value of computed Z falls outside the acceptance region.

Hypothesis I:

H₀: Labour turnover does not increase cost of recruitment, hiring and training replacements in Brewery Sector.

Hₐ: Labour turnover increases cost of recruitment, hiring and training replacements in Brewery Sector.

Question 9 on the questionnaire instrument was employed to collect data for testing the first hypothesis. Question 9 was, will labour turnover increase cost of recruitment, hiring and training replacements in Brewery Sector?

The Table 4 showed that out of 166 respondents, 120 (72.29%) agreed that labour turnover increase cost of recruitment, hiring and training replacements in Brewery Sector. Only 46 (27.71%) of respondents thought that labour turnover does not increase cost of recruitment hiring and training replacements in Brewery Sector.
Table 4: Shows distribution of responses to question no 9

<table>
<thead>
<tr>
<th>Nature of response</th>
<th>No of response</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>120</td>
<td>72.29</td>
</tr>
<tr>
<td>No</td>
<td>46</td>
<td>27.71</td>
</tr>
<tr>
<td>Total</td>
<td>166</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Field survey (2005)

Table 5: Distribution of responses to question No 10

<table>
<thead>
<tr>
<th>Nature of response</th>
<th>No of response</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>112</td>
<td>67.47</td>
</tr>
<tr>
<td>No</td>
<td>54</td>
<td>32.53</td>
</tr>
<tr>
<td>Total</td>
<td>166</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Field survey (2005)

Thus only 46 respondents supported Null Hypothesis H₀. Let p stand for the probability that labour turnover does not increase cost of recruitment, hiring and training replacements in brewery industries. The sample size of the population is 298.

Formulation of hypothesis: We formulate the null hypothesis that the number of success sample x is equal to 46. H₀: x = 46.

The alternate hypothesis that the number of success sample x does not equal 46 H₁: x ¹ 46.

\[
Z = \frac{x - np}{\sigma p} = \frac{46 - 0.5}{0.02896} = 0.34564/0.02896 = -11.94
\]

Decision: Since Z cal (-11.94) <Z a (-1.64). It falls outside the acceptance region. We reject the Null hypothesis and accept Alternate Hypothesis H₁. Therefore labour turnover increase cost of recruitment, hiring and training replacements and this has significant effect on the brewery industries.

Hypothesis 2:

H₀: Labour turnover does not reduce production, decrease output and profit in brewery sector.

H₁: Labour turnover reduce production, decrease output and profit in brewery sector.

Question 10 on the questionnaire instrument was employed to collect data for testing the second hypothesis. Question 10 was, does labour turnover reduce production, decrease output and profit in brewery sector?

The Table 5 showed that out of 166 respondent, 112 (67.47%) agreed that labour turnover reduce production, decrease output and profit in Brewery industries. Fifty four (32.53%) respondents believe that labour turnover does not reduce production, decrease output and profit in brewery industries. Thus only 54 respondents supported the Null Hypothesis H₀.

Table 6: distribution of response to question 11

<table>
<thead>
<tr>
<th>Nature of response</th>
<th>No of response</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>130</td>
<td>78.31</td>
</tr>
<tr>
<td>No</td>
<td>36</td>
<td>21.69</td>
</tr>
<tr>
<td>Total</td>
<td>166</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Field survey (2005)

Let p stand for the probability that labour turnover does not reduce production, decrease output and profit. The sample size of the population is 298.

Formulation of hypothesis: We formulate the null hypothesis that the number of success sample x is equal to 54. H₀: X = 54.

The alternate hypothesis that the number of success sample x does not equal 54 H₁: x ¹ 54.

\[
Z = \frac{x - p}{\sigma p} = \frac{54 - 0.5}{0.02896} = 0.34564/0.02896 = -11.01
\]

Decision: Since Z cal (-11.01) <Z a (-1.64). It falls outside the acceptance region. We reject the Null hypothesis and accept Alternate Hypothesis H₁. Therefore labour turnover reduce production, decrease output and profit and this has significant effect in the brewery industry.

Hypothesis 3:

H₀: Labour turnover does not cause work disruption, increased scrap and overtime in brewery sector.

H₁: Labour turnover causes work disruption, increased scrap and overtime in Brewery sector.

Question 11 in the questionnaire instrument was employed to collect data for testing the third hypothesis. Question 11 was, does labour turnover cause work disruption, increased scrap and overtime in brewery sector?

