

مهارات بحثية 2  
المهمة السابعة  
نورة مبارك البقمي  
اشراف أ. د/ أميرة جانو



الخطوات العملية للحصول على مقاييس النزعة المركزية والتشتت لثلاث متغيرات باستخدام البرنامج الاحصائي spss تم اتباع الخطوات المشار إليها في المحاضرة وكانت النتيجة كالتالي:

```
FREQUENCIES VARIABLES=y x1 x2
  /FORMAT=NOTABLE
  /NTILES=4
  /STATISTICS=STDDEV VARIANCE RANGE MINIMUM MAXIMUM SEMEAN MEAN MEDIAN MODE SUM
SKEWNESS SESKEW
  KURTOSIS SEKURT
  /GROUPED=y x1 x2
  /ORDER=ANALYSIS.
```

## Frequencies

| Notes                  |                                |                                                                                                                                                                                                                                             |
|------------------------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Created         |                                | 14-NOV-2024 16:14:28                                                                                                                                                                                                                        |
| Comments               |                                |                                                                                                                                                                                                                                             |
| Input                  | Active Dataset                 | DataSet0                                                                                                                                                                                                                                    |
|                        | Filter                         | <none>                                                                                                                                                                                                                                      |
|                        | Weight                         | <none>                                                                                                                                                                                                                                      |
|                        | Split File                     | <none>                                                                                                                                                                                                                                      |
|                        | N of Rows in Working Data File | 15                                                                                                                                                                                                                                          |
| Missing Value Handling | Definition of Missing          | User-defined missing values are treated as missing.                                                                                                                                                                                         |
|                        | Cases Used                     | Statistics are based on all cases with valid data.                                                                                                                                                                                          |
| Syntax                 |                                | FREQUENCIES<br>VARIABLES=y x1 x2<br>/FORMAT=NOTABLE<br>/NTILES=4<br>/STATISTICS=STDDEV<br>VARIANCE RANGE<br>MINIMUM MAXIMUM<br>SEMEAN MEAN MEDIAN<br>MODE SUM SKEWNESS<br>SESKEW<br>KURTOSIS SEKURT<br>/GROUPED=y x1 x2<br>/ORDER=ANALYSIS. |
| Resources              | Processor Time                 | 00:00:00.02                                                                                                                                                                                                                                 |
|                        | Elapsed Time                   | 00:00:00.07                                                                                                                                                                                                                                 |

|                        |         | Statistics             |                      |                        |
|------------------------|---------|------------------------|----------------------|------------------------|
|                        |         | y                      | x1                   | x2                     |
| N                      | Valid   | 15                     | 15                   | 15                     |
|                        | Missing | 0                      | 0                    | 0                      |
| Mean                   |         | 24735.333              | 287.347              | 25506.633              |
| Std. Error of Mean     |         | 1258.5062              | 3.8230               | 1894.0132              |
| Median                 |         | 26465.800 <sup>a</sup> | 288.100 <sup>a</sup> | 23445.200 <sup>a</sup> |
| Mode                   |         | 16607.7 <sup>b</sup>   | 267.0 <sup>b</sup>   | 17803.7 <sup>b</sup>   |
| Std. Deviation         |         | 4874.1735              | 14.8066              | 7335.4815              |
| Variance               |         | 23757567.170           | 219.234              | 53809288.812           |
| Skewness               |         | -.337                  | -.088                | .856                   |
| Std. Error of Skewness |         | .580                   | .580                 | .580                   |
| Kurtosis               |         | -1.378                 | -1.749               | -.110                  |
| Std. Error of Kurtosis |         | 1.121                  | 1.121                | 1.121                  |
| Range                  |         | 14928.1                | 40.5                 | 23990.6                |
| Minimum                |         | 16607.7                | 267.0                | 17803.7                |
| Maximum                |         | 31535.8                | 307.5                | 41794.3                |
| Sum                    |         | 371030.0               | 4310.2               | 382599.5               |
| Percentiles            | 25      | 20512.400 <sup>c</sup> | 274.550 <sup>c</sup> | 19287.375 <sup>c</sup> |
|                        | 50      | 26465.800              | 288.100              | 23445.200              |
|                        | 75      | 28933.800              | 300.275              | 31178.875              |

a. Calculated from grouped data.

b. Multiple modes exist. The smallest value is shown

c. Percentiles are calculated from grouped data.