



# The Impact of Transportation Infrastructure on Tourism in Cusco and Jauja

Bhavesh Viswanath, Prof. William Gartner (Faculty Mentor)  
 Undergraduate Research Opportunity Project  
 University of Minnesota  
 Spring 2016

## ABSTRACT

This project will use the grounded theory research methodology as proposed by sociologists, Barney Glaser and Anselm Strauss to explore the impact of transportation infrastructure on tourism development and tourist satisfaction in the Peruvian cities of Jauja and Cusco. Cusco serves as an example of a well-established tourist location whereas Jauja is in the early stages of tourism development. Jauja is using Cusco as a model to attract foreign tourists to the central part of Peru. This paper explores whether Cusco is a worthy model for Jauja and other developing tourist cities as well. It was found that transportation infrastructure plays a key role in satisfying tourists, especially in terms of road and air safety. The findings suggest that though Cusco has improvements that can be made like reorganizing city traffic and adding lights to highways, tourists were generally satisfied with Cusco's transportation infrastructure. This implies that Cusco has the potential to serve as a model for Jauja and developing tourist cities akin to it.

## BACKGROUND

Today, Peru has earned a name for its landscape, culture, and history, which have made it a tourist hotspot. But, not so long ago, Peru was only an iconic destination for backpackers due to the country's unforgiving altitude and scenic hiking trails. How have tourist arrivals in Peru gone up from 479,000 in 1995 to 3,164,000 in 2013 ("World Development...")?

Jauja offers a range of tourist attractions. Jauja was the first capital of post-colonized Peru. Francisco Pizarro, the Spanish colonizer of Peru himself, chose the city. Not only does Jauja offer rich colonial history, it also showcases Incan and Pre-Incan history with magnificent ruins. The central location of Jauja is also one of the main reasons the Peruvian authorities chose to build an airport in Jauja. Francisco Carle Airport opened less than 4 years ago in Jauja and has benefited the city's economy.

Cusco is already a well-established tourist location due to its proximity to Machu Picchu and other rich historical sites. There are approximately two million visitors to Cusco per year making it Peru's tourist hotspot. That being said, the Peruvian government is trying to emulate the success of Cusco in the town of Jauja in the Junin region of Peru. Jauja, Junin is located in central Peru as seen in the map below.



Jauja

Cusco



For additional information please contact:  
 Bhavesh Viswanath  
 Applied Economics  
 University of Minnesota  
 viswa046@umn.edu

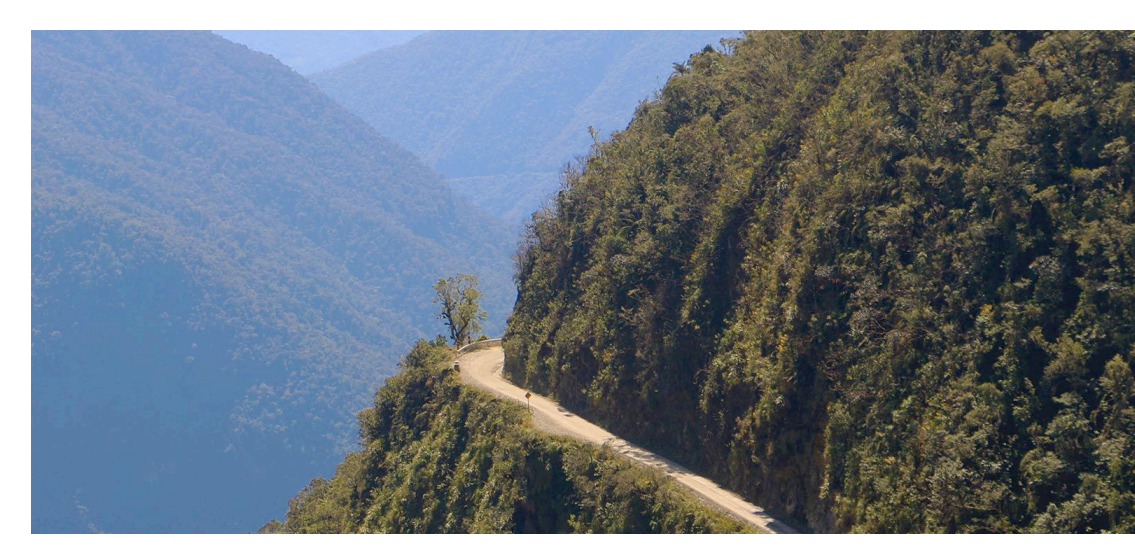
## OBJECTIVES

This paper explores whether Cusco is a satisfactory model for Jauja's transportation infrastructure in attracting and satisfying tourists. Does transportation infrastructure development play a key role in satisfying tourists? What effect do public and private infrastructure investments have on the travel and tourism industry in Peru? Does Cusco serve as a model for other developing tourist cities around the world as well?

