Module 8: Case for Analysis

GINA CHAMPION

Executive Summary of Key Findings



Primary Dimensions of Focus:

- 1. Tourism Promotion
- 2. Tourism Infrastructure, Mobility/Transportation & Related Services
- 3. Safety & Security

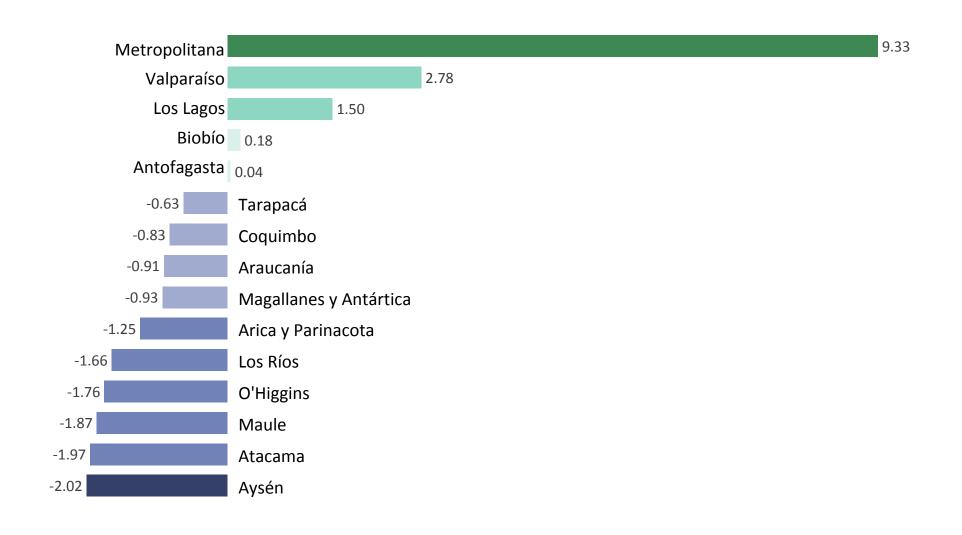
Short-Term Strategy:

- 1. Increased Promotion of Tourism to Key Regions
 - a) Use Metropolitana as a selling point
 - b) Custom promotion of other regions, based off strengths
- 2. Invest in Tourism-Related Infrastructure

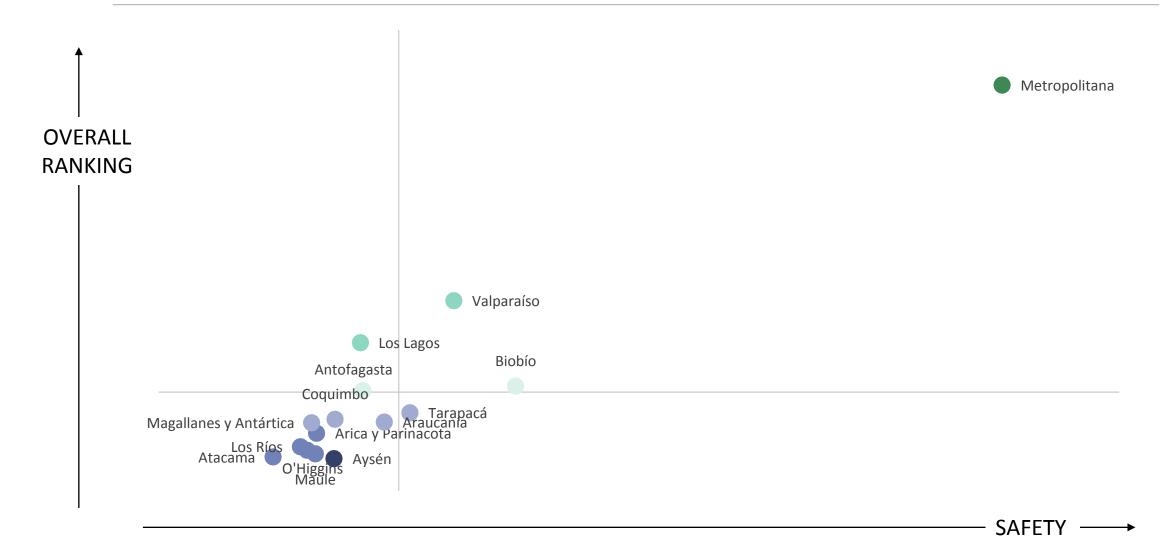
Key Regions:

