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# Analysis of Factors and Processes Affecting the Plurality of Contemporary Residential Facades in Iran (Case Study: Residential Buildings of District 1, Tabriz)

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**ABSTRACT**

The architectural scene and the scene of contemporary Iranian cities, especially metropolises, are full of unique and different development plans from others. In contemporary Iran, diversity, pluralism, eclecticism, and teaching of views are the main architectural design characteristics in recent decades that happen to residential buildings. However, such buildings are the most numerous and influential factors in contemporary cities. Therefore, the purpose of writing the present paper is to analyze factors and processes based on the plurality of contemporary residential facades by examining a sample of district one neighborhoods in Tabriz. The present study is descriptive-analytical uses survey research designs. The statistical population includes residents over 18 years old in the distric one neighborhood of Tabriz among Vali-asr and Abbasi Streets. Cochran's formula is used for sampling random clusters and determining the statistical sample size. Considering the statistical population, the sample size has amounted to 221 person. A close-ended questionnaire was used online. The results indicate spatial belonging (-0.83%), perception (-0.79), Consumerism attitude (0.69), Social Solidarity (0.61), historical memory (-0.49), individualism (0.46), and cultural belonging (-0.36) have the highest to the least significant positive correlation with intensity to pluralism. In this point of view, spatial sense of belonging, historical memory, and cultural belonging negatively correlate with the intensity of pluralism. The increase of spatial belonging, social solidarity, historical memory, and cultural belonging among the residents of the district one (Vali-asr and Abbasi Neighborhoods) will decrease sharply.

**Keywords:** Pluralism, Facade, Residential Apartments, Tabriz

## 1. Introduction

Accelerated growth with the physical expansion of architecture in the field of urban architecture was formed so that many urban complexes could not adapt to this uncontrolled growth, resulting in the visual appearance of urban architecture, which includes a wide range of views in terms of development. There was visual confusion. The consequence of this rapid physical growth, lack of supervision in construction, and fundamental changes in the view of the facade were various forms of the architectural appearance of the building. The visual appearance of buildings in the architectural landscape of cities is one of the most critical factors in forming landscape identity [1]. Architectural perspective, in the correct definition, is not a set of views and shells of buildings, but a system of all tangible and perceptible elements that affect the human senses and are interpreted and understood by the audience in the form of perceptual, mental, and objective categories that result in information. It is one of the buildings that give identity to the appearance and architectural landscape of the city [2]. The architectural scene and the scene of contemporary Iranian cities, especially metropolises, are full of unique and different development plans from others [3].

In this regard, the study of the executive rules of the facade in the comprehensive urban plans shows that there are two critical factors in the formation of any suitable architectural project: one is the

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observance of principles and rules and regulations, and another is the artistic taste of the architect.
Facade design as an external shell and a factor in the appearance and display of the building can show the peak of the arcitect's artistry. In any part where there are stricter rules and regulations, the possibility of monotony and individual taste of the architect will be less and vice versa. In the city of Tabriz, due to the weakness of the rules and regulations of facade design, it has been possible to apply the different tastes of architects and employers in the formation of facades and their influence from advertising methods and materials standards in different contemporary periods. The construction of facades in this metropolis's primary and secondary passages is proof of the lack of reasonable rules and regulations in private facade construction. Of course, the lack of good design and implementation criteria for the facade for architects and designers of architecture and urban planning has not been very desirable.
The occurrence of extensive changes due to the values of the Islamic revolution of Iran, as well as the influence of postmodern Western pluralist ideas and the production of paradigms different from the traditional culture of society, caused many changes in architecture [4]. Iranian society has transitioned from traditional to modern society very quickly and without creating the necessary infrastructure. Now it is watching the emergence of a network society [5].
Contemporary Iranian architecture has been formed in a context that has been continuously influenced by the currents of modernity, industrialization, and globalization [6]. Introducing technology into a society raises challenges and pluralism in various fields, including cultural and identity crises [7]. In Iran, diversity, pluralism, eclecticism, and multiplicity of views are the main features of contemporary architecture in recent decades [4].
Residential facades are one of the most effective elements affecting the quality of urban spaces, the modification of which can increase the quality of the objective landscape of the city. In the meantime, the street view should be considered one of the urban bodies' main components. The inappropriate objective perspective of our cities today results from a vicious circle that requires an understanding of the root of the problem and the presentation of rules that can coordinate the movement of related forces in one direction. Developing a framework for urban housing is particularly important and should be tailored to the context, physical conditions, and type of use. Looking at the urban residential buildings in the city of Tabriz, which also has unique features, it is clear that not only in terms of aesthetics and environment, these views are not in good condition, but there is too much pluralism in them, which confirms the importance and the necessity of this research.
The main subject of the present study is the factors that lead to pluralism in the design of urban residential facades.
The objective perspective in different scales (macro, medium, and micro) should have identical characteristics based on its functional and visual dimensions, ultimately leading to a particular form of stability. The main question of the research can be raised as to what factors and processes are influential on the multiplicity of contemporary residential facades in the Valiasr neighborhood of Tabriz, and among these, which aspect is more important than the others?

