

Review of the structure and geometry of the formation of Iranian markets(A Case study of an Isfahan market)

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Abstract

One of the very important elements supplied by the Iranians to the world is market (Bazar), which has had a vital role in the cities of Iran. In Persian architecture, geometry (as a tool for balance and coordination) and structure (as an integral element of architecture) are the two main factors that their appropriate combination permits the architect to reflect part of the world of meaning into the material world. Since Bazar is the major affecting factors on the overall structure of cities, a good and logical communication between geometry and structure in their architecture is worthwhile. The main purpose of this study was to achieve the connection between geometry and structure of the architecture of Isfahan outstanding Bazar. In this paper, by using maps and drawings, the following result is obtained: the use of geometry in a consistent navigation between forms, static and proportions in the basic structure of the bazar, leads to an alliance between structure and architecture. Furthermore, in this article, after defining the concept of the Bazar, the geometry and structure, we refer to a case study, and with reference to a table, we analyze the geometry of the elements, which make a Bazar. After that, we refer to analysis of force transfer of arched structures, which includes the major structures in Isfahan's Bazar. Finally, we came to the result that the use of the arch and crotch in this bazar is completely coordinated with the values of the physical-space. This coordination leads to the special mobility, and rhythm, consistency and discipline, dissociation and readability, opening Space, the quality of light, rotation and Flexibility, modular multiplication and spread of physical space and privacy and territory of the bazar.

Keywords: structure, geometry, bazar, Iranian bazars, Isfahan