An Analysis of College-Student Travel-Destinations and Its Marketing Implications

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Abstract

This study focuses on college-student travel-patterns, both domestically and internationally. The findings show that there are significant differences in travel patterns, based on three independent variables studied: a student's gender, a student's class year, and a student's home origin. The study uses the student body at a major college in the Northeast of the United States, and provides a detailed analysis of the students' previous travel patterns, and how they differ by the aforementioned independent variables. Domestic travel and international travel are separately analyzed. Marketing implications are discussed. The study also offers a possible template for studying these relationships at additional colleges and universities, and at other venues, both within the U.S. and outside of the U.S.

Keywords: college students, travel patterns, domestic travel, international travel

Introduction

The focus of this paper is the effect of various factors on where a student has traveled at least once during his/her lifetime; later in the paper, we define the word, "visit." When thinking about a student's travel patterns, there are many factors that could affect where a student has travelled, either domestically or internationally. Some of these factors include their family's income, number of siblings, or a parent's job. Rather than looking at a student's travel patterns based on his/her *financial ability* to travel, we instead focus on demographic factors.

One factor we study is one's home state within the United States, or one's home country for international students. Students who have been raised in different regions of the United States may well have different domestic (i.e., within the United States) travel patterns. One might expect, for example, that students who grew up on the East Coast of the United States will have traveled to more states, due to the relatively smaller size of neighboring states and the corresponding proximity of multiple state borders, compared with students who grew up in the Midwest or West parts of the United States, with the latter's corresponding lower proximity of state borders. We separately study domestic travel and international travel; indeed, we would not be surprised to find different international travel patterns for students whose "home state" differed. For domestic students, we define home state as the state in which he/she "grew up" [which, of course, can be different from the state in which one was born]; for international students, we define home country as the country in which he/she grew up. We would guess, for example, that, *ceterus parabus*, a student from Texas is more likely to have visited Mexico than a student from Maine; and, we would guess that the student from Maine would be more likely to have visited Canada than his/her counterpart from Texas.

A second factor we study is gender. That is, how does the pattern of domestic and international travel vary between male students and female students? Although some current research has shown that there are minimal gender differences between young tourists' *activities* while on vacation, we would not be surprised if there is a difference in travel *locations* (i.e., destinations) between male and female undergraduate college students.

The third and final factor we study is how the pattern of domestic and international travel varies as a function of class year (i.e., freshman, sophomore, junior, senior). The rationale behind this analysis is to see if there is a significant increase in the number of states and countries visited by students of different classes. A potential reason for a difference, of course, is that seniors have had, on average, three additional years of "life experience."

Literature Review

There are a variety of studies on different aspects of travel; we highlight those that are most relevant to the focus of our study. Ryan, Henley, and Soutar (1998) analyzed gender differences when determining one's choice for a tourism destination. Their study had several statistically significant findings: 1) Women believe more so than men that "families should take holidays away from home;" 2) Women more so than men "usually look for unique native items and for souvenirs to buy that will remind me of the holiday place I visited;" 3) Males were more likely than females to agree that they "like adventure" while on vacation; 4) Women prefer more than men to travel to places of "historical and cultural interest," while men prefer more than women that their destination "has facilities for sports, such as golf or tennis;" 5) Women prefer to a greater extent than men that vacation destinations "have shopping facilities," as well as that "vacations give opportunity for rest and relaxation." While the study considered differences in desired characteristics by gender, *it did not examine differences in locations* (e.g., Italy vs. Mexico) by gender; the latter is investigated in this study.

Field (1999) conducted a study to analyze the difference in travel patterns between Clemson University (in South Carolina) students who were raised internationally or domestically (i.e., within the US). The objective of this study was to identify any differences that could be leveraged for more effective targeted marketing and advertising by local travel agencies. Data were collected via a questionnaire that requested demographic information, as well as information about a student's travel patterns. The questionnaire was distributed to 827 international students, and about 2,400 domestic students. Descriptive statistics and ANOVAs were used to analyze the data collected. Field found that international students were far less likely than domestic students to travel away from South Carolina. The findings with respect to targeting showed that the market segment of college students was, in fact, not profitable for travel agencies, since both international and domestic students reported that they would very rarely consider using a travel agency to book their travel plans. Now, 12 years later, in an era where many consumers book flights online, this is surely even more so the case in 2012. Field also *did not focus on the specific locations to which students travelled, which, again, this study does*.

