

FACTORS MAKING A STREET A VIBRANT PLACE:
COMPARING STREET USERS' VIBRANCY PERCEPTION BETWEEN MAIN STREET,
FORT WORTH, TEXAS, USA AND INONU BOULEVARD, SIVAS, TURKEY

by

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To my country and its beautiful people...

Abstract

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Streets are one of the most vital parts of cities not only because they serve urban transportation, but also because they are critical elements of the public realm that people use to go to meet daily needs and interact with others. However, modernist urban planning has often ignored the role of streets as a public space and as starting point for public life because of the increasing number of vehicles on roads, rapid urbanization (urban sprawl) and growing demand for the single family home and the gated community concept. In the last few decades, urban planning has recognized that urban streets have a significant function for keeping a city livable and vibrant. This thesis focuses on the question of what makes a street a vibrant public place, and aims to analyze differences and similarities in users' perception of street vibrancy between two case study streets, one in the U.S. and the other in Turkey. To examine the initial research statement, two active street locations—Main Street, Fort Worth, Texas, and Inonu Boulevard, Sivas,—were selected as case study areas. The case study work uses pedestrian counts and qualitative on-street research and finds cultural differences and similarities in street vibrancy perceptions between American and Turkish street users as well as in the

physical factors promoting street pedestrian activity and a vibrant public life. The thesis finds support for its claim that street design is a necessary but not sufficient factor affecting pedestrian activities, and that local activities and destinations for meeting daily needs play a stronger role in generating a desirable street life. However, in the American case, design factors do play a stronger role than in the Turkish case, while in the Turkish case, the diversity of local activities and destinations serving the daily needs of individuals and the community, is more meaningful.

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Chapter 1 Overview

1.1 Introduction

Over time, cities have transformed into a routinized urban system in which the prevailing elements characterizing or defining the urban landscape provide limited opportunities for social interaction, a lack of a sense of place, and less pedestrian movement around living places. This routinized transformation and its triggering factors have led to some dramatic impacts on urban land in a spatial, economic, and social manner. U.S. cities, especially, have experienced dramatic changes over the past half century, including the decline of downtown areas, increased urban sprawl and suburbanization, and an excessive freeway network in the transportation system with mushrooming edge cities around highways and freeways (Duany et al. 2001).

Indeed, even though these changes seem to have stemmed from several complicated reasons that have occurred in economic and social systems in the world, the main reason is that the places in which people reside, work, and entertain have morphed in daily life importance. The late modernist planning ignored the streets and their role in the cities and it gave larger streets to those who drove cars, while other conflicting uses were banned and eliminated (Jacobs 1961).

Since the time of Jane Jacobs and more recently New Urbanism, the urban planning world seems to have realized the main problem of current urban areas. These urban scholars claim that older urban areas were more sociable places than are current cities. The more technology has advanced, and the quality of the built environment has increased, the less urban areas have become a place where streets and neighborhoods display strong ties with the community and daily life.

Moreover, another common aspect among urban scholars is to see the street as the most important part of the urban area and to attach importance to the street as a

starting point for public life. Lynch (1984) has defined streets as the most significant social and daily life component for cities in addition to being arterials carrying people, goods, and vehicles. Appleyard (1983) also emphasizes that streets control the whole outdoor public life of the city and give identity and meaning to urban space as well as provide access. Furthermore, Jacobs (1961) has defined good or livable cities as ones having vibrant, walkable streets, where retail uses align with daily needs and buildings have mixed uses.

Nowadays, early ideas emphasizing the streets' importance for creating livable places have gained ground in the urban planning world. Many scholars in urban planning, public health and urban design have proven that the streets play a major role in promoting public health, sense of place or community, safety, and even the vitality of the retail sector and economy. Most of this scholarly work claims that increasing the quality of design and components of the built environment will automatically increase the number of users and quality of life along streets and around other public spaces. However, in comparison to physical determinism or a blueprint planning approach, the design and enhancements of the built environment are necessary but not sufficient conditions for creating a vibrant public environment. There should be other factors for promoting vibrant daily life on streets and public spaces.

1.2 Problem Statement

Low social interaction even within communities, lack of a sense of place or identity, and urban cores—Central Business Districts (CBDs)—losing economic functions in the city (and becoming inner-city, unsafe places, especially for children and elders), are some of the current issues prevalent in many U.S. cities as well as in many other parts of the world. “As business and industry located in the suburbs, CBDs decreased in

economic importance, and central cities lost population because residents preferred the suburbs for living and working” (Audirac et. al, 1990, 472). While urban planning professionals, especially those embracing the motto of “creating a better place or a livable place” may deal with the above issues, early urban scholars’ claims advocating for public life on the street and the street’s importance in the whole city system often go unheard. Seeking an answer for what makes a street a vibrant public place helps planners envision a better ambiance along the street for residents and visitors. Investigating factors that promote vibrancy on the street can offer planning professionals valuable ideas for creating better urban areas as well.

In addition to the above common issues in U.S. and other parts of the worlds, Turkish Anatolian cities have also started to experience dramatic changes in spatial, economic, and cultural characteristics in recent decades. Guney et al. (2009, 1) emphasize that “Especially during the last two decades, smaller cities have been drastically changing with an ever-increasing speed as the effects of globalization felt in the form of new local developmental opportunities in different sectors including industry, international trade, tourism and real estate.” As Guney et al. (2009) also points out, the globalization and developing Turkish economy influence the structure of Turkish cities, especially inner-city parts or downtowns. Those areas have been pushed to change their traditional commercial or retail functions or cultural identity for the entire city with a new concept in which traditional Anatolian downtowns are transforming into business, tourism, finance, and high-rise residence centers through urban redevelopment or renewal projects. Also, day by day the increasing number of shopping malls in the Anatolian cities have negatively impacted the local independent retail stores, which are losing their role in the shopping culture and city economies.

The current planning agenda should be expanded to include the other factors, besides enhancing street design, that impact the vitality of the public realm in support of livable urban areas. Sometimes, increasing the quality of the built environment alone does not work in promoting an attractive city life. This thesis intends to investigate the factors that influence today's vital urban public realms and to further understand these factors together with their catalysts by studying two vibrant street examples from different parts of the world as case study areas.

1.3. Research Claim

This thesis claims that quality and diversity of street design elements located on the street such as sidewalk pavements, building facades, street art—fountains and monuments—seating elements, and trees etc. are a necessary but not sufficient factor affecting pedestrian activities on the street. By comparison to street design elements, local activities and destinations for meeting daily needs play a stronger role in generating a desirable street life.

Two downtown street examples were chosen as case study areas. The case study areas—Main Street, Downtown Fort Worth, Texas, and Inonu Boulevard, Downtown Sivas, Turkey—have some similar features such as being located in the city core and consisting of main governmental and economic functions as well as being the center of culture and art etc. However, there are some strong differences between the case study areas such as quality of built environment and street design amenities, population size, CBD function in the city and in the surrounding region, and transportation modal split, etc.

Therefore, the research compares one downtown street example having more qualified street design components with another downtown street seemingly less

attractive and having more street design flaws. This thesis aims to provide insights regarding how culture and leisure, urban form, and the regional context influence people's use of streets and their perception of street vibrancy through examining similarities and differences between case study streets.

1.4. Justification of The Study

The comparative study's justification stems from the author's interest as a Turkish citizen who has worked as a planner in Turkey and gained a comparative understanding of his native Sivas and a North Texas city, Fort Worth. Sivas and Fort Worth have in common a vibrant downtown, yet, the aim in this study is to gain a deep understanding of the factors that make their downtown corridors lively public places. This comparative knowledge is critical to the author as someone who will be pursuing a planning academic career in Turkey.

1.5. Research Questions

The following questions in this section determine the main scope of this study. The main research question addressed throughout the thesis is **what makes a street a vibrant public place?**

To seek an answer to this main question, I hope to find out the factors affecting the users' perception toward vibrancy. It is believed that defining factors changing users' perceptions toward vibrancy directly answer the question **what makes a street to be a vibrant public place for residents and visitors?**

In addition to the above main research question, the following questions are also main objectives of this thesis.

1. What makes a street a vibrant public place?
2. What are the factors affecting users' perceptions of street vibrancy?

3. What are the similarities and differences in users' perception of street vibrancy between two case study areas?

1.6. Case Study and Comparative Research

This thesis has embraced the case study approach while conducting research on street users' perceptions. According to Yin (2009, 18), the case study research method is "an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used." Furthermore, Zaidah (2007, 1) states that "case study research allows the exploration and understanding of complex issues. It can be considered a robust research method particularly when a holistic, in-depth investigation is required." The case study approach is believed to be the most relevant approach in this research because both the complexity of the above-mentioned research questions and their deep relationships with social life and community make it hard to find answers. Collier (1993, 105) states that "comparison is a fundamental tool of analysis. It sharpens our power of description, and plays a central role in concept-formation by bringing into focus suggestive similarities and contrast among cases." Comparative research work was chosen as a main research approach for this thesis because, as Collier (1993) points out, comparing two vibrant street examples from different parts of the world helps to demonstrate the similarities and differences in users' perceptions toward street vibrancy. Moreover, analyzing the findings from the case study areas provides insight into differences and similarities in factors affecting street vibrancy between typical Anatolian and U.S. downtown street examples.

1.7. Methodology

To analyze case study areas and to find out the key characteristics in terms of location, demographics, and built environment in a broad manner the case study streets were circumscribed to their surrounding half-mile radius area.

This thesis gathers qualitative data to understand the case study areas and find answers to the research questions. Participatory observation and site reconnaissance were used in this research as qualitative data collection methods on the case study areas. The thesis uses the semi-structured interview as a main data gathering technique on the site as well. Semi-structured interviews were used to obtain the user profile and to gather the perceptions of users toward downtown of the two case studies.

Chapter 2 Literature Review

In this section, the literature was reviewed and discussed to demonstrate the dominant and prevalent factors mentioned by former researchers to promote street vibrancy and livability. Besides understanding the notion of a better street, especially for inner-city streets or downtown streets, some definitions or claims on this idea by urban planners, urban designers, and architects are reviewed. The following section defines features of better streets according to the literature.

2.1 Definition of Livable and Vibrant Streets

There are several street definitions regarding vibrancy and livability in the literature addressed by diversified disciplines ranging from urban planning to urban sociology, which consider aspects of streets in a broad spectrum. However, unarguably, Jane Jacobs' observations of New York's Greenwich neighborhood and its streets had the greatest effect on the emergence of the concept that better cities start with better streets or, said another way, keep inner-city streets vibrant and livable to keep the inner-city livable. "Think of a city and what comes to mind? Its streets. If a city's streets look interesting, the city looks interesting; if they look dull, the city looks dull" (Jacobs 1961, 29).

Moreover, Jacobs (1961) emphasizes the role of daily life occurring on the street in creating a livable environment along the street for all users and defines the vibrant street as one having a continual "sidewalk ballet" consisting of pedestrians and "cross-use" activities at all times of the day. The streets are the starting point of the public realm and represent the vital points of the city's social life, according to Jacobs. "Streets and their sidewalks—the main public places of a city—are its most vital organs" (Jacobs, 1961, 29). In addition to Jacobs (1961), Lynch (1984) also argues that streets are the

most important component of the social life of cities as well as being channels carrying people, vehicles, and goods from one place to another.

Appleyard (1981, 1) has sought an answer to the question of what is a livable street and sees a livable street as “a place where neighbors meet, children first learn about the world, it is the social centers of towns and cities, the rallying points for revolts, the scenes of repression.” Francis (1987, 23) defines good streets as “democratic streets—streets that have meaning for people, invite access for all, encourage use and participation, are loved, and are well cared for by their users.”

Furthermore, Jacobs (1993) points out the aspects a street that bringing people together to activities on the street and defines great streets as the contributor to what a city should be. “A great street should be a most desirable place to be, to spend time, to live, to play, to work, at the same time that it markedly contributes to what a city should be. Streets are settings for activities that bring people together” (Jacobs 1993, 8).

Dumbaugh and Gattis (2005, 283) also mention the role of streets in the social life of the cities and assert a definition for urban streets. “Urban streets are places where people walk, shop, meet, and generally engage in the diverse array of social and recreational activities that, for many, are what makes urban living enjoyable”. Similarly, Sauter, and Huettenmoser (2008) emphasize that the livable street is a significant component of a community’s outdoor living and it provides social inclusion within the community by bringing people together.

2.2 Compactness and Built Environment for Promoting Street Vibrancy

2.2.1 *Mixed-Uses and Building Size*

Street patterns and the size of buildings placed on the street are a way of promoting social interaction and public life on the streets. Jacobs (1961, 186) criticizes

the super-block projects and indicates the importance of small block size in promoting the public life on the street and in increasing the daily interactions among the community.

“Frequent streets and short blocks are valuable because of the fabric of intricate cross-use that they permit among the users of a city neighborhood”.

Moreover, buildings with mixed uses on the street have a great impact on vibrant public life by bringing diversified uses to the street. Greenberg (1987) emphasizes the value of mixed-used zoning and of preserving old buildings along downtown streets for keeping downtown livable and vital in the city of Toronto. Similarly, Jacobs (1961) also emphasizes that the mixed-use and old buildings along the street bring diversity and vital public life to the street. Francis (1987, 28) also mentions the significance of diversified users and uses existing on the street in creating a healthy and livable street. “Healthy streets are used by different people for a variety of activities.... A lively and successful street demands a balanced mix of different user groups and activities.”

The buildings on the street should allow people to make contact with the street and the daily life taking place in the surrounding environment. One of the general problems of downtown areas around the United States is the prevalence of high-rise buildings, because these buildings constrain the direct contact of workers and residents with the street and surrounding public life. “Another problem that reduces city life around these high-rise buildings is that people on the top floors—of apartments as well as work places—venture into the city less often than those who live and work in the lower four to five floors. These lower floors give occupants visual contact with city space...” (Gehl 2009, 68). Likewise, Bosselmann (1987) states that high-rise buildings in Downton San Francisco reduce the visual quality of the street and the street interaction with those who reside and work in high-rise buildings. Moreover, Newman (1972) mentions that high-rise

buildings generally cause security issues, especially on the street by decreasing territoriality defense among the community.

2.2.2 Density

Density of buildings, population, and activities on the street are frequently mentioned in the literature as a way of making the street vibrant and attractive for residents and visitors. Jane Jacobs mentions the importance of a dense concentration of people as one of the four conditions in generating vibrant and diversified urban life for streets and districts in her well-known book *The Death and Life of Great American Cities*.

To generate exuberant diversity in a city's streets and districts, four conditions are indispensable:

1. The district, and indeed as many of its internal parts as possible, must serve more than one primary function; preferably more than two....

2. Most blocks must be short; that is, streets and opportunities to turn corners must be frequent.

3. The district must mingle buildings that vary in age and condition, including a good portion of old ones so that they vary in the economic yield they must produce....

4. There must be a sufficiently dense concentration of people, for whatever purposes they may be there. This includes dense concentration in the case of people who are there because of residence. (Jacobs 1961, 151)

Moreover, A. Jacobs (1993) shows density as one of the strong contributors to making great streets. "Void of human activity, streets soon cry out for people, they need people at the same time as they are for them, they are activated by people at the same time as they contribute to making a community for them. And that is achieved in

considerable measure by having many people live along them or nearby—a matter of density” (A. Jacobs 1993, 303).

Gehl (2009) states that density and compact urban form have a significant impact on creating vibrant city life and furnished urban space. According to Gehl, density should be combined with good and well-designed urban space in which there is a high building density without buildings being too tall, streets being too dark, and without physiological barriers that discourage pedestrians moving from one place to another. “Many older urban quarters demonstrate a combination of compact density and good city space, as exemplified by the city centers of Paris and Copenhagen. The world-famous Cerda city structure in Barcelona also has fine city space, vibrant street life and actually a higher development density than Manhattan in New York City” (Gehl 2009, 69).

Appleyard (1983) stresses that higher-density cities have an effect on increasing the numbers of person-trips, which are mostly walking trips so those places are less affected by automobile traffic and experience more public life on the street. Similarly, Saelens et al. (2003) have found a correlation between land-use mix and high density with higher rates of walking and cycling for utilitarian purposes than low-density and single land use areas. This demonstrates that density of buildings and activities along the street encourages people to walk or cycle on the street. Moreover, dense urban areas allow people to have more social interaction and promote social life (Glaeser and Gottlieb, 2006; Hawley, 2012).

2.2.3 Ground Floor Uses

Francis (1987) claims that there is a good social connection between ground floor buildings and the adjacent street scape in the livable street. Furthermore, Fischer (1981) also argues that public streets need to have healthy relations between private life

inside the buildings and the public world outside in order to create a safe and vibrant public realm.

Whyte (1980) mentions another aspect of ground floor uses on the public street, where retail stores with windows and displays attract people's attention and increase the vitality along the public street. The restaurants and outdoor cafes enhance the street life (Francis 1987) and encourage people to visit the street at different times of the day and spend leisure time (Projects for Public Spaces, n.d.). However, Audirac (1999) conducted research on living place preference of pedestrian proximity in four Florida regions and found that people don't tend to live in proximity of entertainment amenities such as pubs, cafes, and restaurants etc. even those who currently live in a downtown area. Also, Audirac (1999) shows that pedestrian proximity to park/open space and community centers is much preferable as living places rather than proximity to shopping and entertainment facilities.

In addition, commercial activities and small local shopping stores along the streets have a positive correlation in creating the sense of place and feeling of attachment to place among users (Shamsuddin and Ujang 2008; Mehta 2007).

2.2.4 Street Furniture

Placed urban furniture objects and qualified street infrastructure, such as lighting, paving, and sidewalks, directly affect people's uses of streets as an active public space. Whyte (1980) emphasizes that seating and objects around the public spaces, such as fountains, monuments, and plazas, strengthens the vitality of the place as well as increases the number of people using them. "People tend to sit most where there are places to sit" (Whyte 1980, 28). "Unobstructed and ample pedestrian space, high quality and durable materials, safe and accessible sidewalks and well designed and thoughtfully placed street furniture all contribute to successful streets" (Vibrant Streets, 2006).

Harrison (1987) states that fixed street furniture on the downtown street acts as a magnet and collects people around them by creating a safe and relaxing environment in the rush of downtown life. Barnett (2003) states that well designed and properly suited street furniture helps keep downtown areas pedestrian friendly and attracts people to downtown areas to spend time. The more comfortable the streetscape is the more hospitable the pedestrian environment is and the more vibrant the streets are in the eyes of pedestrians (Chanam and Moudon 2008). Moreover, Rehan (2013) also points out the contribution of urban furniture to creating a vibrant street and a beautiful visual image in his research on main arterials in Egypt.

2.2.5 Street Trees

The trees on the street are a great contributor to vibrancy and individuals' perception of the street's livability, as well as improving the aesthetic scenes of the place. Whyte (1980) addresses the public spaces and plazas in New York City and mentions that the trees in public spaces and along the sidewalk encourage people to sit nearby them and create an enjoyable and hospitable environment for passersby. Jacobs (1993) examines a number of street examples from different parts of the world and states that street landscape is one of the crucial components of making a street livable and walkable. Street landscaping not only enhances the visual quality of streets, but, at the same time, protects people from sunny, rainy, and windy weather and keeps people walking on the street.

Moreover, Dumbaugh and Gattis (2005) found that street landscaping enhances the safety on the street, contrary to what is believed, and promotes the livability of the streets. Bosselmann et al. (1999) examine three boulevard examples in California and show the significance of street landscaping in enhancing livability on the street by reducing the negative impact of traffic and noise. Similarly, Mahmoudi and Ahmad (2015)

conducted research regarding determinants of livable streets on Tun Preak and Bukit Bintag Streets in Kuala Lumpur, Malaysia, and determined a strong correlation between landscaping and livability on Tun Preak Street. Moreover, Sarkar et al. (2015) found that street trees have a significant effect on encouraging walkability on the street.

2.3 Traffic Management and Pedestrianization Implementations and Security as a Tool for Making a Street Livable

2.3.1 *Traffic Management and Pedestrianization Implementations*

The current literature stresses pedestrianization and traffic calming implementations as a significant way to create livable and vibrant places. Donald Appleyard did a great deal of research on pedestrianization and traffic calming implementation in relation to a livable street. Appleyard states that “the street environment should not be subject to noticeable noise or vibration from traffic. The street dwellers should be able to sleep soundly without disturbance from night-time noise or passing headlights” (Appleyard 1983, 119).

Botta (1987) mentions that traffic calming implementations in Stockholm, Sweden, have the effect of making inner-city areas more desirable, pleasant, livable places and plays an important role in revitalizing the downtown area. Monheim (1992) has conducted research on some West-German historical downtown areas and has found that pedestrianization schemes have a positive effect on increasing walkability and bringing people to the commercial inner-city streets for shopping. Moreover, Hass-Klau (1993) has reviewed some traffic calming and pedestrianization schemes from the United Kingdom and German cities and has concluded that pedestrianization and traffic calming have positive effects on the local economy and retail turn-over in addition to helping to create a safe and pleasant pedestrian environment.

Furthermore, Engwicht (1993) and Gehl (2011) state that pedestrianized streets help increase face-to-face interaction in the community and promote the vibrancy of social life on the street. Bosselmann et al. (1999) conducted a survey on three street examples in California and found that the light-traffic streets invite social activities much more than other streets.

