Original Research Article

Examining the Contribution of Form and Façade of Buildings to the Branding of Commercial Complexes
A Case Study of Commercial Complexes in Tehran*

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Abstract

Problem statement: Branding of commercial complexes is considered as a factor contributing to economic prosperity in cities, attracting tourists, and improving environmental qualities. The design and construction of commercial complexes are among the key factors in branding these centers. The form and facade of buildings and their decorations and details are among the visible and tangible features of buildings that, in addition to their features and functions, can be used as a potential to attract audiences. Commercial complexes in the 2010s in major cities, especially Tehran, have grown and expanded significantly. Their branding can play an important role in the economic prosperity of Tehran, and in building up a good reputation for this city.

Research objective: This study attempts to identify the role of the form and facade of commercial complexes in branding these centers. This study also seeks to find out how the role of form and facade of commercial complexes in Tehran changes, and determine the degree of its compatibility with the global approach towards this issue.

Research methods: The method of the present qualitative research is descriptive and analytical. In terms of purpose, it is an applied study, and the data was collected through the bibliographic method and field studies.

Conclusion: The results of this study show that the improvement of the visual quality of buildings being in a favorable connection with the context, in addition to the increasing attractiveness, the establishment of unique and symbolic projects, the interaction with the city, and the display of culture and history, are among the physical branding strategies that are reflected in the design of the form and exterior of commercial complexes. The facades and decorations used in commercial complexes represent the use of modern technology and a medium for conveying the intended messages by the brand owners. The results also show that before the 2010s, the strategies for attracting visitors to commercial complexes were more of pretenses of being up-to-date, while in the 2010s, the roles of design and construction in branding of Tehran's commercial complexes are almost synchronous with the world, and the design of commercial complexes with distinctive shells and decorations has grown.

Keywords: *Building Form, Facade Shell, Branding, Commercial Complexes.*

Introduction

In the design of buildings, the form and facade of a building are the visible and tangible features of the building, which is considered as what is seen from the building and interacts with users. For about a decade, the number of commercial complexes in Tehran and major cities of the country has grown and expanded significantly, but little research has been done on various aspects of the issue of commercial complexes due to the emerging nature of these centers. The survival and dynamism of commercial complexes are closely dependent on the number of their visitors. The more visitors, the more likely they are to buy or use the facilities designed in the commercial complexes and bring favorable economic prosperity for these centers. Also, the form and facade of commercial complexes, in addition to responding to their functions, can play a prominent role in attracting attention and audience.

In the globalized age, place branding is considered a prime opportunity for expanding the economical capacities of cities. Cities, areas, and countries in the world, are facing the effects of the globalized economy, culture, and important environmental tendencies. One of these effects is the increased competition between places, which is evident in different levels and fields (Kavaratzis, 2005). Hence, most countries invest in branding to gain fame and a competitive advantage in the global market (Sevin, 2014). Countries' strategies in branding places can include creating functional attractions such as buildings, improving the quality of infrastructure, creating economic stability, providing national support, preserving natural and environmental attractions, and paying attention to factors such as quality of life, culture, and promoting emotional elements such as myths (De Chernatony, 2010). Commercial complex branding is an example of creating functional attractions, and one of the main factors in urban branding, which is used by many cities in the world. Because in addition to the economic dimension for the city, it plays a key role in the tourism industry and tourist attraction. In other words, commercial complex branding is a factor in the economical growth, and an invitation for users to come

to these complexes. The key roles of their brandings are the design and the construction. Therefore, considering the increase of commercial complexes in Tehran, and their key role in economic growth, it is necessary to study the effects of the design, construction, and architectural aspects of these complexes on their branding, attracting positive fame for the city, and their use of the outcomes of branding. This study aims to explain the role of form and facade of commercial complexes in their branding, and to answer the following question; "What is the relationship between the form and facade of the building and the branding of commercial complexes?" And "What are the changes in the role of the form and facade of commercial complexes in Tehran, and are they in line with the global approach to this issue?"

Literature review

Since the main purpose of the research is to explain the role of form and facade on the branding of commercial complexes, the research background can be so far classified into three areas. First: Research on the architectural features and classification of commercial complexes. Second: Research that targets the category of form, decoration, and tangible features of the building. Third: Research dedicated to the field of place branding, especially commercial complexes. The most important ones are shown in Table 1. It should be noted that no research was found on the characteristics of architecture and branding.

Research methodology

The present research is developmental-applied with a qualitative approach. In this research, to discover and analyze the theoretical relationship between the form and facade of commercial complexes and their branding, the qualitative research method, and the description and analysis strategy were used in the first step. In this step, data collection and classification were done by reviewing theoretical and experimental backgrounds in first and second-hand sources, and by summarizing, interpreting, and inferring. Based on these, the factors affecting the form and facade of

Table 1. Research background. Source: Authors.