- Metropolitana
- Valparaiso
- Lagos

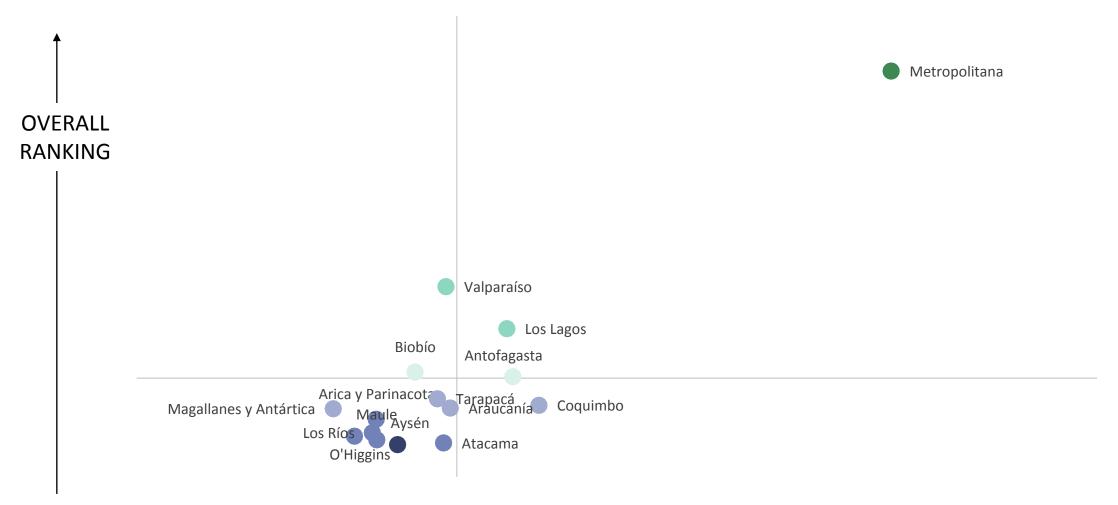
Overall Ranking, by Region



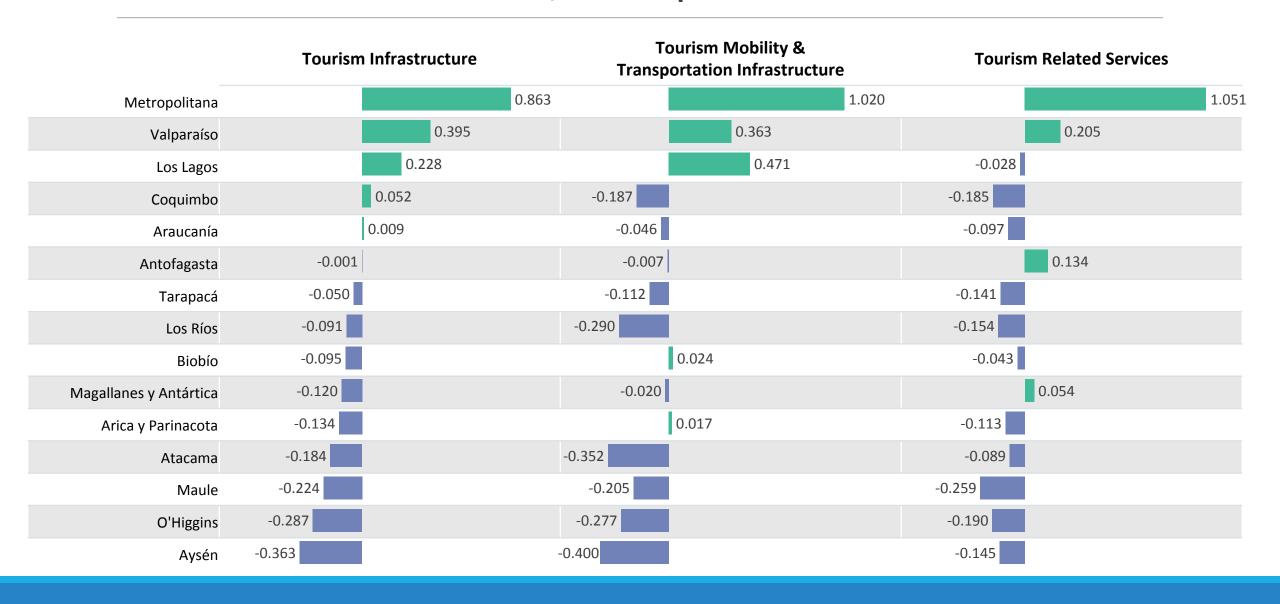
Overall Ranking vs. Safety/Security



Overall Ranking vs. Tourism Promotion



Tourism Infrastructure, Transportation & Related Services



Recommendations: Dimensions

1 TOURISM PROMOTION

- Increase marketing & sales efforts to draw international tourists to Chile.
- Focus on Metropolitana as a "central hub," with customized promotion for other top regions.

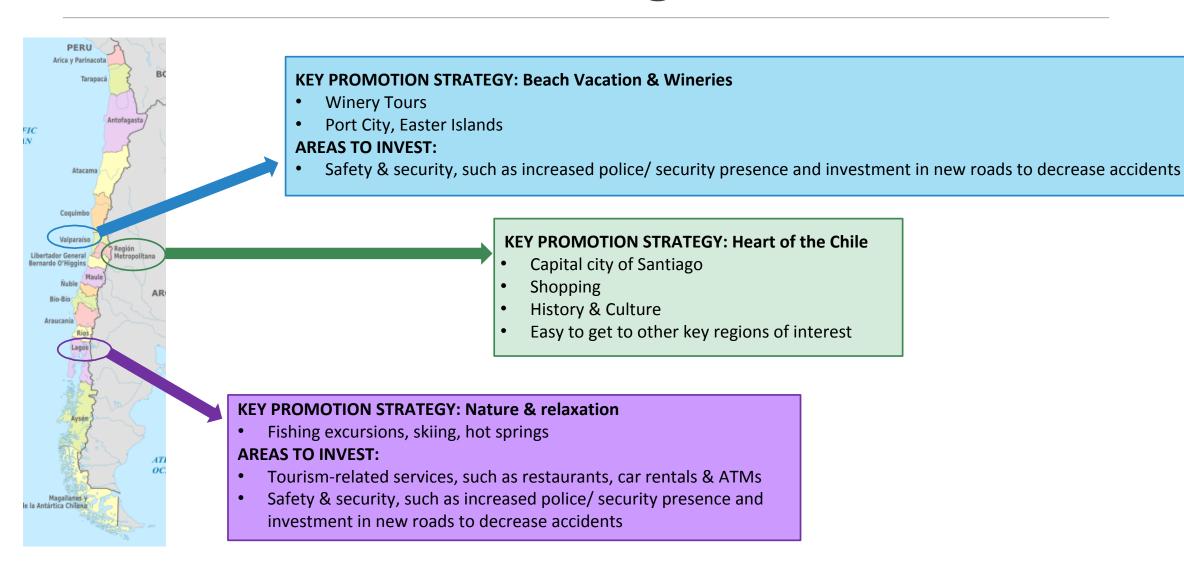
INFRASTRUCTURE, MOBILITY/TRANSPORTATION, RELATED SERVICES

- In order to keep up with an increase in tourists due to new marketing efforts, Chile should invest in the
 infrastructure needed to keep up with the tourism demand
- Hotels, restaurants, car rentals, hospitals, public transport
- This can not only help the key regions be able to keep up with increased tourism, but also make way for other regions to be able to host more tourists in the future

SAFETY & SECURITY

- Tourists want to be safe when they travel, and would be less likely to recommend to their friends/family to take a trip if they felt unsafe during their vacation
- Increase police presence in key tourist areas
- Invest in new roads for safe travels

