

A ROUGH SET APPROACH TO CLASSIFICATION AND ITS APPLICATION FOR THE CREATIVE CITY DEVELOPMENT

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ABSTRACT. *The objective of this paper is to realize an efficient sampling method in a rough set approach that distinguishes whether a subset can be classified in the focal set or not. The algorithm of rough set model will be used to analyze samples obtained and in order to illustrate the method, we use some artificial data in this paper. As its application, we discuss public art and urban development. Also, the concept of the Creative City, proposed by Charles Landry, will be reviewed for urban innovators, policy makers, scientists and artists. City renaissance has played an increasingly important role in urban regeneration since the mid-1980s. However, recent developments have focused less on capital projects, and more on the arts activity to support community-led renewals. It is essential for researchers to pay more attention to the issue of the Creative City development. In this paper, the differentiation is examined whether the cities can be classified into a Creative City or not.*

Keywords: Rough sets, Classification, Sampling method, Creative city, Urban planning & development

1. Introduction. City renaissance has played an increasingly important role in urban regeneration. The concept of Creative City, proposed by Charles Landry is driving the imagination of professionals involved in city redevelopment [1]. According to UNESCO, the Creative Cities Network connects cities that will share experiences, ideas and best practices aiming at cultural, social and economic development. It is designed to promote the social, economical and cultural development of cities in both the developed and the developing world [2].

Recently, arts-oriented approaches to urban design, involving cultural related experiments and activities to bring social, economic and environmental regeneration outcomes, are increasingly being applied in many cities [3]. How do we make sense of a city when walking along the streets? How do we interpret street furniture and public art in urban spaces? In order to enhance the identity of a city, many explorations of urban design have been developed. A method of automatically and quickly describing whether a city is creative would enhance the efficiency of problem-solving in urban planning and development. This is the start-point of writing this paper.

The objective of this paper is to create a simple classification method in a rough set approach that distinguishes whether a subset can be classified in the focal set or not. Rough set theory is a new mathematical approach to imperfect knowledge. The problem