### Cusco



### Jauja



## METHODS

For this project, I will be using the World Bank's World Development Indicators to extract reliable data on tourism and infrastructure from 1995 to 2014. To ensure validity, I will also utilize the United Nations and Peruvian government databases. The international tourism data includes: number of arrivals, receipts in current (USD), and receipts as a percentage of GDP. This data then will be analyzed and compared to infrastructure investment trends like "investment in transport, with private participation" ("World Development...").

The data provides no certainty of a causal relationship between infrastructure investment and tourism, given there is a correlation. Consequently, I will be using the "grounded theory" methodology to collect data in Jauja and Cusco.

The grounded theory method uses inductive reasoning from collected data to identify relationships and draw conclusions (Glaser, Page 3). Theoretical sampling will be used to collect data "from places, people, and events that will maximize opportunities to develop concepts" (Corbin, Chapter 7). In order to maximize my opportunities to develop concepts I will be recruiting foreign tourists and businesses involved in tourism. A key advantage of interviewing businesses is that they will provide information on past and future expectations for their business. Theoretical sampling will continue until saturation is reached, meaning there is no development of new information (Glaser, Page 61). This allows for the collection of relatively small sample sizes, an estimated 20-30 interviews per city. Interviews should be informal and conversational. The goal for each interview is to answer 4 broad questions: How do you feel about the transportation infrastructure?; What adjustments were made?; What was the impact of the adjustments?; and Were expectations of the transportation infrastructure met? The data/interviews collected will then be analyzed, where responses will be categorized. Relationships between categories will be defined and finally a core category would be determined.

Once the local data has been collected, it will be assessed and analyzed with data from outside sources to determine what effect public and private infrastructure investment has on the travel and tourism industry, as well as what policies can be applied to other developing tourist locations. Overall, the analysis will provide insight as to what other nations can learn from Peru and whether or not Peru is on the right track.

## RESULTS

### Jauja Interview Analysis:

- ▶ The responses had a clear theme of negativity to the current state of infrastructure.
- ▶ Tourist vans take up almost the entire width of the streets while traffic is coming in both directions
- ▶ Another common issue for tourists was one-lane highways.
- ▶ The majority stated that their expectations were met or exceeded their expectation because expectations were low

Categories:	# of Responses
Perfectly fine	1
Positive but needs improvement	4
Neutral: lots to improve upon	10
Negative: major issues that need to be addressed	1

Categories:	# of Responses
Narrow City Roads	12
Bad Lighting	3
One-lane highways	5
Unpaved/Bumpy rural roads	3
Safety concern	3

Categories:	# of Responses
Widen roads	14
Lights on highways	6
Road signs	2

Categories:	# of Responses
Yes	14
No	2

Categories:	# of Responses
Exceeded Expectations	13
Met Expectations	2
Below Expectations	1

### Cusco Interview Analysis:

- ▶ Responses were varied but no one said there were major issues
- ▶ The pricing of the tickets from Cusco to Aguas Calientes (Machu Picchu) were perceived as overpriced.
- ▶ Interviewees were split between expectations being met and exceeded. When asked what they expected, most said, narrow and bumpy stone roads

Categories:	# of Responses
Perfectly fine	5
Positive but needs improvement	3
Neutral: lots to improve upon	4
Negative: major issues that need to be addressed	0

Categories:	# of Responses
Narrow City Roads	12
Bad Lighting	0
One-lane highways	0
Unpaved/Bumpy rural roads	3
Safety concern	3
Price of train ticket to Macchu Picchu	10

Categories:	# of Responses
Widen roads	12
Road signs	4

Categories:	# of Responses
Too expensive	10
Fair price	2
A bargain	0

Categories:	# of Responses
Exceeded Expectations	6
Met Expectations	7
Below Expectations	1

