

LOCAL APPROACH OVER SPATIAL RESTRUCTURING FOR ECONOMIC CHANGE THROUGH BRI-DRIVEN FDI IN ARAS SPECIAL ECONOMIC ZONES

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Abstract: International agreements and FDI have increased opportunities for economic and spatial expansion significantly in recent decades, and industrial parks have played an important role in this process, cooperation process often arises a conflict of interest among various stakeholders and locals. However, the critical interaction between local spatial approaches and FDI-induced spatial restructuring of industrial parks as a common platform in a bottom-up planning process has been overlooked for regional development. This study will assess the effects of the local spatial approach on the Aras Free Trade-Industrial Zone spatial restructure via BRI-driven FDI for regional development. Questionnaire data, based on locals' spatial approach to spatial restructure through BRI-driven FDI for sustainable development will be assessed using an integrated Entropy-COPRAS method for ranking and GIS software for spatial analysis to determine weighted and elevated values, hot and cold spots on the map. According to the methodology used, the findings revealed spatial heterogeneity within sections, as well as areas with high weighted and elevated values for mapped spatial locations. Eastern and western sections of the AFTZ were also found to be the most suitable for development.

Keywords: regional development; spatial (re)structuring; local spatial approach; Belt and Road; Bottom-up planning; SEZs

Introduction

Some cities were previously located based on their climate, water reservoirs, and social and religious[1], physical, capital city, geographical features[2], and climate[3] that they had, and yet global trade and economy[4] has become a major factor for spatial development however there has been overlooked areas, such as cities located far from economic activities near country borders[5]. In recent decades, there has been an increase in terms of mega-scale spatial projects and mega-events for competitiveness in the globalized economy [6–8].

To acquire socio-perceptual information in planning practice, a variety of methodologies and methods[15,16,20] have typically been used. In fact, relative to the vast amount of ecological, infrastructure, and numerical data that planners have at their disposal, spatially categorized, social, and perceptual data across cities is inadequate [15].

The study's goal is to figure out how "the changing in local's spatial approach on BRI driven FDI impacts AFTZ spatial (re)structuring for Sustainable development?" through a configuration of spatial (re)structure and sustained urban spatial development for FDI can meet local spatial approach (LSA) in Special Economic Zones (SEZs) for a systematic and meaningful manner.

The study compared and contrasted local spatial approaches to FDI base development planning in project-oriented procedures to determine if "changing the spatial (re)structure based on LSA will cause changes in the spatial restructuring of the AFTZ and its section in the same way" for FDI driven by the BRI and regional development. In the following, this article uses typical IMRAD and conclusion to organize and communicate the information of each section from section one to section five.

Material

In our research, the Aras Free Trade-Industrial Zone (AFTZ) and in-depth interviews used as the initial research material, and its five distinct districts will be used as a case study area in Northern Iran.

Study area

After a strategic agreement between Iran and China, this area was chosen for its unique strategic and economic position with neighboring countries and its role as an industrial park in BRI strategies. Material is AFTZ's five separate sections which are Jolfa, Hadishahr, and Marand (A1), Siahrood-Ayri

(A2), Noorduz (A3), Khodaafarin (A4) and Golibeiglu (A5). The geographical location, respected area (h), and Intended boundaries of these sections in AFTZ besides neighboring international borders are illustrated in **Ошибка! Источник ссылки не найден..**

