



## 2012 Motorcycle ‘Lane Splitting’ Intercept Survey California Office of Traffic Safety

### Regular Vehicle Driver Responses Section

#### **SAMPLE FRAME**

The sample frame for the vehicle driver segment of the study is show in Table 1 below. Overall, the 12 counties included in the sample frame were: San Bernardino, Ventura, San Diego, Orange, Riverside and Los Angeles for the Southern California and: San Francisco, Alameda, Contra Costa, San Mateo, Santa Clara and Sacramento for the Northern California region. The number of motorcycle licenses in the 12 counties, based on DMV records counts, included 77.1% of all vehicle drivers’ licenses in the State of California.

Overall, 733 vehicle drivers were intercepted for the study, resulting in a confidence interval of +/- 3.62 at a confidence level of 95%.

**Table 1. Sample frame vehicle drivers and completed intercepts by county**

| <b>AUTO</b>         | <b>Counties</b> | <b># Auto licenses in CA</b> | <b>% Auto license of CA</b> | <b>% Auto license in sample</b> | <b># completes</b> | <b>% of completes</b> |
|---------------------|-----------------|------------------------------|-----------------------------|---------------------------------|--------------------|-----------------------|
| <b>SOUTH</b>        | San Bernardino  | 1,006,183                    | 4.9%                        | 6.4%                            | 42                 | 5.7%                  |
|                     | Ventura         | 489,283                      | 2.4%                        | 3.1%                            | 21                 | 2.9%                  |
|                     | San Diego       | 1,751,350                    | 8.5%                        | 11.1%                           | 83                 | 11.3%                 |
|                     | Orange          | 1,795,537                    | 8.8%                        | 11.4%                           | 85                 | 11.6%                 |
|                     | Riverside       | 1,020,498                    | 5.0%                        | 6.5%                            | 40                 | 5.5%                  |
|                     | LA              | 5,526,082                    | 26.9%                       | 35.0%                           | 239                | 32.6%                 |
| <b>NORTH</b>        | San Francisco   | 355,388                      | 1.7%                        | 2.2%                            | 17                 | 2.3%                  |
|                     | Alameda         | 861,942                      | 4.2%                        | 5.5%                            | 49                 | 6.7%                  |
|                     | Contra Costa    | 618,972                      | 3.0%                        | 3.9%                            | 25                 | 3.4%                  |
|                     | San Mateo       | 527,303                      | 2.6%                        | 3.3%                            | 21                 | 2.9%                  |
|                     | Santa Clara     | 1,093,363                    | 5.3%                        | 6.9%                            | 71                 | 9.7%                  |
|                     | Sacramento      | 761,772                      | 3.7%                        | 4.8%                            | 40                 | 5.5%                  |
| <b>Total sample</b> |                 | <b>15,807,673</b>            |                             |                                 |                    |                       |
| <b>Total CA</b>     |                 | <b>20,507,384</b>            | <b>77.1%</b>                | <b>100.0%</b>                   | <b>733</b>         | <b>100.0%</b>         |

## DEMOGRAPHICS AND DRIVING FREQUENCY

The demographic information collected from vehicle drivers included the respondent age and gender, both listed in Tables 2 and 3 respectively. Overall, more male (63.4%) than female (36.6%) vehicle drivers were intercepted for this study.

**Table 2. Respondent age**

| Respondent Age | Frequency | Percent |
|----------------|-----------|---------|
| 18-24          | 127       | 17.5%   |
| 25-34          | 174       | 24.0%   |
| 35-44          | 183       | 25.2%   |
| 45-54          | 113       | 15.6%   |
| 55-70          | 108       | 14.9%   |
| 70 or older    | 20        | 2.8%    |
| Total          | 733       | 100.0%  |

The median age range for all vehicle drivers in this study is between the ages of 35 to 44 years.

**Table 3. Respondent Gender**

| Respondent Gender | Frequency | Percent |
|-------------------|-----------|---------|
| Male              | 465       | 63.4%   |
| Female            | 268       | 36.6%   |
| Total             | 733       | 100.0%  |

The distribution of age and gender of respondents is shown in Table 4.

