Sampling and data collection plan

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ABC Corporation has requested a research study to answer the following question. "Would the articles research help with analyzing ABC Corporation's method of forecasting (IV) or determining the company's direction (DV)?" (McBride, J., Felser, C., & Rogers, G., 2015). The team will have to look at the corporation on a global scale to effectively answer these questions.

**Population**

Although the question originated from the Corporate Executive Officers, the company must sample a range of retail stores to determine the answer. Reviewing the sales and trends from previous years will help shape the future direction of the company. The population for the study will derive from ABC Corporation's historical sales records over the past decade with more than 4600 unique data points in the U.S. and 6200 International locations. ("Our locations", 2015).

**Sampling**

A sufficient sample size from a population is crucial in conducting accurate analysis (Cooper & Schindler, 2014). One method to conduct research is through observations within management teams at retail locations. The process is a beneficial element for research. Observations made within the organization often reveal problems and resolutions that are not public knowledge. This approach is an excellent way to take a company pulse and get grasps on employee perceptions about the company's direction. However, the data may be inconclusive since each location's perceptions may differ.

Another technique to obtain the data is through data mining. Given the nature of the items to be observed, the team determines that data mining along with stratified sampling would work best. Data mining consists of gathering information from databases and other data warehouses (Cooper & Schindler, 2014). The company already owns the data, and it is readily available at relatively low costs. The stratified sampling approach allows for the division of large numbers of data points into smaller manageable groups and including the full ten-year history.

The team will collect sales data for the ten year period from the 11,000 data points available. With a confidence level of 95% and a confidence interval of 5%, the team determined that the sample size would consist of 385 randomly selected retail locations (See Appendix, Determining the Sample Size). This team will compare the data with publically available information about sales trends in each of the regional areas.

The data collected will be stored on a local server with two-factor authentication accessible through a VPN connection. Each member will receive an electronic copy of the original document and notification will be provided with any version changes.

**Validity**

The analysis of the vast number of data points collected over the span of a decade strengthens the validity and reliability of the study. The considerable amount of data points significantly reduces the possibility that outliers will skew the overall results. Incorporating the data collected throughout the previous period provides a balance to ensure consistency. The trends identified in regional areas will aid in removing any outliers generated from external factors restricted to that area.

**Conclusion**

ABC Corporation decision makers can use the results of the study to determine if a change in global company policies is required. The research is expected to return a confidence factor of 95% on how the company's forecasting methods affect its strategy. This information will give the management team the tools it needs to make informed decisions about the ABC Corporation's future and the company's direction. Plans are expected to account for variations due to regional trends and appropriately predict future sales.

References

Cooper, D.R., & Schindler, P.S. (2014). *Business research methods* (12th ed.). Retrieved from The University of Phoenix eBook Collection database.

McBride, J., Felser, C., & Rogers, G. (2015). *ABC Corporation: Business research project part II.* Unpublished research paper, University of Phoenix.

Our locations. (2015). Retrieved from http://corporate.walmart.com/our-story/our-locations#/tions

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Appendix

Determining the Sample Size

Prior to calculating a sample size, it is necessary to specify several pieces of information about the sample required and the target population. The population size, (confidence interval) or margin of error, standard deviation, and confidence level must be known. In most cases, the population will be unknown or approximated (Smith, Ph.D., 2015).

First determine the confidence interval that is acceptable for the sample. In this case, the company has determined that an acceptable margin of error is (+,- 5%). The organization desires a confidence level of 95%. When using the Z-score table, it is noted that a 95% confidence level equates to a Z-Score of 1.96. The team will use a standard deviation of .5 it is the most lenient number based on one standard deviation and to ensure a large enough sample is selected. (Smith, Ph.D., 2015).

Now that the basic information has been provided, the required minimum sample size can be determined using the following formula.

**Required Sample Size = (Z-score)2 \* (Standard Deviation \* (1 – Standard Deviation)) / (Confidence Interval)2**

**Sample Size = (1.96)2 \* (.5 \* (1-.5)) / ((.05)2)**

**= 384.16**

**= 385 minimum retail stores in sample**