Market Research Proposal for Marriott

ST3188 Statistical Methods for
Market Research Coursework

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Executive Summary

Marriott International was founded in 1927 and leads the hospitality industry with over 30 brands and about 9,000 properties across 141 countries and territories. In 2023, Marriott attained sales of nearly 24 billion.[1] With this remarkable track record, Marriott plans to continue providing top-notch services to its customers and capture more markets through acquisitions, franchise development and partnerships.

This proposal aims to assist Marriott in achieving its objectives by addressing the six major research aims identified in the client brief:

1. Examine the customer preferences across different demographic segments for personalised services and technology integration
2. Determine emerging trends and destination hotspots
3. Assess guest satisfaction across different brands and regions
4. Analyse how customer loyalty is influenced by sustainability initiatives
5. Explore the effectiveness of their loyalty programs in increasing customers' satisfaction rate
6. Identifying how economic factors influence travel habits could help the company adjust to changing market conditions

These research aims will be subdivided into research questions and objectives. To provide the client with greater clarity, details on the data collection process, sampling methods, questionnaire design as well as flow chart will be given as part of the methodology. Moreover, the proposal outlines the statistical techniques employed and the possible insights gathered from quantitative analysis. Subsequently, we will elaborate further on the focus group discussion, followed by interest forms and questions that will be asked for both Marriott customers and non-Marriott customers. Lastly, a list of budget allocation and project timeframe will be given, along with recommendations for this project.

Ultimately, we hope to provide Marriott with valuable insights and recommendations to better understand its customers and enhance their experiences. We believe that knowing what customers want can translate into increasing market shares and maintaining long-term profitability.

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[1] Quoted from Statista Research Department – Leading hotel and resort companies worldwide in 2023, by sales

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1. Introduction

1.1 Background Information

Founded in 1927, Marriott is well-known for delivering exceptional customer service in hospitality industry and leads the industry with sales of nearly 24 billion in 2024. The business intends to boost its market share by having more hotel properties and attracting and retaining more consumers through outstanding customer service.

1.2 Problem Definition

Marriott's business objectives were declared in the client brief, which included growing its property footprint globally and expanding its brand variety through acquisitions, franchise development, and partnerships. To retain and acquire new customers, Marriott aims to understand customer preferences for personalised services and technology integration. Moreover, Marriott has been actively involved with corporate social responsibility initiatives to give back to society while establishing a strong brand reputation. This research will address these problems within six months and provide suggestions on how Marriott can increase its competitiveness.

1.3 Research Aims (RAs)

This research proposal intends to address the six major research aims (RAs) identified in the client brief:

RA 1: Examine the customer preferences across different demographic segments for technology-integrated personalised services

RA 2: Assess guest satisfaction across different brands and regions

RA 3: Analyse how customer loyalty is influenced by sustainability initiatives

RA 4: Explore the effectiveness of their loyalty programs in increasing customers' satisfaction rate

RA 5: Identify how economic factors influence travel habits could help the company adjust to changing market conditions

RA 6: Determine emerging trends and destination hotspots

1.4 Research Questions (RQs) and Research Objectives (ROs)

To address each research aim (RA), we propose a research question (RQ) along with a research objective (RO):

a) For RA1:

RQ 1: How do the preferences for personalised services and integration technology vary across gender groups?

This question intends to gain a better understanding of how the preference for personalised service and technology integration differs among genders. This enables Marriott to decide which services improve customer experience.

RO proposed:

RO 1: Determine how preference rating for personalised services and technology integration are different between gender groups.

b) For RA2:

RQ 2: How does guest satisfaction differ across brands and regions?

This question attempts to discover how the brands and regions influence guest satisfaction, allowing Marriott to develop suitable initiatives in these brands and regions to increase its competitiveness.

RO proposed:

RO 2: Explore how guest satisfaction varies across brands and regions.

c) For RA3:

RQ 3: What type of sustainability initiatives will gain customer loyalty?

By answering this question, we seek to find out which kind of sustainability initiatives contribute to capturing customer loyalty. This enables Marriott to place greater emphasis on such initiatives to improve its reputation and win the hearts of its customers.

RO proposed:

RO 3: Investigate the relationship between types of sustainability initiatives and customer loyalty levels.

d) For RA4:

RQ 4: How does customer satisfaction vary across different levels of enrolment in loyalty programmes?

As Marriott offers numerous loyalty programmes, we want to learn how customer satisfaction rate changes across each level of enrolment in loyalty programmes, permitting Marriott to evaluate which loyalty programmes are ineffective and should be removed.

RO proposed:

RO 4: Examine how customer satisfaction rate varies across levels of enrolment in loyalty programmes.

e) For RA5:

RQ 5: How does customer spending on travel vary by economic factors?

This question aims to understand how economic factors influence customer spending on travel, allowing Marriott to adjust to different economic conditions by implementing initiatives to attract more customers during those periods.

RO proposed:

RO 5: Examine how customer spending on travel varies across different economic factors.

f) For RA6:

RQ 6: What features of the hotel do customers emphasise on?

By answering this question, we hope to find out the rising trends in customer preferences for hotels by discovering which hotel features are important to them.

RO proposed:

RO 6: Identify the hotel features that reflect the emerging trends in customer preferences for hotels.

2. Methodology

2.1 Research Design

The market research objectives employ a mixed model approach with both exploratory and descriptive research designs. Explanatory research is used to uncover new trends in customer preferences for hotels while descriptive research is used to garner insights into customer satisfaction and preference for personalised service from the impact of hotel brands, initiatives and loyalty programmes. The qualitative analysis will be using explanatory research while quantitative analysis will be using descriptive research.

2.2 Sampling Design

2.2.1 Sample Size for Survey

a) *Marriott Customers*

Since we have a database of previous customers, we will use probability random sampling. Stratified sampling will be applied where we first divide the population into strata such as gender and further group them based on the degree of loyalty programme enrolment. The high precision of this sampling makes strata selection challenging and implementation costly.

According to the client brief, Marriott would like to have at least 5,000 current customers in the sampling frame. However, this might not be feasible within the timeframe so we would like to propose an alternative sample size that yields optimal results while keeping it cost-efficient.

