

REVANCHIST (SUB) URBANISM AS AN ULTIMATUM FOR SOCIAL COHESION AN ANALYSIS WITH SPECIAL REFERENCE TO SPATIAL RESTRUCTURING IN THE URBAN NEIGHBOURHOOD OF DAHAMPURA, KOLONNAWA

Vidhushan, Vijesandiran*, Janaka, Wijesundara
Department of Architecture, University of Moratuwa, Sri Lanka

Abstract

This research is based on the concept of urban social sustainability combining the fields of urban planning and architecture with the disciplines of sociology. Cities and urban peripheries have become sites of structural transformation. The ally of the government, and ascending new wealthy and middle classes, and their desire to create an 'Image', making suburban spaces attractive and pleasant to live in and invest in results in a "suburban revanchism". Revanchism focuses on stimulating a strong middle class and making the city safe for corporate investments implementing policies to protect and safeguard this private bubble while developing more desirable living environments by regaining social control. Development policies are adopted as part of the revanchist urban strategy to banish initial residents and to reconquer the city for the capital and middle classes. Contemporary development initiatives of urban growth management which result from such a political transformation, are not compatible with local demand facts. Thus, disciplines of urban planning and architectural developments at mega scales fail to consider activities at the human scale.

This study examines the importance of physical planning in promoting a socially cohesive neighbourhood. An inductive research approach is adopted. The results suggest that urban neighbourhoods in Sri Lanka experience an uncoordinated distribution of spatial developments that purely privilege the private and transnational capital with little or no consideration given to the interests, needs, and aspirations of permanent residents. The study recommends planning for 'socially cohesive neighbourhoods require evidence-based frameworks and encompasses a 'participatory approach' which addresses challenges and harnesses the opportunities of urbanization.

Keywords: Spatial Restructuring, Social Cohesion, Revanchism, Urban Neighbourhood, Urban Regeneration.

* Corresponding Author: Vijesandiran Vidhushan; E-mail- 95vidhu@gmail.com

1. Introduction

Metropolitan cities in the developing world are competing aggressively to thrive beyond imaginable dimensions. We find ourselves in a very complex situation where cities are being built for 3 billion people: doubling the urban environment across the globe. The increasing economic prosperity of developing countries sets the foundation to improve the livelihood of inhabitants. This brings new challenges and an urgent need for new and improved social and environmental policies. Environmental and social-economic vitality, cross-fertilization, interaction, and so much depend on how cities and fringes are shaped and designed.

Sri Lanka experiences a high rate of urbanization (77.6%) when compared to other developing countries. Urban development took centre stage in Sri Lanka with the City of Colombo as its centrepiece. With city beautification, the desire to refashion the narrative of the city to suit the contemporary was initiated. The state is increasingly subordinate to the economy, thus working and poor classes are swept from business and financial districts, and urban utility services are increasingly relocated to suburbs. As Colombo competes aggressively to create an 'Image', making places attractive and pleasant to live and invest in, more willingly harsh penalties are imposed on those who are considered 'undesirable' by tourists, shoppers, commuters, and investors.

The government stimulates remodelling and introduces spatial configurations drawing the attention of a new population with greater financial and cultural capital. Thus, social transformations will progressively occur in favour of "more desirables". Thus, gentrification came into play in the design of housing, recreation and leisure (parks), commercial, and public facilities. The order was imposed on the urban scene with revanchist undertones which was highlighted in the forcible relocation of low-income households. Marginalized communities are considered culprits of urban decay and major threats to urban order. It has become an obvious and proven factor that the "publicness" of public spaces and other amenities is gradually reducing in the City of Colombo and its outskirts.

Urban planning and spatial restructuring in the fringes of Colombo hardly address the sociability of urban neighbourhoods. Urban regeneration privileges private or transnational capital over the interests, needs, and aspirations of people. This study focuses on the research question 'how do urban regeneration spatial configurations and physical developments impact social networks among residents and social cohesion within communities in the urban neighbourhoods of Colombo?'. This study aims to highlight the importance of embracing balanced design strategies and thoughtful programming in physical capital developments to promote sustainable socially cohesive neighbourhoods in Colombo. The research will also help to get a better understanding of the adverse impacts on society due to remodelling and introducing spatial configurations where urbanization has been increasingly fashioned by and for the ascending new wealthy and middle classes.

2. Literature Review

The urban environment which is turning out to be concrete jungles will result mostly in urban chaos, haphazard developments, and dead urban spaces. The key attribute is that it affects human performance, isolates people, and separates them from nature. Segregates people into economic and land-use enclaves. It does not allow cross-fertilization and interaction which makes society thrive.

2.1 Revanchism

Revanchism is a French word – 'Revanche' which means revenge. The birth story of revanchism runs back to the late 19th Century in Paris, France. Working-class defeated the government of Napoleon III and controlled Paris for months to oppose the socialist uprising of the Paris Commune (Smith,1996). The bourgeois nationalist reactionaries were known as Revanchists.

Smith (1996) identifies a correlation between the revanchist scenario of late 19th century (Paris) and the political climate of the late 20th century (NYC). The concept of neo-liberal revanchism is used against minorities, blue-collar workers, and recent immigrants who were known to be the 'public enemies' of the political elite and their supporters. They were not considered as a part of the urban periphery vision. In the American context, this can be witnessed explicitly as it diffuses much further from political ideology to its way into municipal legislation. The spaces which were increasingly demanded by investors, tourists, the middle-class and wealthy residents were cleansed. This can be witnessed in the privatization and commodification of Time Square and Bryant Park. In 1993, Rudolph Giuliani (Mayor, NYC) states minorities as culprits of urban decay and threats to urban order when NYC becomes a major tourist destination.

According to Uitermark and Duyvendak (2008), mostly policies related to social-democratic urban projects, and anti-segregation are redefined and reconfigured to suit the private developers. Uitermark (2006) exposes developments, and proposed policies to be a strategic step taken to banish initial residents from marginalized spaces. He recognizes Asian cities gradually following the footprint of American and European cities - "Welfare being restructured into workfare, inter-territorial competition taking precedence over solidarity and zero tolerance policies replacing soft paternalism".

