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Review

Survey of Sustainable Regeneration of Historic and Cultural Cores of Cities

Mehrdad Chahardowli [1], Hassan Sajadzadeh [1,*], Farshid Aram [2] and Amir Mosavi [3,4,5,6,7*]

[1] Department of Urban Design, Bu-Ali Sina University, Hamedan 6517838695, Iran; m.chahardowli@art.basu.ac.ir
[2] Escuela Técnica Superior de Arquitectura, Universidad Politécnica de Madrid-UPM, 28040 Madrid, Spain; Farshid.aram@alumnos.upm.es
[3] Department of Mathematics, J. Selye University, 94501 Komarno, Slovakia
[4] Institute of Automation, Obuda University, 1034 Budapest, Hungary
[5] Faculty of Civil Engineering, Technische Universität Dresden, 01069 Dresden, Germany
[6] Thuringian Institute of Sustainability and Climate Protection, 07743 Jena, Germany
[7] School of Built the Environment, Oxford Brookes University, Oxford OX30BP, UK
* Correspondence: sajadzadeh@basu.ac.ir (H.S.); a.mosavi@brookes.ac.uk (A.M.)

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Abstract: The united nations educational, scientific and cultural organization (UNESCO) considers the historic urban landscapes as the world heritages. Managing historic city centers and maintaining historic cores are the emerging challenges for sustainable urban planning. Today, the historic cores form an important part of the economic, social, environmental, and physical assets and capacities of contemporary cities, and play a strategic role in their development. One of the most important approaches to the development of central textures, especially in historical and cultural cities, is the sustainable urban regeneration approach, which encompasses all aspects of sustainability, such as the economic, social, cultural and environmental aspects. To maintain sustainability and regeneration of historic cores of cities, it is necessary to provide insight into the underlying characteristics of the local urbanization. Furthermore, the fundamental assets are to be investigated as indicators of sustainable regeneration and drivers of urban development. In the meantime, a variety of research and experience has taken place around the world, all of which has provided different criteria and indicators for the development of strategies for the historic cores of cities. The present study, through a meta-analytic and survey method, analyzing the experience and research reported in 139 theoretical and empirical papers in the last twenty years, seeks to provide a comprehensive conceptual model taking into account the criteria and indices of sustainable regeneration in historic cores of cities. The quality of the survey has been ensured using the preferred reporting items for systematic reviews and meta-analysis (PRISMA).

Keywords: State-of-the-art; sustainable development; sustainable regeneration; sustainable urban development; urban cores; historic core of cities; survey; smart cities; sustainable architecture; sustainable cities; PRISMA; sustainable development goals (SDGs); literature review; suburbanized core cities

1. Introduction

Historic cores having various layers formed throughout history are one of the social, cultural, and economic assets of cities. These spaces are of great importance due to their identity and assets in line with the strategic development of cities. Historic cores of cities are not only the embodiment of cultural heritage, also known as the identity of cities, but are also considered an important source of

and opportunity for dynamicity in the urban economy, marketing, and tourism [1–3]. In other words, historic cores of cities are one of the most essential indicators for the sustainable physical, economic, and socio-cultural development of cities [4,5]. Today, new urban developments have started to threaten the identity of these areas and have caused the process of decay and deterioration of these valuable urban textures [6–8]. Roberts (2000) considers the main reasons for the decline in urban areas to be due to three factors: de-industrialization, globalization, and adaptation of new economic activities to the body and space. To maintain a gradual and comprehensive change in cities, such as regeneration of an area, the tangible identity perceived by local stakeholders needs to be on the agenda of urban planning policies [9]. For example, in regeneration of the historical urban core of Doha, Qatar, we are witnessing the disappearance of the unique identity and character of this area, such that in the last two decades, about 150 high-rise towers have grown like mushrooms in this area [10]. Likewise, in the Mapuche regeneration project in Chile, due to extensive physical intervention and the loss of physical and social identity, no positive effect on the residents has been created, and the sense of place in the area has been changed, leading them to leave the area [11]. In the Kurdistan region in Iraq, also in the process of urban development, physical interventions have had a negative impact on the region's identity [12]. In order to prevent the negative effects of quantitative developments and the globalization of cities, preserving the identity dimensions of historic cores of cities and regenerating them to adapt to the changes ahead is one of the most important strategies in this regard [13,14]. In line with this, the use of sustainable urban regeneration, as a comprehensive approach involving all stakeholders and influential agents, can play an important role [15,16]. Urban regeneration is a research, general policy-making, and practical context that includes elements of urban planning, housing, transportation/infrastructure, economics, urban design, urban tourism, community development, sustainability, and cultural studies [17,18]. In other words, urban regeneration as a comprehensive and structural measure leads to reconstruction of residential, commercial, or open urban spaces with regard to social and cultural values that improves the economic, physical, and environmental conditions of the target areas [19–23]. Sustainable regeneration of historic cores focuses on initiatives such as employment, education, housing renovation, urban center renewal, community health, and crime prevention projects in order to improve the quality of life of local people [7,24–26]. It can be concluded that cities, in order to achieve comprehensive development, consider the interaction between urban regeneration, economic, social, and physical development in historic cores of cities as the beating heart of the city [21]. The sustainable urban regeneration approach was not widely used from the 1960s to the early 1980s [17], and it has entered the area of urbanization since the late 1990s, being followed by various definitions and keywords. Since its emergence, many researchers have explained the dimensions and principles of it and have defined strategies to implement and realize this concept. The present study aims to study existing research and experiences, to, while exploring the concepts of urban regeneration and proposed dimensions and models, present a comprehensive conceptual model as the basis for further research and experience in the area of development of historic cores of cities, with an emphasis on urban regeneration. In the research process, first the articles and experiences related to urban regeneration and revitalization in the last two decades are introduced and categorized based on the year of publication, as being experimental or theoretical, and as being quantitative or qualitative in terms of research method. Then, various definitions of historical urban cores are provided, and then, in the literature review section, the definitions of urban regeneration and revitalization, their dimensions and components, and their attitudes and changes over the past two decades are addressed. In the analysis section, each section is analyzed separately and the views related to urban regeneration and revitalization are examined respectively in the economic, physical, social, and cultural fields, during which the approaches, strategies, policies, and consequences of each of the above attitudes in the process of development of historical cores are discussed. Finally, in the discussion section, the conditions, effects, and consequences of the approaches and attitudes related to urban regeneration and revitalization are examined and these approaches and attitudes are summarized in the form of a special graph.

2. Materials and Methods

2.1. Searching for a Strategy for a Systematic Review of the Literature

In order to achieve the main goal of the present study, a systematic review of the literature based on PRISMA methods was conducted. Figure 1 shows the method and the steps taken to create a database of all relevant published documents that have focused on urban regeneration models. The research method of the study is applied in terms of purpose and meta-analytical in terms of method. The meta-analysis method is the art of combining studies and analyses, and it is defined as the combination of results of independent studies in order to integrate their findings [27]. In the present study, by analyzing, comparing, and summarizing the keywords used, literature and concepts on the regeneration of historical urban cores are reviewed. In a systematic review, topics such as types of researcher collaborations, research methods of studies, analysis units of studies, variables used, and theoretical models of studies are discussed. The first step was to identify the largest number of articles published in the joint field of urban regeneration and historical urban cores. In order to achieve the desired goals, the articles published in a period of 19 years were categorized according to year of publication, and case studies were reviewed based on their related continents and countries. For subject-based analysis, the approach of each article was analyzed and evaluated separately. Finally, through the conducted reviews, the indicators affecting regeneration of historical urban cores were examined and evaluated based on their approach and time period and geographical and regional characteristics. This method, through analysis of models and experiences of regeneration in different countries, can enable a process for the development and creation of visions for the development of historical urban cores.

In the present study, by analyzing, comparing and summarizing the keywords used, the literature and concepts of regeneration of historic cores of cities are reviewed. In the systematic review, issues such as types of research collaboration, research methods, papers' analysis units, variables used, and theoretical models of papers are addressed [28]. To achieve these goals, the articles published in a 19-year period were categorized by year of publication; and the case study articles were reviewed by their continents and countries. To analyze in terms of subject, each article's approach was analyzed and evaluated separately. Finally, through the investigations carried out, the indices affecting regeneration of historic cores of cities were examined and evaluated according to their approach, time period, and geographical and regional characteristics.

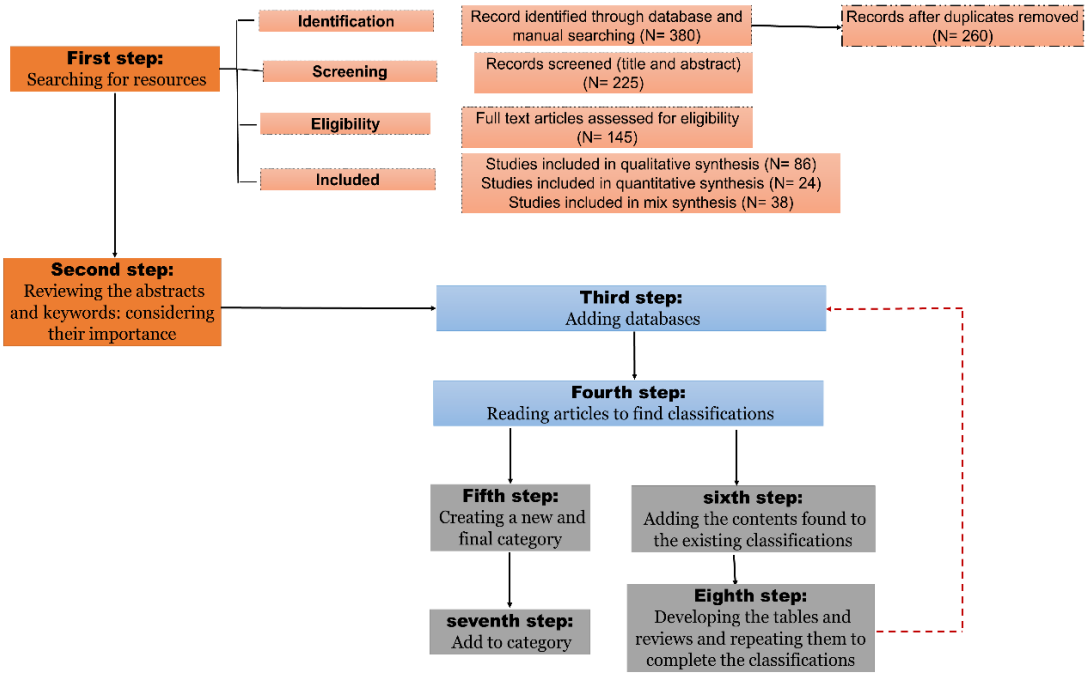

Figure 1. Flowchart of the research methodology.