2.3.2 Security

Security and crime issues on the street, such as robbery, snatching, and sexual harassment, directly affect the livability and vibrancy of the place in the eyes of users. “This is something everyone already knows: A well-used city street is apt to be a safe street. A deserted city street is apt to be unsafe” (Jacobs 1961, 33). “Ask most people why they do not venture out after dark and ‘crime in the streets’ is sure to figure as a common response (Painter 1996, 193). Jacobs (1961) points out that safety and feeling safe are one of the strongest contributors for keeping a street alive, livable, and furnished. Moreover, Jacobs (1961) argues that the “eyes on the street” concept makes streets more secure in the public realm. In this concept, Jacobs (1961) attaches great importance to local stores (the eyes of their owners and customers) and building orientations on the street so that residents see the street and provide natural surveillance to notice strangers and help insure the safety of all groups.

Similarly, Newman (1972) also mentions concentrated pedestrian and vehicular flows on the street as an indicator of safety. Furthermore, Newman (1972) emphasizes the importance of buildings’ doorways, lobbies, windows, and entrances orientated to the street for providing continual surveillance on the streets. Newman (1972) utilizes the “defensible space” in explaining how to design a space in terms of preventing crime and dealing with security issues.

Hunter and Terry (1982) have conducted research on Newman's and Jacobs' ideas about street safety, and they have pointed out the importance of safety in promoting street usages by residents and visitors. One of the considerable findings of their research is that people who are actively integrated with the community have less fear of crime as a result of strangers on the street than those who are less integrated with the community. Hale (1996) states that the fear of crime affects the quality of the street life.

White (2006) emphasizes the importance of a sense of safety in a neighborhood and its streets for those who live on them, use them daily, or just pass through them on their way to somewhere else. White continues by stating that if social disorder or safety issues emerge in the community, a decline in the social and economic life directly results in the neighborhood. The fear of crime directly reduces the uses of public space by not only vulnerable groups, such as children and elderly people, but by all groups. A mixed and diverse public space in terms of users, activities, and time is automatically a vibrant and busy place because of reduced insecurity (Urban October, 2015). Similarly, Rahman et al. (2016) have conducted a case study research on user-friendly streets and found a strong correlation between street safety and accessibility in making a street a user-friendly and vital public space.

2.4 Street as a Festival, Celebration, and Parade Place

Besides being channels carrying vehicles and pedestrians and being links for individuals with the community and social life of the surrounding environment, streets also serve as a place where events such as parades, festivals, and celebrations occur, bringing the community together and attracting many visitors from different places to visit

the site. Those events strengthen the community's feeling of belonging to the city or neighborhoods and promote pride in the surrounding environment.

Moreover, as Harrison (1987) points out, festivals on the street provide the constituency for pedestrian use and have a strong effect on creating a pedestrian environment on the streets. In his example of Portland, Oregon, he mentions the effect of festivals, concerts, and celebration events taking place at different times with keeping downtown Portland streets a public and vibrant pedestrian environment throughout the year. The American Planning Association "Great Places in America Program," (2007) emphasizes the importance of bringing local culture and history into the street by way of parades, festivals, and market organizations to create street identity and vitality.

2.5 Street Food

Street food is often mentioned in the literature as another strong component for providing street vibrancy, especially for inner-city streets. "If you want to seed a place with activity, put out food.... you will almost invariably find a food vendor at the corner and a knot of people around him—eating, schmoozing, or just standing" (Whyte 1980, 50). Whyte (1980) emphasizes the power of food vendors, whether they are on the street or plaza, in attracting people around them like a magnet and making the space more vibrant by bringing people together.

Richard (2002) states the significance of street food as a tourist attraction to the cities as well as a contributor to the local economy. In addition to Richard (2002), Haven-Tang and Jones (2005) put forward the role of street food in creating a sense of place as well as being a tourist attraction. Likewise, Newmann and Burnett (2013) conducted research on street food in Portland, Oregon, and found that the presence of street food promotes the perception of neighborhood walkability as well as fostering sidewalk culture and vibrant street scape. Moreover, the presence of street food on the downtown street

also helps to create social inclusion among the community by bringing “creative class” downtown workers together with less-educated people and families with children together in the lines of food vendors.

2.6 Culture of Leisure Time

Addressing culture of leisure time activities provides significant insight into understanding how streets are used by people as a place for doing leisure time activities and spending leisure times. Embracing streets as a leisure time activity spot by the surrounding community directly enhances street vibrancy. Burda et al. (2013, 3) defines leisure as “all activities that we cannot pay somebody else to do for us and that we do not really have to do at all if we do not wish to. We include in this category television-watching, attending religious services, reading a newspaper, chatting with friends, etc.” Cultural norms and society are a significant factor for forming leisure time activities in communities. “Your culture significantly influences not only how much leisure you have, but the activities you choose for your leisure time.” (White Hutchinson - Leisure & Learning Group, 2009).

Moreover, Van Dyck et al. (2013) conducted research on adults’ leisure time activities and concluded that residential density and land use mix diversity have an effect on increasing recreational walking and contributing to more people on the street. Similarly, Huston et al. (2003) emphasizes that neighborhood characteristics in terms of sidewalks, trails, street lights, and accessibility play a role in leisure activity pattern and increasing leisure physical leisure activity.

According to The Organisation for Economic Co-operation and Development (OECD) Social Indicator 2009, Americans have the lowest leisure time among OECD countries with 6864 hours annually. Schor 1998 states, as mentioned by Robert Kuttner, the longer work week in the job market, absence of strong unions in the

labor force, and slowdown in economic growth and stagnation in living standards as reasons for diminishing leisure time in American society. Furthermore, the U.S. Bureau of Labor of Statistics, American Time Use Survey 2015 Data provides significant insights into understanding the culture of leisure time activity among Americans. According to the data, on an average day, Americans spend 4 hours, 59 minutes for leisure time activities over seven categories—watching TV (2 hours, 47 minutes), sports, exercise, recreation (18 minutes), Reading (19 minutes), socializing and communicating (41 minutes), using computers for playing games (25 minutes), relaxing and thinking (16 minutes), and others (12 minutes).

The literature examined the Turkish perspective on leisure time too. Islamic culture and secularism embraced by Turkish society have an effect on forming the culture of leisure time activity in Turkey (Gurbuz and Henderson, 2013). Besides that, Erkip (2009) and Aydin (2009) state that Turkish leisure perspective in urban areas differs from suburban and rural areas where traditions and local customs have a great effect on daily life. Aslan and Aslan (2012) conducted research on leisure time activities among Turkish parents and point out that visiting relatives, watching TV, and walking are the common leisure time activities for parents. Likewise, Aslan (2009) also emphasizes that home-based and social activities such as visiting friends and relatives comes into prominence as prevalent leisure activities in Turkish culture. Statistics for 2006 for Turkey reported by OECD 2009 Social, Environmental, and Economic Statistic Factbook match with the findings of Aslan and Aslan (2012) and Aslan (2009) and categorized leisure time activities into five groups over an average day—watching TV and radio (2 hours, 2 minutes), visiting or entertaining friends (1 hour, 11 minutes), participating/attending events (3 minutes), sports (7 minutes), and other leisure activities (1 hour, 1 minute).

2.7 Central Business Districts (CBDs) and Anatolian Downtowns

In this section, reviewing the definitions of central city cores or Central Business Districts (CBDs) and functions of downtown areas in U.S. and Turkey urban planning contexts provides a better understanding of the surrounding areas of the case study streets and makes a clearer comparison between them.

2.7.1 Central Business Districts (CBDs)

According to Lee and Wills (1997) and Murphy (2008) and as mentioned by Chang (2009), approximately one century ago, Central Business Districts (CBD)s were a place in which multiple uses, such as residential, commercial, industrial, institutional, and financial, were clustered and became a node for main activities for the entire city. However, over time, some of those activities, for example residential, industrial, and retail, were separated from CBD areas in the U.S. cities because of overcrowding in the central cores and necessity for specialization in manufacturing etc. Kaplan et al. (2009) points out that today CBD areas in the U.S. are places characterized by a concentration of corporate headquarters of national and international companies, banks and other financial institutions, expensive hotel and convention facilities, and advanced producer services such as accounting, advertising, computer and data processing, consulting, and marketing etc. Moreover, Campo and Brent (2008, 291) draw attentions to another significant function of CBDs in U.S. cities and states that “even as downtowns remain regional centers for commerce and culture, they are fast becoming the principal locus for another form of urban activity: nightlife.... The new urban nightlife is more basic: middlebrow partying for young city dwellers and suburbanites who want to drink, dance, watch sports and have fun.”

Furthermore, Kaplan et al. (2009, 151-152) define retail activities currently prevalent all across the CBDs in U.S into basic three types as:

(1) Mass-appeal consumer goods serve a captive market made up primarily of nearby inner-city residents, some of whom are welfare-dependent. Merchants cater to these residents who typically have moderate incomes.

(2) specialty goods and services—these retailers seek to appeal to people who work in CBD and to tourists, conventioners, and those people who are engaged in transitory downtown business activities.

(3) Convenience stores, many of which are open 24/7, are not confined to the CBD frame or inner-city locations. Rather, they are ubiquitous throughout metropolitan areas and at strategic highway sites and interstate changes, as well as in small towns and other rural locations.”

If addressing the downtown city of Fort Worth—one of the case study areas of this thesis—it is clear that downtown Fort Worth reflects all of the above-mentioned characteristics of CBDs across the U.S. According to the Fort Worth Chamber of Economic Development Department’s *State of Downtown 2016* report, Downtown Fort Worth has over 46,000 employees which accounts for the biggest employment center in Tarrant county and significant employment engines for the DFW area and surrounding north Texas region. Moreover, the same report indicates that major sectors doing business in the CBD-Fort Worth are Finance and Insurance (248 companies), Professional, Scientific, and Technological Services (371), Management of Companies (117), and Accommodation and Food Services (71). This matches with the dominant sectors characterizing the employment types of CBDs in the U.S. As other cities in the U.S., the CBD area has very low residential purposes in the city of Fort Worth with 7,166 residents and 2827 current resident units. The report also reveals the biggest sectors in

Downtown Fort Worth retail as accommodation and food services (\$183 million sales), full service restaurants (\$107 million), and clothing stores (\$12.5) in 2015. Although there are retail and residential land uses on the site, downtown area mostly serves office-based usages and has nearly 14 million square feet of multi-tenant office space. Furthermore, the *State of Downtown 2016* report emphasizes the city of Fort Worth CBD's cultural and touristic importance in DFW Metroplex with approximately 7.5 million visitors and \$900 million annual revenue.

2.7.2 Anatolian Cities Downtowns

The Turkish literature also addresses the CBD areas and their functions in the Turkish metropolitan cities. With pretty much similar features as CBDs in the U.S., CBDs are called as “Merkezi Is Alanlari” (MIA) in Turkish literature. Kiray (1984) and Ocakci (1989) emphasizes that an MIA is a center for cultural and socio-economic activities of metropolitan areas by consisting of banking, finance, telecommunication, retail, services, office, and accommodation activities. Generally, MIAs are highly accessible and have the highest value of property in the metropolitan cities.

At this point, touching on definition of the metropolitan areas in the Turkish urbanization system helps to understand the function of downtown in the case study city and its surrounding region. According to 6360 Metropolitan Municipality Law passed by the Grand Turkish National Assembly in 2012, the cities with populations larger than 750,000 within its jurisdictional province border are defined as metropolitan municipalities. In this study, the Turkish city of Sivas has a 365,135-city center population and a 619,844-province population, so it cannot be defined as a metropolitan area according to the 6360 Metropolitan Municipality Law. Therefore, defining the case study area (City of Sivas) as a commercial core or a traditional Anatolian downtown is more accurate for finding out the functions of the city core for its surrounding region.

Downtowns of Traditional Anatolian Cities are called “Carsi” in Turkish culture. The downtowns or “Carsi” are the heart of a city because they include the main cultural, commercial, retail, and governmental activities serving the whole city and province. Oktay (2004, 27) draws attention to the role of downtown of Anatolian cities in the history and states that “the space of the traditional city was, at a functional level, clearly divided into public and private realms. The public realm, often in the town center, contained all the collective activities of the town, such as trade and commerce, religion, education, administration, and urban facilities.” It can be claimed that the role of downtowns of Anatolian cities have remained the same to a large extent. Furthermore, Ucecam and Karagel (2013, 166) point out that “bazaars are important spatial elements in Turkish culture for the cities and they are public areas used by all sections of the society. Many societal, administrative and economic activities in the city take place in this composite space.” It can be said that downtown Sivas reflects all aspects of the traditional Anatolian downtowns or “Carsi” mentioned above and is a significant center for the Province of Sivas and adjacent regions.

However, Guney et al. (2009) draws attention to another perspective and states that small Anatolian cities have experienced drastic changes over the last two decades with the effects of globalization. These Anatolian cities are dreaming of becoming world cities, which have a quality of life similar to other metropolitan cities in developed countries with mass consumption and huge shopping malls as the dominant elements in retail services, by seeking local development opportunities in tourism, international trade, and real estate. The dream of becoming a world city has changed their face with major urban renewal and development projects, which have impacted their cultural and city identities.

In addressing the Sivas downtown's functions for Sivas Province, regional, commercial, and retail activities take place here along with governmental and cultural activities. The existence of residential units on the upper floors of commercial and retail store buildings demonstrates the downtown Sivas' residential function for the entire city (an estimated 18,000 people live in downtown according to Turkish Institution Data 2016). Furthermore, downtown Sivas includes a number of government institutions and their regional headquarters serving the Province of Sivas and adjacent cities make the downtown a significant governmental seat for the region.

According to Fund Global Retail & Technology website, the size of the retail sector in Turkish economy is \$303 billion in 2013 and grocery is dominant among retail activities. Deloitte predicts grocery retail sectors reaching \$150 billion in 2018. Consumer Electronics and Apparel and Foot Wear are other dominant retail sectors in Turkey. It can be said that these findings can characterize the retail activities in downtown Sivas. Also, this same website indicates that Turkish retail sectors are controlled by strong domestic chain stores and local independent retailers, which directly describes the structure of the retail stores and activities taking place in Downtown Sivas because preference of proximity to shopping is popular among Turkish consumers as a result of high gasoline prices. Moreover, Turkish Statistic Institution data between 2013-2015 for Sivas, Yozgat and Kayseri provinces shows Food and Non-Alcoholic Beverage (22.6%), Apparel and Foot Wear (5%), and Accommodation and Hotel (4.5%) as the three largest retail sectors, which pretty much matches the retail sector analysis conducted by Fund Global Retail & Technology.

2.8 Chapter Summary

In this chapter, the literature was reviewed and addressed concerning street livability and vibrancy. The chapter was divided into six different subthemes: “Definition of Livable and Vibrant Streets,” “Built Environment Related Factors for Promoting Street Vibrancy,” “Traffic Management and Pedestrianization Implementations as a Tool for Making a Street Livable,” “Street as a Festival, Celebration and Parade Place,” “Street Food,” “Culture of Leisure Time” and lastly “Central Business Districts (CBDs) and Anatolian Downtowns”. Within each of these themes some scholars’ claims regarding livability and vibrancy subjects on the street were discussed in detail.

The literature indicates that the physical design, street layout, neighborhood compactness, mixed use, street furniture, and landscape affect street life and the physical built environment is a necessary condition to strongly affect behavior or perceptions regarding vibrancy. However, the literature ignores how the culture and life-styles of the people affect street vibrancy perspectives and how people use streets and treat them as public places. Besides, some research such as Appleyard (1983), Bosselmann et al. (1999), and Audirac (1999) shows that factors promoting vibrancy also negatively impact residential livability on or near vibrant streets. Also, the literature does not attach importance to local activities and destinations that meet daily needs of residents and generate a desirable street life.

In addition to the culture and lifestyle of the people, the location of streets in the city districts, and these districts’ functions in relation to the regional context by concentrating services such as banking, finance, governance, and tourism, as well as activities on or nearby streets such as retailing, commercial, etc. They serve the entire city region. These local and regional interrelationships also have an effect on the vibrancy of local streets and their power to attract people to the site. The literature reviewed does

not address the functions and effect of surrounding regional contexts on local streets and street vibrancy.

As a result of the literature review, this thesis claims that physical-built-environment-related factors are a necessary condition but not sufficient to strongly affect behavior or perceptions on vibrancy. By comparison to the physical built environment, pedestrian destinations and local activities meeting the daily need of residents on the street are a stronger factor for generating a vibrant street life. The following chapter includes the methodology framework of the thesis and introduces main components of the research framework. The chapter addresses and discusses the research methods, such as comparative research and the case study approach, and data collection techniques utilized throughout this research such as participatory observation, site reconnaissance, and semi-structured interviews in detail.

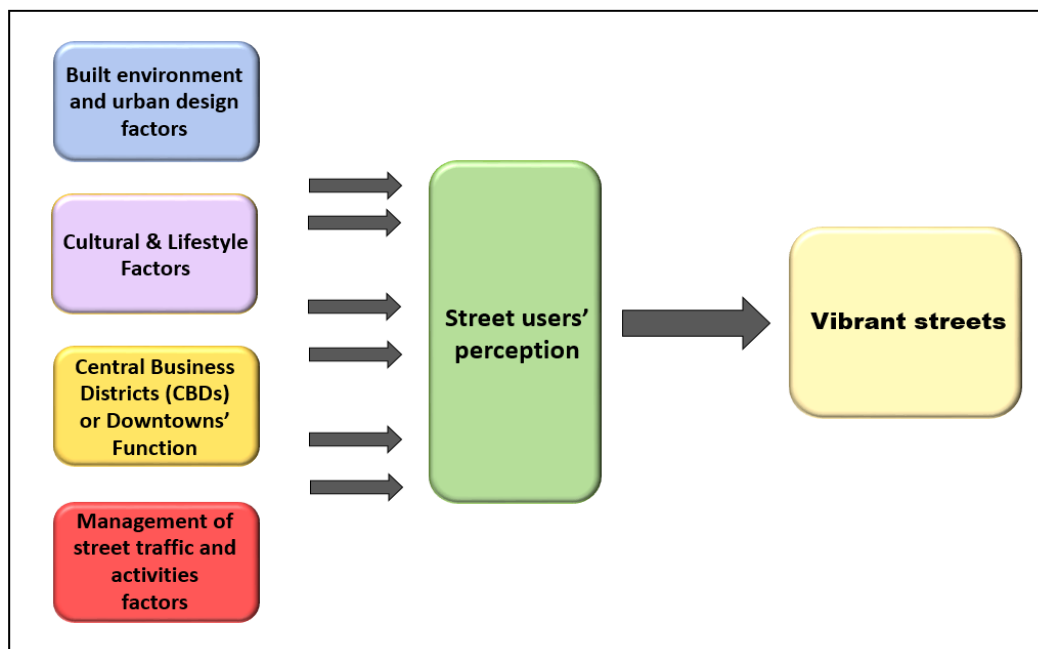


Figure 2-6. This illustrates the reviewed literature and its connection with the subject of street vibrancy.

Table 2.1. Street Livability and Vibrancy Variables Literature Review Matrix

	Street is a Public Realm	Compactness and Built Environment for Promoting Street Vibrancy					Traffic Management & Pedestrianization Implementations and Security		Street as a Festival, Celebration and Parade Place	Street Food	Culture of Leisure Time	Central Business Districts (CBDs) & Anatolian Cities Downtown
		Mixed-Uses and Building Height	Density	Ground Floor Uses	Street Furniture	Street Trees	Traffic Management & Pedestrianization Implementations	Security				
Jacobs (1961)	X	X	X	X				X				
Lynch (1984)	X											
Appleyard (1981)	X		X									
Engwicht (1993)							X					
Sarkar et al. (2015)						X						
Audirac (1999)				X								
Gehl, (2009)	X	X	X									
Burda et al. (2013)											X	
Bosselmann (1987)		X										
Fischer (1981)				X								
Hass-Klau (1993)							X					
Mehta (2007)	X			X								
Oktay (2004)												X
Saelens et al. (2003)			X									
Shamsuddin and Ujang (2008)				X	X							
Erkip (2009) and Aydin (2009)											X	
Jacobs (1993)	X		X	X		X						
Botta (1987)							X					
Monheim (1992)							X					
Appleyard (1983)	X		X				X					
Campo and Brent (2008)												X

Table 2.1. Street Livability and Vibrancy Variables Literature Review Matrix

	Street is a Public Realm	Compactness and Built Environment for Promoting Street Vibrancy					Traffic Management & Pedestrianization Implementations and Security		Street as a Festival, Celebration and Parade Place	Street Food	Culture of Leisure Time	Central Business Districts (CBDs) & Anatolian Cities Downton
		Mixed-Uses and Building Height	Density	Ground Floor Uses	Street Furniture	Street Planting	Traffic Management & Pedestrianization Implementations	Security				
Harrison (1987)					X				X			
Hunter and Terry (1982)								X				
Barnett (2003)					X							
Newman (1972)								X				
Chanam and Moudon (2008)		X				X						
Haven-Tang and Jones (2005)										X		
Rehan (2013)					X							
Hawley, 2012			X									
Rahman et al. (2016)								X				
Fund Global Retail & technology												X
Huston et al. (2003)											X	
Guney et al. (2009)												X
Newmann and Burnett (2013)										X		
Sauter and Huettnermoser (2008)	X											
White (2006)								X				
Ucecam and Karagel (2013)												X
Painter (1996)								X				
Gehl (2011)	X	X					X					
Schor (1998)											X	
Van Dyck et al. (2013)											X	

Table 2.1. Street Livability and Vibrancy Variables Literature Review Matrix

	Street is a Public Realm	Compactness and Built Environment for Promoting Street Vibrancy					Traffic Management & Pedestrianization Implementations and Security		Street as a Festival, Celebration and Parade Place	Street Food	Culture of Leisure Time	Central Business Districts (CBDs) & Anatolian Cities Downton
		Mixed-Uses and Building Height	Density	Ground Floor Uses	Street Furniture	Street Trees	Traffic Management & Pedestrianization Implementations	Security				
Whyte (1980)	X			X	X	X				X		
Glaeser and Gottlieb, 2006			X									
Dumbaugh and Gattis (2005)	X					X						
Greenberg (1987)		X										
Kaplan et al. (2009)												X
Gurbuz & Henderson, 2013											X	
Public Spaces for All Designed to Live Together, (2015)								X				
Bosselmann et al. (1999)						X	X					
Lee and Wills (1997)												X
Aslan (2009)											X	
Mahmoudi and Ahmad (2015)						X		X				
Richard (2002)										X		
Hale (1996)								X				
Kiray (1984)												X
Chang (2009)												X
Aslan and Aslan (2012)											X	
Francis (1987)	X	X		X								
Ocakci (1989)												X
The American Planning Association "Great Places in America Program" (2007)									X			

Chapter 3 Methodology of the Research

3.1 Introduction

This thesis investigates, through empirical evidence, street users' perception of the factors influencing vibrancy on the street. To accomplish the research objective and to find an answer to the initially asked research questions, an exploratory two-case study research was embraced as a main research method in this thesis. Moreover, to find out the similarities and differences in street users' "street vibrancy" concept between case study areas, comparative research was also utilized, and findings obtained from case study sites were evaluated in a comparative manner. This study only used qualitative data to complete the research objectives: participatory-observation, site reconnaissance, and semi-structured interviews. In addition to qualitative data collection methods, this study conducted pedestrian counting to reveal the pedestrian generation capacity of the case study sites. In the following sections, case study research and its rationale for this study, as well as the comparative research method and data collection techniques, are addressed in detail.