Recommendations: Regions



Overview of Methodology

Step 1: Data Cleaning

- Check for missing data
 - Impute values for some columns
 - Dropped columns for some variables where there were a lot of missing data
- Convert object columns to numeric

Step 2: Exploratory Analysis

- Visualizations of various data points
 - Bar charts, scatter plots

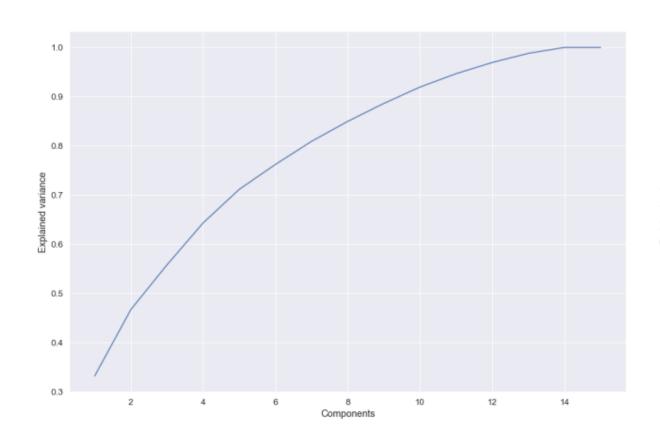
Step 3: PCA Analysis

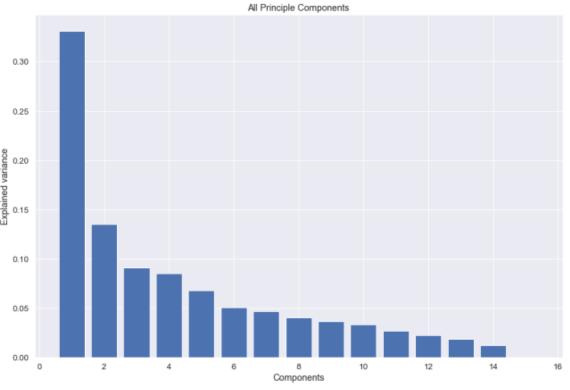
- Standardize data
- Run PCA, fit the model
- Understand explained variance
 - 7 components explain 84% of variance

Step 4: Created a Weighting System

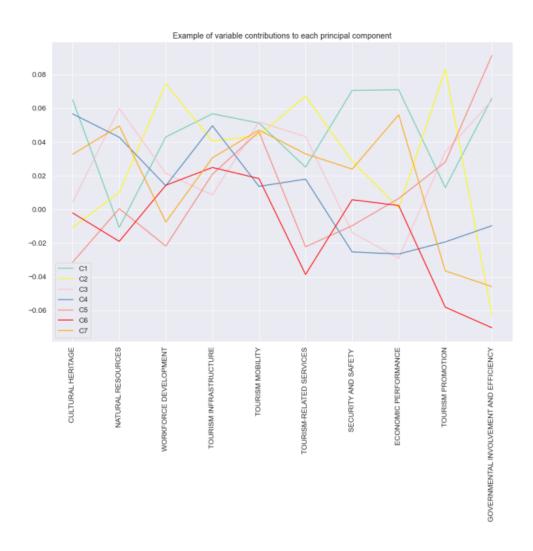
- Weighted average scores for each dimension
- Apply to each region