## 2.Literature Review

According to Gordon Cullen (2003), the urban landscape is the art of visual and structural integration of buildings, streets, and places that make up the urban environment fabric [8]. For him, the landscape of each city is a response to human conduct, climate situation, safety factors, and in other words, skilled interventions within the framework of increasing environmental potentialities. The sense of vision influences each individual's impression of the urban landscape, sense of place, and the environmental content wherein the place is placed [9]. o John Ruskin, the urban landscape is beyond an urban planning and design issue which, at the first stage, involves human values and objectives and recognition of social responsibilities by the people in the community [10]. Urban landscape originates from contact between man and city; in this connection, the man affects the visual perspective of the city through his activities and has his mental perception and behaviors affected by the contact with the urban landscape.
It is also suggested that urban landscape is citizens' understanding of the city, which results from the perception of its symbols (urban structural dimensions) and relevant association of its meanings (mental and memorial dimensions). The three objectives of the urban landscape include aesthetics, cultural identity, and functionalism [2]. For Golkar (2003), the urban landscape is a three-fold blend of the objective urban landscape, subjective urban landscape, and emotional urban landscape, which form the basis of the individual's behavior [10. Gordon Cullen (2003) maintains that

urban landscape is the art of propositions. He argues that urban landscape is based on city structure and emphasizes sights in the city. In his book, he suggests the significance of consecutive sights in the environment. When a building is constructed in a place in an isolated form, it is solely regarded as an architectural experience. However, if several buildings are constructed along with each other, a new event occurs, which falls under the urban landscape. This new event is the art of proportions (Cullen, 2003). In 1961, Lynch introduced the subjective urban concept in "Image of the City." In this book, Lynch proposes several subjective urban landscape dimensions. To conclude, Cullen tended to stress the objective urban dimensions, while Lynch emphasized the objective dimensions of the city [11].

Lynch believes in three perceptive, physical and functional factors contributing to urban landscape [12]. He maintains that to study this field, each urban environment should contain three factors of identity, structure, and meaning. As studies have suggested, the urban landscape can be investigated in three micro, middle, and macro scales. Street view or body is a crucial element to investigate street landscape. In the following, the concept of view, street view, street elements, and dimensions affecting the design of a street view will be examined. In this connection, residential building facades significantly contribute to the formation of the urban landscape. Although the crisis of disorganized residential facades is a common subject of research among urban designers and architects, light Iranian and European sources have addressed this issue.

In an article entitled: "Phenomenology of residential building facades and relevant evolution of expectation," Dr. Pakzad believes that building facade disorganization originates from a failure to meet the expectations made about of façade throughout history. These expectations include protection of the residents against external measures, demonstration of the character and credibility of the owner, cooperation, acceptance of responsibilities, and presence of intellectual restraints. Morovvati (2014) believes that local laws and non-awareness of Iranian architecture principles, non-employment of modulation, inconsistency between form and practice, and anonymous tendencies in architecture cause disturbance and disorganization with the urban body. In research entitled: "Investigation of the identity crisis in modern urban views," Jalili (2016) examines the quality of the façade and volume proportions with the surrounding buildings and creation of cultures to raise awareness of Iranian-Islamic identity as a solution. Roshan (2015) suggested in an article entitled: "Investigation of the effects of urban views on the modern Iranian architecture" that concept and meaning in building façade have been neglected and such concepts as visual literacy, completely legible in traditional architecture, is nowadays illegible, with the city becoming a stage for arbitrary contracts. He argues that to avoid visual disturbance in the views, it is imperative to focus on meaning and preserve identity local and citizenship values within the definition of visual literacy values. In an article entitled: "Investigation of housing development and view-making in Iran," Jaberi-Rad (2015) discusses climatic, geographical, historical, and cultural transformations housing has gone through when encountering urban texture, thereby providing a brief history of housing and elements used in the view as an identity-making core since neolithic period to the architectural period of the Islamic Republic. Also, in an article: "Effects of architecture and city on cultural values," Naghizadeh et al (2010) discusses the root causes of environmental impact on man, the components of environmental impact on man, and the process of the artificial environment on man as well as the induction of cultural values in Iranian cities. In the book "Analysis of modern Iranian architecture," Hamid Reza Ansari (2016) concerns categorizing the existing situation. Naghizadeh et al. (2010) also did a study to conclude that the current crisis comes from the failure to identify the insider culture, educational problems, and emphasis on foreign culture, absence of coherent and effective rules, weak urban management, and unsystematic control of the modern architecture procedures. They also argue that this is to study the Islamic philosophy and theoretical basics to achieve an Iranian-Islamic identity and avoid thinking of a modern solution to the problem. Below, Table 1 gives a summary of the issues analyzed.

