The shoulder-like well-screened spectral weight, which was recently discovered in Mn 2p core-level hard x-ray photoemission (HX-PES) spectra of a colossal magnetoresistive manganite La$_{1-x}$Sr$_x$MnO$_3$, has been so far related to how large the density of state at the Fermi level is, or how metallic the system is in other words [1]. Although this scenario explains the change of the shoulder intensity across the metal-insulator transition with temperature, it fails to give a reasonable explanation for a finite shoulder at insulating $x$=0 and a smaller shoulder weight accompanied by a higher electric conductivity in large $x$’s compared with $x$~0 [2].

By detailed analyses of Mn 2p x-ray photoemission spectra compared with HX-PES ones, we found that (1) there exists another well-screened spectral weight originating from the Mn$^{4+}$ state while the known well-screened shoulder is due to the Mn$^{3+}$ state only, and (2) the sum of the both well-screened spectral weights as a function of $x$ qualitatively follows the $x$-dependence of the electric conductivity in a wide range of $x$.