Carr (1999, 2001) focused on, among other things, gender differences between young tourists' behavior. The 1999 study focused specifically on the gender differences of young adults' activities while they were on vacation in a beach-oriented resort in Southwest England. Data for this study were collected using a detailed questionnaire with a face-to-face application, and later, in-depth face-to-face interviews. Carr asked questions that got to the core of why these young adults were on vacation, and what activates each most liked to take part in during leisure time away from home. The study concluded that there were minimal differences between the leisure activities of male and female young-tourists. This study also did not provide any analysis of gender differences with respect to *choosing a specific location* for his/her vacation.

Carr (2001) also studied differences in vacation activities between domestic and international young tourists, where, in this study, "domestic," given that Carr is based in England, meant from *England*, not from the United States. As noted earlier, "domestic" in our study refers to the United States. He found some differences in behavior, but, again, they had nothing to do with choice of *location*.

Gallarza and Saura (2004) performed a study which focused on the perceived value that a college student receives after traveling on vacation. The measurement instrument, a questionnaire, asked the subjects about their feelings on the aesthetics, perceived cost, perceived terrorism risk, and perceived value of their vacation destination. The results confirmed the existence of a quality–value–satisfaction loyalty-chain and illustrated the complexity of value dimensions that have been shown to be highly sensitive to the tourism experience. Again, the issue of *specific location choice* was not directly addressed.

Indeed, as noted, our paper focuses directly on the specific locations visited, which fills a gap in the literature.

Methodology

A questionnaire was pre-tested, modified and finalized based on the pre-test, and then administered to all undergraduate students living on the campus of a large, major college in Massachusetts, a state located in the Northeast United States, and where there are many prominent colleges and universities. The measurement instrument was an online survey using Qualtrics, an online questionnaire-program/tool. The questionnaire had four main sections.

The first section focused on the student's "home state," for students from the United States or "home country/nation," for students from other countries or United States territories (e.g., Guam, Puerto Rico). Washington, D.C. was considered as a "51st state." The questionnaire defines one's home location as the location that the subject most considers his/her home – essentially, where he/she "grew up." This is, of course, not necessarily the same state or country in which the student was born.

The second section focused on which destinations within the United States each student has visited at least once. We defined "a visit" explicitly in the questionnaire as (1) placing your feet on the ground in the state/country, or (2) being on the ground in an airplane at the airport, or (3) passing through the state/country in a ground vehicle (i.e., car, bus, or train). We believed that a very precise and prominently-placed definition of a "visit" was important, as the lack of a precise definition might engender possible confusion, and correspondingly, reduce the response rate; it is well known that if a potential responder feels confusion (regardless of whose fault it is), he/she is much more likely to abandon the questionnaire and not respond (Burns and Bush, 2010).

This (second) section consisted of six questions, one for each of the six regions of the United States that we formed: the Northeast, the Mid Atlantic, the South, the Midwest, the Southwest, and the West; later, in the analysis section, we note which states were listed in each region. For each of the questions, the participant is asked to carefully look at a map of the states comprising the region (the map provided directly on the questionnaire), and at each of the boxes listed below the map (i.e., one for each state in the region, including, again, Washington D.C.) to check off every state that the participant has visited in that region. We believe that, for several reasons, this approach (i.e., breaking the overall U.S. into mutually exclusive and collectively exhaustive regions [i.e., sets of states]) is superior to one that simply presents a map of the entire United States and lists all 51 states underneath for the student to indicate whether or not he/she has visited each state.

The third section focused on the destinations around the world that each student has visited. This section contained eight questions, one for each of the eight regions of the World: North America, South America, Europe, Africa, the Middle East, Asia, Oceania, and Antarctica; (of course, while everyone had, by definition, visited the U.S., it was not the case that everyone had visited all other countries in North America). For each of the questions, the participant is asked to carefully look at a map of the countries in the region (again, the map was provided directly on the questionnaire), and at each of the boxes listed below (i.e., each country) to check off every country that the participant has visited in that region.

