In business organizations, there are many decision problems where the decision maker considers multiple goals. For such problems a systematic approach called the "goal vector method" has been developed. This method introduces the concept of a "goal vector" which indicates the direction of desirability of multiple goals. Then various types of utility function which reflect the decision maker's desire are formulated in connection with the goal vector.

In the goal vector method, multiple goals are assumed to be mutually independent, but actually there exist several relationships between goals. Then an analysis on relationship of multiple goals is useful for improving the goal vector method. This study proposes to present such analysis in order to analyze multi-goal decision problems.