Example of determinants of the annual income of truck drivers in the us research ...

Business, Company

There has been mixed reaction on the determinants of the annual income of truck drivers in the US. Women lobby groups argue that gender significantly determine wages in the US trucking industry to support their claims of gender discrimination. On the other hand, trucking companies in the US have maintained that wages of truck drivers are solely determined by the number of jobs assigned to a truck driver and the number of days spent on travel by the driver. This study sought to examine if gender, the number of jobs assigned to a truck driver and the number of days spent on travel by a truck driver influenced the annual income of truck drivers. Data regarding truck drivers ID, the gender of truck drivers, the number of jobs assigned in a year to truck drivers, number of days spent by a driver in a year and their respective incomes was collected from a sample of 30 truck drivers in the US. Descriptive statistics, regression analysis and t-test for regression slope were used to analyze the data.

The regression output revealed that the three variables only explained 9. 2% variations of annual income of truck drivers in the US. This study revealed that the three variables under investigation were not statistically significant at 5% significance level. Therefore, the study concluded with 95% confidence level, that gender does not influence the annual income of a truck driver and that the claim by women lobby groups that female truck drivers earn less is erroneous. Similarly, the study concluded that the number of jobs assigned to a driver and the number of days a driver spent on travel do not significantly influence the annual income of a driver. The claim by trucking companies, that the annual income of truck drivers is solely influenced by

the number of jobs assigned to a truck driver and the number of days a truck driver spent on travel is erroneous.

INTRODUCTION

Background

Although the majority of truck drivers in the US are men, there are thousands of women truck drivers across the US. There have been claims of discrimination of female truck drivers by women groups. They have claimed that women truck drivers earn far much less than their male counterparts to support their claims of gender discrimination. Trucking companies have always denied these claims by women lobby groups and purported that annual income are solely determined by the number of jobs assigned to a truck driver and the number of days spent travelling by the driver in the given year of income.

Research Problem

There has been mixed reaction on the determinants of annual income of truck drivers in the US. Women lobby groups argue that gender significantly determine the annual income of truck drivers in the US to support their claims of gender discrimination. On the other hand, trucking companies have maintained that wages of truck drivers are solely determined by the number of jobs and the number of days spent travelling by the driver.

The research problem of this study was to examine if gender significantly determines the income earned by a truck driver as claimed by women lobby groups. It further sought to examine if the number of jobs assigned to a truck

driver per year and number of days spent on travelling per year are significant determinants as claimed by trucking companies.

Research purpose

The research problem of this study was to examine if gender significantly determines the income earned by a truck driver as claimed by women lobby groups. It further sought to examine if the number of jobs and days on travel were significant determinants as claimed by trucking companies.

Significance of the study

There is a need for business to be ethical as part of their corporate social responsibility. Ethical behaviour ensures all stakeholders are treated fairly including; customers, employees, competitors and society at large. Corporate ethical behaviour not only benefits the society at large but also the business itself. The survival of any business is pegged on its adoption of business ethics. Businesses which ignore ethical concerns may have short-term success; however, they will fail in the long run. This is because once their unethical behavior becomes public knowledge it will ruin the business corporate image.

There are two potential ethical issues in this case. The first one is gender discrimination by trucking companies and the second one is whether trucking companies are giving objective information regarding the annual income paid to truck drivers. Therefore, the finding of this report will be important to all stakeholders in the trucking industry to evaluate the ethical behaviour of trucking companies. It is equally important to trucking companies themselves in evaluating their ethical standards.

Research question

The research questions for this study were;

i. Is gender a significant determinant of the annual income of truck drivers in the US?

ii. Does the number of jobs assigned in a year to truck drivers significantly determine the annual income earned by truck drivers in the US?

iii. Is the number of days spent by a driver on travel in a year a significant determinant of annual income earned by truck drivers in the US?

Research Hypotheses

This study comprised of a null and alternate hypotheses for each of the three research questions

For the first research question, the null and alternate hypotheses were;

Null hypothesis (H0):

Gender is not a significant determinant of the annual income of truck drivers in the US.

Alternate hypothesis (HA)

Gender is a significant determinant of the annual income of truck drivers in the US.

For the second research question, the null and alternate hypotheses were;

Null hypothesis (H0):

The number of jobs assigned in a year to truck drivers is not a significant determinant of annual income earned by truck drivers in the US.