Field	Author(s)	Description
Architecture and classification of commercial complexes	Kazemi & Amir-Ebrahimi (2019)	In this research, based on the census of shopping centers and commercial complexes between 2016 and 2018, the statistics, typology, and classification of commercial complexes, and their types according to the geographical location and historical period of construction, have been presented.
	Coleman (2007)	This book deals with the historical evolution of shopping centers in the West, and after explaining the different types of complexes and shopping centers, it describes how to plan and design shopping center environments.
Visible and tangible features of the building	Tatarkiyevich (2002)	This article examines the concepts of form in the history of aesthetics and its historical and philosophical roots. Tatarkiyevich defines five different meanings for form by contrasting the lexical definitions of the form. Some meanings emphasize the tangible and objective aspect of the form, while others focus more on the mental and perceptual dimensions of the form.
	Bolouri Bazzaz & Mostaghni (2019)	This research deals with the subject of formalism and explains the concept of form in architectural formalism. The definition of form in relation to the view of formalists as "form as a way and manner of content" is one of the novel findings of this research.
	Adeli & Nadimi (2020)	This research has theoretically analyzed the concept of form with Foucault's genealogical approach. First, the formation of the concept of form is examined in philosophical thought, then by reference to the trending theories architecture, an analysis and a review of the present status of the form is provided. The formation of six conceptual boundaries of form, including appearance, idea, type, structure, meaning, and capability is one of the findings of this research.
	Forty (2004)	It explains the meaning of form in the context of different attitudes toward form in the twentieth century, by expressing categories contrary to form, such as decoration, culture, social values, technological advances, and performance.
	Moussavi & Kubo (2006)	In this book, contemporary decorations are presented as a tool for cultural representation and visual interaction with society. Also, examples of contemporary architecture are analyzed in the form of graphic expressions, and through three classifications in the fields of depth, material, and subject.
	Balik & Almer (2016)	In this study, the new roles of decorations to the social, cultural, and, economic status are examined through the analysis of case studies, to build a theoretical framework for decorations in the field of architecture in the twenty-first century. This has led to a re-reading of contemporary architectural ornaments as cultural tools.
	Ahani, Etessam & Islami (2017)	In this research, using descriptive and analytical methods, the methods of applying decorations in contemporary architecture after the Islamic Revolution of Iran have been studied in 92 prominent works of architecture. Results show a noticeable increase in the number of ornamental elements and creation of visual complexion, and a significant reduction in their semantic content (compared to traditional decorations).
Branding	Komeili, Hamidizadeh, Hajipour, Azizi & Amin Bidokhti (2018)	In this research, the branding model of shopping centers has been reviewed using data-based theory and considering good shopping experience as a central category, and branding as a consequence. Design and construction, marketing and divestiture management, exploitation management and feasibility studies have been introduced as key dimensions of shopping center branding.
	Yazdanpanah Shahabadi, Sajadzadeh & Rafieian (2019)	In this research, a conceptual model of place branding has been presented by the meta-analysis method. This model contains different conceptual and strategic layers, as well as effective contextual requirements and conditions in place branding. One of the findings of this study is to associate place branding as an interdisciplinary, interactive, multifaceted, and context-oriented approach that is based on the place's assets, which are used in planning and recreation of the place.
	Ashworth (2009)	This research deals with the place branding strategy. The three strategies mentioned are: "Creating a connection between places and prominent characters, improving the visual quality of buildings and urban design, and holding important cultural and sports events".

commercial complexes and branding strategies, and finally the relationship between these two categories were studied. Also, in the second step, global practical experiences in the field of visual features and branding strategies used in commercial complexes were examined. The criteria for selecting samples in this section were the design of the architectural work by the world's leading architects and the determination

of branding strategies by brand owners. 15 works were analyzed in this field.

In the next step, to explain the changes in the form and facade of these centers in Tehran, and compare the results of the previous steps, a case study of commercial complexes in Tehran was conducted. The criterion for selecting the samples was the effectiveness of the commercial complex at the

time of construction among the people, in terms of scale, the extent of influence, and good reputation; because influence is an important factor in branding. Fifty commercial complexes were identified by these criteria, and according to Morgan's table, 44 of them were built between 1957and 2020. Also, it is noteworthy that all the data about the physical and visual characteristics of the buildings was obtained through bibliographic studies, direct observations, and photography. The evaluation criterion and method of data analysis in this step is so that first, the form and facade of commercial complexes were classified according to the results of the first part, and then, they were compared according to what is used throughout the world in relation with the form, facade, and branding.