**Table 1:** A literature Review (Authors)

| Author (Year) | Title | General results |
|---|---|---|
| [13] | Phenomenology of residential building facades and relevant evolution of expectation | Failure to expectations of symbols in the course of history can be an example of disorganized building facades. For instance, one would refer to the protection of residents against external measures, creation of a link between inside and outside, the introduction of the character and credibility of the owner, designer, etc. |
| [14] | Value phenomenology of new residential building facades; guidelines on the development of the urban identity of Valiasr St. in Tehran | Restricted laws and non-awareness of Iranian architecture principles, non-employment of modulation, inconsistency between form and practice, and use of anonymous tendencies in architecture cause disturbance and disorganization with the urban body. |
| [15] | Investigating the identity crisis in modern urban views | Investigating the plans proposed by scholars as well as the field visits of the surrounding buildings to examine the quality of the view and volume proportions with the surrounding buildings and creation of cultures to raise awareness of Iranian-Islamic identity as a solution. |
| [16] | Investigating the effect of urban views on the identity of modern Iranian architecture | Concept and meaning in building view have been neglected, and such concepts as visual literacy, completely legible in traditional architecture, is totally illegible nowadays, with the city becoming a stage for arbitrary contracts. |
| [17] | Investigating the development of housing and view-making in Iran | The author discusses climatic, geographical, historical, and cultural transformations housing has gone through when encountering urban texture, thereby providing a brief history of housing and elements used in the view as an identity-making core from the neolithic period to the architectural period of the Islamic Republic. |
| [18] | Cultural considerations in forming urban views emphasizing the structure of Iranian urban views in the Islamic era | It is suggested that the current crisis comes from the failure to identify the insider culture, educational problems, emphasis on foreign culture, absence of coherent and effective rules, weak urban management, and unsystematic control of the modern architecture procedures |

## Theoretical Basics

### Concept of façade

The concept of façade in Iranian architecture is as large as lands the Iranian culture has infiltrated into. Thus, it is almost impossible to find a single definition to embrace all the thematic, local, and temporal aspects [19]. The façade of each building contributes to the urban environment it has a presence in as its contribution embraces bodies of the street and squares. Each urban view is composed of urban buildings. Therefore, when approaching this from an architectural perspective, there is a direct reference to building facades [20]. Building facades appear to display architectural combinations that involve a kind of meaning. The facades are thus capable of simulating human imagination and communicating with him. For this, significant parts of the human communications with the environment are made through visual and subjective communication with the environmental, architectural combinations. This type of communication which is abstract, lays the ground for stimulating non-abstract communications [21]. In an apartment building, a façade dramatically contributes to creating internal space margins in contact with the surrounding environment and can be focused attention as a relation [22]. Pakzad (2003) maintains that a façade is an interface between the inside and outside of the building. As a three-dimensional element, it is a place where private features, building architecture, and urban and public aspects hold together. In this stage, the facade is a body member, also called urban landscape that plays a more significant role than the architect's [13]. He also remarks that façade has a special status in the visual and perception areas, insomuch as it serves as visual perception and affects the visual perceptions of the environment. In addition to visual and aesthetic impacts, it also involves some social and mental effects, which are

regarded as the most effective element affecting the building's visual quality.

Habib and Hosseini (2010) maintains that an urban view that may leave an appropriate impression of itself can also play a social role because it helps people understand their surroundings and where they are. This will also help them better adjust their activities and increase their collective memories and group communications [4]. Carrir (1992) points out that the composition of a view, taking into account functional needs (windows, folding doors, awnings, and roof surfaces), should be looking forward to creating a coordinate totality using well-established proportions, vertical and horizontal weights, materials, color and decorative elements. In a study entitled: "City design, view, and appearance," Lynch (1994) refers to the importance of view and provides criteria for a good view. For him, criteria should involve multiple needs, be generally defined, and directly related to forming to measure each proposed plan's value compared to other proposals. He regards the best source of these criteria to be the direct reference to the people themselves by considering their choices, as the best place to offer such criteria is the psychology of the environment. The criteria set out by Lynch (1994) include excitation, diversity, identifiability, impressionability, vitality, identity, imageability, legibility, resilience, simplicity, clarity, dominance of parts of the form, adaptation to the environment, significance, and teachability [23].

Tavasoli (1988) elaborates on some principles for the mass-space composition, considering the desired view to have order, unity, composition, scale, proportion, and coordinates. He also characterizes the space design with simplicity, sign element, equilibrium, adjacency, coordination, spatial consistency and coherence, enclosure, Etc. Safamanesh (1994) also considers identity and coordination in an objective urban landscape and adopts a cultural approach. For him, a building view design stresses subjective and cultural values, i.e., immaterial elements, more than other elements constituting the building.

Explaining factors affecting the plurality of residential facades

Studies have demonstrated that this problem is occurring more in underdeveloped nations because modern architecture has been exported to these countries, and this has caused a rift in the construction of architectural spaces [24]. The next issue is modernity's transition to post-modernity in art and architecture. Using the semiotic analysis, one would say that distinct signs characterize post-modern plans (both in art and architecture). Compared to modern features, the most crucial post-modern feature is the re-use of iconic signs [25]. In other words, post-modern works signify causal relations of symbolic signs and create modern implications. Post-modern works select symbolic signs to gain more layers of meaning [26].

**Socio-cultural index:**

The human perception of the environment he built around himself is a function of his culture; however, much is not investigated. This is considered a part of the culture and a material aspect of the society because it has roots in values, beliefs, norms, Etc., revealing the link between culture and architecture. The link between culture and architecture originates from many cases, as human thought for designing spaces in architecture relates to culture [27]. Cultural changes have transformed concepts and basics, affecting various plans in art and architecture [28]. One critical subject that brings about a sense of attachment is the identity relation between man and place [18]. Structural formation originates from our national and social activities and interactions. Place, by itself, is an identity-making element for the human's identity. The subject of visage and landscape (generally known as view) has diverse dimensions owing to its close relationship with the category of urban identity and culture [19].