3.2 Case Study Research Approach

Case study research is a common research method in a variety of disciplines such as psychology, sociology, political sciences and business (Yin, 2009). The case study approach was chosen for this study because the main aim behind this thesis is to search for the "street vibrancy" concept. The concept of street vibrancy itself is a very hard subject to define and it varies from person to person or culture to culture. Yin (2009, 18) states that case study is "an empirical enquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries

between phenomenon and context are not clearly evident." Similarly, Bromley (1990, 302) defines case study as a "systematic inquiry into an event or a set of related events which aims to describe and explain the phenomenon of interest" (quoted in Zucker, 2009). Investigation of street life or daily life in the community context is required to understand street vibrancy phenomena in relation to the surrounding community or culture, and to understand the cultural dynamics affecting street usages and related street vibrancy. Fidel (1984, 273) also points out that "As a research method, case studies seems to be appropriate for investigating phenomena when (1) a large variety of factors and relationships are included, (2) no basic laws exist to determine which factors and relationships are important, and (3) the factors and relationships can be directly observed."

To gain a better understanding and to investigate in depth the concept of "street vibrancy," the thesis proposes the following research questions:

- What makes a street a vibrant public place?
- What are the factors affecting users' perceptions of street vibrancy?
- What are the similarities and differences in users' perception of street vibrancy between two case study areas?

Yin (2003) states that "If research questions focus mainly on 'what' questions, either of two possibilities arises. First, some types of 'what' questions are exploratory, such as "what are the ways of making school effective?" This type of question is a justifiable rationale for conducting an exploratory study, the goal being to develop pertinent hypotheses and propositions for further inquiry" (5). Embracing the exploratory case study approach allows this study to better understand the answer to the question "what makes a street a vibrant public place?" in the two chosen case study examples—Main Street, Fort Worth and Inonu Boulevard, Sivas—with their surrounding environments.

Furthermore, conducting research on multiple case study areas (two vibrant street examples) helps to discover the factors affecting users' perception of street vibrancy and to reveal similarities and differences in these factors in the case studies. According to Ridder (2017, 2) reference to Vaughan (1992) also mentions, "Potential advantages of multiple case study research are seen in cross-case analysis. A systematic comparison in cross-case analysis reveals similarities and how they affect findings". Similarly, Darke et al. (1998) and Schofield (2000) also point out the advantage of multiple case studies as allowing researchers to make a comparison and find out similarities and contrasts between case studies.

Yin (2009) states that qualitative data generation techniques such as site reconnaissance, field observations, interviews, and archival documents or artifacts are the main data generation tools for case study research and emphasizes the importance of using multiple data generation techniques in increasing accuracy in case study research. Therefore, the methods of data collection used in these case studies are diverse: site reconnaissance, participant observation, and semi-structured interviews. These are addressed in detail in the following sections.

3.3 Comparative Research

Comparative research was chosen because the main research aim of the thesis is to investigate similarities and differences in street vibrancy in the two case study areas. Collier (1993, 105) states that "comparison is a fundamental tool of analysis. It sharpens our power of description, and plays a central role in concept-formation by bringing into focus suggestive similarities and contrast among cases." Therefore, focusing on the comparison of two sites allows researchers to determine the common and distinguished features contributing to street vibrancy of the case study areas.

Besides, comparing two street examples from different parts of the world (Fort Worth, Texas, in the United States and Sivas, Turkey) allows urban planning researchers to gain a deeper understanding of factors promoting vibrancy on the streets and making streets vital public places in the city where streets are more engaged in daily life and the surrounding community. Bendix (1963, 532) defines comparative studies as “an attempt to develop concepts and generalizations at a level between what is true of all societies and what is true of one society at one point in time and space” (quoted in Farthing (2016) and de Vaus (2008)).

3.4 Research Design

The thesis aims to search for similarities and differences of street vibrancy in the users' perception to understand in depth the subject of “street vibrancy.” Qualitative data collection techniques were chosen as main data collection methods on the case studies. Qualitative research and relevant data techniques are well suited to addressing intangible topics, individuals' views about any given subject, or contextual conditions affecting people's lives. Thus, these methods are appropriate for addressing the initial research objectives of this thesis' comparative case study approach. Yin (2011, 8) states the five features of the qualitative research:

1. Studying the meaning of people's lives, under real-world conditions;
2. Representing the views and perspectives of the people in a study;
3. Covering the contextual conditions within which people live;
4. Contributing insights into existing or emerging concepts that may help to explain human social behavior; and
5. Striving to use multiple sources of evidence rather than relying on a single source alone.

Furthermore, Mack and Cynthia (2005, 3) emphasize that “when used along with quantitative methods, qualitative research can help us to interpret and better understand the complex reality of a given situation and the implications of quantitative data.”

Therefore, besides generating qualitative data based on the research on the case studies, this thesis also interprets and evaluates responses to semi-structured interview questions in a numerical manner in order to better reveal the similarities and differences of users’ perception of vibrant street. Descriptive questions included in the semi-structured interview are based on the socio-demographic profile of interviewees in terms of gender, age, job, and residence (on the street or not) and help to categorize interview responses and obtain more meaningful information related to users’ profile. Core questions in the semi-structured interview aim to search for interviewees’ responses regarding street vibrancy perception and help gain a deep understanding of the factors affecting their perception and to what extent these factors are effective in the users’ vibrancy perception.

3.4.1 Site Reconnaissance

Site reconnaissance is often used as a qualitative data collection technique in urban planning research. This data collection technique allows researchers to make direct contact with the people and physical environment surrounding the research area to obtain firsthand observational insight about the site. Dandekar (2003, 30) emphasizes that “a site reconnaissance can give the researcher a broader and more integrated picture of the terrain, vegetation, scale and quality of the built environment and infrastructure: mix of people, their races, ages, and sexes; and an indication of their economic position from observations of their dress, age, and condition of automobiles and quality of housing.”

Observational data regarding the quality of the built environment, street infrastructure, and amenities on the case study streets, and land use characteristics of Main Street and Inonu Boulevard was collected firsthand by site reconnaissance. In addition, pictures taken during the site reconnaissance enhance the understanding of the case study areas in terms of the quality of the physical environment and provide visual insight of the research sites. The collected data in the site reconnaissance process on the case study streets was evaluated by comparison in order to produce more meaningful findings and to better understand the strength and the weakness of the surrounding built environment features in affecting users' vibrancy perception.

3.4.2 Participatory Observation

Participatory observation has been used as a qualitative data collection technique for over 100 years by some social sciences such as sociology and anthropology (Yin, 2011). Public life on the street was already determined as one of the main research areas of this thesis in order to understand factors promoting a vibrant and livable street. Dandekar (2003) points out that planners and other applied disciplines also embrace participatory observation to get insights into social relationships and human dynamics within subset communities in a more limited time. Examining public life on the case study streets and observing how individuals engage in public life and with the surrounding community, and how people behave on the street, is vitally important in accomplishing this thesis' research objectives.

Therefore, to understand the social life on the case-study streets and to observe the key aspects of the surrounding communities, participatory observation methods were utilized, such as being a user of an urban plaza adjacent to the streets or being a customer of retail stores along the streets for three days at different times. Participating in street life on the case study area provided valuable impressions and helped make

assumptions about what makes these streets vibrant. In the analysis section, those findings, in both site reconnaissance and participatory observation process, are addressed in detail.

3.4.3 Pedestrian Counting

The pedestrian counting method is often used as a simple and easy way to count pedestrian traffic by a variety of disciplines such as urban design and planning, traffic engineering, and psychology. Emmons (1965, 2) states that “the pedestrian count is a simple, and relatively inexpensive way to measure the volume and direction of pedestrian traffic in the CBD through time and by location.” For this study, the nature of both case study streets being in downtown areas, pedestrian counting was used. Pedestrian numbers for the streets can be shown as a clear indicator of vitality and people generation or attraction power. That is, it can be said that for the street, pedestrian numbers on the sidewalk in any given time provide insights into the vitality of the street. Pedestrian counting enables researchers to understand the main pedestrian flow in the case study areas, to reveal the main pedestrian generators by combining site observations, to find the differences in pedestrian numbers on weekends and weekdays, and to compare those pedestrian numbers with each other and to analyze the strengths and weaknesses of the case study streets.

Turvey et al. (1987) mentions three types of methods for direct counting of pedestrian numbers: film-based counts, the moving observer method, and manual spot counts. May et al. (1985) also describe flow along pavements in a given time period, flow crossing roads for a given length of road and a given time period, and concentration of pedestrians in a given area of pavement at a specific instant as three different pedestrians counting methods. For this research, manual spot count was applied for both

case study streets in order to measure pedestrian flow along pavements in a ten-minute time period for three times a day (morning, noon, and evening) during a weekday (Wednesday) and a weekend (Sunday). Turvey et al. (1987, 5) states that “manual counts of pedestrians can be made from a specified fixed location. Movements across a screen line are recorded on tally counters. For pavement flow the screen line would be an imaginary line drawn across the pavement perpendicular to the carriageway;” The findings obtained from the pedestrian counting on the case study streets were evaluated in a comparative manner to find out the pedestrian generator destinations on the streets and demonstrate the weaknesses and strengths. The findings obtained by pedestrian counting are addressed and discussed in Chapter 5 in detail.

3.4.4 Site Interview

Site interviews were prepared as a semi-structured format because of the nature of this study. The data generated from the structured interviews helps to reveal the factors affecting users’ perceptions of street vibrancy and the key similarities and differences in street users’ perception toward a “vibrant street” concept between case study streets. Twenty-three questions with sub-questions (30 questions in all) were prepared, consisting of open-ended questions as well yes-no or multiple-choice questions. Asking open-ended questions, as well as structured questions including multiple choices for respondents to choose from, is a logical way to obtain street users’ perceptions toward street vibrancy in a clear, meaningful manner. The structured interview consists of three parts—descriptive questions, core questions addressing users’ perspectives toward vibrancy, and questions about users’ behavior on the case study streets. Descriptive questions in the structured interview help determine a user profile of the street and to verify assumptions about the question of who uses the streets. The following sections shows the data the descriptive questions intend to collect.

Descriptive Statistics

- Dominant Age group
- Occupation
- Gender
- Education Level

The core questions were grouped into two parts. The first part allows us to discover user perceptions toward vibrant public life on the case study street. Moreover, the questions help to determine activities taking place on the vibrant street and components of public life on the street for both case study areas. The following list describes the data intended to be collected by conducting semi-structured interview.

Core Questions Part I

- Determine preference of interviewees on case study streets or in proximity of the surrounding area
- Determine whether case study streets are secure public places or not and check effect of the security in making a street a vibrant place mentioned by the literature
- Investigate the effect of street design amenities such as sidewalks, building facades, trees, and street furniture etc. on attracting people to the streets.
- Check the initial assumption that both case study streets are vibrant street examples. Also, obtain the users' perception for a sense of belonging or attachment to the case study streets.
- Investigate the resemblance of the case study streets in users' perception and the historical value of the site in affecting users' perception.
- Discover obstacles on the streets discouraging people to come to the sites.

The second part directly addresses the interviewees' street usage preferences in terms of time and activities etc. The responses in this part provide insightful opinion

regarding how people use the case study streets and which activities people most often participate in and reveal the similarities and differences in the streets user's preference. Therefore, the findings regarding the users' preference help us to make more accurate assumptions for vibrancy of the case study streets and to demonstrate the factors affecting users' preferences. The following list includes the data to be gleaned from interviewees' responses in the second part.

Core Questions Part II

- What time in a day people most often come to the case study streets
- How much time people spend on the case study streets
- With whom people prefer to come to the case study streets
- Which activities people generally prefer to do when walking on case study streets

Chapter 4 The Case-Study Streets and Their Surrounding Area

In order to accomplish the initial research objectives, which were already determined as to what makes a street vibrant by comparison of users' perspective toward vibrancy on the street, I selected two sites as case study areas, Main Street, Fort Worth, Texas, and Inonu Boulevard, Sivas, Turkey. In the following section, the two case study areas and their half-mile radius surrounding areas are examined in detail regarding history of development, demographics, land use, location, and urban form.

4.1 Introduction to Main Street, Fort Worth, Texas

4.1.1 Location and Demography

Before starting to analyze Main Street and its surrounding area, broadly introducing the City of Fort Worth in regional context is helpful for understanding the case study city and its population and economic dynamics. Fort Worth is located in the north part of Texas and encompasses 350 square-miles (910 km²) in DFW (Dallas, Fort Worth, and Arlington) metropolitan area (9,286 square- miles 24,100 km²). According to U.S Census Bureau 2014 data, Fort-Worth is the fastest growing city and 16th largest city in U.S. Besides, the City of Fort Worth is the second largest city with 854, 133 (U.S. 2016 Census) population in DFW metropolitan area after the city of Dallas (1,317,929).

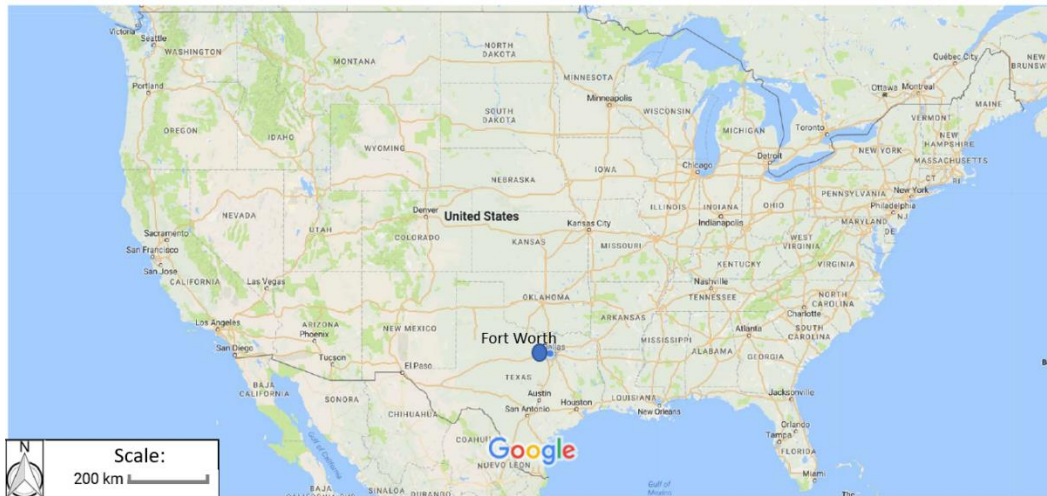


Figure 4-1.1 (a) shows a general view of City of Fort Worth in USA. Source: Google Maps.

The total population number of DFW Metropolitan area is 7, 268,910 and the 7th largest metropolitan area in U.S. According to City of Fort Worth Comprehensive plan report, the city's economy depends on agriculture, oil, and the defense industry, and the three leading sectors in employment numbers are Services (40.2%), Government (13.3%), and Trade (16.4%). The City of Fort Worth is one of the significant trade and finance hubs, having international companies such as Lockheed Martin, Bell Helicopter, and American Airlines for the North Texas region and the U.S. Adjacent interstate highways and railroad arterials such as I-30, 820, and 35W make the city highly accessible and a strong competitor within the state and North Texas region.

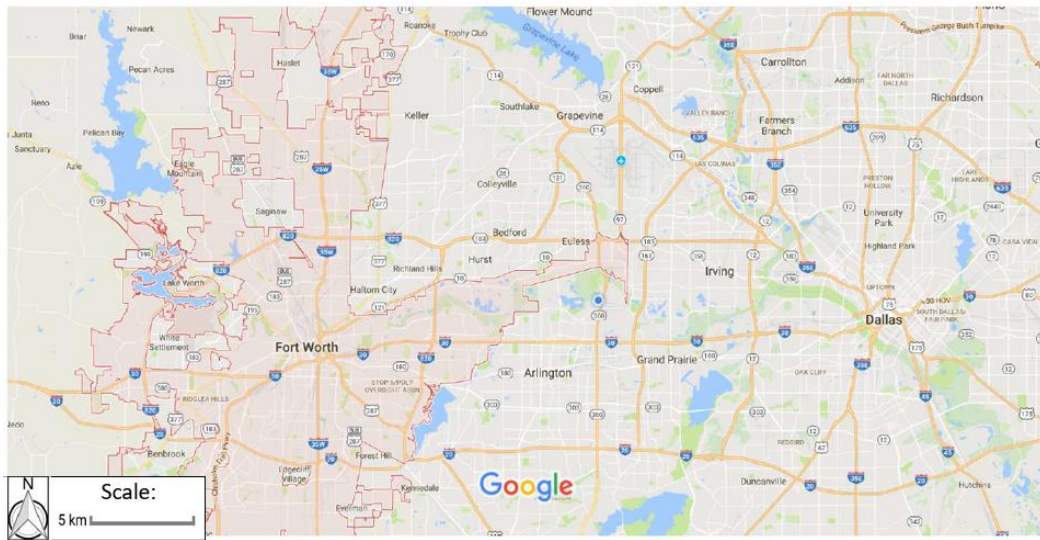


Figure 4-1.1 (b) shows a general view of City of Fort Worth in North Texas. Source:

Google Maps.

Main Street is located in the central business district of Fort Worth. It is a 2,370-foot-long (725 meters) and 75 foot-wide (45 feet traffic line approx. 13.7 meters, 15 feet sidewalk approx. 4.5 meters) linear street. It currently has two-way, low-speed vehicle traffic. Between 9th Street and East 4th Street (Sundance Square) there is two-line, two-way vehicle traffic and partly off-street parking. After Sundance Square, between East 3rd Street and W. Weatherford Street there is also a two-line, two-way vehicle traffic flow and partly off-street parking. If we look at the physical boundary constraints of the street, W. Weatherford Street passing in front of the Tarrant County Court House at the north side and 9th Street passing in front of the Fort Worth Convention Center at the south side limits form the physical boundaries of Main Street on the north-south axis. Houston Street and Commerce Street parallel to Main Street also form the west-east axis boundaries of Main Street. There are eight streets intersecting Main Street along the Tarrant County Court House-Fort Worth Convention Center axis.

The street links the three strongest elements in Downtown Fort Worth, which are the Tarrant County Court House, Sundance Square, and the Fort Worth Convention Center. Those three elements act as a magnet for attracting people to the downtown and encouraging people to walk on this linear line. Moreover, on Main Street, there are several luxury stores, well-known, vibrant entertainment spots in the downtown, such as restaurants and bars, office buildings, museum and art centers, and historic buildings.

