# Factors affecting urban art development in the Mekong Delta, Viet Nam

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#### Abstract

The study's objective is to evaluate the state of the art's development in Mekong Delta urban regions in Vietnam. The results from 150 interview forms identified two-factor groups, including type and historical-cultural value with 12 variables order and community interaction with 9 variables. With coefficient KMO = 0.94 and total variance extracted 67.02%, types include trees, lights, construction works, statues, and paintings distributed in parks, squares, main roads, government agencies, and private establishments. There is a difference in people's interest in urban art in 3 types of cities. Urban art in the urban areas is assessed to meet people's needs.

#### Keywords

Urban art, landscape, Mekong delta

## 1. Introduction

The term "urban art" can be described in many ways and cultural contexts, denoting that public art in urban settings is placed in specific sites with meaning and intent. Urban art often summarizes all visual art practices related to cities and city life (Knight, 2011). Urban art has been developed from street art and graffiti culture. Today, "urban art" is applied to creative artistic/design works ranging from monumental installations, landmark sculptures, graffiti, and murals. In contrast to "public art," urban art is very inclusive. It is both part of and reflective of current global urbanization processes. Following the current forms of urbanism, the transitions between art, architecture, urban design, city planning, and social-cultural characteristics are in continuous change, interaction, and transformation (Helmy, 2017). Urban art helps to renovate old urban areas and develop new urban landscapes effectively (Balarezo & Karimi, 2017; Tu et al., 2021). It communicated cultural and social messages in the community (Malaika et al., 2016). In addition, urban art contributes to sustainable urban development, with the target audience being residents and visitors (Odufuwa et al., 2019).

According to Hiep (2023), Vietnam is oriented to develop planning for specific urban models with many creative forms, such as tourist, creative, and smart cities. It is a step forward in line with the general development trend of cities worldwide, aiming to bring practical benefits to people, meeting the needs and cultural standards of the new era. In the overall picture of sustainable urban development, public art is a highlight that brings many practical benefits to the community, established by works of high artistic value that are symbolic and typical of each city in Vietnam today. The Mekong Delta is a critical region in the south of Vietnam with many potentials and advantages in urban development. In 2021, the urbanization rate of the whole Mekong Delta region will reach 31.16%, an increase of 4.6% compared to 2015. As a result, the urban area has grown in quantity and quality. The urban face is increasingly spacious and modern and has an identity (Vietnam Ministry of Construction, 2021). However, landscapes have many limitations, and art spaces have many limitations, such as the lack of trees, parks, and playgrounds. Urban and rural architecture still needs to be cleaner, lacks urban character, and has yet to attract tourists (Vietnam Construction



Figure 1. Diagram of the implementation steps

Journal, 2022). In addition, they faced many challenges due to climate change, sea level rise, subsidence, and urbanization (Anh & Huong, 2022). Decision: 287/QD-TTg, issued by the Prime Minister in 2022, approved the Mekong Delta region's planning for 2021–2030 with a vision to 2050. (Vietnamese Government, 2021). The following goals are: "maintaining and embellishing the unique and diverse cultural identities of ethnic groups; creating a sustainable living environment; and good quality of life for people in association with conservation of natural resources and ecosystems." Therefore, the study was carried out to assess the current status of urban art development in urban areas in the Mekong Delta.

The study aims to identify factors affecting the development of urban art in the Mekong Delta, Vietnam. It provides a scientific basis for managers and scientists to refer to when investing in development and urban and urban landscape improvement to support economic activities, exploit community tourism, preserve and develop images, and exploit the typical values of the region to meet people's needs.

