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REGIONALISM IN ARCHITECTURE: A STUDY OF LOCAL PERCEPTIONS ON PUBLIC STATE BUILDINGS IN WEST KALIMANTAN PROVINCE, INDONESIA

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Abstract

Regionalism in architecture opposes the globalized approach that disregards local identity. Understanding regionalism is crucial for preserving a region's identity through architecture. Public state buildings in Indonesia play a pivotal role in expressing regional independence through distinctive features. The architectural regionalism of West Kalimantan is defined by vertical composition, building shape, mass, spatial layout, and envelope. This research aims to examine regionalism characteristics of public state buildings in West Kalimantan by comparing them with public perception. The research involves a descriptive approach using questionnaires based on variables related to architectural regionalism. Out of the 36 iconic state buildings studied, 21 meet the regionalism criteria in West Kalimantan. These buildings share common features such as the use of local materials, responsive design to the climate, and incorporation of historical and cultural values into spatial meaning. The most influential factors in assessing the identity are roof shape, cultural symbols, and ornamentation.

Keywords: Public Perception; Public State Buildings; Vernacular Architecture; West Kalimantan Regionalism Architecture

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INTRODUCTION

Identity determined by a locality is a clue to finding and understanding sense of place (Goldstein & C.D, 1994) (Frey, 1999). The existence of a “place” will have uniqueness or special characteristics that distinguish it from other places. An attractive view and vista, an impressive building, or an important feature that exists could become an orientation and will affect one’s image of a place.

Buildings are manifestations that reflect human culture. Geographically, each region exhibits distinct characteristics influenced by local culture, climate, and existing technology. Thus, every architect in various regions around the world has different thoughts on the theory of regionalism. Regionalism is not an architectural style, but a school of thought about architecture (Curtis, 1986). Regionalism can be defined as an awareness that opens up the uniqueness of tradition in responding to place and climate, then giving birth to formal and symbolic identities into new creative forms according to certain perspectives related to the reality of that time (Beng, 1994). Regionalism leads to regional identity which holds emotive link to the locals (Raja Abdul Kadir, Jahn Kassim, Abdul Majid, & Kamaruddin, 2018).

West Kalimantan is a province in Indonesia, situated on the western side of the island of Borneo, with direct access to Sarawak, East Malaysia. A precise definition of regionalism in architecture of buildings in West Kalimantan Province has not been clearly defined yet. Various forms that characterize the characteristics of vernacular or traditional buildings appear in contemporary modern buildings, especially in state-owned buildings. However, this affirmation of regionalism is inseparable from the locals’ understanding of the buildings they use. Creating identity without *studying on the local cultural heritage will lead to identity crisis* (Yusof, Ibrahim, & Raja Shahminan, 2020). The locals’ perception – i.e., how the community views the building – is crucial in determining the regional character of the architecture. This public perception plays a key role in the architecture's longevity, because it is seen as part of the community's identity. Regionalism is indispensable for the survival of a civilization. (Berry, 2007).

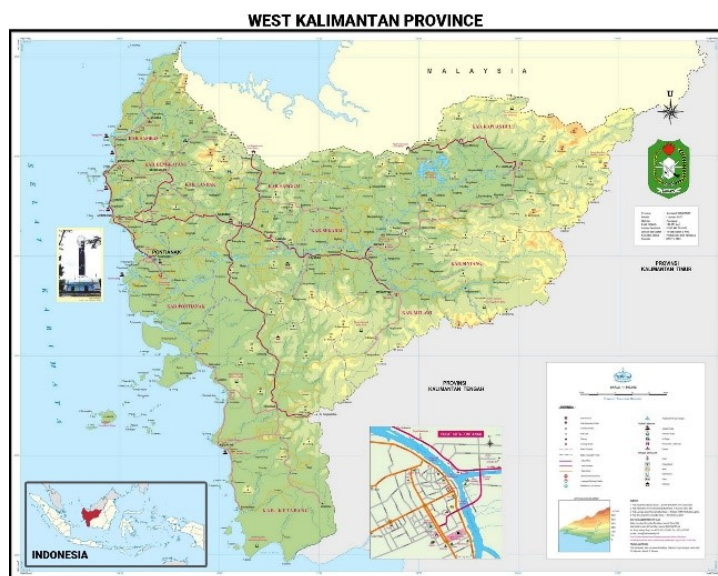


Figure 1: Map of West Kalimantan Province
Source: Bappeda Kalimantan Barat with modification, 2016

The aim of this study is to determine local perception on regional architecture in public buildings in West Kalimantan. The research outcomes will identify which elements of state buildings have high regionalism value. These findings can serve as a reference for identifying the most crucial aspects of identity recognized by the people of West Kalimantan, contributing to the development of West Kalimantan regionalism.