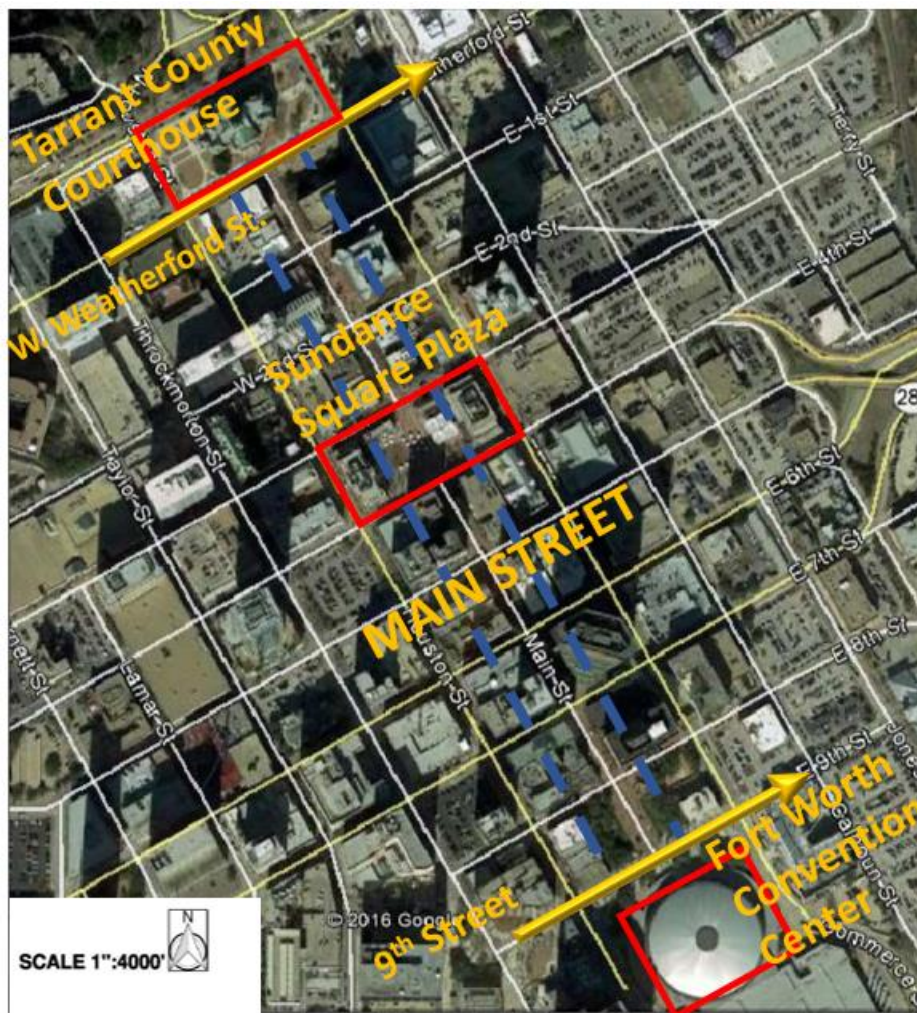


Figure 4-1.1 (c) shows a general view of Main Street. Source: Google Earth

If we look at the half-mile radius surrounding environment of Main Street, the site is one of the most accessible points in Fort Worth and the downtown area by public transit and alternative transportation options in the surrounding area. The site is also one of the most attractive parts of the city for residents and visitors. As of January 20, 2017, Main Street and the surrounding downtown areas attract over 10 million visitors, both residents and tourists, annually (www.sundancesquare.com). The site provides visitors a dozen options for shopping, dining, entertainment, and cultural events and it reflects the vibrant downtown life of Fort Worth both day and night.

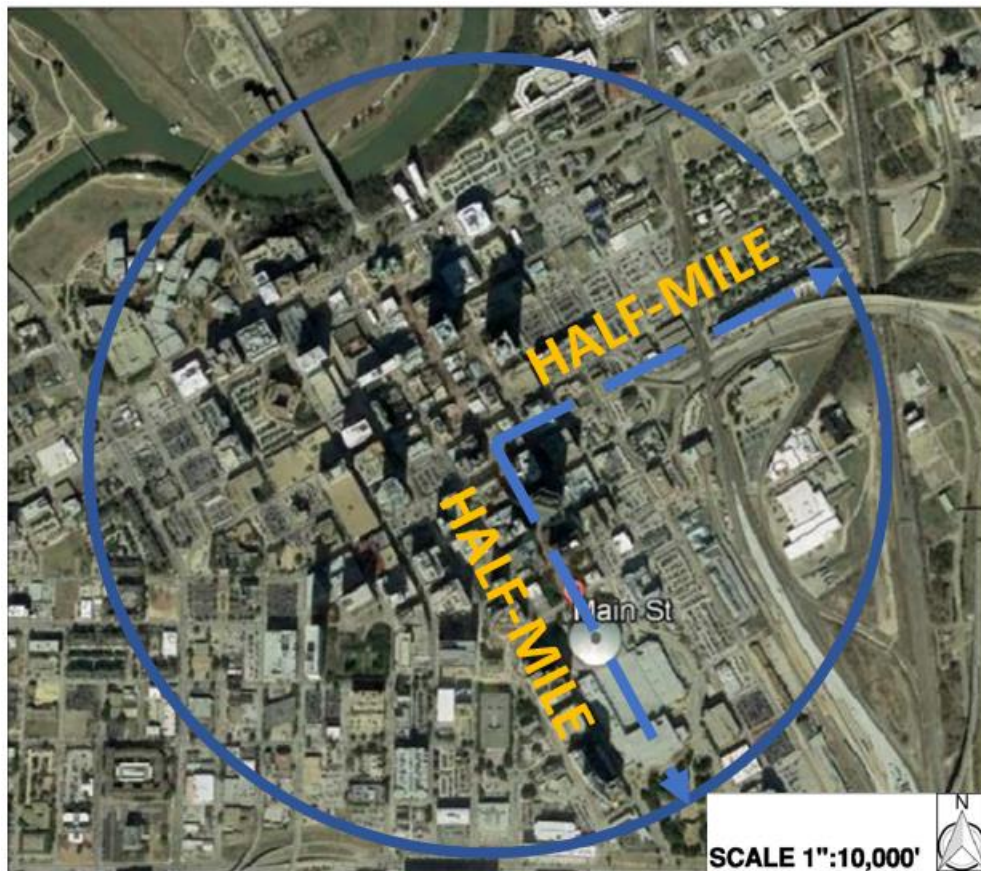
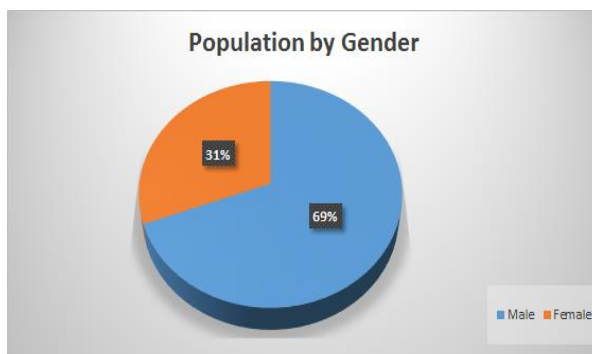
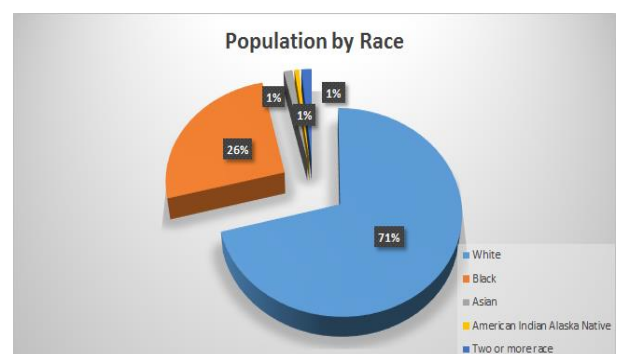


Figure 4-1.1(d) shows a general view of the half-mile radius area. Source: Google Earth

According to the to 2010 U.S. Census Data, the surrounding half-mile radius area of Main Street has approximately 3,055 people and 1,076 households (830 non-family 77.1% and 246 family 22.9%). The median age (years) for the case study area is 38.5. If we look at the gender distribution of the site population, the male population constitutes approximately 68.8% (2,103) of the population and female accounts for 31.2% (952) of the population. The population by race distribution for the site is White 70.3% (2,148), Asian 1.3% (40), Black 25.5% (778), American Indian and Alaska Native 0.3% (10) and Multi-Race 1.5% (46). The dominant race is for the case study area is white.



(e)



(f)

Figure 4-1.1(e) shows population by gender and (f) shows population by race.

Moreover, the median household income for the site is around \$82,894 according to 2014 ACS (American Community Survey) data. When looking at the household income distribution of the case study area closely, according to Fort Worth Chamber Economic Development Department *State of Downtown 2016* report, 69.6% of households in Downtown Fort Worth have over \$75,000 annual income whereas, 32.7% of households in the City of Fort Worth have over \$75,000 annually (34.5% USA). Only 1.9% of households in the downtown have less than \$30,000 income while 28.5% of households

in the city have less than \$30,000 income (28.8% USA) (see Table.4-1.1). It is clear that the case study area has the highest household income in the city and also, it can be said that downtown Fort Worth is one of the wealthiest part of the DFW Metroplex.

Table 4-1.1 Annually Household Income Distribution of Downtown Fort Worth, City of Fort Worth, and USA

	Less Than \$30,000	\$30,000-49,999	\$50,000-74,999	\$75,000-100,000	More than \$100,000
Downtown Fort Worth	1.9%	7.5%	20%	21.7%	48.9%
City of Fort Worth	28.5%	18.8%	20.1%	12.1%	20.6%
USA	28.8%	18.8%	17.9%	11.9%	22.6%

Source: Fort Worth Chamber Economic Development Department *State of Downtown 2016* report

4.1.2 History and Urban Development

It is clear that distinguishing the evolution of Main Street from the development of downtown Fort Worth is a reasonable way for revealing the development of the site in the history.

“Downtown Fort Worth has Tarrant County’s largest concentration of historic structures. Although nothing remains from the pre-railroad days—when most construction was small one- and two-story wooden buildings—there are wonderful examples from the 1880s forward that showcase a wide variety of architectural styles” (Roark 2003, 23).

After the arrival of the railroad in Fort Worth in 1875, the downtown started to develop as a node for business and government activities in the surrounding region (The Trinity Uptown Plan Report, 2004 and Roark, 2003). The Trinity Uptown Plan Report, (2004), states that after 1876, meat packing, oil and gas industries, and transportation became the major sectors in growing downtown. Roark (2003) points out that in

downtown Fort Worth “the buildings also tell the story of the forces that shaped Fort Worth’s early growth—cattle, railroads, and oil” (23). In 1895, with the opening of The Tarrant County Court House at the beginning of the Main Street from Trinity River, the downtown started to become the seat of Tarrant County government.



Figure 4-1.2 (a) General view of the Main Street from Court House in 1880 source:

<http://www.rootsweb.ancestry.com>

The early major buildings built along Main Street, making it a significant arterial in downtown, include the Land Title Block in 1889, Knights of Pythias Castle Hall in 1901, Burk Burnett Building in 1914, Hotel Texas/Radisson Plaza in 1919, and Blackstone Hotel/Courtyard by Marriott Downtown-Blackstone in 1929 (the first art deco-style skyscraper in Fort Worth) (Roark, 2003). According to The Trinity Uptown Plan Report, 2004, between 1940 and 1970 downtown experienced a great decline in its economic power, as had many central cities across the U.S. because of accelerated suburban

movement and decentralization of central business districts. As part of urban renewal attempts in the downtown Fort Worth, in the late 1960s the Tarrant County Convention Center was built at the south part of Main Street and it was renovated and expanded twice in the coming years—1983 and 2003 (www.fortwortharchitecture.com). This facility contributed to attracting people to Main Street by hosting a number of city- and regional-scale events throughout the year.



Figure 4-1.2 (b) General view of the Main Street from Court House in 1949 source:

<http://www.rootsweb.ancestry.com>

In the course of Main Street's evolution, the major changes occurred after Bass Brothers Enterprises started to invest in downtown Fort Worth. This local enterprising group renovated old buildings and opened new ones downtown, and it augmented the number of entertainment/dining and shopping stores such as restaurants, nightclubs, and branded boutiques on the site. In 2013, with the opening of The Sundance Square Plaza,

Main Street was transformed into the most vibrant part of the downtown, with fancy stores and crowded sidewalks and restaurants day and night. The renovated historical buildings recall old times of the city of Fort Worth.

4.1.3 Land Use

If we look at the zoning map of Fort Worth, Main Street and its half-mile surrounding area have a mixed-use zoning type. The existing building uses on the site are retail, such as shops, stores, bank office, and pharmacy, and refreshment-based uses, such as café, bar, and restaurant, on the ground floor. As Kaplan (2009) defines retail activities in the downtowns across the U.S., the retail activities taking place in the downtown can be grouped into three major types—mass-appeal consumer goods, specialty goods and services, and convenience stores. Domestic chain stores or international franchise establishments handle most of these retail activities. It can be said that existence of independent stores operating retail activities are very scarce on the site. Besides that, big retail box stores controlling most of retail goods consumption in the U.S., such as Walmart and Target etc., don't exist near the site. The function of downtown as a node of Finance and Insurance, Professional Scientific and Technological Services, and Management of Companies for the whole city and surrounding DFW region increases office uses and has an effect on the land use evolution of the site. The second- and upper-floor uses are generally office and partially residential in the downtown.

Besides those land-use types, government institutions such as the Tarrant County Court House and public facilities such as Fort Worth Convention Center, Bass Hall, Fort Worth Central Library, and Modern Art Museum of Fort Worth are located in the surrounding area of the site.

In addition to Sundance Square Plaza, there are other parks and public spaces serving to meet the open-space needs of the community, such as General Worth Square,

Fort Worth Water Garden, and Burnett Park on the site. Those public facilities and open spaces on the site, along with the Sundance Square Plaza, undoubtedly play a significant role in making the site one of the most attractive points of the city in the eyes of residents and visitors. According to ACS 2015 data, the case study area has 1463 p/sqm density value. In terms of building density, the site is quite dense and, perhaps, it is one of the densest parts of the city of Fort Worth. However, when taking resident population and population density compared to other parts of the city into consideration, the density may be lower than the common density in the neighborhoods or suburbs of the city. This, having lower population density in comparison to buildings, is the prevalent handicap of downtown areas across the United States.



Figure 4-1.3 (a) shows the current zoning map of the site. Source:

<http://www.dfwmaps.com/>



Figure 4-1.3 (b) shows the future zoning of the site. Source:

<http://mapitwest.fortworthtexas.gov>

Overall, the site reflects the general downtown or central business district characteristics of American cities. Besides mixed-use zoning, the site is also located in the Central Business District (CBD), Downtown Tourism Area (DTA), CBD Scenic Preservation District, and Urban Design District Area overlay boundaries in the City of Fort Worth. Those overlay districts put some specific regulations on the existing building uses and types as well as the future developments to the site. Therefore, those overlay districts along with the mixed-use zoning type play a key role in forming the architectural aspects and scenic view of the site as well as the functionality and utilization of the site by the residents and visitors.

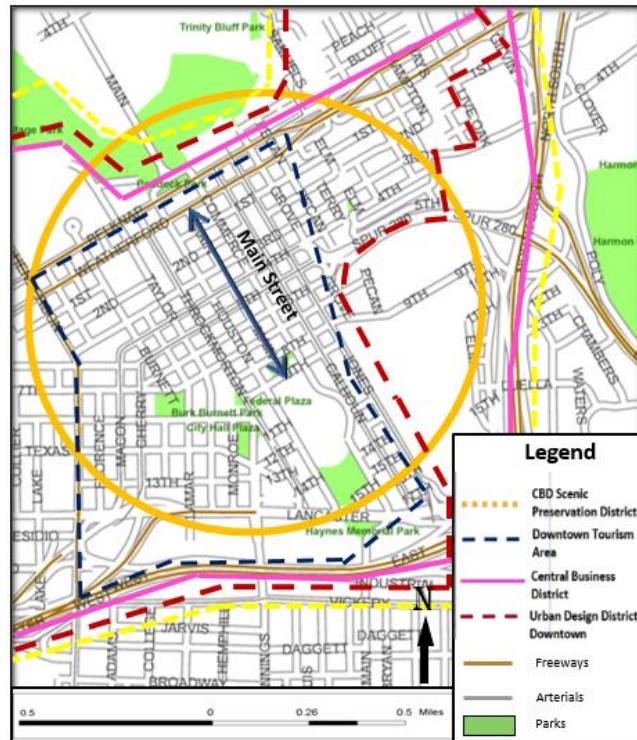
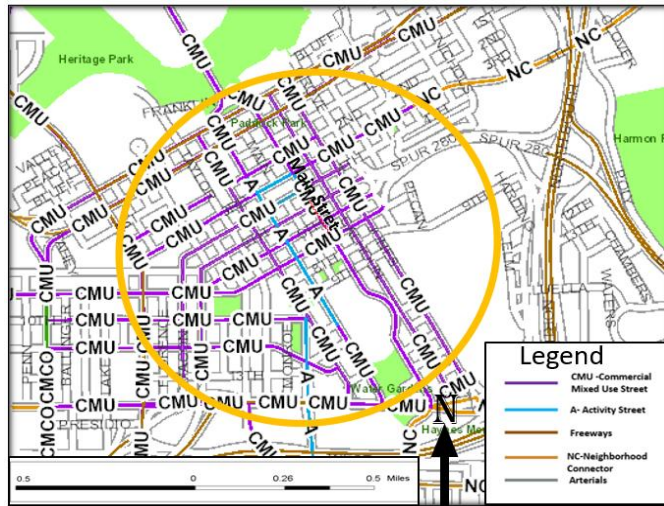


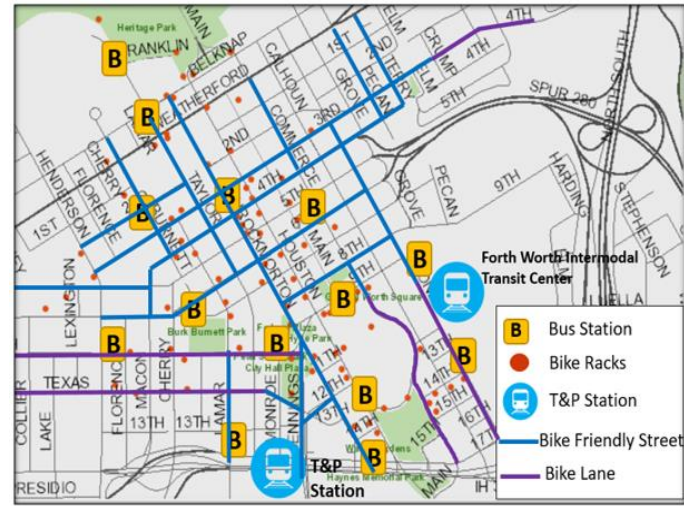
Figure 4-1.3 (c) shows the overlay district boundaries on the site. Map prepared by the author

4.1.4 Accessibility

If we analyze the case study area in terms of accessibility and availability of transportation options on the field, it is clear that the site is one of the most easily accessible parts of the city by both private car and public transportation. The site is close to the major city and regional arterials such as the 35 West and I-30 freeways. Besides that, Fort Worth Intermodal Transit Center, located near the site, allows rail transportation accessibility for the nearby region to visit downtown Fort Worth. Major arterials and the regional rail system increase the accessibility of the site by vehicular transportation on both a city (Forth Worth) and regional scale (DFW).



(a)



(b)

Figure 4-1.4 (a) shows the road types on the site and (b) shows the public transportation and alternative transportation facilities on the site. Maps prepared by the author.

The Commercial Mixed-Use Street (CMU), Neighborhood Connector (NC), and Activity Street (A) make up the road scheme of the case study area (see Fig 4-1.3 (a)). It is clear that the transportation pattern of the site was arranged for automobile-dependent transportation as a result of the high use of personal cars in transportation modal split as in most North American cities. According to U.S. Census Bureau 2015 data, household car ownership is around three cars, which clearly states the car-dependency in transportation mode. Furthermore, City of Fort Worth Economic Development *State of Downtown 2016* report shows the transportation modal split in the city of Fort Worth as car, truck, or van 92.9%, public transportation 0.9%, and walk or bike 1.5%. This high car dependency in transportation has resulted in a considerable amount of space dedicated to parking in the downtown (see Fig. 4-1.4 (c)). The same report also states that there are 46,000 parking spaces with around 6.5 feet (2 meters). In addition to high accessibility by

private car, The City of Fort Worth Bus Service System is operated on the site by a good number of bus stations (see Fig. 4-1.4 (b)). In recent years, the City of Fort Worth has initiated a bike-share program city wide for increasing bicycling as a transportation mode. As a result of this recent work, the site has a bike-share system infrastructure with bike racks, bike lanes, etc. The current bike-share system infrastructure on the site provides a sustainable green transportation opportunity for resident and visitors (see Fig.4-1.4 (b)). All of the above-mentioned transportation options on the site make Main Street the most attractive and easily accessible part of the City of Fort Worth and even in the Dallas-Fort Worth metroplex area.

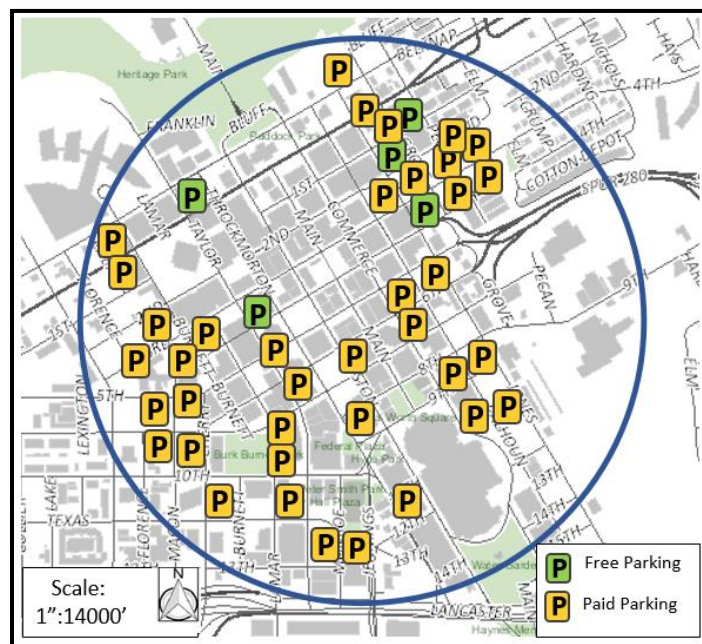


Figure 4-1.4 (c) shows the Free and Paid Parking spots on the site. Map prepared by the author.

