The Livable Corridor as a Generator of Urban Activity: The Case of Simpang Lima Corridor, Ampenan Old Town

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ABSTRACT

To date, the relationship between corridor livability and the generation of activity in cultural heritage areas has rarely been examined empirically, particularly in the context of cities in Indonesia. Kota Tua Ampenan, one of the heritage areas in Mataram City, has the potential to become an urban tourism destination due to its Art Deco architecture. However, the decline in the area's vitality, reflected in the condition of neglected historic buildings and the lack of public space activities, indicates that the corridor's function as a catalyst for the area's vitality is not yet optimal. This study aims to analyze the influence of four livability factors-accessibility, land use, comfort and safety, and memorability-on activity generation in the Simpang Lima Corridor. The method used is a quantitative descriptive approach with multiple linear regression techniques using SPSS. The results show that the four factors collectively contribute 78% to activity generation (Adjusted R^2 = 0.78), with accessibility, comfort and safety being the dominant factors. These findings suggest that improving the livability quality of the corridor can effectively promote the reactivation of heritage areas. This study makes an important contribution to the development of a theoretical approach to livability-based design in historic urban corridors, which can serve as a strategic reference for revitalization efforts in old cities in Indonesia and Southeast Asia.
Keywords: Activity Generator, Corridor Design, Cultural Heritage Spaces, Livable Corridors, Pedestrian Ways.

ABSTRAK

Hingga saat ini, keterkaitan antara livabilitas koridor dan pembangkitan aktivitas di kawasan warisan budaya masih jarang ditelaah secara empiris, khususnya dalam konteks kota-kota di Indonesia. Kota Tua Ampenan, salah satu kawasan warisan di Kota Mataram, menyimpan potensi sebagai destinasi pariwisata perkotaan melalui karakter arsitektur Art Deco. Namun, penurunan vitalitas kawasan yang tercermin dari kondisi bangunan bersejarah yang terbengkalai dan minimnya aktivitas ruang publik menunjukkan belum optimalnya fungsi koridor sebagai pemicu kehidupan kawasan. Penelitian ini bertujuan untuk menganalisis pengaruh empat faktor livabilitas yaitu, aksesibilitas, penggunaan lahan, kenyamanan dan keamanan, serta memorabilitas, terhadap pembangkitan aktivitas di Koridor Simpang Lima. Metode yang digunakan adalah pendekatan deskriptif kuantitatif dengan teknik regresi linier berganda dengan aplikasi SPSS. Hasil penelitian menunjukkan bahwa keempat faktor secara simultan berkontribusi sebesar 78% terhadap pembangkitan aktivitas (Adjusted R^2 = 0,78), dengan aksesibilitas serta kenyamanan dan keamanan sebagai faktor dominan. Temuan ini menunjukkan bahwa peningkatan kualitas livabilitas koridor dapat mendorong reaktivasi kawasan warisan secara lebih efektif. Studi ini memberikan kontribusi penting dalam pengembangan pendekatan teoritis perancangan berbasis livability pada koridor perkotaan bersejarah, yang dapat menjadi acuan strategis dalam upaya revitalisasi kota lama di Indonesia maupun Asia Tenggara.
Kata Kunci: Jalur Pejalan Kaki, Kawasan Cagar Budaya, Livabilitas Koridor, Pembangkitan Aktivitas, Penataan Koridor.

1. INTRODUCTION

The declining vitality of cultural heritage areas is a common challenge in the urban regeneration agenda of many developing countries, including Indonesia. Weakened vitality, characterized by declining socio-economic activities, degradation of public spaces, and abandoned building functions have caused heritage cities to lose their strategic role in the overall city structure. This is reflected in Ampenan Old Town, Mataram City, which used to be the main port of Lombok Island. Since the transfer of the port function to Lembar and the economic center to Cakranegara in 1977, trade, service and social activities in this area have continued to decline. The impact is evident in the abandoned historic buildings, the declining quality of the physical environment, and the stalled dynamics of the urban space.

Ampenan Old Town is now transforming into an urban heritage tourism area, supported by the potential of Art Deco-style architecture along the Simpang Lima corridor, the coastal landscape, and the history of ethnic diversity. The Mataram City Government has made a number of physical interventions, such as pedestrianization and beautification of building facades. However, these efforts have not shown a significant impact on the vitality of the area. One indication is the imbalance in the distribution of arrangements, which actually weakens the character and historical function of the corridor. This shows that physical revitalization alone is not enough, an approach that considers livability aspects as a strategy to improve the quality of life and activity generation is needed.

In this context, urban corridors play an important role, not only as circulation routes, but also as social spaces that connect mobility, economic activity and spatial experience. The concept of livable corridors has evolved as a design approach that places comfort, accessibility, functional connectedness, and historical value as integral factors in the livability of urban areas. However, studies on the relationship between corridor livability and activity generation in heritage areas, particularly in tier two cities such as Mataram, are limited empirically and conceptually.

Several previous studies have addressed livability in urban spaces, but with different focuses. Krisetya (2018) explored physical and social characteristics in the development of livable streets in residential areas, while Mokodongan & Tallei (2016) discussed the design principles of commercial corridors based on land use and accessibility issues. Sugihartoyo & Widagdo (2010) reviewed the potential and constraints of developing tourism corridors in urban areas. While all three are relevant, the approach and context do not specifically cover the dynamics of historic areas. In addition, the livability variables used in the study have not integrated memorability factors and visual-spatial linkages with urban heritage elements.

Furthermore, research by Samian and Jordan (2020) on the implementation of livable streets on Jalan Mulawarman, Balikpapan, used similar variables, namely accessibility, comfort, and land use diversity. However, their approach was qualitative and focused on residents' perceptions, without in-depth quantitative analysis. This study offers a new contribution through statistical testing using multiple linear regression to measure how strongly each variable influences the generation of activity. While several studies have assessed livability in commercial or residential corridors, there is limited research that addresses how livability factors contribute to activity generation in heritage urban corridors, especially in Indonesia's second-tier cities. In that context, livable corridors are not just a matter of physical comfort, but a spatial strategy to revitalize urban memory and stimulate public interaction.

