Analysis Report

This report is structured as follows.

Contents

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Sample Characterization

Data was screened for respondents not passing the attention check and for missing response patterns. 12 respondents missed the attention check and were therefore excluded, reducing the sample from 225 to 213. An additional respondent only responded to the final 5 questions of the survey (suggesting lack of attention) and was also removed. The final sample size was 212.

The majority of respondents identified as female, representing 62.3% of the total. In contrast, males accounted for 37.3%, with a negligible number of participants preferring not to specify their gender (0.5%). There were no respondents identifying as non-binary or third gender.

The most significant group, 40.1% of respondents, held a University Bachelor's degree. This was followed by those who have vocational training (17.9%) and graduate or professional degrees (e.g., MA, MS, MBA, PhD, etc.) at 19.3%. Only a minor fraction had 'Hauptschulabschluss' or 'Mittlere Reife', at 0.5% and 6.1% respectively. No respondent reported having no degree. A substantial portion of participants (34.0%) reported earning less than 25,000 Euros per year, with the next significant income brackets being 25,000 - 49,999 Euros per year (27.4%) and 50,000 - 99,999 Euros per year (22.2%). Only a minority (0.5%) reported an income of more than 200,000 Euros per year.

Most respondents felt moderately (28.3%) to quite familiar (30.2%) with the USA. In terms of knowledge, a majority identified as competent (32.5%), followed by those who consider themselves as intermediate (25.0%) and proficient (25.5%). Respondents showed varied familiarity levels with China, with the highest frequencies reporting being somewhat familiar (28.8%) or slightly familiar (24.5%). As for knowledge, the dominant category was intermediate (33.0%), followed by beginners (26.9%).

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		Count	%
Gender	Male	79	37.3%
	Female	132	62.3%
	Non-binary / third gender	0	0.0%
	Prefer not to say	1	0.5%
What is the highest level of education you have completed?	No degree	0	0.0%
	Hauptschulabschluss	1	0.5%
	Mittlere Reife	13	6.1%
	Abitur	34	16.0%
	Vocational Training	38	17.9%
	University Bachelors degree	85	40.1%
	Graduate or professional degree (MA, MS, MBA, PhD, JD, MD, DDS etc.)	41	19.3%
What was your total household income before taxes during the past 12 months in Euros?	Less than 25,000 Euros per year	72	34.0%
	25,000 - 49,999 Euros per year	58	27.4%
	50,000 - 99,999 Euros per year	47	22.2%
	100,000 - 199,999 Euros per year	21	9.9%
	More than 200,000 Euros per year	1	0.5%
	Prefer not to say	13	6.1%
How familiar do you consider yourself to be with the USA?	Not at all familiar	5	2.4%
	Slightly familiar	13	6.1%
	Somewhat familiar	40	18.9%
	Moderately familiar	60	28.3%
	Quite familiar	64	30.2%
	Very familiar	26	12.3%
	Extremely familiar	4	1.9%
How knowledgeable do you consider you are about the USA?	Novice	2	0.9%
	Beginner	15	7.1%
	Intermediate	53	25.0%
	Competent	69	32.5%
	Proficient	54	25.5%
	Expert	16	7.5%
	Master	3	1.4%
How familiar do you consider yourself to be with China?	Not at all familiar	27	12.7%
	Slightly familiar	52	24.5%
	Somewhat familiar	61	28.8%
	Moderately familiar	50	23.6%
	Quite familiar	18	8.5%
	Very familiar	2	0.9%
	Extremely familiar	2	0.9%
How knowledgeable do you consider you are about China?	Novice	26	12.3%
	Beginner	57	26.9%
	Intermediate	70	33.0%
	Competent	45	21.2%
	Proficient	10	4.7%
	Expert	3	1.4%
	Master	1	0.5%

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Validity and Reliability Analysis

To check the scales' validity, Principal Component Analysis was performed for each scale and country. Sampling adequacy and Sphericity were checked using Kaiser-Meyer-Olkin and Bartlett's test prior to performing the analyses. The table below shows the resulting factor loadings.