In determining the sample size, we use a 95% confidence interval ($Z = 1.96$) and the margin of error (e) is expected to be 5%. Assuming the sample proportion is 0.5 (conservative proportion and π is unknown) and the survey involves 5,000 respondents, a finite population correction is executed, and the appropriate minimum sample size (n_c) is:

$$n \geq \frac{\left(Z_{\frac{\alpha}{2}}\right)^2 (p(1-p))}{e^2}$$

$$n \geq \frac{(1.96)^2(0.5(1-0.5))}{0.05^2}$$

$$n \geq 385\ (round\ up\ to\ the\ nearest\ integer)$$

$$n_c \geq \frac{nN}{N+n-1}$$

$$n_c \geq \frac{385(5000)}{5000+385-1}$$

$$= 358\ (round\ up\ to\ the\ nearest\ integer)$$

Therefore, the appropriate minimum sample size with finite population correction is 358. Regardless of the suggestion, the ultimate decision lies with Marriott deciding how much the sample size is. A higher sample size will improve the accuracy of results, but it also requires more time and costs to achieve the size.

b) *Non-Marriott Customers*

We will adopt non-probability sampling techniques due to lack of a sample frame. We propose using convenience sampling as it is less costly, less time-consuming and more convenient. Nevertheless, the sample might not accurately reflect the population due to selection bias. Thus, we advise approaching the competitors' hotel patrons as they exit from the hotels, such as Ritz-Carlton, Sheraton, and Mandarin Oriental, to improve the representation of population.

In determining the sample size (n), we use a 95% confidence interval ($Z = 1.96$) and the margin of error (e) is expected to be 5%. Assuming the sample proportion is 0.5 (conservative proportion), the appropriate minimum sample size is:

$$n \geq \frac{\left(Z_{\frac{\alpha}{2}}\right)^2 (p(1-p))}{e^2}$$

$$n \geq \frac{(1.96)^2(0.5(1-0.5))}{0.05^2}$$

$$n \geq 385\ (round\ up\ to\ the\ nearest\ integer)$$

Hence, the appropriate minimum sample size for non-Marriott customers is 385.

2.2.2 Online Focus Group Discussion (FGD)

Participants are drawn based on the filled interest form from the survey. The focus groups will be segmented into Marriott and Non-Marriott customers. Each session involves eight participants and a moderator to ensure there are sufficient responses and easier to manage.[2] The discussion would be roughly 75 minutes since it should be within 90 minutes.[3] All discussions will be implemented online via Zoom or Google Meet to allow participants to answer in a comfortable environment which improves the quality of inputs.

Since two to four focus groups are enough[2], we proposed to have 10 groups (7 for Marriott customers and 3 for non-Marriott customers) that will be split into two batches. The focus group discussion is expected to finish within 10 working days with 1 focus group per day and an extra two working days will be allocated as buffer time. In the case of more than 300 sign-ups, judgmental sampling techniques will be used to select the participants as it allows us to choose based on our target profile such as Marriott and Non-Marriott customers which is representative of our target population. The main objective of the focus group discussion is to find out the hotel attributes that reflect the emerging trends in customer preferences for hotels.

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[2] Quoted from Canadian family physician Medecin de famille canadien – Understanding your users

[3] Quoted from Leung & Savithiri – Spotlight on focus groups

2.2.3 Questionnaire

The questionnaire will be administered online so that we can collect the results quicker, participants can answer the questions at their convenience and no additional cost is needed to hire a surveyor. The data mentioned to be collected in section 2.2.5 will be gathered through the questionnaire. There are three parts to the questionnaire, such as main, Marriott and non-Marriott customers. In the general section, we will ask for the customer demographic information such as gender and number of household members. Next, they will proceed to a different section based on their customer category. Lastly, the respondents will indicate their interest in the focus group discussion by completing the interest form.

To identify any potential issue with the questionnaires, a pilot test of 40 respondents (30 Marriott and 10 Non-Marriott customers) will be conducted before its actual implementation. This ensures that respondents do not struggle to understand the questionnaire, which improves the results' accuracy. The questionnaires will be modified upon any identification of issue.

The questionnaires will be distributed online through a QR code in all hotel receptions and tourist attractions, a URL that will be sent to the customers who subscribe to Marriott's loyalty programme news as well as at the end of customers' stay, and the home page of the Marriott website. Physical distributions like flyers would not be as effective as online distribution because passers-by may not look at them before throwing them away.