Developments during the revival and rejuvenation of historical cities of Iran have changed the forms and structures of buildings. The criterion of complexity brought about coordination, diversity, and plurality. Modern buildings characterize the criterion of complexity to the minor part; however, it appears that there is a need to meet the subject of complexity by using materials, stone slabs, lattice interface walls, Etc., to avoid it being obsolete. Complexity attracts eyes and renders a professional design, created of both knowledge and experiment, to discern amateur work [29]. The ideology governing Iranian architecture in the Pahlavi era significantly differed from the Qajar era. Data on index buildings in architecture suggest that the first Pahlavi era architecture tended to pre-Islam architecture; meanwhile, various Western styles considerably developed in the second Pahlavi era [30]. The other point is the adaptation of plurality concepts to universal pluralism. According to the latter, one cannot offer a definite and absolute value for something, as all perspectives are the same, and the superiority they enjoy is due to an optional thing [31]. Hence, architects' individualism in various historical eras

significantly contributes to plurality in architecture and urban development.

**Economic index:**

With social developments in Iran, imitation of the European architecture in this era began totally objectively [32]. One factor which greatly contributes to plurality in urban view designs is economic impacts. Put it simply, the use of modern material and cutting-edge technologies have brought about such pluralities. One should note, however, that the feasibility of applying technology has questioned the concept of culture and identity, the impacts of which are noticed in the urban and architecture anonymity [33]. In other words, economic factors, both at boom-and-bust periods, could, directly and indirectly, affect the urban development within qualitative and qualitative as well as urban buildings, especially residential buildings, thus contributing to the type and level of production activities and revenue level of residents and the formation of the urban visage as well as its structural and spatial features [34]. This aspect of the economy on the urban landscape can be specifically seen in the division of urban territories and their valuation. The familiarity of urban designers with the economic aspects of a city and the interpretation of its various situations make it easier and more meaningful to respond to the need for a proper city [35].

**Technological index:**

In the past Iranian architecture, traditional architecture managed to use the knowledge of his time to coordinate art and technology in all parts of the building in the best way. Coordination, consistency, stagnation, dynamism, and beauty characterize the Old Iranian architecture, which revealed delicacy, balance, and content within the architectural structure [7]. The diversity of form and materials using various technologies in urban views-related construction is quite evident. The entry of technology into architecture led to tendencies focusing on technology's originality, which brought about a perspective of a superior future. In contrast, it disdains imitation of the past and nature, as Missi Van Der Hou (1924) maintains that industrial construction claims that all social, economic, and art problems will be resolved using technology. This potentiality of technology results from architects' creativity [36]. In sum, the following table gives the three categories affecting the plurality of view design along with their subcategories.

**Table 2:** Three categories affecting the pluralism of view design with their subcategories

| **General factors affecting pluralism in view design** | **Dimensions of the subject** |
|---|---|
| Socio-cultural index | Designer individualism |
| | Social Solidarity |
| | Cultural belonging to the community |
| | Spatial belonging to the texture |
| | Consumption-oriented attitude |
| | Perception-orientedness - General Knowledge |
| Economic index | Quality of materials |
| | Construction and execution system |
| | Value of land and area |
| Technological index | Strength of facade |
| | Use a variety of materials |
| | Variety of forms |
| | Historical memory - attitude to design |