LITERATURE REVIEW

Regionalism in Architecture

Regionalism is believed to have developed around 1960 (Jencks, 1977). Architectural regionalism is a natural movement against Western hegemony which seeks to quickly create architecture with a similar appearance in urban centers in the Third World (Curtis, 1986). This movement primarily flourished in developing countries with distinct regional characteristics closely tied to the local culture, climate, and technology of the period (Ozkan, 1989). Regionalism aims to revive distinctive elements to establish identity within architecture (Curtis, 1986). This means that regionalism is not just about restoring local elements, but also a strong sense of identity (Frampton, 1983). Basically, regionalism involves the fusion/unification of the old and the new, with the goal of creating sustainable buildings (Curtis, 1986). It requires the presence of a local identity that considers environmental potential (Frampton, 1983).

Regionalism is expected to create the identity of a region through architectural buildings. It serves as an effort to stimulate the creativity and innovation of architects in crafting modern architecture using advanced technology and contemporary building materials, while also evoking cultural resonances that connect with the richness of past heritage (Budihardjo, 1997). In this rapidly globalizing world, any research on architecture inevitably leads to reflections on regionalism (Canizaro, 2007; Wang, 2007; Zou, Ge, Liu & He, 2023). A crucial step in developing regionalism is to undertake efforts to transform architecture that embodies regional characteristics or the growth of a particular culture, climate, and technology of that time. Such architectural works are referred to as Vernacular Architecture, emerging from folk architecture with its various traditions, optimizing or utilizing local potentials such as materials, technology, and geographic conditions, including climate (Rapoport, 1969). When regionality is evident in a building, it may reflect the identities or characters of places and cultures where the building is situated (Hidayatun, Prijotomo, & Rachmawati, 2012).

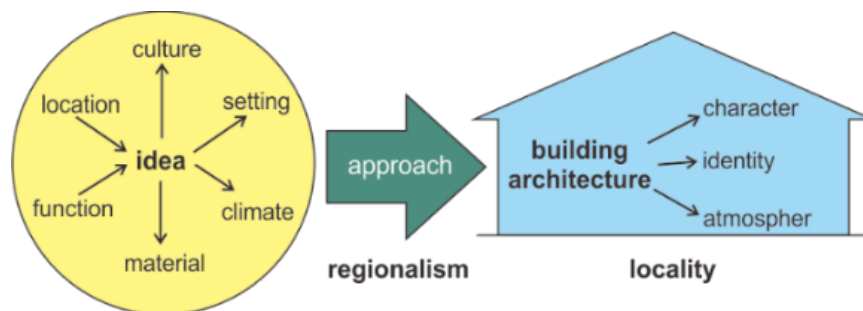


Figure 1: State of the Art of Regionalism in Architecture
Source: Hidayatun, Prijotomo, & Rachmawati, 2012

The main characteristic of regionalism in architecture is the fusion of regional local architectural values with universal modern architecture. This study emphasizes the characteristics of regionalism in architecture, focusing on the meaning and substance of cultural values rather than style. The understanding of regionalism, being inherently regional, utilizes cultural values, beliefs, customs, and philosophical values as guidelines for its application in architecture (Soedigdo, 2010).

RESEARCH METHODOLOGY

Public Buildings

In this study, the term 'public buildings' specifically refers to state-owned buildings. Based on the Regulation of the Minister of Public Works Number

45/PRT/M/2007, state buildings are those used for official purposes, funded by the state budget (APBN) or other legitimate sources, and are part of or will become state assets. These include state residences, office buildings, hospitals, schools, and warehouses.

This study is employed a descriptive research approach to gain an overview of public perception regarding regionalism in the architecture of state buildings in West Kalimantan Province. Descriptive analysis was used to test a hypotheses, answer questions, and examine the percentage of responses obtained from the distribution of questionnaires.





The research instrument was a questionnaire, structured based on the variables involved, specifically focusing on regionalism in the architecture of state buildings in the West Kalimantan Province. The questionnaire results were analyzed further using an explanatory survey to explain the correlation between the studied variables and the influence of one variable on another.

















The variables in this study include: (i) Level of Regional Identity in Building Architecture, (ii) Roof Shape, (iii) Building Material (wood or wood motif), (iv) Ornamentation, (v) Raised Platform Structure, (vi) Basic Building Shape (rectangular or circular), (vii) Resemblance to and/or Incorporation of Cultural Symbols (such as totems, caping, bells, hornbills, etc.). The variables are measured using indicators with an ordinal scale (1 – 5).