2.2. Scope of Review

In order to achieve the desired goals using the meta-analysis method, a systematic review of articles and scientific sources related to the subject of regeneration of historical urban cores was conducted. To do this, firstly, the databases of Thomson Reuters, Web of Science (WoS), Elsevier Scopus, ScienceDirect, Emerald Insight, and Sage Publications, which are the fundamental databases for urban development and urban regeneration studies, are explored. Although the term sustainable regeneration is used in the title of the study, in the research process we have tried to examine and consider various studies and concepts related to urban revitalization terms such as renewal, rehabilitation, conservation, redevelopment, improvement, clearance, infill development, refurbishment, restoration, reconstruction, and renaissance. Considering the literature and experiences in this field, the time period from 2000 to 2019 was chosen to select the scientific articles and resources published in valid scientific journals. Surveys in this area show that articles with the above keywords have been indexed on these two sites since 1997. According to the searches, 148 scientific articles have been reviewed. The first important point of this study is that the number of articles and authors in this subject has increased dramatically in recent years (Figure 2).

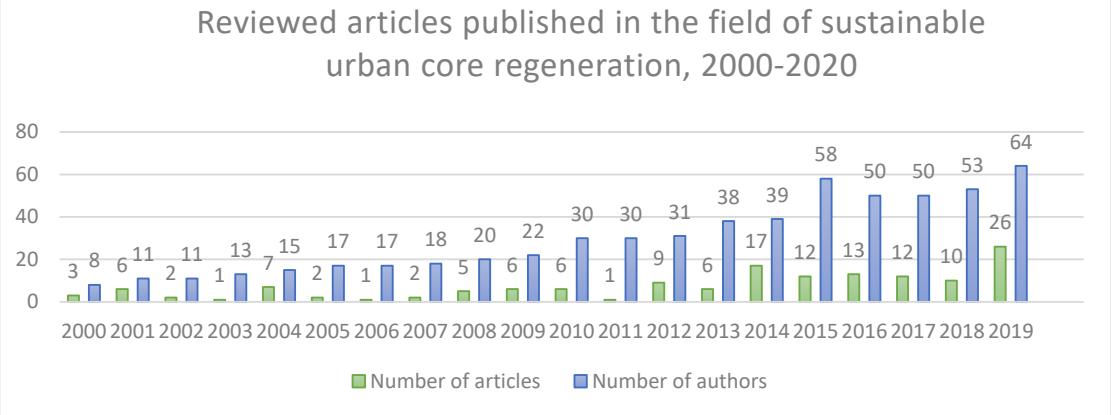

Figure 2. Growth trend of published articles and authors between 2000 and 2019 in scientific journals.

Among 139 papers reviewed in this study, 128 were papers with an empirical approach and 11 used a theoretical approach (Table 1).

Table 1. Article classification based on type.

Classification of articles based on type	Number	Percentage
Empirical	128	93.2%
Theoretical	11	6.8%

From a methodological point of view, the literature shows that researchers have used a variety of quantitative, qualitative, and combinative approaches (Figure 3). Overall, 58% of the articles (81 cases) used qualitative methods, 16% (21 cases) used quantitative methods, and, finally, 26% (37 cases) used combinative methods for their studies (Table 2).

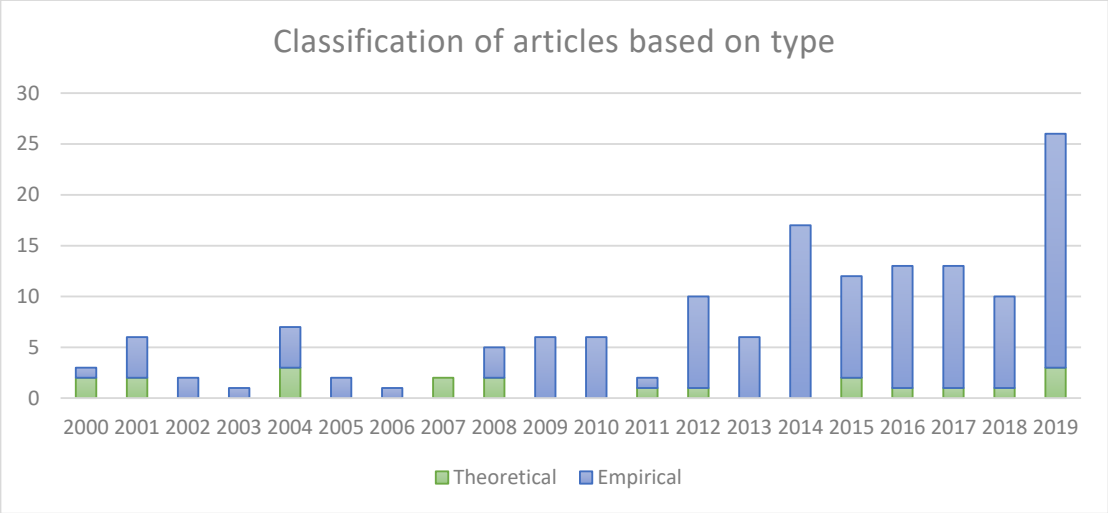

Figure 3. Classification of articles based on article type.

Table 2. Methods used in the reviewed articles.

Classification of articles based on research method	Number	Percentage
Qualitative	81	58%
Quantitative	21	16%
Combinative	37	26%

In qualitative methods, data collection is based on interviews (in-depth interview, semi-structured interview, concentrated discussion sessions), field observations, use of secondary sources (reports, books, articles, web content, and social networks), brainstorming, or a combination of the above methods; in quantitative methods, most of the methods are based on data collection through questionnaires.

3. Results

3.1. Definition of Historic Cores

In examining the literature on historic cores of cities and how human beings have intervened in them, it should be noted that it took more than four decades (from the Athens Charter to the Amsterdam Charter) to change human perceptions and intervention methods from single monuments to the valuable and ancient cores of cities with the aim of revitalization (regeneration). Some believe that the historic core of cities is the same historic context that was built in ancient times [29]. The historic core of cities is recognized as the major focus of governmental, commercial, tourism, and artistic organizations [3]. Historic cores of cities reflect the historical characteristics of cities, physical elements, and urban patterns [30]. This unique space is considered as the physical whole of the city and contains urban elements such as markets, office centers, residential buildings, and other elements with the identity of ancient cities [31]. The architectural urban identity of any city is born and evolves in its historic core, and recognition of this identity is only possible in this area of the city [32]. Historic cores of cities are returning as large parts of a metropolis, and an urban regeneration approach aiming to improve physical, economic, social, and cultural conditions of these areas seeks to revitalize these regions and make them viable [33]. Historic cores or the same early centers of urban development have a variety of urban layers, such as residential neighborhoods, business areas, office spaces, cultural heritage, and so on, each having various potentials that can have a direct impact on the sustainable regeneration of the historic cores of cities [34].

3.2. Review of Literature

There are many terms for urban regeneration. Thus, the authors have used terms that have close meanings to this term, such as urban revitalization, urban redevelopment, urban renaissance, and urban renewal. Additionally, although the term sustainable regeneration is comprehensive and includes the issues of urban revitalization, for emphasis, the term urban revitalization was also added to the study title. Urban revitalization involves detailed and comprehensive insight and action that leads to solving of urban problems and improves the economic, social, physical, and environmental conditions of the area under change [9], and includes terms such as renewal, rehabilitation, conservation, redevelopment, improvement, clearance, infill development, refurbishment, restoration, reconstruction, and renaissance. Today, the term urban regeneration is widely used in studies that address economic and social indicators in the field of regeneration [35]. However, in many studies, urban revitalization is called urban regeneration. Urban revitalization is the context of a public policy that offers an integrated, comprehensive, and practical perspective that leads to solving of urban issues such as economic downturn, environmental collapse, social isolation and indolence, increasing unemployment, and some social urban problems [36]. From the viewpoint of various scholars, regeneration of historic cores includes physical reconstruction and revitalization of economic activities [37]. Physical regeneration can be considered a short-term strategy and economic regeneration a deep function with a longer time period [38]. Physical revitalization can lead to creation of an attractive public territory [39], and old buildings together with abandoned infrastructure represent an important aesthetic, cultural, and economic source and provide existing spaces for new activities, supporting of sustainable local development, and regeneration processes [40]. Thus, economic indicators are also considered the driving force for revitalization and viability of these cores [41]. According to Carta (2004), cities, in order to achieve more comprehensive development, must consider the interaction between urban regeneration, economic development, and private sector investment [21]. Therefore, in the long run, economic revitalization of historic cores plays an important role in preserving and enhancing the nature of public territories [17]. Additionally, sustainable regeneration, utilizing local assets such as social, physical, cultural, tourism, and other forms of potential, creates capacity and is a holistic approach [42]. It can be understood that the regeneration of urban cores is a type of reuse of spatial resources and assets and inherently reflects sustainable development thinking [36]. In fact, urban regeneration benefiting from existing assets and local communities is one of the newest concepts in urban planning discourse [43].

Urban regeneration instead of planning and development of new urbanism is an aspect of the management and planning of existing urban areas [36]. Successful experiences in regeneration of the

historic cores of cities confirm the correlation between improvement of economic conditions and preserving urban cultural heritage in these areas [43]. According to all these, historic cores of cities are among the valuable urban areas that have various potentials, which alone play a significant role in regeneration of cities [44]. Urban regeneration can be an effective tool for promoting sustainability and macro-level strengthening of quality of life if the principles of encouraging participation, building social character, promoting justice, promoting the environment, vitalization, and fostering economic growth can be seen following it [45]. Sustainable urban regeneration is a comprehensive development process in social, economic, environmental, physical, and cultural areas in order to improve quality of life in target areas and neighborhoods in relation to the whole city. Sustainable urban regeneration plays an important role as a community-based process for people achieving economic, environmental, and social well-being through revitalization of urban texture [46]. The purpose of sustainable urban regeneration can be examined from two general perspectives:

- Sustainable regeneration seeks to maximize tourism revenue, boost urban efficiency, improve livelihoods, attract investors, increase cheap housing, and improve the existing infrastructure [3].
- "Sustainable regeneration creates a positive image; it creates an image of a strong and balanced community that is economically competitive, socially cohesive, and environmentally sustainable" [47].

