VACATION 2018

A PERSONAL DECISION MODEL

Comparing criteria to determine an optimal alternative for a Caribbean vacation

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BQOM2521 – Decision Making in Complex Environments

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CONTENTS

GOAL

A friend and I are planning a trip to celebrate our final semester of grad school. From preliminary research, we have eliminated numerous options based on previous travel experience (we want to go somewhere neither of us has been), safety (a priority for two single women traveling alone internationally), and clean drinking water (as we've both had traveler's illness before and anyone who's had it knows what a nightmare it can be). We ultimately narrowed down our options to three Caribbean resorts that received exceptional reviews, but are struggling to choose from the three beautiful properties. The goal of this personal decision model is to, from our remaining criteria, choose a preferred alternative for our 5-night Labor Day weekend girls' vacation.

ALTERNATIVES

SLS Baha Mar, Nassau, Bahamas

Built in 2017, SLS is one of the hotel properties located within the Baha Mar complex, a new luxury resort in Nassau, Bahamas.

Aruba Marriott Resort & Stellaris Casino

Built in the late 1990s and currently undergoing renovations, the Aruba Marriott is an atrium-style resort hotel situated on 10 acres of land and located on Palm Beach.

Ocean Club, Turks & Caicos

Ocean Club is a classic resort built in the mid-1990's and is located along Grace Bay Beach in Providenciales, Turks & Caicos. Guests of Ocean Club also have access to its sister property, Ocean Club West, which is approximately one mile away along the beach.

CRITERIA

Affordability

Though my friend and I both work full-time, we must compare affordability. One of us is planning a wedding and the other is saving to buy a home, so being cost-conscious is necessary for this trip. We priced the trips based on a 5-night stay, departing Pittsburgh on Friday, August 31st, and returning on Wednesday, September 5th. Costs include airfare and accommodations.

SLS Baha Mar, Nassau, Bahamas

The total cost for two travelers for the Bahamas trip is approximately $2,341.

Aruba Marriott Resort & Stellaris Casino

The total cost for two travelers for the Aruba trip is approximately $2,443.

Ocean Club, Turks & Caicos

The total cost for two travelers for the Turks & Caicos trip is approximately $2,060.

Luxury

At over $1,000 per person for only 5 nights, the luxury of the resort is important. Though all of the hotels received exceptional ratings on travel websites, the determination of relative luxury is perception-based from travel website guest reviews and photos. These comparisons are made solely on our observations and opinions.

Activities

Most Caribbean resorts offer similar activities such as water sports and island excursions. The activities important to us include the availability of snorkeling, stand-up paddleboarding, a spa, shopping, restaurants, and nightlife, as well as opportunities to explore the country's culture and natural beauty in areas outside of the resort. The comparison of this criterion is also opinion-driven, based on online research and customer reviews.

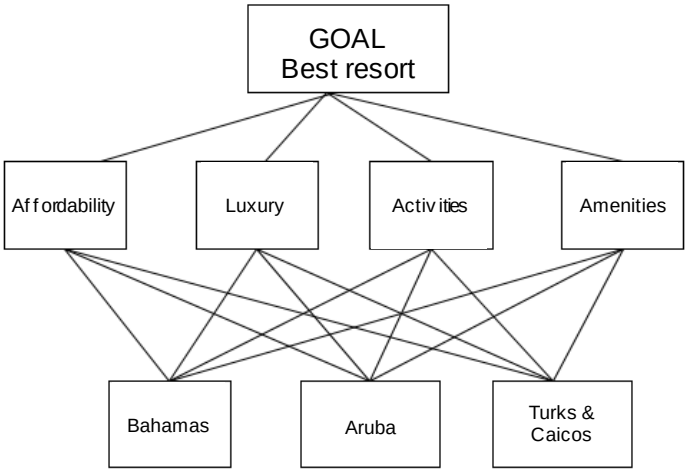
Amenities

Amenities that play a part in our decision include comfortable guest rooms, a fitness center and/or fitness classes, hotel-provided transportation to and from the airport, Wi-Fi access, a step-out balcony in the guest room, and numerous pools and swim-up bars. The comparison of this criterion is also opinion-driven, based on hotel websites and travel website customer reviews.

