CO-BRANDING BETWEEN A FASHION BRAND AND A HOTEL

SUMMARY

In this study, I examined the influence of brand fit between fashion and hotel brands on consumer purchase intentions, considering the moderating role of perceived co-branding uniqueness. The survey was structured around three main constructs: perceived brand fit, perceived co-branding uniqueness, and purchase intention, rated on a 1-to-5 Likert scale. To evaluate these constructs, I conducted a principal component analysis, which confirmed that the three constructs explained 67% of the variance, with reliable internal consistency across most items.

I employed multiple statistical tests to analyze the relationships among these constructs. A linear regression analysis indicated that perceived brand fit significantly predicts purchase intention, with the model explaining 28.6% of the variance. Additionally, a moderation analysis using Hayes Process Macro Model 1 tested the hypothesis that perceived co-branding uniqueness would moderate this relationship. However, the results did not support a moderating effect, as the interaction term was not statistically significant.

All findings were carefully documented in tables and figures to enhance clarity. The results suggest that while brand fit strongly influences purchase intentions in co-branding contexts, perceived co-branding uniqueness does not significantly alter this effect, highlighting that the primary driver of consumer interest in co-branded offerings is the compatibility between the brands themselves.

PSYCHOMETRIC ANALYSIS

FACTOR ANALYSIS

The survey was formulated based on 3 different constructs, without taking into consideration the demographic section of items:

- *Perceived brand fit* - Q5, Q6, Q7, Q8, Q9
- *Perceived co-branding uniqueness* – Q10, Q11, Q12
- *Purchase intention* - Q13, Q14

Survey's rating was done on a Likert scale from 1-to-5 (1 = "strongly disagree"; 5 = "strongly agree").

As the primary purpose was to identify and compute composite scores for the factors underlying the survey, a principal components analysis was used and performed.

Table 1.
Descriptive Statistics

	Mean	Std. Deviation	Analysis N
Q5	4.07	.851	104
Q6	4.20	.852	104
Q7	4.21	.878	104
Q8	3.90	1.057	104
Q9	3.86	1.101	104
Q10	3.86	1.056	104
Q11	3.05	1.210	104
Q12	3.18	1.139	104
Q13	4.12	.938	104
Q14	3.56	1.131	104

The table above presents the descriptive statistics of each item of the survey. Q7 was deemed as the item with the highest influence among the respondents, with an average of M = 4.21.

Table 2.
Correlation Matrix[a]

		Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14
Correlation	Q5	1.000	.704	.566	.266	.311	.303	.110	.208	.392	.284
	Q6	.704	1.000	.579	.334	.280	.259	.179	.232	.408	.184

	Q7	.566	.579	1.000	.368	.353	.285	.018	.184	.383	.134
	Q8	.266	.334	.368	1.000	.389	.275	.148	.410	.374	.427
	Q9	.311	.280	.353	.389	1.000	.500	-.017	.277	.439	.479
	Q10	.303	.259	.285	.275	.500	1.000	-.124	.208	.546	.556
	Q11	.110	.179	.018	.148	-.017	-.124	1.000	.395	-.065	.023
	Q12	.208	.232	.184	.410	.277	.208	.395	1.000	.244	.207
	Q13	.392	.408	.383	.374	.439	.546	-.065	.244	1.000	.671
	Q14	.284	.184	.134	.427	.479	.556	.023	.207	.671	1.000
Sig. (1-tailed)	Q5		.000	.000	.003	.001	.001	.133	.017	.000	.002
	Q6	.000		.000	.000	.002	.004	.035	.009	.000	.031
	Q7	.000	.000		.000	.000	.002	.429	.030	.000	.087
	Q8	.003	.000	.000		.000	.002	.067	.000	.000	.000
	Q9	.001	.002	.000	.000		.000	.434	.002	.000	.000
	Q10	.001	.004	.002	.002	.000		.105	.017	.000	.000
	Q11	.133	.035	.429	.067	.434	.105		.000	.257	.409
	Q12	.017	.009	.030	.000	.002	.017	.000		.006	.018
	Q13	.000	.000	.000	.000	.000	.000	.257	.006		.000
	Q14	.002	.031	.087	.000	.000	.000	.409	.018	.000	

a. Determinant = .020

Table 2 presents the correlations between items and the determinant value which is equal to .02, confirming that the items are related to each other. At the same time, we do not have coefficient values over .8, confirming that **we do not have multicollinearity**, therefor the items do not explain multiple constructs at the same time.