According to reviews of different sources, there are different theories about urban regeneration, which in recent years have been influenced by the sustainable development approach. The role of each of the economic, social, cultural, and environmental indicators in the regeneration of urban cores is undeniable. Emergence of sustainable urban regeneration can be traced back to the late 1990s, when urban regeneration began with a physical approach, and it gradually became clear to scholars that such thing would not be realized without attention to economic indicators [38]. For a more thorough examination, the evolution process of this issue can be divided into three time periods. The first period is from 2000 to 2010, when economic and physical approaches played a major role as the most important factors in the regeneration of historic cores of cities. In this time period, countries such as England, the Netherlands, and France in Europe and countries such as China, Iran, and Turkey in Asia had the highest share. However, in the second time period (2010 to 2015), cultural and social approaches played the most important role in the regeneration of historic cores. This period of time can be considered the turning point of urban regeneration research, as we see shifts in approaches from purely physical research to cultural-social research that prioritizes the role of stakeholders and influential agents. The final period (2015 to 2019) can be considered the period of boom in regeneration of historic cores of cities because attention to urban cores as cultural heritage and the protection of them for economic returns has played a significant role in regeneration of these areas (Figure 4).

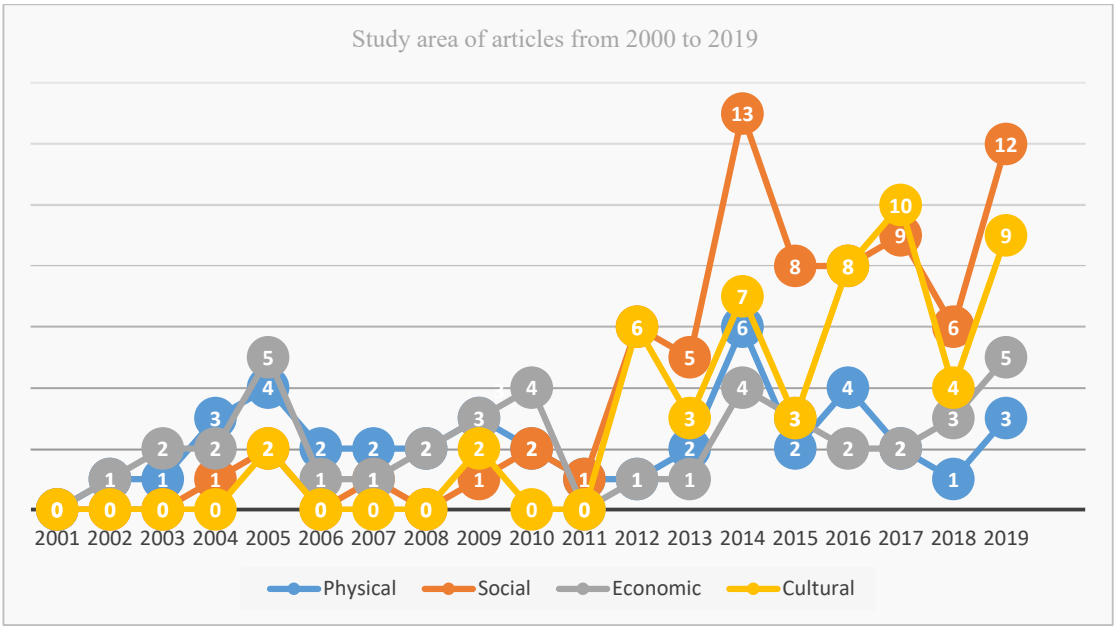

Figure 4. Study area of articles from 2000 to 2019.

Over time, due to multilayered nature of the spaces at historic cores of cities, which incorporate various functions, such as commercial, residential, tourism, etc., the role of each of sustainability indicator has gradually become relevant in projects and studies, such that among the 148 articles reviewed in this study over a 19-year period, 37 articles included sustainable urban regeneration with an economic approach, and 30 included physical issues in these urban areas. In regarding the social aspect and its role in sustainable regeneration of urban cores, it can be noted that today such studies and projects play the most important and fundamental role; thus, the articles reviewed in the present study include 37 articles in the social area, the highest share among the different sustainability indicators. The environmental approach and its role in sustainable regeneration of urban cores is also undeniable and seven articles (10%) have addressed regeneration of historic cores of cities with an environmental approach. A cultural approach has also has played an important role in recent years in sustainable regeneration of urban cores, such that 32 articles include culture-led approaches.

4. Classification of Articles by Subject and Indicators

Reviewing and categorization of the articles showed that the approaches and attitudes toward dimensions of sustainable regeneration of historic cores of cities could be divided into economy-led, social-led, physical-led, and culture-led dimensions. The related analyses can be seen in the following.

4.1. Sustainable Regeneration of Historic Cores with an Economy-Led Approach

Although all types of regeneration approaches (physical, cultural, and social) are necessary and complementary to enhance the viability of the historic cores of cities, the economic approach is significantly important in this regard because one of the most important determinants of urban regeneration feasibility is the economic power of the region seeking to return capital [36]. Any region has unique economic characteristics that affect its regeneration ability. For example, cities having intra-local competition have poor economic performance and are not successful in regeneration (ibid). One of the most important goals of regeneration of historic cores of cities is to enable economic exploitation of historic sites in such a way as to cover the costs of regeneration of these valuable heritages and provide a return on investment for owners or investors and, ultimately, provide the necessary revenue to meet the long-term costs of maintenance and protection of historic buildings

and textures [48]. Park believes that economy-led regeneration is achieved by improving the present values of land and by providing financial support to investors [49]. To realize such an issue, use of mixed uses with various functions can be a turning point in the regeneration of historic cores of cities [50]. Elseragy (2018) views regeneration to be dependent upon changes in activities or the introduction of new uses and introduces such action as "functional diversity" in the historic cores of cities [43]. Sustainable urban regeneration seeks to attract a variety of economic activities and competition among stakeholders. It therefore encourages the residents and visitors to reuse these areas [43]. However, it is important to note that some areas that have been dependent on production of their traditional industries do not accept infrastructures to attract modern services and advanced activities with high technology [36]. In fact, it can be understood that employment is at the heart of economic-led regeneration and is aimed at creating jobs and a thriving retail market [51]. Dixon (2005) considers the contribution of retail development to cities as essential and views retail as one of the main elements of regeneration plans [52]. Creation of local markets and retail areas in historic cores of cities with a mix of shops, colors, traffic patterns, etc. that all represent the native culture of the region can be introduced as the brand of the city and can have a great impact on attracting different groups of people from local people to domestic and foreign tourists [53]. In recent decades, urban regeneration has also supported promotion of the quality of urban space through development of retail and tourism [54]. Tourism development can also be a tool to help regeneration and economic growth, or to stimulate it and, at the same time, promote the physical-spatial quality of historic cores so as to be able to increase the capital to improve living standards in local communities [36,55]. However, it is also important to note that large-scale commercial development can be dangerous for historic cores of cities because, if it is not properly designed in the historic core, it may spread as a cancerous mass in these areas [56].

Ultimately, the economic power of the region will reinforce or inhibit the process of regeneration [36]. The point that we should attend to is that plans to reorganize worn out urban texture in the age of globalization have focused on physical reconstruction and economic growth in order to accumulate capital and have ignored the social dimension and social networks in these contexts [57]. This lack of attention to the social dimension has prevented citizens from participating in these projects [58]. On the other hand, one of the most important concerns in the regeneration of historical urban cores is how investors behave in these projects. They see creation of changes in use in these areas as a good way to return their capital, which in practice will lead to further decline in these areas; by applying laws such as tax exemptions or merging public and private budgets, this trend can be controlled to some extent [59]. However, due to the long duration of urban regeneration projects and the dependence of policies on time, the manner of investment is affected by these factors, which in most cases causes damage to the local economy and stops regeneration [60]. In a sample study in Gwangju, South Korea, a wrong and unsustainable national strategy has had a negative impact on the regeneration process in the region and has reduced its attractiveness to both domestic visitors and foreign tourists [61]. Nasser (2003) points to the negative impact of economic indicators on the value of historical fabrics. For example, cultural heritage turns into a product that becomes involved with the tastes of organizations and consumers and loses its economic and social identity [62]. Additionally, the presence of investors in historical fabrics of cities and their investment will have negative consequences, such as stopping of local commercial activities, relocation of residents from those areas, creation of class differences, and ultimately a negative impact on regeneration [1]. Evans believes that the regeneration approach may not always be positive and sustainable, and, if it goes too far in one area, it can quickly lead to the creation of single-function spaces and a sudden increase in real estate prices and rents and, in general, in aristocracy and the destruction of the indigenous and local economy [24]. Miles and Paddison also argue that, despite the positive cultural and economic effects of sustainable urban regeneration, paying attention to this concept as an economic solution is a short-sighted approach, because neglecting the economic and cultural issues in the region may lead to destruction of economic and cultural values in the environment [63]. In her study of the components of investment and influence power as indicators of the economic regeneration of

historical fabrics, Marichela Sepe (2014) argues that urban regeneration work requires a complex combination of actors, norms, processes, and plans in different scales, and she suggests local economy, local participation and identity as important factors for urban regeneration and the creation of a creative city [64]. Noon [65] and Seo [66] also believe that revitalization of economic policies in historical fabrics should focus on goals such as prioritization of attracting domestic capital, encouragement of self-employment, increasing of professional skills, and reduction in costs of living. Murray [67] also emphasizes the spontaneity factor in representation of a place, and considers predetermined guidance and design of the economic role of places a violation of the endogenous flow of formation and regeneration of place (Figure 5).