**Table 4. Respondent Age by Gender**

| Respondent Age | Male         | Female       | Total         |
|----------------|--------------|--------------|---------------|
| 18-24          | 73<br>57.5%  | 54<br>42.5%  | 127<br>100.0% |
| 25-34          | 116<br>66.7% | 58<br>33.3%  | 174<br>100.0% |
| 35-44          | 115<br>62.8% | 68<br>37.2%  | 183<br>100.0% |
| 45-54          | 74<br>65.5%  | 39<br>34.5%  | 113<br>100.0% |
| 55-70          | 66<br>61.1%  | 42<br>38.9%  | 108<br>100.0% |
| 70 or older    | 14<br>70.0%  | 6<br>30.0%   | 20<br>100.0%  |
| Total          | 458<br>63.2% | 267<br>36.8% | 725<br>100.0% |

The driving frequencies of all respondents is shown in Table 5, indicating that the majority of drivers, 61.6% drive almost every day on a freeway in California. The distribution between male and female drivers is comparable and there are no statistical differences between driving frequency and genders.

**Table 5. Driving frequency on CA freeways (Q1) by gender**

| About how often would you say you drive on a freeway in CA | MALE          | FEMALE        | Total         |
|--|---------------|---------------|---------------|
| 6-7 days a week  | 302<br>65.1%  | 148<br>55.4%  | 450<br>61.6%  |
| 3-5 days a week  | 91<br>19.6%   | 55<br>20.6%   | 146<br>20.0%  |
| 1-2 times a week   | 55<br>11.9%   | 42<br>15.7%   | 97<br>13.3%   |
| Less than once a week                                      | 16<br>3.4%    | 22<br>8.2%    | 38<br>5.2%    |
| Total  | 464<br>100.0% | 267<br>100.0% | 731<br>100.0% |

**OBSERVATIONS AND PERCEPTIONS ON LANE SPLITTING ON FREEWAYS**

The number of observations of motorcyclists’ lane splitting on freeways in an average week is shown in Table 6. The number of MCs observed ranged from “zero” to 210 per week, with a median number of 5 observations; 28 respondents did not know and one refused the answer. Overall, 24 respondents never observed a motorcycle lane splitting on a freeway.

**Table 6. Q2. Lane splitting MCs observed on freeways**

|                   |      |
|-------------------|------|
| Total responses   | 704  |
| Missing responses | 29   |
| Mean              | 9.75 |
| Median            | 5.0  |
| Minimum           | 0    |
| Maximum           | 210  |

The next intercept question asked vehicle drivers if they believe lane splitting for motorcycles on freeways to be legal or not. The frequencies of responses is shown in Table 7, with 52.9% of all vehicle drivers stating “yes”, that lane splitting for motorcycles on freeways is legal, while 36.7% did not think it to be legal, 9.8% of all respondents did not know.

**Table 7. Q3. Do you think it is legal for motorcycles to lane split on freeways?**

| Legal to lane split freeways | Frequency | Percent |
|------------------------------|-----------|---------|
| Yes                          | 388       | 52.9%   |
| No                           | 269       | 36.7%   |
| DK                           | 72        | 9.8%    |
| Skip                         | 4         | 0.5%    |
| Total                        | 733       | 100.0%  |

Table 8 shows the cross-tabulation of frequency of driving on a freeway in California and the perception of lane splitting for motorcycles on freeways begin legal or not. Overall, vehicle drivers who drive more frequently also state that lane splitting for MCs is legal on freeways (weak significance at p=0.27).