Table 3.
KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.753
Bartlett's Test of Sphericity	Approx. Chi-Square	386.684
	df	45
	Sig.	.000

Table 3 presents the KMO and Bartlett's Test of Sphericity. The Kaiser-Meyer-Olkin measure of .753, being above .7, which means that the sample from which the data were collected was adequate. At the same time, Bartlett's test of sphericity which tests the overall significance of

all the correlations within the correlation matrix, was statistically significant, with a p value equal to $p = .00$. We can be confident about sample adequacy and that there were no missing values.

Figure 1.
Scree Plot

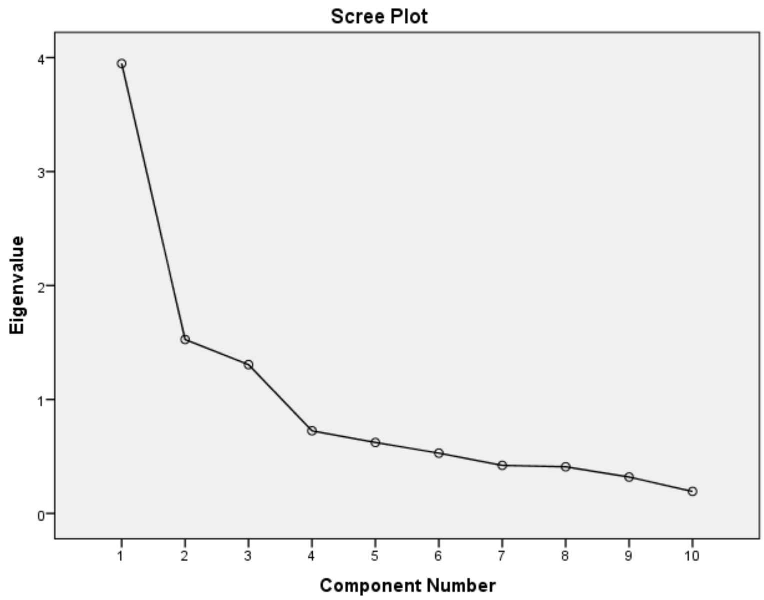


Figure 1 represents the scree plot of the factor analysis, and it presents 3 factors with an eigen values greater than 1, the rest of the factors not meeting the cut off limit. The 3 components cumulated explain 67% of the variance, as confirmed below in *table 4.* Separately, the initial eigen values indicated that the first three factors explained 39%, 15%, and 13% of the variance respectively. The rest of the factors had the eigen values below one, and each explained percentages of the variance from 7% to 1%.

Table 4.
Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.948	39.484	39.484	3.948	39.484	39.484	2.853	28.531	28.531
2	1.526	15.262	54.746	1.526	15.262	54.746	2.344	23.443	51.975

3	1.306	13.056	67.802	1.306	13.056	67.802	1.583	15.828	67.802
4	.725	7.249	75.052						
5	.622	6.225	81.276						
6	.529	5.290	86.566						
7	.421	4.215	90.781						
8	.409	4.092	94.873						
9	.320	3.195	98.069						
10	.193	1.931	100.000						

Extraction Method: Principal Component Analysis.

Table 5.

Communalities

	Initial	Extraction
Q5	1.000	.750
Q6	1.000	.793
Q7	1.000	.694
Q8	1.000	.513
Q9	1.000	.536
Q10	1.000	.647
Q11	1.000	.727
Q12	1.000	.692
Q13	1.000	.685
Q14	1.000	.743

Extraction Method: Principal Component Analysis.

Table 5 presents the communalities values for each item of the survey. The closer the communality is to 1, the better the variable is explained by the factors, so we can confirm that the communalities values are good.

Table 6.

Rotated Component Matrix[a]

	Component		
	1	2	3
Q5	.854		
Q6	.782		
Q7	.765		
Q8	.688		

Q9	.490		.463
Q10		.862	
Q11		.836	
Q12		.808	
Q13			.828
Q14			.782

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 4 iterations.

