# Regression of fuel consumption with respect to car weight in the xauto data

In the dataset uploaded using the SSC package xauto, we fitted a linear regression model of fuel consumption (in nipperkins per mile) with respect to car weight (in US tons), separately for the 2 car model origin groups (non-US models and US models). In each regression model, the regression slope was a weight effect on fuel consumption (expressed in nipperkins per additional ton-mile), and the intercept was a mean fuel consumption (expressed in nipperkins per mile) for a fantasy car with zero weight.

# Table 1. Regression of fuel consumption with respect to weight (long version using insingap)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Parameter*** | ***Estimate*** | ***(95%*** | ***CI)*** | ***P*** |
| **Non-US (N=22):** |  |  |  |  |
| Weight (US tons) | 11.059 | (8.130, | 13.987) | 1.5e-7 |
| Constant | -1.764 | (-5.382, | 1.853) | .32 |
| **US (N=52):** |  |  |  |  |
| Weight (US tons) | 7.885 | (6.484, | 9.286) | 2.2e-15 |
| Constant | 0.537 | (-1.549, | 2.622) | .61 |

# Table 2. Regression of fuel consumption with respect to weight (wide version using xrewide)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | ***Non-US (N=22):*** |  |  |  | ***US (N=52):*** |  |  |  |
| ***Parameter*** | ***Estimate*** | ***(95%*** | ***CI)*** | ***P*** | ***Estimate*** | ***(95%*** | ***CI)*** | ***P*** |
| Weight (US tons) | 11.059 | (8.130, | 13.987) | 1.5e-7 | 7.885 | (6.484, | 9.286) | 2.2e-15 |
| Constant | -1.764 | (-5.382, | 1.853) | .32 | 0.537 | (-1.549, | 2.622) | .61 |