**Table 8. Frequency of driving of freeway and perception of legality for motorcycles to lane split on freeways?**

| Frequency of driving and perception of lane splitting | Legal for MCs to lane split freeways |              | Total         |
|---|--------------------------------------|--------------|---------------|
|   | Yes                                  | No           |               |
| 6-7 days a week                                       | 250<br>61.1%                         | 159<br>38.9% | 409<br>100.0% |
| 3-5 days a week                                       | 78<br>59.5%                          | 53<br>40.5%  | 131<br>100.0% |
| 1-2 times a week                                      | 51<br>58.0%                          | 37<br>42.0%  | 88<br>100.0%  |
| Less than once a week                                 | 9<br>32.1%                           | 19<br>67.9%  | 28<br>100.0%  |
| Total   | 388<br>59.1%                         | 268<br>40.9% | 656<br>100.0% |

Table 9 shows the relationship between age of respondent and the perception if it is legal to lane split on freeways. There is (weak) significant difference between age of vehicle driver and the positive answer of lane splitting being legal. About half or less than half of the youngest (18-24) and oldest (70 and older) driver groups stated that lane splitting for motorcycles is legal, while between 60.7% and 65.7% of the other age groups affirmed this.

**Table 9. Perception of legality for motorcycles to lane split on freeways and age**

| Respondent age | Do you think it is legal for motorcycles to lane split on freeways |              | Total         |
|----------------|--|--------------|---------------|
|                | Yes  | No           |               |
| 18-24          | 49<br>44.5%  | 61<br>55.5%  | 110<br>100.0% |
| 25-34          | 101<br>62.0%   | 62<br>38.0%  | 163<br>100.0% |
| 35-44          | 99<br>60.7%  | 64<br>39.3%  | 163<br>100.0% |
| 45-54          | 69<br>65.7%  | 36<br>34.3%  | 105<br>100.0% |
| 55-70          | 62<br>63.3%  | 36<br>36.7%  | 98<br>100.0%  |
| 70 or older    | 6<br>50.0%   | 6<br>50.0%   | 12<br>100.0%  |
| Total          | 386<br>59.3%   | 265<br>40.7% | 651<br>100.0% |

Of all vehicle drivers surveyed, 86.8% stated to have experienced a motorcyclist lane splitting between the vehicle they were in and another vehicle while driving on a freeway, while 13.2% of drivers did not (Table 10).

**Table 10. Q4. Have you ever had a motorcyclist lane splitting between the vehicle you were in and another vehicle?**

| Q4    | Frequency | Percent |
|-------|-----------|---------|
| Yes   | 634       | 86.8%   |
| No    | 96        | 13.2%   |
| Total | 730       | 100.0%  |

A further breakdown between frequency of driving and having experienced a motorcycle lane splitting on freeways is shown in Table 11. The more frequent the driving of freeways, the higher the percentage of having experienced a motorcycle lane splitting and the less often a respondent drove the less frequently they encountered motorcycles lane splitting (significant and  $p=0.00$ ).

**Table 11. Motorcyclist lane splitting between the vehicle you were in and another vehicle and frequency of driving on freeway**

| About how often would you say you drive on a freeway in CA | Have you ever had a motorcyclist lane splitting between the vehicle you |             | Total         |
|--|---|-------------|---------------|
|  | Yes   | No          |               |
| 6-7 days a week  | 407<br>91.1%  | 40<br>8.9%  | 447<br>100.0% |
| 3-5 days a week  | 128<br>87.7%  | 18<br>12.3% | 146<br>100.0% |
| 1-2 times a week   | 77<br>79.4%   | 20<br>20.6% | 97<br>100.0%  |
| Less than once a week                                      | 21<br>55.3%   | 17<br>44.7% | 38<br>100.0%  |
| Total  | 633<br>87.0%  | 95<br>13.0% | 728<br>100.0% |

**CRASHS WITH MOTORCYCLISTS WHILE LANE SPLITTING ON FREEWAYS**

All vehicle drivers who had observed a motorcycle lane splitting on a freeway were asked if they ever hit a MC or if they have ever been hit by a lane splitting MC. Table 12 shows that 5.3% of all respondents stated to have been hit by a motorcycle that was lane splitting on freeway, 94.7% did not.

