

Industrialization and City Change; the Concept and Historical Evolution of Urban Regeneration

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Abstract

This study is essentially motivated by the increasing number of problems caused by industrial diversity in urban areas. Environmental degradation, Social decay and economic decline as ultimate outcomes of the Industrialization period forced dramatic changes in the process of urbanization, particularly in the developed countries where the population growth rapidly transformed the textures of cities. Hence, several cities were compelled to reconsider and encourage the practice of sustainable urban regeneration as a momentous process to revitalize these declined urban fabrics. This study first aims to trigger a brief discussion about the Industrialization period and how this trend contributed to transformation of cities. Subsequently, the concept and objectives of urban regeneration process will be extensively explained.

Keywords: Industrial Revolution, Urban Regeneration, Environment, Society, Economy

1. Introduction

One of the most controversial issues regarding the subject of urban development emerged after the Industrial Revolution era in the eighteenth and nineteenth centuries. The impact of this period on social, economic and environmental transformation has risen up numerous discussions in urban issues. Along with the progress of industrialization and industrial development a different set of inter-related factors have substantially influenced the form of towns and cities and the quality of life for people residing within them [1]. As industry grew, the majority of cities started changing and population increased considerably.

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Along with the population shift resulted from rural-urban immigrations, the cities were forced to be transfigured due to the new comer's demands as well as emergence of new innovations and technologies. In the process of the Industrial Revolution and population transformation, steel played a key role in reshaping the former technologies. This change is not only limited to the increased usage of steel-framed buildings but also in larger scale such as transportations, manufacturing and also military purposes – specifically during the World War I and II- the significant footprint of steel production could be obviously observed [2]. Furthermore, some mines used to be made to exploit iron ore, coal and other minerals to supply the needs for steel. But when the time of using these mines and factories came to an end, simultaneously in accordance with the current demands, urban planning policies changed by urban governors and city developers (ibid). On the plus side, regardless of deep influences of industrialization on physical changes of cities, rapid industrial development and its subsequent population growth has induced several side effects on the formation of societies. The process of industrialization has significantly changed the old social order and long-held traditions in urban areas that contributed to generation of new forms of life styles. The remarkable effects of the Industrial Revolution and sudden population growth in social and economic development of cities can be explored by looking at, for example, the American industrialization. After the initiation of the Industrial Revolution in the United Kingdom in the 18th century, this trend started spreading throughout the world, beginning with the United States [3].

Within the span of a few decades from the late 19th to the early 20th century, the United States was gradually transformed from a predominately rural agrarian society to an industrial economy centered in large metropolitan cities [4]. As a result of social change caused by arrival of the Industrial Revolution, economic aspects of the society also took new shapes. This was mainly due to production of new labor markets, rising investment, employment as well as productivity in the manufacturing sector (ibid). Meanwhile, the immigration trend created an “Immigrant Generation” whose social, cultural, and economic characteristics were heavily influenced by their origins that ultimately led to provision of a multi-cultural community in the United State [5].

David Meyer in his book “*The roots of American Industrialization*” discusses about the social and economic effects of industrialization on urban lives with respect to the experience in the United State. He believes that the economic exchange and high market price generated after the Industrial Revolution in this country extremely affected social orders and cultural aspects of the new generation. He declares that:

“Regardless of the degree of local self-sufficiency and extent of external exchange, all exchange in a market economy is embedded in social structure and social relations... Intermediaries (e.g., Wholesalers, financiers) controlling exchange among local communities operate in “communalities” of mutual trust, and their network ties provide information about trustworthy exchange partners; social relations among intermediaries are mechanisms to enforce sanctions against malfeasance in the society [6].”

In fact, urban size expansion -increased number of people in urban places- and urbanization -increased share of the population- closely interrelated with economic growth along with the structural and social changes (ibid). Therefore, it must be generally acknowledged that industry-based development caused by the emergence of Industrial Revolution era has had a considerable influence on formation of cities with new physical and environmental attributes, economic prosperity and social behavior of communities in newly generated urban areas.