Theoretical foundation
• Form and facade of the building in architecture

The word form has different meanings in architecture. Some of them include objective aspects and tangibles, and some, which have a philosophical origin, emphasize mental and intangible aspects such as ideas. The most common theme that comes to mind from the concept of form in architecture is the form as a "shape" or attention to the tangible and visible features of the building, which Adeli and Nadimi (2020) referred to as "form as a manifestation". They also associated the concepts of physiognomy lines, body, space, and event with this subject (Table 2).

Also, various "material, environmental, functional and cultural" factors (Soltanzadeh, 1999), (Fig. 1) are effective in the creation of form, which throughout history, depending on the prevailing manner of thought, one or more of these factors have become more important, and played a more fundamental role in this manner. That is, sometimes the form and facade of the exterior are prioritized in the design, and sometimes the interior space and function of the building. For example, with the advent of modern architecture and Sullivan's famous phrase that "form follows function," function and technology became the main shaping factors for architectural forms. During this period, simplicity, purity, removal of ornaments, repetition of elements resulting from mass production, and industrialization were among the main features of architectural forms. In fact, the modernism of the beginning of the twentieth century demonstrated the main idea of "Transparency" with a direct presentation of architectural elements of the built space (Opincariu, 201; Moussavi & Kubo, 2006). But in the 1960s and 1970s, formalist thinking emerged. Therefore, it can be said that there have been different ranges of attention to form and function or both (as two opposing elements) in different periods and different types of construction.

The form of the building has become very diverse in the postmodern era due to the diversity of ideas that exist. Over time and with the advancement of technology, a large number of building types have been created where the designer focuses more on their interior space, and there is less need for connection between inside and outside the building. These include museums, shopping malls, theaters, and libraries. Firstly, these centers had a simple form and facade. For example, the external form of a shopping mall was generally box-like, and this was due to the insignificance of the appearance of these buildings in comparison with the importance of the event inside them. Gradually, however, the architecture of the form and facade of such buildings became a work of art and visible. Because today's world is focused on a culture of consumerism. During this period, the sense of sight has become the most important human sense. "Today, the image," says Opincariu, "is the main means of communication for the consumer community, and the idea of expression has become an architectural goal" (Opincariu, 2011). Meanwhile, the architecture is revealed by the form, facade, and contemporary decorations using innovative technologies, and through various materials and the structure of the building (Riisberg & Munch, 2015), making the form an important factor in creating attractiveness and attracting public attention (Fig. 2). This is evident with the unique forms of museums designed by architects,

Table 2. Concepts related to the tangible and objective aspect of the form (manifestation). Source: Adeli & Nadim, 2020.

	Concept	Definition of concept
Form as a manifestation (a tangible and objective aspect of the form)	Physiognomy lines	Set of peripheral lines and geometric shape
	Body	Full, rigid, and material part of the architectural work
	Space	The empty part of the architectural effect
	Event	Non-fixed and non-physical elements of architecture (Humane events in the environment, and mechanical events like demonstrating elevators' movements, and movement paths)
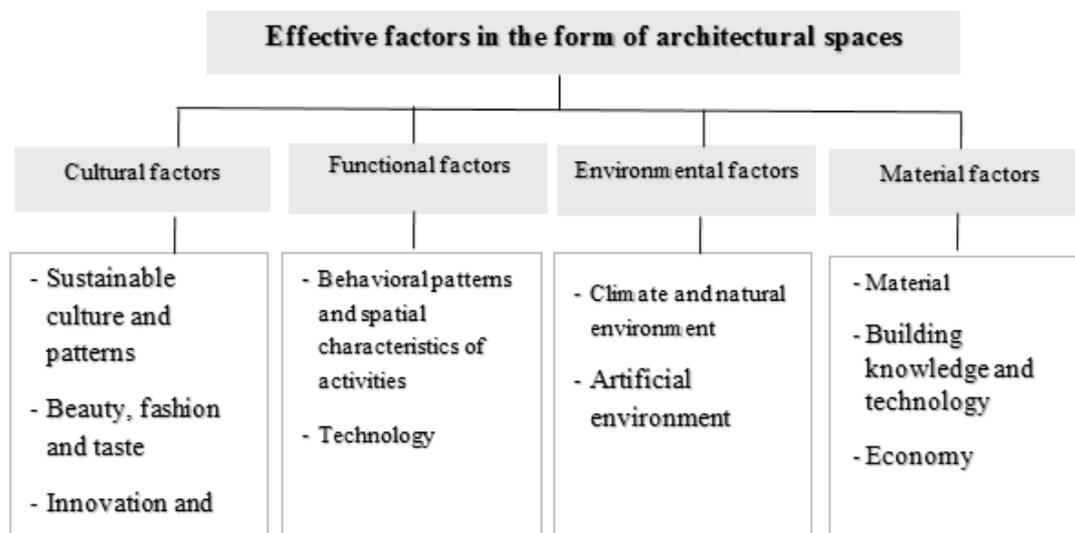
Fig. 1. Effective factors in the form of architectural spaces. Source: Soltanzadeh, 1999.

such as Frank Gehry and Daniel Libeskind, and some of the commercial complexes that are often designed by world-renowned architects.

