

# Developing a conceptual framework for assessing the Socio-economic benefits of Regeneration Projects in UK

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## ABSTRACT

The recent decades have experienced the evolution of building assessment methods for appraising the sustainability performance of building projects. In the UK for instance, government has initiated a number of assessment/evaluation methods to deal with some of the environmental problems associated with regeneration programmes. However, attempts aimed at implementing sustainability assessment have primarily been limited to the environmental impact of building, with the socio-economic aspects often neglected. The findings of an exploratory case study on a housing regeneration project that adopted a combination of literature review and focus-group interview approach with eight (8) key stakeholders for data collection in the UK is presented in this paper. The emergent framework developed and presented in hierarchical order in this paper incorporates project level and wider community socio-economic sustainability indicators.

**Keywords:** Socio-economic benefit, assessment framework, sustainable regeneration, UK.

## INTRODUCTION

The awareness and significance of sustainable development has been a growing concern around the world for the last few decades<sup>1</sup>. The world summits through the 1990s brought the issue of sustainability into mainstream consideration and there has been much research undertaken to align the built environment practices with general concern for the environment and society's responsibility towards future generations' wellbeing<sup>2</sup>. Generally, the performance of the built environment is expressed by the quality of life society benefits from, since most of its sectors contribute to the creation and regeneration of our communities<sup>3</sup>; <sup>4</sup>. The concept of sustainable development and regeneration has been an essential focal point of government policy for sometime in the UK and has contributed to the enhancement of many communities' physical structures<sup>5</sup>. Many of earlier initiatives that were meant to tackle socio-economic disparities have focused on improving the physical and environmental aspects of regeneration. In more recent times, there have been a number of researches which sought to study and analyze how the UK built environment is responding to the challenges of integrating sustainability into regeneration projects<sup>6</sup>. These emerging researches and initiatives have sought to suggest a new approach to delivering regeneration for the 21<sup>st</sup> century and beyond. The Sustainable Development Commission<sup>7</sup> suggests that the development of regeneration has proved to be a testing and ongoing challenge for government agencies, construction industry practitioners and communities within the UK in which these projects have been implemented<sup>7</sup>. The appreciation of such challenges has led to the development of various management strategies and systems to guide and direct industry practitioners and activities to achieve higher and improved sustainability standards. However, attempts aimed at implementing sustainability assessment have primarily been limited to the assessment of the environmental performance of building. According to<sup>3</sup>,

several research works undertaken on sustainable regeneration have shown that they lack a conceptual clarity related to sustainability assessment. They identified sustainable regeneration/development as an evolving subject and suggested the need for further study as there has not been a well-defined research or evaluation framework that has been able to deal with the issues of socio-economic benefits and their evaluation in a comprehensive and a decisive manner. It is quite clear that the present project management systems, the industry structure, the policy and governance structures, and the nature of the assessment systems all have influence on the current construction industry practices' related to regeneration programmes. Consequently, the quest for sustainable regeneration benefit evaluations calls for an exploration of new ways of evaluating sustainable regeneration projects that are under-pinned by strong socio-economic considerations; and which better address sustainability concerns in a holistic manner to maximise the sustainability benefits of these projects.

This paper explores the social and economic impacts/benefits of sustainable built environment regeneration projects in the UK, in particular housing regeneration. It explores and identifies the key sustainability factors and develops an initial sustainability assessment framework that can be utilized to assess/evaluate the socio-economic factors of sustainable regeneration projects. In order to address a broader range of behavioural issues in meeting the objective of the research, a case study approach is adopted as it provides more robust and convincing results from different scenarios within a the case being studied<sup>8</sup>.