Table 6 explains the rotated component matrix of the factor analysis, where the factor loadings are sorted by size, and values below .4 were excluded. This confirms the presence of the 3 factors, being constructed as described initially. On the other hand, the item with the smallest contribution to the first factor is *Q9*, having a value of .49, yet this is still acceptable. At the same time, this item loads for the third factor as well, having an even slightly smaller contribution.

Comparing the results of the principal component analysis, the communalities table, the drop on the scree plot, the correlations, and a mean eigen value over 1, all available above, it is safe to assume the 10 items of the survey are representative for three different factors, as intended.

COMPOSITE RELIABILITY AND AVERAGE VARIANCE EXTRACTED

The average variance extracted (AVE) is a measure of the amount of variance that is captured by a construct in relation to the amount of variance due to measurement error, and it was calculated for each scale using formula $\frac{\Sigma\lambda^2}{n}$.

At the same time, the composite reliability (CR) is a less biased estimate of reliability, compared to Cronbach's Alpha, and it was calculated using the formula $\frac{(\Sigma\lambda)^2}{(\Sigma\lambda)^2+(\Sigma\varepsilon)}$.

Both of them were calculated based on the factor analysis results presented previously, and the results are presented in *table 7* below.

Table 7.

Average Variance Extracted and Composite Reliability results

Factors	Average Variance Extracted	Composite Reliability
Construct 1	.527902	.844395
Perceived brad fit		
Construct 2	.698268	.87402
Perceived co-branding uniqueness		
Construct 3	.648554	.786679
Purchase intention		

The first construct has an *AVE* value of .52, which is an acceptable value, and a good *CR* value equal to .84. The second construct has an *AVE* value of .69, and a good *CR* value equal to .87. The third construct has an *AVE* value of .64, which is an acceptable value, and a good *CR* value equal to .78.

CRONBACH'S ALPHA

- *Perceived brad fit*

Table 8.
Case Processing Summary

		N	%
Cases	Valid	104	100.0
	Excluded[a]	0	.0
	Total	104	100.0

a. Listwise deletion based on all variables in the procedure.

Table 8 confirms we have no missing values, and presents the count of the cases which is equal to N = 104.

Table 9.
Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.766	.780	5

Table 9 presents the reliability statistics for the *Perceived brad fit* construct, and the results manifest high internal consistency, with a Cronbach's Alpha value of α = .766 (5 items).

- *Perceived co-branding uniqueness*

Table 10.
Case Processing Summary

		N	%
Cases	Valid	104	100.0
	Excluded[a]	0	.0
	Total	104	100.0

a. Listwise deletion based on all variables in the procedure.

Table 10 confirms we have no missing values, and presents the count of the cases which is equal to N = 104.

Table 11.
Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.371	.363	3

Table 11 presents the reliability statistics for the *Perceived co-branding uniqueness* construct, and the results manifest a very poor internal consistency, with a Cronbach's Alpha value of α = .371 (3 items).

- *Purchase intention*

Table 12.

Case Processing Summary

		N	%
Cases	Valid	104	100.0
	Excluded[a]	0	.0
	Total	104	100.0

a. Listwise deletion based on all variables in the procedure.

Table 12 confirms we have no missing values, and presents the count of the cases which is equal to N = 104.

Table 13.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.795	.803	2

Table 13 presents the reliability statistics for the *Purchase intention*, and the results manifest high internal consistency, with a Cronbach's Alpha value of α = .795 (2 items).

HYPOTHESIS TESTING

HYPOTHESIS H_1 – LINEAR REGRESSION

The hypothesis H_1 is intended to be verified through a *Linear Regression*, having *Perceived brand fit* as the predictor variable and *Purchase intention* as the outcome variable.

Before performing the *Linear Regression*, the data needs to meet the required assumptions that qualifies the data as being proper for the design.

Table 14.
Descriptive Statistics

	Mean	Std. Deviation	N
Purchase_intention	7.67	1.892	104
Perceived_brand_fit	20.24	3.426	104

Table above presents the mean and standard deviation for the both variables of the hypothesis. For variable *Purchase intention*, the mean is M = 7.67, and the standard deviation is SD = 1.89. For variable *Perceived brand fit,* the mean is M = 20.24, and the standard deviation is SD = 3.42.