Factor	Statements	λ	
		USA	China
Conflict	The government is very cooperative with ours.	0.845	0.835
	The trade practices with Germany are very fair.	0.855	0.827
	The government respects other nations.	0.743	0.800
Political System	The political system is very democratic.	0.838	0.829
	The country is a very peaceful country.	0.652	0.815
	The citizens have a great deal of freedom (many rights).	0.772	0.857
Environment	The country makes an aggressive effort to protect the environment.	0.907	0.914
	The country maintains very high standards for pollution control.	0.899	0.901
	The country is very concerned about the environment.	0.931	0.914
Labor	Workplace conditions in the country are generally very safe.	0.875	0.887
	The country is very considerate to its workers.	0.933	0.937
	The workers are generally very well treated.	0.912	0.924
Data	The country handles personal information responsibly.	0.928	0.917
	The country would keep its data protection commitments.	0.917	0.928
	The country would not misuse personal data.	0.840	0.889

Only one item's loading coefficient was below 0.700 (USA is a peaceful country) but still at an acceptable level (0.652). The analysis proceeded by calculating scales' reliability using Cronbach's Alpha and the results for USA are shown below, along with means and standard deviations for each item.

Again, Political System showed an Alpha sightly below the generally accepted 0.700 level (0.623). This number is still acceptable, specially in the context of exploratory research.

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Factor	Statement	α	N of Items	Mean	SD
Conflict	The USA's government is very cooperative with ours.	0.723	3	4.630	0.982
	The USA's trade practices with Germany are very fair.		3	4.190	0.994
	The government of the USA respects other nations.		3	3.810	1.372
Political System	The USA's political system is very democratic.	0.623	3	4.410	1.326
	The USA are a very peaceful country.		3	3.190	1.329
	The USA's citizens have a great deal of freedom (many rights).		3	5.000	1.247
Environment	The USA makes an aggressive effort to protect the environment.	0.899	3	2.910	1.270
	The USA maintains very high standards for pollution control.		3	2.810	1.181
	The USA is very concerned about the environment.		3	2.940	1.298
Labor	Workplace conditions in the USA are generally very safe.	0.887	3	3.580	1.424
	The USA is very considerate to its workers.		3	3.110	1.267
	The USA's workers are generally very well treated.		3	3.370	1.184
Data	The USA handles my personal information responsibly.	0.877	3	2.990	1.226
	The USA would keep its data protection commitments.		3	3.150	1.241
	The USA would not misuse my personal data.		3	2.750	1.187

For China, all Alphas were above 0.700 indicating good reliability (table below).

Factor	Statement	α	N of Items	Mean	SD
Conflict	China's government is very cooperative with ours.	0.752	3	2.800	1.101
	China's trade practices with Germany are very fair.		3	3.080	1.149
	China's government respects other nations.		3	2.870	1.323
Political System	China's political system is very democratic.	0.768	3	1.680	1.022
	China is a very peaceful country.		3	3.130	1.328
	China's citizens have a great deal of freedom (many rights).		3	1.940	0.984
Environment	China makes an aggressive effort to protect the environment.	0.894	3	2.440	1.303
	China maintains very high standards for pollution control.		3	2.280	1.142
	China is very concerned about the environment.		3	2.370	1.287
Labor	Workplace conditions in China are generally very safe.	0.903	3	2.390	1.136
	China is very considerate to its workers.		3	2.130	1.043
	China's workers are generally very well treated.		3	2.200	1.072
Data	China handles my personal information responsibly.	0.898	3	2.200	1.196
	China would keep its data protection commitments.		3	2.300	1.201
	China would not misuse my personal data.		3	2.110	1.094

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Descriptive Statistics

After validity and reliability were assessed, a mean score was calculated for each scale and country. The table below shows the means and standard deviations for all scales. The table is supplemented by the results of Paired-Samples T-tests. There are significant mean differences for all scales between China and the USA ($p < 0.001$).