DECISION MODEL AND PROCESS

Model

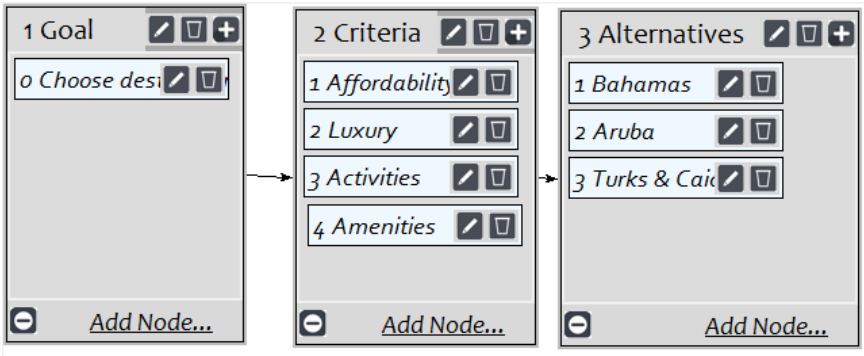
Prior to using the software, I modeled my problem:



SuperDecisions

Clusters

I inserted three clusters, one each for goal, criteria, and alternatives, then listed my specific nodes within each cluster. I connected the nodes among the clusters as shown below.

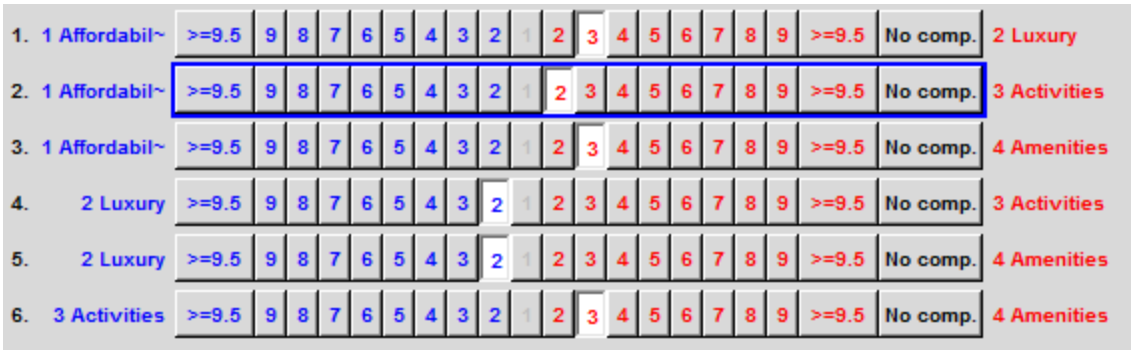


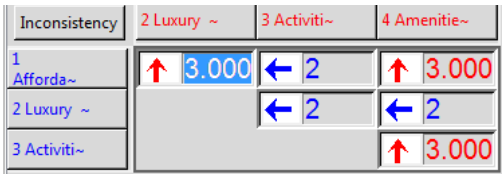
Comparisons

I entered direct values (prices) for the Affordability node:

1 Bahamas	2341
2 Aruba	2443
3 Turks & Caicos	2060

Then I assigned relative importance of each pairwise comparison of my criteria, and checked “completed comparison”.





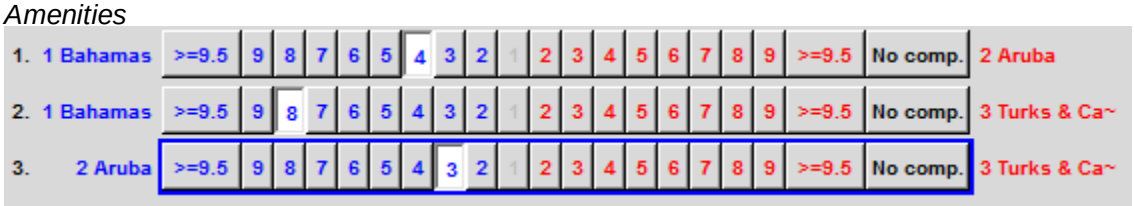
Next, for each pairwise criteria comparison, I assigned comparative relative importance per destination, and checked “completed comparison”.

Affordability

Luxury

Activities

Amenities



Inconsistency Report

Rank	Row	Col	Current Val	Best Val	Old Inconsist.	New Inconsist.	% Improvement
1.	3 Activities	4 Amenities	3.000003	1.255305	0.053607	0.015254	71.54 %
2.	2 Luxury	4 Amenities	2.000000	1.255305	0.053607	0.015254	71.54 %
3.	1 Affordability	3 Activities	2.000000	1.281393	0.053607	0.042335	21.03 %
4.	1 Affordability	2 Luxury	3.000003	5.125572	0.053607	0.042335	21.03 %
5.	2 Luxury	3 Activities	2.000000	3.000003	0.053607	0.045438	15.24 %
6.	1 Affordability	4 Amenities	3.000003	3.192845	0.053607	0.053798	-0.36 %

I ran a Sanity Check to ensure the model was complete, then viewed the results through Synthesize, shown below.

