Deciding within a competition

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Abstract

In this paper we describe the ways through which the competing sets D_1 and D_2 of decision makers can interact within a dialectic iterative decision process in two paradigmatic cases:

(1) where the members of D_1 present a project p_1 that the members of D_2 refuse contesting the presented costs set C/benefits set B analysis;
(2) where the members of D_1 present a project p_1 whereas the members of D_2 present a competing project p_2 under the constraint that only one project can be implemented.

In the case (1) we propose an iterative procedure through which the members of D_1 and D_2 can negotiate both the composition of the set of (even non monetary) costs C and the set of (even non monetary) benefits B and the ways to share their elements. The aim of the members of D_1 is to have the project approved and that of the members of D_2 is to obtain the most as a compensation for approving the project. Both sets aim at getting the highest benefits and the lowest costs under the constraints represented by the sets B and C.

In the case (2) we modify the preceding procedure so to allow the interplay between the two competing projects. Also in this case each project has its sets B and C that form the constraints of the decision process.

Both decision processes are characterized by a coarse grain phase during which the sets B and C are negotiated and agreed on and a fine grain phase during which the sharing of the elements of the two sets is negotiated between the members of D_1 and D_2. Such phases may be repeated until a satisfactory agreement is reached from D_1 and D_2 or both decide that no agreement is possible so that the final decision may depend from a third party arbitrator or from voting procedures such as a referendum.

The paper describes the roles of stakeholders S, experts E and possibly mediators M within the proposed iterative decision processes whose best outcome is the reaching of compromise solutions between the members of D_1 and D_2 with the help of M and the involvement of S ad E.

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