2.2 Urban Fringe Dynamics

Zhao, et al. (2008) describes the urban fringe as a zone that struggles to control revanchist policies and represents the conflict between the urban management system and rural development resulting from political transformation. These policies act as a barrier in meeting the local demands of people. The baseline for stability in underdeveloped nations is to promote the whole social welfare for everyone. Spedding (2004) in his studies emphasizes urban fringes as a collection of fertile and dynamic environments which meet the needs of the present and help to change the way we live in the future.

Smith (1996) by his works states that the state transforms its actions from care into repression, reflecting a new phase of urban policies related to gentrification. Uitermark and Duyvendak (2006) identify contemporary revanchist policies to have a close relationship with urban regeneration as an indirect response to economic restructuring. According to Wyly and Hammel (2005), as these policies support economic restructuring, emancipating groups show high interest in and demand revanchist policies. Thus, this most opportunistic space becomes a place of conflict.

Mostly the performance of urban growth is criticized as their objectives are incompatible with the local demands. The spatial developments in developing countries are significantly manipulated by the market-led economy. According to Aalbers (2010), revanchist renewal benefits focus more on serving the interests of the corporate environment and stimulating a strong middle class. The writer states, "the ears and wallets of social workers have been replaced by the strong hand and

sticks of the police". He also demonstrates how revanchist policies are demanded by lower classes and pretend to exist alongside soft "caring" policies, even for "undesirables".

2.3 Social Cohesiveness and Urban Neighbourhoods

A socially cohesive neighbourhood holds the potential to set the stage for social interactions and chance encounters, thus influencing the fabric of the social culture and nurturing community belonging.

Collier (2010) describes spatial planning as nothing more than "applied common sense" and it should be an emphasis on livability and sustainability for everyone. According to the Literature base, it can be explicitly witnessed that the social coherence in society is undergoing a huge challenge due to biased urban developments, inequality in the meeting standards of living and social structural transformation.

Sharp and Clark (2008) define social cohesion as a range of activities that guide all communities and groups in fostering a lasting integration. Social cohesion refers to a supportive intangible which ensures mutual respect among communities and individuals' collective growth and healthy living. Social cohesion is linked with the quality of life in terms of societal quality. It represents the behavioural patterns, attitudes, and attributes of the community and its relations which relate to the notion of social capital.

More (2017) in his study, analyses the impact and relevance of social cohesiveness in four neighbourhoods in Dubai. He adopted social cohesion indicators and socio-cultural aspects to conduct his study. Social cohesion indicators such as strong social ties, a sense of community (shared interests, shared values), and social interaction (enduring social relations, informal face-to-face) are adopted. Aspects such as positive attitude, open-heartedness and willingness, availability of opportunities for social interaction, regular social interaction, number of socio-cultural activities, involvement in activities, community participation, and sense of community are considered under socio-cultural aspects. UN-Habitat (2016) states cohesiveness enhances social capital at the neighbourhood level. Thus, a well-planned and effective spatial planning of a neighbourhood can promote social cohesion.

2.4 Urban Forms and Social Sustainability

Urban forms create sustainable built fabrics. They vary in scale (urban, suburban, block, neighbourhood, street), shape, size, orientation, configuration, and density. Block patterns, arrangements of residential units and amenities, road networks, street patterns and land-use patterns characterize the urban forms. An urban form that can contribute to an effective urban setting enhances the sense of community.

Karuppan and Sivam (2011) work on social behaviour indicators and design parameters to assess the neighbourhoods in Delhi, India. Social and economic enclaves are highly intervened through physical planning and built form. Their study emphasized the importance of physical planning, neighbourhood layouts, design of open spaces and interactive amenities in developing a socially sustainable neighbourhood. They also demonstrate urban policies are important, same as urban forms, for livability improvements.

Scholars identify the relationship between the spatial and physical characteristics of neighbourhoods and buildings in influencing social cohesion. Physical elements of the

neighbourhood govern the activities and actions within its periphery. Social capital varies with the street network, amenities, perception of safety, design, and connectivity. Raman (2010) in his study identifies the importance of designing physical forms for vibrant communities.

3. Research Methodology

This is a study that establishes patterns and meanings through a process of gathering data. As this research is mainly socially based, multi-stage sampling would be efficient and effective.

Social cohesion indicators and socio-cultural aspects (variables) are tested upon the three aspects of physical capital: layout and design of neighbourhood (Forrest and Kearns,2001), availability of amenities and social infrastructure (Dixon and Woodcraft, 2013), and availability of recreational spaces (Collier,2010).

Quantitative analysis is incorporated to understand the relationship between variables. It is statistically proven that the variables are dependent on these physical aspects. Observation analysis carries information on the current situation of the physical aspects of the neighbourhood. These findings are converged to analyze social cohesiveness and its relevance to physical capital, thus sub-urbanism.

3.1 Study Area

Weerakoon (2017) a Sri Lankan identifies the applicability of the three types of urban growth (Infill, Edge expansion, and Outlying) and conducted a study in Sri Lanka. He analyses the types of growths using distance gradients. According to his studies, edge expansion is prominent in the 5km - 25km zone. This indicates urban growth gradually spreading outwards with sprawl in a mediated or unmediated manner where urban fringes function as transition zones. These indicate the urban fringes gradually becoming urban areas.