**Table 12. Q5. Have you ever hit a motorcycle or has a motorcycle hit you while driving on a freeway?**

| Q5                    | Frequency | Percent |
|-----------------------|-----------|---------|
| Yes, MC hit me/my car | 34        | 5.3%    |
| No, never             | 604       | 94.7%   |
| Total                 | 638       | 100.0%  |

Vehicle drivers who were never hit by nor hit a motorcycle that was lane splitting were asked the follow-up question Q5a about their experiences on nearly being hit by a motorcycle.

Overall, 34.6% of these respondents stated that they had been nearly hit or nearly hit a motorcyclist who was lane splitting on a freeway, while 65.4% did not.

**Table 13. Q5a. Did a motorcycle ever nearly hit you?**

| Q5a   | Frequency | Percent |
|-------|-----------|---------|
| Yes   | 196       | 34.6%   |
| No    | 371       | 65.4%   |
| Total | 567       | 100.0%  |

The follow-up question for a total of 34 vehicle drivers on the outcome of the hit or collision for respondents who stated to have been hit by a motorcycle while lane splitting on a freeway allowed for multiple responses, the combined results of which can be found in Table 14.

Overall, 34 answers from 34 unique respondents were included. Of all answers given, 58.8% of drivers stated that the MC “just hit the car mirror”, 26.5% reported their vehicle being scraped or the side being hit. The remaining 14.7% of “other specified” from five respondents included: “MC hit back bumper” or “nothing happened”.

**Table 14. Q6. What damage was caused by that hit or collision?**

| Q6                      | Frequency | Percent |
|-------------------------|-----------|---------|
| Just hit car mirror     | 20        | 58.8%   |
| Scraped/hit side of car | 9         | 26.5%   |
| Other                   | 5         | 14.7%   |
| Total                   | 34        | 100.0%  |

All vehicle drivers were also asked if they ever witnessed a collision involving a lane splitting motorcycle on a freeway, and 19.1% of respondents stated that they did (see Table 15).

**Table 15. Q7. Have you ever witnessed a collision that involved a motorcycle that was lane splitting on a freeway**

| Q7    | Frequency | Percent |
|-------|-----------|---------|
| Yes   | 139       | 19.1%   |
| No    | 587       | 80.9%   |
| Total | 726       | 100.0%  |

**OBSERVATIONS AND PERCEPTIONS ON LANE SPLITTING ON MULTIPLE LANE ROADS**

The number of observations of motorcyclists’ lane splitting on multiple lane roads in an average week is shown in Table 16. The number of lane splitting MCs observed ranged from “zero” to 250 per week, with a median number of three observations and a mean of 5.37 motorcyclists per week; 55 respondents did not know and one refused the answer. A total of 101 respondents (13.8% of all 733 drivers surveyed) had never observed a motorcycle lane splitting on a multiple lane road.

**Table 16. Q8. Lane splitting MCs observed on multiple lane roads**

|                   |      |
|-------------------|------|
| Total responses   | 677  |
| Missing responses | 56   |
| Mean              | 5.37 |
| Median            | 3.0  |
| Minimum           | 0    |
| Maximum           | 250  |

Of all the drives who ever observed a motorcycle lane splitting on a multiple lane road, a total of 69.4% confirmed that they had a motorcycle lane splitting between their and another vehicle.

**Table 17. Q9. Thinking about driving on roads other than freeways have you ever had a motorcyclist lane splitting between the vehicle you were in and another vehicle?**

| Q9    | Frequency | Percent |
|-------|-----------|---------|
| Yes   | 495       | 69.4%   |
| No    | 218       | 30.6%   |
| Total | 733       | 100.0%  |

**CRASHES WITH MOTORCYCLISTS WHILE LANE SPLITTING ON MULTIPLE LANE ROADS**

Respondents who did observe a motorcyclist lane splitting on a multiple lane road were additional asked if they every nearly were hit by a motorcycle, the answers to which can be found in Table 18. Overall, only 1.6% of all drivers (eight answers in total) confirmed that they were every hit by a lane splitting motorcyclist, while 98.4% were never hit.