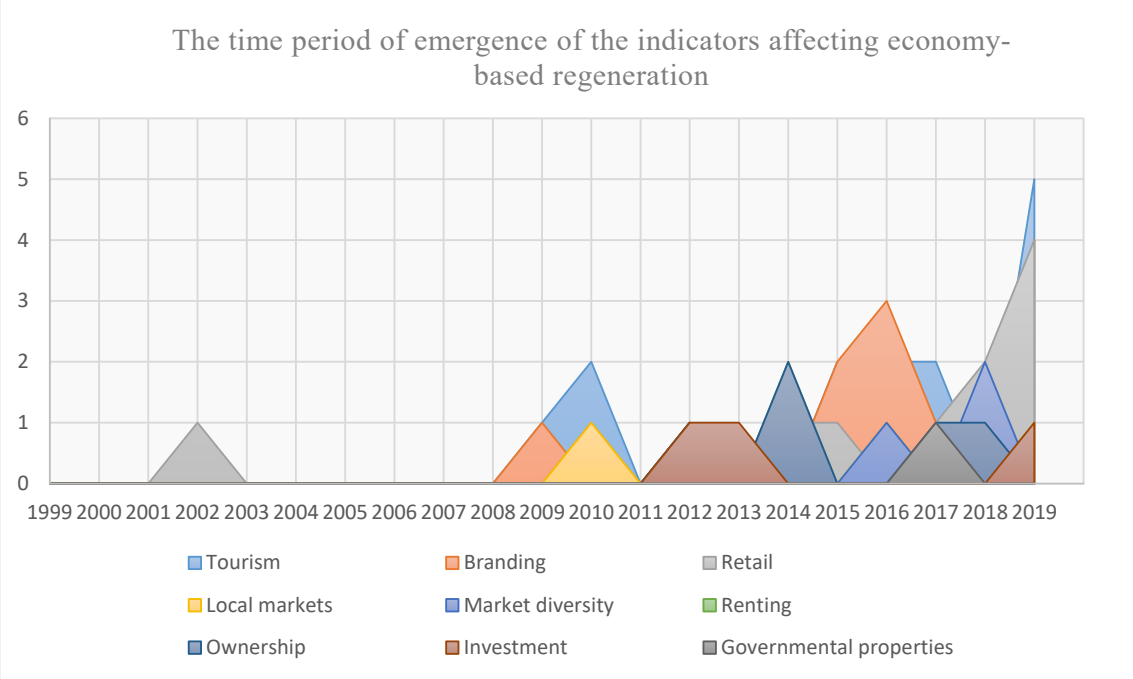

Figure 5. Time period of emergence of the indicators affecting economy-led regeneration.

4.2. Sustainable Regeneration of Historic Cores of Cities with a Physical and Spatial-Led Approach

The physical-spatial environment of historic cores of cities seems to have a major impact on the mental image and sense of belonging of stakeholders and influential agents and can be an important driver for further investment in these regions [36]. The goals of using the physical-spatial environment through the process of regeneration depend on local needs. In historic cores of cities, in the central business areas (markets), the regeneration process has been largely accompanied by renovation of downtown buildings and infrastructure (ibid). Following the increase in the existing building and population density, sustainable urban regeneration seeks to integrate land use planning with transportation planning in order to reduce reliance on personal cars. One of the most important measures in this area is development of urban sidewalks for the regeneration of historic cores, especially their commercial areas, because the quality of urban environments and urban centers is of particular importance. In recent years, we have seen large investments in improvement of physical-spatial conditions of historic cores of cities, such that most of these areas have pedestrian paths ending in squares and public spaces [36]. This approach, given the sub-indicators of physical reconstruction of space and creation of spatial integration between 2005 and 2015, is identified as one of the most important factors in regeneration of the historic cores of cities with physical approaches.

Physical-led regeneration focuses on resolving the problems of dense cities, such that urban regeneration as a tool to revitalize the existing urban structures, while making better use of the existing physical structure, overcomes challenges such as urban sprawl [43]. The physical space that

forms various aspects of the urban landscape must be integrated to create a coherent mental image and a suitable place for the activities of users and must restore their lost identity [49]. Among the other solutions, protection and revitalization of cultural heritage in these spaces can be mentioned, which can be examined from various perspectives. For example, between 2008 and 2015, the purpose of repairing such spaces was to preserve integrity in the historic cores of cities so that the identity and sense of belonging among the residents will not be destroyed. From 2015, local activities at the heart of cultural heritage have contributed much to regeneration of the historic cores of cities. Therefore, in addition to the physical aspect of urban design in the recreation of historic cores of cities, the identity aspects of urban elements must also be taken into account (Figure 6).

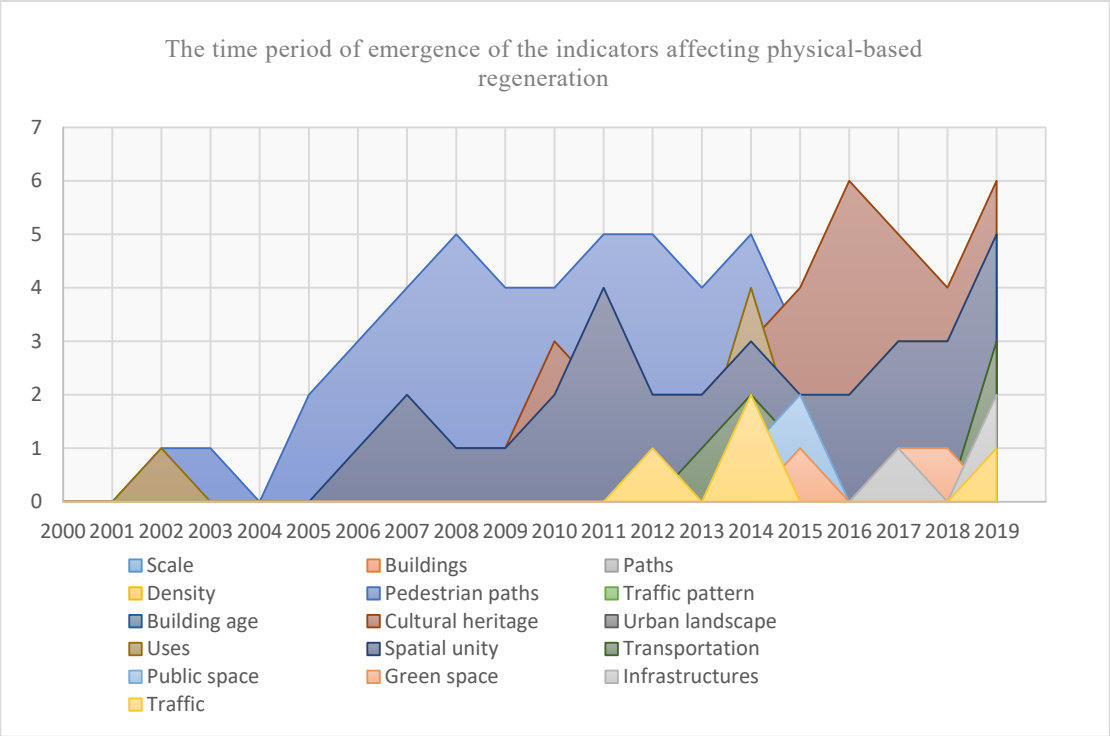

Figure 6. Time period of emergence of the indicators affecting physical-led regeneration.

4.3. Sustainable Regeneration of Historic Cores of Cities with a Social Approach

Although all the principles of sustainable development have been proposed in regeneration, the dominant and latest viewpoint is the "social sustainability" debate that manifests in a sustainable place. Some believe that social sustainability is a certainty of development, while physical, environmental, and economic sustainability are types are goals of sustainable development and means to achieve them. Without local social capital, there is no possibility of urban regeneration [68]. Social capital includes a group of norms, social networks, and mutual trusts that facilitate cooperation and synergy of individuals to advance common interests [69]. From another perspective, it is a set of relationships, interactions, and social networks that exists among individuals and social groups and strengthens and facilitates social actions. Social capital is a collective concept and its basis can be searched for in the behaviors, attitudes, and talents of individuals [70]; it represents a complex network of relationships between stakeholders and influential agents that can be examined at local, regional, and national levels [71]. Urban regeneration projects, in turn, require a participatory aspect that includes incorporating all types of stakeholders from the initial to the final stage [42]. Social cohesion also implies a local state and prepares an area for cooperation between government and the local organizations [72]. Regeneration projects and programs may become a participatory activity in order to potentially enhance social management and deliver results related to community

empowerment, thereby inviting local stakeholders to actively participate in the local regeneration process [73].

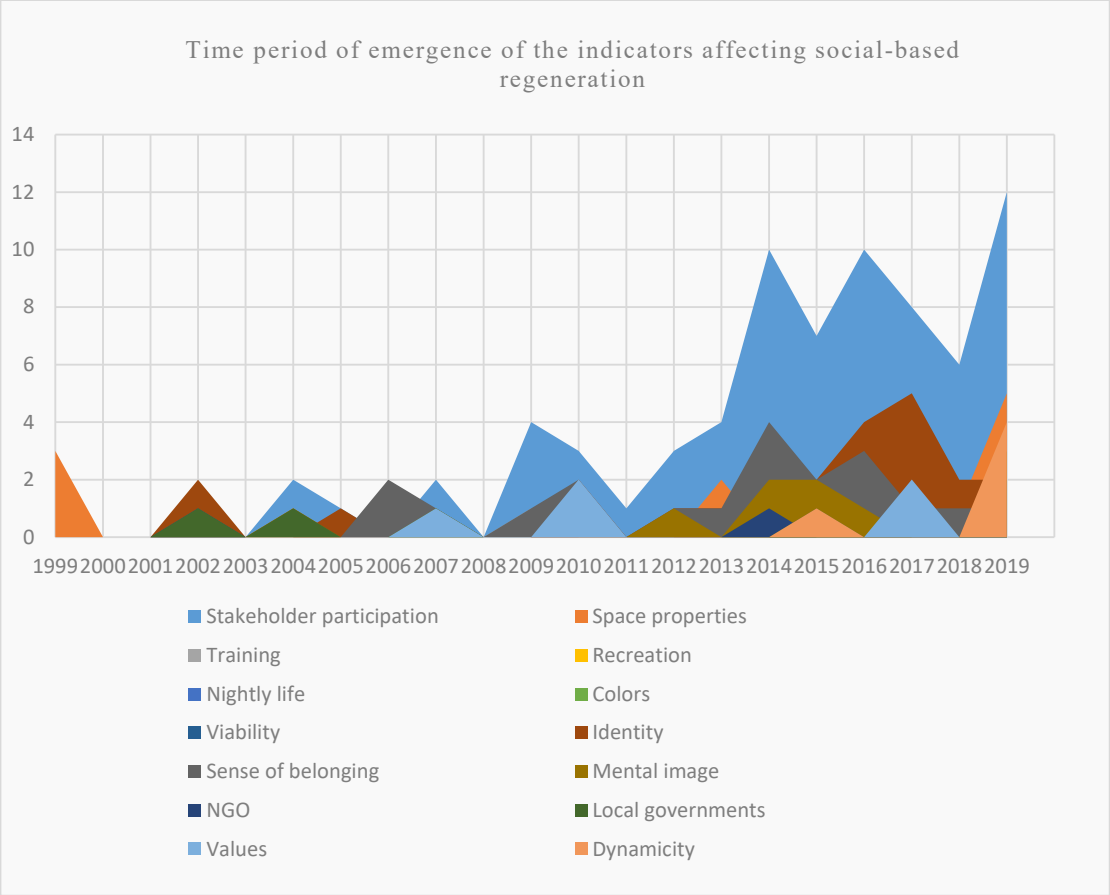

Figure 7. Time period of emergence of the indicators affecting social-led regeneration.