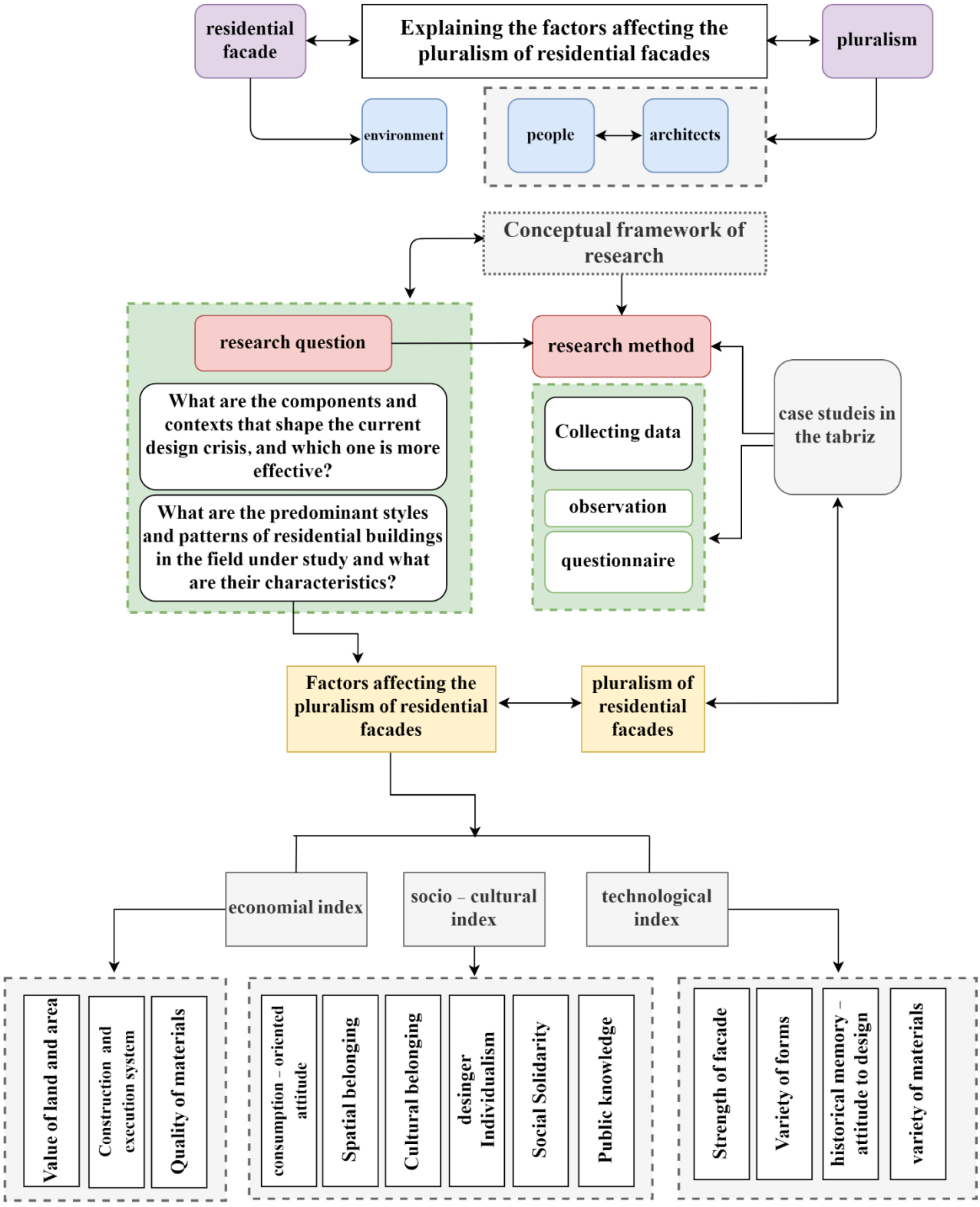



**Figure 1:** Conceptual framework of research

Tabriz's Valiasr neighborhood was selected as the case study of this research. This area is located in the northeast of the city. The plan for the construction of Valiasr Township began in 1970 when the first comprehensive urban plan was adopted with the acquisition of parts of the Western territories of Barenj village outside the comprehensive plan limits. Currently, the Valiasr area is part of the structural neighborhood of district 1 of Tabriz's municipality.

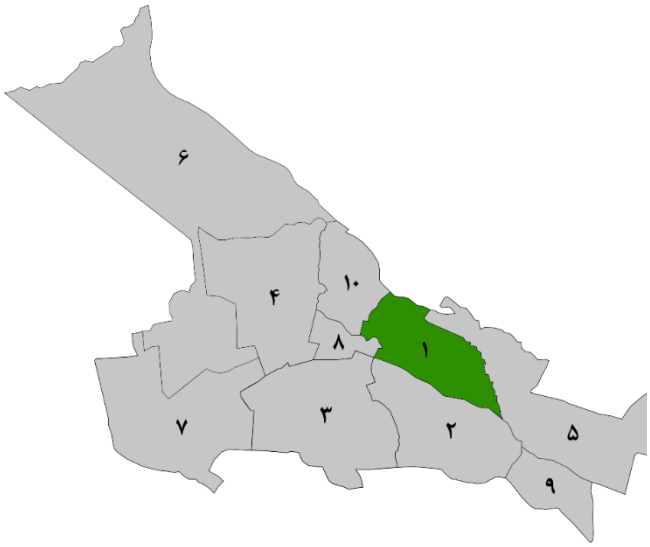


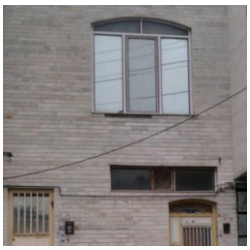

**Figure 2:** Location of District 1 in the map of the Tabriz (Source: Tabriz Municipality website)

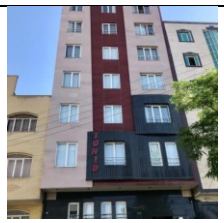
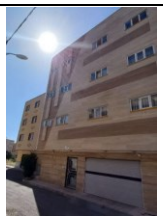
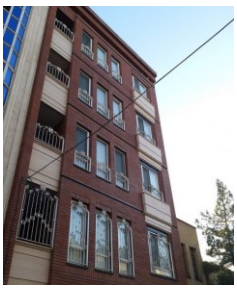
The facades in the district one (like other parts of the city) are made of different materials such as stones, bricks, wood, and a combination of them. Since this twe neighborhoods (Vali-asr and Abbasi) dates back to the 70s, the buildings, like other buildings in the city, are made of various facades of different styles and of different materials.

As mentioned before, case studies of the present study were selected from houses in one area. However, there are different contexts due to cultural differences (economic situations). This research tried to select the studied cases from the residential buildings of an area (district one) but with different cultural issues.