The purpose of this study is to examine the influence of four livability factors namely accessibility, land use, comfort and safety, and memorability on activity generation in the Simpang Lima Corridor, Kota Tua Ampenan. This study is expected to offer an alternative approach in revitalizing the old town area through corridor design that is more oriented towards quality of life and sustainability of social activities.

Literature Review

Corridors in an urban context are understood as linear spaces formed by rows of buildings, vegetation, or other physical elements that enclose streets and provide a strong spatial structure to the area (Moughtin, 1992). Lynch (1960) reinforces this by defining corridors as movement paths that connect urban spaces, shape the image of the area, and facilitate spatial identification for the community. In this context, corridors are not only physical infrastructure, but also social spaces that have great potential in supporting urban life.

The idea of livable streets was introduced by Appleyard (1981), who emphasized that streets should not only function as vehicle routes, but also as safe, comfortable and inclusive living spaces for all user groups, including pedestrians, cyclists, people with disabilities and public transport users. Livable streets are understood as public spaces that support health, social connectedness, and daily community interaction. This concept was later expanded by The National Association of Regional Councils (2012) in Hadinugroho & Yulanda (2015), which added social and economic dimensions such as community engagement, housing affordability, and local economic competitiveness as part of the corridor livability principles. Based on the synthesis of various theories, this research formulates four main variables in measuring corridor livability, namely accessibility, land use, comfort and safety, and memorability.

Accessibility is a fundamental aspect in shaping a vibrant urban space. Jacobs (1993)

states that activity generators thrive in areas that have high accessibility and good connectivity, as they are able to ensure the continuity of pedestrian flow and social interaction. Elements such as connected street networks, clarity of orientation, and availability of public transportation are key criteria in assessing corridor accessibility. Adaptive and diversified land use greatly contributes to the vitality of an area. Shirvani (1985) explains that land use is an instrument for controlling space through determining functions that are in accordance with the character of the area. In the context of livable streets, the application of mixed-use is an important strategy to encourage activity intensity, especially when combined with supportive design and infrastructure (Roberts & Greed, 2001). Krisetya (2018) adds that the effectiveness of land use is determined by the relationship between functions, the availability of facilities, and vertical integration in the form and height of buildings.

Physical comfort and safety are prerequisites in creating inclusive public spaces. White (1980) points out that well-lit public spaces, open visibility, and adequate seating facilities encourage people to gather and interact. Gehl (1987) emphasizes the importance of pedestrian-friendly design such as wide sidewalks and accessible open spaces to naturally foster activity. The element of comfort also includes weather protection, ease of movement, and a feeling of safety from crime.

Memorability relates to people's memory and emotional attachment to a space. Lynch (1960) underlined the importance of visual elements such as landmarks, edges, and paths that help people explore the city and create a strong image of the area. In the context of historic corridors, the value of memorability is strengthened by the presence of distinctive architecture, local stories, and spatial structures that are able to revive the collective memory of the community. Appleyard (1981) also mentions that spaces that have visual uniqueness and local identity tend to be more vibrant because they encourage emotional involvement of the community. Based on the theoretical description and previous findings, the four variables of accessibility, land use, comfort and safety, and memorability were chosen because they represent the physical and social dimensions of the livable corridor concept. This formulation also fills the gap in previous studies that have not systematically integrated these four aspects in the context of historic urban corridors in second-tier cities such as Mataram City.

Tabel 1. Research Variable

Variable	Sub Variable	Indicator
Accessibility	Transportation mode choices	Impact of accessibility
Land Use	Mixed land use	Impact of land use
Comfort and Safety	Pedestrian way and street furniture conditions	Impact on comfort and safety
Memorability	Attractiveness	Impact on memorability

Source: Research Results, 2025

This study conceptualizes corridor livability as consisting of four interrelated factors accessibility, land use, comfort and safety, and memorability that directly influence the generation of activities in the Simpang Lima Corridor, Ampenan Old Town. The framework illustrates the analytical structure used to assess the extent to which each factor contributes to corridor vitality.
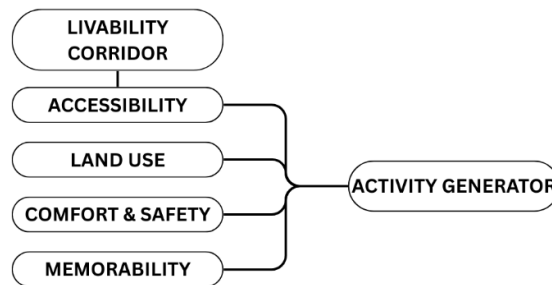

Figure 1. Conceptual Framework
Source: Research Results, 2025

2. DATA AND METHODS

Data

The location of this research is in Kota Tua Ampenan, located in Ampenan Sub-district, Mataram City. The Simpang Lima corridor of Kota Tua Ampenan consists of 5 (five) roads, namely Jalan Pabean, Jalan Saleh Sungkar, Jalan Koperasi, Jalan Yos Sudarso, Jalan Niaga, and Jalan Niaga 1, with a total delineation area of 25.4 ha.
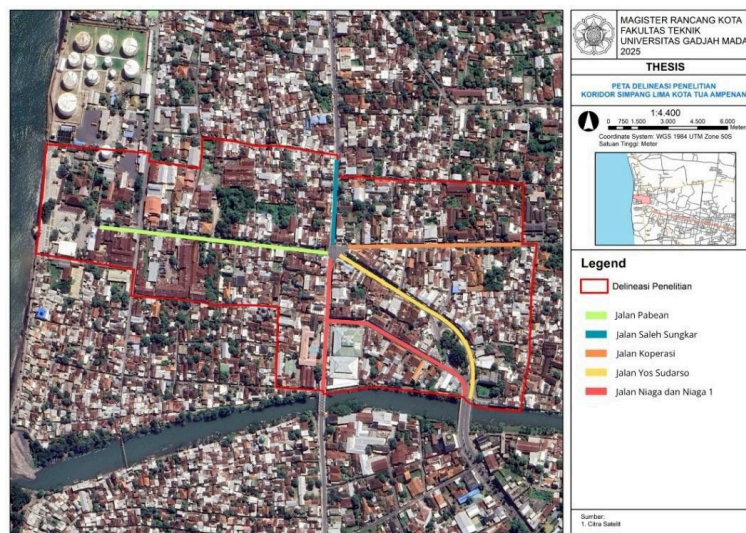

Figure 2. Map Delineation of the Simpang Lima Corridor
Source: Research Results, 2025

Based on the delineation map of the Simpang Lima Corridor shown in (Figure 1), the

Simpang Lima Corridor is divided into 5 (five) road segments with an observed length of Segment 1 Jalan Pabean along 413 m, Segment 2 Jalan Saleh Sungkar along 169 m, Segment 3 Jalan Koperasi along 352 m, Segment 4 Jalan Yos Sudarso along 366 m, and Segment 5 Jalan Niaga along 251 m and Jalan Niaga 2 along 238m.