Also, the role of such buildings as large-scale buildings, where in some cases are considered urban landmarks, is an important issue in the city and the impact they have on contemporary urban landscapes. A study on the effects of digital architecture on urban landscapes states: "Digitally designed spaces and forms can influence contemporary urban landscapes, due to their complex geometry and free forms. They can contribute to turning cities into museums of avant-Garde architecture and attractive magnets for investment and tourism in the age of globalization" (Mirgholami, Ghamkhar & Farokhi, 2013). Commercial complexes and shopping malls are also changing the landscape of cities with their unique and special forms and facades, which in some cases also use digital architecture, and will create different visual compositions for the future of cities. Therefore, if the unique and special forms of commercial complexes are designed and constructed, regardless of the urban context and the effects it has on it, they will visually create chaos in the urban landscape and have adverse effects on the branding of the region and the city.

• **Branding concepts of commercial complexes**
Branding is a calm and multifaceted process (Ventangren, 2017, 142), and includes various areas of management, marketing, tourism, urban planning, and architecture. Due to the interdisciplinary nature of branding, clear boundaries of the position of branding of commercial complexes in the mentioned areas are not clear. In the theoretical foundations related to the branding of commercial complexes, the term 'commercial complex branding'[1] is used along with various keywords, such as destination branding, city branding, and place branding. These concepts differ despite the commonalities in meanings. 'Destination branding' is mostly used in the field of
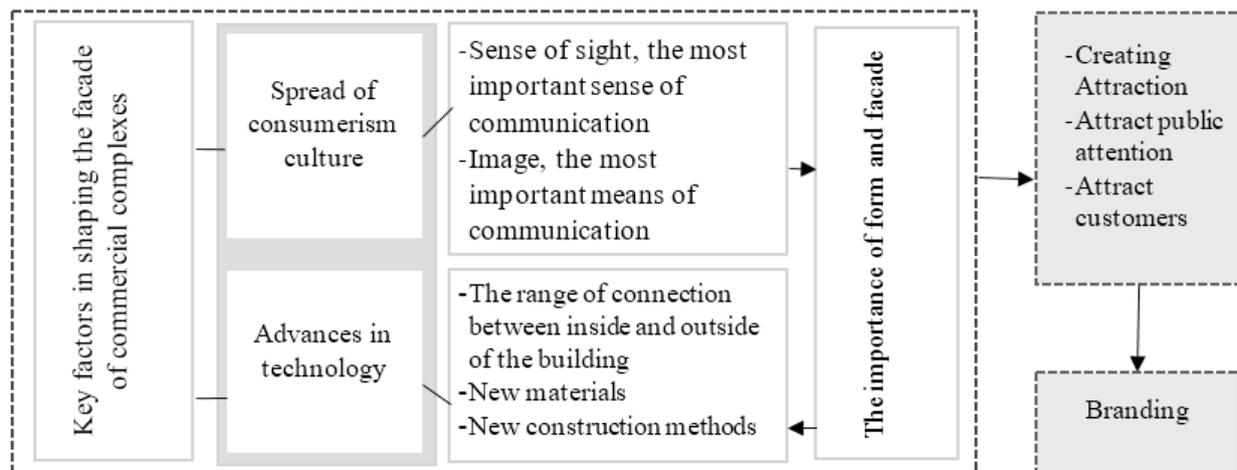
Fig. 2. Key factors in the formation of the form and facade of commercial complexes and their impact on branding. Source: Authors.

tourism and tourist attraction. "Destination branding is a way to communicate with the unique identity of the destination by distinguishing that destination from other destinations" (Morrison & Anderson, 2002 Quoted from Qu, Kim & Im, 2011). 'Place branding' is generally the idea of finding or creating unique items that distinguish one place from another and allow it to compete with other places (Ashworth, 2009). For places of all scales, it is vital to create competitive force and value, to attract new investments, activities, and users, as well as to keep the people who are already there satisfied (Kavaratzis, 2005, 329). Therefore, it can be said that the word place encompasses a wider dimension of the destination and includes people living in the place and visitors (Briciu, 2013). Thus, when branding is associated with the term destination, it has a tourism approach, and when it comes to branding a place, it takes a broader approach that includes all the interactions of a place with its environment, including political, economic, social, foreign investment and trading, immigration, media issues, and so on. Also, both destination and place branding issues can take on urban, regional, or even national dimensions (Govers & Go, 2009). The concept of 'City branding' refers to a set of measures that are taken using various tools and methods to gain competitive advantages between cities, to attract investments and tourists, and strengthen the city's identity, introduce it to citizens, and improve internal and external images of the city (Kavaratzis, 2004, 70; Prilenska, 2012, 12).