Sampling was carried out using purposive sampling, considering objects that can be considered as sample members (Sedarmayanti & Hidayat, 2011), and divided into two categories: state building samples and respondent samples.

The sampling of state building objects is based on the following criteria: (a) Located within the study area, namely Pontianak City, Mempawah Urban Area, and Sambas Urban Area, (b) State buildings, (c) Exhibiting regional architectural characteristics, and (d) Possessing iconic value within the area. The sample comprises 20 buildings, as shown in Table 1.

Table 1: Iconic State-owned Public Buildings as Research Samples

No	Building	No	Building
Iconic Public Building in Pontianak City			
1.		2.	
	Governor of West Kalimantan Office		West Kalimantan House of Representative
3.		4.	
	Pontianak City Council Secretariat Office		Mayor of Pontianak City Office

No	Building	No	Building
5.	 PT. PLN (State Electricity Company) UP3 Pontianak	6.	 Auditorium of Universitas Tanjungpura
7.	 Museum of West Kalimantan Province	8.	 Melayu Traditional House of West Kalimantan
9.	 House of Radakng, Pontianak	10.	 State Junior High School 2 Pontianak
Iconic Public Building in Mempawah Regency			
1.	 Melayu Cultural House of Mempawah	2.	 Dept. of Investment, SME Cooperatives, and One-Stop Services of Mempawah Regency
3.	 Dept. of Education, Youth, Sports, and Tourism of Mempawah Regency	4.	 House of Representative of Mempawah Regency
5.	 Mempawah Hilir District Office	6.	 Dept. of Transportation and Environment of Mempawah Regency
7.	 Regional Inspectorate of Mempawah Regency		
Iconic Public Building in Sambas Regency			
1.	 House of Representative of Sambas Regency	2.	 Hajj Dormitory of Sambas Regency
3.	 State Polytechnic of Sambas		

Source: Author's Survey, 2022

The respondents' sample is drawn as part of the population in West Kalimantan Province, using a random sampling method. The sample size was determined based on the population of West Kalimantan Province in 2021, which

was 5,470,797 individuals. Using the Slovin formula (Sujarweni, 2018) with a significance level (α) of 7%, the estimated sample size was 220 respondents.

The analysis methods used include (1) Ordinal regression to explain the relationship between two variables, (2) Factor analysis to explore the correlation among a set of independent variables, and (3) MANOVA (Multivariate Analysis of Variance) to explore the correlation between multiple categorical independent variables and multiple metric dependent variables.

ANALYSIS AND DISCUSSION

Respondents' Assessment of Architectural Regionalism of State Buildings

The respondents, totalling 220 individuals selected through random sampling, have the following demographic information: 96 male (43.6%) and 124 female (56.4%) respondents. Ages range from 15 to 64, with the majority falling in 25 – 34 age group (44.1%). The predominant ethnic group is Malay (Melayu) at 55.5%. Regarding occupation, the majority are government employees (32.3%), followed by private sector employees (26.8%), and students (12.3%). Education levels of the respondents include undergraduate (67.7%), postgraduate (16.4%), high school students (10.5%), and diploma graduates (5.5%). All respondents indicated that the majority (45%) have seen/recognised the buildings being referred to.

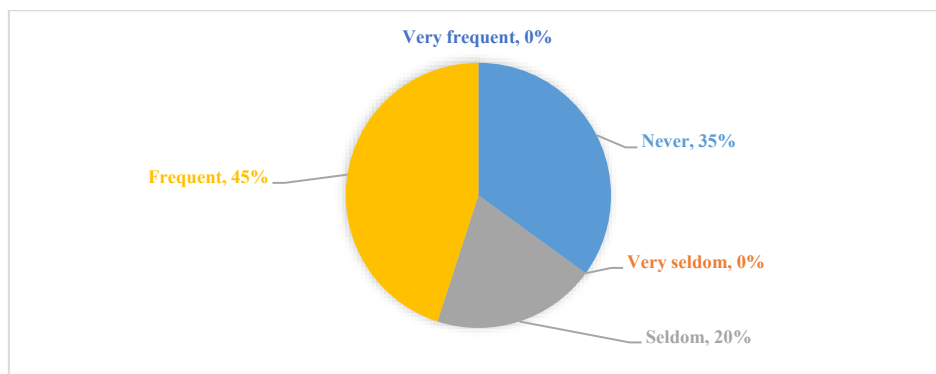


Figure 2: Respondents' Recognition of State Public Buildings

Source: Author's Analysis, 2022

Level of Identity

In general, respondents perceive that all the sampled buildings have a level of identity for West Kalimantan's architecture. The majority of respondents (65%) view 13 buildings as having a moderate level of identity, while 6 buildings (30%) are seen as having a high level of identity. There is one building, namely Rumah Radangk Pontianak, that is perceived to have a very high level of identity.