Accessibility

The diversity of choices of public transportation modes in an area can provide many choices to get to the area so as to create activities in it. Based on observations, it was found that there are 2 (two) types of public transportation modes available in the Simpang Lima Corridor, namely city transportation (bemo) and andong (cidomo). Both modes of public transportation serve Ampenan Old Town and its surroundings, but there are no adequate stops such as bus stops. The following figure shows the condition of public transportation modes in the study area.

Figure 3. Types of Public Transportation in The Simpang Lima Corridor
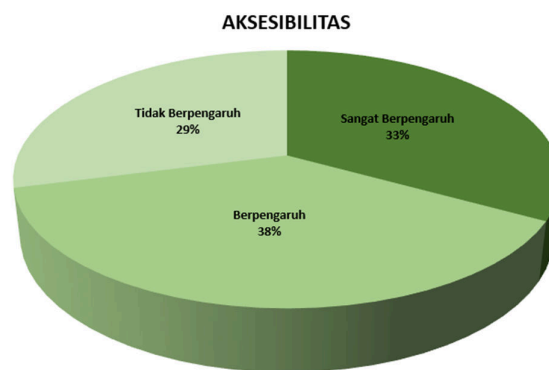Source: Research Results, 2025

Figure 4. Percentage of Accessibility Factor
Source: Research Results, 2025

The results of the questionnaire are shown in Figure 4, the majority of respondents answered that the accessibility factor was quite influential at 38% on activity generation, even though the existing accessibility in the Simpang Lima Corridor was not optimal.

Land Use

Land use in the Simpang Lima corridor includes various functions, including green open space, trade and services, public facilities, settlements, worship, offices, and industry and warehousing. Based on the findings in the field, the most dominant types of land use are settlements and trade and service activities. The following is a table of the area and percentage of land use and building functions in the research area.

Tabel 2. Percentage of Land Use in Simpang Lima Corridor

Land Use	Area (Ha)	Percentage (%)
Industry	0,55	2,34
Religion	0,13	0,55
Education	0,58	2,46
Trade and Services	10,93	46,37
Office	0,59	2,51
Residential	9,02	38,28
Green Open Space	1,76	7,49
Total	23.56 Ha	100%

Source: Research Results, 2025

The data shown in Table 1, shows that the dominant land use in the Simpang Lima Corridor is trade and services with a total area of 10.93 ha or 46.37% of the total delineation area. Meanwhile, residential land use is 9.02 ha or 38.28% of the total delineation area.

Figure 5. Percentage of Land Use Factor
Source: Research Results, 2025

The results of the questionnaire are shown in Figure 5, the majority of respondents answered that the land use factor was quite influential on activity generation, even though the dominating land use in the Simpang Lima Corridor is residential. Based on the data that has been collected, it is known that the diversity of building functions in the Simpang Lima City Corridor is as follows.
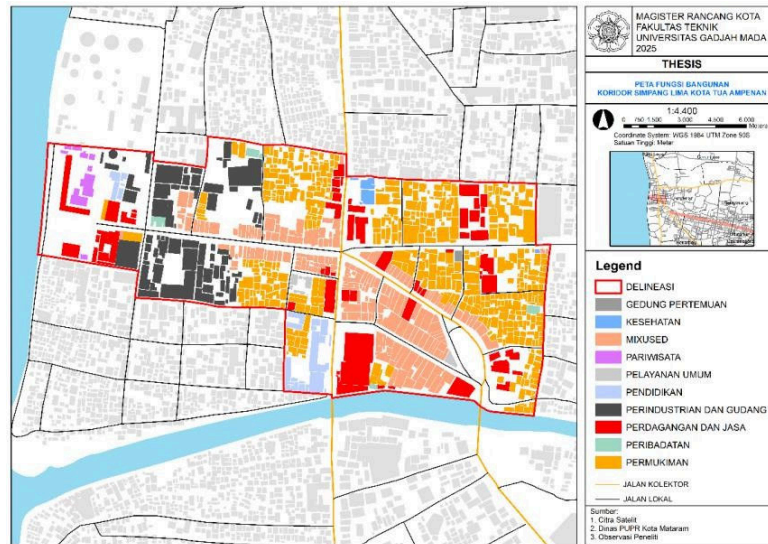
Figure 6. Distribution of Building Functions
Source: Research Results, 2025

Comfort and Security

Comfort and safety in the Simpang Lima Corridor is seen from the condition and dimensions of pedestrian paths, the availability of street furniture and security on pedestrian paths. Based on the findings of field observations that have been made, several pedestrian paths with potholes were found and two typologies of pedestrian paths were also found.

