

BMW MOA Member and BMW Motorcycle Dealers

Who are these BMW riders and where did they get their bikes?



James H. Cutts III, BA, MS

Center for Applied Research and Environmental Systems (CARES),
University of Missouri-Columbia, Columbia, MO 65211



Introduction

The BMW Motorcycle Owners of America (BMW MOA) was chartered in April of 1972 with the stated goal to "promote the camaraderie and friendship of individual members and BMW motorcycle clubs." Since then BMW MOA has grown to be the largest brand specific independent motorcycle club in the world.

The BMW Motorcycle is a bike that engenders fierce brand loyalty. However, there are relatively few BMW Motorcycle dealers in North America. There are a total of 156 BMW Motorcycle dealers nationwide. By way of comparison there are 115 Harley Davidson dealers in New York and California alone. (NY 42, CA 73) So the question is: Where do the BMW MOA members get their motorcycles?

Methods

BMW MOA provided a list of their 39,678 members. In order to ensure privacy, the list included only the BMW MOA user identification number and their ZIP code. The use of the ZIP code provided more granularity than had the users been identified by City and State.

The location of BMW Motorcycle Dealers was extracted from the BMW Motorrad US and BMW Motorrad Canada web sites. The BMW Motorcycle Dealers were located using their ZIP codes to maintain constancy in processing.

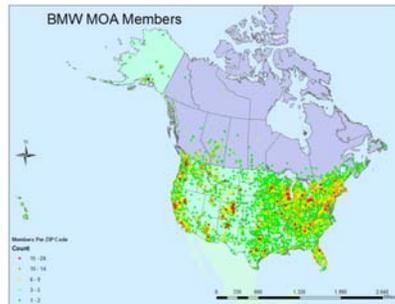
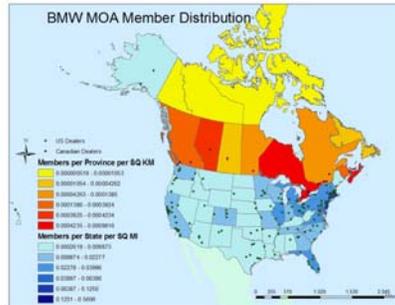
The location of the centroid of each US 5 digit ZIP code area was determined and this data was joined to the BMW MOA membership data, providing locations for the majority of the members living in the US. When the ZIP code information was joined with the Dealer data, the locations of the US dealers were identified. A similar process was used to locate the Canadian BMW MOA members and Dealers using their 3 digit ZIP code.

BMW MOA Membership

The members of the BMW MOA are distributed across the continent. The center of all of the members is located in Randolph county Missouri, just to the west of Higbee. About 117 miles from the headquarters of the BMW MOA in Ballwin, MO.

In the USA, California has the most members, followed by Texas. Ontario holds the most members in Canada. There are only 1875 BMW MOA members in all of Canada. There are more members in either of California or Texas than in all of Canada.

When normalized by area, Washington DC takes the lead as the area with the greatest density of members, due to its small size.



Here the members of the BMW MOA are plotted by ZIP Code. This gives a more granular representation of the membership distribution.



BMW Motorcycle Dealers

There are 156 BMW Motorcycle dealers in North America. There are 138 dealers in the USA, while the remaining 18 are in Canada. There are no BMW Motorcycle dealers in: Delaware, Washington DC, Kansas, Mississippi, North Dakota, West Virginia and Wyoming.



The first approach at determining the BMW Motorcycle dealers markets was done by generating Thiessen polygons for the dealers. The boundaries of Thiessen polygons define the area that is closest to each point relative to all other points.

However, the trouble with this approach is that the resulting markets do not take into account that BMW Motorcycle riders want their dealer to be relatively near. So a 250 mile buffer was plotted around each BMW Motorcycle dealer.



This new approach to determining dealer markets clearly showed that the East and West coasts were well covered by BMW Motorcycle dealers. However, there was a band through the mid west from North Dakota to Texas that had not BMW Motorcycle dealer coverage. In the "lower 48" about a quarter of a million square miles (~8% of the area) does not have a BMW Motorcycle dealer within 250 miles.

State	Total Area (Sq Miles)	Area with no Dealer Coverage (Sq Miles)	Percent without Coverage
Alaska	576,594.00	460,500.50	80%
North Dakota	70,812.00	46,923.89	66%
Montana	147,245.00	66,569.89	45%
Texas	264,436.00	62,010.00	23%
Wyoming	97,803.00	22,637.97	23%
Kansas	82,197.00	17,773.64	22%
Nebraska	77,330.00	11,383.48	15%
Minnesota	84,520.00	8,551.51	10%
South Dakota	77,195.00	5,192.79	7%
Maine	32,162.00	1,978.07	6%
New Mexico	121,757.00	4,195.13	3%
Oklahoma	70,003.00	1,956.34	3%
Michigan	57,899.00	736.04	1%
Nevada	110,670.00	934.92	1%
Idaho	83,344.00	118.90	0%
Utah	84,872.00	3.59	0%

Using these unserved areas it is possible to identify 304 BMW MOA members who live further than 250 miles from the nearest BMW Motorcycle dealer.



Conclusions

- The members of BMW MOA are well distributed throughout the United States.
- The BMW Motorcycle dealers are well represented east of the Mississippi and along the West coast.
- There is an opportunity for a BMW Motorcycle dealer to be located in North Dakota.

Data Sources

BMW Motorrad US web site: <http://www.bmwmotorcycles.com/>
BMW Motorrad Canada web site: <http://www.bmw-motorrad.ca/>
BMW Motorcycle Owners of America web site: <http://www.bmwmoa.org/index.html>

Acknowledgments

This work was conducted with Dr. Li as part of Geographic Information Systems I (4840) during Fall Semester 2008.

I would like to acknowledge the staff of the BMW Motorcycle Owners of America for providing the data on their membership. I would specifically like to thank Ray Zimmerman, Executive Director of the BMW MOA for permission to use their confidential data.

I would like to thank CARES for access to their extensive set of ESRI data sets. Thanks go to Bryan Mayhan for encouragement and data analysis suggestions.