## LITERATURE REVIEW

### **Sustainable regeneration a driving force for sustainable development**

The transformation of urban and built environment is often viewed largely in physical terms, for instance, the construction of new hospital, school etc. in a community<sup>9</sup>.<sup>10</sup> defines regeneration 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 ”* pg. 17. Fundamentally, regeneration is about closing gaps<sup>11</sup> and tackling the spatial disparities of communities<sup>4</sup>. Regeneration means different things to different people. The ultimate objective of the regeneration concept is to transform an area economically and socially by creating sustainable places where people want to live, work and feel secure<sup>12</sup>. Sustainable regeneration programmes should have an overriding objective of improving the well-being, quality of life and not just physical infrastructure of the local communities. It also means meeting the needs of the people in a way which delivers social progress, economic growth, environment protection, and better quality of life (<sup>4</sup>; <sup>7</sup>). A sustainable regeneration process should be based on a strategic plan that sets out a comprehensive framework so as to ensure that outcomes such as; wealth creation, well-being, sustainable jobs and lasting legacy for the communities are delivered. The necessary infrastructure development required to meet the needs of the growing world population poses the major challenge<sup>13</sup>. Consequently, sustainable regeneration projects have the potential to contribute to socio-economic structures in the communities in which they are sited if they are well planned and managed.

The Office of Deputy Prime Minister report<sup>14</sup> identified five key elements of sustainable regeneration in relation to planning and management of communities as; sustainable economic growth; social cohesion and inclusion; protection and enhancement of the natural environment; prudent use of natural resources; and the integration of sustainability into development plans. In its most recent iteration, five key elements of sustainability were identified in relation to the integration of sustainable development in urban development plans. Sustainable urban regeneration projects should take into consideration the interaction between physical, social, environmental and economic concerns<sup>15</sup>. A successful sustainable regeneration

programme/project will reinforce a better socio-economic condition and enhance the quality of lives, particularly for people living in the deprived localities<sup>16</sup>. According to<sup>17</sup> regeneration programmes should not only address physical and environmental features, but also consider the broader issues of economic and social factors as well. As such, any regeneration programme that fails to evaluate each of the well-established sustainability pillars is not likely to achieve its sustainable development objectives<sup>18</sup>. Regeneration should be targeted at improving both social equity, economic efficiency and the physical systems within the communities<sup>16</sup>. Sustainable regeneration projects have the potential to reinforce a sense of community confidence, make an important contribution to the local economy and act as a catalyst for improving the wider area<sup>14</sup>. Accordingly, the relationship between the built environment and sustainable development shows greater potential for the implementation of sustainable regeneration initiatives with wider and stronger emphasis on the socio-economic development and better quality of life for all. Therefore, the built environment must be seen to be driving the regeneration processes towards the attainment of the sustainable development agenda. It is worth noting that successful regeneration will require a long-term process and a concerted effort from all the key stakeholders responsible for the delivery of such projects<sup>16</sup>. It has been acknowledged that a successful regeneration programme which is centred on the social and economic well-being of the people concerned is more likely to deliver tangible and sustainable benefits<sup>5; 16</sup>. Of course this will require the evaluation systems and policy frameworks that embrace other dimensions beyond the current consideration of sustainability and not one that is only environmentally oriented<sup>1; 6; 7</sup>.

### **Evaluation/assessment process of sustainable regeneration projects**

There is an emerging recognition that the improvement of the socio-economic structures is more likely to deliver sustainable outcomes of regeneration projects<sup>19; 7</sup>. The built environment influences social welfare and human well-being, urban activities, the economy and the general environment in numerous ways. According to<sup>20</sup> the correlation between sustainable development/regeneration and the built environment has become evident, since construction is of high socio-economic significance. Sustainability evaluation has a key role to play in introducing sustainability ethos and principles into the mainstream of regeneration programmes. Accordingly, the application of evaluation mechanisms requires a level of consideration beyond the current focus on environmental performance to include social and economic considerations of regeneration projects. Such evaluation practices must be carried out in a way that is comprehensive, practical and acceptable to a range of projects and stakeholders with differing interests and priorities to achieve the required benefits. The evaluation process helps to establish whether progress has been achieved towards sustainable development to justify the decisions taken now and for the future. According to the United Nations<sup>21</sup>, evaluation processes provide crucial guidance for decision-making in a variety of ways. Thus, they offer early warning on economic, social and environmental damage, communicate ideas and values. Ultimately, the choice of a framework for evaluation and the set of indicators it uses must meet the priority of the projects<sup>21</sup>. A good evaluation tool must reflect the linkages between the sustainability dimensions to advance social development, enhance economic prosperity and environmental integrity of the community<sup>21</sup>.<sup>3</sup> asserted that unless some evaluation can take place it will be difficult to ascertain whether sustainability is achieving its desired objectives. While a number of evaluation tools and frameworks have been developed over the years, there seems to be no consensus and agreement in the selection of indicators among various bodies responsible for the evaluation of sustainability<sup>3</sup>. They made a call for a new approach and assessment framework which is able to make the value-based judgement in a consistent manner to explain the complexity underlying decisions for sustainable development.