Kolonnawa is a suburb of Colombo which acts as a service area and a multi-religious, multi-ethnic

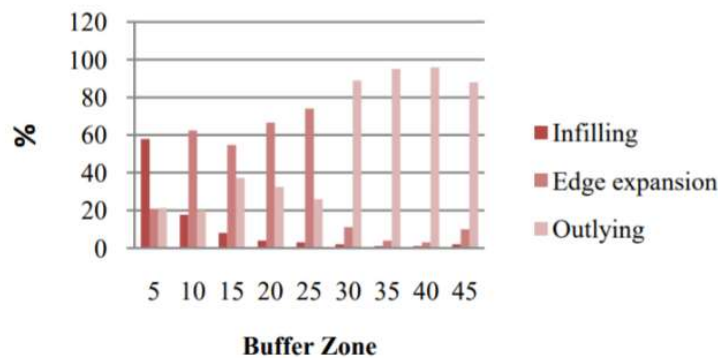


Figure 1: Urban growth in different distance gradients
Source: Weerakoon (2007)

urban centre. Subsequently, settlements were developed within the area with the development of Industrial activities. Initially, it was established with service-oriented activities as the backyard of the City, which over years expanded into a massive extent of non-residential enterprises (container yards, stores, electricity substations, warehousing, and an oil storage tank complex). Kolonnawa region accommodates a low-income working population who are mainly engaged in retail trade and port-related activities. Over time, urban service entities are transferred to Kolonnawa. Improved infrastructure developments provide incentives for people to shift to the periphery.

The main objective is to study the impact on urban neighbourhoods due to strong urbanization pressures. An urban neighbourhood is selected within the Kolonnawa context, which experiences diverse regeneration developments and where the community is equally represented.

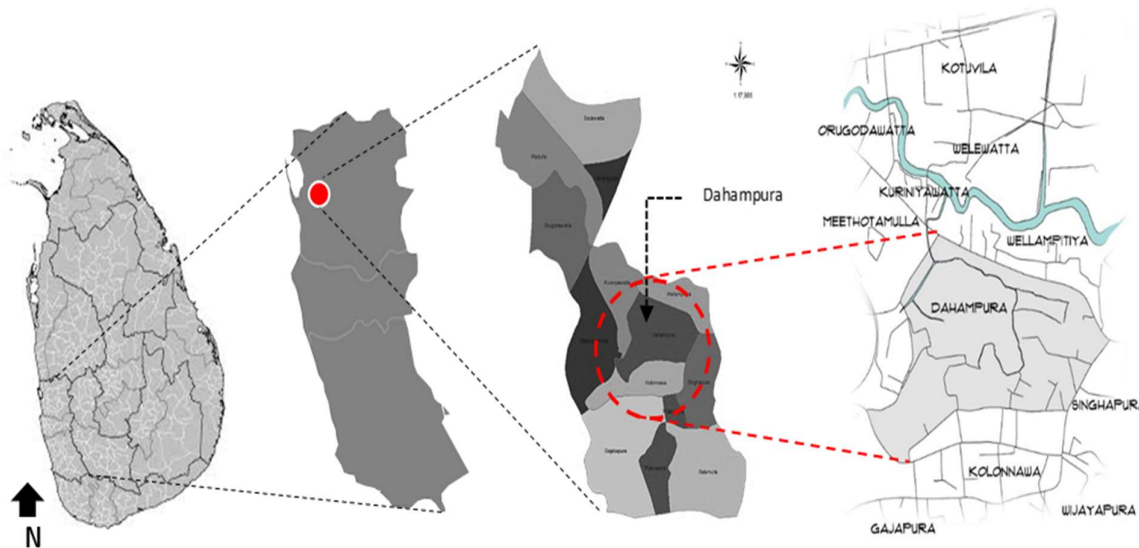


Figure 2: Case location – Dahampura
Source: Author

The neighbourhood of Dahampura constituted 75% of low-lying areas, where most of these are filled during the last few decades. 80% of the low-lying lands have been reclaimed for infrastructure developments and housing by poor families who are engaged in informal sector activities. This has resulted in many squatter settlements. Areas that could not be reclaimed were used for the disposal of solid waste.

Dahampura is one of the urban neighbourhoods which is experiencing a major spatial transformation with the inflow of local and international investments. Transportation development – urban transit boulevard, gateway boulevard and canal drive development, moderate density residential development (garden houses, high-rise apartments, and condominiums), Wellampitiya Commercial Point development, Kittampahuwa Ela - water esplanade development to promote aqua tourism, and transformation of Meethotamulla dumping site into a public outdoor recreational space (Meethotamulla Urban park) along with a sports village, apartment complex, office complex and commercial development in its vicinity are major development projects.

Western Region Megapolis Planning Proposal (WRMPP) categorizes Dahampura as a moderate-density residential zone. The development of the urban park at the dumpsite will catalyze Dahampura to cater to highrise residential apartments in middle-income communities. This zone is defined predominantly for residential including garden houses, high-rise apartments, and condominiums. This classifies that in terms of vertical density, 5% - 15% of the total constructed buildings will be intermediate or high-rise structures and developments should be made at an average plot coverage of 65% in horizontal density.

Kittampahuwa Ela (Canal) is developed for Aqua Tourism (canal experience). The urban park in Meethotamulla, proposed recreational parks in Dahampura, the development of Kolonnawa marsh, and the development of the commercial artery are used as attracting nodes to improve aqua tourism along with the canal. Major tourism categories such as water-based tourism, fashion tourism, nightlife tourism, and culinary tourism are promoted with this development. This canal front is developed as a vibrant interactive space with a linear park of 5.3km (Project code-WO-1-6) forcefully relocating the family who have been living there for generations. This acts as an investment catalyzer that caters to the shopping, dining, retailing, recreational activities, condominiums, and office spaces proposed under WRMPP.



Figure 3: Dahampura - Proposed spatial developments.

Source: Author

3.2 Data Analysis

To analyse the data collected by survey questionnaires, tools such as MS Excel and SPSS are used which provide a wide variety of statistical and graphical techniques.

From the surveys conducted in paper form and online platform, 100 responses were recorded from the neighbourhood of Dahampura. Out of these, responses were filtered to maintain the validity and credibility of the information received. The responses were filtered as the respondents who were living in the neighbourhood of Dahampura for more than 5 years and the

respondents who had the highest educational qualification above the high school level. According to these criteria, 40 responses were obtained, and they were taken for analysis.

The descriptive statistical analysis (cross-tabulation) method is used as it includes a measure of central tendency, variability, and distribution. The bivariate statistical analysis (correlation) method is used to test the strength of the relationship between two variables.

