Which country you should visit if you like to kiss ?

The relationship between
National Income Inequality(GINI) and Kissing Frequency

Group 6A
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AGENDA

① **Project Background**

② **Data Source and Analysis Methods**

③ **Analysis Process and Results**

④ **Conclusion**

⑤ **Review**

Analysis Objectives and Methodology

Data Sources

- Open Science Framework
- Date: 2019
- Rows: 2,989 / Columns: 41
- 13 countries from 6 continents

Analytical Tool

- ANOVA Test
- Correlation Coefficient
- Simple Linear Regression

Analysis Process and Results

1) ANOVA: Are the means of kissing frequency among 13 countries statistically different?

SUMMARY				
Groups	Count	Sum	Average	Variance
Australia	119	9311	78.2	447.1
Brazil	170	13644	80.3	450.1
Chile	141	11503	81.6	328.4
Colombia	231	18296	79.2	302.8
CZ	83	6229	75.0	393.6
France	99	6976	70.5	531.0
Germany	91	6791	74.6	383.1
India	43	3109	72.3	802.1
Italy	60	4464	74.4	367.7
Nigeria	98	7676	78.3	577.4
Poland	84	6492	77.3	468.4
UK	867	70015	80.8	394.6
USA	70	5783	82.6	402.4

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	18611.5	12	1550.958	3.7639	0.00001	756683
Within Groups	883032.9	2143	412.0546			
Total	901644.4	2155				

P-value = 0.00001 < 0.05, **reject H0**.

Not all the kissing frequency among 13 countries are the same.

Analysis Process and Results

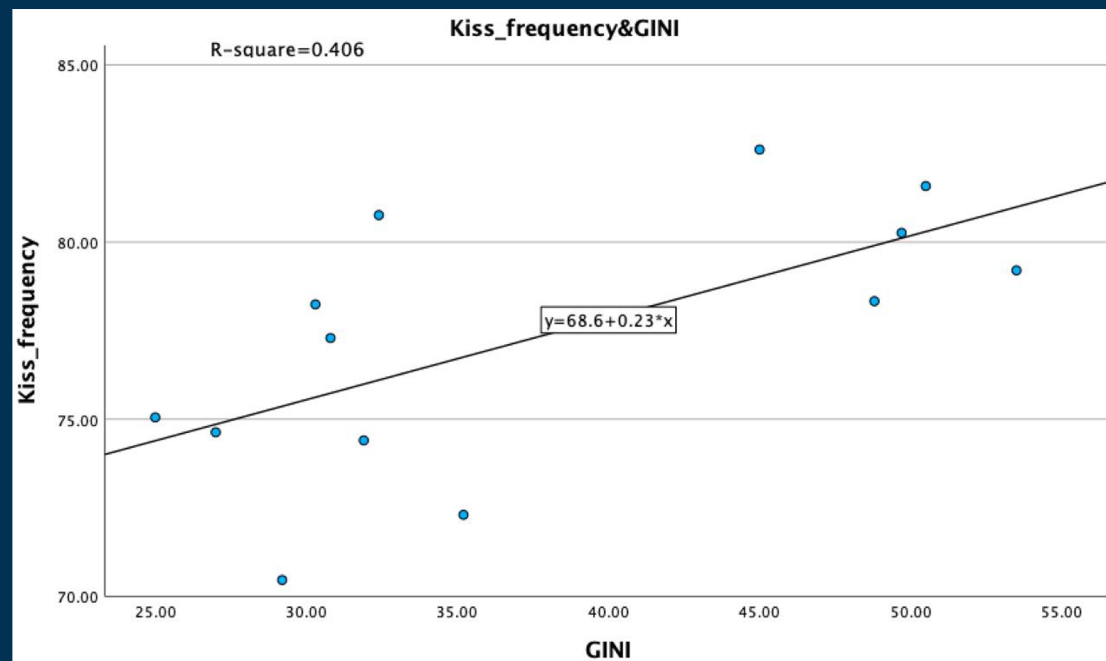2) Correlation Analysis: Among all variables, which should we choose?