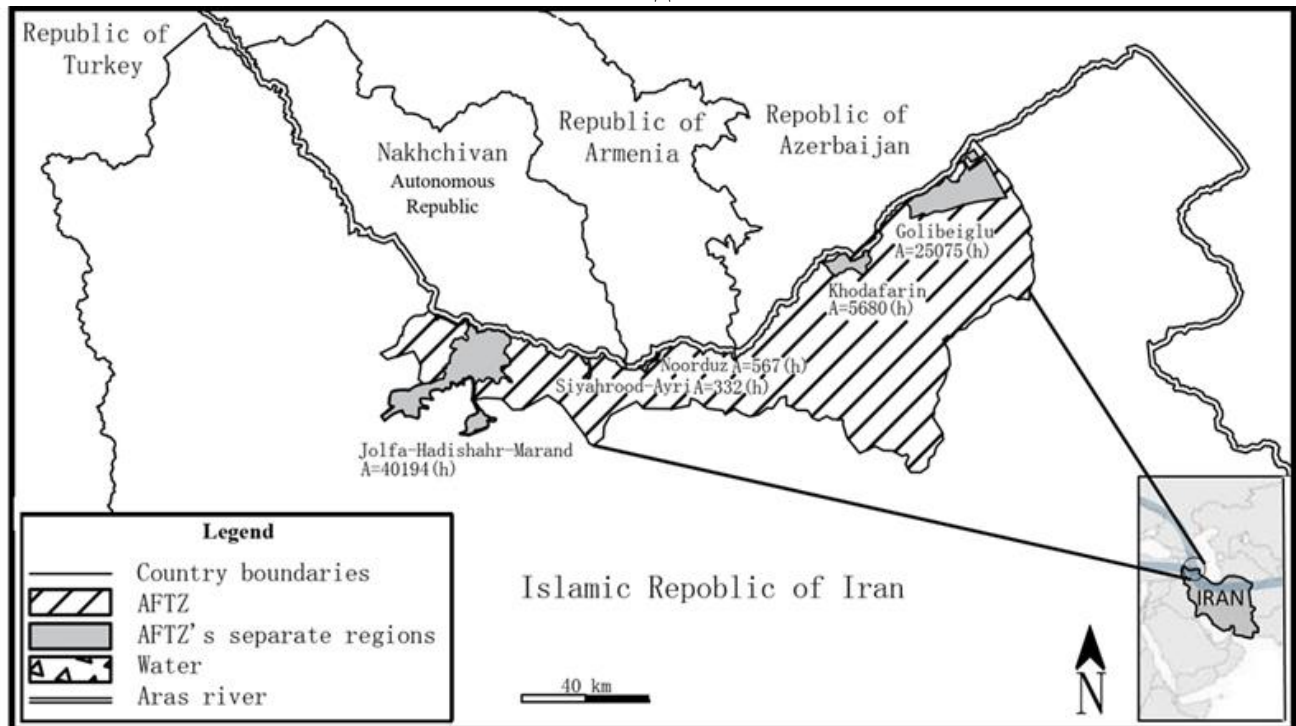


Figure 1. The geographical location, respected area, and Intended boundaries of these sections along with neighboring international borders

LSA's Survey

To answer to questions of this study Q- Where to locate formed combinations (spot on the map) of the development structure of the respected region in AFTZ? On local's response about spatial development and Foreign Direct Investment (FDI) of China's mega project, BRI at AFTZ, Based on local knowledge, perception, and experience about developments, transitions, visions, and policies of FDI at AFTZ. Considering local's concerns about spatial development and FDI in China's mega-project of the Belt and Road Initiative (BRI) in the AFTZ.

Methodology

The decision matrix for the Third step will be developed after the first two steps in the research methodology are completed, as well as a questionnaire survey of locals in the AFTZ. Shannon's Entropy [22–24] and Complex Proportional Assessment (COPRAS) method will be used. COPRAS is used to analyze the effects of maximizing and minimizing calculated values on the evaluation of results, as well as the impact of attribute metrics on the outcomes, which are separately analyzed [25]. The COPRAS method was utilized [26,27], and integrated [25,28–31] and in recent urban studies and SDGs [32–37]. Then local spatial approach results will be utilized to determine the maximum feasible effects of BRI-driven FDI in AFTZs through spatial (re)structuring. Also, to create spatial mapping analysis for a public participation survey on spatial placement for development and spatial (re)structure through BRI-driven

