Application of aggregation operators on the assessment of public universities and their faculties

Lucia Vavríková[*]

Faculty of Civil Engineering

Slovak University of Technology in Bratislava

vavrikova@math.sk

June 20, 2011

Keywords: Decision making, Preference structure, Aggregation operator.

Abstract

In order to solve decision making problem we have to compare and rank a finite set of alternatives according to finite number of criteria. In this paper we want to show some approaches how to create the preference structure (ranking) of alternatives. These approaches lead us to use chosen multicriteria decision methods and aggregation operators. ARRA (Academic ranking and rating agency) uses one fixed way to create a ranking of public universities and their faculties. Here many more approaches how to create such rankings (or preference structures) of alternatives are discussed.

References

[1] Calvo T., Kolesárová A., Komorníková M., Mesiar R. (2002): Aggregation Operators: Properties, Classes and Construction Methods, *Studies in Fuzziness and Soft Computing-Aggregation Operators. New Trends and Applications* (T. Calvo, G. Mayor, R Mesiar editors), Physica-Verlag, Heidelberg, pp. 3–106.

[2] Calvo T., Mayor G., Mesiar R. (2002): Aggregation operators: new trends and applications, *Studies in Fuzziness and soft computing*, Physica-Verlag Heidelberg New York, vol. 97, pp. 44–47.

[3] Mesiar R., Špirková J., Vavríková L. (2007): Weighted aggregation operators based on minimization, *Information Sciences* **vol. 178**, pp. 1133–1140.

[4] Pomerol Ch., Barba-Romero S.(2000): Multicriterion Decision in Management: Principles and Practice, Kluwer Academic Publishers, Boston.