Roof Shape

Regarding the roof shape, respondents perceive that 10 buildings (50%) exhibit a moderate level of identity, 9 buildings (45%) demonstrate a high level of identity, and 1 building is perceived to have a very high level of identity.

Building Material

Regarding the building material, respondents perceive that 14 buildings (70%) exhibit a moderate level of identity, 5 buildings (25%) demonstrate a high level of identity, and 1 building is perceived to have a very high level of identity.

Ornament

Regarding the building ornamentation, respondents perceive that 14 buildings (70%) exhibit a moderate level of identity, 5 buildings (25%) demonstrate a high level of identity, and 1 building is perceived to have a very high level of identity.

Building on Stilts

Regarding the building on stilts (raised platform structure), respondents perceive that 10 buildings (50%) exhibit a moderate level of identity, 9 buildings (45%) demonstrate a high level of identity, and 1 building is perceived to have a very high level of identity.

Basic Shape

Regarding the basic shape of buildings, respondents perceive that 13 buildings (62%) exhibit a moderate level of identity, 7 buildings (33%) demonstrate a high level of identity, and 1 building is perceived to have a very high level of identity.

Cultural Symbols

Regarding the cultural symbols incorporated in state buildings, respondents perceive that 15 buildings (75%) exhibit a moderate level of identity, 3 buildings (15%) demonstrate a high level of identity, and 2 buildings (10%) are perceived to have a very high level of identity.

Local Perception of Regionalism in the Architecture of State Buildings

The Influence of Building Identity Factors on Assessment of State Building Identity

Based on the scoring of the questionnaire results and subsequent ordinal regression analysis, it can be concluded that several factors influence the assessment of identity characteristics in the studied state buildings. The analysis reveals that the **roof shape** factor is the most significant factor in determining the identity character of the buildings in this research. Subsequent factors, in order

of significance, are **ornamentation, cultural symbols, building on stilts (raised platform structure), building material, and basic building shape.**

Table 2 : Scoring of the Influence of Building Identity Factors on the Assessment of the Identity of Each Building

No.	Buildings	Identity Characteristic Factors					Cultural Symbol
		Roof Shape	Building Material	Orna-ment	Building on Stilts	Basic Shape	
1	Governor of West Kalimantan Office	1	0	0	3	2	4
2	West Kalimantan House of Representative	3	5	2	0	4	1
3	Pontianak City Council Secretariat	1	0	2	3	0	0
4	Mayor of Pontianak City Office	2	0	1	0	0	0
5	PT. PLN (State Electricity Company) UP3 Pontianak	2	3	0	1	0	4
6	Auditorium of Universitas Tanjungpura	3	0	2	1	0	0
7	Museum of West Kalimantan	2	0	4	0	3	1
8	Melayu Traditional House of West Kalimantan	4	1	3	0	0	2
9	House of Radakng, Pontianak	1	0	2	0	0	0
10	State Junior High School 2 Pontianak	1	0	0	0	0	0
11	Melayu Cultural House of Mempawah	3	4	0	2	1	0
12	Department of Investment, SME Cooperatives, and One-Stop Services of Mempawah Regency	1	0	0	0	0	0
13	Dept. of Education, Youth, Sports, and Tourism of Mempawah Regency	2	1	0	0	0	3
14	House of Representative of Mempawah Regency	3	1	0	2	0	4
15	Mempawah Hilir District Office	1	0	2	0	0	0
16	Department of Transportation and Environment of Mempawah Regency	2	0	0	0	0	1
17	Regional Inspectorate of Mempawah Regency	1	5	3	0	4	2
18	House of Representative of Sambas Regency	1	0	3	0	0	2
19	Hajj Dormitory of Sambas Regency	1	0	3	0	0	2
20	State Polytechnic of Sambas	2	0	3	1	0	0

Ranking: 1 lowest – 5 highest

Source: Author's Analysis, 2022

These factors are then grouped using factor analysis to obtain major factor clusters that influence the assessment of the identity of the building. The following are the results of the conducted factor analysis.