2.2.4 Flow Chart

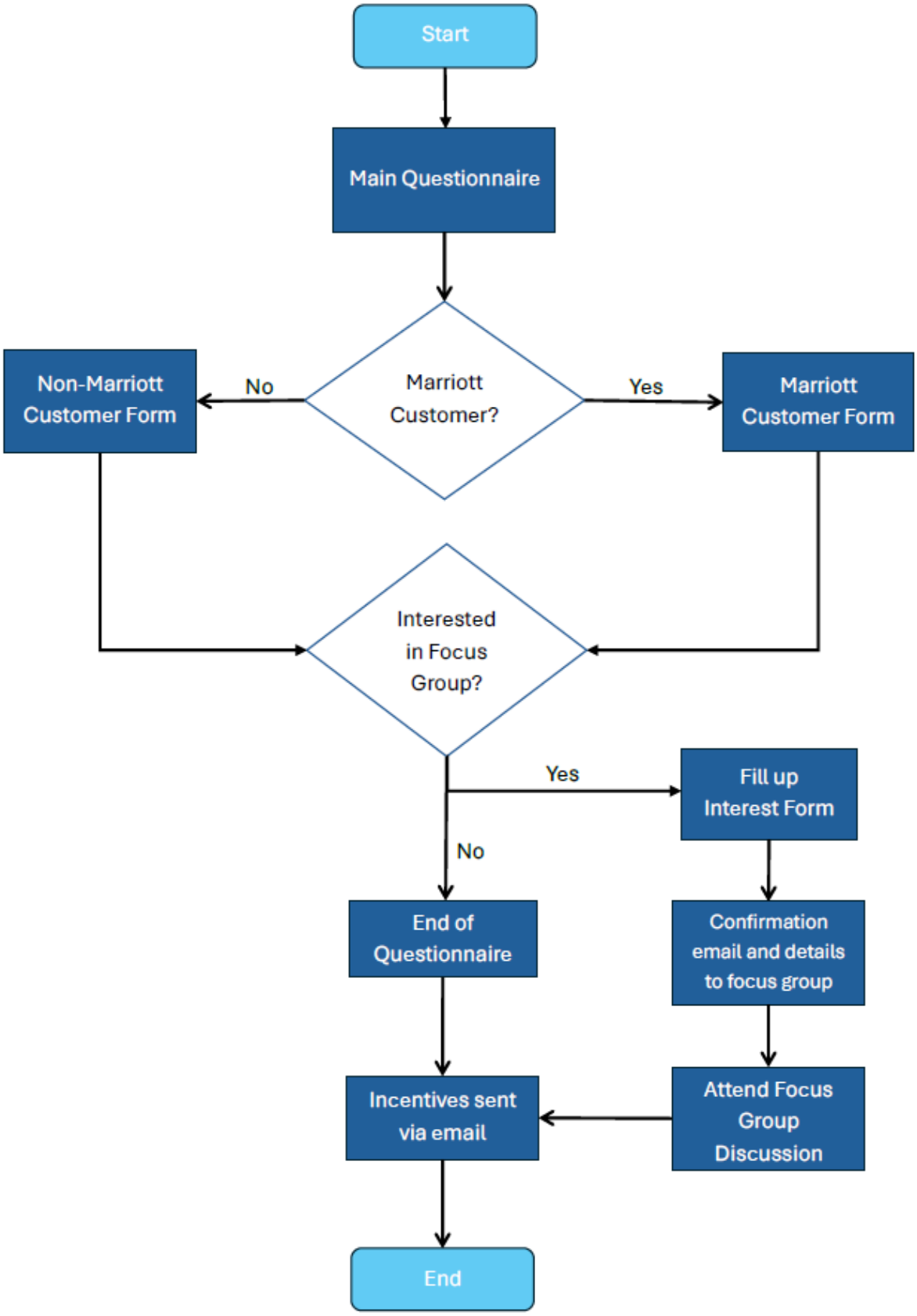


Figure 1: Flow Chart to show the start and end of the data collection process (Questionnaire and FGD)

2.2.5 Data Collected

Variable	Data Type
Hotel Brands	Categorical Nominal
Hotel Regions	Categorical Nominal
Sustainability Initiatives	Categorical Nominal
Gender	Categorical Nominal
Annual Income	Continuous
Number of Households Member	Continuous
Enrollment levels in loyalty programme	Categorical Ordinal
Preferences for personalised service	Continuous (Likert Scale of 1-5)
Customer/Guest Satisfaction	Continuous (Likert Scale of 1-5)
Customer loyalty	Categorical Ordinal
Customer Spending	Continuous

Table 1: List of Primary Data Collected

Variable	Data Type
GDP of country	Categorical Ordinal
Bank Interest rate	Continuous
Inflation Rate	Continuous
Unemployment Rate	Categorical Ordinal

Table 2: List of Secondary Data Collected from External Sources

3. Data Analysis

All tests will use a 95% confidence interval (5% significance level) and SPSS to analyse.

3.1 Research Objective 1

This objective will be tackled using the independent samples t-test, with gender as independent variable and preference rating for personalised services and technology integration as dependent variable. We want to test whether preference ratings differ between gender groups.

Before conducting independent samples t-test, the assumptions of normality and homogeneity of variances must be met. Kolmogorov-Smirnov test and Levene's test will test each assumption respectively.

Kolmogorov-Smirnov test

H_0 : Data is normally distributed

H_1: Data is not normally distributed

Tests of Normality

		Kolmogorov-Smirnov		
	Gender	Statistic	df	Sig.
Preference rating for technology-integrated personalised services	Female			*
	Male			**

If the value at * or ** is less than 0.05, we reject H_0 . This concludes the data is not normally distributed. However, since the sample sizes for both groups are larger than 30, which is large enough, the normality assumptions can be safely ignored without conducting Kolmogorov-Smirnov test.

Independent Samples Test

		Levene's Test for Equality of Variance		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig.(2-tailed)	Mean Differences	Std. Error Differences	Lower	Upper
Preference rating for technology-integrated personalised services	Equal variances assumed		*			#				
	Equal variances not assumed					##				

Table 4: Independent Samples Test from SPSS

Levene's Test

Let σ_1^2 : Population variance of preference rating for females

σ_2^2 : Population variance of preference rating for males

$$H_0: \sigma_1^2 = \sigma_2^2$$
$$H_1: \sigma_1^2 \neq \sigma_2^2$$

If the value at * is less than 0.05, we reject H_0 and conclude the population variances for preference ratings differ significantly between females and males.

Independent samples t-test

Let μ_1 : Population mean of preference rating for females

μ_2 : Population mean of preference rating for males

$$H_0: \mu_1 = \mu_2$$
$$H_1: \mu_1 \neq \mu_2$$

If the value at # or ## (Depending on whether the population variances are equal) is less than 0.05, we reject H_0 and conclude the population mean preference rating is significantly different for both genders.

Moreover, if the lower and upper bound of the 95% confidence interval does not include 0 and shows positive values, it means that the preference rating for females is higher than for males.

3.2 Research Objective 2

Two-way ANOVA will be used to address this objective with brands and regions as independent variables and guest satisfaction rate as dependent variable. We want to explore how guest satisfaction rates vary across brand and region groups.

Brands	Regions
Luxury	Asia Pacific
Premium	Europe
Select	Middle East and Africa
Longer Stays	North America
Collections	Caribbean and Latin America

Table 5: Brands and Regions Variables

Assuming that the collected data satisfied all assumptions, the two-way ANOVA yields the following results:

Tests of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model						
Intercept						
Brands					*	#
Regions					**	##
Brands * Regions					***	###
Error						
Total						
Corrected Total						

Table 6: Two-way ANOVA from SPSS

The highlighted box will be used to analyse the results for the following hypotheses:

	Brands	Regions	Brands * Regions (Interaction Term)
H_0	There is no difference in population mean of guest satisfaction rating between brand groups	There is no difference in population mean of guest satisfaction rating between region groups	There is no interaction between brand and region groups
H_1	Not all population mean are equals	Not all population mean are equals	There is an interaction between brand and region groups

Table 7: Null and Alternative Hypotheses for each Variable

If the value at *, ** and *** are less than 0.05, we reject H_0 and conclude not all population mean guest satisfaction ratings are equal (for brands and regions).