### **Conceptual overview of assessment methods**

There has been a number of assessment methods developed in the past notable among them are the conventional parametric and construction cost models<sup>22</sup>. Recently, there has been a significant growth in the number of environmental and sustainability assessment methods available for use in the construction industry such as the fuzzy logic, neural network, neurofuzzy systems and environmental and sustainability life cycle cost models<sup>23</sup>; <sup>22</sup>. A plethora of assessment systems and tools have been developed for the purposes of appraising the environmental and sustainability performance of building projects, in areas such as the use of energy in buildings, indoor environment and building materials containing hazardous substances, among others<sup>24</sup>. While some of these methods and tools have focused mainly on rating the environmental and sustainability performance of the proposed developments, others have placed emphasis on the assessment of their environmental and sustainability impacts<sup>25</sup>. The development of various forms of assessment methods has largely been informed by the desire to provide building projects with a better profile of environmental performance and the achievement of the best practice in sustainable building design, construction and operation. <sup>26</sup> argued that the subject of sustainability and building performance assessment methods are constantly developing, therefore “*the time and effort required to keep pace with several systems are clearly of importance; pg. 368*”. In order to ensure sustainable development and achieve value for money in sustainable regeneration projects, it is essential that project delivery is underpinned by strong project related socio-economic assessments, which are vital in providing lessons for future interventions and ensuring more effective future regeneration development.

### **Limitations of the assessment methods**

Although the range of assessment methods indicated above have been developed and applied in the construction industry over the period, their focus and attention has remained limited to evaluating the environmental impacts of a proposed building at its design<sup>27</sup>. Their evaluation objectives and procedures have traditionally been limited to design cost and environmental factors, and their validity and reliability for evaluating socio-economic sustainability factors at both pre-project and post project stages still remain to be tested. Their roles and usefulness have also been put into question<sup>28</sup>. It has also been suggested that many assessment methods have been utilized as design tools or devices and centred mainly on evaluating environmental improvements of building designs<sup>29</sup>; <sup>30</sup>; <sup>31</sup>, and in that regards, they are limited in their usefulness to pre-construction project evaluation instead of adopting a holistic and life-cycle approach. <sup>3</sup> pointed out that the current list of methods does not reflect the complexities of issues they were designed to address. They noted that most of the methods formulated were based on environmental criteria and derived from ideas and assumptions of individual practitioners. <sup>25</sup> and <sup>31</sup> identified data intensiveness, impracticality and late application as some of the major criticisms that have been labelled against them. They went on to suggest that a number of the current assessment methods were still functioning as voluntary and market place mechanisms and this was undermining their importance and usefulness. As such, over generalization and reliance on environmental factors were also recognized by the industry practitioners as some of the weaknesses inherent in the current systems which have hampered their usefulness and day-to-day application <sup>32</sup>; <sup>25</sup>.

### **The emerging issues**

However, the pursuit of sustainable regeneration and sustainable building development requires a fundamental change of perspective to the assessment practices currently in use. Accordingly, an effective use of assessment methods requires a level of consideration beyond the current focus on environmental performance to include the socio-economic considerations of sustainable regeneration projects. However, <sup>3</sup> indicated that the current thinking needs to be considered

alongside the improvement or replacement of the conventional methods with those that better address sustainability concerns holistically to enhance their evaluation performance. Since buildings and their components undergo continuous transformations and deterioration over their lifetime, it therefore suggests that any system meant to evaluate them must also be designed in such a way that makes them adaptable and responsive to these changes. Therefore, in order for assessment methods to be useful so as to meet a project's sustainability requirements, there is the need for comprehensive systems and frameworks which seek to adopt a holistic approach by integrating the principles of sustainability into the building processes<sup>25</sup>. Such an approach would set out standards and consider innovative solutions that maximize the sustainability benefits for a potential project. This phenomenon will certainly lead to the attainment of sustainability objectives considered as an integral part of a building project's delivery process. Of course this will require a comprehensive policy framework and a broad-based approach from all the stakeholders within the built environment; and the application of multiple methods of early stage project evaluation as opposed to the single methods based on conventional capital cost forecasts which are explicitly inherent in the current approaches as suggested by<sup>25</sup>.