# 2. Materials and Methods

The research approach follows the qualitative method of street art research by Boscaino (2021) by synthesizing requirements related to related fields in and outside Vietnam on urban art and urban architecture. The survey on the level of the community includes taking the opinions of experts and people and using quantitative methods suitable for social research. Since the research was conducted at Can Tho City (class urban I) in Viet Nam, which is a centrally run city in the Mekong Delta; Soc Trang City (class urban II) is an urban center directly under the province, is the economic and cultural center of the East coastal sub-region, and land imbued with cultural heritage City. Nga Bay (class urban III) is the center and second central traffic hub of Hau Giang province. It is a young and



Figure 2. The study area in the Mekong Delta of Viet Nam

dynamic urban area with the orientation of a landscape and ecological tourism area. The research follows the steps (Figure 1), as follows:

## Study location

The Mekong Delta has a natural area of 39,194.6 km<sup>2</sup>, accounting for 11.8% of the total area of the country (Figure 2), and a population of 17,300,947 people, accounting for 17.6% of the total population of the country, an average of 441 people/km<sup>2</sup>. Currently, the towns that were formerly provincial capitals of the provinces in the Mekong Delta have all become provincial cities (except for Can Tho city, which has been centrally run since the beginning of 2004). From the beginning of 1976 to 1999, the entire Mekong Delta had only two cities (at that time, both were provincial cities): Can Tho and My Tho. From 1999 to now, the towns have been upgraded to provincial cities (Wikipedia, 2024).

# 2.1 Collect primary data

Hair et al. (2009) state that the following formula was used to determine the sample size for EFA exploratory factor analysis:

(1) 
$$N = 5 \times m$$

Where: N: Number of sample sizes ; m: Number of measurement questions.

The number of people to be surveyed applying the formula to determine the sample size of the population is unknown (Yamane, 1967):

(2) 
$$n = Z^2 \times \frac{P \times (1-P)}{e^2}$$

Where: n: Sample size to be determined;

Z: The importance of searching the Z distribution table with the chosen dependability;

- p: The success rate of sample size estimation n;
- e: Allowable error

| Criteria                                           | Specific criteria                                                            | Symbol |  |  |  |
|----------------------------------------------------|------------------------------------------------------------------------------|--------|--|--|--|
| Architectural type/<br>style (Government,<br>2020) | Architectural artistic value of the work itself                              |        |  |  |  |
|                                                    | Suitable for living space                                                    |        |  |  |  |
|                                                    | Contributing to the urban landscape                                          |        |  |  |  |
|                                                    | Contributing to scenic spots, natural landscapes                             |        |  |  |  |
|                                                    | Values of engineering, construction technology, use of building materials    | LH5    |  |  |  |
| Historical and                                     | Typical of the historical period                                             | GT1    |  |  |  |
| cultural values                                    | Associated with typical characteristics and characteristics of local culture | GT2    |  |  |  |
| (Government,                                       | Construction durability                                                      | GT3    |  |  |  |
| 2020;                                              | The historicity of art and space                                             | GT4    |  |  |  |
| Karimimoshaver et                                  | Use of national and religious symbols                                        | GT5    |  |  |  |
| al., 2021)                                         | Using traditional art and architecture                                       | GT6    |  |  |  |
| Usage function<br>(Nami et al., 2016)              | Increase public space (play, entertainment, sightseeing, etc.)               | CN1    |  |  |  |
|                                                    | Enhance urban green space.                                                   | CN2    |  |  |  |
|                                                    | Renovating and beautifying abandoned and neglected urban spaces              | CN3    |  |  |  |
|                                                    | Usage of urban buildings, such as the combination of lighting, shading,      |        |  |  |  |
|                                                    | advertising, etc                                                             |        |  |  |  |
|                                                    | New urban space development application                                      | CN5    |  |  |  |
| Community                                          | Community support and participation                                          | TTCD1  |  |  |  |
| interaction                                        | The work's ability to explore and reflect                                    | TTCD2  |  |  |  |
| and the arts                                       | Convey messages and ideas.                                                   | TTCD3  |  |  |  |
| (Boscaino, 2021;                                   | Suitable for the duration of the experience                                  | TTCD4  |  |  |  |
| al., 2021)                                         | Catering to the tastes and preferences of all groups                         | TTCD5  |  |  |  |
| Spatial Order                                      | Consistent with other plans                                                  | TT1    |  |  |  |
| (Francis et                                        | Guaranteed stability and safety                                              | TT2    |  |  |  |
| al., 2015;                                         | Form and style suitable for urban culture and society                        | ТТ3    |  |  |  |
| Karimimoshaver et                                  | The uniformity of urban landscape orientation                                | TT4    |  |  |  |
| al., 2021)                                         | Limit dirty painting on the wall, control advertising                        | TT5    |  |  |  |

