TeleCall uses 4 centers around the globe to process customer order forms. They audit a certain % of the customer order forms. Any error in order form renders it defective and has to be reworked before processing. The manager wants to check whether the defective % varies by centre. Please analyze the data at 5% significance level and help the manager draw appropriate inferences

**Ans :**

**R Code :**

## Hypothesis Testing

########## CustomerOrder Form Data Set #########

cof <- read.csv('D:\\Data Science\\Excelr\\Assignments\\Assignment\\Hypothesis Testing\\Costomer+OrderForm.csv')

table(Phillippines)

table(Indonesia)

table(Malta)

table(India)

a <- prop.table(table(Phillippines))

b <- prop.table(table(Indonesia))

c <- prop.table(table(Malta))

d <- prop.table(table(India))

t <- data.frame(a,b,c,d)

t1 <- t[-c(2),-c(1,3,5,7)]

chisq.test(t1)

**Results :**

> table(Phillippines)

Phillippines

Defective Error Free

29 271

> table(Indonesia)

Indonesia

Defective Error Free

33 267

> table(Malta)

Malta

Defective Error Free

31 269

> table(India)

India

Defective Error Free

20 280

> chisq.test(t1)

Chi-squared test for given probabilities

data: t1

X-squared = 0.011652, df = 3, p-value = 0.9997

Warning message:

In chisq.test(t1) : Chi-squared approximation may be incorrect

**Inference :**

The assumptions were as below :

Ho = Defective forms in all regions are equal.

Ha = Defective forms in all regions are not equal.

From the chisq.test we got p-value greater than 0.05 i.e. 0.9997.

Hence, we accept the null Hypothesis.