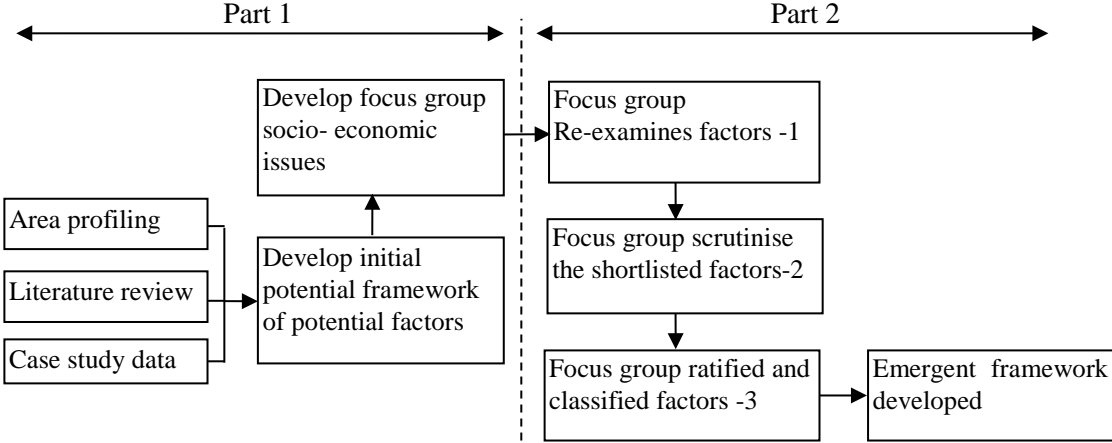
### **Socio-economic framework and policy objective**

There is no doubt that sustainability considerations are inherently multifaceted and multidisciplinary, as a result there are several issues that need to be addressed to develop a practical set of sustainability criteria to achieve the harmonization of their objectives<sup>33</sup>. The performance of the evaluation and policy frameworks currently in practice has been well acknowledged by the industry players. <sup>34</sup>maintained that, most policy documents on sustainability exist in an abstract form, and in most cases never get conceptualized and operationalized into tangible goals. <sup>2</sup>identified gaps between sustainability policy systems in practice, and the lack of common structured frameworks to assist practitioners involved in the delivery of sustainable development projects. They related the difficulty of applying the principles and features of sustainability in a number of policy frameworks developed to date to either being the lack of basic features or being overly complex for practitioners to understand. Although industry actors seem to have accepted the concept in principle, implementing the policies and indicators of sustainability becomes very difficult in practice<sup>34</sup>. It has also been acknowledged that many policy frameworks for sustainable regeneration projects sacrifice social and economic factors at the expense of environmental factors<sup>2</sup>. According to <sup>34</sup>, too much emphasis has been placed on "substance" to the detriment of "processes" needed to implement the policies, as a result, making it very difficult to incorporate suitable socio-economic benefit analysis into the policy frameworks. While a variety of different initiatives and policy frameworks exist for environmental and sustainability assessment. However, to date, there is no consensus as to how to measure sustainability performance of a building project. <sup>35</sup>called on policy makers and construction industry practitioners to reassess and redefine the environmental and sustainability indicators of building assessment frameworks and policy systems, both on conceptual and operational levels within the built environment. The basis for such calls is to provide the means by which sustainability evaluation can be incorporated into the policy systems and frameworks to inform and direct the decision making processes. <sup>35</sup>indicated that the integration of sustainability thinking into policy systems and decision making processes could form the basis for identifying synergies and making the most out of their imperatives to achieve the performance objectives through an effective multi-criteria methods and procedures. It is also argued that any assessment framework set out to measure performance must be well established on sound sustainability policy structures, with generally accepted criteria and methods to address the socio-economic challenges in an integrated manner. An appropriate and relevant framework needs to be developed based on project realities. An integrated approach to sustainability assessment and policy framework that takes into account social and economic development at all levels of human development is more likely to promote and facilitate sustainable development.