The fourth section asked demographic questions. These questions included school year (i.e., freshman, sophomore, junior, senior) and gender. The questionnaire ended by giving the (otherwise anonymous) participant the option of typing in his/her email address, in order to be entered into a raffle to win one of five twenty-dollar gift certificates to Amazon.com. This was, of course, an incentive to complete the survey; this gift-certificate option was clearly communicated to the possible participant in the email each received describing the survey and including the link to the questionnaire.

We received about 300 responses from the 4000 or so email addresses sent the survey. In an attempt to increase the number of responses, a link to the survey was posted on Facebook, and asked undergraduate student *non-campus-residents* to please take the survey. This increased the total number of respondents to 409. Since the questionnaire was anonymous (if the student chose to keep it that way), and the basic subject was not "controversial," and the partial results coming in were consistent over time, we believe that there was no indication of a non-response (or "self-selection") bias in the set of responses. In 2010, the college from which the sample was selected had about 9000 undergraduates, with 52% female, 48% male, from 49 states in the U.S. and 43 countries, as well as a few U.S. territories.

Analysis and Results

We performed six basic analyses – one for each of the three factors (Gender, Class Year, Home State/Country), separately for domestic travel and international travel. For each of the analyses, we used the chi-square test-of-independence to test the hypotheses. In each case, the null hypothesis is that there is no relationship between the level of the factor being tested (e.g., gender - Male, Female) and locations visited. The alternate hypothesis was that, indeed, there is a relationship between the level of the factor being tested and locations visited. If the null hypothesis is rejected, we report the direction of the relationship. We used a significance level of .05 for all tests.

Differences by Gender

Our sample consisted of 409 respondents, 253 (62%) females and 156 (38%) males,

Domestic Travel

We analyzed each of the 51 states individually. For each state, a 2x2 table was formed, where the two rows were: "Visited the state (Yes)" and "Did not visit the state (No)," and the two columns were Male and Female. From these analyses, we determined that the null hypothesis was rejected (i.e., the results were significant) for 5 of the 51 states. (Note: we report results to be significant only if all expected cell frequencies exceed 5; this is the traditional, albeit conservative, minimum expected cell frequency recommended for appropriate use of the chi-square test-of-independence (e.g., Sharpe, De Veaux and Velleman, 2012).

We are aware that it is "easy" to find some "false" significant results (i.e., type 1 errors) when conducting so many tests – in this case, 51. However, if the null hypothesis were true for all 51 tests, the expected number of type 1 errors would be .05(51) = 2.55 and the probability of at least 5 type 1 errors (with this mean of 2.55) is about only 1 chance in 9. Furthermore, of the five states for which we had significant results, 4 were from the 12 states of the South region of the U.S., and the other borders the South Region. Thus, we believe that the results were not simply a result of having a large number of tests. These 4 states are Georgia, Mississippi, Virginia, and West Virginia. For Mississippi, Virginia, and West Virginia, more female students (and, correspondingly, fewer male students), than what would be expected if gender and visit status were independent, have visited these three states. For Georgia, more male students (and correspondingly, fewer female students) than what would be expected if gender and visit status were independent, have visited.

We cannot identify obvious reasons for these significant findings *for these particular states*, although we believe that the predominant result that, relatively speaking, more females choose to visit various southern states (and the bordering state discussed below) is likely valid. Indeed, the 2000 US Census indicates that females outnumber males in these States (Smith and Spraggins, 2011). So, perhaps there is something inherent in these states that attracts females more so than males. A direction for future research might be to ask *why* a student visited a particular state. This would combine *location* choices with the focus of most previous studies: *activity/behavioral choices*. (However, to ask potential responders who have visited many states – as many as 35 – what their reason was for visiting each state would make the questionnaire extremely burdensome, and would likely reduce the response rate dramatically.) Kansas (in the Midwest region), which, as noted, borders on the South region, was the state having the other statistically significant result. Also as noted, similar to the pattern of 3 of the 4 southern states mentioned above, more female students (and, correspondingly, fewer male students), than what would be expected if gender and visit status were independent, have visited Kansas. Like the southern states, the 2000 US Census indicates that females outnumber males in the state of Kansas (Smith and Spraggins, 2011)