Sustainable regeneration with a social-led approach using local knowledge and taking into account the interests and viewpoints of different stakeholders and influential agents can be regarded as the most important approach at the forefront of sustainable regeneration of the historic cores of cities [46]. In addition, social diversity becomes a driving force rather than an impediment [74], and it is very important that we know different groups and pay attention to their unique requirements, and be careful to avoid loss of social diversity [75]: without external support, including local and national support, the process of sustainable regeneration would not be possible [71]. In examinations conducted in various studies, the role of stakeholders is so important that nearly 70% of the studies have paid attention to its importance, and, since 2014, we have seen a significant increase in such research, and it has been considered the most important indicator for regeneration of historic urban cores. Thus, it can be said that the sustainable regeneration of historic cores of cities with a social approach seeks to create an environment that, firstly, provides the ground for return or retention of old residents and tradespeople and, secondly, by creating environmental security and quality in these areas, provides the ground for a diverse presence of people and tourists (Figure 7).

4.4. Sustainable Regeneration of Historic Cores of Cities with a Cultural Approach

This policy has been a comprehensive approach since the early 1980s and has continued to date, and is a major wave that has affected urban regeneration projects across Europe [45]. The consequences of cultural characteristics in the field of urban regeneration have become more

important as of today [76]. The main features of this approach to disorganized urban textures are attention to the role of culture, attention to how people spend leisure time, use of historical and cultural values as resources for development, and consideration of the financial and economic benefits of urban projects by investing in line with creating cultural and artistic and leisure time centers, such that, in addition to the return of capital, the affected areas are also highly influenced due to creation of specific attractions for the presence of people [45,77,78]. One of the most important indicators, such that its role has been mentioned in half of the studies, is the debate about cultural heritage and its conservation, which has grown significantly between 2015 and 2019. In sustainable urban regeneration, the greater the value given to local cultural features such as cultural heritage and place identity, the more attractive the urban regeneration performance for locals and visitors will be [24]. Therefore, the traditional landscape of the historic core of cities is stronger than new urban elements, and, without considering this structure, a development plan is impossible [79]. It is important to emphasize that the role of culture in urban regeneration goes beyond the aspects of ethnicity, traditions, and social norms which commonly use for the social and human dimension [80]. In a broader sense, cultural heritage is the result of human processes and activities in urban spaces, and is not a purely physical product [81], because by performing targeted human activities, it can provide the ground for tourism development and tourism attraction, so that by making the space dynamic and increasing the income level of stakeholders, it can play a role as a catalyst in the sustainable regeneration of these areas, and all these features are directly related to stakeholder training in the historic core of cities. This requires identification of the cultural heritage, moral values, social customs, and beliefs or myths of any cultural source [82]. The historic core of cities can also be seen as a cultural area that includes a collection of artistic facilities, institutions, and other sustainable items, such as museums, libraries, restaurants, and retail spaces [83]. At the same time, measures taken to improve the old texture of cities may themselves lead to decline and destruction of historical fabrics. In many cases, the historical fabric has good apparent attractiveness, but due to the mismatch between the services available in the area and the needs of the contemporary era, it causes isolation, backwardness, and decline in quality of life [84]. Additionally, despite the high importance of tourist attractions and their role in the success and development of tourism destinations, due to lack of scientific knowledge of the indicators for evaluating touristic attractions and ranking criteria in urban development planning, tourism destinations may be associated with deviations and damage [85]. Butler also believes that the role of tourism in urban regeneration does not meant just any kind of tourism, but, in fact, a sustainable tourism—a tourism that can continue indefinitely in a certain environment and does not harm the environment humanly and physically, and which is active to the extent that it does not harm development of other social activities and processes [86]. Pearce, although he believes that tourism potential, can be used as an opportunity for cultural interaction, emphasizes that the imposed inflation, costs, and over-dependence on tourism should not be neglected as negative consequences of this industry in the process of development of cities and urban cores [87]. In addition, the economic benefits of tourism in regeneration are widely known, but the main issue is to create a balance between costs and obtained profit. For example, cities with a strong and diverse economic base can better attract tourism's advantages. However, it is important to note that, as the economic dependence of a city on this sector increases, the effects of tourism will become negative [88]. From the perspective of sustainable regeneration, attracting tourists to historical areas can have good results, but the World Tourism Organization considers the imbalance between the number of tourists and the number of residents a negative and deterrent factor for urban revitalization of that area [89]. Although tourism is an important economic opportunity for urban regeneration in terms of growth and development, this activity often has negative impacts on the environment in urban textures, such as a negative impact on the climate, increased pollution, environmental damage, and so on [90]. Although tourists can create socio-cultural changes in societies, they may also have negative effects such as destruction of local cultures and origins [91].

It should be noted that despite the positive effects of tourism on the culture of host communities, it may also have negative effects on culture and traditions. In local communities, most residents

consider tourists to be alien elements in their daily lives. This may affect their culture, customs, and traditions. Commodification of the local culture through tourism may weaken originality in the culture and change traditions [92] (Figure 8).

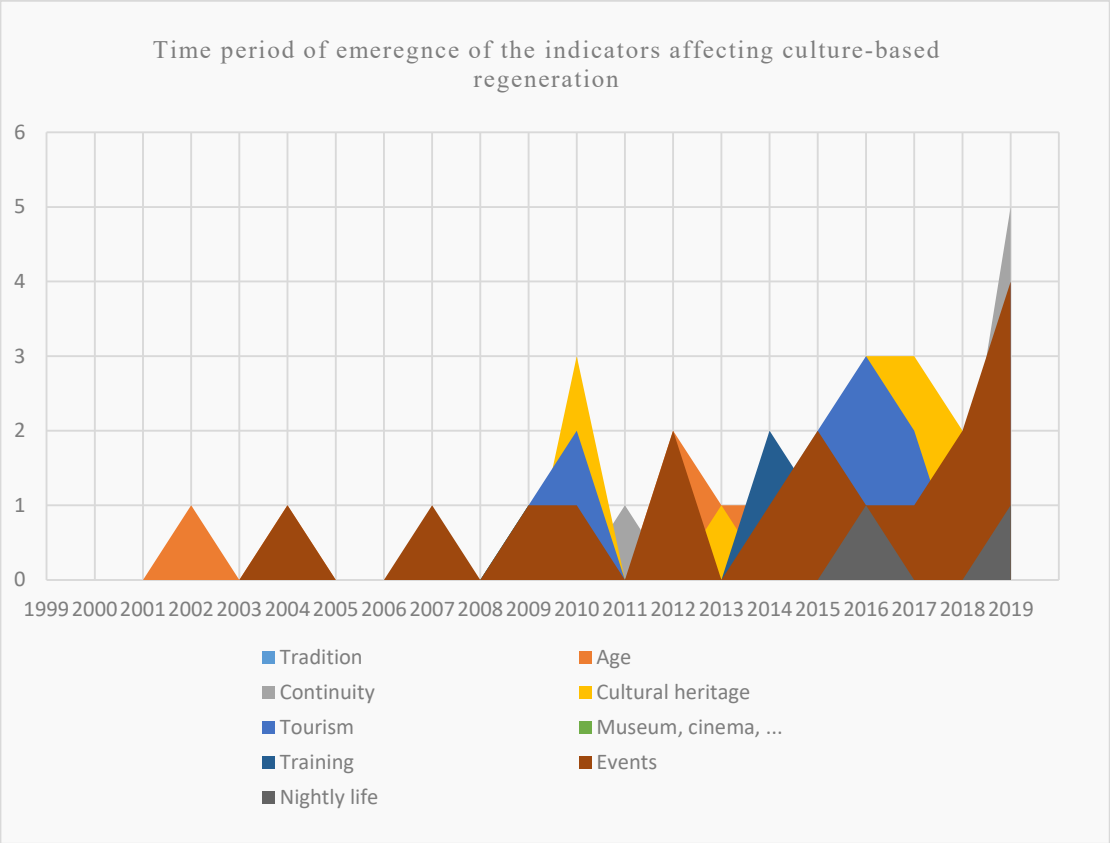

Figure 8. Time period of emergence of the indicators affecting culture-led regeneration.

5. Discussion

The meta-analysis of research and experiences in the field of regeneration of historic cores of cities shows a structural evolution of the concept, which has made it an important activity in any country and has increasingly turned it into an important political goal [36]. This evolution is observed in various dimensions, such as changes in disciplines, effective dimensions, nature, goals, processes, actors, and scale. Accordingly, urban regeneration can be divided into three general periods: initial, later, and future. In the first period (from 2000 to 2010), we see the emergence of the concept of regeneration in the historic cores of cities, in which special attention has been paid to the physical and economic conditions of these areas. During this period, urban regeneration had an instrumental nature and acted in line with spatial-physical regeneration to provide the opportunity for stakeholders and influential agents to return to these valuable historic urban cores [93]. As noted earlier, these areas of cities have several functional layers, and markets and commercial spaces can be considered as the most important and valuable functional layers of the area [53,94,95]. Therefore, researchers in this period sought to provide contextual conceptual models by which they could improve the quality of life of stakeholders and influential agents.