Indicators of social cohesion and aspects of socio-culture are predicted based on aspects of physical capital. According to Field (2016), the optimal form of analysis test for prediction-oriented research is the regression-based analysis method. Here the independent variable is known as the predictor and the dependent variable is explained. In this study, the dependent variables, social cohesion measured by five constructs are scale variables. According to IBM (2016), simple linear regression is the optimal form of analysis for scale-dependent variables.

Kowal (2016) explains the model of simple linear regression as:

$$y = \alpha + \beta x + \epsilon \quad [1]$$

where y is the dependent variable, x is the independent variable, α and β are the structural parameters, and ϵ is the random component.

The F-test is conducted to verify whether the predictor variables are jointly explained to the response of the dependent variables or not. If the *p*-value is less than 5% (0.05), then it can be said that the predictor variables have a statistically significant relationship to the dependent variable.

4. Results

The extent of social cohesiveness and ratings of the socio-cultural aspects of Dahampura are evaluated as scale-dependent variables.

4.1 Observation Analysis

Observation analysis carries information on the current situation of the physical aspects of the neighbourhood.

Table 1: Observation analysis

Attributes	Recorded Observation
Master plan	<ul style="list-style-type: none"> • Master plan evolved during early 1970's and indicates clustered and individual plots, marshy land and service areas.
Land use	<ul style="list-style-type: none"> • A complete disorderly and haphazard distribution of land uses • Hardly any agricultural lands exist excepting a few vegetable (green leaves) plots in the unreclaimed low-lying areas. • The present land use is of a mixed character having many conflicting uses such as polluting industries co-existing with residential uses. • Environmentally sensitive locations such as canals and low lying areas • Most of the installations, warehouses and industries have been constructed on reclaimed marshy lands which are well connected to the main roads • Developments without adequate reservations or buffer zones
Mixed-use patterns	<ul style="list-style-type: none"> • Low and middle-income Residential, Retail shops, Dumping site, Bus depot, National water supply and drainage board, Abandoned Wellampitiya shopping complex, Vidyawardhana Maha Vidyalaya, Sri Wimalaramaya temple, Sewerage pump house, Sri Rahula Vidyalaya. • Environment comprising of the internal water bodies, wetlands, canal and drainage network, natural vegetation etc. have been seriously affected due to man made activities such as establishment of polluting industries unregulated and excessive land filling and establishment of human settlements.
Building forms and layout planning	<ul style="list-style-type: none"> • Unauthorized constructions at Pothuvil Kumbura • Encroachment of canal reservations by shanty dwellers • Low-rise buildings. • Building along the road are with minimum set back which doesn't promote any opportunity or social interaction.
Road network	<ul style="list-style-type: none"> • Low-Level road to Avissawella has made it strategically important for wholesale distribution of goods • Most of the inner access roads in residential areas are narrow (about 10 feet wide) and are not tarred roads. • Difficulty to reach houses, difficulty in transferring a patient to a hospital • The low lying areas which have been recently filled and utilized for housing dwellers do not have a satisfactory road network, even for performing basic services such as collection of solid waste and cleaning the septic tanks.
Water bodies	<ul style="list-style-type: none"> • Water bodies are highly polluted and are not functioning properly due to sedimentation and lack of regular maintenance. • Almost all the wet lands and parts of water bodies have been reclaimed and low income settlements established with no open spaces and green areas.
Human scale	<ul style="list-style-type: none"> • Building are surrounded by thick boundary walls or fence. Doesn't contribute to activities at ground level.
Accessibility & availability of amenities & social infrastructure	<ul style="list-style-type: none"> • The availability of formal open spaces for recreation and amenity are severed inadequate in relation to high density development of residential areas. • A complete contrast in terms of basic amenities can be found between orderly developed highland area • High density low income settlements with no basic amenities have poor sanitary conditions • occupied by the middle class and extremely poor conditions of the low income settlements in low-lying areas. • Grocery stores are available in the either sides of the Low Level road up to the Wellampitiya junction. • Few retail shops are available in the linking roads.
Common spaces & public realm	<ul style="list-style-type: none"> • People meet and interact in streets. • No sufficient spaces in and around houses • No dedicated open spaces, parks or spaces. • Busy neighbourhood and active streets during day times. Not felt safe at nights. No proper paving, street lights and shop fronts. • No community centre which is usable
Sewerage disposal	<ul style="list-style-type: none"> • Sack nits and septic tanks for disposal of sewerage. • In low income communities located particularly in low lying areas do not have proper sewerage disposal methods. Families in many low-income settlements directly discharge sewerage into nearby open drains and canals
Drainage	<ul style="list-style-type: none"> • The open drains are used as toilets • Low-lying areas have no satisfactory gradient to facilitate natural drainage. • Unauthorized constructions and encroachment of drains, particularly along the service roads, the local authority is unable to carry out the maintenance activities as required. • Meethotamulla, drain towards the end of Nagahamulla are non-functioning drains.

4.2 The Extent of Social Cohesiveness

Findings for social cohesion indicators were highly rated for informal face-to-face interactions. This shows a notable and dominant variance from the rest of the indicators. Enduring social relationships and shared interests were rated the least among the indicators

Table 2: Descriptive statistics for social cohesion indicators

Descriptive Statistics			
	N	Mean	Std. Deviation
Enduring social relationships	40	1.40	.496
Informal face-to-face interaction	40	2.18	.844
Shared values	40	1.48	.506
Shared interests	40	1.40	.496
Strong social ties and bonds	40	1.50	.506
Valid N (listwise)	40		

4.1.1 Influence of layout and design of neighbourhood on social cohesion

This section analyses the influential capability of the layout and design of a neighbourhood (IV) by socially cohesive indicators (DV) of Dahampura. Simple linear regression analysis is conducted to predict the dependency. The corresponding hypotheses for this analysis are:

H_0 – Social cohesiveness among the residents does not depend on the layout of the neighbourhood.

H_1 – Social cohesiveness depends upon the layout of the neighbourhood.

