Consumer behavior changes with demographic composition, as well as with life cycle and generation. We estimate Japanese demand system from the 5 waves of national surveys that cover 21 years by allowing for varying taste parameters and flexible household equivalence scale function. We propose a procedure to estimate and identify parameters that characterize household economy of scale and implement it. The results indicate that equivalence scale depends on prices, and equivalence elasticity changes with age and by wave. The estimated value of equivalence elasticity is roughly in between 0.4 and 0.7, close to the conventional value, and a degree of economy of scale is changing with time.