Regeneration of the historic cores of cities in the later period has been developed in various dimensions and has shaped broader knowledge. In this period, along with physical and economic approaches, we see the presence of a wider range of other approaches, including social and cultural approaches and forces. This reflects a conceptual evolution and addition of new dimensions to regeneration of the historic cores of cities [96,97]. In the present period, sustainable regeneration is

not only a tool to attract external audiences and increase the economic and cultural benefits of their presence, but also is a tool in place planning and management [98]. Meanwhile, in addition to the visual aspects and tangible environmental heritage, attention has been paid to environmental functions and performances as well as the creation of spatial events relying on local and native knowledge and assets of the historic cores of cities [99,100].

In new research in the area of sustainable regeneration of the historic cores of cities, new concepts are emerging, including branding of these areas based on contextual assets; the role of spatial interactions and communications; location assets; participatory processes; the role of stakeholders in regeneration of spaces; interdisciplinary interaction; and native social models in sustainable regeneration of the historic cores of cities (Figure 9). All of these indicate the continuance of the conceptual evolution of sustainable urban regeneration [40,101]. The emergence of new technologies such as ICT and smart textures has also been paid attention in this regard. Accordingly, the goals of regeneration of the historic cores of cities are not confined to the economic, environmental, and physical dimensions of the place, but are a comprehensive approach to all-inclusive development of cores based on social, cultural, economic, functional, physical, and environmental contexts, such that it leads to creation of a positive image based on the inner properties of the cores [102]. In this approach, a hierarchical view of the sustainable regeneration of cores is needed to make it possible to achieve a uniform and homogeneous development at all levels of space and time (Table 3).

Table 3. The evolution process of sustainable regeneration of the historic core of cities.

Sustainable regeneration of historic cores	The initial period of sustainable regeneration	The later period of sustainable regeneration	Future of sustainable regeneration
Disciplinary area	Urban development and architecture	Multidisciplinary	Interdisciplinary
Effective factors	Importance of physical and economic dimensions	Importance of social and cultural approaches	Use of all four approaches hierarchically
Nature	Regeneration as a tool to transform the physics	Sustainable regeneration as a tool for planning and management	Sustainable regeneration as an approach
Goal	Maintaining stakeholders in historic cores of cities	Promoting quality of life	Branding
Process	Top-down	Public participation	Interactive process
Effective actors	Specialists	Specialists, Stakeholders	Specialists, stakeholders, influential agents, and creative group
Research area	UK, Netherlands, Turkey, France, Iran, China	UK, Netherlands, Turkey, France, Iran, China, US, Canada, Hong Kong, Qatar, Egypt	-
Underlying theme in sustainable regeneration	Special attention to tangible indicators	Attention to assets inside historic cores of cities	Attention to assets inside historic cores of cities

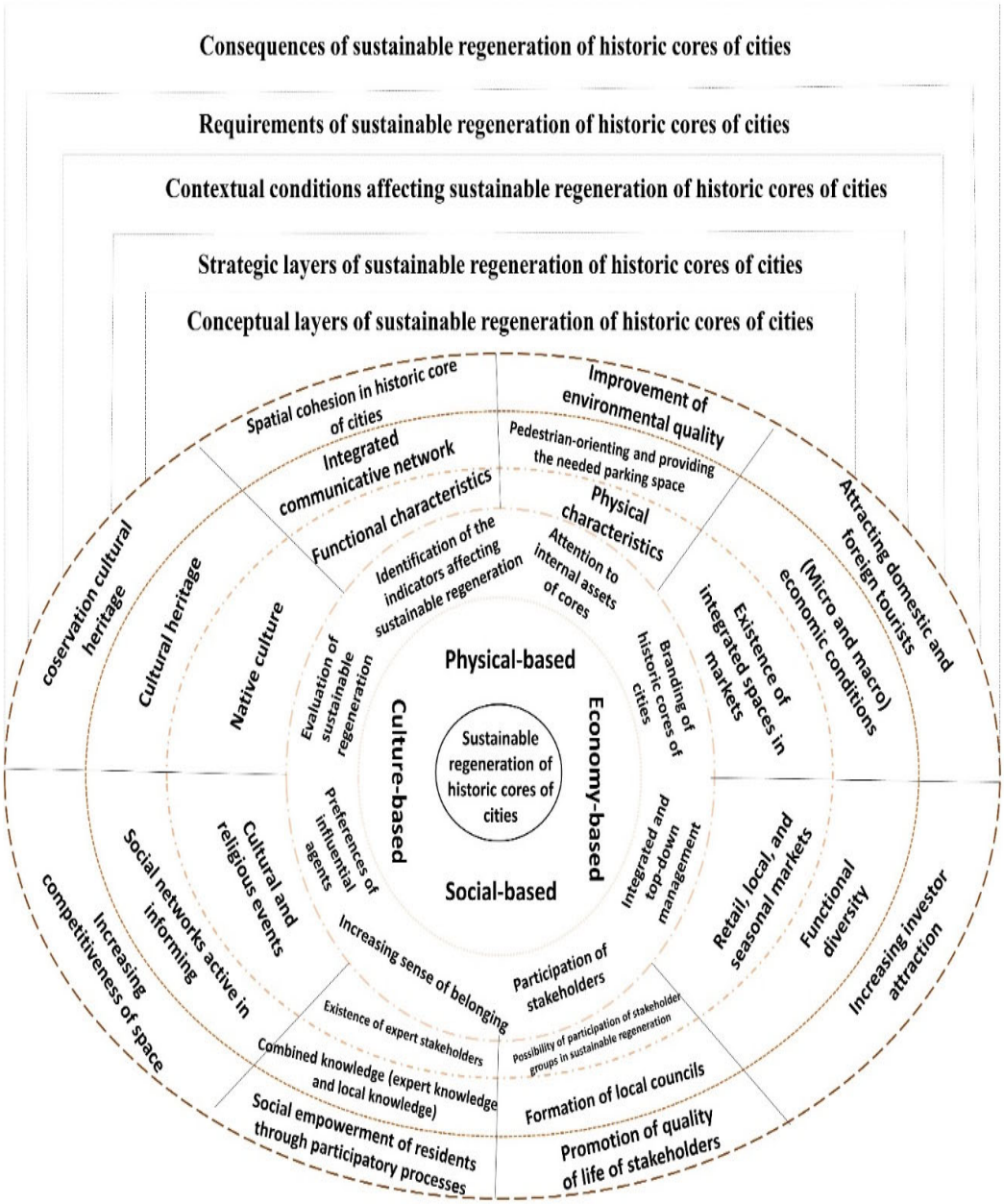

Figure 9. Conceptual model of sustainable regeneration of the historic cores of cities.

6. Conclusions

Today, the global expansion of urban regeneration reflects the willingness of governments to intervene in urban problems through policies, programs, and projects. In doing so, governments, experts, and researchers in the field of urban regeneration face complex issues such as problem identification, formulation of strategies and policies, and implementation and evaluation of this process. The overall attitude of this study is a comprehensive review of urban regeneration as a holistic approach to regeneration of the historic cores of cities. Sustainable regeneration is the result of the interaction of four physical, economic, social, and cultural dimensions, which contribute to the regeneration the of historic cores of cities that all regeneration strategies seek to achieve. To achieve and develop this conceptual core, strategies need to be adopted which vary from place to place. In

new approaches to the regeneration of historic cores, emphasis is put not only on physical and tangible dimensions, but also on the intangible dimensions of place. These strategies are in the form of attention to internal assets of the historic cores of cities, evaluation of sustainable regeneration, stakeholder participation, the preferences of influential agents, native and local knowledge, an increasing sense of belonging, integrated management, and branding of the historic cores of cities along with the emergence of new technologies. One of the most important new approaches to the sustainable regeneration of historic cores of cities is attention to contextual conditions. In general, the highest level of sustainable regeneration of the historic cores of cities is based on assets of these spaces, which underlines the importance of attention to contextual dimensions. Functional features, physical characteristics, local and seasonal retail, the possibility of stakeholder participation in sustainable regeneration, the existence of expert stakeholders, cultural and religious events, and creative and native culture are dimensions that should be taken into consideration and will be effective in development strategies for historic cores.

New attitudes to the sustainable regeneration of historic cores emphasize a contextual approach, the dimensions of which vary across different urban cores and different scales. The present study provides a dense review of definitions, dimensions, goals, research methods, and approaches to sustainable regeneration of the historic cores of cities. Figure 8 represents the concepts related to urban regeneration in the form of a comprehensive model. In this model, by refining the concepts extracted from research, different dimensions of sustainable regeneration were classified and provided in the form of various sections, such as conceptual layer, strategic layer, contextual conditions, requirements of sustainable regeneration, and expected consequences. Among the requirements for sustainable regeneration of historic cores, creation of an integrated communication and management network in historic cores in these areas can be mentioned, which can play a significant role in the dynamics and attraction of different groups. One of the other requirements is attention to a pedestrian-orienting approach and the provision of high-quality access that can maximize the access of people to the historic cores of cities. Among the other requirements are economic conditions (macro and micro), functional diversity, formation of local councils, combined knowledge (expert knowledge and local knowledge), active social networks for informing, and cultural heritage. The consequences resulting from sustainable regeneration, on this approach, include spatial cohesion in the historic core of the city; environmental quality enhancement; attracting domestic and foreign tourists; increasing investor attraction; enhancement of the quality of life of stakeholders; social empowerment of residents through participatory processes; enhancing the competitiveness of the place; and preserving cultural heritage. Thus, in this model, the key concepts of this approach rely on the internal assets of cores, interaction between stakeholders and influential agents, attention to micro and macro contextual conditions, and a strategic approach to sustainable regeneration of the historic cores of cities.

This study, while providing a comprehensive overview of perspectives on and experiences of urban regeneration in historical urban cores, in physical, social, economic, and environmental dimensions, seeks to use these perspectives and experiences in the process of regeneration and development of historical urban cores in undeveloped or developing countries. Of course, future research in this field will emerge with novel experiences of regeneration to further adapt to the cultural, climatic, geographical, and economic contexts of each city, country, region, or continent, and examine the relevant facts, potentials, spatial assets, and cultural, economic, social, and geographical values. The regeneration approach can be analyzed and examined in each of them, although presentation of unique or identical experiences that may not have any similarity or appropriateness in economic, social, cultural, and geographical contexts in other cities and regions should be avoided. In other words, in future research, while comprehensively reviewing the experiences of regeneration and examining their effects and consequences in different countries, it is possible to present models of indigenous, local, and geographical development and regeneration in historical urban cores in different parts of the world. As Roberts also believes, any urban revitalization model should be consistent with overall contextual and spatial conditions [9].