The layout and design of the neighbourhood show a rating of 1.5 with a distribution of 0.554.

Enduring social relations (DV) $y=1.767+0.429x$ layout and design (IV), informal face-to-face relations (DV) $y=8.902+0.566x$ layout and design (IV), shared values (DV) $y=0.360+0.192x$ layout and design (IV), shared interests (DV) $y=0.790+0.284x$ layout and design (IV), and social ties (DV) $y=0.227+0.158x$ layout and design (IV); where DV and IV stand for Dependent Variable and Independent Variable, respectively.

Table 3: Regression model for social cohesion indicators and layout & design of neighbourhood

No.	Dependent Variable	Independent Variable	Respondents	R Square		Regression Coefficient	t-Statistics	Sig. (p-value)	F-Change	Sig. F-Change (p-value)
1	Enduring social relationships	Layout and design of neighbourhood	40	0.184	18%	0.429	3.83	.000	8.572	.006
2	Informal face-to-face interactions			0.321	32%	0.566	2.607	.013	17.952	.000
3	Shared values			0.136	14%	0.192	4.315	.000	5.962	.019
4	Shared interests			0.113	11%	0.284	4.248	.000	4.828	.034
5	Strong social ties and bonds			0.253	25%	0.158	3.851	.000	12.844	.001

The highest variance shown by the availability of recreational spaces accounted for 58% of strong social ties and bonds. The resulting regression models predict strong social ties and bonds, enduring social relationships, shared interests, and shared values have a significant value which is less than 0.00 ($p < 0.00$) for the F-test. Therefore, the regression models are statistically valid. The null hypothesis can be dropped. According to the alternate hypothesis, it can be concluded that social cohesiveness among the residents depends on the availability of physical spaces for recreation.

4.1.2 *Influence of the availability of amenities and social infrastructure upon social cohesiveness.*

The relationship between indicators (DV) and the availability of amenities (IV) in Dahampura is analyzed. The corresponding hypotheses for this analysis are:

H₀– Social cohesiveness among residents cannot be predicted by the available amenities and social infrastructure in the neighbourhood.

H₁ – Social cohesiveness among residents can be predicted by the available amenities and social infrastructure in the neighbourhood.

The availability of physical spaces for recreation has a mean of 1.43 with a standard deviation of 0.501.

Simple linear regression analysis is conducted to predict the dependency. The enduring social relations (DV) $y=6.879+0.846x$ availability of amenities (IV), informal face-to-face relations (DV) $y=1.657+0.244x$ availability of amenities (IV), shared values (DV) $y=3.591+0.6x$ availability of amenities (IV), shared interests (DV) $y=2.766+0.537x$ availability of amenities (IV), and social ties (DV) $y=5.754+0.759x$ availability of amenities (IV); where DV and IV stand for Dependent Variable and Independent Variable, respectively.

The highest variance observed for the availability of amenities is 72% for enduring social relationships. The resulting regression model predicts enduring social relationships, strong social ties and bonds, shared values and shared interests have a significant value which is less than 0.00 ($p<0.00$) for the F-test. Therefore, the regression models are statistically valid. The null hypothesis is not valid. According to the alternate hypothesis, it can be concluded that social cohesiveness among residents can be predicted by the available amenities in the neighbourhood.

Table 5: Regression model for social cohesion indicators and availability of amenities

No.	Dependent Variable	Independent Variable	Respo ndents	R Square		Regression Coefficient	t-Statistics	Sig. (p-value)	F- Change	Sig. F-Change (p-value)
1	Enduring social relationships	Availability of amenities	40	0.717	72%	0.846	1.585	.121	96.057	.000
2	Informal face-to-face interactions			0.060	6%	0.244	3.971	.000	2.411	.129
3	Shared values			0.360	36%	0.600	3.091	.004	21.378	.000
4	Shared interests			0.288	29%	0.537	3.138	.003	15.382	.000
5	Strong social ties and bonds			0.575	58%	0.759	2.522	.016	51.506	.000

4.2 Socio-Cultural Aspects

The table shows respective ratings for socio-cultural aspects of the neighbourhood of Dahampura. The most notable variance can be observed in the open-heartedness and willingness of the residents to interact. This is extraordinarily dominant in the neighbourhood. The available opportunities for residents to socially interact seem to be very poor.

Table 6: Descriptive statistics for socio-cultural aspects

Descriptive Statistics			
	N	Mean	Std. Deviation
Regular social interaction	40	1.38	.540
Availability of opportunities for social interaction	40	1.33	.474
Open heartedness and willingness to interact	40	2.20	1.018
Involvement in community activities	40	1.78	.733
Sense of community belonging	40	1.40	.496
Valid N (listwise)	40		

4.2.1 Influence of the layout and design of the neighbourhood upon sociocultural aspects

This section analyses the influence of layout (IV) upon socio-cultural aspects (DV). The corresponding hypotheses for this analysis are:

H_0 – Socio-cultural aspects do not depend upon the layout and design of the neighbourhood.

H_1 – Socio-cultural aspects depend upon the layout and design of the neighbourhood.

The layout and design of the neighbourhood show a rating of 1.53 with a distribution of 0.554.

Simple linear regression analysis is conducted to predict the dependency. Regular social interaction (DV) $y=3.133+0.525x$ Layout and design (IV), Availability of opportunities for social interaction (DV) $y=2.236+0.505x$ Layout and design (IV), Open heartedness and willingness to interact (DV) $y=1.924+0.218x$ Layout and design (IV), Involvement in community activities (DV) $y=2.737+0.361x$ Layout and design (IV), Sense of community belonging (DV) $y=1.767+0.429x$ Layout and design (IV); where DV and IV stand for Dependent Variable and Independent Variable, respectively.

