Given that,

Y=The mean 2015 GDP Per Capita (i.e. Response or dependent variable)

X= A GDP Per Labor Hour (i.e. independent or explanatory variable)

We know that,

The the estimated least squares regression equation is ,

 y^=b 0 + b 1  ×x

Where,

 b o=The estimate of the y-intercept &

 b 1 =The estimate of the slope

1) Interpretation

Given that,

b0 =1265.586 and b1 =771.8596

**For y-intercept b0**

The y-intercept b0 is the mean of the regression equation if the value of independent variable (x) contains zero i.e. the GDP Per Labor Hour is zero,

here the value of the GDP Per Labor Hour is not zero hence y-intercept doesn't have any practical interpretation.

**For Slope b1**

As per one unit change in the GDP Per Labor Hour produces 771.8596 unit change in the

GDP Per Labor Hour.

2.)

Claim: Is the slope is statistically significant.

To test ,

H0 :b1=0 vs H1:b1 ≠ 0

Given that,

P-value for slope is 3.58E −12

**Decision rule:**

We reject H0 at α% level of significance level if,

P-value<α

Here we take ,α=0.05 (i.e. 5%)

here , P-value < α i.e. 3.58E −12 < 0.05

Therefore, we reject H0 at 5% level of significance.

**Ans: Reject Ho**

**Conclusion: There is sufficient evidence to conclude that ,the slope is statistically significant.**

3)

Here we have to predict the mean 2015 GDP Per Capita for a GDP Per Labor Hour of $40.

i.e. we have to find the value of  y^  when x=40

4)

We have coefficient of determination, R2=(correlation coefficient, R)2

Given that,

R2 =0.815775

i.e. **R2=81.5775%**

**Interpretation:**

T**here are 81.58% of the variation in response variable explained by the independent variable.**

**1) Interpretations:**

**For y-intercept b0**

**The y-intercept b0 is the mean of the regression equation if the value of independent variable (x) contains zero i.e. the GDP Per Labor Hour is zero,**

**here the value of the GDP Per Labor Hour is not zero hence y-intercept doesn't have any practical interpretation.**

**For Slope b1**

**As per one unit change in the GDP Per Labor Hour produces 771.8596 unit change in the**

**GDP Per Labor Hour.**

**2) Conclusion: There is sufficient evidence to conclude that ,the slope is statistically significant.**

**3)** **Ans: $32139.97**

**4) R2=81.5775%**

**Interpretation:**

T**here are 81.58% of the variation in response variable explained by the independent variable.**