4.1.5 Urban Form and Pattern

The general urban planning pattern of the site is gridial form, and it seems to have grown or evolved around this grid scheme. The average block size on the site is

around 200 (61.9 meters) to 300 (91.4 meters) feet wide and around 250 (76.2 meters) to 500 (152.4 meters) feet long, and the block shape generally is rectangular or square. If we look at the building size, it ranges from between 65 (19.8 meters) to 100 (30.4 meters) feet in width and 130 (39.6 meters) to 200 (approximately 61 meters) feet in length. The Fort-Worth Convention Center, located between Houston Street and Commerce Street, is the largest building on the site, and it diverges from the prevalent square- and rectangular-building form with its curved shape. The building heights on the site vary from two-story (some stores along Main Street and apartments on adjacent neighborhoods) to 40-story (high-rise towers on Main Street, Commerce Street, and Houston Street). Most of the buildings on the site are filled with retail uses on the ground floor and office or residential uses on the upper floors, and the scarce vacant buildings or lots are on the surrounding location of the Main Street. The average store front size on the site is approximately between 13 and 18-feet long (between 4-5.5 meters).

If we look at the natural and artificial boundaries in the development of the site, the regional railroad line passing by adjacent to the site on the east separates the downtown area and the site from the east parts of the city. Besides that, West Fork Trinity River passing by the north part of the site and I-30 freeway passing along the east to west direction on the south part of the site determine other boundaries around the site.

Within the case study area, Houston (70 feet approximately 21 meters) and Commerce (68 feet approximately 20 meters) streets, as well as Main Street (63 feet, approximately 19 meters) come into prominence as main axes, which carry most of the vehicle and pedestrian flows in the area and gather the high-rise building developments around it. Those three axes serve to combine the one element of cultural and historical value on the site, which is Tarrant County Court House, with another significant functional element of the site, which is City of Fort Worth Conventional Center in a linear sense.

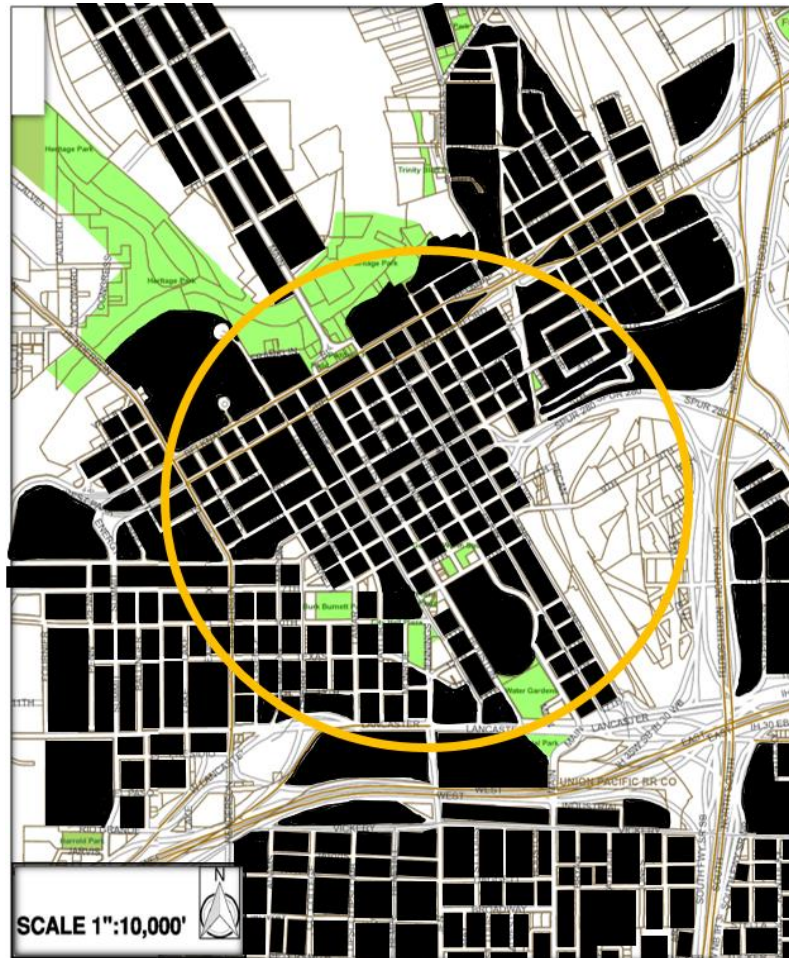


Figure 4-1.5 Urban pattern maps of the site. Maps prepared by author.

Although the general building types and architectural aspects of the site reflect the common downtown characteristic of most U.S. cities, some building clusters adjacent to the plaza and historical buildings, such as Tarrant County Court House and Chase Bank Building, shift from the concrete and high-rise modern buildings downtown to the historical structure of the 1900s. Furthermore, the Trinity River passing on the north side of downtown Fort Worth and its surrounding area serves as the main open space and parkland of the site.

4.2 Introduction to Inonu Boulevard, Sivas, Turkey

4.2.1 Location and Demography

Inonu Boulevard is located at the city center of Sivas, Turkey. City of Sivas is located at the north-east part of central Anatolia. Sivas Province with 17 surrounding other towns is the second largest province in terms of encompassed area in Turkey with 11,049 square miles (28,619 km²) after the City of Konya. The City of Sivas area is 1346 square miles (3,488 km²). According to Turkey Statistic Institution (TUIK) 2016 data, the total Sivas Province Area population is 619,844 and it was ranked the 32nd largest province area in Turkey. The City of Sivas population is 365,135. The major sectors in the Sivas Province economy are agriculture (66.5%), service sector (24.1%), industry (5.4%), and construction (4%). Sivas is located in a highly accessible part of the region.

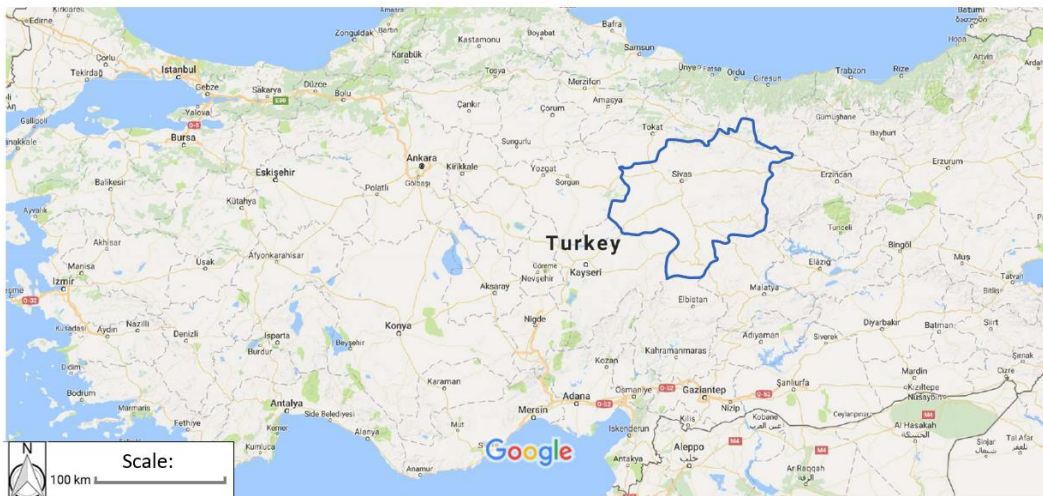


Figure 4-2.1 (a) shows a general view of Sivas Province in the Turkey. Source: Google

Maps.

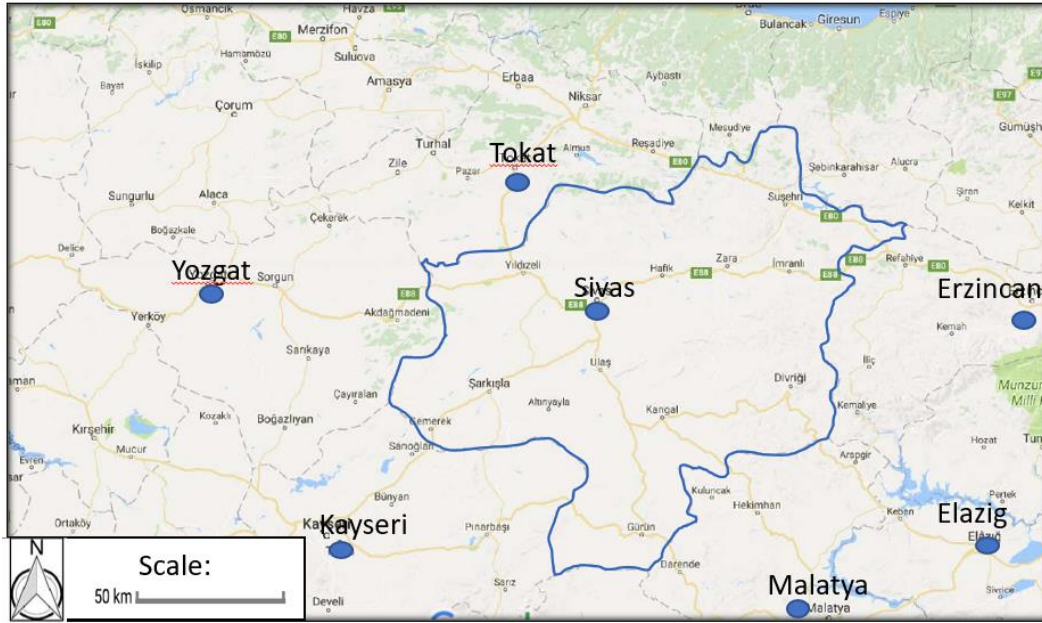


Figure 4-2.1 (b) shows a general view of Sivas Province in the north-east part of central Anatolia, Turkey. Source: Google Maps.

E-88 highway and regional and state-level railroads passing city centers connect the City of Sivas with other adjacent central Anatolian centers such as Kayseri, Malatya, and Tokat.

Sivas consists of a number of regional quarters of governmental institutions such as Turkish Railway Institutions, Mineral Research and Exploitation Institution, and State Hydraulic Works Institution. Its historical importance in the past Ottoman Empire and in the early Modern Turkish Republic make the city of Sivas a significant governmental seat and tourist attraction in the surrounding region. Besides, downtown Sivas is a node for the concentration of most of the commercial and retail activities as well as banking and office activities in the city serving the city and the Sivas Province area.

Inonu Boulevard is located at the center, or heart, of the Central Business District of the City of Sivas. It is a 3,900-foot long (1,200 meters approximately) and 98-foot wide

(30 meters) linear street and consists of a 65.6-foot (20 meters) traffic line and 16-foot (5 meters) sidewalks. It currently has two-way, moderate-speed vehicle traffic, and on-street parking is allowed on the boulevard. The boulevard is between the main city intersection at the beginning of the boulevard and the intersection with Muhsin Yazicioglu Boulevard at the end. Moreover, those intersection constraints form the physical boundaries of the boulevard on the north-south axis. (see Fig.4-2.1 (c)).



Figure 4-2.1 (c) shows the general view of the half-mile radius surrounding area. Source:

Google Earth

The site is undoubtedly the most vital and crowded part of the city of Sivas both day and night. The boulevard is the most accessible part of the city of Sivas by the advantage of being located in the city core. Moreover, the boulevard is also one of the most attractive parts of the city for visitors because the boulevard is adjacent to the most important historical heritages of Sivas such as Seljuk Madrasahs, Mosques, and Sivas Urban Square. The Sivas Urban Square at the beginning of the boulevard is the heart of the social life of the city. In addition to the urban square, Sifahkiye and Buruciye Madrasahs and Cifte Minare remain from the Seljuk Empire and Kale Mosque and Kongre Museum remain from the Ottoman Empire. These are the most important elements of the boulevard and raise the significance of the boulevard for the city of Sivas.

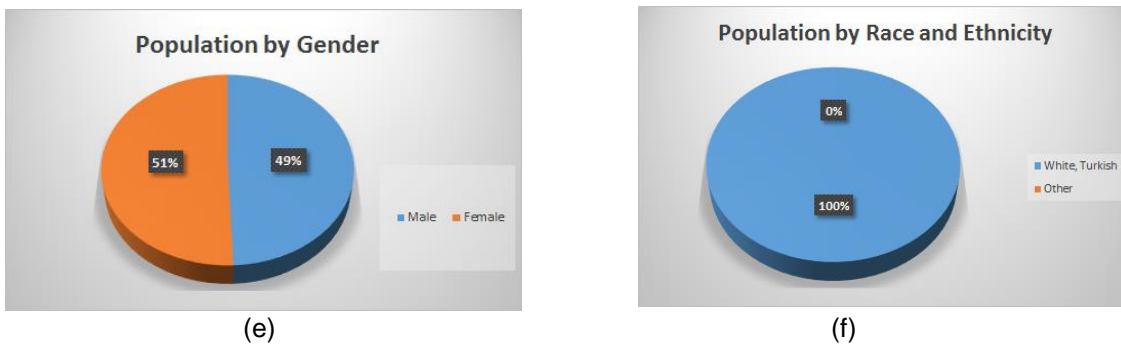


Figure 4-2.1 (d) shows a general view of the Inonu Boulevard. Source: Google Earth

The Sivas Urban Square and Amphitheatre near the Kongre Museum hosts several cultural and entertainment events throughout the year. The most important event taking place on the boulevard is 4 Eylül International festival and it brings many visitors from foreign countries and nearby regions to the city for four or five days. Besides being near the historical core of the city, those events, both at the international and city level, take place on the site, making the case study area an important cultural spot for the city.

If we start to analyze the demographic character of the half-mile radius surrounding the area of the boulevard, according to the Turkey Statistical Institution 2016

Year Demographic Data, the boulevard and its half-mile radius surrounding area population is estimated at approximately 18,000 people. According to same data, 51% of the case study population is female, which accounts for approximately 9,180 people, and 49% of the population is male, which accounts for approximately 8,820. If we look at the race distribution of the case study area, the whole is constituted of a single race which is white and Turkish.



The 2013 Turkey Statistical Data shows that the city of Sivas has a 3.84 household size and 25,632 Turkish Liras household income, which currently corresponds to \$7,000. Any direct data addressing average household income and household size is not available currently, so we assume that average household income is currently \$7,000 and that the number of households in the case study area is around 5,000 by accepting that the average household size of 3.84. If addressing the detail of the distribution of household income for the case study area, unfortunately, there is no data at either the city or downtown level indicating household income. However, in 2013, Turkish Statistic Institution (TURKSTAT) has revealed the household income distribution of the region including Sivas, Kayseri, and Yozgat cities, so this data can roughly provide an

information about the household income levels in the City of Sivas and it is accepted as City of Sivas household income distribution. According to TURKSTAT 2015 data, 17.3% of households in City of Sivas have lower than \$5,000 annual income, 22.3% of households have approximately \$10,000, and 44.6% of households have over \$19,000 income (see Table 4-2.1). However, although there is no clear data indicating the household income level of the downtown Sivas and comparing it with other part of the city, it is believed that the downtown part of Sivas has mostly affluent households and the wealthiest residents of the city. As seen, City of Sivas has relatively lower annual household income than other case study city (City of Fort Worth) of this study. It can be stated that this considerable household income difference stems from the difference between U.S. and Turkish economy and GDP per capita (for 2017, GDP USA \$19.42 trillion and Turkey GDP \$793.69 billion; GDP per capita USA \$48,147 and Turkey \$10,565 per capita).

Table 4-2.1 Annually Household Income Distribution of City of Sivas, Turkey

	\$2,740 average household income	\$4,860 average household income	\$6,990 average household income	\$9,800 average household income	\$19,500 average household income
City of Sivas	6.3%	11%	15.9%	22.3%	44.6%

Source: Turkish Statistic Institution 2015 Socio-Economic Data.

4.2.2 History and Urban Development

After creating the modern Republic of Turkey, the government accelerated efforts for establishing railways to cover the whole country. So, in 1924, the rail line connecting the city of Sivas with the capital city of Turkey, Ankara, was started. In 1927, the first rail line linking the city of Sivas with Ankara and other cities opened. Then, the Sivas City Council wanted to combine the railway station building, which was far away from the city center (around 1 kilometer) with the city center to provide easy access between two attraction points of the city. Uredi (2009) states that the main reason for creating Inonu Boulevard was to connect the city railway station with the city center and other significant government institutions located around the main city intersection, such as the Governor's Building, municipality building, and city post office. In 1931, the boulevard, named after Ismet Inonu, who was the second president and founder of the modern Republic of Turkey, came into service as one of the main city arterials. Uredi (2009) points out that this boulevard is understood as the first modern urban planning project for the city of Sivas.

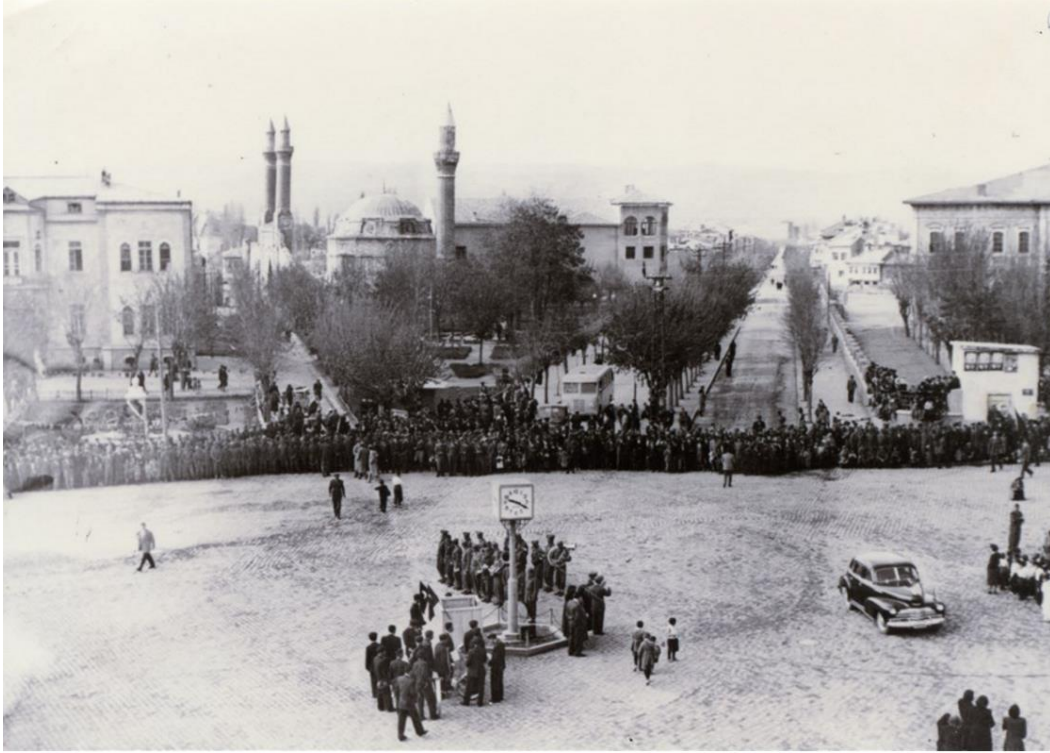


Figure 4-2.2 (a) General view of the Sivas Urban Square and Inonu Blvd. in the 1930s.

Source: www.hayatagacidergisi.com.tr

Inonu Blvd. has had many groundbreaking developments in the course of the urban development of the city. Uredi (2009) mentions that the first five-story building in the city, the first building with central heating system, and the first movie theater of the city were erected along the street in the period between 1932–1935. The boulevard had become a place in the city that reflected the modern Republic of Turkey and it became the heart of the city's social life. At the same time, it started to host major parades, celebrations, and events at national holidays. The most significant transformation in the course of the development of the boulevard took place in the 1970s with the building of the main city public hospital. After this development came to the site, the boulevard

transformed into the current modern boulevard with high-rise buildings, fancy cafés and restaurants, luxury stores, offices, and crowds both day and night (Uredi, 2009).

Nowadays, it is unarguably the main public place and socializing node for both city residents and visitors.

4.2.3 Land Use

If we look at the zoning map of the City of Sivas, Inonu Boulevard and its half-mile surrounding case study area have diversified land-use types. The core area surrounding blocks of Inonu Boulevard are the commercial zone of the whole city and consists of commercial and retail uses for daily needs such as cafés, shops, pharmacy, and grocery, as well as office and business space (see Fig. 4-2.2.). According to Turkish Statistic Institution 2013 data, the city of Sivas has 56,413 square feet (5241 m²) of space for office activities and 326,501 square feet (30,333 m²) for commercial and retail activities. It can be said that most of those spaces for commercial, retail, and office uses are in the downtown area. The ground floor uses within the commercial zone generally are for retail and daily needs. The second and upper floors generally are for office, business, and residential uses. The other part of the case study, except for city commercial zones, generally include residential purposes partially with residential and retail uses on the ground floor.

As a Fund Global Retail & Technology website indicates in the literature review, grocery, apparel and foot wear, and consumer electronics are three dominant retail store types in downtown Sivas. Those stores are either domestic chain stores like Teknosa, LC Waikiki, Sarar etc. or independent local stores like Hakan Bistro, Marka, and Oncu etc. Also, domestic and international big box retailers, such as Migros, Carrefour, BIM and Kiler etc., are located near the downtown but outside of the half-mile radius case study area. Although, some domestic and international big box retail stores are available

adjacent to the downtown, the independent local or domestic chain stores in the downtown are still strong players in retail and commercial activities in the city by taking advantage of locating in inner city areas and Turkish consumers' preference of proximity to the shopping, as well as the low rate of household car ownership.

If we analyze the residential zoning types, the contiguous multistory apartment building is the prevailing residential type on the site ranging from high density to low density. Detached single story or multiple story residential uses scarcely exist on the site. Moreover, public institutions, such as municipal buildings, the public library, schools, and hospitals are another dominant land use type of the case study area. This plays a significant role in Inonu Boulevard and its surrounding location being the part of the city with the most people and the most economic activity. The historical buildings and ruins inherited from the Ottoman and Anatolian Seljuk Emperors are other considerable elements of the land use plan. Those historical buildings prove that the site has been a focal point and important congregational spot for people throughout the city's history. Furthermore, those buildings create a cultural value for the boulevard in the eyes of residents and visitors.