Table 7: Regression model for socio-cultural aspects and layout & design of neighbourhood

No	Dependent Variable	Independent Variable	Respo ndents	R Square		Regression Coefficient	t-Statistics	Sig. (p-value)	F- Change	Sig. F-Change (p-value)
1	Regular social interaction	Layout and design of neighbourhood	40	0.275	28%	0.525	2.729	.010	14.444	.001
2	Availability of opportunities for social interaction			0.255	26%	0.505	3.429	.001	12.997	.001
3	Open heartedness and willingness to interact			0.048	5%	0.218	3.372	.002	1.900	.176
4	Involvement in community activities			0.130	13%	0.361	3.225	.003	5.703	.022
5	Sense of community belonging			0.184	18%	0.429	3.830	.000	8.572	.006

The greatest variance for layout and design is observed for regular social interaction which is 28%. The resulting regression models predict regular interaction, availability of opportunities, and sense of community belonging have a significant value which is less than 0.00 ($p < 0.00$) for the F-test. Therefore, the regression models are statistically valid. The null hypothesis is not valid. It can be concluded that socio-cultural aspects can be predicted by the layout and design of a neighbourhood.

4.2.2 Influence of the availability of physical spaces for recreation upon sociocultural aspects

The influence of the availability of recreational spaces (IV) on socio-cultural aspects (DV) is examined. The corresponding hypotheses for this analysis are:

H_0 – Availability of physical spaces for recreation does not influence the socio-cultural aspects among residents.

H_1 – The availability of physical spaces for recreation influences the socio-cultural aspects.

The availability of physical spaces for recreation has a mean of 1.43 with a deviation of 0.501.

Simple linear regression analysis is conducted to predict the dependency. Regular social interaction (DV) $y = 5.948 + 0.723x$ Availability of recreational spaces (IV), Availability of opportunities for social interaction (DV) $y = 5.716 + 0.807x$ Availability of recreational spaces (IV), Open heartedness and willingness to interact (DV) $y = 4.456 + 0.332x$ Availability of recreational spaces (IV), Involvement in community activities (DV) $y = 4.765 + 0.477x$ Availability of recreational spaces (IV), Sense of community belonging (DV) $y = 3.932 + 0.640x$ Availability of recreational spaces (IV); where DV and IV stand for Dependent Variable and Independent Variable, respectively.

Table 8: Regression model for socio-cultural aspects and availability of physical space for recreation

No	Dependent Variable	Independent Variable	Respo ndents	R Square		Regression Coefficient	t-Statistics	Sig. (p-value)	F- Change	Sig. F-Change (p-value)
1	Regular social interaction	Availability of physical spaces for recreation	40	0.523	52%	0.723	1.445	.157	41.646	.000
2	Availability of opportunities for social interaction			0.651	65%	0.807	1.719	.094	71.012	.000
3	Open heartedness and willingness to interact			0.110	11%	0.332	2.638	.012	4.71	.036
4	Involvement in community activities			0.227	23%	0.477	2.476	.018	11.171	.002
5	Sense of community belonging			0.410	41%	0.640	2.663	.011	26.367	.000

The greatest variance for the availability of physical recreational spaces is observed for the availability of opportunities for interaction which is 65%. The resulting regression models predict the availability of opportunities for interaction, regular social interaction, a sense of community belonging, and involvement in community activities, which have a significant value that is less than 0.00 ($p < 0.00$) for the F-test. Therefore, the regression models are statistically valid. The null hypothesis is not valid. It can be concluded as the availability of physical spaces for recreation has influenced the sociocultural aspects of residents in the neighbourhood.

4.2.3 Influence of availability of amenities and social infrastructure on socio-cultural aspects

The influence of the availability of amenities (IV) on socio-cultural aspects (DV) is examined. The corresponding hypotheses for this analysis are:

H₀ – Availability of amenities and social infrastructure does not influence the socio-cultural aspects among residents.

H₁ – Availability of amenities and social infrastructure influences the socio-cultural aspects of the neighbourhood.

The availability of physical spaces for recreation has a mean of 1.43 with a standard deviation of 0.501.

Simple linear regression analysis is conducted to predict the dependency. Regular social interaction (DV) $y=7.610+0.818x$ Availability of recreational spaces (IV), Availability of opportunities for social interaction (DV) $y=4.289+0.699x$ Availability of recreational spaces (IV), Open heartedness and willingness to interact (DV) $y=2.165+0.231x$ Availability of recreational spaces (IV), Involvement in community activities (DV) $y=4.765+0.477x$ Availability of recreational spaces (IV), Sense of community belonging (DV) $y=3.932+0.640x$ Availability of recreational spaces (IV); where DV and IV stand for Dependent Variable and Independent Variable, respectively.

Table 9: - Regression model for socio-cultural aspects and availability of amenities & social infrastructure

No	Dependent Variable	Independent Variable	Respo- ndents	R Square		Regression Coefficient	t-Statistics	Sig. (p-value)	F- Change	Sig. F-Change (p-value)
1	Regular social interaction	Availability of amenities	40	0.669	67%	0.818	0.775	.443	76.817	.000
2	Availability of opportunities for social interaction			0.489	49%	0.699	2.229	.027	36.332	.000
3	Open heartedness and willingness to interact			0.054	5%	0.231	3.160	.003	2.151	.151
4	Involvement in community activities			0.227	23%	0.477	2.476	.018	11.171	.002
5	Sense of community belonging			0.410	41%	0.640	2.663	.011	26.367	.000

The highest variance for the availability of amenities is observed for regular social interaction which is 67%. The resulting regression models predict regular interaction, availability of opportunities for interaction, sense of community belonging, and involvement in community activities have a significant value which is less than 0.00 ($p<0.00$) for the F-test. Therefore, the regression models are statistically valid. The null hypothesis is not valid. According to the alternate hypothesis, it can be concluded availability of amenities has an influence on the socio-cultural aspects among residents in the neighbourhood.

The study illustrates that the layout and design, availability of amenities and social infrastructure, and availability of recreational spaces impact upon sociability of the residents. The neighbourhood is compactly built and has no common open spaces leading to very low social interactions. Dahapura experiences a completely haphazard and disorder in the distribution of spatial restructuring developments; based on the vested interests of investors with little or no consideration given to the interests, needs and aspirations of the people. In the meanwhile, a clear difference is observed in terms of the availability of basic amenities and social infrastructure between the planned and orderly developed areas, occupied by high/middle-income people, and the poor conditions in low-lying areas occupied by low-income neighbourhoods. The penetration of urban units, poor planning regulations and policies, and uncoordinated zoning and restructuring are causing a fracture in society.