Furthermore, if we conclude that the population means are not equal across brands, regions or interaction term, we refer to partial eta squared in Table 6 to discover its effect on the total variation in the population means across the independent variables. The strength of effect is measured as follows:

Partial Eta Squared	Effect
More than 0.01	Small
More than 0.06	Medium
More than 0.14	Large

Table 8: Measures of Strength of Effect

The strength of effect for each independent variable is determined by #, ## and ###. For example, # is 0.018, indicating that brands account for 1.8% of the total variation in population means of guest satisfaction ratings and the effect is small.

3.3 Research Objective 3

To address this objective, we use x^2 test of independence. The independent variables are types of sustainability initiatives and customer loyalty levels. A cross-tabulation is shown below:

Sustainability Initiatives * Customer Loyalty Crosstabulation

		Types of Sustainability Initiatives				Total
		Nurture	Environmental	Empower	Human Rights	
Customer Loyalty Levels	Inactive					
	Occasional					
	Always					
Total						

Table 9: Cross Tabulation of Customer Loyalty against Types of Sustainability Initiatives

x^2 test of independence

H_0: There is no association between types of sustainability initiatives and customer loyalty levels.

H_1: There is an association between types of sustainability initiatives and customer loyalty levels.

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square			*
Likelihood Ratio			
Linear-by-Linear Association			
N of Valid Cases			

Table 10: Chi-Squared Test from SPSS

Since it is a 3x4 table, the statistical results are reliable when no more than 20% of all cells have frequencies less than 5 and all expected frequencies are more than 1.

If the value at * is less than 0.05, we reject H_0 and conclude that there is an association between the types of sustainability initiatives and customer loyalty levels.

Moreover, if we conclude that there is an association between the types of sustainability initiatives and customer loyalty levels, we will determine the strength of association as follows:

Strength of Association	Value of Measure of Association
None	0.00
Weak	±0.01 to 0.09
Moderate	±0.10 to 0.29
Strong	±0.30 to 0.99
Perfect	±1.00

Table 11: Strength of Association Table

Since sustainability initiatives are nominal and customer loyalty levels are ordinal variables, strength of association is determined using the Contingency Coefficient and Cramer's V.

Symmetric Measures

		Value	Approximate Significance
Nominal by Nominal	Phi		
	Cramer's V	*	#
	Contingency Coefficient	**	##
N of Valid Cases			

Table 12: Symmetric Measures from SPSS

The value at * and ** shows the strength of association between types of sustainability initiatives and customer loyalty levels based on Table 11. If the # or ## is less than 0.05, it means that the measure is statistically significant.

Directional Measures

			Value	Asymptotic Standard Error[a]	Approximate T[b]	Approximate Significance
Nominal by Nominal	Lambda	Symmetric				
		How often do you book Marriott Hotels? Dependent				
		Customer Loyalty Dependent	*			

Table 13: Symmetric Measures from SPSS

Lastly, lambda is used to determine the proportionate reduction in error (PRE). Using customer loyalty levels as dependent variable, knowing the type of sustainability initiative improves the ability to predict the correct outcome of its impact on customer loyalty by * %.

3.4 Research Objective 4

One-way ANOVA will be used to determine if customer satisfaction rate varies across levels of enrolment in the loyalty programmes.

Descriptives

Level of Enrollment in Loyalty Programmes	N	Mean	Std.Deviation	Std.Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Low								
Medium								
High								
Total								

Table 14: Descriptive Table from SPSS

Assuming all other assumptions are satisfied, we conduct Levene's test to test homogeneity of variances.

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Level of Enrollment in Loyalty Programmes	Based on Mean				*
	Based on Median				
	Based on Median and with adjusted df				
	Based on trimmed mean				

Table 15: Test of Homogeneity of Variances from SPSS

Levene's Test

Let σ_1^2 : Population variance for customer satisfaction rate of low enrolment

σ_2^2 : Population variance for customer satisfaction rate of medium enrolment

σ_3^2 : Population variance for customer satisfaction rate of high enrolment

$$H_0: \sigma_1^2 = \sigma_2^2 = \sigma_3^2$$

$$H_1: Not\ all\ \sigma_s^2\ are\ equal$$

If the value at * is less than 0.05, we reject H_0 and conclude the population variances are significantly different between levels of enrolment in loyalty programmes.

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups					*
Within Groups					
Total					

Table 16: ANOVA from SPSS

Let μ_1 : Population mean customer satisfaction rate for low enrolment

μ_2 : Population mean customer satisfaction rate for medium enrolment

μ_3 : Population mean customer satisfaction rate for high enrolment

$$H_0: \mu_1 = \mu_2 = \mu_3$$

$$H_1: \text{Not all } \mu_s \text{ are equal}$$

If the value at * less than 0.05, we reject H_0 and conclude the population mean customer satisfaction rate is significantly different between levels of enrolment in loyalty programmes.

3.5 Research Objective 5

Multiple linear regression (MLR) will be appropriate to address this objective with gross domestic product (GDP) (classified as low, medium and high), annual income, bank interest rate, inflation rate, unemployment rate (classified as low, medium and high) and number of household members as independent variables and customer annual spending on travel as dependent variable. The MLR function is:

$$\widehat{Spending} = \widehat{\beta_0} + \widehat{\beta_1} Inc + \widehat{\beta_2} Int + \widehat{\beta_3} Infl + \widehat{\beta_4} GDPLow + \widehat{\beta_5} GDPMed + \widehat{\beta_6} UnempLow + \widehat{\beta_7} UnempMed + \widehat{\beta_8} Members$$

$Spending$: Customer's annual spending on travel (in USD $1000)

Inc: Annual income of the customer (in USD $1000)

Int: Bank interest rate for the customer's residence country (in percentage point)

$Infl$: Customer's residence country inflation rate (in percentage point)

GDP: Gross domestic product (USD dollars per capita)

$Unemp$: Unemployment rate (in percentage point)