According to the definitions provided, 'branding of commercial complexes' can be related to any of the defined areas, depending on the approach that each research has. Since commercial complexes are the destination of many tourists around the world, destination branding and some of its strategies can be effective in branding these centers. Since commercial complexes are also influenced by and affect the various social, cultural, economic, and business-related components of the places, the more general term 'Place branding' can also be used for these centers. Finally, it should be said that since the construction of commercial complexes has become common in many contemporary cities around the world, therefore, the branding strategies of these centers can be adapted to some branding strategies of cities, regions, and even nations (Fig. 3).

Branding of commercial complexes and shopping malls has different dimensions including feasibility studies, design and construction, marketing and divestiture management, and exploitation management (Komeili et al., 2018). According to Alalhesabi and Moradi, branding techniques include various physical, cultural-social, infrastructure, facilities, and advertising areas (Alalhesabi & Moradi, 2020). By studying the literature in the field of branding about branding strategies of place, destination, and city (as previously mentioned, commercial complex branding is considered their sub-category), and in connection with the design and physical construction

Fig. 3. The relationship between the branding of commercial complexes and place branding. Source: Authors.

of buildings that are considered in this study, it is clear that the unique, special, and signature design of these buildings (Ashworth, 2009), and the construction of symbolic buildings (Kavaratzis, 2004, Kavaratzis, 2005, Riza, Doratli & Fasli, 2012) in one place, are among the most important tools used by countries for branding. In the words of Ashworth, "Visual quality of buildings, designs, and neighborhoods is a tool in place branding" (Ashworth, 2009, 14). Also, investors in various architectural spaces, especially commercial spaces, try to create 'attractiveness' to attract maximum customers. Various researches, in the field of creating attractiveness in shopping malls, also reveal that several factors play a role in the attractiveness level of commercial centers, such as "beauty and design of a commercial complex" (Said, Gambo & Ismail, 2016), "design of the physical environment and atmosphere of the store" (Teller & Elms, 2010; Cortázar & Vela, 2017), "creating a unique aesthetic experience for users" (Debek, 2015), and creating mental images of commercial complexes for users. Figure 4 shows the relationship between branding strategies and the form and facade of commercial complexes from existing theoretical foundations.

Results and discussion
• Global experiences of branding commercial complexes and their relation to the form and facade of the building

The concept of commercial complex branding has

a long history. But the creation of a unique brand identity in the design of commercial complexes goes back to recent times. An examination of the historical development of commercial complexes in the West shows that the spatial structure and architectural plan of the suburban commercial complexes, which were created by Victor Gruen in the 1960s, have long been replicated in various cities as a model. As Klauser interprets, "For a long time, architectural issues did not play a role in the construction of shopping malls" (Klauser, 2011). In the early 1970s, a type of department store called 'Galleria' was formed, in which the interior of the store was divided according to consumer's consumption trends. Thus, the concept of 'shop in shop' was formed, and the brands that were allowed to design the interior of their store became important (Miellet, 2001; Quoted by Quartier & Van Cleempoel, 2013, 18). However, due to the greater importance of internal activities, little attention was paid to external appearances. But since the 1980s, at the same time as the 'Retail design' discipline[2] became independent and professional, physical spaces and the architectural design of commercial complexes became more important (Quarter, 2015). In 2000, Rem Koolhaas paved the way to increase consumers' aesthetic expectations of shopping malls. With the publication of the book 'The Harvard Design School Guide to Shopping' in 2001, Koolhaas presented commercial architecture as an interdisciplinary work, which involves style, design, product development, technology, marketing, and finances (Klauser, 2011). During this period, shopping became a leisure activity and with the revival of urban spaces, more innovations were made in the design of commercial complexes and shops. In this way, over time, the culture of consumption grew and became a visual culture (Joy, Wang, Chan, Sherry & Cui, 2014, 348). The design of commercial complexes also became an opportunity to showcase the creativity of architects and the application of the latest technologies and materials in the world. Today, this has gone so far that some of the leading brands in various industries have outsourced the design of their stores, which often have a unique form and facade,
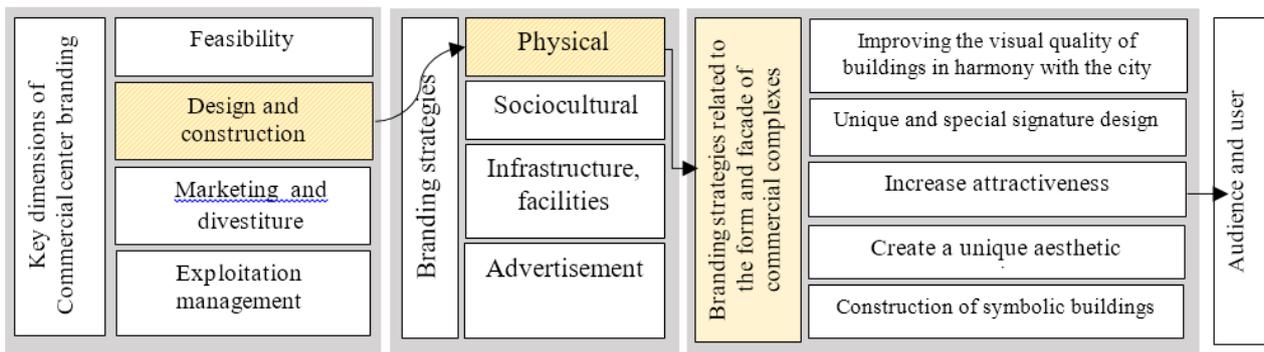
Fig. 4. Branding of commercial complexes and its relationship with the form and facade of the building. Source: Authors.

