In this paper is investigated the densities of soil and rock using the seismic velocities and is emphasized importance of very parameters relationship between density and seismic velocities. Required density data for multi-parameters relationship are obtained from samples taken from different provinces of our country. Seismic velocity values of these samples are determined with the seismic refraction and seismic ultrasonic studies which they are applied in-situ and in laboratory respectively. In addition to these data, data published in the literature including density and seismic velocities are generated by compiling of a data set. When all data are evaluated together the two and multi-parameters relationships between seismic velocities and density are established and compared with existing relationships in the literature. Also, it has been proposed density-velocity relationship for pumice, which is a special type of material and non knowledge about this relationship in the literature.