**Table 18. Q10. Have you ever hit a motorcycle or has a motorcycle hit you that was lane splitting on roads other than freeways**

| Q10                   | Frequency | Percent |
|-----------------------|-----------|---------|
| Yes, MC hit me/my car | 8         | 1.6%    |
| No, never             | 497       | 98.4%   |
| Total                 | 515       | 100.0%  |

Drivers who were never hit by a motorcycle lane splitting on multiple lane roads were asked if they were nearly hit by a motorcycle, and 24.9% of respondents confirmed this, while 75.1% were never even nearly hit by a motorcycle lane splitting (see Table 19).

**Table 19. Q10a. Were you ever nearly hit by a motorcycle?**

| Q10a  | Frequency | Percent |
|-------|-----------|---------|
| Yes   | 118       | 24.9%   |
| No    | 355       | 75.1%   |
| Total | 497       | 100.0%  |

The damage caused to vehicles by lane splitting motorcycles on multiple lane roads is shown in Table 20. A total of 18 answers were collected, 50.0% of which were: “scraped/hit side of car” and 37.5% stated the damage was “just hitting the car mirror”.

**Table 20. Q11. What damage was caused by that hit or collision?**

| Q11                     | Frequency | Percent |
|-------------------------|-----------|---------|
| Just hit my car mirror  | 3         | 37.5%   |
| Scraped/hit side of car | 4         | 50.0%   |
| Other                   | 1         | 12.5%   |
| Total                   | 18        | 100.0   |



All vehicle drivers were asked if they ever witnessed a collision that involved a MC that was lane splitting on a multiple lane road, and 16.0% reported that they did witness this, 84.0% did not (Table 21).

**Table 21. Q12. Have you ever witnessed a collision that involved a motorcycle that was lane splitting on roads other than freeways**

| Q12   | Frequency | Percent |
|-------|-----------|---------|
| Yes   | 115       | 16.0    |
| No    | 602       | 84.0    |
| Total | 717       | 100.0   |

Table 22 shows the comparison of perception of lane splitting being legal on freeways and on multiple lane roads. Overall, a larger proportion of drivers believe that lane splitting on freeways is legal (52.9%) while on multiple lane roads more drivers believe lane splitting to be illegal (45.3%). A large segment of drivers (9.8% and 12.7% respectively) do not know if lane splitting is legal on freeways or other road.

**Table 22. Q3+Q13. Do you think it is legal for motorcycles to lane split on freeways / multiple lane roads?**

| Q3 + Q13 | Legal to lane split freeways | Legal to lane split on multiple lane roads |
|----------|------------------------------|--|
| Yes      | 52.9%                        | 41.5%                                      |
| No       | 36.7%                        | 45.3%                                      |
| DK       | 9.8%                         | 12.7%                                      |
| Skip     | 0.5%                         | 0.5%                                       |
| Total    | 100.0%                       | 100.0%                                     |

The comparison of the respondents' age and the perception of lane splitting on multiple lane roads being legal is shown in Table 23. Similar to the comparison with lane splitting on freeways there is (weak) significant difference between age of vehicle driver and the positive answer of multiple lane roads lane splitting on being legal. About 36.0% of the youngest (18-24) and 25.0% of the oldest (70 and older) driver groups believe that lane splitting on multiple lane roads is legal, while between 46.6% and 53.5% of the other age groups believe lane splitting to be legal ( $p=0.02$ ).

**Table 23. Cross-tabulation of respondent age and perception of legality of lane splitting on multiple lane roads**

| Age         | Do you think it is legal for motorcycles to lane split on roads other than freeways |              | Total         |
|-------------|---|--------------|---------------|
|             | Yes   | No           |               |
| 18-24       | 40<br>36.0%   | 71<br>64.0%  | 111<br>100.0% |
| 25-34       | 86<br>53.1%   | 76<br>46.9%  | 162<br>100.0% |
| 35-44       | 76<br>50.0%   | 76<br>50.0%  | 152<br>100.0% |
| 45-54       | 54<br>53.5%   | 47<br>46.5%  | 101<br>100.0% |
| 55-70       | 41<br>46.6%   | 47<br>53.4%  | 88<br>100.0%  |
| 70 or older | 4<br>25.0%  | 12<br>75.0%  | 16<br>100.0%  |
| Total       | 301<br>47.8%  | 329<br>52.2% | 630<br>100.0% |

**APPROVAL/DISAPPROVAL OF LANE SPLITTING**

Overall, 36.6% of all vehicle drivers “strongly approve” or “somewhat approve” of lane splitting in general, while the majority of 63.4% “somewhat disapprove” or “strongly disapprove” of it (Table 24).