Figure 7. Pedestrian Way Conditions
Source: Research Results, 2025

The condition of the pedestrian path is shown in Figure 7, showing that the condition of the pedestrian path has a fairly poor condition because there are several uneven and potholed pedestrian paths. In addition, based on the above, there are also two typologies of pedestrian paths in the Simpang Lima Corridor, namely sidewalks and arcades.
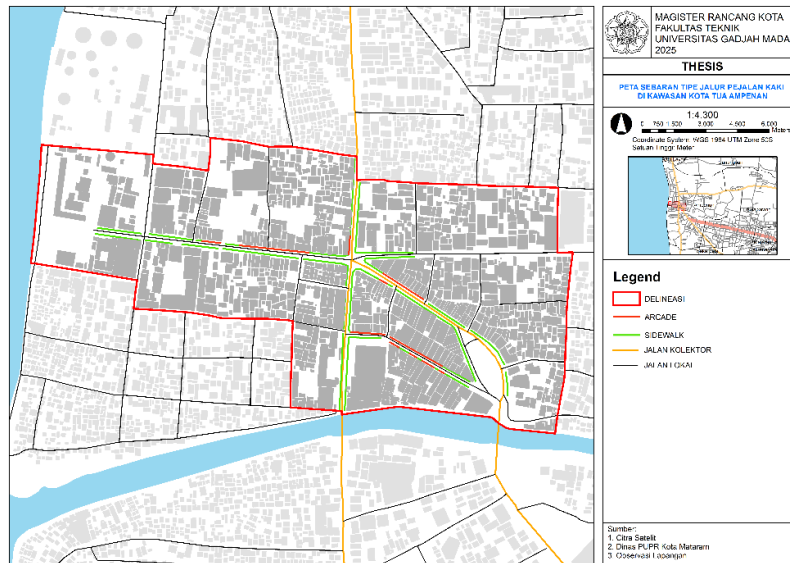
Figure 8. Distribution of Pedestrian Way Typology
Source: Research Results, 2025

Based on PERMEN PUPR Number 3 of 2014, the width of the pedestrian path in the shopping / entertainment area is recommended to be 4 (four) meters wide with a minimum width of 2 (two) meters. The following is the width of the pedestrian path in each road section of the Simpang Lima Corridor.

Tabel 3. Pedestrian Way Width

Segment	Road Side	Width (m)
Segment 1	North	2 m
	South	3 m
Segment 2	West	2,25 m
	East	2,6 m
Segment 3	North	2 m
	South	2,25 m
Segment 4	North	2,6 m
	South	2,8 m
Segment 5	North	1,9 m
	South	1,9 m

Source: Research Results, 2025

Data shown in Table 2, shows that the width of the pedestrian path in the Simpang Lima Corridor is wide enough except in segment 5. The availability of street furniture and road dividers with pedestrian paths is based on PUPR Regulation Number 3 of 2014 which explains that pedestrian paths must take into account several criteria such as comfort and safety. Comfort criteria on pedestrian paths emphasize the availability of supporting facilities for pedestrian paths (street furniture) that are able to provide comfort for users of road space for activities,

such as street lighting, trash bins, shade or green lanes, seats, bus stops, and facilities for people with disabilities. Based on the findings of field observations, the availability of street furniture in each segment of the Simpang Lima City Corridor is as follows.
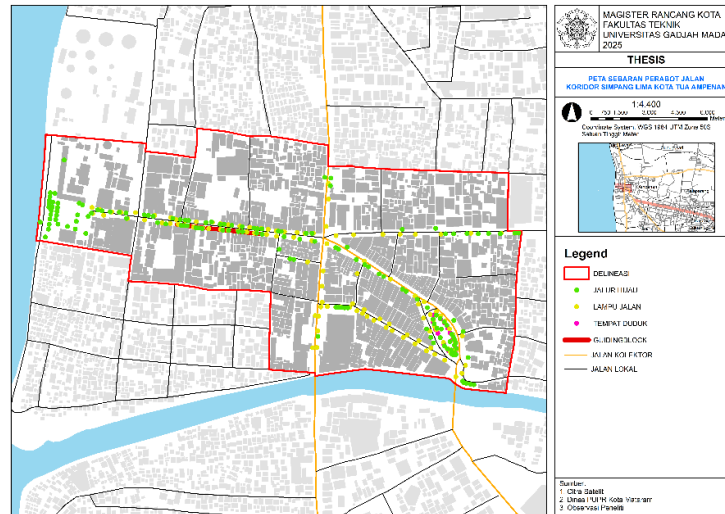

Figure 9. Distribution of Street Furniture
Source: Research Results, 2025

The distribution of street furniture on the pedestrian path shown in Figure 9, shows that the availability of street furniture in the Simpang Lima corridor of Kota Tua Ampenan is still low and incomplete, it can be seen from the street furniture available in all segments only consists of lighting and green lanes. Meanwhile, other street furniture is still rarely found and does not even exist at all. In addition to the availability of street furniture, security of pedestrian paths in the Simpang Lima corridor is still minimal and dangerous.

Figure 10. Percentage of Comfort and Safety Factor
Source: Research Results, 2025

The results of the questionnaire are shown in Figure 10, the comfort and safety factors are quite influential on activity generation, although comfort and safety in the Simpang Lima Corridor are still not optimal, because the conditions and dimensions of the pedestrian path, the availability of street furniture and safety are not adequate.

Memorability

Memorability in the Simpang Lima Corridor is seen from the condition of the distribution of attractions that are able to invite people to come and do activities, and are able to give a good impression to road users. Based on the results of the questionnaire distributed to 100 samples, several things were found to be attractive in the Simpang Lima Corridor of Kota Tua Ampenan.

Tabel 4. Attractiveness According to Respondents

Attractiveness	Number of Respondents
Old Building	38 respondents
Ampenan Beach	34 respondents
Anchor Park	16 respondents
Old Town Archway	10 respondents
Culinary Tourism	9 respondents
ACC Market	7 respondents

Source: Research Results, 2025

The data shown in Table 3, shows that there are several attractions in Ampenan Old Town such as, old buildings, anchor park (durian park), old town gate, market Ampenan City Center (ACC), and ampenan beach and culinary tours. Based on questionnaire data, the most memorable attractions are the Old Building and Amenan Beach.

Figure 11. Attraction of The Simpang Lima Corridor
Source: Research Results, 2025

The observation results shown in Figure 11, are an attraction in the Simpang Lima City Corridor that can give an impression to visitors so that they want to come and invite new visitors. The following are respondents' answers regarding memorability.

Figure 12. Percentage of Memorability Factor
Source: Research Results, 2025

The results of the questionnaire are shown in Figure 12, the memorability factor is already quite influential on activity generation, although memorability in the Simpang Lima Corridor only gives an impression for several segments that have diverse attractions such as historical buildings, open spaces, tourism spots, photo spots, and there are culinary tours.