Table 1. Summary of evaluation criteria in research

The study includes 26 measurement questions, and the sample size for EFA analysis was 130. The number of independent variables expected to participate in the regression is 5, n = 90. X defines the minimum sample size needed for the study to be 130. In which the number of people applying formula (3) with 90% confidence corresponds to Z = 1.645; error rate e = 10%, the minimum is 69. The remaining number of experts to be surveyed is 61, consistent with Hutchinson (Hutchinson, 1993) and

multivariate regression analysis (Green & Salkind, 2003; Harris, 1985; Tabachnick & Fidell, 1996).

The results of collecting and synthesizing criteria for the survey identified 5 groups of criteria with 26 criteria (variables) in Table 1. The criteria group of architectural type/ style and the historical and cultural value group are based on the provisions of the Government's Law on Architecture (2020). The remaining criteria groups are collected and synthesized from published reputable studies, including the criteria group of use function (Nami et al., 2016), the criteria group of community and art interaction according to the theoretical framework from the research of Boscaino (2021) and Karimimoshaver et al. (2021) theoretically identifies the aspects that have identified interactions in the social process that affect the value of street art and provides criteria suitable to the conditions of the research area; spatial order criteria group based on the synthesis of appropriate criteria from research results Francis D. K. Ching (2015) and Karimimoshaver et al. (2021).

Decision makers express opinions according to priority in the form of a Likert scale with values from 1 to 5, specifically: (5) very responsive; (4) respond; (3) provisional response; (2) Can response; (1) does not respond. Interval bar – Calculated by distance value: (Maximum – Minimum)/n = (5 - 1)/5 = 0.80, yes: 1.00 - 1.80: No response; 1.81 - 2.60: Can response; 2.61 - 3.40: Temporary response; 3.41 - 4.20: Respond; 4.21 - 5.00: Very responsive.

The research priority was to select households near urban artworks. Experts were selected, such as officials/ managers and scientists who do research and work directly related to urban landscape architecture management, urban planning, etc. Interviews were conducted according to stratified samples at the local level of town and ward/ commune due to the difference in the number of wards and communes.

#### 2.2 Secondary data collection

Collect published research results on urban planning, architecture/landscape, characteristics, urban types, etc.; the Mekong Delta region's cultural, socio-economic, and environmental conditions; relevant regulations, legal documents, and planning and development orientation of the Mekong Delta region and urban areas.

### 2.3 Data pre-processing

After the official survey, the results are aggregated and adjusted to the collected data to ensure a representative sample number. The difference test helps the results be in the right direction when performing frequency statistics with the provided data, reaching a p-value >0.05.

#### 2.4 Data statistical analysis

Oneway ANOVA determines the mean difference between the urban type or the difference between the residents and experts. Particular Hypothesis Ho = Mean value of equal evaluation. Select the confidence used to be 95% with a = 0.05. If the t value with p-value < a significance level, reject Ho and vice versa.

The Cronbach's Alpha scale test checks whether the variables and the fact of the criterion are reliable and have the same and similar answers across each observed scale variable. It shows how closely related the observed variables are to one another within the same set of factors as below formula:

(3) 
$$\alpha = N\rho / [1 + p(N - 1)]$$

Where: The average correlation coefficient between the questions; N: Number of observed variables.

Exploratory factor analysis (EFA) seeks to make the original set of variables more relevant by condensing the collection of interdependent measurements into minor variables that retain most of the source data. Considering the appropriateness of factor analysis, variables are rarely correlated in the population to ensure a practical significance level (Hair et al., 2009).