PCA Outputs





PCA Outputs



The Factor scores are

	PC1	PC2	PC3	PC4	PC5	PC6	PC7
0	-3.353498	1.608181	-1.582183	-0.237261	-3.449640	4.862151	0.772824
1	-2.164654	1.660241	-5.227525	-1.162747	2.753981	4.826127	2.701062
2	-0.727422	3.703057	-3.630520	-0.381449	3.291641	-4.412543	2.910755
3	-3.479076	0.821718	-4.731121	-1.918471	1.215268	-1.226846	0.481672
4	-0.830247	-3.134555	-2.097779	3.468263	1.943877	-0.477330	-3.890678
5	4.588837	-1.055439	-0.086863	10.589977	-1.359019	-0.558769	1.995606
6	21.826574	4.335464	0.555220	-2.699925	-1.391621	0.903598	-0.918454
7	-1.280227	-4.059490	-1.926913	0.722814	-3.125349	0.505362	-3.254364
8	-1.093260	-5.499579	-0.538222	-1.896991	-2.065633	-0.431173	-0.772332
9	3.139942	-3.838975	-0.460303	-2.765644	2.092178	-3.496457	-1.312946
10	-0.565803	-6.063523	4.890623	-2.249734	-2.930731	-0.981432	5.700374
11	-2.827197	-2.137913	1.260431	-2.341001	0.224917	0.360441	-1.389120
12	-0.385161	-0.194387	7.225696	1.156990	7.286542	2.600561	-0.380118
13	-6.999638	4.791132	3.947399	-1.193484	-1.698133	0.113016	-2.335758
14	-5.849170	9.064066	2.402060	0.908662	-2.788278	-2.586707	-0.308524

Final Scoring Data

	Ranking 1: Cultural & Heritage Events	Ranking 2: Natural Resources & Sustainability	Ranking 3: Human Resources & Tourism-Related Workforce Development	Ranking 4: Tourism Infrastructure	Ranking 5: Tourism Mobility & Transportation Infrastructure	Ranking 6: Tourism-Related Services	Ranking 7: Security & Safety	Ranking 8: Economic Performance	Ranking 9: Tourism Promotion	Ranking 10: Government Involvement & Efficiency	Overall Ranking
Arica y Parinacota	-0.35204	0.012614	-0.200605	-0.13394	0.017473	-0.112601	-0.171233	-0.108058	-0.062982	-0.138605	-1.24998
Tarapacá	-0.151878	-0.064461	-0.014831	-0.050027	-0.111674	-0.14103	0.023122	0.047245	-0.015176	-0.149593	-0.6283
Antofagasta	0.057032	-0.194991	-0.038854	-0.000971	-0.006765	0.133605	-0.074815	0.085753	0.043753	0.039147	0.042893
Atacama	-0.340943	-0.335391	-0.152789	-0.18425	-0.352432	-0.08908	-0.261799	-0.117217	-0.01037	-0.124519	-1.96879
Coquimbo	-0.27478	0.115361	-0.103491	0.052269	-0.186785	-0.184503	-0.132779	-0.157317	0.064088	-0.017804	-0.82574
Valparaíso	0.927056	0.495811	0.22859	0.39537	0.363045	0.204619	0.114596	0.002128	-0.008493	0.054576	2.777297
Metropolitana	2.068241	0.351619	1.046783	0.863165	1.020156	1.051391	1.256147	0.897449	0.339075	0.433521	9.327548
O'Higgins	-0.401523	-0.129822	-0.123471	-0.286507	-0.27708	-0.19015	-0.19098	-0.040408	-0.079938	-0.044923	-1.7648
Maule	-0.466935	-0.108885	-0.217622	-0.224087	-0.204509	-0.259407	-0.173796	-0.144189	-0.062501	-0.011888	-1.87382
Biobío	0.227089	-0.277922	0.113008	-0.094783	0.024185	-0.043009	0.243035	-0.0638	-0.032632	0.087295	0.182466
Araucanía	-0.368866	-0.081632	-0.153601	0.009356	-0.046268	-0.096631	-0.030207	-0.173586	-0.005146	0.037159	-0.90942
Los Ríos	-0.338965	-0.09659	-0.230853	-0.090791	-0.290327	-0.153838	-0.204846	-0.141987	-0.065986	-0.045419	-1.6596
Los Lagos	0.139753	0.32429	0.155459	0.228063	0.471484	-0.027883	-0.0799	0.106469	0.039057	0.144593	1.501386
Aysén	-0.483358	-0.009676	-0.197593	-0.363014	-0.400063	-0.145107	-0.13498	-0.066532	-0.046256	-0.17387	-2.02045
Magallanes y Antártica	-0.239883	-0.000325	-0.110129	-0.119854	-0.020441	0.053626	-0.181565	-0.125951	-0.096493	-0.089669	-0.93068