International Travel

We basically followed the same steps as above for all 195 countries. In most cases, the frequency of visits for both males and females was so sparse that expected cell frequencies were too small to achieve meaningful results (e.g., only 4 respondents in the entire sample of 409 had visited Kenya, only one had visited Cameroon, and none had visited Algeria, Chad, Libya, and many others). In these cases with sparse cell frequencies, we did not consider the results further. In fact, there were only 36 analyses (i.e., countries) for which all expected cell frequencies exceeded 5. As an example, for the continent of Africa, with 53 countries, only 3 countries qualified – Egypt, Morocco, and South Africa. (Actually, we "stretched" the required minimum for appropriate analysis down from 5 to 4.96 as an expected cell frequency; this enabled us to view an analysis as meaningful for any country that had at least 13 visits [males and females combined]).

We found 4 significant results. Again, we examined the issue of having significant results solely due to having "so many" tests. With 36 test results, and no relationship with gender for each one, we would expect .05(36) = 1.80 type 1 errors, and the probability of at least 4 type 1 errors (with this mean of 1.80) is about only 1 chance in 9 (just by coincidence, the same likelihood as in the earlier domestic analysis).

The 4 significant results were for India, Peru, and Belgium, and the "Entire South-American Continent."[1] For Peru, India, and the Entire South-American Continent, more male students (and, correspondingly, fewer female students), than what would be expected if gender and visit status were independent, have visited. Belgium was the only significant result for Europe, the continent most visited outside of North America (which 100% of the students have "automatically" visited as they are enrolled as college students there). More female students (and, correspondingly, fewer males students), than what would be expected if gender and visit status were independent, have visited Belgium.

It can be noted that males outnumber females in Peru and India (Geohive, 2011). One might make a case that Peru - indeed, the entire South-American Continent - and India are areas that offer "more adventure" than routinely available in the U.S. Thus, our finding would be consistent with Ryan, Henley, and Soutar (1998), who found that males, more so than females, agreed that they like adventure when on vacation (and, most traveling by college students is for vacation purposes.)

It is not clear why Belgium, of all the European countries, is the only European significant result. The fact that frequency of travel to Belgium is more proportionally female may be that females perceive Belgium as a location in Europe that has more historical and cultural "cache" and has a more heterogeneous culture than several other, more population-homogeneous, countries. This would be consistent with the previous literature that indicated that females, to a degree proportionally higher than males, prefer travel destinations with superior opportunity for cultural interest (Ryan et al., 1998).

Differences by Class Year

Our sample for class year consisted of 406 respondents, 80 freshmen (20%), 108 sophomores (26%), 49 juniors (12%) and 169 seniors (42%). Three of the 409 respondents did not indicate his/her class year.

Domestic Travel

We again analyzed each of the 51 states individually. Fifty-one 2x4 tables were formed, where the two rows were either "Visited the state (Yes)" and "Did not visit the state (No)," and the four columns were the class years, Freshman, Sophomore, Junior, and Senior. We did not analyze results for 6 states (Alaska, Arkansas, Idaho, North Dakota, Oklahoma, and Oregon) due to the number of visits by all 4 classes being too low in total (so that at least one expected cell frequency below 5 obtained). Out of the remaining 45 states (again, recall that Washington D.C. is being considered a state for this analysis), it was determined that results for 9 states came out statistically significant. Having as many as 9 significant results out of 45 clearly indicates that the significant results were not due simply to having "many tests."

The 9 states were Connecticut, Indiana, Maine, Maryland, New York, New Jersey, Ohio, South Carolina, and Virginia. Other than Indiana and Ohio, each of these states is on the East coast; this clearly belies coincidence. In every case, more Seniors than what would be expected if class year and visit status were independent, have visited these nine states. It may be that these results simply reflect the fact that, by and large, the college students who are older have had more time to travel than younger college students. However, except for Indiana and Ohio (and, there are specific reasons to be noted for these two states), there is no evident reason for this (perhaps obvious) age phenomenon to show up for the *particular states* where significance has resulted, as opposed to other states (although, as noted, every one of the 7 states are on the East coast, which would appear to be specific enough to, again, belie coincidence. It is possible that Seniors were job hunting, and had some tendency to search states that were located in or near the Northeast. In the fall of 2010, "College X's" (the university from which this study's sample is drawn) football team played a football game against Notre Dame, in South Bend, Indiana, and there is a tradition among College X's upper-class undergraduate students to drive rented RVs from Massachusetts to South Bend. In making this drive, most students passed through Ohio.