$Members$: Number of household members

$\widehat{\beta_k}$: For every one unit increases in the X_k, the $\widehat{Spending}$ increases by this value, with all other independent variables held constant, $k = 1, 2, 3, 4, 5, 6, 7, 8$

Dummy variables:

GDP	$GDPLow$	$GDPMed$
Low GDP rate	1	0
Medium GDP rate	0	1
High GDP rate	0	0

$Unemp$	$UnempLow$	$UnempMed$
Low unemployment rate	1	0
Medium unemployment rate	0	1
High unemployment rate	0	0

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)							
Inc							
Int							
Infl							
GDPLow							
GDPMed							
UnempLow							
UnempMed							
Members							

Table 17: Coefficients Table of Customer Annual Spending on Hotels from SPSS

All estimated coefficients will be shown under Unstandardized Coefficients – B column in Table 14. Moreover, we conduct a partial t-test using the P-value of each variable by referring to the Sig. column. If the P-value is less than 0.05, we reject H_0 and conclude the variable is a significant predictor of $Spending$. We can also support the fact by looking at the lower and upper bound of 95% confidence interval. If the confidence interval includes 0, it means that the variable is not a significant predictor of $Spending$.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1		*		

Table 18: Model Summary for Model Fit from SPSS

The strength of association in MLR is shown as * in R Square. The higher the R Square value, the better the fit of model to the observations.

ANOVA[a]

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression					*
Residual					
Total					

Table 19: ANOVA for Global F-test from SPSS

The hypothesis for Global F-test is:

$H_0: \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = \beta_7 = \beta_8$

H_1: Not all β_s are 0

If the value at * is less than 0.05, we reject H_0 and conclude not all independent variables are zero. This means that some of the variables have the ability to explain the variation in $Spending$.

3.6 Research Objective 6

The objective will adopt a mixture of qualitative and quantitative approaches.

Focus Group

The focus group discussion will draw insights from existing and potential customers to learn about the growing trends in customer preferences for hotel features. The discussion is expected to yield surprising responses, such as preference for features that Marriott's brands do not offer. This enables Marriott to improve its facilities and services while acquiring a larger customer base.

Each focus group will take approximately 75 minutes, including eight participants and a moderator. The moderator is expected to have a neutral stance during questions probing. A consent form will be given to ensure they understand the aim of the discussion and agree to the recording session. More information is provided in section 2.2.2.

Moderator could ask open-ended questions like "What hotel attributes best represent Marriott?". Any further questions from participants will be heard and further discussed to derive more insights.

Conjoint Analysis

Seven hotel attributes identified in the discussions will be used in conjoint analysis stimuli. Full-profile stimuli will use software to generate orthogonal arrays that have estimation and holdout data sets. Each respondent will indicate their preference rating for each stimulus, and a utility score table will be generated using SPSS.

Form of input data:

100 respondents are asked to rate each combinations in terms of preference using the 7-point Likert scale:

1. For your next purchase of a pair of shoes, how likely are you to buy this product of Brand Adidas, with white logo at $300 with shoelace and money-back guarantee?

Definitely Would Not Purchase						Definitely Would Purchase
1	2	3	4	5	6	7

2. For your next purchase of a pair of shoes, how likely are you to buy this product of Brand Puma, with blue logo at $200 with non-shoelace and money-back guarantee?

Definitely Would Not Purchase						Definitely Would Purchase
1	2	3	4	5	6	7

Figure 2: Sample Stimuli Generated from Orthogonal Array

Attribute	Level	Utility
Hotel Attribute 1		
Hotel Attribute 2		
Hotel Attribute 3		
Hotel Attribute 4		
Hotel Attribute 5		
Constant		

Table 20: Utility Score Table Generated from SPSS

The utility (part-worth) score will be used to analyse each attribute's levels and assess the importance of each attribute by calculating individual range and relative importance. The range is the difference between maximum and minimum utility score of each attribute's level, while the relative importance is the proportion of range to the total sum of all attribute ranges. By analysing relative importance, we can identify which attribute is the most and least significant to each respondent and further determine the most desired attribute among all respondents, allowing us to develop an appropriate feature-based strategy.

$$I_i = \left(\max(\alpha_{ij}) - \min(\alpha_{ij})\right) \quad \text{for each } i$$

I_i : The importance of an attribute

α_{ij}: Utility associated with the jth level $(j = 1, 2, \dots, k_i)$ of the ith attribute $(i = 1, 2, \dots, m)$

$$W_i = \frac{I_i}{\sum_{i=1}^{m} I_i} \quad \text{such that } \sum_{i=1}^{m} I_i = 1$$

W_i : Relative importance of an attribute

I_i : The importance of an attribute

Figure 3: Formula of Range and Relative Importance

Lastly, each respondent's overall utility is calculated by adding up the highest utility among the levels of each attribute. This enables Marriott to design hotel packages that entice consumers to make reservations.

$$U(X) = \sum_{i=1}^{m} \sum_{j=1}^{k_i} \alpha_{ij} x_{ij}$$

$U(X)$: Overall utility of the respondent

α_{ij}: Utility associated with the jth level $(j = 1, 2, \dots, k_i)$ of the ith attribute $(i = 1, 2, \dots, m)$