It should be noted that the questionnaire was not distributed separately in these two areas, and the whole area was selected as a study sample. This article aims to investigate the current situation in one of the urban areas of Tabriz. Samples were selected from these two neighborhoods because one represents high-strength economic construction and the other represents moderate (economically) and conservative (historical perspective) construction. For this reason, it can be claimed that it can be, in general, an excellent example of studies for the city of Tabriz.

**Table 3:** Table of different facades studied in the present study (authors)

| Materials, year, style | General façade descriptions | Formal combination of the façade | Cases in Vali-asr neighborhood | Cases in Abbasi neighborhood |
|---|---|---|---|---|
| Brick (Modern) | The façade in question is composed of a single material, i.e., 3-cm bricks. It has no specific combination. It also uses various brick colors in terraces which have simple patterns | . The formal diversity of the façade is very simple, and the façade has no niche or protrusion |  |  |
| Stone (Roman Classic) | The façade in question is known as Roman style and uses classic proportions. The façade is made of a single material with only one type of stone used in the combination. | The formal diversity of the façade body is highly complex while the complexity is annoying |  |  |

| | | | | |
|---|---|---|---|---|
| Combination (stone) (Modern) | The use of various stones in the body of the face (two-three types of stone) with different colors are noted | The formal diversity in the intended facade is moderate |  |  |
| Combined (wood and stone) (contermporary) | The use of wood in the façade, especially in cold and dry climates, creates a warm sensation in the outer crust. The use of wood with recent symbols is totally considered to be modern as it has no background in the historical symbols of Tabriz. | Because of the different nature of the combined facades, i.e., stone and wood, various combinations are usually used in terms of differences in protrusion. |  | Not available |
| Combined (brick and stone) (contermporary) | One of the most common residential symbols in the intended area is the use of stone and bricks, which was common in the 90s and 2000s. One of the advantages of this type of facade is the color and form diversity that it creates. There is also greater authenticity in terms of technical characteristics in the materials. | Since the materials used in this type of facade are heavy, one cannot make use of the difference in this type of facade, which of course, is not a negative aspect. |  |  |

## 3.Materials and Methods

The present article was a descriptive-analytical one that used a survey. The statistical population consisted of residents of the selected area (aged over 18). The sampling method was cluster-random, and the Cochran formula was used to determine the statistical sample size (equation 1) with coefficients (p=0.7 and q=0.3) and measurement error level (d) at 0.05 level. Considering the statistical population, the sample size has amounted to 221. A close-ended questionnaire was used online. Pearson correlation (r) test was used for the bivariate analyses. For multivariate analyses, Generalized Linear Models (GLM) were used as the variable of the tendency to plurality was of a count variable, with the mean tendency to plurality amounting to 5.29 and its variance 6.03, showing an abnormal distribution. The statistical package to conduct statistical analyses in this study was SPSS 26 software. Figure 3 gives the distribution of the variable of the tendency to plurality.

$$n=\frac{z^2pq}{d^2} \div \left(1+\frac{1}{n}\left(\frac{z^2pq}{d^2}-1\right)\right) \quad \text{Formule-1}$$

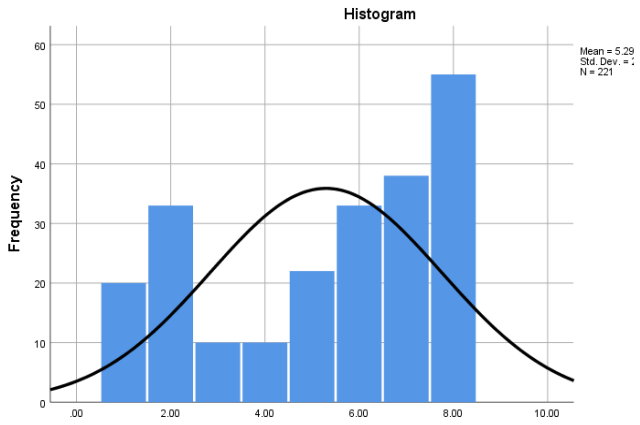



**Figure 3:** Distribution of the tendency to pluralism among the research sample population (Research Findings, 2022)

## 4.Results

### Correlation test

Hypothesis test results (Table 4) suggests that the variables of spatial belonging (-0.83%), perception-oriented (-0.79), consumption-oriented attitude to the building 0.69), solidarity (0.61), historical memory (-0.49), individualism (0.46) and cultural belonging (-0.36) were positively and significantly correlated with the intensity of the tendency to pluralism, respectively. In this connection, the variables of spatial belonging, social solidarity, historical memory, and cultural belonging were negatively correlated with the intensity of the tendency towards pluralism, indicating that with the increase of spatial belonging, social solidarity, historical memory, and cultural belonging among the residents of the selected area, the intensity of the tendency towards pluralism decreases. On the other hand, the variables of perception-oriented, consumption-oriented attitude toward the building and individualism were positively correlated with the intensity of the tendency to pluralism, indicating that the intensity of the tendency towards pluralism increases, with increasing perception-oriented, consumption-oriented attitude towards the building and individualism among the residents of selected area.