Table 15.
Correlations

		Purchase_intention	Perceived_brand_fit
Pearson Correlation	Purchase_intention	1.000	.535
	Perceived_brand_fit	.535	1.000
Sig. (1-tailed)	Purchase_intention	.	.000
	Perceived_brand_fit	.000	.
N	Purchase_intention	104	104
	Perceived_brand_fit	104	104

Table 15 presents the correlation coefficient between the two variables, and confirms that the dependent variable *Perceived brand fit* does meet the accepted value of correlation with *Purchase intention* (r = .535, p = .00), which should be a value greater than .3.

Table 16.

Residuals Statistics[a]

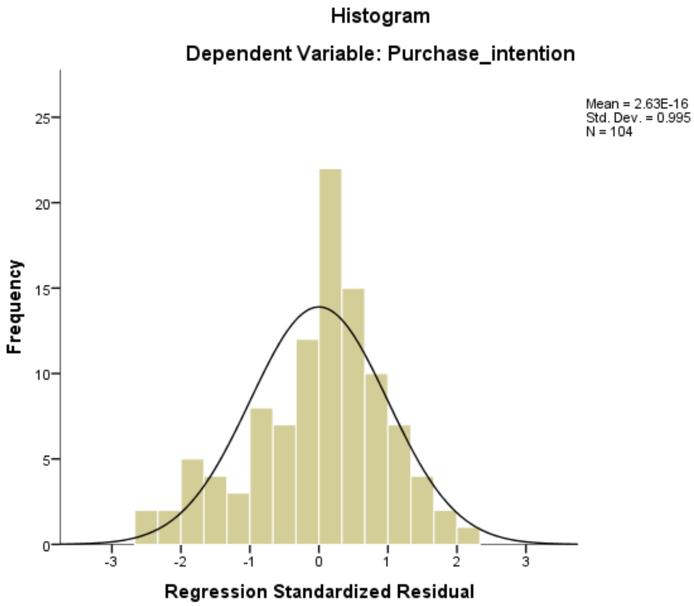
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	3.17	9.08	7.67	1.012	104
Residual	-4.193	3.580	.000	1.599	104
Std. Predicted Value	-4.448	1.389	.000	1.000	104
Std. Residual	-2.609	2.228	.000	.995	104

a. Dependent Variable: Purchase_intention

In the table above, the mean value of the *Residual* is *M* = .00, indicating that the values could be normally distributed. To confirm this, we consult the histogram generated along, which presents the distribution curve as well.

Figure 2

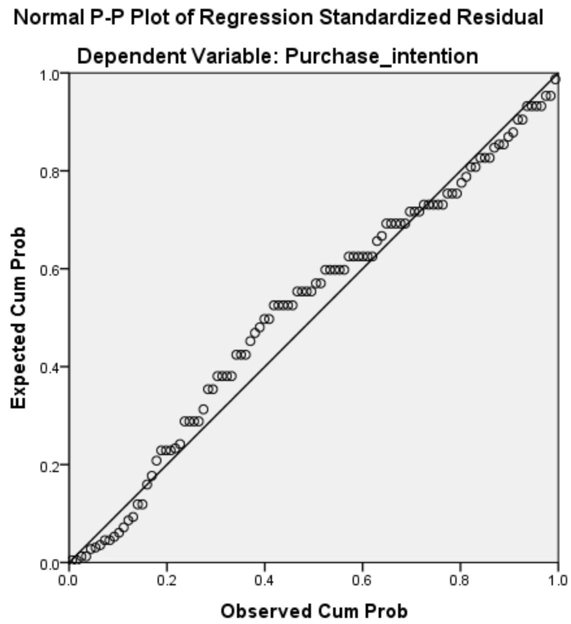
Distribution curve for dependent variable Purchase Intention - Regression Standardized Residual



The histogram above presents the distribution curve for the dependent variable *Purchase Intention's* regression standardized residual, which is visibly normal.

Figure 3.

