Let $M$ be a partitioned matrix with blocks $M_{ij}$ whose rows have a constant sum $b_{ij}$. Then the smaller matrix $B = [b_{ij}]$ is called the equitable quotient matrix of $M$. It is known in literature that the spectrum of $B$ is contained in the spectrum of $M$ (including algebraic multiplicity). In this talk, we investigate the equality of the spectral radii of $M$ and $B$, and the structure of the associated eigenvectors under the additional assumption that $M$ is nonnegative. (Received September 14, 2018)