Factor	USA		China		t	df	p
	Mean	SD	Mean	SD			
Conflict	4.208	0.907	2.917	0.977	13.682	211	0.000
Political System	4.198	0.982	2.250	0.927	21.18	211	0.000
Environment	2.887	1.141	2.365	1.132	5.237	211	0.000
Labor	3.352	1.170	2.239	0.992	12.051	211	0.000
Data	2.964	1.091	2.201	1.061	10.047	211	0.000

For Conflict, Political System, Environment, Labor, and Data, perceptions about the USA consistently scored higher (more favorable) than China.

The same test was applied for willingness to buy both smartphones. The willingness level was much higher for the American phone ($p < 0.001$). With regards to the binary choice (buying one or the other), 88.2% of respondents opted for the American phone.

Product	Mean	N	SD	Std. Error Mean	t	df	p
Chéngzi F20 Elite	2.790	212	1.267	0.087	-10.883	211	0.000
Lumos X9 Ultra	3.720	212	1.429	0.098			

The survey also asked about which factors have influenced respondents on their willingness to buy the smartphones. The table below shows the scores disaggregated by respondents who have either chosen the Chinese and the American phone. According to an Independent-Samples t-test, those that choose the American phone have stronger opinion on the factors that have influenced them on making this choice ($p < 0.05$).

Factor of Influence	Total		Chéngzi smartphone		Lumos Smartphone		t	p
	Mean	SD	Mean	SD	Mean	SD		
Relationship to other Countries: cooperation with Germany, fairness and respect	3.962	1.560	2.920	1.552	4.102	1.512	-3.659	0.000
Political System: level of Democratization peacefulness, freedom	4.547	1.712	2.800	1.323	4.781	1.623	-5.844	0.000
Environment: environmental protection & concern, pollution standards	3.825	1.556	3.200	1.414	3.909	1.558	-2.159	0.032
Labor Conditions: safe workplace & treatment of workers	4.250	1.587	3.520	1.262	4.348	1.604	-2.478	0.014
Data Protection: responsible treatment & data protection	4.717	1.574	3.840	1.344	4.834	1.569	-3.022	0.003

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Correlations

The table below shows correlations among country familiarity and country' image.

	How familiar do you consider yourself to be with the USA?	How familiar do you consider yourself to be with China?
Conflict - US	0.118	0.004
Political System - US	0.114	0.014
Environment - US	0.030	.153*
Labor - US	0.038	0.085
Data - US	-0.058	-0.122
Conflict - China	0.082	.208**
Political System - China	-0.023	0.116
Environment - China	.171*	.178**
Labor - China	-0.047	0.038
Data - China	-0.058	-0.066

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

The level of familiarity with the USA and China showed mixed and generally weak correlations with perceptions about each country. Notably, the familiarity with China significantly correlated at the 0.01 level with perceptions about China's conflict and environmental stances.

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Regression Models – Willingness to Buy

Multiple linear regressions were conducted to investigate how various factors related to China and the US (conflict, political system, environment, labor, and data) predict the willingness to buy the Chéngzi F20 Elite and the Lumos X9 Ultra. The model for China ($R^2 = 0.089$, $F = 5.133$, $p < 0.001$) and for the US ($R^2 = 0.084$, $F = 4.846$, $p < 0.001$) were significant but only able to predict less than 10% of the variance on Willingness to Buy. Multicollinearity was assesses using Tolerance and variance inflation factors and was absent (VIF < 10).

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.596	.284		5.627	.000		
	Conflict - China	.025	.115	.019	.220	.826	.553	1.808
	Political System - China	.098	.125	.071	.782	.435	.518	1.929
	Environment - China	.196	.090	.175	2.165	.032	.661	1.514
	Labor - China	.041	.108	.032	.377	.707	.602	1.660
	Data - China	.158	.096	.133	1.653	.100	.670	1.493

a. Dependent Variable: How willing are you to buy the Chéngzi F20 Elite?

Environmental image of China was a significant predictor of willingness to buy the Chinese smartphone ($\beta = 0.175$, $p = 0.032$).