facade to famous architects whose names are also a kind of brand (Lubell, 2016), and they turn buildings into manifestations of technology, consumption, and places of public attention.

In other words, today, commercial complexes have transformed the exterior of the building into a powerful medium of perception and expression, by using various structural, digital, symbolic, and sensory aspects in the form of buildings and facade decorations. Therefore, paying attention to the design of the building and its form and creating strong mental images in the minds of the audience is one of the key branding strategies. Table 3 lists some of the commercial complexes, designed by prominent architects, and the facade features and branding strategies used in them. All of these models use unique lighting in the facade to show the night dynamics.

• **Explaining the changes in the role of form and facade of commercial complexes in Tehran**

The results of theoretical studies and analysis of samples on the features of form and facade and branding strategies of commercial complexes are shown in Table 4.

Now, to find the answer to the second question of the research, some commercial complexes of Tehran during four time periods (before 1991, 1992 to 2001, 2002 to 2011, and 2012 to 2020) are examined.

Before the 1990s, the most frequent shopping centers were passages (malls). They were often a combination of traditional market structures and nineteenth-century European passages with

no recreational and leisure spaces, and their examination is beyond the scope of this study. During the second Pahlavi era, large stores were formed based on Western culture and using modern technologies. Such as the 'Ferdowsi Store' in 1336, and the 'Kourosh Store' in 1350, which can be considered as the roots of the first commercial complexes today. In terms of form and facade, the Ferdowsi store corresponds to the facade of common buildings of the same period and is built with a stone facade and tall glasses.Kourosh store is one of the chain stores of Kourosh and is located at the intersection of Vali-e-asr and Zartosht streets. The facade and appearance of this building, which has six floors on the ground, are among the ones that, due to its commercial use, are designed in an integrated manner and without an opening; and steel sheets were used in a part of it, which at that time were new materials for public building facades. In this building, lighting and its design have been considered as factors to attract customers (Sharestan Consulting Engineers, n.d).

During the years of revolution and war, the construction of commercial complexes declined dramatically. However, smaller complexes were being built, such as Gandhi Shopping Center in 1979, which has a central courtyard, and Golestan Commercial Center in 1989. Regarding the Golestan Shopping Center, it can be said that its volumetric form has motifs inspired by the past architecture of Iran, while the whole collection has similarities to the indoor shopping malls of the 1960s in the United States (Table 5).

From 1991 to 2000, some commercial complexes

Table 3. Facade features and branding strategies of some commercial complexes in the world. Source: Authors.

Work/Architecture	Year	Picture	Visual feature	Description	Branding strategy
LOUIS VUITTON Maison Osaka Midosuji / Jun Aoki & Associates	2019- Japan		Simple cube forms but facade design inspired by the geographical location of the city and the sails of its famous ship.		- Showing Louis Vuitton's brand identity worked with fabric. - Create a unique design of fabric for the facade.
Tokyu Plaza Ginza / Nikken Sekkei	2016- Japan		- Formation of the façade with three-dimensional glass screens, and making the phenomenon of light reflection. - The façade reflects the urban landscapes and the internal commercial space.		- Creating attractiveness and integrating the urban landscape and facade by choosing materials that reflect the weather conditions. - Creating a diamond-like symbolic form. Symbolic display of Japanese glass art.
Facts Emporia / Wingårdh Arkitektkontor	2012-Sweden		Creating attraction in the form and facade of the building with recesses and special materials and colors of the entrance.		- Iconic entrance design. Special and unique design. - Create attractiveness by creating a diamond-like form.
Westside Bruennen / Studio Libeskind	2008- Swiss		- Prominent volumetric composition, materials and special colors. - Unique integration of architecture and landscape with the use of wooden materials.		Creating architecture as a work of art by creating unique and special forms and quasi-crystal and diagonal window forms.
John Lewis Department Store / Foreign Office Architecture	2008- England		- Simple form but multi-layered and transparent facade with floral design. - Interaction of interior and urban space and adjustment of interior lighting.		- Showing brand identity in the form of a relationship showing the lace pattern and the brand of textile products. - Creating visual attraction.
The Gyre Center/ MVRDV	2007-Japan		- A special form of sliding rectangular cube plates. - Creating attraction by using empty spaces in the form.		Unique building with a distinctive and special form in relation to the surroundings. Creating a terrace in interaction with the city.
Selfridges Building/Future Systems	2003- Birmingham		Creating a special shape of an amorphous curve. A unique application of aluminum discs on a blue background.		Creating a symbolic and unique form. Turning the special form of the building into an urban landmark and upgrading the brand.