**Table 4:** Results of correlation coefficient of independent research variables with the intensity of tendency to pluralism (Research Findings, 2022)

| Variable | Correlation coefficient | Sig. |
|---|---|---|
| Spatial belonging to the texture | -0.83 | 0.00* |
| Perception oriented | 0.79 | 0.00* |
| Consumption-oriented attitude | 0.69 | 0.00* |
| Historical memory - attitude to design | -0.49 | 0.00* |
| Designer individualism | 0.46 | 0.00* |
| Cultural belonging to the community | -0.36 | 0.00* |
| Social Solidarity | -0.61 | 0.00* |

Dependent variable: intensity of tendency to pluralism
Sig = p <0.05 *
*It should be stated that only the variables in Table 1 have a correlation coefficient, and the other variables not given in the table show no positive or negative correlation. In other words, the correlation coefficient of these variables is zero.

## 5.Discussion

The proposed model in this article aimed to determine the factors that explain the tendency to pluralism in the residents of the selected area. The factors that were significantly correlated with the variable of the tendency to pluralism constitute the model's variables. Thus, the variables including 1- Spatial belonging 2- Perception-oriented 3- Consumer-oriented attitude to the building, 4- historical memory 5- Individualism 6- Cultural belonging, and 7- Social solidarity constitute the model's components. To achieve a suitable model (Fit Model), independent research variables were entered into the model to measure the extent to which the addition of each of the variables affected the model fit. However, it should be stated that the deviation index was used to examine the goodness fit in GLM models, including Poisson regression. This index shows how far the research model is from a desired and ideal model.

Similarly, the deviation is expected to decline as additional independent research variables. The Chi-Square test also indicates the real significance of the model. Chi-square is calculated from the difference of the deviation of the zero models (i.e., a model to which no independent or predictive variable has entered) and the deviation of the primary model (a model to which the predictive variable has entered). It tests the significance of the deviation reduction. In the end, as predictive variables are added to the model, the chi-square value is expected to increase, suggesting that the deviation from the ideal model is declining. In Poisson's model, the freedom degree of the chi-square test comes from the number of independent variables entered in the model. As regards the factors affecting the tendency to pluralism, predictive variables entered into the model in 7 stages, respectively, to develop the final model of the research.

Table 5 gives each model's constituting components and goodness of fit indicators. As

seen, model deviation decreases with the addition of the variables of spatial belonging, perception-oriented, consumption-oriented attitude to the building, historical memory, and individualism, respectively. However, when variables of cultural belonging and social solidarity are added, deviation and the goodness-of-fit indicator of the model do not change, suggesting that although these two variables have a higher correlation with the intensity of the tendency to pluralism, they are not capable of being fit or explaining the intensity of the tendency to pluralism in the final model. In other words, there is no zero-order correlation between cultural belonging and social solidarity with the intensity of the tendency to pluralism, as the observed correlation is false and affected by other research variables.

Finally, when the effect of other research variables is controlled, the correlation between cultural belonging and social solidarity with the intensity of the tendency to pluralism decreased to -0.007 and -0.02, respectively (correlation close to zero). Thus, the final model of the research, including the variables of spatial belonging, perception-oriented, consumption-oriented attitude towards the building, historical memory, and individualism, were extracted as the main factors contributing to the intensity of pluralism among the residents of the selected area of Tabriz.

**Table 5:** Components and indicators of goodness of fit of each model (Research Findings, 2022)

| Model | Deviance | Likelihood Ratio Chi-Square | df | Sig |
|---|---|---|---|---|
| 1. Spatial belonging | 103.11 | 151.18 | 1 | 0.00* |
| 2. Spatial belonging- perception-oriented | 75.13 | 179.17 | 2 | 0.00* |
| 3- Spatial belonging-perception-oriented-Consumption-oriented attitude towards the building | 65.00 | 189.29 | 3 | 0.00* |
| 4- Spatial belonging, perception-oriented, consumption-oriented attitude towards the building, historical memory | 60.96 | 193.33 | 4 | 0.00* |
| 5- Spatial belonging-perception-oriented-Consumption-oriented attitude towards the building-Historical memory-Individualism | 57.33 | 196.96 | 5 | 0.00* |
| 6- Spatial belonging-perception-oriented-Historical memory-Individualism-Consumption-oriented attitude towards the building-Cultural belonging | 57.25 | 197.04 | 6 | 0.00* |
| 7- Spatial belonging-perception-oriented-Historical memory-Individualism-Consumption-oriented attitude towards the building-Cultural belonging-Social solidarity | 56.71 | 197.58 | 7 | 0.00* |

After the final model was extracted, the effects of the model variables on the tendency to plurality were measured. Thus, the Poisson regression model was used to calculate the adding ratio for each variable affecting the model (Table 6). The statistical findings revealed:

- The adding ratio of the tendency to plurality decreases by 0.95 for every unit of increased spatial belonging in the study population; i.e., increasing spatial belonging can decrease the intensity of tendency to plurality.
- The adding ratio of the tendency to plurality increases by 1.026 for every unit of increased perception-oriented in the study population; i.e., increasing perception-oriented can increase the intensity of tendency to plurality.
- The adding ratio of the tendency to plurality increases by 1.010 for every unit of increased consumption-oriented attitude in the study population; i.e., increasing consumption-oriented attitude can increase the intensity of tendency to plurality.
- The adding ratio of the tendency to plurality decreases by 0.98 for every unit of increased historical memory in the study population; i.e., increasing historical memory can decrease the intensity of tendency to plurality.
- The adding ratio of the tendency to plurality increases by 1.009 for every unit of increased individualism in the study population; i.e., increasing individualism can decrease the intensity of tendency to plurality.