**Table 24. Q14. How would rate your approval or disapproval of lane splitting**

| Q14                 | Frequency | Percent |
|---------------------|-----------|---------|
| Strongly approve    | 60        | 8.3%    |
| Somewhat approve    | 204       | 28.3%   |
| Somewhat disapprove | 188       | 26.1%   |
| Strongly disapprove | 268       | 37.2%   |
| Total               | 733       | 100.0   |

Table 25 shows the frequencies of the created variable “Approval” based on the positive or negative response to questions 14 (above) and the cross-tabulation with respondent gender. There is a significant difference between male and female drivers in the approval rate of lane splitting with male respondents showing a higher rate of approval (41.9%) compared to females (25.7%,  $p=0.00$ ).

**Table 25. Approval or disapproval of lane splitting by gender**

| Approval by gender | Approval     | Disapproval  | Total         |
|--------------------|--------------|--------------|---------------|
| MALE               | 195<br>41.9% | 270<br>58.1% | 465<br>100.0% |
| FEMALE             | 69<br>25.7%  | 199<br>74.3% | 268<br>100.0% |
| Total              | 264<br>36.0% | 469<br>64.0% | 733<br>100.0% |

There is no significant difference in approval rates among different age groups.

Question 15 asked drivers to state why they approve or disapprove of lane splitting in a multiple choice question. The additionally collected open-ended comments were coded and the following four answering categories were added:

- Why not/no problem with it/no opinion
- MC's choice, their own risk
- Because they fit
- As long as it is safe

The approval of lane splitting and the reason(s) given for approval or disapproval are shown in Table 26. The majority of drivers who disapprove, stated that lane splitting "is unsafe" (77.0%), that lane splitting "scares me they might crash" (19.7%) followed by the response "might cause me to have an accident" (13.2%). Of the drivers who approve of lane splitting, 27.3% of answers given were "help traffic congestion", "it is safe" (16.8%) followed by "it is legal" by 13.7%.

**Table 26. Approval of lane splitting by reason for approval/disapproval**

| Q15                               | Approval of lane splitting* |              |
|-----------------------------------|-----------------------------|--------------|
|                                   | Approval                    | Disapproval  |
| It is illegal                     | 6<br>2.3%                   | 21<br>4.6%   |
| It is unsafe                      | 25<br>9.8%                  | 355<br>77.0% |
| It is unfair they get ahead of me | 1<br>0.4%                   | 17<br>3.7%   |
| It startles/surprises me          | 13<br>5.1%                  | 54<br>11.7%  |
| It scares me they might crash     | 13<br>5.1%                  | 91<br>19.7%  |
| They ride too fast                | 8<br>3.1%                   | 28<br>6.1%   |

|                                       |             |             |
|---------------------------------------|-------------|-------------|
| Might cause me to have an accident    | 8<br>3.1%   | 61<br>13.2% |
| It is legal                           | 35<br>13.7% | 2<br>0.4%   |
| It is safe                            | 43<br>16.8% | 3<br>0.7%   |
| Help traffic congestion               | 70<br>27.3% | 8<br>1.7%   |
| Other                                 | 14<br>5.5%  | 9<br>2.0%   |
| Why not/no problem with it/no opinion | 22<br>8.6%  | 9<br>2.0%   |
| MC's choice, their own risk           | 16<br>6.3%  | 2<br>0.4%   |
| Because they fit                      | 6<br>2.3%   | 0<br>0.0%   |
| As long as it is safe                 | 24<br>9.4%  | 2<br>0.4%   |
| Total                                 | 256         | 461         |

\* Percentages add up to more than 100% due to multiple choice answers

An additional variable was created to combine the positive and negative answers to the lane splitting questions on both freeways and other multiple lane roads, the combination of which can be found in Table 27. A total of 34.2% of all vehicle drivers stated that it is legal for motorcycles on both freeways and multiple lane roads to lane split, while 29.2% believed both to be illegal. Another 13.2% believed lane splitting to be legal on freeways but illegal on other roads, 5.6% believed the opposite.

