

QUESTION 3

STAT 34I Assignment 4

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**Were The Sales Affected By COVID-19 Pandemic
Policies In Italy, Greece, Bulgaria, Hungary, Romania,
Poland, And Russia?**

Affect	Italy	Greece	Bulgaria	Hungary	Romania	Poland	Russia
Sales Changed	0.807	0.860	0.762	0.606	0.735	0.593	0.759
Sales Increase	0.072	0.170	0.073	0.102	0.142	0.055	0.058
Sales Decrease	0.735	0.691	0.689	0.504	0.593	0.537	0.701
Sales Remained Same	0.193	0.140	0.228	0.394	0.257	0.399	0.236

If The Sales Were Affected, Has The Effect Been Similar Or Different Between Countries?

Significance Test

H_0 : The sub-populations P_1 and P_2 were randomly drawn from the same population

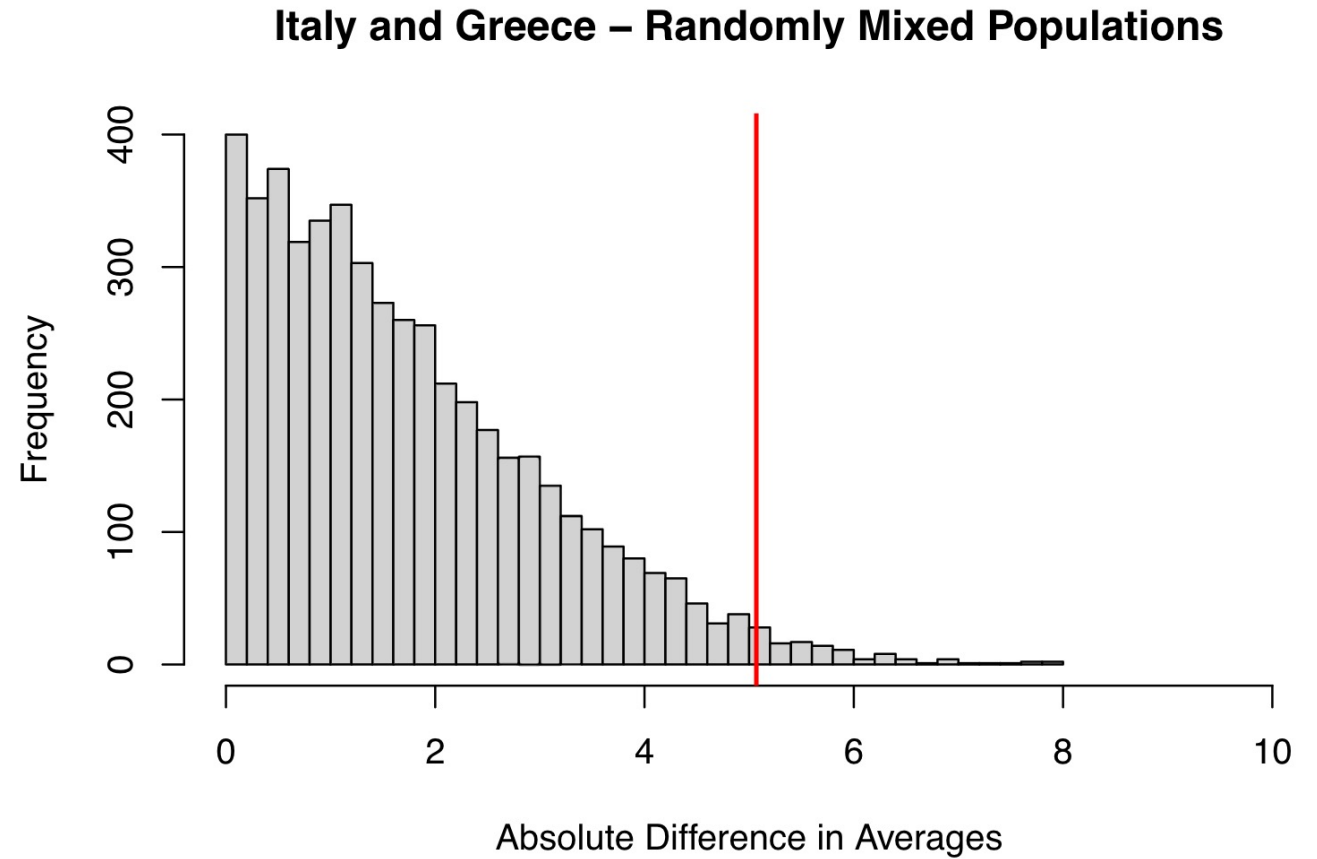
Variate: Percentage by which sales decreased