[1] The actual p-value for the Entire South-American Continent was .0507; for discussion purposes, we decided to include the result as significant.

At the time of this game, only the current Seniors were considered "upperclassmen." Current Juniors and Sophomores were not yet upperclassmen, and current Freshmen were not yet in attendance at College X.

International Travel

We followed similar procedures for all 195 countries. As in the gender analysis, for most countries, the frequency of visits for all classes was so sparse that the minimum expected cell frequency was too small to achieve meaningful results. Indeed, the situation was "worse" than in the gender analysis. Given that the totals were smaller for each class than for each gender (for the obvious reason that there are only 2 genders and the minimum size of gender was 156 [Male], while there are 4 classes and the minimum size is only 49 [Juniors]), many fewer countries qualified for meaningful analysis by satisfying the minimum expected cell frequency of least 5. In fact, none of the countries outside of North America and Europe qualified; (recall, as noted earlier in the methodology section, the international sections were broken down on the questionnaire into 8 sub-sections: North America, South America, Europe, Africa, the Middle East, Asia, Oceania, and Antarctica).

In total, only 18 countries qualified for analysis – 5 in North America 13 in Europe. Of these 18 countries analyzed, 11 had significant results. None of the 5 North American countries analyzed had significant results; all 11 were European countries. These 11 were: Austria, Belgium, Czech Republic, France, Germany, Ireland, Italy, Netherlands, Spain, Switzerland, and Vatican City. The pattern of the differences was similar to that of domestic travel. For all 11 countries, more Seniors than what would be expected if class year and visit status were independent, have visited.

Differences by Region of Home State

In order to analyze the differences in domestic travel patterns by Home State, it became clear that we did not have the sample size to support analysis on a state by state basis. Therefore, we categorized all domestic students into their "Region of Home State." The total number of respondents who indicated that they were from a state in the United States, rather than from another country, was 396. (Thus, there were only 409 – 396 = 13 students responding to the survey who were from a country other than the United States; it was clearly not sensible to analyze the travel patterns of these 13 students.)

Moving somewhat from west to east, the "West" region was defined as Alaska, California, Colorado, Hawaii, Idaho, Montana, Nevada, Oregon, Utah, Washington (state), and Wyoming, and included 26 respondents. The "Southwest" region was defined as Arizona, New Mexico, Oklahoma, and Texas, and included 13 respondents. The "Midwest" region was defined as Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin, and included 55 respondents. The "South" region was defined as Alabama, Arkansas, Georgia, Florida, Kentucky, Louisiana, Mississippi, North Carolina, Tennessee, South Carolina, Virginia, and West Virginia, and included 23 respondents. The "Mid-Atlantic" region was defined as Delaware, Maryland, New Jersey, New York, Pennsylvania, and Washington D.C., and included 130 respondents. The "New England" region was defined as Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont – the 6 states actually comprising New England, and included 149 respondents.

Domestic Travel

As we did for the previous two independent variables (gender and class year), we analyzed each of the 51 states separately. For each state, a 2x6 table was formed, where the two rows were either "Visited the state (Yes)" and "Did not visit the state (No)," and the six columns were the six regions of home state. For these analyses, we made the decision to drop the required minimum expected cell frequency from 5 to 3; while the majority of authors indicate that a minimum cell size of 5 is appropriate for use of the chi-square test-of-independence, several authors suggest that this may be too conservative and that using "3" as this minimum is acceptable as long as fewer than 20% of cells are less than 5 (Cochran, 1954; Durand, 1971). Indeed, even with this reduced minimum required expected cell frequency of 3, only 32 of the 51 states yielded expected cell frequencies above the minimum – had we stayed with a minimum of 5, this value would have been only 23 states. As examples, across all six categories of home-state region, a total of only 23 of the 396 students had ever visited Arkansas, and only 29 had ever visited North Dakota.