were designed using common materials of the period, which were often using entirely glass facades, and had a simple form. Milad-e Noor Commercial Complex is an example of them. Apart from the use of all-glass material, its simple and cubic shape in the facade has been further diversified by the use of elevators with cylindrical cabins. Some other commercial complexes also demonstrated the technology in facade and form to attract more customers. In this research, the word 'display' is used for these centers, because the facade of the building is designed as a separate cover around the interior of the complex, and no trace of it can be seen from the inside. The most

Table 4. Facade features and branding strategies of commercial complexes. Source: Authors.

Features of form and facade	Branding strategies
- Unique volumetric composition - Form overlay facade in two or more layers - Unique material - Unique decorations - Paying attention to empty spaces along with attention to mass or full spaces - Special colors and textures - Integration of architecture and landscape - Unique lighting design	- Display of brand identity in facade and form - Creating unique designs and architecture as works of art - Creating a symbolic form - Integrating the urban landscape with the exterior - More interaction of the city with the building and the brand - Displaying the culture and history of the brand or location - Creating a distinct form relative to the texture

Table 5. Some commercial complexes - built before 1991. Sources: Authors.

Commercial complexes				
Image/Date of Construction	Ferdowsi Store – 1957	Kourosh Store - 1970 - 1971	Gandhi Shopping Center - 1979	Golestan Business Center - 1989

prominent of these are the Goldis-e Sadeghieh Commercial Complex and the Paytakht Computer Center, where the building's façade is designed using elements and materials used in famous one-of-a-kind buildings, such as the Pompidou Centre and the Lloyd's Building (Table 6). From 2001 to 2010, the number of commercial complexes increased significantly. Commercial complexes were often in the form of rectangular cubes and the common materials used in most of their facades were stones and composite sheets. It is important to note that in this decade, recreational, cultural, and leisure spaces such as cinemas, theaters, and indoor amusement parks were added to commercial complexes, and showcase and entertainment shopping became one of the attractions of shopping malls. This caused the commercial complexes to have a different structure and architecture, and more or less expand in size. But since these new spaces also did not need to be connected from the interior to the exterior space, the facades often covered the volumetric mass as an external covering (Table 7).

From 2011 to 2020, the number of commercial complexes grew significantly and 'Malls'[3] were formed. According to Kazemi and Amir-Ebrahimi (2019), "unlike shopping malls in the 1990s, new megamalls are multi-purpose places. In the 2010s, megamalls changed purchasing from a need-based activity to a leisure-based activity, and the chain of consumption, shopping, and leisure are being completed in these centers". As the number of commercial complexes expands, these centers will compete with each other through various measures for a greater number of consumers, ensuring their dynamism. One of these measures is the development of an up-to-date and unique design of the form and facade. In this decade, designers seem to have realized more and more the importance of sensory influences and encouraging visitors to attend these centers, in which the facade of commercial complexes can contribute to creating. Also, the close relationship between the branding of commercial complexes and the way of designing and building these centers is getting more and more recognized and realized in this decade. The use of various and special forms, the use of multi-layered shells that allow the building to use natural light, the display of the structure in the building facade, and beautiful lighting are among the features of the form and facade of commercial complexes and malls built during this period, which are also considered among the branding strategies of commercial complexes. In addition, in some

Table 6. Some commercial complexes - built between 1992 and 2001. Source: Authors.

Commercial Complexes				
Image/Date of Construction				
	Paytakht Computer Complex - 1995	Milad-e Noor Commercial Complex - 1999	Goldis Commercial Complex - 2000	Andisheh Shopping Center - 2001

Table 7. Some commercial complexes - built between 2002 and 2011. Source: Authors.

Commercial Complexes				
Image/Date of Construction				
	Tirazheh Shopping Center - 2003	Tandis Shopping Center - 2004	Samarkand Commercial Complex - 2007	Arike-e Iranian Complex - 2008
	Pardis-e Zendegi Complex - 2009	Pasargad Commercial Complex - 2011	Modern Elahiyeh - 2011	

commercial complexes, the facade of the building has been used as an intermediate link between the city and the interior of the complex. This is sometimes done by reflecting the surrounding environment in the facade of the building (such as Arg-e Tajrish Shopping Center), and sometimes by using a display of internal dynamics (such as Sam-e Pasdaran Shopping Center). Building courtyards and designing spaces for people to gather have also helped. Since in the current decade, the number of commercial complexes and their formal and visual diversity is very large, Table 8 identifies some of them and the prominent strategies adopted for branding these centers through their form and facade.

