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An Extension of the Vandermonde Convolution Formula

As an extension of the Vandermonde Convolution $\sum_{m=0}^{\gamma} \binom{\alpha}{\gamma-m}\binom{\beta}{m} = \binom{\alpha+\beta}{\gamma}$, an explicit expression for the sum $\sum_{m=0}^{\gamma} m(m-1)\cdots(m-\zeta+1)\binom{\alpha}{\gamma-m}\binom{\beta}{m}$ is obtained, where $\binom{n}{r} = \frac{n!}{(n-r)!r!}$ denotes the binomial coefficient. Some examples for the application of the result are considered.