The 32 states analyzed were California, Colorado, Hawaii, Nevada, and Utah from the West region; Arizona and Texas from the Southwest region; Illinois, Indiana, Michigan, Minnesota, Ohio, and South Dakota from the Midwest region; Georgia, Florida, North Carolina, Tennessee, South Carolina, Virginia, and West Virginia from the South region; all of the Mid-Atlantic and New England regions.

Out of the 32 states analyzed, virtually all of them yielded statistically significant results. Only Massachusetts, New York, and Washington D.C. were not statistically significant. As noted earlier, Massachusetts is, of course, discounted since all of the students in the survey have "visited" Massachusetts. In fact, below, in discussing our results, whenever we refer to "New England [states]" as a region *visited*, we mean "New England, not counting Massachusetts."

In analyzing visits to each of the six regions, students who responded that a state in a given region was their "home state" had visited all states in that region (with a few exceptions that will be noted), more than what would be expected if home-state region and visit status were independent. This makes obvious sense; (recall that the 19 states not visited too often *by anyone* were not part of the analysis.) Thus, we will refer below only to "exceptions" – results that were not "*almost* automatic." For visits to the New England region, there were no such results to report.

In analyzing visits to the Mid-Atlantic region, it was discovered that more students from the New England region than would be expected if home state and visit status were independent, had visited Delaware and New York. This can perhaps be attributed to these states' relatively close proximity to Massachusetts, where these students are currently attending college.

In analyzing visits to the South region, results followed a similar pattern, but with one exception. It was true for only 11 of the 12 states in the South region that more students who responded that a state in the South region was their "home state" had visited that state, than what would be expected if home state and visit status were independent. The exception was West Virginia, as *fewer students from the South region than what would be expected if home state and visit status were independent*, had visited West Virginia. It was also discovered that more students than what would be expected if home state and visit status were independent, whose "home state" were in the Southwest and Midwest regions had visited the majority of states of the South region (and correspondingly, fewer than expected from the other regions – West, Mid-Atlantic, New England - had visited the majority of states in the South region. For the Midwest region, this can likely be attributed to the close proximity to many of the South states and Midwest states. This "border-sharing" is, in the main, not true for the Southwest states.

In analyzing visits to the Midwest region, it was discovered that fewer students than what would be expected if home state and visit status were independent, whose "home state" were in the New England region, had visited any of the states in the Midwest region. This may be primarily due to the distance between the states of the New England region and the states of the Midwest region.

Analysis of visits to the Southwest region was very clear. For each state, more students who identified as being from the West, Southwest, South, and Midwest regions, than what would be expected if home state and visit status were independent, have visited the Southwest region. This is likely due to the relatively close proximity between the Southwest states, and the states of these four regions. Correspondingly, fewer students who identified as being from the New England and Mid Atlantic regions, than what would be expected if home state and visit status were independent, have visited the Southwest region. Again, this is likely due to the larger distance between the New England and Mid-Atlantic area to the Southwest states.

Similarly, analysis of visits to the West region was also quite clear. For each state, more students who identified as being from the West, Southwest, and Midwest regions, than what would be expected if home state and visit status were independent, have visited the West region. Correspondingly, fewer students who identified as being from the New England and Mid- Atlantic regions, than what would be expected if home state and visit status were independent, have visited the West region. This is again, likely a distance issue. The one region that was an exception was the South region. More students who identified as being from the South region had visited Colorado and Utah than what would be expected if home state and visit status were independent. Clearly, these significant results cannot be attributed to a distance metric.

We now present some results pertaining to the visits of the 396 students in the analysis, some in aggregate, but mostly by home region (Massachusetts always excluded and ties listed alphabetically):

Most Visited States - all students, no distinction of Home Region

1. New York, 385/396 – 97%
2. Florida, 362/396 – 91%
3. Connecticut, 351/396 – 89%

Least Visited States - all students, no distinction of Home Region

1. Arkansas – 23/396 –6%
2. North Dakota - 29/396 – 7%
3. Oklahoma 31/396 – 8%

Most Visited State in each of the Six Regions - all students, no distinction of Home Region

