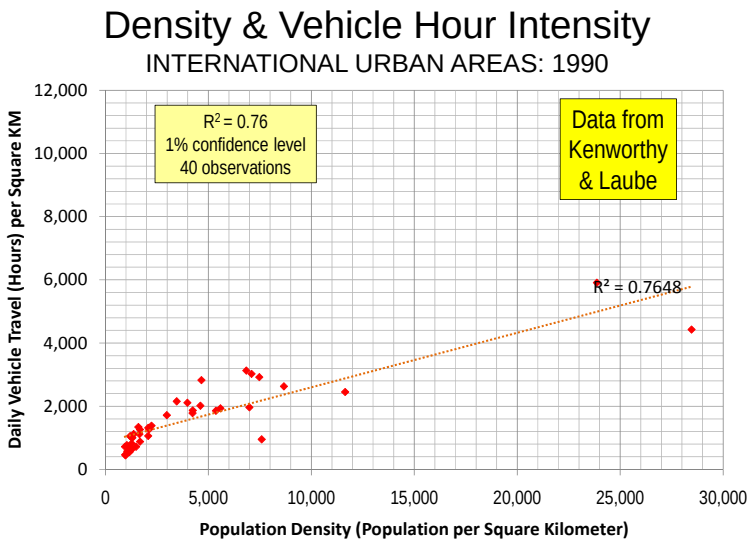
DEMOGRAPHIA

International Urban Population Density and Traffic Density

There is only limited comparable international data on traffic densities in the world urban areas. Perhaps the best and most current source is in the work of Kenworthy and Laube (1999), which provides urban density and traffic volume data for 40 more developed world urban areas (some later data [UITP 2001] is available that includes only automobiles).[1] This makes it possible to calculate traffic densities (vehicle hours per square kilometer).[2] The Kenworthy and Laube (1990) data includes both automobiles and trucks, the latter of which have, individually, all far greater impact on traffic congestion than cars.

Higher urban population densities are strongly associated with higher traffic densities, as measured by vehicle hour, as indicated in the Figure . The linear regression had an R^2 of 0.76, which is significant at the 1 percent level of confidence.



[1] Zurich was included in the database, but did not include truck volumes. Zurich is not included in this analysis.
[2] Where the data is available, vehicle hours is a more effective indicator of traffic volume, because of the increase energy usage and GHG emissions that occur from the slower and more erratic speeds in traffic congestion.