FDI. Schematic of the research methodology is presented in

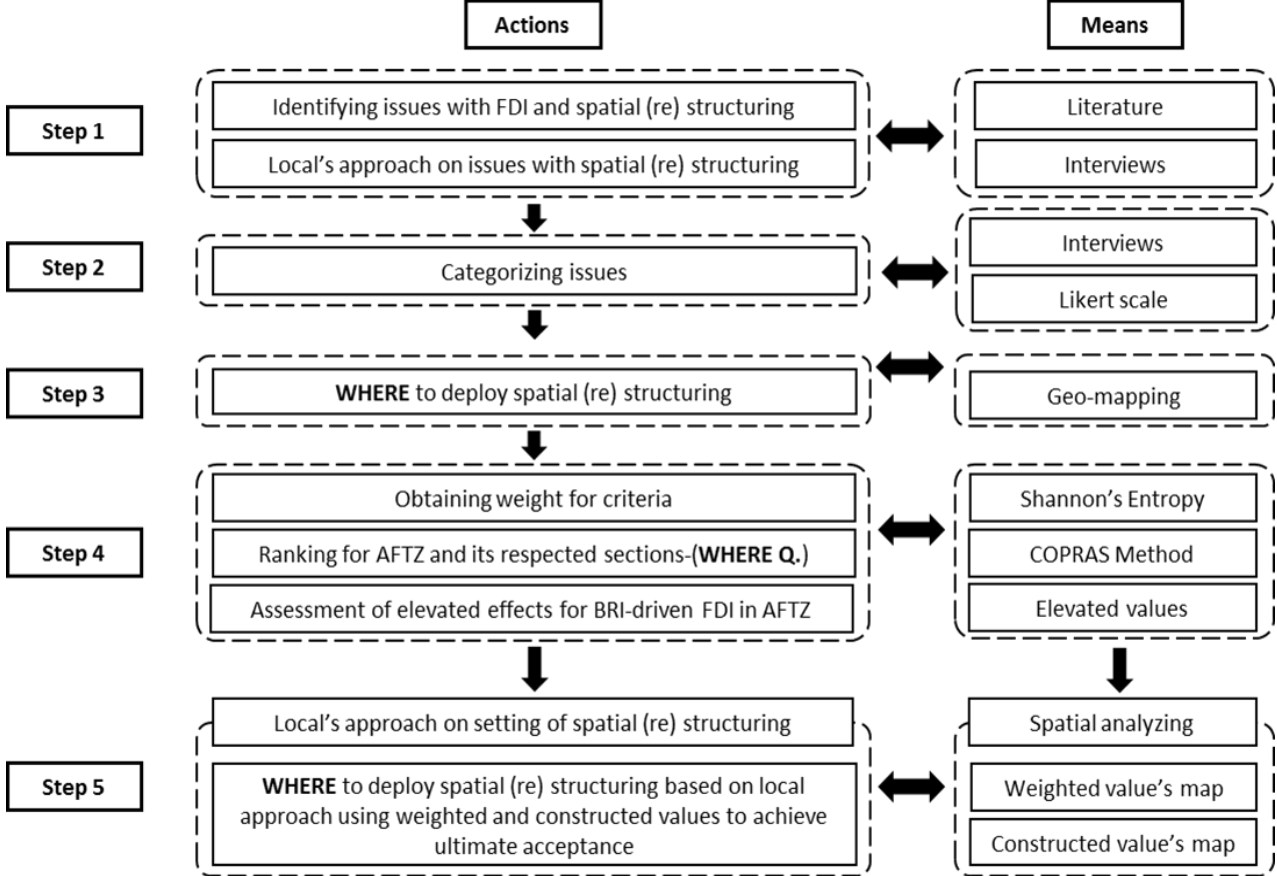


Figure 2.