Regression analysis was used to determine the contribution level, predicting the value of the dependent variable MTDT based on the values of many other variables in the study. Regression formula (Hair et al., 2009), to be:

$$(4) \quad y = \alpha + \beta_1 x_{1i} + \beta_2 x_{2i} + \dots + \beta_k x_{ki} + \varepsilon_i$$

Where: y: The degree of influence of each factor on the outcome variable; Random variable called error term; Express the value of the p independent variable at the i observation.

#### 2.5 Results evaluation and recommendation

Based on the analysis's results, conduct an assessment of the current situation of ecological environment development in the Mekong Delta, such as type, distribution, and rate compared with main works; the response level of MTDT in the Mekong Delta; and the influence of criteria on urban art within the scope of the study.

#### 3. Results and Discussion

# 3.1 Quantitative analysis result

# 3.1.1 Test results of Cronbach's alpha scale

According to the analysis's findings, every variable has a total correlation coefficient that ranges from 0.6 to 0.8, with a maximum of 0.3. The scale is good when the observed variables have the Corrected Item—a correlation value of 0.3 or higher. Variables have quality, explanation, and contribution to the criteria group. Cronbach's Alpha values are respectively 0.926, 0.930, 0.890, 0.919, and 0.895, corresponding to  $\alpha \ge 0.9$  (optimal) for good results in the study. As a result, all observed variables are valid and will be included in the following factor analysis.

## 3.1.2 Results of good kernel analysis exploring EFA

Analysis of Principal components with Varimax rotation, for KMO of 0.94, shows a relatively close correlation. Therefore, Bartlett's test between variables is correlated with each other (Sig = 0.00), and factor analysis is appropriate. Using a load factor of 0.50 gives the results of the total variance extracted. 02 groups explain 67.02% of the data variation of 21 observed variables participating in EFA (Table 2). The results of the second rotation matrix have removed 5 variables: CN1, CN4, CN5, TTCD1, and TTCD2 due to the appearance of a load factor >0.5 in both two-factor columns and the difference >0.3. Distinguishing 2 groups of factors with 21 variables, the loading coefficient of variables >0.5 has practical significance for the study. With a sample size of 150, the load coefficient of variables needs to be greater than 0.45 to meet the requirements demand in Hair et al. (2009). Notably, the variable LH1 has the most significance for the study.

Name the group of factors after factor analysis: Factor group 01 is "Types and values of a culture - history," including 12 variables; Factor group 02 is "Community order and interaction," including 09 variables. However, grouped LH and GT, TT and TTCD. The variables that used to belong to the user functional group (CN) are mixed in both groups because the research model-building process is still limited (Table 3). The 2 components are not correlated (correlation coefficient = 0.00). Therefore, using the Varimax visualization rotation in the study is appropriate.

| Criteria                                                                             | Sign  | Factor |       |
|--------------------------------------------------------------------------------------|-------|--------|-------|
|                                                                                      |       | 1      | 2     |
| The architectural artistic value of the work itself                                  | LH1   | 0.809  |       |
| Contributing to scenic spots, natural landscapes                                     | LH4   | 0.789  |       |
| Technical value, construction technology, use of materials                           | LH5   | 0.778  |       |
| Suitable for living space                                                            | LH2   | 0.747  |       |
| The historicity of art and space                                                     | GT4   | 0.735  |       |
| Contributing to the urban landscape                                                  | LH3   | 0.733  |       |
| Typical of the historical period                                                     | GT1   | 0.723  |       |
| Construction durability                                                              | GT3   | 0.722  |       |
| Use of national and religious symbols                                                | GT5   | 0.703  |       |
| Using traditional art and architecture                                               | GT6   | 0.678  |       |
| Associated with typical characteristics and cultural characteristics of the locality | GT2   | 0.638  |       |
| Renovating and beautifying abandoned and neglected urban spaces                      | CN3   | 0.533  |       |
| Form and style suitable for the city                                                 | TT3   |        | 0.770 |
| Guaranteed stability and safety                                                      | TT2   |        | 0.770 |
| The uniformity of urban landscape orientation                                        | TT4   |        | 0.770 |
| Consistent with other plans                                                          | TT1   |        | 0.755 |
| Limit dirty painting on the wall, control advertising                                | TT5   |        | 0.709 |
| Catering to the tastes and preferences of all groups                                 | TTCD5 |        | 0.691 |
| Suitable for the duration of the experience                                          | TTCD4 |        | 0.675 |
| Enhance urban green space                                                            | CN2   |        | 0.626 |
| Convey messages and ideas                                                            | TTCD3 |        | 0.614 |