## CONCLUSIONS

### Common Issues

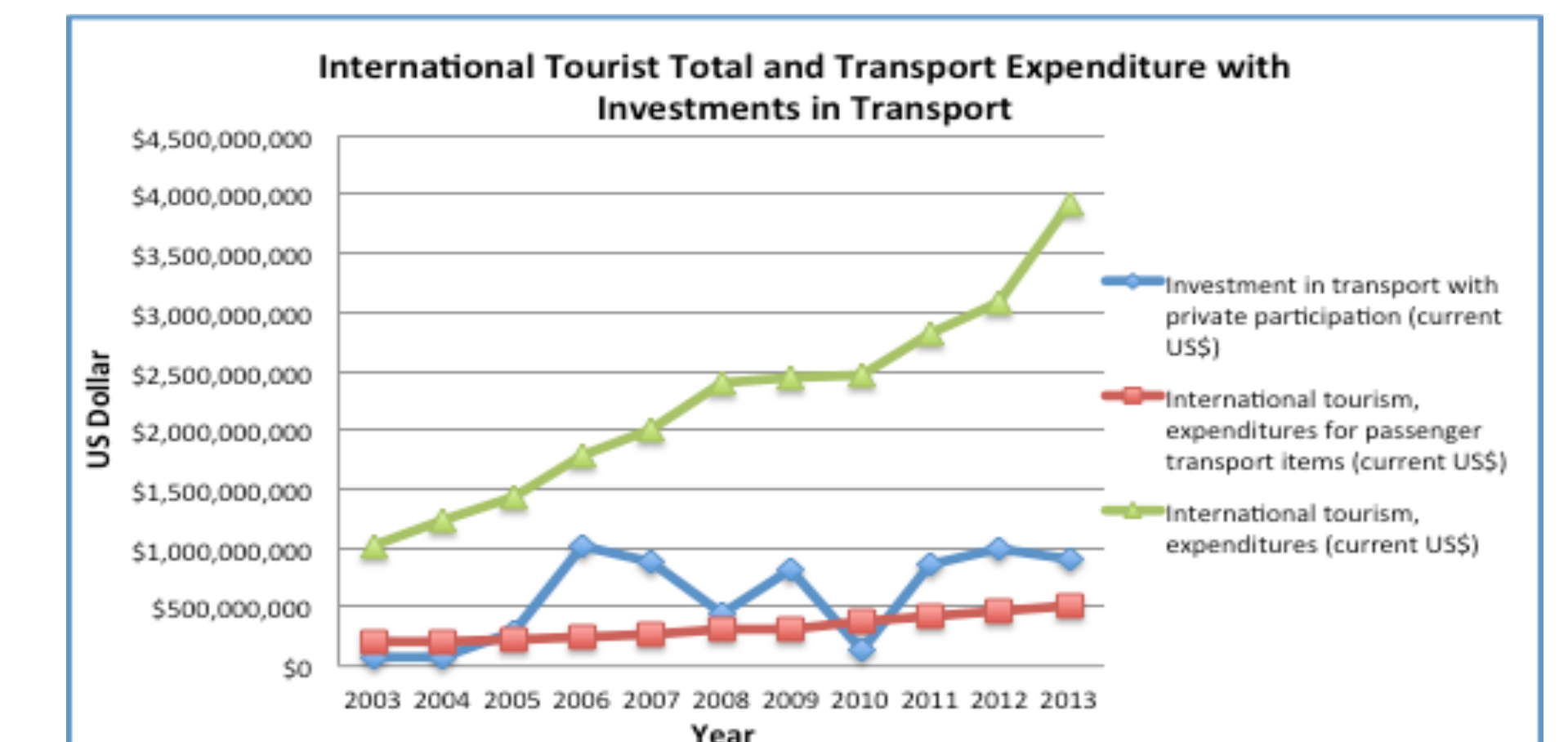
- ▶ The most common issue expressed by tourists in both Jauja and Cusco was the narrow roads
- ▶ The second most common problem in both cities for the tourists interviewed was the one-lane highways, especially the mountainous ones.
- ▶ Many tourists also were concerned about the lack of lighting and railings on the roads, especially in the mountains.

### In Jauja, the improvements to include:

1. Reorganizing the traffic of vehicles in the city limits where the roads cannot be widened.
2. Investing in barriers on mountainous highways on the cliff-side and in lighting for the highways.
3. Paving rural roads that lead to highways and major roads

### Value & Impact on the Economy:

- ▶ Tourists do see value in transportation infrastructure. Though this may seem obvious, accessibility to Jauja because of the new airport has caused a spike in tourism with both local and international tourists.



\*Figure 1: Investment in transport with private participation (current US\$), International tourism, expenditures for passenger transport items (current US\$), International tourism, expenditures (current US\$). Source: WTO World Development Indicators Data

- ▶ The amount tourists spend on transport items has the smallest range and percent change over the 10 years. This may imply that tourists are able to spend more money on other tourist activities since transportation revenue is not increasing at the same rate as total revenue.
- ▶ The rate of return on these investments for the government is unclear, considering only one-airline flies to the airport and only from Lima.
- ▶ According to a Peruvian-American economist from Jauja, the government plans to expanding the airport and eventually having international flights like the Cusco airport.

### Cusco as Model:

Categories:	# of Responses
Yes	13
No	0

- ▶ Jauja is currently an unconventional location for tourists but more and more tourists are looking to experience the unconventional.
- ▶ Tourists are looking to experience both the conventional sites and unconventional sites around the world
- ▶ Tourists in India want to experience the conventional like the Taj Mahal in Agra but few have heard of Khajuraho near Jhansi because it is virtually inaccessible by air or road.
- ▶ Creating access for tourists is important but it is clear that tourist value the quality of transportation infrastructure, especially in terms of safety as well.

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