Also, a policy framework which defined the sustainable regeneration agenda would have a great impact in creating and changing the awareness in getting policy makers to recognize and realize the linkages between the socio-economic development and wellbeing of the society.

**RESEARCH APPROACH**

The case study research <sup>36</sup> approach adopted for data collection was divided into two parts. Figure 1, below sets out the research data collection protocol that was followed. Initially existing literature, including case study material on sustainability and regeneration projects/programmes were reviewed. This was followed by a focus group interview exercise (part two) conducted with the key stakeholders involved in the delivery of the case study project. A current and ongoing sustainable regeneration housing development project was selected for the case study and a focus group interview approach with project related stakeholders was used to collect rich data. This allowed for an in-depth study of the socio-economic factors and benefits within its real life context<sup>36</sup>. The focus group process also served as a pilot test to check whether the indicators/factors identified from literature and set out in a conceptual framework were reliable and valid to use in the assessment of the potential benefits and impacts of other regeneration projects.



**Figure 1:** *Research data collection protocol*

**DEVELOPING THE CONCEPTUAL FRAMEWORK**

The first part of the process began by profiling the local area of the case study project, reviewing existing literature on sustainability, regeneration projects, government policy and planning frameworks as well the case study project data. By so doing, a broad range of social and economic issues were identified and compiled. The resulting findings were subsequently subjected to a review by a focus group interview panel session (part 2), comprising eight (8) key stakeholder participants namely; the regeneration director (contractor); the project manager (contractor), site manager (contractor), sustainable regeneration manager (client), property development manager (client), commercial manager (client representative), regeneration manager (council) and a member of local community representative. The focus group discussion process lasted 4-5 hours and was based on intensive deliberation, brainstorming and consensus building. At the beginning of part 2 process, a total of 15 output/outcomes of social and economic sustainability issues, identified and shortlisted in part one, were re-examined for their feasibility from the perspective of the case study project within the wider community. This list was subsequently scrutinized and reduced to 12 through a rigorous examination and evaluation of individual output/outcome and their associated impact/benefit, and direct and indirect factors. A further examination was then undertaken, ratified and finalized through the top-down analysis/evaluation approach (sustainability dimension-outcome/output-factor-impact) by the panel. This led to the main features of the hierarchy of the emergent

framework to be derived and classified in terms of its dimension, outputs/outcomes as well as the associated direct and indirect factors as presented in Figure 2.

Figure 2 has been developed following the seminal work of <sup>1</sup> which focuses solely on the social sustainability dimension, the framework as in (Figure 2) considers the social as well as the economic sustainability dimensions. It illustrates the three main features of the framework namely: dimension, output/outcome and factors- (direct and indirect). These three levels, as explained below are fundamental to the evaluation of the direct and indirect impacts/benefits of socio-economic sustainability of regeneration projects at the project and post-project delivery stages as well as the community level.

The dimension level describes the overarching target and achievement of the framework. It focuses mainly on the sustainability aspect necessary to achieve the socio-economic issues/factors associated with the delivery of the project.

The output/outcome level is further subdivided into nine main issues relating to social and economic sustainability. The social issues comprise; project production, economic demographics, education and training, community wellbeing and security. The economic issues consist of project production, economic demographics, economic growth-private sector as well as the public sector issues. The output/outcome level considers the social and economic issues both at the project and wider community levels.

Data collected from the project stakeholders identified the direct and indirect sustainability factors based on the potential impacts/benefits of the socio-economic sustainability output/outcome features. Each direct and indirect factor reflects the sub-issues in the parent output/outcome features.