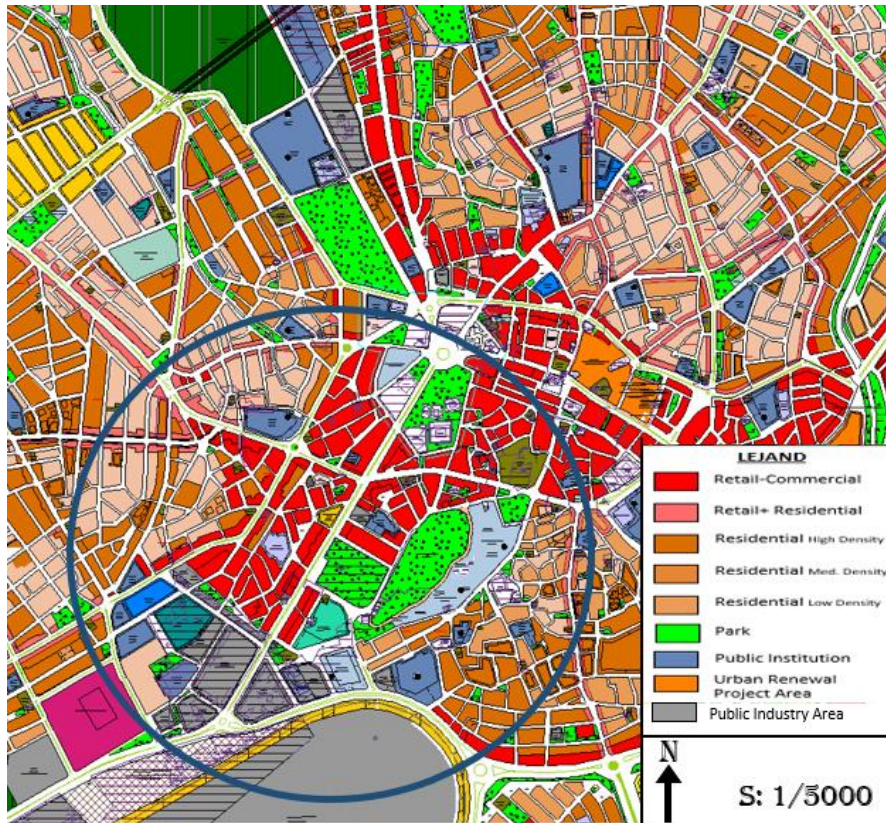
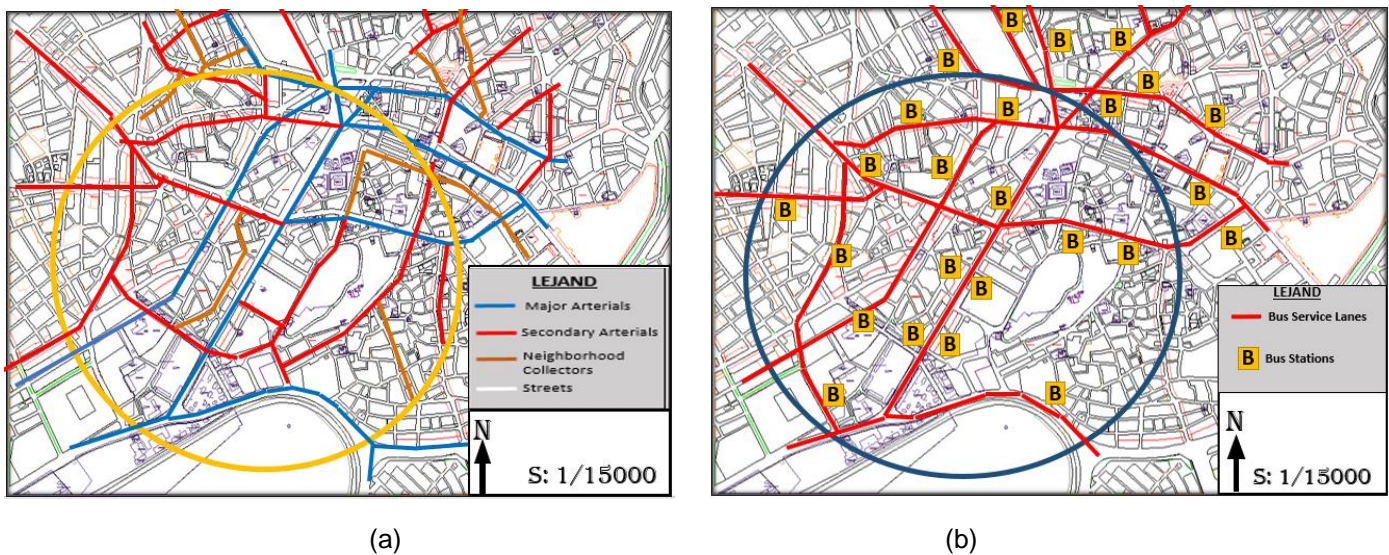


Figure 4-2.3 Land Use map of the case study area. Source: City of Sivas Zoning and Development Unit Map Data Base.

4.2.4 Accessibility

Inonu Boulevard is the most accessible part of the city by private car and public transportation by the advantage of being located in the city core. The road distribution of the case study area in the city transportation plan includes four major types of roads, which are major arterials such as Inonu and Ataturk boulevards, secondary arterials such as Kepenek, Hayri Sigirci, and Evliya streets, neighborhood collectors, and other streets (see Fig. 4-2.3 (a)). The major and secondary arterials are two- or three-lane boulevards with some intersections controlled by traffic lights. They are the main roads of the city

transportation network, as well as for the case study area, and carry most of the vehicle and pedestrian load of the city. The other road types, excluding major and secondary arterials, have less than 50-foot road width and they have lower vehicle and pedestrian capacity in comparison to arterials. The roads and arterials around the site often experience traffic congestion and delays on the road during commute hours because of their close location to major arterial intersections.



Sivas has a lack of alternative transportation modality in the city transportation networks. There are no city-wide green transportation efforts, such as a bike-share program or other green transportation options, initiated by either public or private organizations. This poses a handicap for the city and for the accessibility of the boulevard by sustainable transportation modes. In addition to a lack of alternative transportation, the site has a deficiency of space dedicated for public parking. Even though there are a few public parking spots on the site, either these parking spots are just outside of commercial

and retail core or their operating hour and price do not encourage residents to use them. This affects accessibility to the site by personal car. However, the city bus service helps residents and visitors access the site by operating a good number of buses and stations on the boulevard. Moreover, walking is a significant transportation mode and a habit for individuals residing in neighborhoods near the site and commercial zone. Average household car ownership is approximately 0.8 according to Turkish Statistic Institution. Based on this data it can be asserted that the city of Sivas is not a car-dependent city like North American cities and personal cars do not account for a vital transportation modality in the city. Moreover, OECD economic survey 2013 data demonstrates transportation modal split in Turkey as 52% Passenger Car, 45.7% Buses and Coaches, and 2.3% Railways, Trams, and Metro. Because of the lack of the data indicating transportation modal split in the city of Sivas, OECD economic survey 2013 data was accepted as the transportation modal split in the city of Sivas. Also, there is no metro or tram system currently operated in the city. The 2.3% Railways, Trams, and Metro data was converted as walking because it is believed that 2.3% walking share in transportation will provide a clear insight into walking modal split in the city of Sivas. Besides that, 45.7% Buses and Coaches was used as data for public transportation, which is estimated as closer to data indicating public transportation modal split in Sivas.

4.2.5 Urban Form & Pattern

It is apparent that the general urban pattern of the site is organic and it seems to have organically developed around the historical Sivas Urban Square and adjacent historical buildings (see fig. 4.2.4). The city of Sivas has had planned urban development history and zoning maps for over three decades; however, the city core and its organic form shaped over one-thousand years made planned development difficult in the city

core and it did not allow urban planners and decision-makers at the political stage to make radical changes in zoning and development plans. The prevalent housing type on the site is contiguous buildings, and detached housing type is minimal in the site.

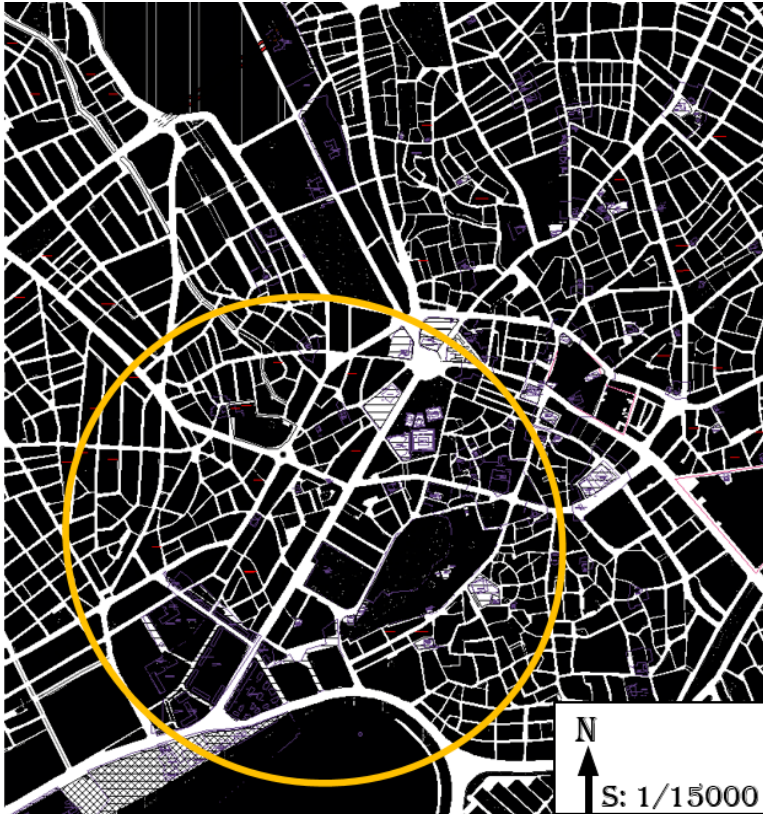


Figure 4-2.5 Urban pattern maps of the site. Source: City of Sivas Zoning and Development Unit Map Data Base.

It is difficult to talk about average block-size and shape for the site. The block lengths differ from 590 to 80 feet and the block width varies from 490 to 50 feet in the site. Because of the organic block form, mentioning average building size and form in the site is difficult too. The building sizes range from between 260 to 30 feet in length and 180 to 30 feet wide. Most of the high-rise buildings in the city are located on the site

especially along Inonu Boulevard (eight-story height). Furthermore, most of the large buildings in the city are also located on the site, most of which serve as public institution buildings such as the city public hospital, the city governor office, the city municipality, and the city tax administration office. If analyzing the size of stores, which are mostly commercial and retail, and taking place as a main function of the downtown for entire Sivas Province, it is clear that the store fronts have also evolved around the organic form of the city core and generally are small in size, between 6.5-10 feet (2-3 meter).

Main arterials of the site, such as Inonu Boulevard, Hoca Ahmet Yesevi Street, and Evliya Street, are also the main arterials of the city and carry the main vehicle and pedestrian load of the city core. The largest arterial of the site is Inonu and Muhsin Yazicioglu boulevards, which are around 98 feet wide. As a result of the organic form of the city, street width varies from up 98 feet to 32 feet. These 32-foot wide streets, lined with contiguous buildings, are prevalent and are prominent general neighborhood characteristics of the area.

4.2.6 Chapter Summary

In this chapter, the case study streets and their surrounding environment were addressed in detail in terms of demography, accessibility, urban form, history of development. City of Fort Worth and DFW Metropolitan area are more populated and have a larger area size than the City of Sivas and Sivas Province Metropolitan area (see Table.4.2.6 (b)). However, if comparing population numbers on the surrounding half-mile radius environment on case study streets, Inonu Boulevard and its surrounding environment have greater resident numbers and is more densely populated than Main Street Corridor. Having low resident numbers in a downtown area is a general characteristic of inner cities in the U.S. Therefore, it can be stated that having lower

residents number surrounding area of Main Street than Inonu Boulevard can be derived from this general characteristic.

Also, people who live around Main Street have relatively high household income level and are wealthier than those whole live around Inonu Boulevard (see Table. 4-1.1, 4-2.1, and 4-2.6 (a)). Besides that, downtown Fort Worth has the highest household income level in the entire city of Fort Worth and even in the DFW Metroplex area. Although the surrounding area of Inonu Boulevard has a considerably low household income by comparison to Downtown Fort Worth, it can be stated that the surrounding area of Inonu Boulevard also has the highest household income in the City of Sivas. This demonstrates that both case study areas include wealthy and upper-level socio-economic groups within each case study cities.

In terms of land use, land usages around the boulevard are more diversified than Main Street. It is clear that the urban form of Main Street is more planned and more developed for the surrounding built environment area (developed in grid scheme) than Inonu Boulevard with an organic urban form. The function of downtown Fort Worth is a business and finance node for the surrounding region with a concentration of insurance, banking, scientific and technological companies, and management or headquarters of international companies. In comparison to the business activities, retail activities are very low-level on the site. However, the function of downtown Sivas is a retail or commercial node for the entire Province of Sivas and nearby region. Even though there are some office uses such as law firms, accounting, and banking etc., retail and commercial come into prominence as a main function of the downtown. Both case study areas have some historical buildings and vibrant urban plaza. Comparing the street features of the case study streets, Inonu Boulevard has wider vehicular lanes and sidewalks than Main Street.

Table 4.2.6 (a) Comparison of Case Study Streets and Their Half-Mile Radius

Surrounding Area

	Fort Worth	Sivas
Annual Household Income Distribution	Less than 30,000\$ (28.5%) 30,000-49,999\$ (18.8%) 50,000-74,999 (20.1%) 75,000-100,000 (12.1%) More than 100,000\$ (20.6%)	2,740 \$ (6.3%) 4,860 \$ (11%) 6,990 \$ (15.9%) 9,800 \$ (22.3%) 19,500 \$ (44.6%)
Average Household Car Ownership	Approximately 3 cars per household	Approximately 0.8 cars per household
Transportation Modal Split	Personal Car, Truck, or Van (92.9%) Public Transportation (0.9%) Biking or Walking (1.5%)	Personal Car, Truck, or Van (52%) Public Transportation (45.7%) Walking (2.3%)
Area Devoted Parking	46,000 parking spaces	A few small parking areas, there is no considerable area devoted public parking

In terms of transportation modal split, personal car is a main transportation mode for the city of Fort Worth with 92.8% and an average three cars per household (see Table. 4-2.6 (a)). In comparison to personal cars, public transportation and walking or biking usage is very low in transportation modes (0.9% public transportation and 1.5% walking or biking). It can be said that a high level of personal car dependency in transportation results in a significant amount of space in the downtown Fort Worth devoted to public parking (46,000 parking spaces). However, in comparison to the city of Fort Worth, average car ownership/household rate is very low level (approximately 0.8 car) in Sivas. If looking at the transportation modal split for Sivas, public transportation (45.7%) and walking (2.3%) percentage are higher than the city of Fort Worth. Also, personal car uses (52%) in transportation modal split is at very low level by comparing to the city of Fort Worth.

The following section includes the analysis of collected data on case study streets, and it describes striking findings attained from evaluation of collected data. At the end of the section, the question of what makes a street a vibrant public place? are answered by revealing key findings.

Table 4.2.6 (b) Comparison of Case Study Streets and Their Half-Mile Radius

Surrounding Area

Metropolitan Area Statistic		Fort Worth	Sivas
	Location	North Texas, DFW (Dallas, Fort Worth, Arlington)	North-East part of Central Anatolia, Turkey
	City Population	854, 133	365,135
	Metropolitan Area Population	7, 268,910	619,844
	City Area Size	350 sq. mile (910 km ²)	1346 sq. mile (3, 488 km ²)
	Metropolitan Area Size	9,286 sq. mile (24,100 km ²).	11,049 sq. miles (28,619 km ²)
Demography	Major Sectors	Service (40.2%), Government (13.3%), and Trade (16.4%)	agriculture (66.5%), service (24.1%), industry (5.4%), and construction (4%)
		Half-mile radius surrounding area of the Main Street	Half-mile radius surrounding area of the Inonu Boulevard
	Total Population	3055	18000
	Female	952 (%31.2)	9180 (%51)
	Male	2103 (%68.8)	8820 (%49)
	Dominant Race	White (%70.3) and Black (%25.5)	White (%100), Turkish (%100)
	Household Numbers	1076	5000
Built Environment	Average Household Size	1.37	3.84
	Density	1463 person/sqm	22,900 person/sqm
	Current Land Use Type	Multi Family, Mixed Use, Institution/Semi-Public, Park/Open Space	Retail + Residential, Commercial, Public Institutions, Governmental Institutions Park/Open Spaces
	Future Land Use Type	Mixed Use and Parks/Open Spaces	Park, Public Institution, Retail+Residential, Commercial, Residential (Low, Medium, and High Density), and Urban renewal project area
	Ground Floor Uses	Retail and Office uses	Retail, Residential, Commercial, and Office Uses
	Urban Form	Gridial Planned	Organic partially Planned
	Average Block Size	from 200-foot (60 m) to the 300-foot (91 m) width and from 250 (76 m)-500-foot (152 m) length	From 490 (149 m) to the 50-foot (15m) width and from 590 (27.5 m)-80-foot (24m) length
	Average Building Size	65-foot (20 m) to 100-foot (30 m) in width and 130 (40 meters) to 200-foot (61 meters) in length	260 (18 m) to 30-foot (9 m) in length and 180 (55 m) to 30 feet (9 m) wide
	Average Building Height	varies from two-story to 33-story (high-rise towers)	from eight-story to one story
	Street Width (Main Street/Inonu Blvd.)	75 foot-width (22.9 m) (45 feet traffic line approx. 13.7 m, 15 feet sidewalk approx.4.5 m)	98-foot (30 m) wide consisting of 65.6-foot (20 m) traffic line and 16-foot (5 m)
	Vehicular speed of Traffic (Main Street/Inonu Blvd.)	two-way, low- speed vehicle traffic, on street parking allowed	two-way moderate speed vehicle traffic, on street parking allowed
	Historical Buildings	Tarrant County Court House, Bryce Building, Blackstone Hotel	Buruciye and Sifahaye Madrasah, Kongre Museum, Kale Mosque, and Cifte Minare Madrasah
	Urban Open Space	Sundance Square Plaza	Sivas Urban Square

Chapter 5 Analysis and Findings

5.1 Introduction

In this chapter, the findings derived from data collected in each case study street, namely, site reconnaissance, participatory observation, pedestrian counting, and semi-structured interview, are analyzed to provide answers to the initial research questions of this study. While evaluating and discussing the findings from case study streets, the comparative approach is used to reveal similarities and differences in the two vibrant street examples: Main Street, Downtown Fort Worth, Texas, and Inonu Boulevard, Downtown Sivas, Turkey. Those findings are addressed by grouping into different sub-chapters site reconnaissance and observations, pedestrian counting findings, and findings from semi-structured interview questions. This chapter closes with the summary subchapter.

5.2 Findings From Site Reconnaissance and Participant Observation

Site reconnaissance and observations on each of the case study street helped provide a clearer impression of public life on the streets, street users' behavior, and how people use the streets, as well as revealing the built environment characteristics of the sites. The site observation research for Main Street Corridor was conducted on weekdays and weekends in May 2017, and for Inonu Boulevard in June 2017. Furthermore, in order to engage in daily life and understand public life on the streets, stores, and restaurants on the sites were visited as a customer on weekdays and weekends.

5.2.1 Built Environment and Street Amenities

Both case study streets have some unique aspects making the sites vital public places attractive to visitors and residents in the downtown core. In this section, the

findings from site reconnaissance and participant observation reveal the strengths and weaknesses of the streets in terms of vitality.

For Inonu Boulevard, Sivas Urban Square (an approximately 28,000-square-meter and 300,000-square-foot area) and its surrounding historical buildings dating to the Ottoman and Seljuk Empires are one of the unique aspects of the boulevard that majorly contribute to the value of the site in the downtown core and provide vitality by attracting people day and night to the site making it the most crowded part of the city. The Main Street Corridor also has the urban plaza or square, Sundance Square (an approximately 8,500-square-meter or 90,000-square-foot area). However, Sivas Urban Square has a greater impact on making Inonu Boulevard a vibrant public space than Sundance Square Plaza has on the Main Street Corridor in terms of both historical values or meanings and the size of the plaza.

Sivas Urban Square is the main node in which the essence of the city of Sivas is constituted and it has been the heart of the community and social life of the city throughout history. Therefore, as a result of site observation, it can be said that Inonu Boulevard together with the urban square located at its beginning represents the social life of the city and the value of the community and its history. At this point, Inonu Boulevard and Sivas Urban Square bring about the role of a vibrant street in representing the social life of the city and bringing the community together as stated in the literature by Jacobs (1961), Appleyard (1981), Francis (1987), A. Jacobs (1993), and Dumbaugh and Gattis (2003).