The study of Dahampura indicates a very poor level of social capital within the neighbourhood in terms of social cohesion indicators and socio-cultural aspects. Physical features can influence attitudes. The aspects of physical capital in the suburbs of Colombo are not conducive towards social cohesiveness.

5 Conclusion

Urban peripheries are considered to be sites of innovation; where new economic ideas are generated, and people from different groups co-exist as neighbours. Approaches in the early development phases of Colombo have failed to address potential layouts of neighbourhoods for sustainable communities. Innovative planning practices and approaches are required to build a cohesive society for an expansive population. Public-private bubbles can be integrated along with their communities only when cities plan the future based on past trends. The size and the rate of urban growth in the suburbs of Colombo is an obvious indicator that suggests the absence of an evidence-based planning framework. Urban planning principles should meet local demands, address sustainable developments and integrated approaches, and recognise cultural diversity, budgets, partners, and stakeholders.

It can be explicitly identified that strands of revanchism are infiltrating into urban regeneration policies and strategies addressing control and safety in urban neighbourhoods and public spaces. The state implements policies to protect and safeguard the private bubble and develop more desirable living environments by regaining social control. Egregious forms of revanchism are trying to sweep and banish the symptoms of homelessness and poverty out of sight from the urban peripheries of Sri Lanka, especially within Colombo and its fringes. The state is more slave to the market than regulating and intervening.

Urban regeneration in Sri Lanka has failed in providing a proper life for the permanent residents for those who have for decades been paying for the maintenance of facilities and utilities. It is not only about providing comfort luxuries and social space to attract the new rich and urban elite. Spatial restructuring and planning should stem from a democratic effort to establish a national identity, economic dynamism, and social balance with the goals of sustaining the impulses of uncontrolled economic growth, founding a system of equity, and avoiding social fractures. Spatial transformation should not be a threat to the inter-bonding relationship and the links between different communities or groups in a society.

Neighbourhoods are opportunities for people representing different religious, social, cultural, and ethnic backgrounds to co-exist. In these development processes, what often gets ignored is the human scale and the people for whom cities are built. Thus, a people-centric approach in architecture and urban planning is important. Socially cohesive communities and neighbourhoods are not impossible with proper spatial planning and the support of policymakers, urban planners, architects, developers, and other key stakeholders. Thus, this research suggests sustainable design guidelines to be integrated as part of urban planning in Colombo via policy frameworks or agendas.

6 Recommendations

A socially cohesive neighbourhood is sustainable and resilient. This research suggests the incorporation of 'socially cohesive neighbourhoods' as a fundamental element of spatial planning, regulations, proposals, and policies. Planning for sustainable neighbourhoods requires evidence-based frameworks which address challenges and harness the opportunities of urbanization. The study suggests future developments can be evidence-based interventions as outlined in The United Nations Sustainable Development Goals (SDGs), 2030 Agenda for Sustainable Development, and State of Sri Lankan Cities (SoSLC) report.

Colombo is facing a rising disparity in urban living due to challenges of social stratification. They demand improved urban frameworks and agendas for sustainable and vibrant social life. This study recommends a collaborative strategic coalition between the state, policymakers, urban planners, architects, property developers and agents to minimize urban spatial segregation and build sustainable communities. A model for building socially cohesive neighbourhoods in Colombo is proposed based on the research findings.

Table 10: Recommendations

No.	Key Recommendations	Actors
1	<p>Enhancing the effectiveness of urban land use planning</p> <ul style="list-style-type: none"> • Strict land use planning control – planning control of urban fringe land strengthen urban-rural inequalities, promote rural industrialization and urbanization leading to an increase in the income of farmers, and development of infrastructure in rural areas. • Urban-rural cooperation – to increase the sense of responsibility, cooperation between governmental departments and urban-rural authorities is a must. This is important for establishment of laws and regulations and standardization of urban fringe land use. High standards of transparency and accountability should be established for the efficient operation of planning control. This will help promote regional development and overcome the problem of over exploitation of resources. • Land Statutory framework – a unified, coherent, transparent, and representative land administration to resolve social conflicts. Ability and accountability of the government in the governance of urban fringe land use should be strengthened for effective urban fringe land. 	<p>Government, Investors, Ministry of Mega polis & Western Development, National Physical Planning Department, Land Use Policy Department, Sri Lanka Land Reclamation & Development Cooperation, Urban Development Authority, Irrigation Department, Urban and Municipal Councils, Local Authorities, Property Developers, Urban Planners, & Architects.</p>