Alternate hypothesis (HA):

The number of jobs assigned in a year to truck drivers is a significant determinant of annual income earned by truck drivers in the US.

For the third research question, the null and alternate hypotheses were;

Null hypothesis (H0):

The number of days spent by a driver on travel in a year is not a significant determinant of annual income earned by truck drivers in the US.

Alternate hypothesis (HA):

The number of days spent by a driver on travel in a year is a significant determinant of annual income earned by truck drivers in the US.

RESEARCH METHODOLOGY

Introduction

This section focuses on the research techniques that were adopted and used for this study with the aim of achieving the research objectives.

Research design

A quantitative research design was presumed tobe the best approach in addressing the research questions. Quantitative research design was best suited to examine the relationships between the variables under investigation and to answer the research question based on hypothesis testing.

Research model

Truck drivers' annual income in the US is determined by gender, the number of jobs assigned to the driver and the number of days spent travelling by the driver. This can be illustrated with the following model;

$Yt = \alpha Xt + \beta At + \delta Mt + e$

Where;

Yt represents the dependent variable for a truck driver's annual income in the USA during the year t.

Xt is dummy variable for gender. The gender dummy variable will be equals to zero if a selected individual is male and equals to one if the selected individual is a woman.

At represents the independent variable for the number of jobs assigned to a driver in a given year of income.

Mt represents the independent variable for the number of days a truck driver spent on the road in a given year of income.

e is the error term.

α, β and δ represents the coefficients of the respective independent variables.

Definition and measurement of variables

The dependent variable for this study was a truck driver's annual income in the US. There were three independent variables; gender, the number of jobs assigned to a driver and the number of days spent by a driver on the road in a given year of income.

A truck driver’s income was measured in US dollars. Data pertaining to gender had to be coded to facilitate quantitative analysis. Men were represented by the code 0 while women were represented by the code 1 in the data table. The number of jobs assigned to a truck driver was measured using ordinary numbers. The numbers of days spent by a driver was measured using ordinary calendar days.

Study area and target population

The theoretical population of the study consists of all truck drivers in the USA. However, the study was restricted to drivers of North American Van Lines Company due financial and time constraints.

Data type and source

This study relied on secondary data to obtain the data required for the analysis. Data regarding truck drivers ID, the gender of truck drivers, the number of jobs assigned in a year to truck drivers, number of days spent by a driver in a year and their respective incomes. This data was obtained from the management accountant’s records. Data relating to the year 2011 was used. This was the most recent and complete data that could be obtained. The collected data is in appendix A.

Sampling technique and sample size

The sampling frame was restricted to truck drivers of North American Van Lines Company due to financial and time constraints. North American Van Lines Company is a US based trucking company. It provides trucking services to automotive parts suppliers, the government of the US and government

departments, consumer electronics dealers, and other clients who require dependable handling and Delivery. North American Van Lines Company has its corporate office in New York with more than 70 local offices in both the US and Canada. The company has approximately 850 drivers.

Data analysis

Multiple linear regressions were used in analyzing the data collected. Multiple regression analysis is a statistics analysis tool that is commonly used to determine the relationship between dependent variable and independent variables using historical data. Normally, multiple linear regression analysis is used to evaluate the nature of the correlation between the variables under examination. In this study, multiple linear regressions will be used to evaluate the nature of the relationship between annual income of truck drivers, which is the dependent variable, and gender, number of jobs assigned to a driver and the number of days spent travelling.

T-tests for the regression slope were used to evaluate whether the three coefficients of the independent variables are statistically significant. The p-value obtained from the t-test for regression was compared to the p-critical at 5% significance level which is 0. 05. Normally, if the p-value obtained is higher than the 0. 05 then the independent variable is statistically significant. However, if the p-value is lower than the 0. 05 then the independent variable is not statistically significant.

Descriptive statistics was also used to analyze the data collected. The mean of the various variables were obtained, frequencies of men and women were

obtained. Graphs were also used in the study. This study used SPSS to analyze the data collected.

Ethical consideration

Data was collected after obtaining permission from North American Van Lines Company. The company's management was fully aware of the objectives of this study. The identity of the sampled drivers was not revealed. The research findings were in the form of generalizations. The data collected from North American Van Lines Company was used for this research only. During data analysis, care will be taken to avoid misrepresentation of the data collected.