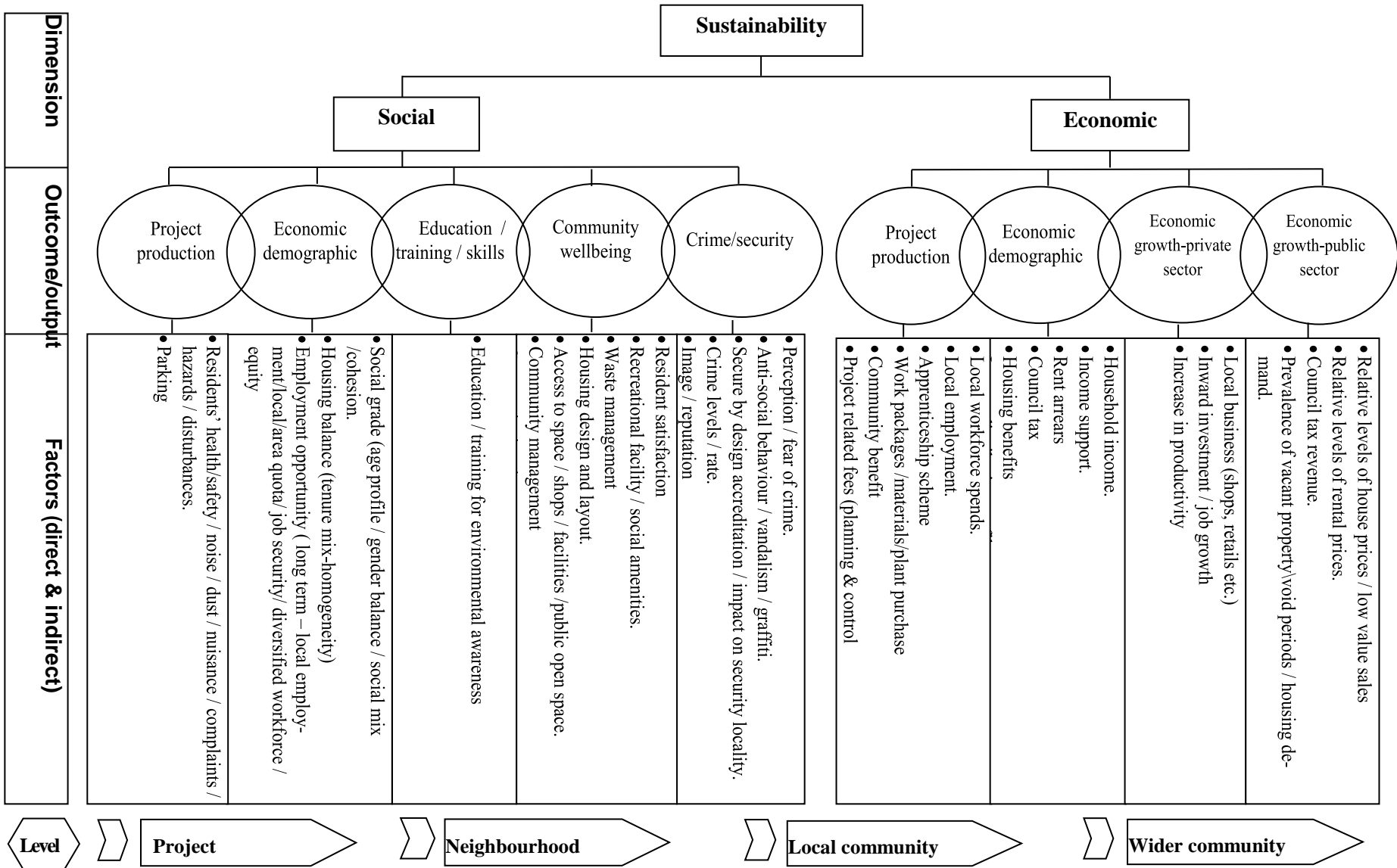


Figure 2: Socio-economic assessment framework



## CONCLUSION

This paper explored the socio-economic impacts/benefits of sustainable built environment regeneration projects and presented the findings from an exploratory case study on a housing regeneration project in the UK that adopted a focus-group interview approach with key stakeholders for data collection. The case study identified the need for a structured sustainability assessment framework to assist practitioners in making better informed decisions particularly at the project, post-project and community level. The study identified that the processes involved in developing such an assessment framework for practical application should engage all the key stakeholders and a thorough evaluation of the impact of both the likely direct and indirect socio-economic factors related to the project delivery. The emergent framework developed and presented in this paper provides an initial mechanism for decision making by industry practitioners and better approach to managing, and incorporating socio-economic factors into sustainable regeneration projects. The further development of this emergent initial framework requires more data to be collected from other built environment regeneration projects. Such a process would refine the features of the framework (see Figure 2) and enhance its reliability.

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