Sex	Income
M	40,6
M	54,6
M	38,6
M	58,2
M	34,6
M	42,9
M	67,5
M	79,8
M	54,4
M	47,3
M	66,4
M	69,0
M	62,0
M	52,5
M	72,6
M	52,4
M	59,5
M	59,1
M	36,7
M	54,6
M	52,1
M	49,9
M	52,0
M	47,1
M	40,8
M	36,5
M	57,1
M	54,1
M	32,4
M	34,9
M	64,1
M	54,0
M	51,5
M	50,8
M	45,1
M	81,5
M	70,4
M	39,2
M	45,2
M	80,9
M	48,6
M	31,0
M	32,1
M	33,9
M	31,3
M	51,0
M	53,4
M	58,3
M	31,4
M	56,3
M	41,0
M	47,9
M	51,4
M	33,1
M	74,9
M	77,2
M	57,9
M	80,1
M	40,2
M	100,9
F	33,1
F	35,8
F	68,8
F	31,6
F	38,2
F	42,0
F	33,4
F	50,3
F	39,6
F	30,7
F	31,3
F	61,3
F	30,0
F	38,1
F	56,4
F	35,7
F	31,3
F	40,4
F	32,1
F	66,4
F	36,9
F	35,9
F	49,6
F	62,8
F	44,6
F	32,5
F	33,4
F	55,3
F	62,7
F	54,4
F	30,8
F	49,1
F	41,9
F	32,5
F	35,2
F	47,4
F	60,7
F	33,0
F	43,3
F	34,8
F	36,0
F	51,6
F	31,9
F	34,1
F	78,4
F	30,4
F	45,3
F	52,6
F	30,3
F	36,6
F	53,1
F	36,5
F	37,8
F	34,0
F	69,3
F	77,2
F	32,6
F	82,9
F	42,3
F	57,8

F-Test Two-Sample for Variances

	Variable 1	*Variable 2*
Mean	52,91333333	44,23333333
Variance	233,1289718	190,1758192
Observations	60	60
df	59	59
F	1,225860221	
P(F<=f) one-tail	0,21824624	
F Critical one-tail	1,539956607	

p2 0,43649248

t-Test: Two-Sample Assuming Equal Variances

	Variable 1	*Variable 2*
Mean	52,91333333	44,23333333
Variance	233,1289718	190,1758192
Observations	60	60
Pooled Variance	211,6523955	
Hypothesized Mean Difference	0	
df	118	
t Stat	3,267900001	
P(T<=t) one-tail	0,000709735	
t Critical one-tail	1,657869522	
P(T<=t) two-tail	0,00141947	
t Critical two-tail	1,980272249	

Difference in Means 8,68

Exercise 8.6c

F-Test is used to compare variance in two samples.

Sample variance for Male income is 52.913, and for Female is 44.233.

The observed F test statistic is F = 1.226 with 59 degrees of freedom, giving a two tailed p-value of p=0.218.

A big F value with a small P-value means that the null hypothesisi is discredited, and is statistically significant. (*https://pjbartlein.github.io/GeogDataAnalysis/topics/interpstats.pdf*).

The t-Test is used to compare the difference in menas.

The observed t-value is = 3.268 with 118 degrees of freedom, giving a two tailed p-value of p=0.001.

A p-value here of less than 0.05, (or 0.01 for medical studies) implies significance, and supports the view that the null

Summary

The statistical tests support the null hypothesis be discredited, as there is sufficient evidence to state that there are significant differences in income, between Males and Females.