RESEARCH FINDINGS

The research findings discussed below are in the SPSS output which is in appendix B under appendices.

Descriptive statistics results

The descriptive statistics comprised of median, mode frequency tables with percentages and bar graph.

The sampled number of truck drivers was 30 of which 20 were male and 10 were female. The male drivers were 66. 7% of the sampled truck drivers while female truck drivers were only 33. 3% of the sampled truck drivers. This implies that men drivers form a higher proportion of truck drivers in the USA. This information is represented graphically by a bar graph in appendix B under appendices.

The mean annual income of all sampled truck drivers was $ 59, 104 with a standard deviation of $ 5428. 48. The highest paid truck earned $ 69, 603 while the lowest paid truck driver earned $ 50, 128. The mean number of jobs assigned to the sampled truck drivers was 181. 83 with a standard deviation of 33. 43. The truck driver who was assigned the highest number of jobs had 232 assigned jobs while the one who was assigned the least number of jobs was assigned 98 jobs. The mean number of days spent on travel by the sampled truck drivers was 192. 77 days with a standard deviation of 39. 94 days. The truck driver who spent the highest number of days on the road spent 280 days while the truck driver who spent the least number of days spent 110 days on the road.

Regression results

In the regression model, the annual income earned by a truck driver in the US was being explained by gender, number of jobs assigned to the driver and the number of days the driver spent on the road in a given year of income. The adjusted R square is 0. 092. Adjusted R square gives the explanatory power of the model. This implies that the model of this study only explains 9. 2% of variations of the annual income a truck driver earns. 90. 8% of variations in the annual income of drivers cannot be explained by the model. This model has a low explanatory power because it only explains 9. 2% of variations in the annual income of truck drivers in the US whereas 90. 8% of the variations in the annual income of truck drivers in the US are explained by factors outside this study.

T-test for the regression slope results

The t-calculated from the regression output of gender is 1. 313. The p-value, P (t <1. 313) is 0. 201. The p-value (0. 201) is more than the significance level which is 0. 05. We accept the null hypothesis and reject the alternate hypothesis. Therefore, gender is not statistically significant. The t-calculated from the regression output of the number of jobs assigned to a driver is -1. 341. The p-value, P (t <1. 341) is 0. 192. The p-value (0. 192) is more than the significance level which is 0. 05. We accept the null hypothesis. Therefore, the numbers of jobs assigned to a driver is not statistically significant. The t-calculated from the regression output of the number of days spent on travel is 0. 517. The p-value, P (t <0. 517) is 0. 609. The p-value (0. 609) is more than the significance level which is 0. 05. We accept the null hypothesis. Therefore, number of days spent on travel by a truck driver is not statistically significant.

Conclusion

The model developed by this study has a low explanatory power. It only explains 9. 2% of variations in the annual income of truck drivers whereas 90. 8% of the variations in the annual income of truck drivers in the USA are explained by factors outside this study. Gender, number of jobs assigned to a driver and the number of days spent travelling by a driver explain a very small percentage of the disparities in the annual income of truck drivers. Further research may be necessary to determine the other factors that influence the annual income of truck drivers in the US.

This research revealed that the three variables under investigation were not statistically significant at 5% significance level. Therefore, we can conclude with 95% confidence level that gender does not influence the annual income of a truck driver and that the claim by women lobby groups that female truck drivers earn less is erroneous. Similarly, we can conclude that the number of jobs assigned to a driver and the number of days a driver spent on travel do not significantly influence the annual income of a driver. The claim by trucking companies that the annual income of truck drivers is solely influenced by the number of jobs assigned to a truck driver and the number of days a truck driver spent on travel is erroneous. This study also revealed that there are more men who are truck drivers as compared to women.

Conclusion

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Conclusion

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Employee ID

APPENDIX B – RESEARCH RESULTS

Descriptive statistics

Valid Percent

Cumulative Percent

Descriptive Statistics

Std. Deviation

Valid N (listwise)

Regression output

Model Summary

Model

R

R Square

Adjusted R Square

Std. Error of the Estimate

a. Predictors: (Constant), Days, Gender, Jobs

Unstandardized Coefficients

Standardized Coefficients

t

Sig.

B

Std. Error

(Constant)

a. Dependent Variable: Income