Discrepancy Measure: Absolute Difference of Averages

$$D(\mathcal{P}_1, \mathcal{P}_2) = |\bar{y}_1 - \bar{y}_2|$$

ITALY VS. GREECE

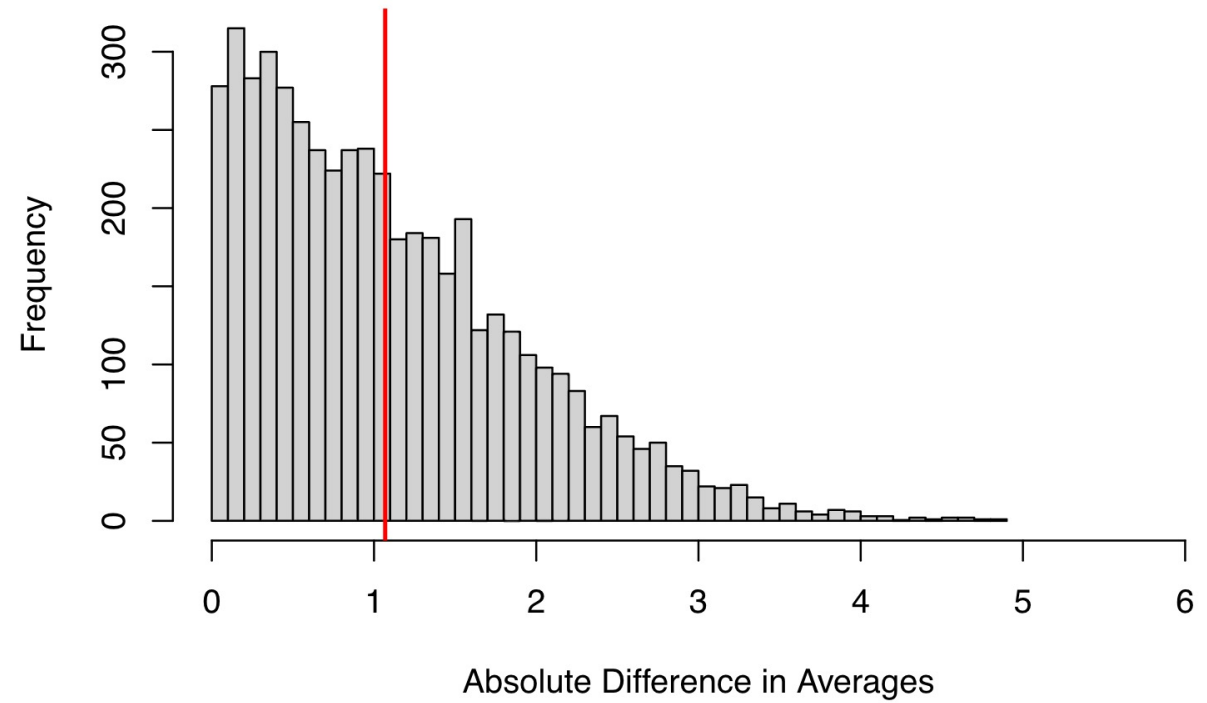
p-value : 0.0198



BULGARIA VS. RUSSIA

p-value : 0.4422

Bulgaria and Russian Federation – Randomly Mixed Populations



POLAND VS. HUNGARY

p-value : 0.0464