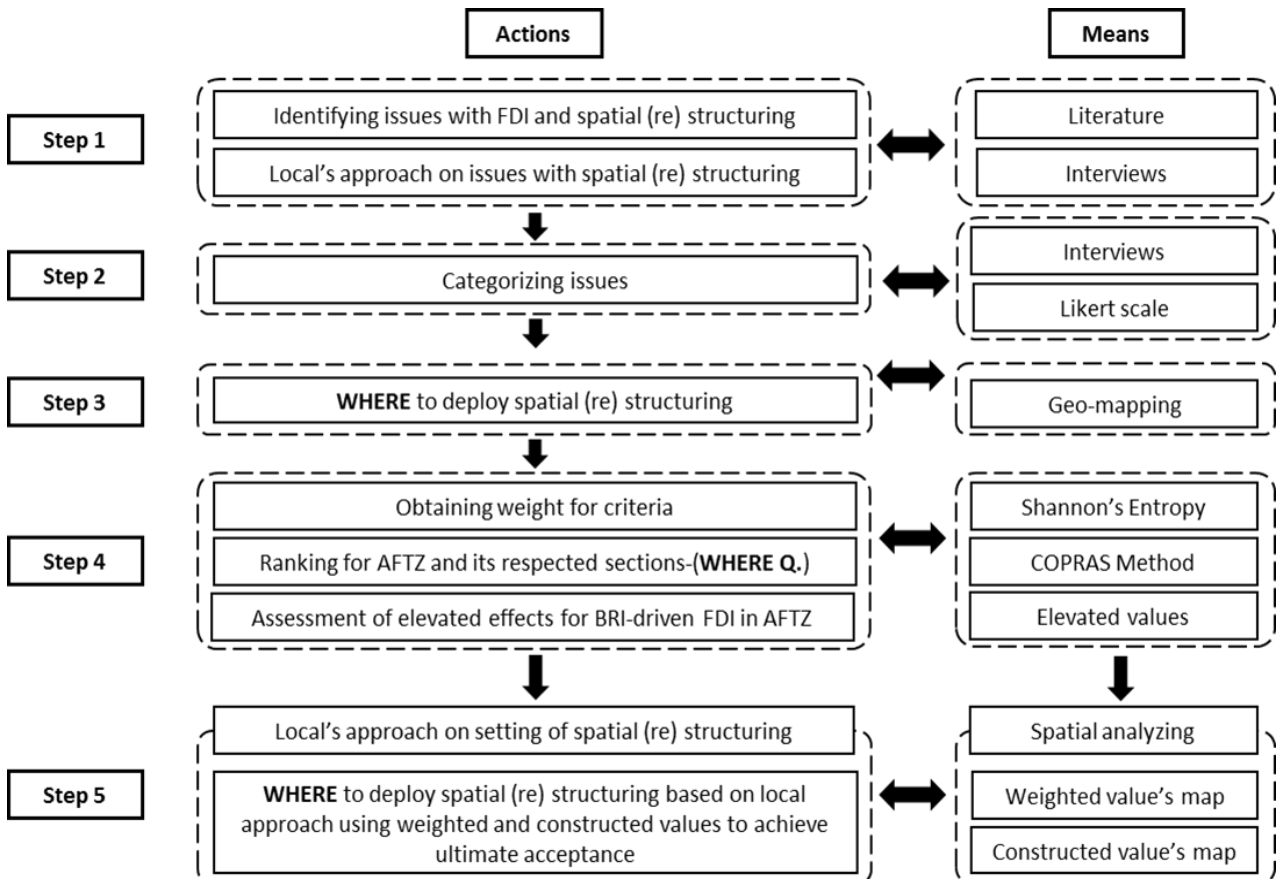


Figure 2 Schematic of research methodology

Results

This study found that changing the local spatial approach to BRI-driven FDI affected the spatial restructuring of the AFTZ and its sections. The determined local spatial approach on spatial restructuring based on suitability ‘location’, for spatial (re)structuring resulted in the mapping of hot and cold spots based on the questionnaire for the entire AFTZ and its sections, which is required for the all-inclusive decision-making process. The results showed that there is variation across sections, indicating the requirement and usefulness of geographical data for planning and carrying out changes for spatial (re)structure based on LSA. Planners, policymakers, practitioners, and all other stakeholders must be aware of these socio-perceptions to make long-term decisions based on spatial and mathematical methods that combine spatial equity, diversity, and need-based allocation early in the restructuring process.