- New England - Connecticut, 351/396 – 89%
- Mid Atlantic – New York, 385/396 – 97%
- South – Florida, 362/396 – 91%
- Midwest – Illinois, 205/396 – 52%
- Southwest – Texas, 152/396 - 38%
- West – California, 265/396 – 70%

Most Visited States – Student Home-Region was New England

1. Rhode Island – 147/149 – 99%
2. New Hampshire – 146/149 – 98%
3. New York – 146/149 – 98%

Least Visited States – Student Home-Region was New England

1. Arkansas – 4/149 – 3%
2. North Dakota – 5/149 – 3%
3. Alaska – 6/149 – 4%

Most Visited States – Student Home-Region was Mid Atlantic

1. New York – 128/130 – 98%
2. Pennsylvania – 126/130 – 97%
3. New Jersey – 125/130 – 96%

Least Visited States – Student Home-Region was Mid Atlantic

1. Iowa – 3/130 – 2%
2. Oklahoma – 3/130 – 2%
4. Nebraska – 4/130 – 3%

Most Visited States – Student Home Region was Midwest

1. Illinois - 54/55 – 98%
2. New York – 52/55 – 95%
3. Florida – 51/55 – 93%

Least Visited States – Student Home Region was Midwest

1. Arkansas – 5/55 – 9%
2. Alaska - 7/55 – 13%
3. Oregon – 7/55 – 13%

Most Visited States – Student Home Region was West

1. California – 26/26 – 100%
2. New York – 25/26 – 96%
3. Nevada – 22/26 – 85%

Least Visited States – Student Home Region was West

1. Arkansas – 1/26 – 4%
2. Kentucky – 1/26 – 4%
3. Mississippi – 1/26 – 4%

Most Visited States – Student Home Region was Southwest

1. California – 13/13 – 100%
2. Florida – 13/13 – 100%
3. New York – 13/13 – 100%

Least Visited States – Student Home Region was Southwest

1. Iowa – 0/13 – 0%
2. North Dakota – 1/13 – 8%
3. Alaska – 2/13 – 15%

Most Visited States – Student Home Region was South

1. Florida – 22/23 – 96%
2. New York – 21/23 – 91%
3. North Carolina – 21/23 – 91%

Least Visited States – Student Home Region was South

1. North Dakota – 0/23 – 0%
2. Arkansas – 1/23 – 4%
3. Idaho – 1/23 – 4%

International Travel

Out of the 396 students who were from one of the six regions of the U.S., 373 answered "Yes" to having visited at least one country outside the United States. These 373 students included 24 from the West, 13 from the Southwest, 22 from the South, 139 from New England, 122 from the Mid-Atlantic, and 53 from the Midwest.

Given the relatively low frequencies for some of the 6 regions, not many countries qualified for analysis, even using "3" as the required minimum cell frequency. However, there were 9 countries that did qualify: Bahamas, Canada, France, Germany, Italy, Mexico, Spain, United Kingdom, and Vatican City. The results were statistically significant for 5 of these 9 countries: Mexico and four countries in Europe: Germany, Italy, United Kingdom, and Vatican City.

With respect to Mexico, more students who identified as being from the West, Southwest, South, and Midwest regions, than what would be expected if home state and visit status were independent, have visited. Correspondingly, fewer students who identified as being from the New England and Mid Atlantic regions, than what would be expected if home state and visit status were independent, have visited Mexico. These results are very likely yet another manifestation of the distance effect.

For all four European countries, the pattern of differences is the same. Fewer students who identified as being from the West and from the New England regions, than what would be expected if home state and visit status were independent, had visited each of the four countries. More students who identified as being from the Midwest and Southwest regions, than what would be expected if home state and visit status were independent, have visited each of the four countries. For the other two regions (South and Mid-Atlantic), observed frequencies were just about identical to the expected frequencies. It may not be surprising that the pattern is the same for the four countries. After all, everyone who visits Vatican City has also visited Italy; also, many flights to Italy make a stop at Heathrow Airport in the United Kingdom; in addition, Germany borders on Italy and many tours may visit both countries. However, this consistency of direction does not explain why, as described above, students from some regions visit the four countries in disproportionately high numbers and students from other regions visit the four countries in disproportionately low numbers. Indeed, whatever the underlying reasons for this are, it is clearly *not a distance effect*.