Conflict with the US marginally predicted the willingness to buy the Lumos X9 Ultra ($\beta = 0.148$, $p = 0.066$). This can only be considered significant if a threshold of 1% significance level is considered, which is often acceptable in exploratory research in the social sciences.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.392	.505		2.759	.006		
	Conflict - US	.234	.127	.148	1.845	.066	.672	1.488
	Political System - US	.191	.128	.131	1.487	.138	.558	1.792
	Environment - US	.080	.105	.064	.763	.446	.621	1.611
	Labor - US	.111	.097	.091	1.145	.254	.689	1.451
	Data - US	-.021	.099	-.016	-.214	.831	.757	1.320

a. Dependent Variable: How willing are you to buy the Lumos X9 Ultra?

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Logistic Regression Models – Purchase Decision

A binary logistic regression was conducted to investigate how various factors related to the US and China (conflict, political system, environment, labor, and data) predict the choice of the American or phone (used as reference category). The model for the American phone was significant ($\chi^2 = 19.962$, $p < 0.001$) as well as for the Chinese ($\chi^2 = 16.826$, $p < 0.01$). The tables below show the model coefficients.

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Conflict - US	1.083	.311	12.107	1	.001	2.955
	Political System - US	-.053	.316	.028	1	.866	.948
	Environment - US	.062	.263	.055	1	.814	1.064
	Labor - US	.172	.252	.469	1	.494	1.188
	Data - US	-.219	.233	.882	1	.348	.803
	Constant	-2.084	1.139	3.349	1	.067	.124

a. Variable(s) entered on step 1: Conflict - US, Political System - US, Environment - US, Labor - US, Data - US.

Conflict - US significantly predicted the outcome variable, B = 1.083, p = .001, OR = 2.955. The odds of choosing the American phone are approximately 2.955 times higher for each one-unit increase in conflict with the US, controlling for the other predictors in the model. All other variables were non-significant predictors of this choice. For China (table below), none of the predictors were significant ($p > 0.05$), suggesting that these factors are not really influencing the decision of buying the American phone.

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Conflict - China	-.035	.316	.012	1	.912	.966
	Political System - China	-.466	.309	2.271	1	.132	.627
	Environment - China	-.168	.219	.588	1	.443	.846
	Labor - China	-.272	.264	1.062	1	.303	.762
	Data - China	-.161	.248	.423	1	.515	.851
	Constant	4.801	.883	29.571	1	.000	121.629

a. Variable(s) entered on step 1: Conflict - China, Political System - China, Environment - China, Labor - China, Data - China.

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Regression Models – Price Difference

Lastly, multiple regression models were attempted to be fit to explain the perceived price difference of the American phone over the Chinese phone. Neither model was statistically significant. For the US-related predictors, $F(5, 203) = 1.664$, $p = 0.145$, and for the China-related predictors, $F(5, 203) = 1.035$, $p = 0.398$. Given the non-significance of the models, further exploration of individual coefficients was deemed unnecessary.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	186761.950	5	37352.390	1.664	.145[b]
	Residual	4556257.850	203	22444.620		
	Total	4743019.799	208			

a. Dependent Variable: Hidden question for Price Premium

b. Predictors: (Constant), Data - US, Conflict - US, Labor - US, Environment - US, Political System - US

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	117878.658	5	23575.732	1.035	.398[b]
	Residual	4625141.141	203	22783.947		
	Total	4743019.799	208			

a. Dependent Variable: Hidden question for Price Premium

b. Predictors: (Constant), Data - China, Environment - China, Conflict - China, Labor - China, Political System - China

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New Analysis

A single construct for 'Country Image' was tested for validity and reliability and the results are shown below.

Component Matrix[a]

	Component
	1 (λ)
The USA's government is very cooperative with ours.	.442
The USA's trade practices with Germany are very fair.	.521
The government of the USA respects other nations.	.560
The USA's political system is very democratic.	.675
The USA are a very peaceful country.	.548
The USA's citizens have a great deal of freedom (many rights).	.459
The USA makes an aggressive effort to protect the environment.	.752
The USA maintains very high standards for pollution control.	.718
The USA is very concerned about the environment.	.706
Workplace conditions in the USA are generally very safe.	.636
The USA is very considerate to its workers.	.690
The USA's workers are generally very well treated.	.665
The USA handles my personal information responsibly.	.646
The USA would keep its data protection commitments.	.647
The USA would not misuse my personal data.	.562

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

The majority of the loadings for USA were above 0.500. One item had a loading of 0.442 which is still minimally acceptable. For China, all items loaded higher than 0.500. Cronbach's alpha was 0.884 for US and 0.908 for China.