New synthesis for: Main Network: Miller_AssignmentL1b.sdmod

Here are the overall synthesized priorities for the alternatives. You synthesized from the network Main Network: Miller_AssignmentL1b.sdmod

Name	Graphic	Ideals	Normals	Raw
1 Bahamas		1.000000	0.632980	0.316490
2 Aruba		0.354657	0.224491	0.112245
3 Turks & Caicos		0.225171	0.142529	0.071264

Okay | Copy Values

Priorities output:

Main Network: Miller_AssignmentL1b.sdmod: Priorities

Here are the priorities.

Icon	Name	Normalized by Cluster	Limiting
No Icon	0 Choose destination	0.00000	0.000000
No Icon	1 Affordability	0.10381	0.051903
No Icon	2 Luxury	0.40905	0.204526
No Icon	3 Activities	0.16526	0.082630
No Icon	4 Amenities	0.32188	0.160942
No Icon	1 Bahamas	0.63298	0.316490
No Icon	2 Aruba	0.22449	0.112245
No Icon	3 Turks & Caicos	0.14253	0.071264

Okay | Copy Values

RESULTS AND ANALYSIS

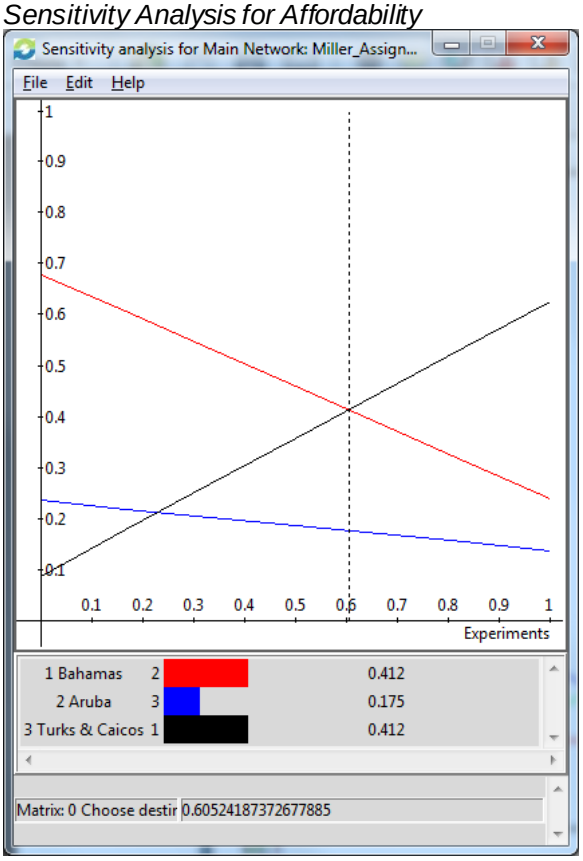
Discussion of Results

Name	Graphic	Ideals	Normals	Raw
1 Bahamas		1.000000	0.632980	0.316490
2 Aruba		0.354657	0.224491	0.112245
3 Turks & Caicos		0.225171	0.142529	0.071264

The preferred alternative based on the criteria and pairwise comparisons entered into the model is the Bahamas trip. This matches what I initially believed the outcome would be because the SLS Baha Mar resort in Nassau had the luxury, activities, and amenities we were looking for, and though it wasn't the most affordable option, the prices of the three alternatives were not different enough to have much of an impact on price importance. We were also most excited about particular criteria items available at the SLS property (such as airport transportation, fitness classes, snorkeling with sharks and turtles), which certainly influenced our importance ratings. This resort property is new, beautiful, and due to its size, is able to offer everything we want at a (relatively) reasonable cost.

