

Instruction

Dear students,

Welcome to Assignment

You can start and save the quiz anytime up till the due date of the assignment, i.e.,

When you are ready to submit your responses to the assignment, you can click on the "Ready" Button. Please note that if you do so, your responses will be finalized, and **you will no longer be able to edit them**. As such, please only click "Ready" when you are indeed ready!

Finally, we would like to remind you once again that this is an individual assignment and you are expected to work on it individually (i.e., do not share syntax, results, interpretation, or any files).

Good luck and have fun!

[Download Data](#)

Important: Please do not clean the data any further (e.g., look for outliers, delete cases, etc.).

Please download the SPSS data file (i.e., from the link above) consisting of accommodation options that reflect properties in Amsterdam that are listed on Booking.com as of the date at which the search was conducted, i.e., on 1 August 2018. Kindly note that the data structure corresponds to the dataset that was provided to you for the sample practice questions. As such, we refer you to the variable description and documentation in **Appendix A: Dataset** (Canvas: Assignments > Assignment 2: Data Analytics Using SPSS > Details of the Assignment) and/or the **data dictionary** (Canvas: Assignments > Assignment 2: Data Analytics Using SPSS > Booking.com Data Dictionary) if you have any questions.

Finally, for questions that require solutions relating to the provision of your interpretations of the results and/or any managerial insights/implications/conclusions, you should set the context of your responses as illustrated in the **Introduction** section of the document containing the details of the assignment (Canvas: Assignments > Assignment 2: Data Analytics Using SPSS > Details of the Assignment).

Tip: The questions in this quiz share many similarities to the sample practice questions. In fact, they are designed to be very similar in nature to the sample practice questions, i.e., in terms of the technical concepts assessed. Therefore, if you are unsure about how to respond to a question in the quiz, always refer to the sample practice questions (i.e., look for sample practice question that is similar to the question in the quiz). When in doubt with regards to what is expected of you in terms of your response to a particular question, you can use the solutions provided for the sample practice questions as the reference point.

We have intentionally left out the elaboration - essentially the "tips" provided for each of the sample practice questions - when we were creating some of the questions for the quiz because we wish to assess your understanding of important key terms and their expected, or to a large extent, required responses in the data analytics and/or statistics field. However, if you have attempted all the sample practice questions and have understood the requirements of each question, their corresponding solutions and SPSS syntax, you will be able to respond accurately to all of the questions featured in the quiz. All the best and good luck!

Descriptive Statistics

In this question block, you are required to obtain a more in-depth understanding of the characteristics of the dynamics of the accommodation market in Amsterdam (i.e., descriptive and summary statistics; graphical illustrations). For each question in this block, a different aggregation level (grouping variable/breaking) may be required, so take a moment to think about what aggregation level is really needed.

1. question

Please upload a scatterplot that visualizes the number of reviews across accommodation options per notice period - you should ensure that it is easy to observe the trend from the scatterplot - and answer the following questions in the answer box below.

1. What can you conclude from the scatterplot? Please provide your interpretations of the scatterplot.
2. Can we draw any managerial implications from your interpretations of the scatterplot? Please also provide a reason for your response to this question.

Kindly note the following:

- You should make a screenshot of the scatterplot in the SPSS Output file, and upload as an image file, .jpg.
- **Kindly note that you should generate the scatterplot using only SPSS.**

Choose File No file chosen

Enter answer No answer submitted

2. question

Which of the following hotel(s), is(are) not only close to a metro, but is(are) also promoted property(properties) on Booking.com?

- ☐ One and Only Bedroom
- ☐ Kimpton De Witt Amsterdam
- ☐ QO Amsterdam
- ☐ Museum Suites
- ☐ Market View New

3. question

Descriptive Statistics

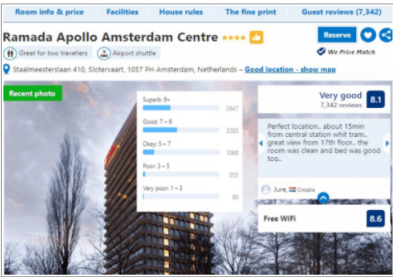
Show block intro

Please upload a table that takes into account the variance of the reviews as well as the composite valence-volume of the reviews.

Kindly note the following:

- You should make a screenshot of the table in the SPSS Output file, and upload as an image file, .jpg.
- Kindly note that you should generate the table using only SPSS, except for the highlighting of cells. For that, you can either do it directly in the SPSS Output file via "Edit Content" before making the screenshot, or you can first make a screenshot and then highlight the cells in MS Word/Excel before taking the final screenshot and uploading the file.)