No.	Key Recommendations	Actors
2	<p>Stimulate Existing neighborhoods through participatory approach.</p> <ul style="list-style-type: none"> • Promote community engagement and social relationships by creating opportunities for interaction. • Proposals for layout and design of neighbourhoods to regenerate the public realm. Provision of interactive and walkable streets, landscape and vegetation, additions of meeting pockets, and common activity spaces. • Encouraging community partnerships to create multicultural, inclusive, vibrant, and healthy neighbourhoods. 	<p>National Physical Planning Department, Ministry of Public Management Reforms, UDA, Residents, Voluntary Organizations, Urban & Municipal Councils, Local Authorities, Urban Planners, Architects, & Researchers.</p>
3	<p>Identify & Implement urban Social Cohesion Indicators.</p> <ul style="list-style-type: none"> • Indicators – enduring social relationships, informal face-to-face interactions, shared values, shared interests, strong social ties, and bonds. • Formulate urban planning policy frameworks and guidelines for layout and design of physical factors to favour and promote social indicators. • Coordinated and consistent approach to the design of public areas, community features and markers. 	<p>National Physical Planning Department, Ministry of Public Management Reforms, Ministry of Social Services, UDA, Residents, Voluntary Org., Urban & Municipal Councils, Local Authorities, Urban Planners, Architects.</p>
4	<p>Diminish social stratification through community activities.</p> <ul style="list-style-type: none"> • Promote multicultural urban living through social media; organizing multicultural events and festive; workshops, seminars, and roundtables; incentives on rental in multicultural neighbourhoods. • Encourage diverse perspectives and ways of thinking through provision of opportunities for engagement and participations of cultural exchanges. • Build and enhance social cohesiveness by promoting participation in recreational activities. • Evaluate and monitor the activities to continue the process by understanding strengths and weaknesses. 	<p>Government, Ministry of Social Services, Ministry of Cultural Affairs, Ministry of Public Management Reforms, Voluntary and NGOs, Sociologists, Local Authorities, & Residents.</p>
5	<p>Promote inclusive design & affordable housing.</p> <ul style="list-style-type: none"> • Provision of basic amenities and social infrastructure in ensuring social development and inclusiveness of diverse communities. • Street networks and block patterns that provides multiple connections between neighborhoods, to open space, amenity areas, and transit nodes. • Street zones that are pedestrian scaled and provide a safe and comfortable environment for community life. • The development of the commercial area aimed at creating a 'community focus', and incorporates elements such as decorative lighting, benches, bollards, decorative paving, large tree canopy, and landscaped areas that promote to a pedestrian environment and encourage community interaction. 	<p>Government, Investors, Ministry of Maga polis & Western Development, National Physical Planning Department, Land Use Policy Department, Sri Lanka Land Reclamation & Development Cooperation, Central Environmental Authority, Ministry for good Governance & Infrastructure, Ministry f Housing & Construction,</p>

	<ul style="list-style-type: none"> • Develop existing landscape through eco-tourism & by creating breeding grounds for endangered species through research centers. • Create defined buffer zones and create reservations for sensitive landscape areas by introducing eco friendly activities under controlled conditions. 	Urban Development Authority, Irrigation Department, Urban and Municipal Councils, Local Authorities, Property Developers, Urban Planners, & Architects.
--	---	---

7. Reference

- Aalbers, M.B. (2010). Antipode. *The Revanchist Renewal of the Yesterday's City of Tomorrow*. Vol 43 (No. 5. 2011 ISSN 0066-4812), 1696–1724. DOI: 10.1111/j.1467-8330.2010.00817. x. Department of Geography, Planning and International Development Studies, University of Amsterdam, Amsterdam.
- Collier, D. (2010). *Thought piece: Reflections on spatial planning*. Unpublished internal paper, Relu. RES-24-25-0016. Birmingham City University
- Colombo Municipal Council. (2001). *City Development Strategy Report*. Colombo: Government of the Democratic Socialist Republic of Sri Lanka.
- Karuppannan, S., & Sivam, A. (2011). *Social sustainability and neighbourhood design: an investigation of residents' satisfaction in Delhi*. Local Environment: The International Journal of Justice and Sustainability, 16(9), 849-870
- Kumara, K.K. (2016). *Refashioning the City: History, Tradition, Community, and Culture*. Department of Sociology, University of Colombo.
- Ministry of Megapolis and Western Development. (2017). *THE MEGAPOLIS - Western Region Master Plan 2030*. Colombo: Government of the Democratic Socialist Republic of Sri Lanka.
- More, B. (2017). *Urban planning, neighbourhoods and social cohesiveness: A socio-cultural study of expatriate residents in Dubai*. School of the Built Environment, College of Science and Technology University of Salford, Salford, UK.
- National Physical Planning Department. (2010). *National Physical Planning Policy and The Plan*. Colombo: Government of the Democratic Socialist Republic of Sri Lanka.
- Raman, S. (2010). *Designing a Liveable Compact City Physical Forms of City and Social Life in urban neighbourhood*. *Built Environment*, 36(1), 63-80.
- Sharp, J. S., & Clark, J. K. (2008). *Between the country and the concrete: Rediscovering the rural-urban fringe*. *City and Community*, 7(1), 61–79
- Smith, N. (1996). *The New Urban Frontier: Gentrification and the Revanchist City* (New York: Routledge).
- Spedding, N. (2004). *Unlocking the potential of the rural-urban fringe*. Resource Briefing [www.arthurrankcentre.org.uk/projects/ resource briefings/](http://www.arthurrankcentre.org.uk/projects/resource_briefings/). pdf Accessed 21.10.09.
- Subasinghe, S, Estoque, R.C & Murayama, Y. (2016). *Spatiotemporal Analysis of Urban Growth Using GIS and Remote Sensing: A Case Study of the Colombo Metropolitan Area, Sri Lanka*. *International Journal of Geo-Information*. Vol. (5), 197; DOI: 10.3390 /ijgi5110197.
- Uitermark, J. & Duyvendak, J.W. (2006). *Civilizing the City: Populism and Revanchist Urbanism in Rotterdam*. SAGE publications.
- UN-Habitat. (2014). *Urban Planning and Design for Social Cohesion*. Columbia: UN-Habitat.
- UN-Habitat. (2016). *World Cities Report 2016: Urbanization and Development: Key Findings*
- United Nations. (2020). *Colombo Development Dialogues*. Public Sector Modernization (pp. 15-19). London: The London School of Economics and Political Science.
- Wacquant, L. (1999). *Urban marginality in the coming millennium*. *Urban Studies*, 36, pp. 1639–1647
- Wang, F., & Zhou, Y. (1999). *Modelling urban population densities in Beijing 1982– 90: suburbanization and its causes*. *Urban Studies*, 36, 271–287.
- Weerakoon. K.G.P.K. (2017). *Analysis of Spatio-temporal Urban Growth using GIS Integrated Urban Gradient Analysis, Colombo District, Sri Lanka*. *American Journal of Geographic Information System*, 6(3), 83-89.

Zhao.P, Lu" a.B, Woltjer.J. (2008). *Conflicts in urban fringe in the transformation era: An examination of the performance of the metropolitan growth management in Beijing*. Habitat International (2008), doi: 10.1016/j.habitatint.2008.08.007