Let $T = (\tau_{nk})$ and $U = (u_{nk})$ denote triangular matrices representing series to sequence transformations, and let $\lambda = \{\lambda_n\}$ denote a rate that is a positive sequence. The series $\sum u_k$ is said to be T^λ - summable to t if $\lim_n \sum_{k\le n} \tau_{n|k|}u_k = t$ exists and $\lambda_n|\sum_{|k|\le n} \tau_{n|k|}u_k - t|$ is bounded. The space $L^p_{T_\lambda}$ consists of all functions f in the Lebesgue space $L^p([0,2\pi])$ such that $\lambda_n\|\tau_n f - f\|_p$ is bounded, where $\tau_n f$ represents the quantity $\sum_{|k|\le n} \tau_{n|k|}c_k \exp ikx$ and $\{c_k\}$ are the Fourier coefficients of the function f; the space $\mathcal{L}^p_{T_\lambda}$ consists of all functions f such that $\lambda_n\|\tau_n\|_p$ is bounded, where for each n, γ_n denotes the function $\sum_{|k|\le n} \tau_{n|k|}c_k \exp ikx$ with the norm $\|f\|_{L^p_{T_\lambda}} = \|f\|_p + \sup \lambda_n\|\tau_n f - f\|_p$ $L^p_{T_\lambda}$ is a normed linear complete space; as is the space $\mathcal{L}^p_{T_\lambda}$ with the norm $\|f\|_{\mathcal{L}^p_{T_\lambda}} = \lambda_n\|\tau_n\|_p$ $\mathcal{L}^p_{T_\lambda}$.

It is proved that for a rate λ, $p > 1, q > 1$, the function f with Fourier series $\sum_{k=-\infty}^{\infty} c_k \exp ikx$ is in $\mathcal{L}^p_{T_\lambda}$ if and only if, for each g in L^q with Fourier series $\sum d_k \exp ikx$, the series $\sum_{k=-\infty}^{\infty} c_k d_{-k}$ is T^λ summable to zero, where $q = p/p-1$. If λ is a non-decreasing rate $p > 1$, $q = p/(p-1)$, and series to sequence matrix satisfies the condition that $\|\tau_n f - f\|_p$ tends to zero for all functions $f \sim \sum c_k \exp ik\theta$ in L^p, the f is in $L^p_{T^\lambda}$ if and only if, for each function g in L^q with Fourier series $\sum_{k=-\infty}^{\infty} d_k \exp ikx$, the series $\sum_{k=\infty}^{\infty} c_k d_{-k}$ is T^λ summable. If λ is a nondecreasing rate p and p_1 are greater than 1 $q = p/(p-1)$, $q_1 = p_1/(p_1-1)$ and the sequence $\epsilon = \{\epsilon_k\}$ is a multiplier from the space L^q to the space L^{q_1}, then the sequence $\{\epsilon_k\}$ is a multiplier from the space $\mathcal{L}^{p_1}_{T^\lambda}$ to the space $\mathcal{L}^p_{T^\lambda}$; if the matrix T satisfies the condition $\lim \|\tau_n f - f\|_p = 0$ for all f in L^p, then ϵ is a multiplier from the space $L^{p_1}_{T^\lambda}$ to space $L^p_{T_\lambda}$.