Component Matrix[a]

	Component
	1 (λ)
China's government is very cooperative with ours.	.528
China's trade practices with Germany are very fair.	.557
China's government respects other nations.	.729
China's political system is very democratic.	.648
China is a very peaceful country.	.606
China's citizens have a great deal of freedom (many rights).	.720
China makes an aggressive effort to protect the environment.	.661
China maintains very high standards for pollution control.	.700
China is very concerned about the environment.	.642
Workplace conditions in China are generally very safe.	.728
China is very considerate to its workers.	.727
China's workers are generally very well treated.	.704
China handles my personal information responsibly.	.623
China would keep its data protection commitments.	.673
China would not misuse my personal data.	.719

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

The table below shows the descriptive statistics of the resulting averaged scale.

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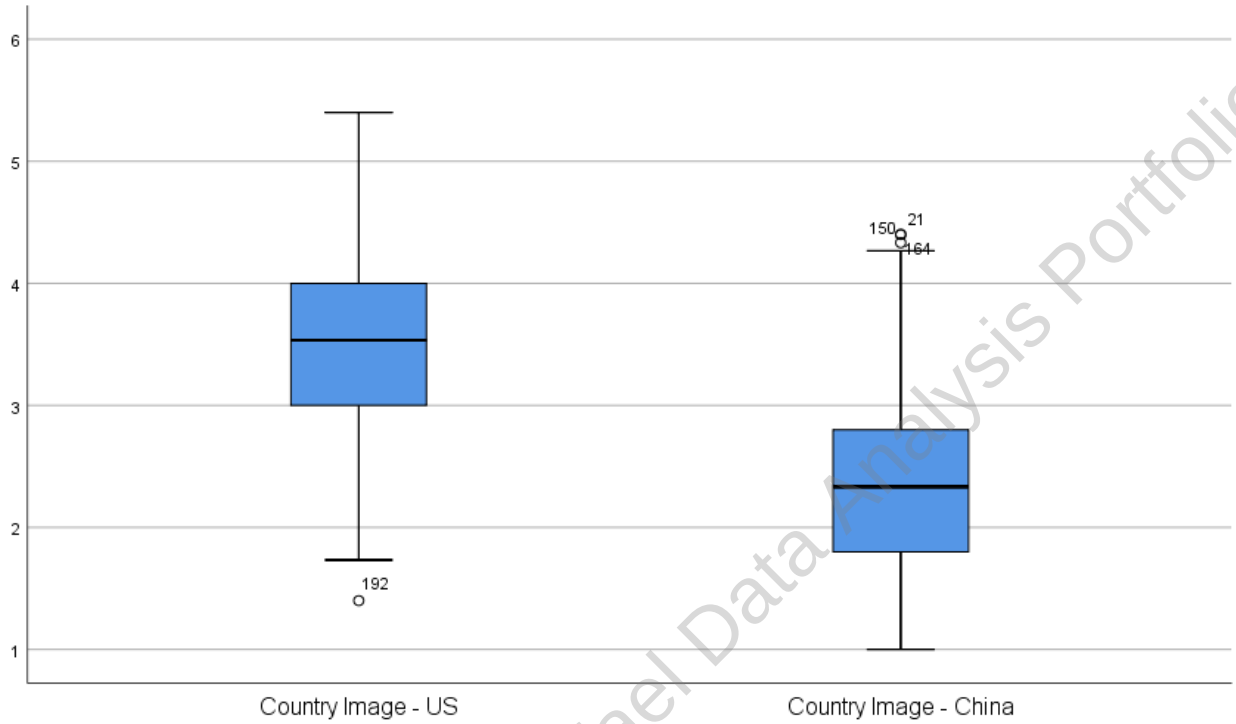
	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Country Image - US	1.400	5.400	3.522	.765	.023	.167	-.161	.333
Country Image - China	1.000	4.400	2.394	.769	.468	.167	-.324	.333

The lower absolute values for kurtosis and skewness suggest variables are not significantly deviating from normality. The figure below shows the scales' distributions.