2. The Necessity for Regeneration

“Urbanization directly indicates structural economic changes, because it measures transformation from rural to urban occupations (ibid).” Indeed, the rapid urban transformation rooted in industrial drivers had forced several economic, social, physical and also environmental changes on new societies so that Jonathan Rees describes this period of time as “The Shock of the new” for urbanization process [3].

Population and labor shift from lower-productivity jobs in rural areas to higher-productivity ones in urban areas during the Industrial Revolution period contributed to agglomeration economies in urban areas [6]. Indeed, this agglomeration of people and economy made it easier to provide social, educational, health and such facilities as well as to install public services [7]. But rather, after the industrialization period came to an end, the cities started experiencing new situations. The economic boom ceased and subsequently rural-urban population shift gradually stopped. This process was heavily influential in reformation and redevelopment of urban areas in several developed and developing countries. For instance, during the rapid economic growth caused by the industrialization the urban population in the United State increased 4.5 percent annually, whereas during the period from 1810 to 1820 (end of the industrialization when the economy suffered the most) urban growth fell to 2.4 percent (ibid). In fact, the sharp economic declines in metropolitan areas raised up the basic necessities for cities to undergo regeneration in order to create new urban spaces. In a few words, in this period of urbanization, the economy was forced to manage a transition from the production of manufactured goods to the provision of facilities and services, whereby the former needs for industrial centers should have been substantially replaced with new dwellings and social infrastructures that had been little paid attention before.

Meanwhile, the structure of societies and social affairs also faced adverse situations under the influence of economic crisis. As Peter Robert and Hugh Sykes in their book "*Urban Regeneration*" remark: "For reasons of public health and genuine desire to improve urban living conditions, the slums of nineteenth century were eventually acknowledged as an unacceptable end-product of the industrialization process which had dictated the pace and quality of urbanization [8]."

Socially looking, drastic out-migration and decline of economic functions in industrialized areas have changed several social and cultural values. But rather, apart from the fact that industrial development both demands and produces far-reaching changes in societies and the fabric of social life, it reacts both with and upon demographic factors so that it substantially leaves its stress upon the physical environment [7]. Regardless of economic and social negative influences, the Industrialization inflicted high toll upon the environment and physical attributes of cities. Due to the cessation of a large number of industrial centers resulted from population and economic decline in metropolitan areas, the governors, developers and urban planners were supposed to adopt some measures in order to improve the quality of cities. The abandoned and poor-quality industrialized urban areas came in desperate need of regeneration to return to former beneficial uses. Some of them were reconstructed and still remained as industrial-used urban fabrics and some regenerated to fulfill the public demands for new dwellings. In meeting the needs of expanding cities and their populations (especially earlier generations), unprecedented steps should have been taken so that new urban functions and land uses created which were formerly in low priorities. Meanwhile, in the wake of quest for industrialization, several environmental problems such as air pollution (industrialized emissions), solid and hazardous waste problems and depletion of natural resources were arisen. However, many of these environmental negative consequences of manufacturing industries have been closely interrelated with the physical, social and economic aspects of urbanization.

With the purpose of overcoming all socio-economic and environmental barriers, the concept of "Sustainable Urban Regeneration" has become the central issue of discussions from the emergence of industrialization until recent days. The process of sustainable urban regeneration basically came into use in order to resolve such problems as economic collapse, ecological degradation, social exclusion and urban decline that emerged after the Industrial Revolution in several cities of the developed world. Additionally, with respect to growing demands of contemporary urbanization, regeneration of declining urban areas still remained as one of theoretical and practical approaches that is becoming increasing importance to governments and local people, as well as to urban professionals and scholars.

3. The Concept of Urban Regeneration

3.1. Definitions

The concept of urban regeneration is essentially a process concentrating on all elements of an area that contributes not only to the creation of a more environmentally friendly city but also to provision of social equality and economic growth which all together result in more sustainable urban space.