x_{ij}: 1 if the jth level of the ith attribute is present, and 0 otherwise

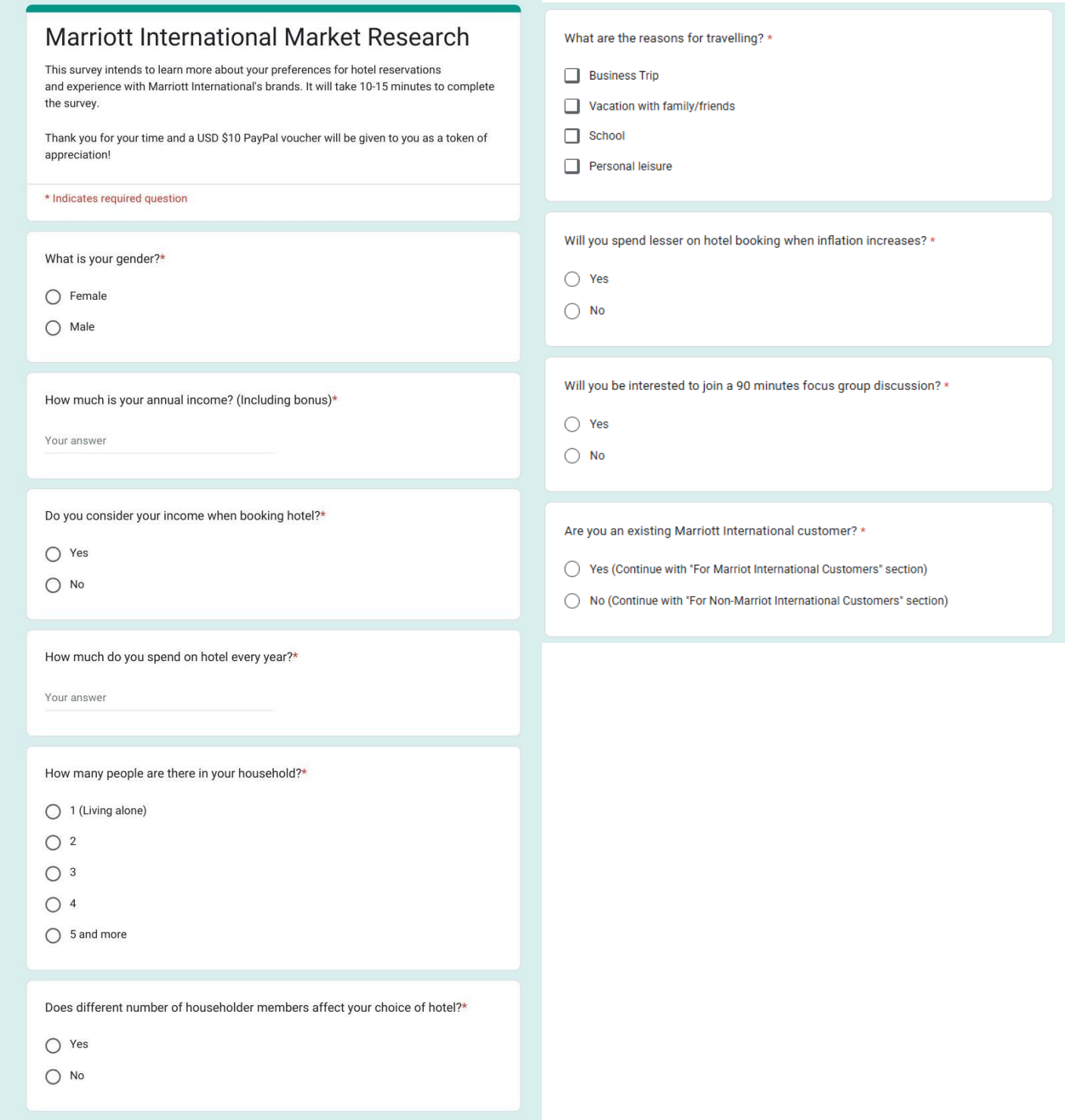
k_i: the number of levels of attribute i

m: the number of attributes

Figure 4: Formula of Overall Utility

4. Questionnaire

4.1 Main Questionnaire



Marriott International Market Research

This survey intends to learn more about your preferences for hotel reservations and experience with Marriott International's brands. It will take 10-15 minutes to complete the survey.

Thank you for your time and a USD $10 PayPal voucher will be given to you as a token of appreciation!

* Indicates required question

What is your gender?*

- Female
- Male

How much is your annual income? (Including bonus)*

Your answer

Do you consider your income when booking hotel?*

- Yes
- No

How much do you spend on hotel every year?*

Your answer

How many people are there in your household?*

- 1 (Living alone)
- 2
- 3
- 4
- 5 and more

Does different number of householder members affect your choice of hotel?*

- Yes
- No

What are the reasons for travelling? *

- Business Trip
- Vacation with family/friends
- School
- Personal leisure

Will you spend lesser on hotel booking when inflation increases? *

- Yes
- No

Will you be interested to join a 90 minutes focus group discussion? *

- Yes
- No

Are you an existing Marriott International customer? *

- Yes (Continue with "For Marriot International Customers" section)
- No (Continue with "For Non-Marriot International Customers" section)

