

## Formation of the Investment Portfolio of Intangible Assets with a Wide Pairwise Comparison Matrix Application

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**Abstract :** The Analytic Hierarchy Process is widely used in the economic and financial studies, including the formation of investment portfolios. In this study, a generalized method of obtaining a vector of priorities for the case with separate pairwise comparisons of the expert opinion being presented as a set of several equal evaluations on a ratio scale is examined. The author claims that this method allows solving an important and up-to-date problem of excluding vagueness and ambiguity of the expert opinion in the decision making theory. The study describes the authentic wide pairwise comparison matrix. Its application in the formation of the efficient investment portfolio of intangible assets of a small business enterprise with limited funding is considered. The proposed method has been successfully approbated on the practical example of a functioning dental clinic. The result of the study confirms that the wide pairwise comparison matrix can be used as a simple and reliable method for forming the enterprise investment policy. Moreover, a comparison between the method based on the wide pairwise comparison matrix and the classical analytic hierarchy process was conducted. The results of the comparative analysis confirm the correctness of the method based on the wide matrix. The application of a wide pairwise comparison matrix also allows to widely use the statistical methods of experimental data processing for obtaining the vector of priorities. A new method is available for simple users. Its application gives about the same accuracy result as that of the classical hierarchy process. Financial directors of small and medium business enterprises get an opportunity to solve the problem of companies' investments without resorting to services of analytical agencies specializing in such studies.

**Keywords :** analytic hierarchy process, decision processes, investment portfolio, intangible assets

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