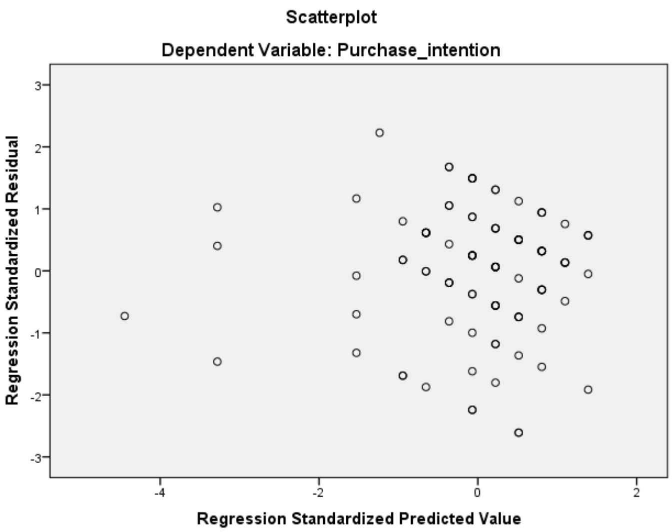
Normal P-P Plot of Regression Standardized Residual



In *Figure 3*, the illustration shows that the points do follow the line very closely, so we are able to assume we have a normal distribution, the observed standardized residuals are normally distributed.

Figure 4.

Scatterplot



In the scatterplot above, we do have a few unusual cases, as some of the dots do not fit the overall pattern, so the assumption of no significant outliners is not met.

There should be no significant outliers, as all these points can have a very negative effect on the regression equation that is used to predict the value of the dependent variable based on the independent variable, so the assumption of no significant outliners is violated.

Such shape of variance is an example of **heteroscedasticity** - the opposite of homoscedasticity. This assumption is violated. We cannot assume that the pattern is rectangular enough to clear the assumption of independence and constant variance, so far.

Table 17.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.535[a]	.286	.279	1.607

a. Predictors: (Constant), Perceived_brand_fit

b. Dependent Variable: Purchase_intention

Table 17 presents the Model 1's *R Square*, showing a value of .286, which is a good fit. This means that our model explains 28.6% of the variance of the dependent variable, which is statistically significant $p = .00$.

Table 18

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	105.520	1	105.520	40.867	.000[b]
	Residual	263.365	102	2.582		
	Total	368.885	103			

a. Dependent Variable: Purchase_intention

b. Predictors: (Constant), Perceived_brand_fit

The ANOVA tests the null hypothesis that the slope of the line is 0. We do have a significant finding here, $p < .05$, so **we reject the null hypothesis**.

Table 19

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.693	.949		1.785	.077	-.188	3.575
	Perceived_brand_fit	.295	.046	.535	6.393	.000	.204	.387

a. Dependent Variable: Purchase_intention

Table 19 further confirms that the independent variable *perceived brand fit* did make a significant contribution to the dependent variable, p = .00.

A *Linear Regression* was run to predict the level of *Purchase intention* from the influence of *perceived brand fit*. This variable **did** statistically significantly influence the level of *Purchase intention*, $F(1,102) = 40.867$, $p = .00$, $R^2 = .286$.

HYPOTHESIS $\boldsymbol{H_2}$ - HAYES PROCESS MACRO MODEL 1

The hypothesis $\boldsymbol{H_2}$ is intended to be verified through a *Hayes Process Macro Model 1*, having *Perceived brand fit* as the predictor variable and *Purchase intention* as the outcome variable, and *Perceived co-branding uniqueness* as a moderator.