As Chris Couch describes “Urban Regeneration moves beyond the aims, aspirations, and achievements of urban renewal, which is seen as a process of essentially physical change, urban development (or redevelopment), with its general mission and less well-defined purpose, and urban revitalization (or rehabilitation) which whilst suggests the need for action, fails to specify a precise method of approach [9].” Thus, according to Couch’s interpretation, the consideration of urban regeneration is not only limited to the action of renewing. In fact the term of urban regeneration as a comprehensive development process not only encompasses the renewal action- which mainly put stress on physical alternation- but also concurrently can be translated into social and economic contexts.

Lichfield determines the objective of urban regeneration as a need for a better understanding of the processes of decline and an agreement on what one is trying to achieve and how it could be done [10]. Furthermore, in accordance with Donnison’s illustration, urban generation means new ways of tackling our problems which mainly focus on a coordinated way on problems and on the areas where those problems are concentrated [11].

On the plus side, Department of the Environment, Transport and the Regions (DETR) describes the term urban regeneration with respect to its impact on social and economic transitions. According to DETR’s definition:

“Urban Regeneration is about jobs: their creation, protection, quality, skills and the accessibility to various groups within society. It is also about investment: in businesses, in the urban infrastructure of roads, railways, airports, factories, offices, houses and public utilities, and in facilities like shops, tourist attractions, sports and cultural facilities. Finally, it is about wealth: the generation of profit, of income, of resources, and how these are distributed between rich and poor areas, and groups. It is a highly political discipline: it is about people and power [12].”

And lastly, Peter Robert and Hugh Sykes describe this term as a “Comprehensive and integrated vision and action which leads to the resolution of urban problems and which seeks to bring about a lasting improvement in the economic, physical, social and environmental condition of an area that has been subject to change [8].”

3.2. Objectives

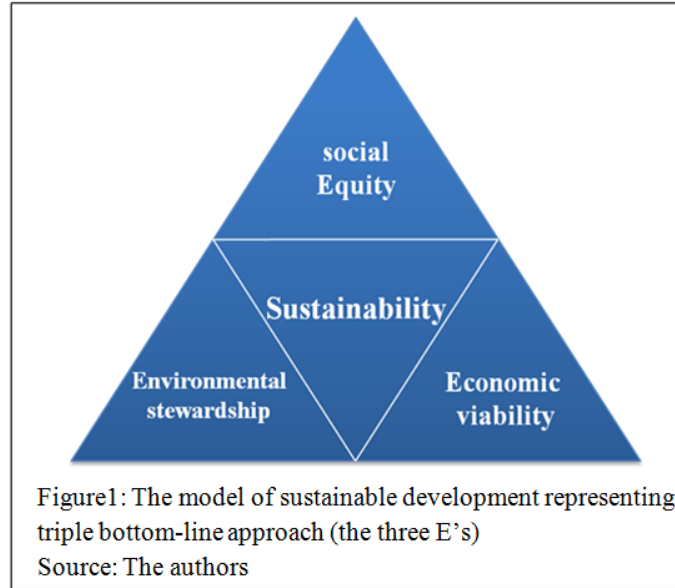
The process of urban regeneration tries to accomplish various objectives. Roberts discovers five inclusive themes as the main objectives of urban regeneration. He believes that this process must be generally aimed to [13]:

1. Establish a strong relationship between physical conditions of urban space and social problems,
2. Fulfill the continued needs for the physical replacement of many elements of the urban fabric like housing and industrial areas,
3. Highlight the importance of economic success as a linkage between social growth and urban progress,
4. Make the best possible use of urban land and to avoid unnecessary sprawl in order to ensure optimum beneficial and effective use of land within the urban area and
5. Enable urban policy to be shaped through the collaborative planning process pursued by a multi-agency approach.

Reconsidering these five themes along with all the data from the history of urban development and transformation display that what is nowadays defined as urban regeneration is an “interventionist activity” (based on Roberts’s

interpretation). This activity comprises of series of strategies, theories as well as practices which should favorably meet three following major implications of urban change:

1. Community and social needs,
2. The necessity for economic and career regeneration,
3. New physical and environmental demands



In other words, urban regeneration approach can be considered as a response to the opportunities and challenges presented by social, economic, physical and environmental changes. Hence, this fact can be reflected that urban regeneration must be translated first and foremost into its trend towards sustainable development. In meeting all three major implications mentioned above, the process of urban regeneration parallels triple bottom-line approach (the three E's) as the key indicator of true sustainability (Fig1).