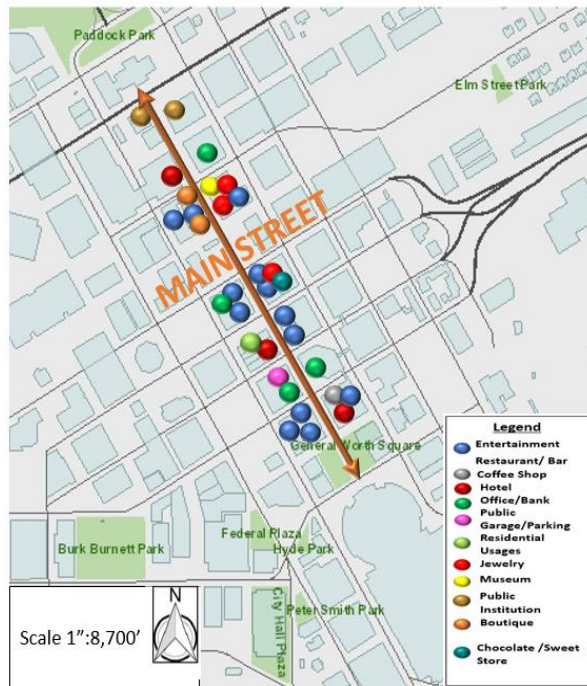


Figure 5-2.1 (a) A view of Sivas Urban Square from public park. Photo by author. Date: 06/11/2017, 8:16 pm.

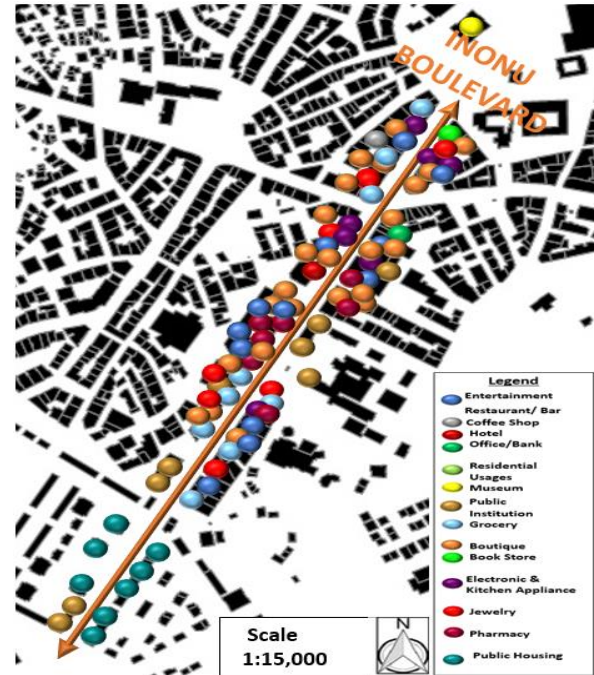


Figure 5-2.1 (b) A view of Sivas Urban Square from the beginning of Inonu Boulevard. Photo by author. Date: 06/11/2017, 1:08 pm.

Another remarkable way in which Inonu Boulevard draws attention is that there are more diversified and numerous retail activities along the sidewalks than on the Main Street Corridor (see. Fig.5-2.1 (c)-(d)) These range from stores selling electronic devices and kitchen appliances to hair dressers and restaurants. These diversified retail activities help make Inonu Boulevard a main place in which the city's commercial activities take place and serve daily needs of the community. Shamsuddin and Ujang (2008) and Mehta (2007) emphasize the positive effect of commercial activities and small local shopping stores along the streets in keeping the vitality of site and creating a feeling of attachment among the street users. Besides that, it is believed that, as mentioned in the literature review, people in Turkey tend to prefer proximity in choosing a shopping place because of low car ownership and expensive gasoline prices, so the boulevard brings more people than the Main Street corridor by the advantage of being a highly accessible part of the city with public transportation or walking. Also, it can be said that shopping in downtown is a dominant culture activity among Sivas residents because most of the retail and commercial activities concentrating in downtown are seen as a socializing opportunity in this culture as well, which attracts more people to the site.



(c)



(d)

Figure 5-2.1 (a) shows ground floor usages on Main Street (b) shows ground floor usages on Inonu Blvd. Each dot represents two stores. Source: Maps prepared by author



Figure 5-2.1 (e) A view of stores along Inonu Boulevard. Photo by author. Date:

06/11/2017, 1:53 pm.



Figure 5-2.1 (f) A view of stores along Inonu Boulevard. Photo by author. Date:

06/14/2017, 2:21 pm.



Figure 5-2.1 (g) A view of stores along Inonu Boulevard at evenings. Photo by author.

Date: 06/14/2017, 10:12 pm.



Figure 5-2.1 (h) A view of stores along the Main Street Corridor. Photo by author. Date:

05/28/2017, 12:17 pm.

Another notable difference between Inonu Boulevard and Main Street Corridor is the number of people living on the case study streets. During the site observation on Inonu Boulevard, a considerable number of people were seen returning home from shopping, carrying a shopping bag or just walking out from apartments and hanging out. The concentration of residential purposes along Inonu Boulevard can be shown as a factor promoting the vitality of the boulevard. "There must be a sufficiently dense concentration of people, for whatever purposes they may be there. This includes a dense concentration in the case of people who are there because of residence" (Jacobs 1961, 151). Furthermore, Inonu Boulevard being adjacent to the governmental center of the city and public institutions such as Municipality of Sivas, Sivas Governor Office, City Tax office etc. help bring people to the boulevard especially on weekdays.

In comparison to Inonu Boulevard, street design elements such as trees, pavements, street furniture, etc. on the Main Street Corridor are well-designed and maintained, which can be asserted as one of the strengths of the corridor in attracting people to spend time there.



Figure 5-2.1 (i) A view of an elderly couple just returning from shopping on Inonu Boulevard. Photo by author. 06/15/2017, 12:18 pm.



Figure 5-2.1 (j) A view of people shopping on Inonu Boulevard. Photo by author. Date: 06/14/2017, 5:38 pm.

Moreover, outdoor seating space and store vendor amenities on the Main Street Corridor seem well-arranged in keeping with the hospitable environment of the corridor. The stores with the awnings covering the sidewalks, especially, create a pleasant scene on the site as well as protect pedestrians on the sidewalks from sunny and rainy weather. The outdoor seating space of the cafés and restaurants on Main Street serve people who want to eat and drink while enjoying the weather and watching the passersby on the sidewalks. This directly contributes to the perception of the vitality of the street and encourages people to visit the site and spend leisure time as Francis (1987) and Projects for Public Spaces n.d. point out.



Figure 5-2.1 (k) A view of outdoor seating space on the Main Street Corridor. Photo by author. Date: 05/27/2017, 4:52 pm.

In contrast to the Main Street Corridor, Inonu Boulevard has no stores with sidewalk vendors or cafés or restaurants with outdoor seating space near the sidewalks. The present outdoor seating spaces of cafés or restaurants on the boulevard are inside the

buildings either on the first or upper floors. Those outdoor sitting amenities of the boulevard don't allow customers direct contact with sidewalks and don't contribute to street ambiance except for providing a street view.



Figure 5-2.1 (I) A view of people standing with a store vendor on the Main Street Corridor.

Photo by author. Date: 05/28/2017, 12:19 pm.

Another remarkable finding regarding street amenities on the Main Street Corridor is the existence of a number of building facades with testaceous or biscuit colored iconic ornaments, which adds value to the streetscape. Besides that, the corridor offers many activities, such as downtown tours with electric scooters or pedal cars and horse-drawn vehicles located near tourist amenities. Also, bike kiosks located in downtown and the surrounding area of the corridor make the corridor open to cyclists and increase the accessibility of the corridor by alternative transportation.



Figure 5-2.1 (m) A view of a building with ornamental facade on Main Street Corridor.

Photo by author. Date: 05/27/2017, 4:25 pm.



Figure 5-2.1 (n) A couple just took a newspaper from the newspaper box on Main Street

Corridor. Date: 05/28/2017, 12:58 pm.



Figure 5-2.1 (o) A group of people driving a pedal car on Main Street Corridor. Photo by author. Date: 05/28/2017, 1:47 pm.



Figure 5-2.1 (p) A group of tourists taking a downtown tour by scooter on Main Street Corridor. Photo by author. Date: 05/28/2017, 12:05 pm.



Figure 5-2.1 (q) A view of a horse-drawn vehicle on Main Street Corridor. Photo by author. Date: 05/31/2017, 8:16 pm.



Figure 5-2.1 (r) A view of couple bicycling on Main Street Corridor. Photo by author. Date: 05/28/2017, 8:23 pm.

In analyzing the obstacles that make the sites less vibrant public spaces in people's perceptions, some weaknesses were noted.

For the Main Street Corridor, public parking garages on the street deteriorate the street skyline. Also, some buildings, especially at the end of the street through the Courthouse, don't have display windows, thus they don't project a sense of vitality. Whyte (1980) points out that retail stores with windows and displays attract people's attention and increase the vitality along the public street.



Figure 5-2.1 (s) A view of buildings with no windows. Photo by author. Date: 05/28/2017,

8:28 pm.



Figure 5-2.1 (t) A view of a public parking garage on Main street. Photo by author. Date: *05/27/2017, 4:38 pm.*

For Inonu Boulevard, the contiguous eight-story height with huge bulk buildings along the boulevard near the historical Anatolian settlement conflict with the historical heritage of the site, especially after the view of the historical buildings at the beginning of the boulevard. The observer expects to see moderate building size and height with facades in keeping with the historical ambiance and value of the site. Besides this issue, sidewalks are not as maintained in comparison to the Main Street Corridor. While walking on the sidewalks, some breakups and little holes draw a pedestrian's attention, which impact the walkability and pedestrian safety of the boulevard. "Unobstructed and ample pedestrian space, high quality and durable materials, safe and accessible sidewalks and

well designed and thoughtfully placed street furniture all contribute to successful streets”
(Vibrant Streets 2006).



Figure 5-2.1 (u) A view of skyline of Inonu Boulevard. Photo by author. Date: 06/14/2017,
11:38 am.

Also, when considering the length of the boulevard (3,900 feet or 1,200-meter length approximately), pedestrians will notice the lack of seating space and open space, making the site less pedestrian friendly. The lack of street furniture on the boulevard is another remarkable shortcoming in terms of street design. Quality and well-placed street furniture has a considerable impact on making downtown areas pedestrian friendly and attractive to people (Whyte 1980, Harrison 1987, Barnett 2003).



Figure 5-2.1 (v) A view of breakups and holes on sidewalks of Inonu Boulevard. Photo by author. Date: 06/11/2017, 4:36 pm.

However, Main Street Corridor provides a more pleasant and quality walkable environment for visitors with public open spaces with seating, whether it is Sundance Square Plaza located at the center of the corridor or public parks around the Court House or Convention Center in comparison to Inonu Boulevard. Moreover, the Main Street Corridor has plenty of street furniture elements such as monuments, metal information signs in front of historical buildings etc.



Figure 5-2.1 (y) A view of sidewalks on Main Street. Photo by author. Date: 05/27/2017, 5:02 pm.



Figure 5-2.1 (w) A view of street furniture element on Main Street. Date: 05/27/2017, 5:24 pm.

5.2.2 Findings Regarding Daily Life on Case Study Streets

This section addresses findings from observation about daily life on the case study streets and compares characteristics of daily life on the case study streets. Daylong (9:30 am-10:30 pm) site observations were conducted on Wednesday (as a weekday) and Sunday and Saturday (weekends). For the Main Street Corridor site observations were conducted on 27-28 and 31 May 2017, and for Inonu Boulevard site observations were conducted on 10-11 and 14 June 2017.

Beginning with the Main Street Corridor, the site observations revealed that, on weekends public life started to blossom after 11 am. Before 11 am, although some people with families and friends visited the site for breakfast, most of the people observed on the sidewalks were tourists. It was also observed that families with children prefer to come to Main Street at either morning or evening time. A considerable number of families on Inonu Boulevard also drew attention during site observation on the weekend. While the concentration of families with children coming to Inonu Boulevard occurred at noon and evening, the number of families with children increased in the morning and evening, instead of noon on Main Street. This difference may occur because of difference of climate conditions between Texas and Sivas. The summer is hotter and sunnier in Texas than in Sivas, so, hot weather might discourage families from going outside with children.



Figure 5-2.2 (a) Tourist group on Main Street. Photo by author. Date: 05/28/2017, 10:08
am.

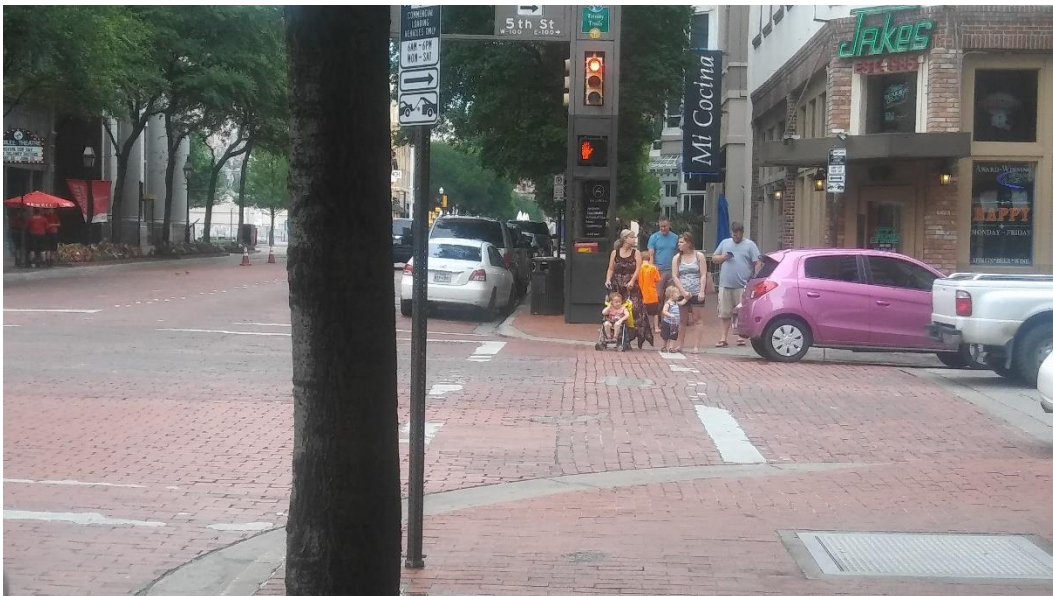


Figure 5-2.2 (b) A view of families on Main Street. Photo by author. Date: 05/28/2017,
12:07 pm.

Another considerable finding from weekend site observations on Main Street Corridor is that people did not shop at the stores. There were many people standing in front of store displays; however, few people were inside the stores. The stores on the Main Street Corridor are expensive, luxury retailers, so shopping on the corridor is not affordable for all people, which may discourage people to come for shopping. It is believed that stores on Main Street Corridor and adjacent places need to be highly specialized or franchise retail stores to survive in the downtown area, which makes the retail stores expensive and not affordable to all people. While the stores on Main Street close around 6 pm, most of the stores on Inonu Boulevard are open later hours. It is believed that stores that are open until late hours help keep people on the boulevard. The outdoor seating and inside of cafés, restaurants, and bars had several customers especially for lunch and dinner or for meetings with friends to drink and to celebrate. Comparing the customer profile of entertainment/eating amenities on Main Street and Inonu Boulevard, Main Street's establishments were visited by many young and elderly people and had a more diversified customer profile in terms of age than on Inonu Boulevard. However, entertainment/eating amenities on Inonu Boulevard generally serve young people and you rarely see elderly people in those amenities. It can be stated that elderly people in Sivas prefer the local tea and coffee houses, called "Kahvehane" or "Cayocagi," for meeting friends and other elderly people to spend leisure time. Therefore, this habit in the daily life or cultural phenomena may affect the number of elderly people in café and restaurants.



Figure 5-2.2 (c). A view of an eating/entertainment amenity on Main Street Corridor.

Photo by author. Photo by author. Date: 05/28/2017, 8:41 pm.

Another remarkable finding from weekend observations on Main Street is that, except for Sundance Square Plaza and other open spaces on the park in front of the Convention Center and the Tarrant County Courthouse, the site doesn't attract people to the park either day or night time. During most of the site observation time, those open spaces rarely had visitors. Sundance Square Plaza becomes a more crowded, pleasant environment in which people from every age group—children, adolescents, and the elderly—spend time by enjoying the lighted scene and fountains of the plaza at night rather than noon or morning. Similarly, Sivas Urban Square attracts more people at night rather than morning or noon. However, The Sivas Urban Plaza has more people in the morning and noon in comparison to the Sundance Square Plaza. It is believed that this discrepancy between the two urban squares occurs because of huge size of the Sivas Urban Square and being the most vital open urban spaces in Sivas.



Figure 5-2.2 (d) A view of empty chairs in the open space in front of the Convention Center. Photo by author. Date: 05/27/2017, 4:54 pm.

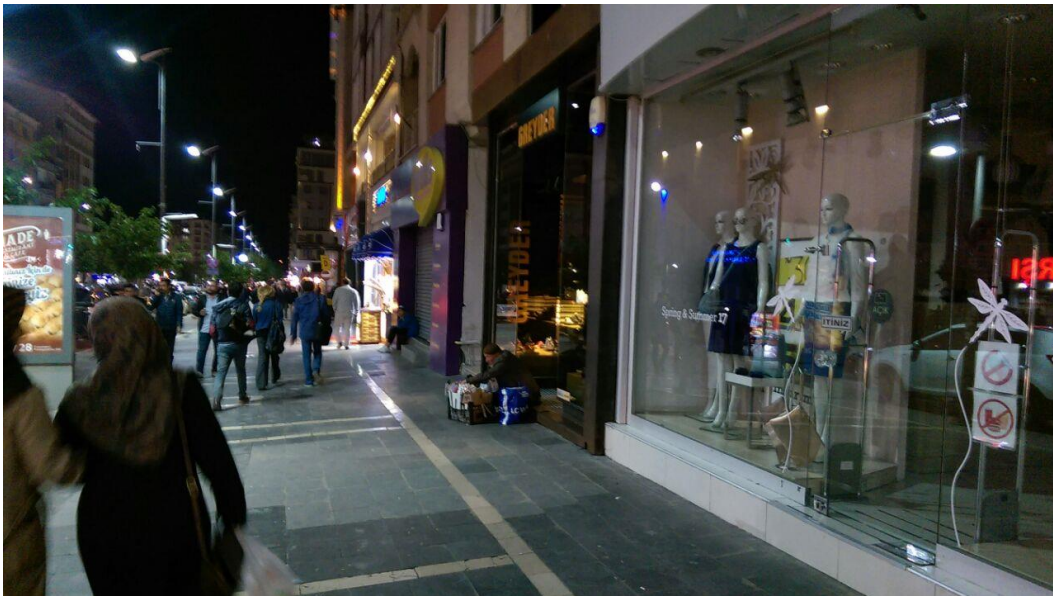


Figure 5-2.2 (e) A view of people on Inonu Boulevard at night. Photo by author. Date: 06/11/2017, 9:23 pm.



Figure 5-2.2 (f) A view of people looking at a peddler's wares on Inonu Boulevard at night. Photo by author. Date: 06/12/2017, 9:38 pm.

For both case study streets, the hurried and bustling weekday of the downtown areas is easily recognized from passersby on the sidewalks. With lunch hours, the eating amenities and sidewalks start to become crowded. The public parks on Main Street especially attract people to spend time at lunch. In contrast to open spaces on Main Street, the public parks on Inonu Boulevard don't serve people who eat lunch. For Main Street, the decrease in the vitality of public life between weekends and weekdays, especially in the Sundance Square Plaza, easily draws the attention. A significant decrease in the vitality of public life on Inonu Boulevard, however, was not observed. It is thought that this situation derives from Main Street serving more people on weekends and becoming a place where people visit at leisure time with families and friends (most probably weekends).

On the other hand, as mentioned earlier, Inonu Boulevard is a place where most of the commercial, retail, and entertainment activities of the city are supported by being adjacent to governmental institutions as well as being one of the main transportation arterials in the city. Therefore, unlike Main Street, the public life on Inonu Boulevard did not experience considerable changes in vitality between weekend and weekday observations. This situation is discussed and analyzed in detail in section 5.3., Findings From Pedestrian Counting.



Figure 5-2.2 (g) A view of people shopping on Inonu Boulevard. Photo by author. Date:

06/15/2017, 2:28 pm.

In addition, more people were observed on the sidewalk, walking and hanging out in groups, on Inonu Boulevard than were noted on Main Street. Moreover, you can see many people stopped on the sidewalks, standing and talking with friends or acquaintances. More young people can be seen walking or hanging out on the Boulevard than elderly people, as also noted in another observation. Although a considerable number of elderly people were noted on the boulevard, elderly people generally spent

time inside the Sivas Urban Square or in the surrounding park sitting, looking around, and talking with nearby visitors.



Figure 5-2.2 (h) A view of young group on Inonu Boulevard standing in front of store and talking. Photo by author. Date: 06/11/2017, 3:18 pm.



Figure 5-2.2 (i) A view of people on Inonu Boulevard walking in a group. Photo by author.
Date: 06/11/2017, 3:16 pm.



Figure 5-2.2 (j) A view of people sitting on the bench and talking nearby in Sivas Urban Square. Photo by author. Date: 06/14/2017, 1:58 pm.

During both weekday and weekend observations on Inonu Boulevard, it was observed that local store owners and employees tended to watch the sidewalks and passersby and to care about what was happening in front of the stores than did the store owners or employees on the Main Street Corridor. Jacobs (1961) asserts the “eyes on the street” concept for making streets a secure part of public realm. In this idea, Jacobs (1961) places emphasis on local stores (the eyes of their owners and customers) and building orientations on the street in order for residents to see the street, creating natural surveillance to notice strangers and to help insure safety. Similarly, Newman (1972) states the “territoriality” notion for providing natural surveillance and ensuring street safety is close to Jacobs’ (1961) “eyes on the street” idea.