3.2 Determining the current status of urban art development in urban types in the Mekong Delta today

# 3.2.1 Types and distribution

According to Helmy (2017), urban art classification in Jeddah includes seascape art, landscape art, sculptures and murals, architectural icons, and lightscape art. In the Mekong Delta, the types of urban art applied are mainly trees, lights, stone statues, paintings, and construction works (Figure 3), including:

Trees and lights are the most famous art, with current development rating rates of 70.86 % and 70.20%. These projects have been interested in investment and development by agencies, managers, and private establishments in recent years. They bring many benefits, such as green trees contributing to air conditioning during the day and rainwater overflow (Berland et al., 2017). In addition, trees help create mental comfort and aesthetics, provide shade, increase property value, and reduce noise (McCarthy et al., 2011). Meanwhile, spotlights help control vision, change the color, shape, and size of objects/ surfaces, and attract public attention (Manninen, 2020). Moreover, they contributed to developing trade - services, and tourism in regional cities.

Current construction works are assessed at 56.95%, serving the purpose of working, living, organizing festivals, etc. Besides, according to Josh (2022) and Liu et al. (2010), art in construction aims to create the best points in terms of ideas, colors, coals, arrangement of glass doors, height, etc., of individual works, thereby contributing to the central landscape of the urban area.

On the contrary, other arts, such as statues, paintings, and stained glass art, were evaluated only to be applied a little. The assessment rate was 29.80%, 21.19%, and 4.64 %. Specifically:

+ Through the survey, the statue has themes about famous people in history, culture, politics, and academia, as well as natural and ecological, like animal statues.

+ Paintings are underappreciated but are very diverse in content. They are suitable for the decoration of small, relatively flat areas such as walls of houses, walls of bridges, electric poles, etc. Other types, such as glass art, 3D graffiti art, ceramics, etc., are applied in buildings, churches, commercial areas, etc.

Compared with people's needs or development orientation through expert surveys, the development rate needs are diverse in new and undeveloped forms in local urban areas, such as statues, paintings, glass art, etc., which are higher than the current development assessment (Figure 3).



Figure 3. Current and desired urban art form



Figure 4. Urban artworks in urban areas in the Mekong Delta

In particular, this rate is lower for lights with lower demand (52.98%). These lighting projects have developed strongly recently, especially the art of LED lights at city center routes and intersections, shaped like shapes, colors, decorative combinations of greeting gates, traffic lights, intersections, buildings, etc. (Figure 3). Many advantages include low energy usage, flexible and efficient brightness control, and led lights. However, in the Mekong Delta, the entertainment space has yet to be created following the people's experience time. In addition, according to the Ministry of Construction, Vietnam does not have specific and complete standards and regulations for the design, and the information and recommendations on the use of LED light sources need to be clarified, too. Specifically, this leads to unsatisfactory quality, low life expectancy, easy damage, time consumption, and cost (Vietnam Ministry of Construction, 2020).

According to Helmy (2017), urban art is located in roadways, parks, roundabouts, and corniche strips. Urban In the Mekong Delta, the works are distributed in the center of urban areas such as parks, squares, and tourist attractions: 92.72% and 64.90% rate of people rating. The evaluated works are concentrated on the main road of the city and critical intersections (33.77%), mainly art lights.

Traffic lights and artistic lights at roads and intersections will help people shape their way, avoid accidents, limit social evils, and increase the urban landscape (Manninen, 2020; Palša et al., 2019). Using guiding lighting on traffic axes: Combining various lighting arrangements such as projection from above, lights arranged around the works, various types of spotlights, hidden lights, hanging lights, flashing lights with colorful visual attraction, guiding, creating spatial axis (Figure 4). Most art lights are invested in social capital in urban areas in the Mekong Delta. They combined the exploitation of advertising for specialized streets, contributing to propagating social tasks and promoting economic development.