Conclusion

The form and facade of buildings are influenced by various factors such as construction technologies and techniques, details, materials, decorations, and contexts with different geographical, cultural, historical, social, economic, and political natures. The form and facade of buildings also affect the physical, sensory, and psychological conditions of the users. This shows the big impact of designing the facade of commercial complexes in branding these centers. Because in place branding, the transfer of the brand message that is consistent with the brand's identity to the audience as the recipient of the message is done through the brand's environment, facilities, and features. After that, the audience's mental image of the brand is formed based on the feeling and perception they get from the brand. The results of this study show that in the field of design and construction, the physical branding strategies can include improvement of the visual quality of buildings according to the urban context and through a favorable

Table 8. Some commercial complexes – recently built between, 2011 - 2020, and the prominent branding strategy used in their form and facade. Source: Authors.

Strategy	Commercial Complexes - Date of Construction			
Prominent form and volumetric composition	Kourosh Shopping Center-2014	Palladium Commercial Complex - 2014	Platin Shopping Center-2018	Opal Commercial Complex-2019
	Baam land - 2017	Ava Center - 2017		
Unique facade and decorations/details	Baamyek Zafaraniyeh- 2013	Lidoma Complex-2015	Shemiran Center-2018	Jam Center Niavaran-2019
Interaction of the city and the commercial complex	Arg-e Tajrish-2014	Charsou-2015	Sam Pasdaran-2018	
Lighting design	Ekbatan Megamall -2017	Setin Center - 2019	Didar Commercial Complex-2019	

relationship, increase of attractiveness and creating unique and symbolic projects, integration of the city landscape and the facade and more interaction between the city and the building, and display of culture and history, which are mostly put in to use in the design of form and exterior of commercial complexes, since the 2000s. The facade, decorations, and details of the facades of commercial buildings in a way represent the use of modern technology and as a powerful medium for conveying the messages intended by brand owners.

Among the main facade features of commercial complexes in the world, we can mention the use of facades with prominent materials and decorations, unique composition, attention to empty spaces along with attention to mass or full spaces, integration of architecture and landscape, and design of unique lighting.

Changes in the form and facade of commercial complexes in Tehran over four periods of time show that, like commercial complexes in the world, the

design of these centers has gradually shifted to works of architecture that attract public attention, and the form and facade of the complex and the decorations on the facades of the buildings play important roles in this. Also, the results of this research show that before the 2010s, the strategies adopted by designers to attract more visitors were displays of the use of new technology or materials and more of a representation of being up-to-date. While in the 2010s, the role of the design and construction in the branding of commercial complexes in Tehran is almost in line with the world (according to the comparison of Tables 4 & 8), and designers, managers, and owners of commercial complexes strive to attract maximum customers and brand their centers by making them unique and attractive in various dimensions. However, it should not be overlooked that the construction of commercial complexes with a unique and special form and facade, regardless of the urban context and their multiple effects on the city, not only causes chaos in the city and urban landscape, but also branding the commercial complex will have conflicts with the branding of the region and the city, and the advantages of branding are not achieved on a larger horizon.

In terms of the features of the façade in the samples of this study, it should be said that in the 2010s, commercial complexes with prominent facades and decorations had the highest frequency, and most of the samples had used lighting in the facade of the building. This is very much in line with what has happened in the world since the 2000s.

Endenote

1. Terms such as 'Shopping mall branding', 'Commercial complex branding', and 'Shopping center branding' were looked up through this research. /2. Retail Design is a mixture of the disciplines of architecture, industrial design, communication design, as well as social sciences, environmental psychology, sociology, and marketing (Quartier, 2015; Christiaans & Almendra, 2012)./3. 'Iran Mall or Iran's Grand Bazaar' is one of the top five malls in the world and one of the largest international commercial, cultural and social projects, which started its construction at the end of 2009 and in the 22nd district of Tehran, and in 2019, one phase of this multi-purpose super-complex was opened (Mo'refi-ye bazar-e bozorg-e Iran, n.d) It should be noted that despite the importance of this super-complex in terms of size and multiplicity of facilities, it has not been included in the sample studied in this study for the following reasons and it is hoped that in future researches, various architectural and urban aspects of this complex and its relationship with branding be studied separately; - Inconsistency of the scale and scope of the project with other Iranian and foreign samples under study. - Failure to complete the final project of Iran Mall and changes in the facade of this complex with the construction

of new buildings.

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