The results of the communalities analysis in Table 3 indicate that all factors can explain more than 50% of the variance (e.g., the roof shape variable can explain 78.7% of the variance). It can be concluded that all variables contribute significantly to the factor analysis and effectively explain the factors.

Table 3 : Result of Communalities of Identity Forming Factors

Factors	Initial	Extraction
Roof Shape	1.000	0.787
Building Material	1.000	0.822
Ornaments	1.000	0.567
Building on Stilts	1.000	0.829
Basic Shape	1.000	0.718
Cultural Symbol	1.000	0.834

Extraction Method: Principal Component Analysis
Source: Author's Analysis, 2022

The Total Variance Explained analysis indicates that 6 components can represent the variables. Using the criterion of Eigenvalues greater than 1, the selected components are 1, 2, and 3, as shown in Table 4.

Table 4 : Result of Total Variance Explained for Identity Forming Factors

Component	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.939	32.320	32.320	1.939	32.320	32.320	1.777	29.617	29.617
2	1.426	23.763	56.083	1.426	23.763	56.083	1.426	23.772	53.389
3	1.161	19.356	75.439	1.161	19.356	75.439	1.323	22.050	75.439
4	0.888	14.795	90.234						
5	0.375	5.256	96.490						
6	0.211	3.510	100.000						

Extraction Method: Principal Component Analysis

Source: Author's Analysis, 2022

Each variable is then assigned to either component 1, 2, or 3 based on the magnitude of its correlation with the formed factors, as shown in Table 5. From the analysis, the following can be concluded regarding the membership of each factor group:

- Factor Group 1 : Building Material, Building on Stilts
- Factor Group 2 : Roof Shape, Cultural Symbols, Ornaments
- Factor Group 3 : Basic Shape

Table 5: Result of Rotated Component Matrix of Identity Forming Factors

	Rotated Component Matrix ^a		
	Component		
	1	2	3
MATERIAL	0.900	0.065	0.090
ROOF	-0.867	0.062	-0.036
CULTURAL			
SYMBOL	0.267	0.852	0.193
STILTS	0.290	-0.830	0.237
BASIC.SHAPE	-0.097	0.032	0.841
ORNAMENT	-0.227	0.052	-0.716

Extraction Method: Principal Component Analysis
 Rotation Method: Varimax with Kaiser Normalization

a. Rotation converged in 4 iterations.

Source: Author's Analysis, 2022

When relating it to the previous recapitulation results, it can be observed that Factor Group 2, consisting of **roof shape, cultural symbols, and ornamentation**, is the most influential in assessing the identity characteristics. This is followed by Factor Group 1, consisting of building material and the building on stilts structure. Lastly, there is Factor Group 3, consisting of the basic building shape. These findings indicate that the three main factors shaping the identity are primarily influenced by local cultural elements (Factor Group 2), followed by construction elements (Factor Group 1), and lastly spatial elements (Factor Group 3).

CONCLUSION

Based on the research findings, several conclusions can be drawn. Firstly, the factors of roof shape, ornamentation, and cultural symbols are significant in determining the assessment of regional characteristics in state buildings in West Kalimantan Province. The roof shape, particularly with a saddle or pyramid form, is a prominent feature in the regional architecture of West Kalimantan. The presence of ornamental elements on the building facades further reinforces the perception of regional identity in state buildings. These ornaments can take the form of carvings resembling plant tendrils. Additionally, cultural symbols, such as totems or cultural elements like cannons present in some state buildings, significantly contribute to the formation of architectural regional identity. These factors have a strong association with the cultural aspects, highlighting their importance in shaping the regional identity.

Secondly, the factors of building material and the building on stilts (raised platform structure form) stand as the next significant group in shaping the identity. Both factors are associated with visual construction aspects. State buildings generally exhibit regionalism through the visual appearance of

construction materials, such as materials that resemble or evoke the impression of wood. Additionally, the visual presence of buildings in a raised platform structure or those that give the impression of a raised platform convincingly convey the characteristics of regional architecture to the public.

Thirdly, the basic building shape factor is considered less significant in convincing the assessment of regional architecture in the observed samples. The shape of the building is closely related to the spatial layout, which is difficult to be directly observed by the public. As a result, this factor has relatively less influence in determining the regionalism value of the state buildings.

Through the questionnaire distribution method employed in this research, many have come to know that the regional architecture of West Kalimantan can be identified through roof shape, ornamentation, cultural symbols, material, and the building in stilts. The next step that could be taken is to explore the specific characteristics of the factors that determine the regional architecture of West Kalimantan.

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