Methods

The type, method and approach used in this research are descriptive quantitative with a theoretical deductive approach. According to Narbuko & Abu (1999), descriptive research is a type of research that aims to provide a description or explanation of a problem based on the data that has been collected, then analyzed and interpreted, so as to obtain a deep understanding of a problem. Quantitative research is research that uses research objects in an explanatory manner to test the relationship between hypothesized variables using instruments to measure hypotheses with certain indicators and statistically processed using numbers (Mulyadi, 2011). Quantitative research is used to determine the factors of Corridor livability that affect the increase in activity in the Simpang Lima Corridor of Kota Tua Ampenan through simple regression tests on the SPSS application.

Data Collection Technique

This study used a mixed sampling approach, with the research location of the Simpang Lima corridor of Kota Tua Ampenan purposively selected for its historical and functional relevance. Data were collected through observation, documentation, and a questionnaire that was tested for validity and reliability. The questionnaire was pilot tested to ensure content validity, and achieved a Cronbach's alpha value of 0.92, indicating acceptable reliability. Sampling was conducted using two techniques, random sampling of 100 general corridor user respondents to obtain generalizable quantitative data, and purposive sampling of 20 respondents in each corridor segment based on activity and land use characteristics. This combination allows for a more comprehensive understanding of the phenomenon under study, both in general and contextually.

Analysis Technique Classical Assumption Test

The regression model can be declared feasible as a modeling tool when it meets the Best Linear Unbiased Estimator (BLUE) criteria. Thus, before conducting multiple linear regression analysis, it is necessary to first test the model to get a good model using the classical assumption test which consists of normality test, heteroscedasticity test, and multicollinearity test.

Normality Test

This test aims to determine whether the confounding or residual variables are normally distributed in the regression model. To prove whether the data is normally distributed or not, it can be seen from the shape of the data distribution, which is found in the normal probability plot graph. Apart from using graphs, there is another way that can be used, namely by using the Kolmogorov-Smirnov Test, by looking at the significance value with an error rate ($\alpha = 5\%$). If the Sig.KS value ≥ 0.05 then the data is normally distributed and if Sig.KS ≤ 0.05 then the data is not normally distributed (Ghozali, 2006).

Heteroscedasticity Test

This test aims to test whether there is an inequality of variance from the residuals of an observation to another observation period. The way to predict the presence or absence of heteroscedasticity can use the Glejser Test method. The Glejser test is performed to regress the absolute value of the residual against the independent variable. If each independent residual has no significant effect on the absolute residual ($\alpha = 5\%$), then there is no heteroscedasticity in the regression model and if each independent residual has a significant effect on the absolute residual ($\alpha = 5\%$), then there is heteroscedasticity in the regression model (Ghozali, 2006).

Multicollinearity Test

This test is used to test the regression model whether there is a correlation between the independent variables. A good regression model should not have a correlation between the independent variables. To determine the presence or absence of multicollinearity symptoms in the regression model, it can be seen from the Tolerance and VIF (Variance Inflation Factor) values. If the Tolerance value ≤ 0.10 and the VIF value ≥ 10, it is said that the model has multicollinearity symptoms and if the Tolerance value ≥ 0.10 and the VIF value ≤ 10, the model does not experience multicollinearity (Ghozali, 2006).

Multiple Linear Regression Test

Multiple linear regression tests can be used to model the relationship between the dependent variable and more than one independent variable. To find out the factors that influence activity generation, we can use the multiple linear analysis method in the form of a linear function that connects activity generation (Y) with independent variables, namely accessibility (X1), land use (X2), comfort and safety (X3), and memorability (X4). The relationship can be expressed with the following mathematical equation:

$$Y = \beta 0 + \beta 1 X1 + \beta 2 X2 + \beta 3 D1 + e$$

The accuracy of the regression function in estimating the actual value can be measured

using goodness of fit. In statistics, the suitability of the model can be measured from the coefficient of determination (Adjusted R2), simultaneous significance test (F-test), and partial significance test (T-test). It is called significant if the statistical calculation results are in the condition that H0 is rejected (Ghozali, 2006).

Test Coefficient of Determination (Adjusted R-Square)

Adjusted R-Square is used to determine the value of the dependent variable that can be explained by variations in the independent variable and the rest which is part of the value of other variables not included in the model. The adjusted R-Square value is 0 to 1, if the value is close to 0, it means that the ability of the independent variable to predict the dependent variable is very limited and vice versa if the value is close to 1, the ability of the independent variable is able to provide almost all the information needed to predict the dependent variable. If the adjusted R-Square value is equal to 0 then what is used is the R2 value (Ghozali, 2006).

Simultaneous Significance Test (F-test)

The F-test is used to determine whether all independent variables (X) included in the regression model have a joint influence on the dependent variable (Y) (Ghozali, 2006).

Partial Significance Test (T-test)

Partial significance test (t-test) is a measurement method to test the effect of each independent variable (X) on the dependent variable (Y). This research hypothesis testing design is used to test whether or not there is an influence between the independent variables (X), namely accessibility (X1), land use (X2), comfort and safety (X3), and memorability (X4), and generating activities (Y).

3. RESULT AND DISCUSSION

Classical Assumption Test

Analysis of the livability factors of the Simpang Lima corridor in Kota Tua Ampenan that affect the increase in activity will be measured using multiple linear regression analysis using the SPSS application. To perform the analysis, there are several model tests such as the classical assumption test and hypothesis testing in order to obtain a good regression model.

Normality Test

Normality testing is used to determine whether the residual variables are normally distributed in testing multiple linear regression models. The normality test can prove that the data used is normally distributed or not and can be reviewed based on the shape of the distributed data. In this study using the Kolmogorov-Smirvor Test (K-S).

In the Kolmogorov-Smirvor (K-S) Test, the data seen is the significance value with an

error (α = 5%). If the Sig.KS value > 0.05 (greater than 0.05), then the data is normally distributed and if the Sig.KS value < 0.05 (less than 0.05), then the data is not normally distributed. The following are the results of the Kolmogorov-Smirvor (K-S) test.