Country	Sex	Age	HPP_9	SRA	SRM	Kiss_Freq	Status	RelLength	RelY	Kiss_Imp Ini	Kiss_Imp Est	Hug_Freq	Sex_Freq	Kiss_Satis	Hug_Satis	Sex_Satis	SRH	SRA_Partner	SRM_Partner	SRH_Partner	GK_Breath	GK_Scent	GK_Taste	GK_Wet	GK_Contact	GK_Arous us	GK_SynchStyle	GINI	GDP
Australia	1.68	32.03	-0.20	4.37	2.		1.25	6.09	5.82	74.85	84.53	80.51	56.75	75.97	82.29	63.63	4.17	4.64	3.33	3.58	83.75	76.98	69.97	63.08	71.65	65.53	61.0		49900
Brazil	1.67	29.08	0.93	4.10	3.15	80.20	1.38	3.66	3.44	83.89	86.79	77.82	63.29	78.46	84.28	64.68	4.35	3.77	2.99	3.40	90.45	87.96	77.54	64.55	83.90	79.15	76.82	49.7	15500
Chile	1.82	31.15	-0.42	4.61	2.70	81.58	1.33	4.64	4.39	84.12	85.29	85.94	64.04	79.26	78.70	68.96	4.39	3.95	3.38	3.54	89.13	87.20	81.12	66.28	79.99	77.09	63.43	50.5	24600
Colombia	1.67	26.02	0.27	4.46	2.93	79.55	1.39	2.94	2.70	78.54	83.47	82.47	67.64	81.00	81.09	74.79	4.36	3.81	2.86	3.43	91.89	88.97	80.54	66.54	73.93	77.76	70.56	53.5	14500
Czech Republic	1.81	27.24	-0.75	4.73	2.96	75.05	1.22	3.17	2.86	81.28	78.59	80.08	62.25	77.37	78.10	68.73	4.47	4.71	3.92	4.34	82.54	81.20	71.96	65.64	78.99	72.94	62.83	25	35200
France	1.77	32.25	-0.42	4.72	3.79	70.46	1.22	4.89	4.60	85.00	75.39	76.71	65.21	72.68	78.91	72.53	4.59	4.60	3.44	4.14	86.53	81.55	70.93	54.09	72.26	78.42	53.61	29.2	43600
Germany	1.84	27.52	-0.74	4.46	2.74	73.82	1.30	3.76	3.44	84.97	82.88	81.91	59.95	83.24	79.72	70.64	4.47	3.89	3.11	3.41	82.53	82.12	72.16	63.85	70.61	59.92	67.99	27	50200
India	1.86	28.67	0.94	4.79	2.63	72.30	1.23	3.94	3.72	75.79	82.84	75.07	46.47	77.70	71.98	55.60	4.12	5.12	4.53	4.79	85.44	83.26	72.84	62.28	85.72	85.07	57.53	35.2	7200
Italy	1.86	30.41	0.15	4.07	3.03	74.08	1.25	4.53	4.34	85.47	85.98	66.56	68.83	77.08	73.76	73.36	4.69	4.61	4.02	4.20	86.08	84.69	83.17	62.39	82.31	83.19	68.14	31.9	38000
Nigeria	1.62	31.59	1.14	5.52	2.95	78.33	1.26	5.46	4.90	58.11	79.76	79.01	53.18	82.66	78.56	70.31	6.01	5.21	4.10	5.40	86.00	83.00	80.05	65.12	83.10	85.27	60.84	48.8	5900
Poland	1.73	26.59	-0.86	4.66	2.87	76.38	1.19	3.78	3.48	82.48	85.04	88.99	66.19	77.31	80.78	68.49	4.65	4.38	3.48	3.87	82.53	81.93	75.68	60.41	70.47	77.72	62.05	30.8	29300
UK	1.74	36.61	-0.91	4.20	2.77	80.73	1.16	8.53	8.23	84.07	86.40	79.29	64.13	78.09	81.82	70.80	4.26	4.88	3.69	4.19	86.56	80.81	73.65	63.62	75.60	69.59	61.86	32.4	43600
USA	1.77	32.96	-0.74	4.78	3.01	82.36	1.32	3.95	3.67	78.49	85.70	77.33	64.81	82.64	86.03	71.12	4.32	4.51	3.81	4.04	85.32	81.86	77.32	62.57	73.54	69.01	63.88	45	59500
ALL	1.74	31.97	-0.33	4.42	2.92	78.83	1.24	5.70	5.41	81.10	84.35	79.85	63.23	78.67	80.79	69.72	4.43	4.50	3.50	3.98	86.59	82.66	74.99	63.49	76.14	72.94	63.94	30	
Correlation_Coefficient	-0.47	0.31	-0.06	-0.08	-0.34	1.00	0.41	0.22	0.22	-0.15	0.63	0.34	0.24	0.48	0.68	0.16	-0.04	-0.28	-0.30	-0.27	0.43	0.26	0.42	0.61	0.00	-0.19	0.	0.64	0.01

GINI has the **highest** R-value = 0.64, so we choose **GINI***.

*GINI: In economics, the Gini coefficient is a measure of statistical dispersion intended to represent the income inequality within a nation or a social group.

Analysis Process and Results

3) Simple Linear Regression: What is the relationship between x and y?

There is a **positive linear relationship** between x and y:
the higher GINI, the higher kissing frequency.

Conclusion

GINI coefficient is positive related to kissing frequency and can significantly affect it.

Psychological comfort

The nature of human

Review

Backward Variable Selection

Add **HPP_9*** into our model, since the R-square = 0.661, which is the highest.

*HPP_9: Reflects how immune a country is to disease and how healthy the country is overall.

Model Summary^f

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.856^a	.733	.465	2.59543
2	.856^b	.733	.542	2.40334
3	.854^c	.730	.595	2.25834
4	.852^d	.727	.636	2.14256
5	.847^e	.718	.661	2.06576

a. Predictors: (Constant), Sex_Freq, GINI, Hug_Freq, GDP, Kiss_Imp_Initial, HPP_9

b. Predictors: (Constant), Sex_Freq, GINI, Hug_Freq, Kiss_Imp_Initial, HPP_9

c. Predictors: (Constant), Sex_Freq, GINI, Kiss_Imp_Initial, HPP_9

d. Predictors: (Constant), GINI, Kiss_Imp_Initial, HPP_9

e. Predictors: (Constant), GINI, HPP_9

f. Dependent Variable: Kiss_Freq

Thank you!

Wish you can find your soul mate.

Group 6A
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