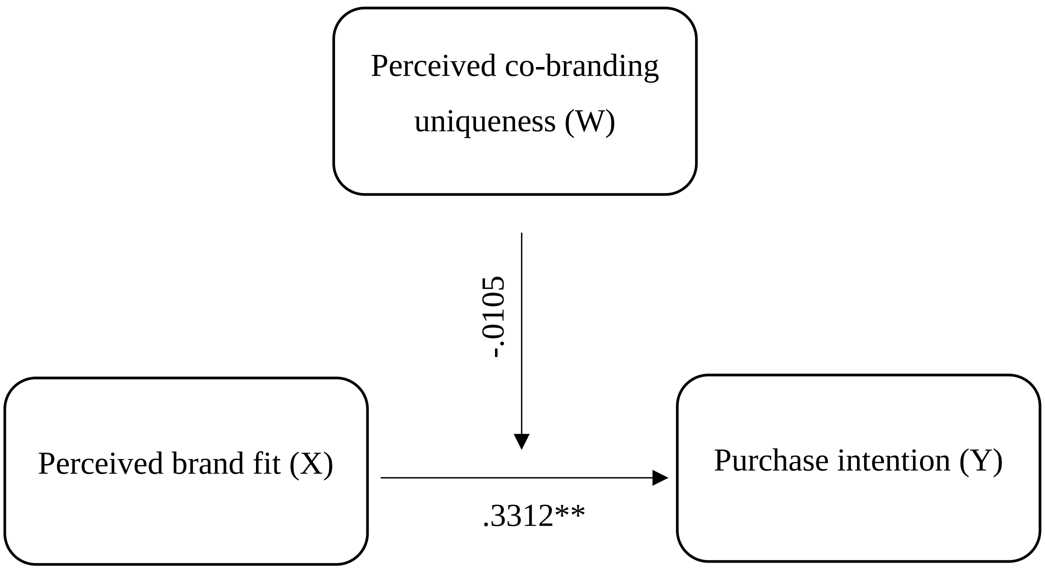


Table 20.
Model Summary

R	R-sq	MSE	p	F	df2	df1
.5630	.3170	2.5195	.0000	15.4705	3.0000	100.0000

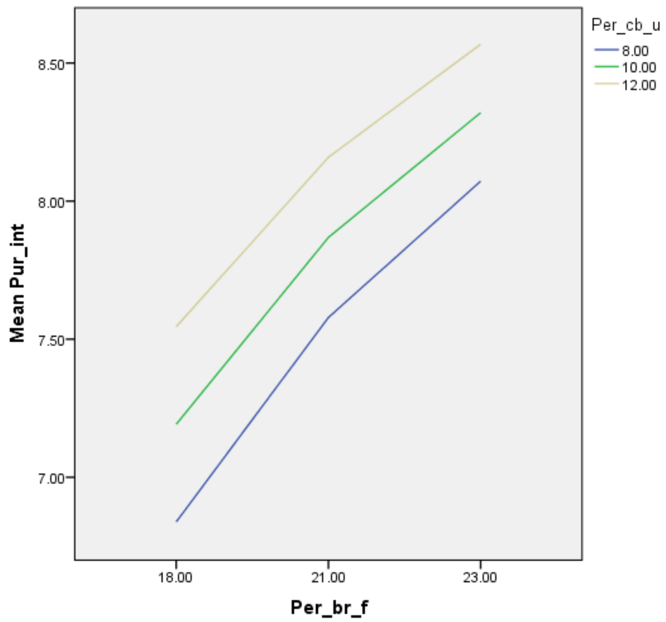
In the outcome variable, *table 20* presents the overall model results of the moderated analysis. Based on the R^2 reported, 31.70% change in *Purchase intention* is being accounted by the variables and the interaction term, $p = .00$.

Table 21.
Model 1

	coeff	se	t	p	LLCI	ULCI
constant	-.5363	2.4049	-.2230	.8240	-5.3075	4.2349
Per_br_f	.3312	.1235	2.6820	.0086	.0862	.5761
Per_cb_u	.3666	.2958	1.2392	.2182	-.2203	.9534
Int_1	-.0105	.0142	-.7410	**.4604**	-.0388	.01

Table 21 presents the results of the moderated analysis, and we can confirm that the moderator does not affect the relationship between the independent variable and dependent variable, $p = .46$.

Figure 5.
Visualization of effect analysis



Looking at the graph above, the blue line reflects the relationship between *Perceived brand fit* and *Purchase intention* among the participants that are following one standard deviation below the mean on *Perceived co-branding uniqueness*, the green line reflects the relationship between the variables at the mean on *Perceived co-branding uniqueness*, and the yellow line reflects the relationship between the variables among cases that are following one standard deviation above the mean on *Perceived co-branding uniqueness*.

A bootstrapping method was performed using *SPSS Process Macro* to examine to what extent does *Perceived co-branding uniqueness* moderate the relationship between *Perceived brand fit* and *Purchase intention*. The results revealed that *Perceived co-branding uniqueness* does not have an impact on the relationship between *Perceived brand fit* and *Purchase intention (*b = -.0105, t = -.74, p = .46), therefore not supporting $\boldsymbol{H_2}$, as we accept the null hypothesis.