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Unit 2 IP Email

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Dear sir or madam,

I greatly appreciate your interest in using statistics to assist you in making business decisions and to reduce the variability in the running of your business. Statistics truly is a valuable tool in decision making. It gives the businesses that use it, a competitive advantage over those that do not by allowing them to use the mathematics of probability and hypothesis testing to account for randomness in their business processes. Regarding the data that we have been working with, I’d like to show you a few findings that I’ve discovered in the data that might be useful for your decision making process. First, please see in the below pie chart that there are more females than males in our sample.

But, notice the distribution of tenure by gender:

This shows that there appears to be a low number of men with tenure of 2. That means that there are plenty of men with a lot of experience and plenty of men with little experience, but not as many in with a moderate level of experience. The women, on the other hand, demonstrate a gradual decline in tenure.

The following pie chart shows the distribution of survey participants by department. Information technology was the most widely polled, but human resources were the least widely polled.

When we discussed extrinsic value, men and women felt basically the same. The men had a sample mean extrinsic value of 4.945 and the women had a 4.786. A few probabilities also give us some useful information about the survey participants. The probability that an individual will be between 16 and 21 years is 8/25 = 0.32. The probability that a respondents overall job satisfaction is 5.2 or lower is 9/25 = 0.36. The probability that an individual will be female and in the human resources department can be read off of this 2 way table:

|  |  |  |  |
| --- | --- | --- | --- |
|  | Man | Woman | Total |
| Human Resources | 2 | 3 | 5 |
| Information Technology | 5 | 8 | 13 |
| Administration | 4 | 2 | 6 |
| Total | 11 | 13 | 24 |

So the probability that a selected individual is a female in human resources is 3/24 = 0.125

The following 2-way table shows us some important information about salary grades and intrinsic satisfaction:

|  |  |  |
| --- | --- | --- |
|  | Intrinsic Satisfaction | |
|  | <=5 | >5 |
| Hourly | 4 | 11 |
| Salaried | 6 | 4 |

So we see that the probability that a salaried employee has intrinsic job satisfaction is more than 5 is 4/25 = 0.16.

Please let me know if you have any questions about these chart and statistics. I’m more than happy to clarify any details!

Sincerely,

Fondre Gadson

References

Bluman, A. (2008). Elementary Statistics (4th Ed): A Step by Step Approach. New York, N.Y. McGraw-Hill