

Executive summary

- We carried out a hypothesis test to find evidence for the hypothesis that average earnings of people in age range of 30 to 50 is not equal to 14245.
- The dataset considered was a sample of about 4857 taken from Panel Study of Income Dynamics which was the longest running longitudinal survey in the world. We got a sample of 2000 from the existing sample dataset, considering it as population in order to carry-out hypothesis testing.
- The sample size is greater than 30, so according to central limit theorem we carried out a z test.
- With the dataset we defined hypothesis as follows.
 - H_0 : mean of earnings of people in age range of 30-50 equals to 14245
 - H_a : mean of earnings of people in age range 30-50 not equal to 14245
- Since alternative hypothesis is a not equal condition this test carries a two tail test.
- Did the hypothesis testing with 95% confidence level. So the level of significance(α) is 0.05 and the related z score value is 1.96.
- We calculated the test statistic(z) and found it is 0.366728. The p value for the corresponding test 0.71382 which is greater than level of significance. If the p value is greater than level of significance we can accept null hypothesis(H_0). So in this hypothetical testing we accept the null hypothesis which is mean equals to 14245 for people in age range of 30-50.