HINT: Note that this table can be produced directly using the SPSS syntax provided to you from the sample practice questions. You should only highlight the cells that contain useful information with regards to the variance, as well as the composite valence-volume of the reviews. Finally, you should take inspiration from the picture below and follow it closely when creating the table:



Dosya Seç

Dosya seçilmedi

4. question

Descriptive Statistics

Show block intro

Please create a grouping variable to represent high, low, medium distances of accommodation options to town and upload a histogram that visualizes the price of the cheapest room available by this grouping variable.

What can you conclude from the histogram? Please provide your interpretation of the histogram in the answer box below.

Kindly note the following:

- You should make a screenshot of the histogram in the SPSS Output file, and upload as an image file, .jpg.
- Kindly note that you should generate the histogram using only SPSS.

Choose File

No file chosen

Enter answer

No answer submitted

5. question

What is the total number of rooms left across all notice periods that provide the free cancellation option and also include it as a message to consumers in at least 1 of the room descriptions?

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6. question

Which accommodation option(s) has the greatest number of reviews and the lowest review rating?

- ☐ Cosy Studio
- ☐ XO Hotels Park West
- ☐ Park Mansion Centre
- ☐ 180 M2 CENTRALART ...LOFT ..JACUZZI...HORSE..
- ☐ Amsterdam Grand Apartment

7. question

Please upload a scatterplot that visualizes the number of rooms left across accommodation options per notice period - you should ensure that it is easy to observe the trend from the scatterplot. What can you conclude from the scatterplot? Please provide your interpretation of the scatterplot and discuss the corresponding managerial insights/implications in the answer box below.

Kindly note the following:

- You should make a screenshot of the scatterplot in the SPSS Output file, and upload as an image file, .jpg.
- Kindly note that you should generate the scatterplot using only SPSS.

No file chosen

No answer submitted

8. question

How many unique accommodation options, that display a message in their room banners, display a persuasive message? *Note: A persuasive message seeks to evoke consumers' sense of urgency to make a purchase, i.e., in this case a reservation, immediately or at least sooner than later. Such messages typically involve providing more information about the product or service in question, for example information relating to the number of apartments left etc.*

Tip: Note that an accommodation option may display any of the following messages in its room banner:

- No Message Displayed
- Choose your apartment
- Choose your room
- Choose your stay
- See all 3 available apartments
- See all 4 available apartments
- See all 5 available apartments
- See all 6 available apartments
- See both available apartments
- See both available options
- See our last available rooms

☐ 6417

☐ 1515

☐ 1535

☐ 435

☐ 1235

☐ 441

9. question

How many of the 3-star hotels are also preferred partner properties on Booking.com?

10. question

What is the total number of accommodation options that are not only bestsellers but also have at least 5 people looking at the time of search?

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Regression Analysis (Part I)

In this question block, please follow the instructions given and perform the regression analysis as required by the question, if applicable.

Before you begin this question block, please ensure that your dataset contains only observations that meet the following criteria:

- The accommodation option is **NOT** an apartment-type accommodation
- There is **at least 1 room left** from the accommodation option for a specific notice period
- There is **at least 1 review** for the accommodation option
- Information of **BOTH the price** of the cheapest room available and **its previous price** is provided

Next, use linear regression analysis and estimate a model with the following specification:

1. **Dependent Variable:** Number of people also looking at the accommodation at the time of the search

2. **Independent Variables:**

- dummy variables representing the *near*, *far* and *moderate* distances from the accommodation option to town (baseline is *far*)
- dummy variables representing the different review categories (baseline is *Not Ranked*)
- a variable that denotes the difference between the price of the cheapest room available from its previous price
- 1 dummy variable that differentiates between the messages displayed in the room banner (baseline is *Choose your room*)
- 1 dummy variable that identifies whether or not the first description of the details of the cheapest room available contains any messages (baseline is *No Message Displayed*)
- 1 dummy variable that identifies whether or not the second description of the details of the cheapest room available contains any messages (baseline is *No Message Displayed*)
- a variable that denotes the number of rooms left for the accommodation option for the specific notice period

TIP: You will need to create some of the independent variables before you can estimate the model. Please examine the dataset **very carefully** before creating these variables.

11. question

Regression Analysis (Part I)

[Show block intro](#)

Please indicate the column in the table below that needs to be considered when evaluating the effect of the difference between the price of the cheapest room available from its previous price on the number of people also looking at the accommodation at the time of the search.

Tip: To respond to this question, drag the green box to the column that you think is the right answer.



Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		

12. question

Is the overall model statistically significant?

☐ No

☐ Yes

☐ I have no idea.

13. question

What is the overall model fit?

You should round off your answer to **3 decimal places** and **include the zero**, if applicable, **before decimal points** (e.g., use 0.056 instead of .056).

14. question

Based on the results of the regression analysis that you have performed, which of the following statement(s) is(are) true?

- ☐ There is no significant difference in the number of people also looking at the accommodation options with review ratings in the category of good, as opposed to fabulous, at the time of search
- ☐ Displaying "Choose your room" in the room banner attracts a significantly higher number of people also looking at the accommodation options at the time of search as opposed to displaying "See our last available rooms".
- ☐ There is a significantly higher number of people also looking at accommodation options that are nearer, as opposed to further, from town at the time of search.
- ☐ There is a significantly higher number of people also looking at accommodation options with review ratings in the category of very good, as opposed to not ranked, at the time of search.
- ☐ Accommodation options with superb review ratings attract a significantly higher number of people also looking at them at the time of search as opposed to accommodation options that are not ranked, in terms of their review ratings.
- ☐ In terms of explaining the variation in the number of people also looking at the accommodation options at the time of search, the descriptions of the details of the cheapest room available does not matter.

15. question

What is the magnitude of the impact of the difference between the price of the cheapest room available from its previous price on the number of people also looking at the accommodation at the time of the search?

You should round off your answer to **3 decimal places** and include the zero, if applicable, before decimal points (e.g., use 0.056 instead of .056).

123

16. question

Please interpret the regression coefficient of the difference between the price of the cheapest room available from its previous price and discuss a one possible managerial implication of this finding.

Tip: In terms of interpretation, you should take inspiration from the format featured in the solutions to the sample practice questions.

Enter answer No answer submitted

17., question

Please upload a graph consisting of the plots of the coefficients of the review category dummies.

Kindly note the following:

- You should make a screenshot of the graph in the SPSS output file, and upload as an image file, .jpg.
- Kindly note that you should generate the graph using only SPSS.

Choose File No file chosen

Regression Analysis (Part II)

In this question block, you will have to perform regression analyses to examine the relationships between one or more of the variables within the dataset based on the descriptions provided in each of these questions.

Therefore, please pay close attention to the situation illustrated in each of these questions and think very carefully about the concepts taught in class.

18. question

Your team received special instructions from your team manager to learn more about how the location of an accommodation option (i.e., distance to town) can influence its review ratings.

Even though your team manager did not provide any additional instructions on other factors that your team should consider, the smart alec in your team insists that variables such as the volume of reviews, proximity to a metro station, the star rating of the accommodation option and whether the accommodation option is a preferred partner property may influence its review ratings and should be taken into account.

Unfortunately, your team manager is convinced and would like you to specify a model that takes into account his interests as well as all of the considerations raised by the smart alec.

Please use linear regression analysis to estimate your model and provide your response to the following question. What is the effect of the variable of interest on the dependent variable? Your response should include both its size and sign.

You should round off your answer to 3 decimal places and include the zero, if applicable, before decimal points (e.g., use 0.056 instead of .056).

Tip: You may need to prepare the dataset (e.g., creating a subset of the dataset and using the aggregate function) for this question.

1/3

19. question

Your team manager is interested in finding out more about how the review ratings and the star ratings of an accommodation option can influence the price of the cheapest room available for the notice period with the most number of rooms left.

Given the importance of location, he wants you to focus only on accommodation options with addresses that are associated with the highest average location ratings.

In addition, he also thinks that you should also examine only accommodation options with an acceptable volume of reviews. Specifically, he feels that the volume of reviews for each accommodation option featured in your analysis should be at least equivalent to the mean of the volume of reviews within the original dataset.

Finally, he feels that you also need to take into account factors such as whether the previous price of the cheapest room available is provided, as well as the number of rooms left, as they can also influence the price of the cheapest room available.

Therefore, your team manager would like you to specify a model that takes into account all of his above considerations.

Please use linear regression analysis to estimate your model and upload your SPSS output file (.spv) that lists the steps you have taken for this question, as well as the results of your regression analysis.

Tip: You may need to prepare the dataset (e.g., creating a subset of the dataset and new variables) for this question. Relatedly, the following command might be useful for you: "SYSMISS" - it is a function that evaluates whether a value is system missing. You can also find it in the GUI when you are in the "Recode into Different Variables" or "Recode into Same Variables" interface, i.e., "System-missing".

Choose File No file chosen