Tabel 5. Results of The Kolmogorov-Smirnov Normality Test

Unstandardized Residual	
N	100
Kolmogorov-Smirvor Z	
Asymp. Sig (2-tailed)	0,140

Source: Research Results, 2025

The data shown in Table 4, shows that the results of the normality test show that the Kolmogorov-Smirvor (K-S) significance value is 0.140, which means that the data is normally distributed. This is in accordance with the significance value with an error (α = 5%), where the Sig.KS value> 0.05 (greater than 0.05), then the data is normally distributed. For this reason, the data used in the multiple linear regression model in this study are normally distributed.

Heteroscedasticity Test

Heteroscedasticity testing is used to determine whether there is an inequality of variance from residuals in an observation to another observation period, in this study the heteroscedasticity test used the Glejser Test. The Glejser test is performed to regress the absolute value of the residual against the independent variable. If each independent residual has no significant effect on the absolute residual (α = 5%), then there is no heteroscedasticity in the regression model, and if each independent residual has a significant effect on the absolute residual (α = 5%), then there is heteroscedasticity in the regression model. The following are the results of the Glejser test.

Tabel 6. Results of Glejser's Heteroscedasticity Test

Independent Variable	Sig.
Accessibility	0,514
Land Use	0,894
Comfort and Safety	0,973
Memorability	0,533

Source: Research Results, 2025

The data shown in Table 6, shows that the results of the heteroscedasticity test show that all values of the independent variables are significant > 0.05. For this reason, the data used in the multiple linear regression model of this study does not occur symptoms of heteroscedasticity.

Multicollinearity Test

A good regression model should not have a correlation between the independent

variables, to determine the presence or absence of mulitkolinearity symptoms in the regression model can be seen from the Tolerace and VIF (Variance Inflation Factor) values. If the Tolerance value < 0.10 (less than 0.10) and the VIF value > 10 (greater than 10), it is said that the regression model has multicollinearity symptoms, and if the Tolerance value > 0.10 (more than 0.10) and the VIF value < 10 (less than 10), it is said that the regression model does not experience multicollinearity symptoms.

Tabel 7. Multicollinearity Test Results

Independent Variable	Tolerance	VIF
Accessibility	0.980	1.020
Land use	0.970	1.031
Comfort and Safety	0.991	1.010
Memorability	0.979	1.021

Source: Research Results, 2025

The data shown in Table 7, shows that the multicollinearity test results show that there are no independent variables that have a Tolerance value < 0.10 and the calculation results of the VIF value > 10. For this reason, it can be concluded that the independent variables in the multiple linear regression model used in this study do not have multicollinearity symptoms.

Multiple Linear Regression Analysis

Multiple linear regression analysis can be used to find out the relationship between more than 1 (one) independent variable and the dependent variable. Activity generation as the dependent variable can be influenced by several independent variable factors, namely, accessibility, land use, comfort and safety, and memorability.

Tabel 8. Results of Multiple Linear Regressuin Analysis

Independent Variable	Regression Coefficient	T Count	Sig.
Constant	-.606	-3.886	.000
Accessibility (X1)	0.453	11.466	.000
Land Use (X2)	0.256	6.622	.000
Comfort and Security (X3)	0.440	11.219	.000
Memorability (X4)	0.221	5.682	.000
R Square			.796
Adjusted R^2			.788
N			100

Source: Research Results, 2025

The data shown in Table 8, shows that the significance value of each independent variable is said to be significant if the significance value is less than or equal to the significance level. For this reason, the multiple linear regression equation for activity generation around the Simpang Lima Corridor of Kota Tua Ampenan is as follows.

$$Y = -.606 + 0.453\,(X1) + 0.256\,(X2) + 0.440\,(X3) + 0.221\,(X4)$$

Adjusted R-Square Coefficient Test

The data shown in (Table 7), shows that the Adjusted R Square value is 0.788, so the value of the independent variable variation is 78.8% explained by accessibility, land use, comfort and safety, and memorability with the remaining value of 21.2% can be explained by other independent variables outside the model used in this study.

Simultaneous F Test

The F test is used to determine whether all independent variables (X) in the regression model have a joint influence on the dependent variable (Y). the following are the results of the F test analysis used in this study.

Tabel 9. Results of Simultaneous F Test Analysis of Multiple Linear Regression (ANOVA Table)

Model	Sum Of Squares	Df	Mean Square	F	Sig.
Regression	35.064	4	8.766	92.777	.000[b]
Residual	8.976	95	.094		
Total	44.040	99			

Source: Research Results, 2025

The data shown in Table 9, shows that the simultaneous F test results show that the significance value is 0.000, which means that the value is smaller than 0.05. In addition to using the significance value, the F test can be done by knowing the value of F table and F count, if the value of F count > F table (greater), then the independent variable affects the dependent variable. Based on the simultaneous F test analysis, the F table value is found to be 2.46 while the calculated F value is 92,777. So it can be concluded that the independent variables, namely accessibility, land use, comfort and safety, and memorability are involved together (simultaneously) affect the dependent variable, namely activity generation.

Partial T Test

The T test is a test method to measure the effect of each independent variable (free, X) on the dependent variable (bound, Y). the following are the results of the partial T test of each independent variable.

Tabel 10. Results of Partial T-Test Analysis of Multiple Linear Regression

Independent Variable	T Count	T Table	Sig.	Description
Accessibility	11.466	1.985	.000	Influential
Land Use	6.622	1.985	.000	Affected
Comfort and Safety	11.219	1.985	.000	Influential
Memorability	5.682	1.985	.000	Influential

Source: Research Results, 2025

The data shown in Table 10, shows that the results of the partial T test show that each independent variable, namely accessibility, land use, comfort and safety, and memorability, has a significance value of 0.000, which means that the value is smaller than 0.05. In addition to using the significance value, the T test can be done by knowing the value of T table and T count, if the value of T count > T table (greater), then the independent variable affects the

dependent variable. Based on the parisal T test analysis, the T count for the accessibility variable (X1) is 11.466, the land use variable (X2) is 6.622, the comfort and safety variable (X3) is 11.219, and the memorability variable (X4) is 5.682, all independent variables are greater than the T table value of 1.985.