In addition, MTDT also appeared in schools with 25.83% of ratings (mainly preschools and primary schools). The officers and private establishments, including religious establishments, were evaluated at a low rating of 15.89% and 6.62%. The designs create a separate workspace and highlight the building. In addition, religious imprints in architectural art contribute to creating art and cultural treasures. Each ethnic group has its own cultural, social, and economic characteristics. Therefore, architectural art in cultural and religious areas has contributed to the overall landscape of the city (Figure 4).

# 3.2.2 The level of interest of residents and experts in urban art

The average value was assessed by urban-type using Oneway ANOVA analysis. Sig test Levene is equal to 0.001 and 0.016 < 0.05, respectively. There is a difference in variance between the 3 types of cities. Considering the results of the Welch test, the Sig of Welch test equals 0.049 and 0.00 < 0.05. Thus, people and experts in the urban environment have different interests in 3 types of urban areas: I, II, and III

The average level of interest in urban environments in 3 urban types tends to increase according to the urban level from III to I. In contrast, the average level of interest in another urban environment in 3 urban types tends to decrease by grade of urban from III to I (Table 4).

# 3.2.3 Level of demand satisfaction

One-way ANOVA analysis for Sig = 0.089 shows no variance difference between residents and experts. However, the results of ANOVA with Sig = 0.00 differ in the mean value of people and experts. Specifically, the average expert's assessment is 3.21 (temporarily met); the population means the value was 3.75 (response) at the 95% significance level. Considering the response level of the scale, the average value of the two criteria groups is 3.56 and 2.50, respectively. Considering the response level based on the criteria scale, all 19 criteria groups were assessed as responsive. The criteria are contribution to the general urban landscape (LH3) and Associated with typical characteristics and characteristics of local culture (GT2), with the highest average ratings of 3.74 and 3, respectively. In recent years, cities have invested in building new buildings and periodically renovating many aesthetic works, especially lights and trees, with many ideas about city signs that have contributed to the urban landscape and met people's needs.

However, the criteria of limiting dirty painting, advertising control (TT5), and renovating and beautifying abandoned and neglected urban spaces (CN3) averaged 3.24 and 3.24, corresponding to the level of transient response. Due to the current state of advertising, especially advertising paper stickers, it is typical in urban areas in the Mekong Delta. Due to the limited distribution and planning, many public areas, such as residential areas, markets, parks, etc., are abandoned and degraded, which need to be optimally exploited, repaired, or upgraded. Loss of urban beauty affects the perception of the evaluator (Figure 5).

| Model          | Normalized regression coefficient |    | +     | Sig   | Collinear Statistics |                |       |
|----------------|-----------------------------------|----|-------|-------|----------------------|----------------|-------|
|                | β                                 |    | ı     | Siy   | Acceptability        | VIF coefficien | t     |
| Constant       |                                   |    | 0.522 | 0.602 |                      |                |       |
| b 1            | 0.2                               | 10 | 2,698 | 0.008 | 0.306                |                | 3,270 |
| b <sup>2</sup> | 0.6                               | 69 | 8,589 | 0.000 | 0.306                |                | 3,270 |

(Note: a: Urban art; b<sup>1</sup>: Type and value; b<sup>2</sup>: Order and interaction) Table 5. Results of regression analysis in Table Coefficients



Figure 5: Abandoned construction, advertising stickers, and dirty painting on the walls

3.2.4 Determining a regression model on the responsiveness of urban art in the Mekong Delta region

The study uses a regression model to determine the coefficient of influence of factors on MTDT response. The results of the regression model analysis are as follows:

The findings of the ANOVA analysis demonstrate that the F-test, employed in the variance table analysis, is a hypothesis test of the linear regression model's fit. Resulting in the significance level of the independent variable (Sig.) = 0.00 < 0.05; therefore, it is statistically significant, and the regression model is suitable (Table 5).