**Table 6:** Results of the research regression model (the effect of each of the model variables on the intensity of the tendency to pluralism) (Research Findings, 2022)

| Variable | B | Standard error | Wald Chi-Square | Freedom degree | Sig. | (Add ratio) |
|---|---|---|---|---|---|---|
| (Intercept) | 1.74 | 25.0 | 78.45 | 1 | 0.00* | 5.74 |
| Spatial belonging | -0.044 | 0.0075 | 33.95 | 1 | 0.00* | 0.95 |
| Perception-oriented | 0.025 | 0.0086 | 8.74 | 1 | 0.003* | 1.026 |
| Consumption-oriented attitude to the building | 0.010 | 0.0045 | 11/5 | 1 | 0.024* | 1.010 |
| historical memory | -0.014 | 0.0070 | 4.017 | 1 | 0.045* | 0.98 |
| Individualism | 0.009 | 0.0048 | 3.66 | 1 | 0.047* | 1.009 |

Dependent variable: intensity of tendency to pluralism Sig = p <0.05 *

## 6.Conclusion

Residential building facades are the factors that most affect the quality of urban spaces, which, if modified, enhance the objective landscape quality. In this connection, street views are the major elements of the urban body that should be focused attention. Looking at urban residential bodies in the city of Tabriz suggests that they not only lack aesthetic aspects but also involve a high rate of plurality. In fact, the research mainly concerns factors that lead to the plurality of urban residential facades.

Hypothesis test results from the relationship between independent variables of research and the intensity of the tendency to pluralism (Table 4) suggests that the variables of spatial belonging (-0.83%), perception-oriented (-0.79), consumption-oriented attitude to the building 0.69), solidarity (0.61), historical memory (-0.49), individualism (0.46) and cultural belonging (-0.36) were positively and significantly correlated with the intensity of the tendency to pluralism, respectively. In this connection, the variables of spatial belonging, social solidarity, historical memory, and cultural belonging were negatively correlated with the intensity of the tendency towards pluralism, indicating that with the increase of spatial belonging, social solidarity, historical memory, and cultural belonging among the residents of selected area, the intensity of the tendency towards pluralism decreases. On the other hand, the variables of perception-oriented, consumption-oriented attitude toward the building and individualism were positively correlated with the intensity of the tendency to pluralism, indicating that the intensity of the tendency towards pluralism increases, with increasing perception-oriented, consumption-oriented attitude towards the building and individualism among the residents of selected area. Finally, the results suggested that such components as spatial belonging, historical memory, perception-oriented, consumption-oriented attitude, historical memory, and individualism greatly contribute to the tendency to pluralism. The former two components, i.e., spatial belonging and historical memory, are directly related to the tendency to pluralism, but the final four are related to it indirectly. Finally, as Figure (4) reveals, there are three categories of factors; the first group is marked in white shows no logical relationship between them, and the tendency to pluralism in the selected area of Tabriz. Factors marked in green are noted to be directly related, and factors in red are inversely related to the dependent variable of the research.

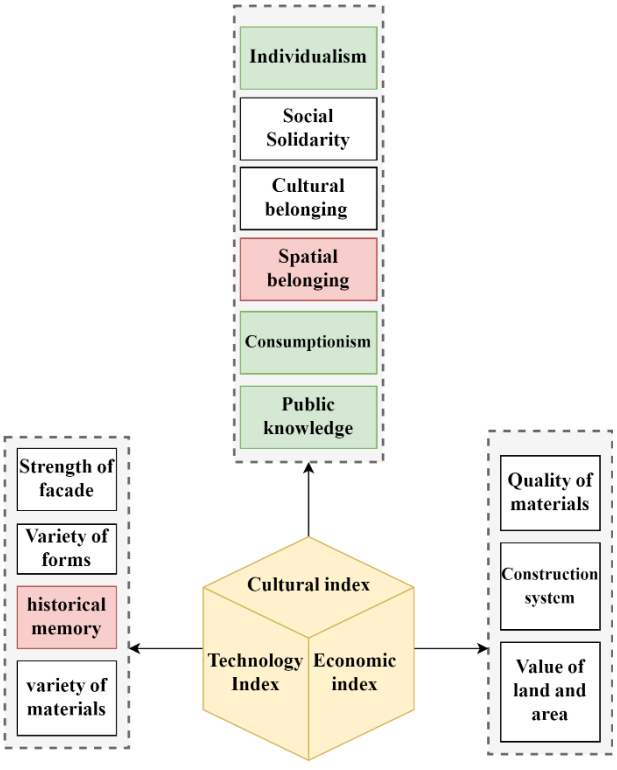



**Figure 4:**Relationship between research factors and dependent variables (Research Findings, 2022)

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