The 'Price difference' variable was standardized to reflect the choice the respondent made on the previous question. Those that chose the Chinese phone had their values multiplied by '-1' (had their signs inverted). The resulting recoded variable represented the price change that a customer was willing to pay for the American phone over the Chinese phone.

For instance, if someone chose the American phone and is willing to pay $50 more for it compared to the Chinese phone, the value would be +50. If someone chose the Chinese phone and is willing to pay $50 more for it compared to the American phone, the value would be -50.

By doing this, we have a standardized dependent variable that represents the price difference with the direction of preference. Positive values indicate a preference (and how much more someone is willing to pay) for the American phone, and negative values indicate a preference for the Chinese phone. The resulting variable was checked for outliers and six cases were dropped who scored more than +-3 standard deviations from the mean.

The descriptive statistics of this variable are below. The mean was $105.75, suggesting that on average, the German customers are willing to pay more for an American phone.

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	Minimum	Maximum	Mean	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Price Difference - Lumos over Chéngzi	-200.000	650.000	105.747	1.774	.169	4.057	.337

A One-Sample T-test was used to test this hypothesis. Essentially it tested if the mean score of this variable is significantly different from 0 (which would mean there is no preference). The results indicated that the willingness to pay more for an American phone is significant, $t = 10.501$, $p < 0.001$.

One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Price Difference - Lumos over Chéngzi	10.501	205	.000	105.748	85.892	125.603

The table below shows correlations between variables. Country images are not statistically associated with familiarity with either the US or China ($p > 0.05$).

Correlations

		How familiar do you consider yourself to be with the USA?	How familiar do you consider yourself to be with China?	Country Image - US	Country Image - China
How familiar do you consider yourself to be with the USA?	Pearson Correlation	1	.514**	.061	.038
	Sig. (2-tailed)		.000	.374	.585
	N	212	212	212	212
How familiar do you consider yourself to be with China?	Pearson Correlation	.514**	1	.041	.125
	Sig. (2-tailed)	.000		.548	.069
	N	212	212	212	212
Country Image - US	Pearson Correlation	.061	.041	1	.170*
	Sig. (2-tailed)	.374	.548		.013
	N	212	212	212	212
Country Image - China	Pearson Correlation	.038	.125	.170*	1
	Sig. (2-tailed)	.585	.069	.013	
	N	212	212	212	212

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

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Finally, a multiple regression model was used to check if country images were significantly influencing the willingness to pay more for an American phone. Model was significant, $F = 9.058$, $p < 0.001$, $R^2 = 0.073$). Country image for the US was significantly positively related to willingness to pay for an American phone ($\beta = 0.159$, $p = 0.021$). On the other hand, Country Image for China was negatively related with this preference ($\beta = -0.269$, $p < 0.001$). Multicollinearity was absent.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	122.050	50.562		2.414	.017		
	Country Image - US	29.643	12.772	.159	2.321	.021	.967	1.034
	Country Image - China	-50.316	12.810	-.269	-3.928	.000	.967	1.034

a. Dependent Variable: Price Difference - Lumos over Chéngzi

A second model (logistic) was used to determine if country image is related to the phone choice. The model was significant ($\chi^2 = 32.175$, $p < 0.001$, Nagelkerke $R^2 = 0.273$).

For every one-unit increase in the "Country Image - US" score, the odds of choosing Lumos over Chéngzi increase by a factor of 3.996 (or roughly 4 times), holding everything else constant. This is statistically significant with a p-value < 0.001 (Sig. column).

For every one-unit increase in the "Country Image - China" score, the odds of choosing Lumos over Chéngzi are multiplied by 0.237. This means that higher scores on the China country image are associated with lower odds of choosing Lumos, and this relationship is statistically significant (p-value < 0.001).

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Country Image - US	1.385	.380	13.269	1	.000	3.996
	Country Image - China	-1.442	.327	19.403	1	.000	.237
	Constant	1.220	1.210	1.017	1	.313	3.388

a. Variable(s) entered on step 1: Country Image - US, Country Image - China.

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