 $R^2 = 0.727$  indicates that 72.70% of the variance in the dependent variable can be explained by the independent factors MTDT. Random errors and variables not included in the model account for the remaining 27.30%. However,  $R^2$  will depend significantly on the field and nature of research, sample size, number of variables participating in the regression, etc. Durbin Watson's coefficient is 1,828, greater than 1 and less than 3, proving the regression model. qui has no first-order series correlation. The variance

exaggeration factor (VIF) for both variables is 3.270 < 10, so the regression model does not have multicollinearity. Significance of 02 variables: Type and value; Community order and interaction are 0.008 and 0.000 less than 0.05, respectively. However, on the contrary, the significance level of the constant 0.094 is 0.602, which is insignificant. Thus, both variables significantly influence the responsiveness of urban art with 95% confidence. From the analysis results of Table 5 obtained the following normalized regression model:

 $MTDT = 0.21^{*}LH\&GT + 0.67^{*}TT\&TTCD$ (5)

Where: MTDT: Level of the urban art response

LH&GT: The degree of meeting the group of criteria of type and value of works

TT&TTCD: The level of meeting the criteria for order and community interaction

In Figure 6, The standard deviation is 0.991, which is about one, while the mean is almost zero. The Scatter Plot test focuses on nearly forming a straight line, assuming a linear relationship between the data points.



Figure 6. Graph showing regression analysis data

# 3.3 Assessing the influence of criteria in the development of urban art in the Mekong Delta

The regression model (Formula 5) shows that the responsiveness to urban art in the Mekong Delta is influenced by two criteria groups, including type and value, Spatial order, and community interaction. Specifically, criteria of architectural type/style and historical and cultural values have a low positive influence on the level of responsiveness to the MTDT ( $\beta$  = 0.21). On the other hand, the response level of the category/style and historical-cultural values contributed 21% to the MTDT response. Meanwhile, the group of criteria of spatial order and community interaction has a more significant favorable influence on the level of response to the urban environment ( $\beta$  = 0.67). The order criteria group and community interaction response level contributed 67% of the MTDT response.

In the case of performing 3 analyses for 3 groups of urban centers of grades I, II, and III for different sets of criteria. Specifically, Can Tho City has identified 2 groups of criteria with 20 variables, including group 1 (LH1- H5, GT1, GT3-GT6, CN3, CN1), group 2 (TT1-TT5, TTCD5, TTCD4, CN2); Soc Trang city has identified 4 criteria groups with 21 variables: group 1 (GT1, GT2, GT4-GT6, CN4, CN5), group 2 (TTCD1-TTCD4, TT4, TT5, LH5), group 3 (CN1-CN3, GT3, LH2), group 4 (TT1-TT3); Nga Bay city has identified three criteria groups with 14 variables: group 1 (LH3, LH4, GT1, GT6, TT1, CN4), group 2 (GT2, GT3, GT5, LH5), group 3 (TTCD1, LH1, TT2, CN3).

It shows that, with each urban area in the Mekong Delta's specific characteristics, people will have different feelings, leading to different criteria determination results. Therefore, the common application of a set of criteria in landscape management, planning, and development orientation, without regard to the specific criteria of the local urban area, will make the field management uncertain, not bring optimal efficiency, and will have a low response to people's needs.

# 4. Conclusion

The study identified two factors, including type and historical-cultural value with 12 variables; order and community interaction with 9 variables, KMO = 0.94 and total variance extracted 67.02%. Types developing

in the Mekong Delta urban areas include trees, lights, construction works, statues, and paintings distributed in parks, squares, main roads, government agencies, and private establishments. There is a difference in people's interest in environmental protection in 3 types of cities. Therefore, urban areas in the Mekong Delta are assessed to meet people's needs. However, criteria TT5 (Limit dirty painting on walls, control advertising) and CN3 (Renovate and beautify abandoned and neglected urban spaces) are assessed to be temporarily met.

The criteria of spatial order and community interaction influence 67% of the level of urban art responsiveness in the Mekong Delta; criteria group Type and value have less influence than 21%.

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