4. Conclusion

This study first aimed to briefly study the revolutionary process of industrialization and its impact on formation of cities to provide a strong framework for the discussion about the concept of urban regeneration. The subject of Industrial Revolution and its socio-economic and environmental consequences resulted from rapid population growth was mentioned to declare the necessity of regeneration in industrial urban fabrics. Hence, the American experience was exemplified at a glance to demonstrate practical influences of the industrialization process in transformation of urban structures. It was discussed that how environmental, social and economic patterns of cities changed after the emergence of industrialization in the United State.

Subsequently, the research explained the different interpretations and objectives of the term regeneration within the subject of urbanization. As the context of the article emphasized, the process of urban regeneration can be naturally indicated in perspective of sustainability as it substantially promotes triple bottom-line approach.

Beyond all discussed issues, it is absolutely essential to notice the significance of “the uniqueness of place” (ibid). In spite of the fact that the problems and challenges on the way of each sustainable urban development resemble each other in many aspects, they have to be sorted out in accordance with various priorities in different locations [14]. In

short, the challenges that confront the process of urban regeneration vary place to place and over time [15]. The reason can be detected as the existence of various social, economic, physical and environmental trends in different spaces and time which demand multiple approaches towards development processes. In other words, in order to obtain integrated and comprehensive solutions, it is important to understand when and in which urban space the process of regeneration is taking place.

References

- [1] Morley, I., 2005. Post-Industrial Urbanism and the Growth of Sustainability: Historical Trends, Present and Future Observations. Ming Chuan University Taiwan. May 2005.
- [2] Laghai, H. & Moradi, A. & Jamshidi, F., 2012. Brownfields: The concept, definition and their redevelopment model in Iran, Journal of Advances in Environmental Biology.
- [3] Rees, J., 1966. Industrialization and the Transformation of American Life: a brief introduction. M.E. Sharp, Inc. United State.
- [4] Hirschman, C. & Mogford, E., 2009. Immigration and the American Industrial Revolution from 1880 to 1920. US National Library of Medicine, National Institute of Health (NIH) Publication.
- [5] Atack, J. & Bateman, F. & Parker, W. N., 2000. The Farm, the Farmer, and the Market. The Cambridge Economic History of the United States. Vol. 2. Cambridge: Cambridge University Press.
- [6] Meyer, D. R., 2003. The roots of American Industrialization. The Johns Hopkins University Press.
- [7] Mountjoy, A. B., 1963. Industrialization and Underdeveloped Countries. Second Revised Edition Hutchinson University Library.
- [8] Roberts, P., Sykes, H., 2000. Urban Regeneration, A Handbook, London; Thousand Oaks, Calif.: SAGE Publications Ltd.
- [9] Couch, C., 1990. Urban Renewal: Theory and Practice. London: Macmillan Building and Surveying Series.
- [10] Lichfield, D, 1992. Urban Regeneration for the 1990s, London Planning Advisory Committee, London.
- [11] Donnison, David V., Soto, P., 1980. The good city: a study of urban development and policy in Britain, London: Heinemann Educational.
- [12] DETR, 2000. Our Towns and Cities: the Future - Delivering an Urban Renaissance, TSO, Cm 4911.
- [13] Roberts, P., 2000. The Evolution, Definition and Purpose of Urban Regeneration in ROBERTS, P. and SYKES, H. (ed.) Urban Regeneration: A Handbook, London; Thousand Oaks, Calif.: SAGE.
- [14] Duzcu, S., 2006. the Assessment Criteria of Urban Regeneration Projects: the case of the Fener-Balat Districts in Istanbul. A Master Thesis Submitted to the Graduate School of Natural and Applied Sciences of Middle East Technical University.
- [15] Tsenkova, S., 2002. Urban Regeneration, Learning from the British Experience Chapter 1. Calgary: Faculty of Environmental Design, University of Calgary.