**Table 27. Perception of legality of lane splitting on both freeways and multiple lane roads**

| Perception of legality   | Frequency | Percent |
|--------------------------|-----------|---------|
| Both legal               | 251       | 34.2%   |
| Both illegal             | 214       | 29.2%   |
| FWY legal - Road illegal | 97        | 13.2%   |
| FWY illegal - Road legal | 41        | 5.6%    |
| Both DK                  | 38        | 5.2%    |
| FWY legal                | 39        | 5.3%    |
| Road legal               | 12        | 1.6%    |
| FWY illegal              | 21        | 2.9%    |
| Road illegal             | 20        | 2.7%    |

| Perception of legality   | Frequency | Percent |
|--------------------------|-----------|---------|
| Both legal               | 251       | 34.2%   |
| Both illegal             | 214       | 29.2%   |
| FWY legal - Road illegal | 97        | 13.2%   |
| FWY illegal - Road legal | 41        | 5.6%    |
| Both DK                  | 38        | 5.2%    |
| FWY legal                | 39        | 5.3%    |
| Road legal               | 12        | 1.6%    |
| FWY illegal              | 21        | 2.9%    |
| Road illegal             | 20        | 2.7%    |
| Total                    | 733       | 100.0%  |

The cross-tabulation of the approval of lane splitting variable and the perception of legality of lane splitting is shown in Table 28. The difference between the perception of lane splitting being legal and the approval of lane splitting shows a higher approval rate among drivers who believe lane splitting to be legal. Drivers who believe lane splitting to be illegal, also have a higher rate of disapproval of lane splitting (significant at p=0.00).

**Table 28. Approval or disapproval of lane splitting by perception of legality of lane splitting**

| Perception of legality   | Approval of lane splitting |             | Total |
|--------------------------|----------------------------|-------------|-------|
|                          | Approval                   | Disapproval |       |
| Both legal               | 150                        | 101         | 251   |
|                          | 56.8%                      | 21.5%       | 34.2% |
| Both illegal             | 22                         | 192         | 214   |
|                          | 8.3%                       | 40.9%       | 29.2% |
| FWY legal - Road illegal | 45                         | 52          | 97    |
|                          | 17.0%                      | 11.1%       | 13.2% |
| FWY illegal - Road legal | 17                         | 24          | 41    |
|                          | 6.4%                       | 5.1%        | 5.6%  |
| Both DK                  | 3                          | 35          | 38    |
|                          | 1.1%                       | 7.5%        | 5.2%  |
| FWY legal                | 12                         | 27          | 39    |
|                          | 4.5%                       | 5.8%        | 5.3%  |
| Road Legal               | 8                          | 4           | 12    |
|                          | 3.0%                       | 0.9%        | 1.6%  |
| FWY illegal              | 5                          | 16          | 21    |
|                          | 1.9%                       | 3.4%        | 2.9%  |
| Road illegal             | 2                          | 18          | 20    |
|                          |                            |             |       |

|       |        |        |        |
|-------|--------|--------|--------|
|       | 0.8%   | 3.8%   | 2.7%   |
| Total | 264    | 469    | 733    |
|       | 100.0% | 100.0% | 100.0% |

### PREVENTING MOTORCYCLISTS FROM LANE SPLITTING

All drivers were also asked if they ever prevented a motorcyclist from lane splitting, and the response summary can be found in Table 29. Of all drivers surveyed, 7.3% stated that they had tried to prevent a motorcycle from lane splitting. Table 30 shows the responses from drivers why they tried to prevent a motorcyclist of lane splitting.