The Table 6 showed that out of 166 responses, 130 (78.31%) agreed that labour turnover causes work disruption, increased scrap and overtime in brewing sector. Only thirty six (21.69%) thought that labour turnover does not cause work disruption, increase scrap and overtime in brewery sector.

Thus only 36 respondents supported the null hypothesis H₀.

Let p stand for the probability that labour turnover does not cause work disruption, increased scrap and over time in the brewery sector. The sample size is 298.

Formulation of hypothesis: We formulate the null hypothesis that the number of success sample x is equal to 36. H₀: x = 36.
The alternate hypothesis that the number of success sample \( x \) does not equal 36 \( H_A: x \neq 36 \).

\[
Z = \frac{x - np}{\sigma_p} = \frac{0.5(1-0.5)}{0.02896} = 0.028964
\]

\[
Z = [0.12081-0.5]/0.02896 = -13.09
\]

**Decision:** Since \( Z \text{ cal} (-13.09) < Z \text{ a} (-1.64) \). It falls outside the acceptance region. We reject the Null Hypothesis and accept Alternate hypothesis \( H_A \). Therefore, new employees are subject to accidents, causes more breakages and make more errors than experience worker and this has significant effect on the brewery industry.

**SUMMARY OF FINDINGS**

- The effects of labour turnover were reduced production, increased cost of recruitment, work disruption, increased scrap and overtime, additional turnover and difficulty to employ good worker.
- Reduced production was found to have foremost effect on labour turnover and this affects output and profit.
- Eighty five percent (85%) respondents from Bendel Brewery which constitute 28.52% of response rate were asked to rate any of the variables in Table 3, they considered as the major effect of labour turnover. The highest response was recorded on increased cost of recruitment and training replacements (34.12%), followed by reduced production (29.41%). Additional turnover and work disruption had 17.65 and 11.76%, respectively, while increased scrap and overtime had the least response (7.06%).
- Similarly, eighty one percent (81%) respondents from Guinness Brewery which constitute 27.18% of response rate were asked to rate any of the variables in Table 3, they considered as the major effect of labour turnover. The highest response was recorded on reduced production (32.09%), followed by increased cost of recruitment and training replacement (25.92%). Additional turnover and work disruption had 20.99 and 11.11%, respectively. The least response was recorded on increased scrap and overtime (9.88%).
- Increased scrap and overtime had the lowest response in both companies. The response rate followed a set pattern in the two companies when comparing work disruption, increased scrap and overtime and additional turnover with each other. However, Bendel Brewery rated increased cost of recruitment and
training replacements as the major effect of turnover, while Guinness Brewery rated reduced production. The responses were 29 and 26 for Bendel and Guinness Breweries. These figures represent 34.12 and 32.09% of the respondents from Bendel and Guinness Breweries, respectively.

- The variables that were hypothetically tested as the effect of labour turnover has significant effect on the brewery industries, and the variables are increase cost of recruitment, hiring and training replacements, reduced production, decreased output and profit, work disruption, increase scrap and overtime, accidents, breakage of equipment and more mistakes.

**CONCLUSION**

Labour turnover apart from its cost implication can be disastrous, if not controlled. It has its consequences apart from its cost implication of recruiting new staff and hiring replacements. An aggrieved departing staff can put employer at bad light and lure other employees out of the organisation. This additional turnover caused by departing staff can result to difficulty in employing good employee.

Controlled turnover can be healthy as it clears dead wood and brings new blood and fresh ideas and approaches to the organisation. Labour turnover can be a driver to organisational renewal. Although high turnover rate is expensive and disastrous, low rate can be cost saving. Controlled turnover can enable an organisation eliminate poor performances, unmotivated workers and people who are difficult to get along with. Controlled turnover may have financial advantage and may be house cleaning driver.

**RECOMMENDATIONS BASED ON RESEARCH FINDING**

- We recommend competitive and adequate compensation to the brewery staff in order to maintain stable workforce. Brewery industries should ensure that there are no discrepancies in pay and that employees are paid based on their certificate, experience and job output.
- We also recommend offering of challenging job and hope for future prospects to workers in order to increase their loyalty and commitment to the organisation. A loyal and committed staff hardly leaves the organisation.
- Workers should be offered promotability opportunities, fair and equal treatment to maintain a stable workforce and reduce turnover.
- Brewery industries should attach interest in providing good supervision, reduction of stress, and unpleasant physical and interpersonal working conditions in order to reduce turnover.

**REFERENCES**


Stessin, L., 1961. Figure that management does not see: High cost of labour turnover. Don Ser a Mon Indus. Rev. USA, 77: 75-77.