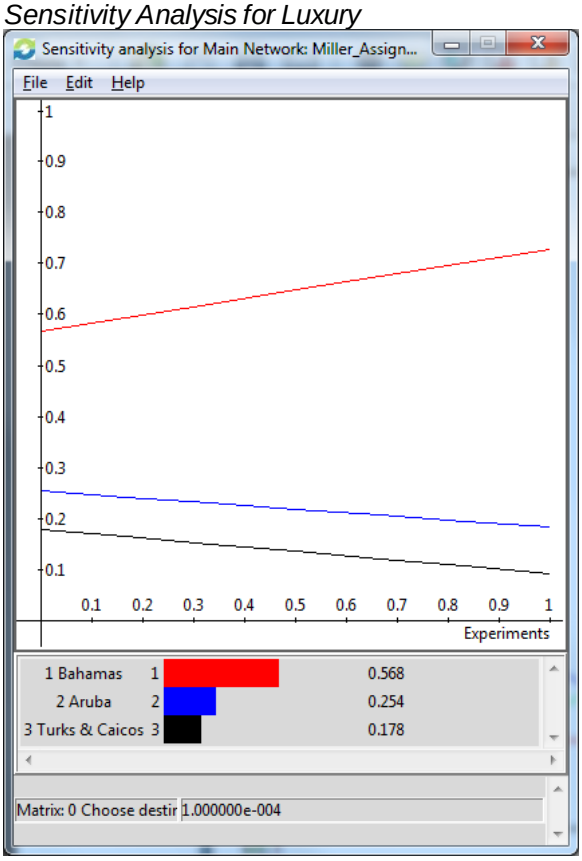
Sensitivity Analyses

Sensitivity Analysis for Affordability



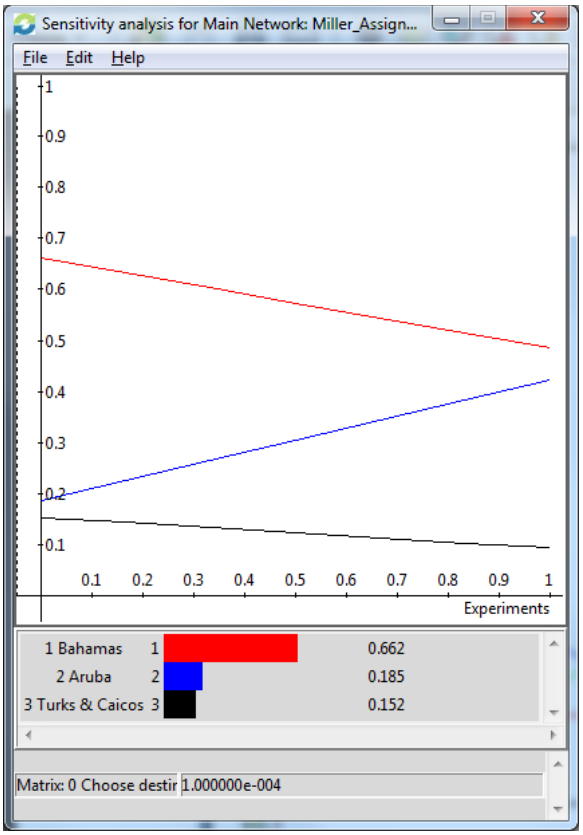
Once the priority of affordability rises to over approximately 61%, we should choose Turks & Caicos over Bahamas.

Sensitivity Analysis for Luxury

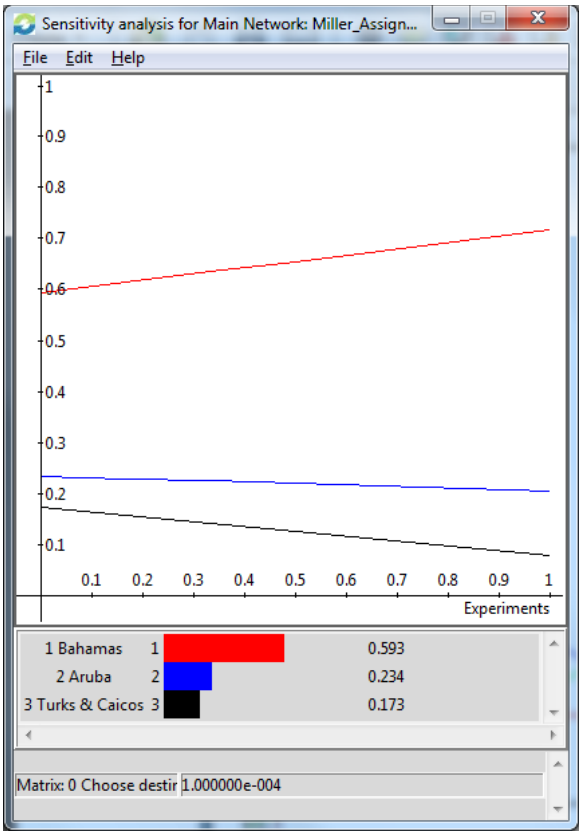


We should always choose Bahamas since it is more luxurious than the resorts in both Aruba and Turks & Caicos.

Sensitivity Analysis for ActivitiesSensitivity Analysis for Amenities



We should always choose Bahamas since it rates higher in activities than the resorts in both Aruba and Turks & Caicos.



We should always choose Bahamas since it rates higher in amenities than the resorts in both Aruba and Turks & Caicos.

Conclusion

This analysis confirmed our initial thoughts regarding our vacation destination. After hours of discussion and research, my friend and I booked our trip to SLS Baha Mar in Nassau, Bahamas for Labor Day weekend!