**Table 29. Q16. Have you ever tried preventing a motorcycle that was lane splitting from passing you?**

| Q 16  | Frequency | Valid Percent |
|-------|-----------|---------------|
| Yes   | 53        | 7.3%          |
| No    | 669       | 92.7%         |
| Total | 722       | 100.0         |

**Table 30. Q17. Why did you try to prevent the motorcyclist from lane splitting?**

| Q17                                | N  | Percent of responses |
|------------------------------------|----|----------------------|
| It is illegal                      | 3  | 7.7%                 |
| It is unsafe                       | 17 | 43.6%                |
| It is unfair they get ahead of me  | 9  | 23.1%                |
| It startles/surprises me           | 2  | 5.1%                 |
| It scares me they might crash      | 3  | 7.7%                 |
| They ride too fast                 | 3  | 7.7%                 |
| Might cause me to have an accident | 13 | 33.3%                |
| Total                              | 50 | 128.2%               |

The cross-tabulation of approval of lane splitting by having attempted to prevent motorcyclist from lane splitting is shown in Table 31. The difference between approvers and non-approvers in blocking motorcyclists from lane splitting is significant ( $p=0.03$ ), indicating that those driver who disapprove prevent motorcyclists from lane splitting more frequently (9.5% versus 3.5% of approvers).

**Table 30. Approval of lane splitting by having prevented MC from lane splitting**

| Q16   | Approval of lane splitting |               | Total         |
|-------|----------------------------|---------------|---------------|
|       | Approval                   | Disapproval   |               |
| Yes   | 9<br>3.5%                  | 44<br>9.5%    | 53<br>7.3%    |
| No    | 249<br>96.5%               | 420<br>90.5%  | 669<br>92.7%  |
| Total | 258<br>100.0%              | 464<br>100.0% | 722<br>100.0% |

There is no statistically significant difference between male and female drivers and the frequency of preventing MCs from lane splitting, nor is there between the age of drivers and this behavior.

A further investigation of the question of having tried to prevent a motorcycle from lane splitting and the county where the intercept was conducted showed that of all respondents who engaged in this behavior, drivers in San Francisco had the highest rate of blocking motorcyclists with 23.5% of all respondents, followed by Los Angeles county with 10.9% of all drivers. [Note that the number of observations by county are small].

| County         | Have you ever tried preventing a MC that was lane splitting from passing you |              | Total         |
|----------------|--|--------------|---------------|
|                | Yes  | No           |               |
| Orange         | 4<br>4.8%  | 80<br>95.2%  | 84<br>100.0%  |
| LA             | 26<br>10.9%  | 212<br>89.1% | 238<br>100.0% |
| San Bernardino | 2<br>4.9%  | 39<br>95.1%  | 41<br>100.0%  |
| Ventura        | 0<br>0.0%  | 21<br>100.0% | 21<br>100.0%  |
| San Diego      | 4<br>4.9%  | 78<br>95.1%  | 82<br>100.0%  |
| Riverside      | 3<br>7.5%  | 37<br>92.5%  | 40<br>100.0%  |
| San Francisco  | 4<br>23.5%   | 13<br>76.5%  | 17<br>100.0%  |

|              |       |        |        |
|--------------|-------|--------|--------|
| Alameda      | 5     | 37     | 42     |
|              | 11.9% | 88.1%  | 100.0% |
| Contra Costa | 1     | 24     | 25     |
|              | 4.0%  | 96.0%  | 100.0% |
| Sacramento   | 2     | 38     | 40     |
|              | 5.0%  | 95.0%  | 100.0% |
| San Mateo    | 0     | 21     | 21     |
|              | 0.0%  | 100.0% | 100.0% |
| Santa Clara  | 2     | 69     | 71     |
|              | 2.8%  | 97.2%  | 100.0% |
| Total        | 53    | 669    | 722    |
|              | 7.3%  | 92.7%  | 100.0% |