Figure 5: Main Questionnaire

4.2 For Marriott's Customers

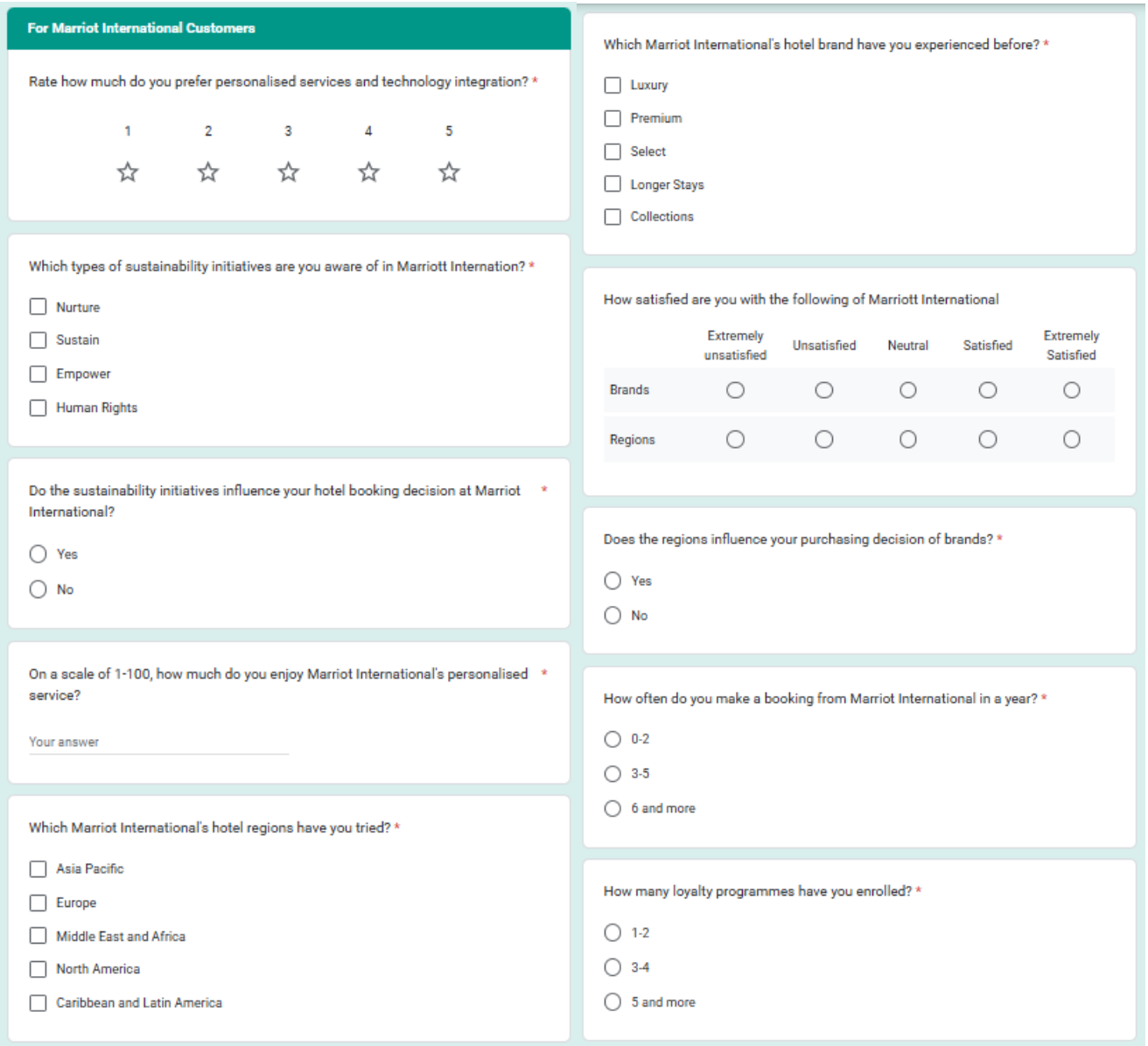


Figure 6: Questionnaire for Marriot Customers

4.3 For Non-Marriott ’s Customers

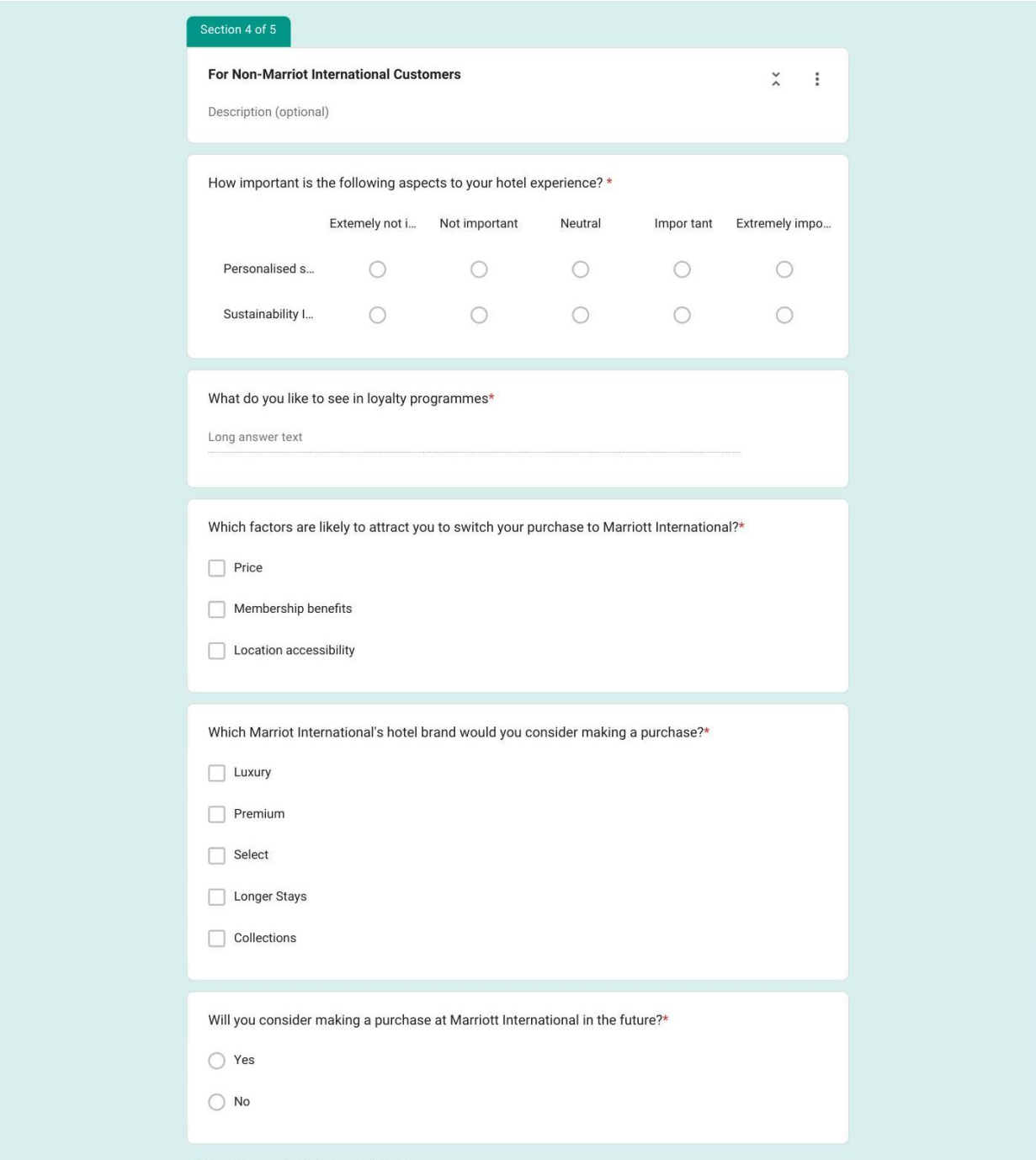


Figure 7: Questionnaire for Non-Marriot Customers

4.4 Interest Form for Online Focus Group Discussion

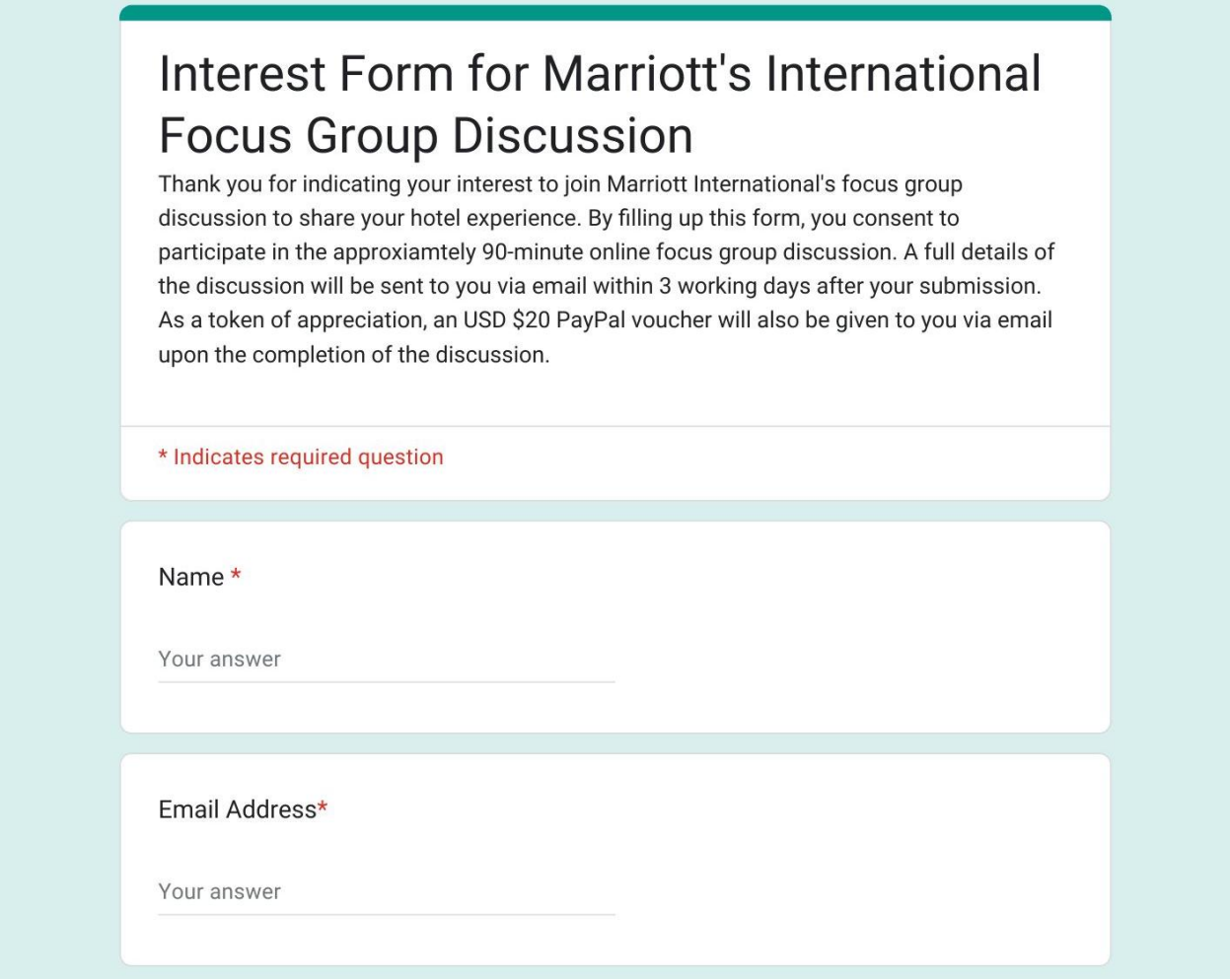


Figure 8: Interest Form for Focus Group Discussion

5. Proposed Timeline and Budget

5.1 Timeline

The project is expected to be six months and will be executed promptly upon receiving the approval. The following is the proposed timeline:

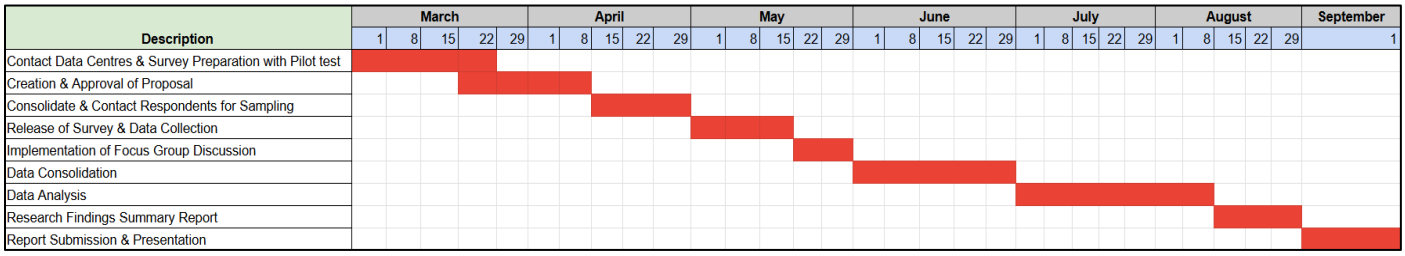


Figure 9: Gantt Chart of a 6 months Proposed Timeline

The project will run from 1st March to 31st August 2025 with the research findings presented on 1st September.

5.2 Budget Estimation

Activity	Cost (USD)
Data Collection	330,000
Data Analysis	200,000
Administration Fee	40,000
Survey Incentives (First 10,000 respondents)	100,000
Focus Group Discussion (Allowance for Moderator and Incentives)	20,000
Miscellaneous Expenses	10,000
Total	**700,000**

Table 21: List of Costs for Every Activity

6. Recommendations

The research study can expand further by diving into advertising aspect to engage with potential and existing customers. For instance, the company can explore common social media platforms with large user bases that its customers use. By leveraging these channels, Marriott can promote its loyalty programmes and display its sustainability initiatives to strengthen its brand image. This helps the company maintain engagement with customers while they are not travelling and acquire new customers with advertising content.

The degree of importance of each attribute identified from conjoint analysis can be further used for cluster analysis where we can determine the change in preferences of hotel attributes across customer groups and better tailor to their needs.

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