**Marketing Research Mark 302 Fall2020**

**Individual or pairs assignment – Due Class 10 – Midnight**

**Marked out of 100, worth 15% of the final grade.**

**Q1)** Critically evaluate the survey described below using the concepts learned in this course and answer the following questions.

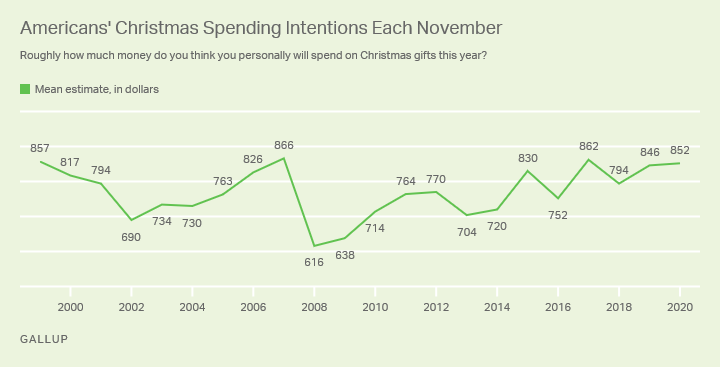
1. Based on the study, identify and discuss possible sampling methods that have been used in the survey. ( State whether a probability (simple random, systematic random, cluster, stratified) or a non-probability sample (convenience, judgmental, snowball, and quota). Justify your answers. (10 points)

2. Identify and discuss the possible sampling/measurement errors (At least 2 errors) (15 points)

Americans' Holiday Spending Intentions Strengthen in November

https://news.gallup.com/poll/326654/americans-holiday-spending-intentions-strengthen-november.aspx

Gallup's latest update of Americans' 2020 holiday spending plans finds consumers estimating they will spend an average $852 on Christmas gifts, nearly identical to the $846 they projected at the same time last year.



Americans' Christmas Spending Estimate. The annual trend since 1999 in which Americans estimate each November of the amount they will spend on Christmas gifts, ranging from a high of $866 in 2007 to a low of $616 in 2008. The November 2020 figure is $852.

The latest gift-buying estimate, based on a Gallup telephone poll of U.S. adults conducted Nov. 5-19, is higher than the $805 Americans' expected to spend in October and points to stronger holiday sales than were implied by that preliminary figure.

Holiday sales typically increase year-over-year, with an average 3.3% annual increase since 2000, according to figures from the National Retail Federation. Sales increased by more than 5% in strong years (such as in 2004 and 2005) and by 2% or less in weak years, including negative sales growth in 2008 and 2009.

Gallup analysis of the historical relationship between Americans' Christmas spending intentions each November and actual holiday retail sales suggests that this year's holiday retail sales are likely to rise by an amount similar to the historical average (in the 3.3% range). By contrast, [the October estimate of $805 in spending on gifts was indicative of below-average sales](about:blank) (rising by closer to 2%). Gallup has historically found a stronger correlation between November spending estimates and actual retail sales, in part due to changes in the economic or political climate that have occurred between those months in some years.

The latest spending estimate reflects 32% of Americans planning to spend $1,000 or more on Christmas gifts, 21% spending between $500 and $999, 29% spending between $100 and $499, and 2% spending less than $100.

These percentages are nearly identical to what Gallup found in November 2019, further indicating that the economic disruption caused by the COVID-19 pandemic has not altered Americans' normal holiday spending patterns.

Roughly how much money do you think you personally will spend on Christmas gifts this year?

Although spending intentions vary by household income, the figures at each income level are also essentially unchanged from 2019. Currently, those living in households earning $100,000 or more per year plan to spend an average of $1,291 on Christmas gifts. This drops to $888 among those earning between $40,000 and $99,999, and to $516 among those earning less than $40,000.

Estimated Christmas spending is also higher among households with children younger than 18 living at home ($1,103) than in households without children ($749).

Separately, the poll asks Americans to say whether the amount they plan to spend on Christmas gifts is more, the same as, or less than what they spent the year prior.

As is almost always the case, the largest segment of Americans, 57%, say they will spend about the same on gifts while a larger proportion say they will spend less (28%) rather than more (15%).

Each November since 2002, the public has tilted toward saying they will spend less money rather than more, with the gap between those figures ranging from six points in 2016, 2017 and 2018 to 39 points in 2008. Holiday sales tended to be below average in years when the advantage for less spending was high, while spending was relatively strong in low-gap years.

This year's 13-point difference matches the mean historical gap in spending expectations, providing further evidence that holiday retail sales will be about average in 2020.

***Study sample***

|  |  |
| --- | --- |
| Total sample | 1018 |
| Gender | |
| Male | 525 |
| Female | 493 |
| Race | |
| White | 713 |
| Non-White | 285 |
| Age | |
| 18-34 | 201 |
| 35-54 | 270 |
| 55+ | 530 |

**Q2.**

Namaste Yoga is considering keeping the virtual studio developed during the pandameic a permanaent feature for their community. The Marketing Manager has hired a consultant to design a survey to determine attitudes towards the service. In addition the percentage of young adults in Quebec practicing yoga and the average frequency per week are to be determined. The Marketing Manager wants to be 95% confident of the results and does not want the error to exceed 3 percentage points for yoga practioners ownership and 2 hours per week for average practice. Previous reports are not available for the percentage of youth yoga practioners, but some earlier studies do indicate that the average weekly practice is 6 hours with a variance of 4 hours.

a. What sample size would you recommend assuming that only the percentage of households with youth yogis is to be determined? Show all your calculations (5 points)

b. What sample size would you recommend assuming that only the average practice hours per week is to be determined? Show all your calculations. (5 points)

c. Due to budget constraints, Namaste decided to use a sample size of 582, and to maintain the confidence level at 95%. What is the consequence of doing so for the specified Namaste ownership error rate and for the average usage rate error rate? Show all your calculations. (5 points)

d. The actual results of the survey showed that 30% of young adults practice yoga and that the average practice 5 hours (variance=3). Compute the 95% confidence interval for the usage rate per week. (5 points)

e. The consultant who carried out the survey using systematic sampling found that some interviewers had skipped respondents who were hard to understand on the phone, and that some survey questions may not have been clear. She makes the following statement in her presentation to the management of the firm: “Based on the results, I can say with 95% confidence that the average young adult in Quebec who practices yoga, does so 5 hours a week. There is only a 5% probability that any mistakes that might have occurred in the survey process can affect the results”. Discuss whether the consultant is justified in making the statement she did (in quotation marks). (5 points)