Summary and Marketing Implications

There are several marketing implications to this study. In terms of gender, it would appear that U.S. states in the South, except Georgia, should aim their college-student promotions more toward females. Also, more developed countries might also promote more to female college students, while less-developed countries should aim college-student promotion more toward males.

States on the East coast are states that get visited significantly more by seniors than by younger college students, at least for students in colleges/universities in the New England area. There is no reason to believe that there would be any differences between the college we studied and other colleges/universities in the New England area. The same phenomenon occurred for 11 European countries. Home state makes a gigantic difference in college-student travel patterns. Most of the differences can be explained by the distance metric; it is natural that college students, and, in fact that most groups, will have visited locations that are nearer compared to locations farther away.

Thus, the notion of distance should be explicitly considered when formulating marketing strategies, whether through pricing-decisions or other promotional aspects. Of course, there are exceptions to the distance metric being the dominant consideration by college students location choices; certain countries are visited significantly more by college students of certain home regions than by college students of other home regions, and distance measures are unmistakably not the criterion being used. This is clearly illustrated by noting that relatively fewer New England home-region college students visit several European countries, even though New England is the part of the United States that is nearest to these European countries (i.e., Germany, Italy, Vatican City, and Spain.) It could well be that the New England states are, to an extent, considered more similar to European countries (in terms of the age of cities, the architecture, general "quaintness," etc.) than other regions of the U.S., and thus, Europe is not considered as "different" from home for the New Englanders as it is for students of other home regions.

The data reveal which states are visited the most and least by college students of the different regions of the U.S. This information, in itself, provides the promotional-strategy department of various states with useful data for planning optimal target locations for allocating their promotional budget. For example, New York is in the top 3 in frequency of visits for every home region, and thus, New York should likely adopt a national promotional strategy. On the other hand, Florida is in the top 3 for the home regions of South, Midwest, and Southwest, but not the 3 other regions; perhaps Florida should allocate more of its college-student promotional budget toward the three regions in which it is apparently more popular.

There are three different arenas in which travel patterns may have marketing implications. One is the *consumer*, another is the *company or state doing the marketing*, and a third is the *workforce* of marketing departments (if not other departments). On the consumer side, the increased mobility of students (as well as the general population) changes the set of products and brands that consumers are exposed to – and we know how important awareness is to purchase, as well as increasing the international perspective of the consumers. Certainly, this has implications for national and international brands. In addition, the international perspective

There is the obvious implications for states and countries, many of whom have increased their budget for attracting tourists (e.g., Rough, 2011) – whether college students or other tourists. Travel patterns and preferences are core concepts for states to identify and target profitable customer segments. The gender differences that were found (which might apply to only college students, or might apply also to other populations) clearly have segmentation implications in terms of promotional strategy. Also, a variety of tourist attractions within these states could also benefit from the segmentation analyses implied by our findings.

The third group potentially affected by the travel patterns is the workforce in marketing and other departments within a company. Their experience and perspectives will clearly have changed, and it is not unreasonable to assume that, for example, a brand manager with more travel experience to selected states and countries will better be able to form a brand strategy when promoting and pricing products in these countries. Also, as "everything" becomes more global, and more and more American companies are opening branches in different states and overseas, the ability of workers to staff offices in different locations is able to be accomplished more effectively if travel patterns of these workers are taken into account.

Limitations and Direction for Future Research

The primary limitation of this study is that it was completed only on students from one institution. However, as noted earlier, these students are anything but "all from the same place," and, indeed, hail from 48 of 50 states, and Washington D.C. (which was treated as a 51st "state" in this study) in the United States, and 43 other countries. Still, the obvious direction for further research is to extend the study to a broader cross-section of students or other population of interest. This may provide a more diverse sample of students and may yield results that will have more potential external validity if results are to be extrapolated to larger populations of students. A larger sample size is always desirable from a statistical perspective, although we believe that our sample size of about 400 is sufficient to be confident about our results.

In any study, there are choices that need to be made about which independent variables to study; we acknowledge that there may be several other variables worth studying. These may include additional demographic variables (e.g., race/ethnicity and [in this study, purposely ignored] financial variables), and perhaps such variables as major area of study, grade-point average, and others.

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