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References

1. Al-hagla, K.S. Sustainable urban development in historical areas using the tourist trail approach: A case study of the cultural heritage and urban development (CHUD) project in Saida, Lebanon. *Cities* **2010**, *27*, 234–248.
2. Gedik, G.S.; Yildiz, D. Assessing the role of users in sustainable revitalization of historic urban quarters: The case of Bursa-Khans District. *A/Z Itu J. Fac. Archit.* **2016**, *13*, 195–208.
3. Heath, T.; Oc, T.; Tiesdell, S. *Revitalising Historic Urban Quarters*; Routledge: Abingdon, UK, 2013.
4. Tweed, C.; Sutherland, M. Built cultural heritage and sustainable urban development. *Landscape Urban Plan.* **2007**, *83*, 62–69.
5. Pilotti, L. Cultural economy for the environmental preservation of the landscape as a key resource in historic territories. *Agriculture* **2018**, *8*, 161.
6. Chandan, S.; Kumar, A. Review of urban conservation practices in historic cities. *Int. J. Emerg. Technol.* **2019**, *10*, 74–84.
7. Nosratabadi, S.; Mosavi, A.; Keivani, R.; Ardabili, S.; Aram, F. *State of the Art Survey of Deep Learning and Machine Learning Models for Smart Cities and Urban Sustainability, Proceedings of the International Conference on Global Research and Education, Balatonfüred, Hungary, 4–7 September 2019*; Springer: Cham, Germany, 2019.
8. Aram, F.; Solgi, E.; Higueras-García, E.; Mohammadzadeh, S.D.; Mosavi, A.; Shamshirband, S. Design and validation of a computational program for analysing mental maps: Aram mental map analyzer. *Sustainability* **2019**, *11*, 3790.
9. Roberts, P. The evolution, definition and purpose of urban regeneration. In *Urban Regeneration*; Sage: Tauzand Ouks, CA, USA, 2000; pp. 9–36.
10. Boussaa, D. Urban regeneration and the search for identity in historic cities. Sustainability **2018**, *10*, 48.
11. Lehane, R. Faculty of Arts, Humanities and Social Sciences. Available online: https://www.researchgate.net/profile/Rachel_Lehane/publication/299456837_The_Effects_of_Urbanization_on_the_Cultural_Identity_and_Wellbeing_of_Indigenous_Youth_in_Chile_The_Mapuche_Community/links/56f93fcb08ae81582bf4356b.pdf (accessed on day month year).
12. Jarah, S.H.A.; Zhou, B.; Abdullah, R.J.; Lu, Y.; Yu, W. Urbanization and urban sprawl issues in city structure: A case of the Sulaymaniah Iraqi Kurdistan region. *Sustainability* **2019**, *11*, 485.
13. Embaby, M.E. Heritage conservation and architectural education:An educational methodology for design studios. *HBRC J.* **2014**, *10*, 339–350.
14. Guzman, P.; Pereira-Roders, A.R.; Colenbrander, B. Impacts of common urban development factors on cultural conservation in world heritage cities: An indicators-based analysis. *Sustainability* **2018**, *10*, 853.
15. Doratli, N.; Hoskara, S.O.; Fasli, M. An analytical methodology for revitalization strategies in historic urban quarters: A case study of the Walled City of Nicosia, North Cyprus. *Cities* **2004**, *21*, 329–348.
16. Martinez-Pino, J. The new holistic paradigm and the sustainability of historic cities in Spain: An approach based on the world heritage cities. *Sustainability* **2018**, *10*, 2301,
17. Leary, M.E.; McCarthy, J. *The Routledge Companion to Urban Regeneration*; Routledge: Abingdon, UK, 2013.
18. Zhang, J.; Zhang, J.; Yu, S.; Zhou, J. The Sustainable development of street texture of historic and cultural districts—A case study in Shichahai District, Beijing. *Sustainability* **2018**, *10*, 2343.
19. Chiu, Y.-H.; Lee, M.-S.; Wang, J.-W. Culture-led urban regeneration strategy: An evaluation of the management strategies and performance of urban regeneration stations in Taipei City. *Habitat Inter.* **2019**, *86*, 1–9.

20. Chang, D.L.; Sabatini-Marques, J.; Moreira Da Costa, E.; Selig, P.M.; Yigitcanlar, T. Knowledge-based, smart and sustainable cities: A provocation for a conceptual framework. *J. Open Innov. Technol. Market Complex*. **2018**, *4*, 5.
21. Carta, M. *Next City: Culture City*; Meltemi Editore srl: Sesto San Giovanni, Italy, 2004; Volume 27.
22. Aram, F.; Solgi, E.; Higueras-García, E.; Mosavi, A.; Várkonyi-Kóczy, A.R. The cooling effect of large-scale urban parks on surrounding area thermal comfort. *Energies* **2019**, *12*, 3904.
23. Ardabili, S.; Mosavi, A.; Várkonyi-Kóczy, A.R. *Building Energy Information: Demand and Consumption Prediction with Machine Learning Models for Sustainable and Smart Cities, Proceedings of the International Conference on Global Research and Education, Balatonfüred, Hungary, 4–7 September 2019*; Springer: Cham, Germany, 2019.
24. Evans, A. The development of urban economics in the twentieth century. *Reg. Stud.* **2003**, *37*, 521–529.
25. Fathi, S.; Sajadzadeh, H.; Sheshkal, F.M.; Aram, F.; Pinter, G.; Felde, I.; Mosavi, A. The role of urban morphology design on enhancing physical activity and public health. *Int. J. Environ. Res. Public Health* **2020**, *17*, 2359.
26. Faroughi, M.; Karimimoshaver, M.; Aram, F.; Solgi, E.; Mosavi, A.; Nabipour, N.; Chau, K.-W. Computational modeling of land surface temperature using remote sensing data to investigate the spatial arrangement of buildings and energy consumption relationship. *Eng. Appl. Comput. Fluid Mech.* **2020**, *14*, 254–270.
27. Glass, L. Patterns of supernumerary limb regeneration. *Science* **1977**, *198*, 321–322.
28. Pigott, T. *Advances in Meta-Analysis*; Springer Science & Business Media: Berlin/Heidelberg, Germany, 2012.
29. Shamaiee, A. The role of traditional urban planning patterns in modern urban planning in Yazd. *J. Stud. Iranian Islamic City* **2010**, *1*, 1.
30. Skot-Hansen, D.; Rasmussen, C.H.; Jochumsen, H. *The Role of Public Libraries in Culture-Led Urban Regeneration*; New Library World: Novato, CA,USA, 2013.
31. Monadizadeh, B.; Safamanesh, K. Basics of valuing old buildings and complexes. *Haft Shahr* **2003**, *12*, 31–45.
32. Haeeri, V. Introducing and evaluating the performance of renovation service offices. *Haft Shahr* **2012**, *41*, 147–150.
33. Zielenbach, S.; Levin, G. College of urban affairs, urban centre. In *The Art of Revitalization: Improving Conditions in Distressed Inner-City Neighborhoods*; Garland: New York, NY, USA, 2000,
34. Escandon, E.A.B. *Electricity Production Using Renewable Resources In Urban Centres*; Ice Virtual Library: London, UK, 2018; Volume 171.
35. Peerapun, W. Participatory planning in urban conservation and regeneration: A case study of Amphawa Community. *Proc. Soc. Behav. Sci.* **2012**, *36*, 243–252.
36. Couch, C.; Fraser, C.; Percy, S. *Urban Regeneration in Europe*; John Wiley & Sons: Hoboken, NJ, USA, 2008.
37. Grodach, C. Before and after the creative city: The politics of urban cultural policy in Austin, Texas. *J. Urban Aff.* **2012**, *34*, 81–97.
38. Hutton, T.A. Trajectories of the new economy: Regeneration and dislocation in the inner city. *Urban Stud.* **2009**, *46*, 987–1001.
39. Naseri, E.; Safari, B. Structural causes of unsuccessful urban regeneration: the case of renovation of atabak neighborhood in Tehran, Iran. In *Re-City. (Im)Possible Cities*; Tampere University of Technology: Tampere Finland, 2018; Volume 83.
40. Ferretti, V.; Degioanni, A. How to support the design and evaluation of redevelopment projects for disused railways? A methodological proposal and key lessons learned. *Transp. Res. Part D Transp. Environ.* **2017**, *52*, 29–48.
41. Noring, L. Public asset corporation: A new vehicle for urban regeneration and infrastructure finance. *Cities* **2019**, *88*, 125–135.
42. Porter, L.; Shaw, K. *Whose Urban Renaissance? An International Comparison of Urban Regeneration Strategies*; Routledge: Abingdon, UK, 2013.
43. Ayoub, M.; Elseragy, A. Parameterization of traditional domed-roofs insolation in hot-arid climates in Aswan, Egypt. *Energy Environ.* **2018**, *29*, 109–130.