Determined COPRAS Results for LSA

The effects of maximizing and reducing values determined via COPRAS method rankings based on sections and AFTZ weights were evaluated. The determined rank among sections reveals a consistent trend for the highest and lowest rank for A1 and A2, respectively, as well as a variety of rankings for other sections. LSA’s mapped pattern for determined weighted and elevated AFTZ values

Figure 3 depicts the hotspots of LSA’s survey pattern for determined weighted (a) and elevated (b) values for the Ultimate (re)structure effects on AFTZ for A1, A2, A3, A4, and A5. The A1, A3, and A5 hotspot areas have the highest weighted LSA values for the entire AFTZ, while A2 and A4 have the lowest. According to the LSA values spotted on the map for elevated values (b) in AFTZ, there are two hotspots for spatial (re)structure in the A1 and A5 sections, whereas the determined LSA values for A2, A3, and A5 sections showed lower values for hot spots.

Findings show that regions with high LSA values (hot spots) were mainly distributed in the first and second largest areas with high connection to the neighboring areas to and within the AFTZ, which are A1 and A5 sections also they were also highly populated with the first and third rand in the AFTZ respectively. Low LSA values (cold spots) were revealed in A2, A3, and A4, and were primarily located in the AFTZ’s center and central region, with less land coverage and population than average. The findings could be partially ascribed to previous development and construction, as well as approvals, legislation, and rules [41] as well.

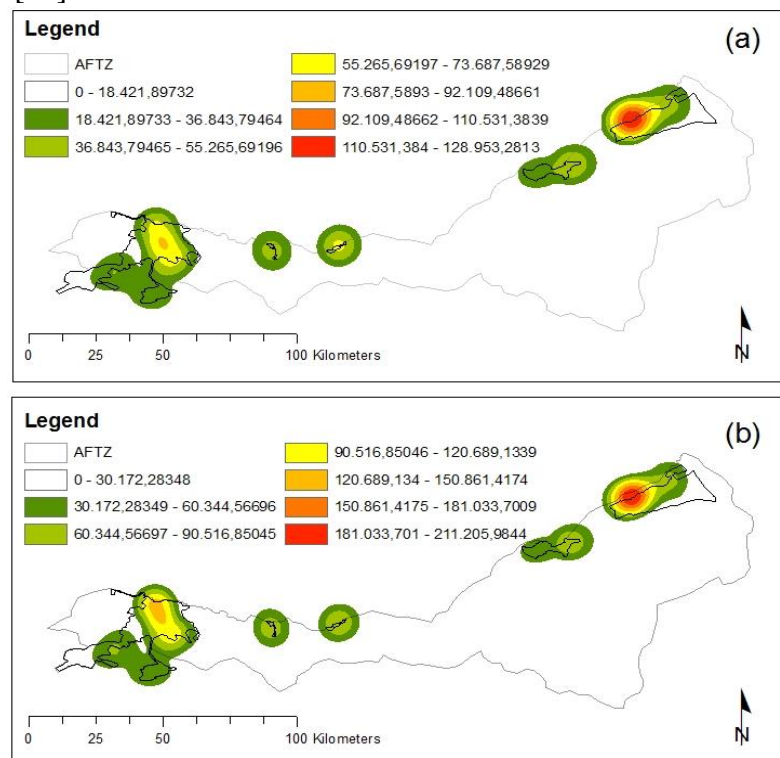


Figure 3 Describes spatial patterns derived from a conducted survey and elevated AFTZ values- (a) for weighted values and (b) for ultimate effects.

Discussion

The results for LSA in AFTZ showed spatial heterogeneity, with land use types being one of the primary drivers, which could be characterized as land use conflict [42,43], and land use consistency [44–46]. Any upgrading intervention that focuses solely on physical upgrading will have little influence; instead, a suitable mapping (Geo informative) context is required to communicate notions such as social interaction, networks, or social ties, much as it was for settlement transformation.[47].

Companies expanding abroad, as well as investors in general, face the challenge of identifying valuable locations and sites to launch their operations[39], which necessitates observing locals and the demand for institutionalization in the local context[48]. Despite the existence of viewpoints that are overlooked by obsessive administrators and community planners [49], an integrated stakeholder engagement method should be developed and implemented to unify information disclosure and community consultation activities [13]. Feasibility analysis and resource mobilization are necessary as prerequisites for decision-making [50]. While the procedure Local governments, the general public, and non-governmental groups all contribute to and coordinate favorable public policies for industrial parks in support of BRI goals [21].

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