Discussion

Accessibility

The results show that accessibility is the most dominant factor in influencing activity generation, with a contribution value of 11,466 in multiple linear regression analysis and an influence level of 38% according to respondents' perceptions. This finding reinforces Lynch's (1960) theory on the importance of corridors as path elements that support urban movement and orientation. In the context of historical corridors, the role of accessibility is even more crucial as it connects activity nodes and city elements that have historical and cultural value. This is in line with the findings of Aulia et al. (2020) that physical connectivity and ease of access can activate corridors and increase social interaction. However, the Simpang Lima Corridor does not yet have adequate bus stops or transit facilities, so its accessibility potential has not been optimized.

In Contranst to studies in the context of metropolitan cities that are usually supported by integrated transportation nodes such as bus stops, terminals, or multimodal systems, the Simpang Lima corridor in Kota Tua Ampenan is only served by two traditional modes of transportation, bemo and cidomo. The lack of supporting infrastructure such as bus stops or official transit points indicates a spatial mismatch between the potential of the area as an activity node and the reality of available physical access. This indicates that although the community feels the presence of public transportation, the suboptimal connectivity system limits the increase in more intense activities. This limitation makes it clear that accessibility is not only about the presence of modes, but also the quality of the network and supporting infrastructure. Thus, these results support Appleyard's (1981) notion of streets as social spaces, but also show that without adequate support systems, the corridor's function as an activity trigger remains weak. The implication is that improving public transportation nodes and structuring access points should be a planning priority.

Comfort and Safety

Comfort and Safety has a contribution of 11,219 in the regression analysis, with a perceived influence of 38%, similar to accessibility. This indicates that although people recognize the importance of comfort and safety, the actual conditions on the ground are not

able to support these expectations. Observations found that the pedestrian paths are damaged, uneven, and lack street furniture in almost all corridor segments. This contradicts the basic principles of livable streets according to Appleyard (1981) and Gehl (1987), which emphasize the importance of safe, pleasant and inclusive street spaces.

The absence of key elements such as seating, shade, trash bins, and protection for pedestrians indicates that the corridor has not functioned as an active social space, but is still limited to a transition path. In White's (1980) study, physical design qualities such as lighting and visibility influenced people's desire to stay and move. This indicates that comfort is not just a complement, but a shaping factor for interaction patterns in urban spaces. In other words, while comfort is perceived to be important, actual weaknesses in the design of street space show that the existence of elements is not a guarantee of vitality, unless they are designed with participatory, accessible and friendly principles towards vulnerable groups such as children, the elderly and the disabled.

In addition, a study by Zhang et al. (2025) shows that thermal comfort in street spaces influences people's tendency to linger, interact, and actively use the space. In the context of the Simpang Lima Corridor, despite the fact that comfort is not yet optimal with uneven pedestrian paths and a lack of shade it is understandable that such physical conditions also reduce the appeal of public spaces and hinder the generation of activity. Therefore, improving micro-comfort quality through the provision of shade, adequate lighting, and street furniture is not only relevant to regulations (Ministry of Public Works and Housing Regulation No. 3/2014) but is also supported by empirical findings on the relationship between physical comfort and public space behavior (Zhang et al., 2025).

Land Use

Land use in the Simpang Lima corridor is dominated by trade and service functions (46.37%) and settlements (38.28%), both of which play an important role in shaping the area's activities. Nonetheless, the contribution value of land use in the regression model stands at 6.622, with a perceived influence from respondents of 35%, lower than accessibility. Theoretically, mixed land use is considered a key driver of urban vitality, as suggested by Roberts & Greed (2001), and Jacobs (1993) who state that a diversity of functions can support sustainable activities and increase pedestrian flows. In the context of Ampenan, this diversity of functions is not yet fully reflected spatially due to the dominance of settlements with unevenly distributed commercial intensity.

This indicates that the massive residential function can be an obstacle if not

accompanied by adaptive reuse strategies or activation of passive spaces. In contrast to studies in commercial urban areas, where mixed-use develops organically through market demand, land use in heritage corridors such as Ampenan needs to be strategically organized through designation incentives and integration of spatial functions. The findings also emphasize the importance of zoning controls and reactivation of spatial functions to prevent the area from becoming socially and economically stagnant.

Memorability

The memorability factor obtained the lowest contribution in the regression model, namely 5,682, and the level of influence according to respondents' perceptions was 36%. This is quite interesting because the Simpang Lima corridor has iconic elements such as old buildings, anchor parks, old city gates, markets, and culinary tours. These results indicate that the visual and historical appeal of the area has not been fully optimized in creating a strong and sustainable impression. Lynch (1960) states that visual elements such as landmarks and lanes can increase people's emotional attachment to urban space. However, in Simpang Lima, memorability only functions in certain segments, reflecting the uneven distribution of visual value. This has implications for the perception of the area as image fragmented and reduces its spatial cohesion as a historic corridor.

This also suggests that there is latent potential that has not yet been mobilized through place-making strategies and the strengthening of local identity. In contrast to heritage cities that have been integrated into the city branding system, Ampenan is still in the early stages of collective memorability formation. As in the study by Marthya et al. (2021), historic corridors have symbolic value that needs to be developed as visual and narrative attractions. With a layout that highlights local elements such as old buildings, beaches, and social interaction spaces, corridors can become places of meaning that encourage community engagement and tourist visits. As such, these findings provide an important argument that memorability building should be encouraged through synergies between building preservation, public space activation, and visitor experience curation. Zhao et al. (2025) emphasize that integrating the subjective perceptions of the community into street design is a crucial element in creating responsive and humanistic cities. The study shows that street space imagery that reflects subjective perceptions such as safety, liveliness, and attractiveness can increase residents' attachment to urban spaces, supporting a landscape-oriented urban development approach. This is relevant to the findings of this study, where comfort and memorability factors were found to be significant in triggering activity, although their implementation is not yet fully optimal.

Although the model explains 78% of the variance in activity generation, there is 22% unexplained variance that may be influenced by external factors such as government policies, socio-economic dynamics, and informal and seasonal interventions. Referring to Montgomery (1998), urban vitality is also strongly influenced by the cultural dimension, spontaneous activities, and sustainability of public space policies. As such, these factors play an important role in reviving historic urban corridors and should be considered in further research and more comprehensive planning strategies.