44. Abdellaoui, A.; Hottenga, J.-J.; de Knijff, P.; Nivard, M.G.; Xiao, X.; Scheet, P.; Brooks, A.; Ehli, E.A.; Hu, Y.; Davies, G.E. Population structure, migration, and diversifying selection in the Netherlands. *Eur. J. Human Genet.* **2013**, *21*, 1277–1285.
45. Izadi, M.S. Urban conservation and Development, Two complementary or contradictory approaches. *Abadi J.* **2004**, *43*, 12.
46. Ng, M.K.; Cook, A.; Chui, E.W. The road not travelled: A sustainable urban regeneration strategy for Hong Kong. *Plan. Prac. Res.* **2001**, *16*, 171–183.
47. Bahraini, S.; Izadi, M.; Mofidi, M. Urban renewal approaches and policies (from reconstruction to sustainable urban regeneration). *J. Urban Stud.* **2013**, *3*, 17–30.
48. Drury, P.; McPherson, A.; Heritage, E. *Conservation Principles: Policies and Guidance for the Sustainable Management of the Historic Environment*; English Heritage: London, UK, 2008.
49. Park, R.E.; Burgess, E.W. *The City*; University of Chicago Press: Chicago, IL, USA, 2019.
50. Doratli, N.; Revitalizing historic urban quarters: A model for determining the most relevant strategic approach. *Eur. Plan. Stud.* **2005**, *13*, 749–772.
51. Hoernig, H.; Seasons, M. Monitoring of indicators in local and regional planning practice: concepts and issues. *Plan. Prac. Res.* **2004**, *19*, 81–99.
52. Dixon, T.J. The role of retailing in urban regeneration. *Local Econ.* **2005**, *20*, 168–182.
53. Mehanna, W.A.E.-H. Urban renewal for traditional commercial streets at the historical centers of cities. *Alexandria Eng. J.* **2019**, *58*, 1127–1143.
54. Madanipour, A. *Knowledge Economy and the City: Spaces of Knowledge*; Routledge: Abingdon, UK, 2013; Volume 47.
55. Nepravishta, F. Industrial heritage in Albania and the opportunities for regeneration and adaptive re-use. In Proceedings of the Keeping up with Technologies to Make Healthy Places, Nova Gorica, Slovenia, 18–19 June 2015.
56. Shamsuddin, S.; Latip, N.A.; Sulaiman, A. Waterfront regeneration as a sustainable approach to city development in Malaysia. *WIT Trans. Ecol. Environ.* **2008**, *117*, 45–54.
57. Zhai, B.; Ng, M.K. Urban regeneration and social capital in China: A case study of the drum tower muslim district in Xi'an. *Cities* **2013**, *35*, 14–25.
58. Yung, E.H.K.; Zhang, Q.; Chan, E.H. Underlying social factors for evaluating heritage conservation in urban renewal districts. *Habitat Int.* **2017**, *66*, 135–148.
59. Adair, A.; Berry, J.; McGreal, S.; Deddis, B.; Hirst, S. The financing of urban regeneration. *Land Use Policy* **2000**, *17*, 147–156.
60. Bottero, M.; Datola, G.; Monaco, R. Fuzzy cognitive maps: a dynamic approach for urban regeneration processes evaluation. *Valori Valutazioni* **2019**, *23*, 77–90.
61. Jung, T.H.; Lee, J.; Yap, M.H.T.; Inesona, E.M. The role of stakeholder collaboration in culture-led urban regeneration: A case study of the Gwangju project, Korea. *Cities* **2015**, *44*, 29–39.
62. Nasser, N. Planning for urban heritage places: reconciling conservation, tourism, and sustainable development. *J. Plan. Lit.* **2003**, *17*, 467–479.
63. Miles, S.; Paddison, R. *Introduction: The Rise and Rise of Culture-Led Urban Regeneration*; Sage Publications Sage: London, UK, 2005.
64. Sepe, M. Urban transformation, socio-economic regeneration and participation: two cases of creative urban regeneration. *Int. J. Urban Sustain. Develop.* **2014**, *6*, 20–41.
65. Noon, D.; Smith-Canham, J.; Eagland, M. Economic regeneration and funding. In *Urban Regeneration: A Handbook*; Sage Publications: London, UK, 2000.
66. Seo, J.-K. Re-urbanisation in regenerated areas of Manchester and Glasgow: new residents and the problems of sustainability. *Cities* **2002**, *19*, 113–121.
67. Stewart, M.; Lane, C. Area based initiatives and urban policy. In Proceedings of the Danish Building and Urban Research and European Urban Research Association Conference, Copenhagen, Denmark, 17–19 May 2001.
68. Bullen, P.A.; Love, P.E. Residential regeneration and adaptive reuse: learning from the experiences of Los Angeles. *Struct. Surv.* **2009**, *27*, 351–360.
69. Schneider, G.; Plümper, T.; Baumann, S. Bringing Putnam to the European regions: on the relevance of social capital for economic growth. *Eur. Urban Reg. Stud.* **2000**, *7*, 307–317.

70. Landry, R.; Amara, N.; Lamari, M. Does social capital determine innovation? To what extent? *Technol. Forecast. Soc. Change* **2002**, *69*, 681–701.
71. Atkinson, R.; Tallon, A.; Williams, D. Governing urban regeneration: Planning and regulatory tools in the UK. *Eur. Plan. Stud.* **2019**, *27*, 1083–1106.
72. Mayer, M. The onward sweep of social capital: causes and consequences for understanding cities, communities and urban movements. *Int. J. Urban Reg. Res.* **2003**, *27*, 110–132.
73. Savini, F. The endowment of community participation: institutional settings in two urban regeneration projects. *Int. J. Urban Reg. Res.* **2011**, *35*, 949–968.
74. Stren, R.; Polèse, M. Understanding the new sociocultural dynamics of cities: comparative urban policy in a global context. In *The Social Sustainability of Cities: Diversity and the Management of Change*; University of Toronto Press: Toronto, ON, Canada, 2000; pp. 3–38.
75. Colantonio, A.; Dixon, T. *Measuring Socially Sustainable Urban Regeneration in Europe*; Oxford Brookes University: Oxford, UK, 2009.
76. Bouchenaki, M. The interdependency of the tangible and intangible cultural heritage. In Proceedings of the 14th ICOMOS General Assembly and International Symposium, Victoria Falls, Zimbabwe, 27–31 October 2003.
77. Bianchini, F.; Parkinson, M. *Cultural Policy and Urban Regeneration: The West European Experience*; Manchester University Press: Manchester, UK, 1994.
78. Griffiths, R. Cultural strategies and new modes of urban intervention. *Cities* **1995**, *12*, 253–265.
79. Moghimi, L.; Assari, A. Redefinition of pedestrian route-finding networks as a tool to return vitality and responsiveness to Yazd Khan Plaza. *Cur. World Environ.* **2016**, *11*, 378.
80. Guiso, L.; Sapienza, P.; Zingales, L. Does culture affect economic outcomes? *J. Econ. Perspect.* **2006**, *20*, 23–48.
81. Litvin, S.; Tan, P.S.K.; Tay, P.F.J.; Aplin, K. Cross-cultural differences: an influence on tourism ethics? *Tourism* **2004**, *52*, 39–50.
82. Othman, R.N.R.; Hamzah, A.; Abdullah, J. A conceptual foundation and methodological framework for developing urban indicator of heritage city. *Proc. Soc. Behav. Sci.* **2013**, *85*, 474–483.
83. Diamond, J. Strategies to resolve conflict in partnerships: reflections on UK urban regeneration. *Int. J. Public Sector Manag.* **2002**, *15*, 296–306.
84. Lichfield, D. *Urban Regeneration for the 1990s*; London Planning Advisory Committee: London, UK, 1992.
85. Wang, J. 'Art in capital': Shaping distinctiveness in a culture-led urban regeneration project in Red Town, Shanghai. *Cities* **2009**, *26*, 318–330.
86. Butler, T. Re-urbanizing London Docklands: gentrification, suburbanization or new urbanism? *Int. J. Urban Reg. Res.* **2007**, *31*, 759–781.
87. Pearce, G. *Conservation as a Component of Urban Regeneration*; Carfax Publication: Abingdon, UK, 1994; pp. 88–93.
88. Ashworth, G.; Page, S.J. Urban tourism research: Recent progress and current paradoxes. *Tourism Manag.* **2011**, *32*, 1–15.
89. Trends, T.M. *World Overview & Tourism Topics*; UNWTO: Madrid, Spain, 2005.
90. Furt, J.-M.; Michel, F. *Tourismes, Patrimoines & Mondialisations*; Editions L'Harmattan: Paris, France, 2011.
91. Harrison, R. Heritage and globalization. In *The Palgrave Handbook of Contemporary Heritage Research*; Springer: Berlin/Heidelberg, Germany, 2015; pp. 297–312.
92. Monterrubio, C.; Bermúdez, M. Les impacts du tourisme sur l'artisanat local au Costa Rica. Commercialisation et préservation de la culture. *Téoros Revue de Recherche en Tourisme* **2014**, *33*, doi:10.7202/1042432ar.
93. Nobre, E.A. Urban regeneration experiences in Brazil: Historical preservation, tourism development and gentrification in Salvador da Bahia. *Urban Design Int.* **2002**, *7*, 109–124.
94. Guimarães, P.P.C. An evaluation of urban regeneration: the effectiveness of a retail-led project in Lisbon. *Urban Res. Practice* **2017**, *10*, 350–366.
95. Pavlic, I.; Portolan, A.; Butorac, M. Urban tourism towards sustainable development. *Int. J. Multidiscip. Bus. Sci.* **2013**, *1*, 72–79.

96. Blessi, G.T.; Tremblayd, D.-G.; Sandric, M.; Pilatid, T. New trajectories in urban regeneration processes: Cultural capital as source of human and social capital accumulation–Evidence from the case of Tohu in Montreal. *Cities* **2012**, *29*, 397–407.
97. Didier, S.; Peyroux, E.; Morange, M. The spreading of the city improvement district model in Johannesburg and Cape Town: urban regeneration and the neoliberal agenda in South Africa. *Int. J. Urban Reg. Res.* **2012**, *36*, 915–935.
98. Otsuka, N.; Reeve, A. Town centre management and regeneration: the experience in four English cities. *J. Urban Des.* **2007**, *12*, 435–459.
99. Farhat, R. Accountability in urban regeneration partnerships: A role for design centers. *Cities* **2018**, *72*, 8–16.
100. Ferilli, G.; Sacco, P.L.; Tavano-Blessi, G.; Forbici, S. Power to the people: when culture works as a social catalyst in urban regeneration processes (and when it does not). *Eur. Plan. Stud.* **2017**, *25*, 241–258.
101. Mohammadzadeh, D.; Karballaeezadeh, N.; Mohemmi, M.; Mosavi, A.; Várkonyi-Kóczy, A.R. *Urban Train Soil-Structure Interaction Modeling and Analysis, Proceedings of the International Conference on Global Research and Education, Balatonfüred, Hungary, 4–7 September 2019*; Springer: Cham, Germany, 2019; p. 361-381.
102. Ferretti, V.; Grosso, R. Designing successful urban regeneration strategies through a behavioral decision aiding approach. *Cities* **2019**, *95*, 102386.