4. CONCLUCION

This study aims to examine the influence of corridor livability factors of accessibility, land use, comfort and safety, and memorability on activity generation in the Simpang Lima Corridor, Kota Tua Ampenan. The results of multiple linear regression analysis show that the four variables simultaneously contribute 78% to area activity, with accessibility as the most dominant factor. This finding emphasizes the importance of the livability approach in planning historic urban corridors, where designs that integrate access functions, public space comfort, diversity of functions, and visual identity are able to encourage the vitality of the area as a whole. This study is in line with Lynch, Jacobs, and Montgomery's view that a vibrant urban space depends on the interaction between activities, forms, and socio-cultural values.

Practically, these results provide direction for local governments and urban planners to not only focus on preserving heritage buildings, but also strengthen connectivity, provide safe and comfortable public spaces, and reorganize land use that supports local economic activities. Corridor design that is responsive to user needs and collective memory can be a key strategy in the reactivation of heritage areas in second-tier cities such as Mataram. However, this study has limitations, namely being cross-sectional and based on quantitative approaches, so it has not been able to capture behavioral dynamics or qualitative meanings of spatial activities. For this reason, further research is recommended using longitudinal, qualitative, or ethnographic methods to explore in-depth perceptions, time patterns, and user experiences of corridor spaces more holistically.

While this study provides valuable insights into the relationship between corridor livability and activity generation, it has several limitations. First, the research is cross-sectional and relies primarily on quantitative data, which restricts the ability to capture temporal dynamics and subjective experiences of users. Second, the study focuses on a single case in a second-tier Indonesian city, which may limit the generalizability of the findings to different cultural and spatial contexts. Future research could expand this approach by incorporating

longitudinal or mixed-method designs, exploring qualitative dimensions such as users' narratives and perceptions, and conducting comparative studies across multiple heritage corridors in Southeast Asia. Such directions would enrich the theoretical development of livability-based urban design and strengthen its practical relevance for revitalization strategies.

REFERENCES

Appleyard, B., AICP, & Cox, L. (2006). At Home in The Zone. Creating Livable Street in The U.S. Prosiding American Planning Association, hal 30-35, USA.

Appleyard, Donald. (1981). Livable Streets. Los Angeles: University of California Press.

Dwira Aulia, Sry Malem Perbina Bangun, & Cut Sari Natasya.R. (2020). Penataan Koridor Ruang Publik Perumahan Dengan Konsep Livable Street (Studi Kasus Perumahan Bumi Asri Medan). Talenta Conference Series: Energy and Engineering (EE), 3(1). https://doi.org/10.32734/ee.v3i1.872

Gehl, J. (1987). Life Between Buildings: Van Nostrand Reinhold Company

Ghozali, I. (2006). Aplikasi Analisis Multivariate dengan Program SPSS. Badan Penerbit Universitas Diponegoro.

Hadinugroho, D. L., & Yulanda, T. (2015). Konsep Livable Street Dalam penataan Ruang Jalan.

Jacobs, J. (2012). " The Uses of City Neighborhoods": From The Death and Life of Great American Cities (1961). In *The urban sociology reader* (pp. 50-57). Routledge.

Krisetya, A. T. (2018). Konsep Pengembangan Kawasan Koridor Jalan Tunjungan Melalui Pendekatan Livable Street. Skripsi. Institut Teknologi Sepuluh Nopember.

Lynch, K. (1960). The Image of the City: The M.I.T Press.

Marthya, K., Furlan, R., Ellath, L., Esmat, M., & Al-Matwi, R. (2021). Place-making of transit towns in Qatar: The case of qatar national museum-souq waqif corridor. Designs, 5(1), 1–17. https://doi.org/10.3390/designs5010018

Mokodongan, E. F., & Tallei, V. R. (2016). Prinsip Desain Koridor Komersial di Kawasan Kota Tua Gorontalo. Prosiding Temu Ilmiah IPLBI 2016, Hal 1-8, Lhokseumawe.

Montgomery, J. (1998). Making a city: urbanity, vitality and urban design. Journal of Urban Design, 3(1), 93–116. https://doi.org/10.1080/13574809808724418

Moughtin. (1992). Urban Design: Street and Square: Architectural Press.

Mulyadi, M. (2011). Penelitian Kuantitatif Dan Kualitatif Serta Pemikiran Dasar Menggabungkannya. Jurnal Studi Komunikasi dan Media, Vol. 15, Issue 1.

Narbuko, C., & Abu, A. (1999). Metodologi Penelitian. Jakarta: Bumi Aksara, 1999.

Samian, R., Jordan, N.A., (2024). Penerapan Konsep Livable Street Dalam Penataan Koridor Jalan Mulawarman Kota Balikpapan. Jurnal Tata Kota dan Daerah. Vol. 16 No.2 (2024)

Roberts, M., & Greed, C. (2001). Approaching Urban Design: Routledge.

Rukajat, A. (2018). Pendekatan Penelitian Kuantitatif (quantitative research approach): Deepublish Publisher.

Shirvani, Hamid. (1985). The Urban Design Process. New York: Van Nostrad Reinhold Company, Inc.

Sugihartoyo, & Widagdo, W. A. (2010). Strategi Pengembangan Wisata Kota Tua Sebagai Salah Satu Upaya Pelestarian Urban Heritage Studi Kasus: Koridor Kali Besar, Jakarta Barat. Jurnal PLANESATM. Vol. 1, Issue 1.

White, W. H. (1980). The Social Life of Small Urban Spaces: Project for Public Space

Zhang, Y., Lu, Y., Li, H., & Zhai, G. (2025). Effects of street-level thermal comfort on collective behaviors within the diurnal cycle: The moderating effect of streetscape

perception. Urban Climate, 61. https://doi.org/10.1016/j.uclim.2025.102485

Zhao, C., Ogawa, Y., Chen, S., Oki, T., & Sekimoto, Y. (2025). Street Space Quality Improvement: Fusion of Subjective Perception in Street View Image Generation. Information Fusion, 125. https://doi.org/10.1016/j.inffus.2025.103467