According to perception attained from participatory observation in public, it can be asserted that Inonu Boulevard seems like a public place in which residents, local store

owners, and passersby give attention to the control of the sidewalks and street and have a more territorial behavior toward the place than do the people on the Main Street Corridor. Furthermore, the findings in which people on the Boulevard seem to make social contact with passersby, to stand and talk with acquaintances, and to greet store employees and owners while walking proves the vitality of the social atmosphere on Inonu Boulevard. Therefore, it can be claimed that Inonu Boulevard has a stronger social ambiance than the Main Street Corridor and people on the Boulevard are more engaged in the social life on the street than people on Main Street. The correlation of this claim is addressed in detail and is matched with findings from interview responses in the section 5.4., Findings From Site Interview.



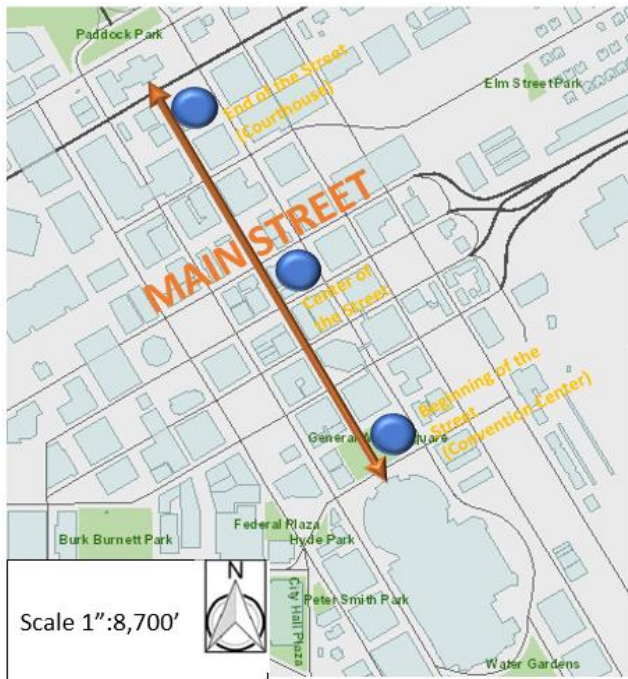
Figure 5-2.2 (k) A view of pedestrians taking a break from shopping and talking with store owners in front of the store on Inonu Boulevard. Photo by author. Date: 06/14/2017, 4:13

pm.

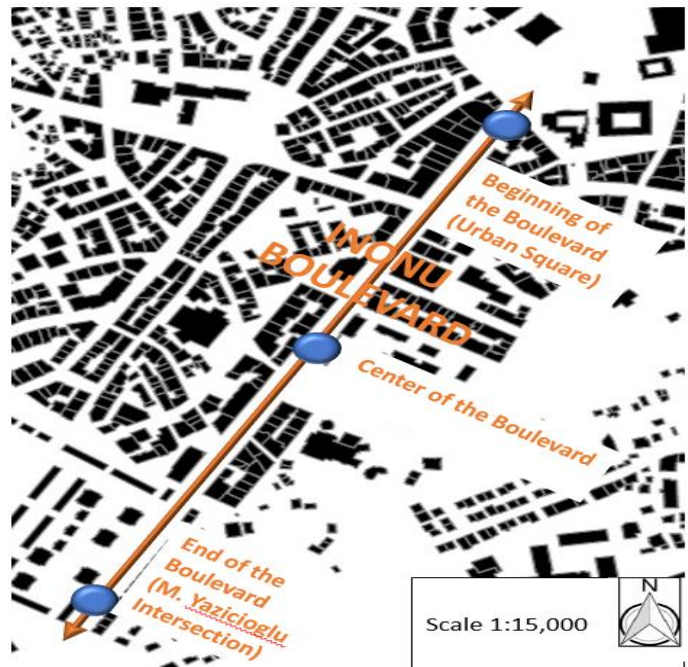
5.3. Findings From Pedestrian Counting

Findings from the pedestrian counting provide a valuable insight into the pedestrian volume and pedestrian flow direction of the case study streets and into understanding the factors that generate pedestrians on the sidewalks and the pedestrian attraction magnets on the sites. Pedestrian volume of the street is another way of describing the pedestrian traffic generation capability of the place and can be shown as an indicator for vitality or people attraction power. Therefore, conducting pedestrian counting is significant for this research in order to understand the factors that account for pedestrian traffic generation on the sidewalks of the case study streets and for revealing the pedestrian attraction magnets on the sites.

Pedestrian counting research was conducted on the sites two days—a weekday (Wednesday) and a weekend (Sunday)—and during three different parts of the day, morning (9:30 am–10:30 am), noon (12:30 am–1:30 pm), and evening (8:00–9.00 pm). For weekend pedestrian counting Sunday was chosen because most of the private sector in Turkey continues to operate on Saturdays, so to attain more meaningful data and to make more clear the comparison in pedestrian numbers Sunday (an off day for both countries) was chosen. Three segments of the case study streets, the beginning, center, and end, were determined as pedestrian counting locations. At each of the three segments of the case study streets, pedestrians passing on the sidewalks were observed coming and going for ten minutes. May et al. (1985,14) states that “10 minutes appears to be the length of count which is most commonly used predominantly for the reason that this allows for a 10-minute period one way count at a site with a 5-minute break followed by a count for the other crossing direction or at another site, within a half hour time period.” The following Figures 5.3. (a) and (b) shows the detail of pedestrian counting location on the case study streets.



(a)



(b)

Figure 5-3. (a) shows the pedestrian counting location on the Main Street Corridor

Source: <http://mapitwest.fortworthtexas.gov/fwgisdata/> and (b) shows pedestrian counting location on Inonu Boulevard Source: City of Sivas Zoning and Development Unit Map Data Base.

According to weekend pedestrian counting data on the Main Street Corridor, it can be asserted that the morning period is dead time on the street in terms of people on the street and public life. Especially at the beginning and at the end of the street, the pedestrian numbers (at the beginning 14 people, at the end 8 people, and at the center 27 people) are much fewer in comparison to the center of the street (see table 5.3(a)). It is assumed that the difference in pedestrian numbers is explained by the fact that most of the retail stores and eating amenities are located at the center of the street rather than at the beginning (Convention Center side) and end of the street (Courthouse side). As

mentioned earlier in section 5.2.2, it was observed that most of the people on the street in the morning were either tourists or people who came to the site for breakfast.

If we compare the pedestrian numbers on a weekend morning on the Main Street Corridor with pedestrian numbers on a weekend morning on Inonu Boulevard, it is seen that pedestrian numbers on three sections of the boulevard as beginning (Main City Intersection side, 33 people), center (41 people), and end of the boulevard (M. Yazicioglu Boulevard Intersection side, 22 people) are greater than pedestrian numbers on the three sections of Main Street Corridor. For the overall pedestrian counting number on a weekend morning, it is believed that on Sundays, people typically go to church with families in the morning and then go to a restaurant for brunch and lunch so, this cultural practice in Texas may affect the number of pedestrians on the corridor in the mornings and may cause a striking discrepancy between pedestrian numbers on Inonu Blvd. and Main St. Corridor (See. Table. 5.3 (a)). As mentioned earlier in section 5.2.2, it was observed that public life on the corridor blossoms after 11.00 am.



Figure 5-3. (c) A view of Sundance Square Plaza on Sunday morning. Photo by author. Date: 05/28/2017, 10:12 am.

It can be stated that those people who went to church with families and preferred a restaurant on Main Street for family brunch or lunch played a role in blossoming public life.

Pedestrian numbers are larger in the center of the boulevard in comparison to the beginning and end of the boulevard such as on the Main Street Corridor. Similarly, it is assumed that the larger pedestrian number at the center of the boulevard can be attributed to the concentration of eating/entertainment amenities and retail activities, as with the Main Street Corridor. Overall, the fact that Inonu Boulevard has more pedestrian numbers in the morning counting than Main Street stems from the number of stores and other amenities serving daily needs, such as market, grocery, bakery etc., rather than leisure time activities. In comparing pedestrian number findings between case study streets, people living on Inonu Boulevard or in the surrounding area use the street to meet daily needs more than do people on Main Street.

Table 5.3. (a) Pedestrian Numbers at Weekend on the Case Study Streets

Street	Weekday/Weekend	Counting Location on the street	Time	Pedestrian Number
Main Street Corridor	Sunday	Beginning of the street (Convention Center)	9:30 am-10:30 am	14
			12:30-1:30 am	53
			8:00 pm-9:00 pm	81
		Center of the Street	9:30 am-10:30 am	27
			12:30-1:30 am	51
			8:00 pm-9:00 pm	48
		End of the Street (Courthouse)	9:30 am-10:30 am	8
			12:30-1:30 am	15
			8:00 pm-9:00 pm	11
Inonu Boulevard	Sunday	Beginning of the street (Main City Intersection)	9:30 am-10:30 am	33
			12:30-1:30 am	92
			8:00 pm-9:00 pm	200
		Center of the Street	9:30 am-10:30 am	41
			12:30-1:30 am	103
			8:00 pm-9:00 pm	231
		End of the Street (M. Yazicioglu Boulevard Intersection)	9:30 am-10:30 am	22
			12:30-1:30 am	69
			8:00 pm-9:00 pm	140

Pedestrian numbers at weekend, noon, and evening counting show that both of the streets start to attract people to spend time and be active after the morning hours. Especially for Main Street Corridor, pedestrian numbers at noon and evening reveal that Fort Worth Convention Center is a significant magnet for attracting people to the street and this is even stronger than the Sundance Square Plaza. If comparing the pedestrian counting numbers for noon and evening on the sidewalk near to the Convention Center (for noon 51 people and for evening 81 people) with the numbers at center near to the Sundance Square plaza (for noon 51 people and for evening 48 people), it is clear that the convention center, by hosting public events such as graduation ceremonies, conferences, or community meetings etc. throughout the day, brings more people on the

adjacent sidewalk of the street than does Sundance Square. Moreover, people leaving an event at the Convention Center, walking through to Main Street in groups, were observed during pedestrian counting, which shows that the convention center channels people coming to the event into Main Street. This situation will be addressed in detail with findings obtained from interview data in the following section.



Figure 5-3. (d) A view of people waiting for the start of an event in front of Convention Center. Photo by author. Date: 05/28/2017, 2:06 pm.



Figure 5-3. (e) A view of Sivas Urban Square from inside on weekday. Photo by author.

06/15/2017, 11:18 am.

As a remarkable finding, by looking at the pedestrian counting findings, it is claimed that the Tarrant County Court House and its surrounding green spaces have no effect on the pedestrian attraction and pedestrian flow of the Main Street Corridor even though it contributes to historical value of the street by being one of the oldest and most well-known historical buildings in the city of Fort Worth.



Figure 5-3. (f) A view of Tarrant County Court House and its surrounding green space.

Photo by author. Date: 05/28/2017, 8:04 pm.

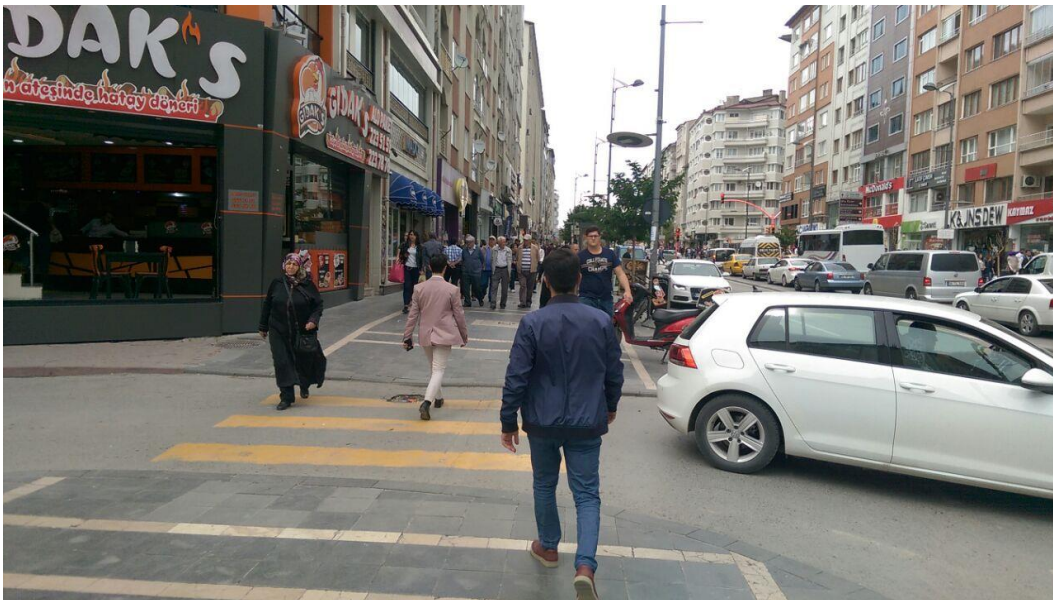


Figure 5-3. (g) A view of weekday rush hour on Inonu Boulevard. Photo by author. Date:

06/14/2017, 3:58 pm.

For Inonu Boulevard, weekend pedestrian numbers at noon and evening (see Table 5.3.(a)), have a bigger value at all three sections, beginning, center, and end, than Main Street. One of the considerable findings from the Inonu Boulevard weekend pedestrian number is that the pedestrian numbers at the beginning of the boulevard near the Sivas Urban Square are almost equal to numbers recorded at the center of the street even though the recorded number in the evening is lower than at the center of the boulevard. This reveals that the eating/entertainment amenities such as restaurants and cafés etc. and diversified retail stores concentrated on the center of the street have a stronger effect on bringing people to the boulevard than do Sivas Urban Square and its surrounding historical buildings. Moreover, another remarkable finding is that the recorded pedestrian number at evening is much greater than the number at noon and morning. Therefore, it can be claimed that the boulevard is a more attractive place for visitors and residents to walk and hang out during evenings than at noon and morning. This finding will correlate with findings from interview data and will be discussed in detail in the following section. Pedestrian numbers at the end of the street are lower than at the center or beginning. Based on the site observation it is found that the existence of low retail activities and other eating/entertainment amenities at the end of the boulevard generate fewer people on the sidewalk than other parts of the boulevard.

For weekday pedestrian counting data, both case study streets have a slight decrease in overall pedestrian numbers on the sidewalk in comparison to pedestrian numbers on the sites on weekends (see Table 5.3(b)). A decrease in pedestrian numbers at evening, especially, is clearer if weekday pedestrian counting data is compared with weekend data. However, although overall pedestrian numbers on weekday counting is less than weekend counting for both Main Street and Inonu Boulevard, weekday morning numbers are greater than weekend pedestrian numbers in the morning. It is assumed

that this change stems from case study streets being business and governmental centers of the cities. Based on site observation on both case study streets, surrounding business and office type usages especially around Main Street and governmental institutions, especially for Inonu Boulevard, have a strong effect on bringing and attracting people to the streets for lunch hours, with eating amenities on both streets serving downtown employees.

Table 5.3. (b) Pedestrian Numbers at Weekday on the Case Study Streets

Street	Weekday/Weekend	Counting Location on the street	Time	Pedestrian Number
Main Street Corridor	Wednesday	Beginning of the street (Convention Center)	9:30 am-10:30 am	11
			12:30-1:30 am	63
			8:00 pm-9:00 pm	35
		Center of the Street	9:30 am-10:30 am	33
			12:30-1:30 am	45
			8:00 pm-9:00 pm	41
		End of the Street (Courthouse)	9:30 am-10:30 am	15
			12:30-1:30 am	29
			8:00 pm-9:00 pm	12
Inonu Boulevard	Wednesday	Beginning of the street (Main City Intersection)	9:30 am-10:30 am	43
			12:30-1:30 am	83
			8:00 pm-9:00 pm	142
		Center of the Street	9:30 am-10:30 am	55
			12:30-1:30 am	97
			8:00 pm-9:00 pm	177
		End of the Street (M. Yazicioglu Boulevard Intersection)	9:30 am-10:30 am	26
			12:30-1:30 am	61
			8:00 pm-9:00 pm	103

Moreover, the Convention Center and Sundance Square Plaza are dominant magnets for the Main Street Corridor in attracting people to their surrounding area during the weekday as on the weekend.



Figure 5-3. (h) A view of Main Street Corridor on a weekday. Photo by author. Date:
05/31/2017, 11:13 am.



Figure 5-3. (i) A view of Inonu Boulevard on a weekday. Photo by author. Date:
06/15/2017, 3:08 pm.

Based on weekday pedestrian counting data, it is obvious that Inonu Boulevard has larger pedestrian numbers on weekdays than Main Street. However, Inonu Boulevard has a significant decrease in evening pedestrian numbers on the sidewalks in comparison with weekend evening pedestrian numbers. There might be two reasons for these differences in weekday and weekend pedestrian numbers on the boulevard. The first might be that people generally tend to spend less time outside on a weekday evening because of work the following morning. The second is that people might prefer walking and hanging out on the boulevard during the weekend than a weekday. This claim is addressed and discussed by analyzing site interview data on the boulevard in the following section 5.4, Findings from the Site Interview.

At this point, while evaluating pedestrian counting data, culture of leisure time perspectives on case study cities and their effect on pedestrian generation can be discussed as another contributor to the striking discrepancy in pedestrian numbers. As Aslan and Aslan (2012) state, visiting with relatives and friends, entertaining them, and walking are common leisure time activities in Turkish culture, which is supported by OECD 2009 Social, Economic Statistic Data. Therefore, the street plays a significant role in the daily life of Turkish people as a spot for meeting friends and relaxing with them and walking for hanging out. Furthermore, people in Sivas, and in Turkey, generally prefer to shop by going to the bazaar and stores rather than doing online shopping. They also prefer to pay bills by going to payment offices rather than paying online, which could contribute to more pedestrian activity on the boulevard.

In comparison to U.S. cities, Anatolian cities have a more compact urban form spatially as to encourage walking. Van Dyck et al. (2013) emphasize that residential density and land use mix diversity promote recreational walking and contribute to generating more people on sidewalks. Therefore, this lifestyle and compact urban form

can encourage walking and spending more time on the streets among Turkish people. Whereas car dependency of people in the U.S. and spatially more separated pedestrian destinations, such as shopping malls, outlet stores and work places, in the urban form discourage people from walking to meet daily needs. In addition to that, increasing online shopping and meal order opportunities in U.S. make people less likely to go outside even for daily needs. In contrast to the leisure time perspective in Turkey, according to American Bureau Labor Statistic 2015 data, socializing and communicating with friends and walking accounts for very small percentage of the average leisure time of Americans. It means that people generally much prefer to watch TV as a leisure time activity rather than going outside and entertaining with friends. This also can be a reason why pedestrian activity was observed less on Main St. Corridor than Inonu Blvd.

5.4. Findings From Site Interview

The site-interview-based data collection process involved semi-structured interviews, with open-ended and multiple-choice questions (23 with sub-questions, 30 questions in total) regarding street usage by people, design amenities on street, and social ambiance along the street. The interview questions consisted of three parts—descriptive questions addressing the interviewee's general profile in terms of gender, age, and education; core questions analyzing the vibrancy of the case study streets in user perception; and lastly, the general usage preference of people to case study streets. (See details of interview questions in Appendix). Each semi-structured interview work was done by asking interview questions to 30 interviewees face to face on the case study streets for around a half-hour. Semi-structured interview work was conducted on Main Street Corridor during a weekend on 27-28 May 2017 and on Inonu Boulevard during a weekend on 10-11 June 2017.

Before discussing findings attained from the interview responses, looking at descriptive statistic of interviewee in terms of age, education, and gender etc. is helpful for evaluating interview data in terms of street users' demographic characteristics. While the modal age group for Main Street interviewees was 25–34 years with 11 respondents, the dominant age group among interviewees on Inonu Boulevard was 18–24 years. If we look at the gender distribution, the female and male number ratio is equal (15 male, 15 female) for Inonu Boulevard while female male numbers ratio is 1/2 (10 female, 20 male) for Main Street (see table 5.4. (a)). If education level of interviewees is categorized holding bachelor's degree is relevant both for Main Street (13 people) and for Inonu Boulevard (11 people). When occupation information of interview participants is grouped into white collar and blue collar, the blue-collar occupation category is dominant for both case study streets (16 people on Main Street Corridor, 18 people on Inonu Boulevard).

Table 5.4. (a) Descriptive information of respondents of site interview on case study streets

	Dominant Age Groups	Gender	Education Level	Occupation
Main Street Corridor	18-24 years: 8 people (26%), 25-34 years: 11 people (37%) 45-54 years: 5 people (17%)	Female: 10 people (33%), Male: 20 people (67%)	High School: 11 people (37%) Bachelor's degree: 13 people (43%) Master's or PhD: 6 people (20%)	Blue Collar: 16 people (53%) White Collar: 14 people (47%)
Inonu Boulevard	18-24 years: 9 people (30%), 25-34 years: 8 people (26%), 35-44 years: 5 people (16%).	Female: 15 people (50%), Male: 15 people (50%)	High School: 8 people (26%) Bachelor's degree: 11 people (37%) Other: 10 people (33%)	Blue Collar: 18 people (60%) White Collar: 12 people (40%)

Q.7. Have you ever considered living in this area, within walking distance (from 5 to 20 minutes walking distance) of Main Street/Inonu Boulevard?

The main aim behind this question is to reveal whether people desire to live around these streets beyond seeing these places as spots for socializing and doing leisure activities. People participating in the site-interview on Main Street tended to live around the case study streets (22 people responded Yes) while 14 people on Inonu Boulevard responded Yes. People on Main Street responding yes stated as reasons: “lots of stores and things to do,” “being close to downtown life and events,” and “it is a nice and pleasant environment.” However, the people responding yes on Inonu Boulevard specified “better location” and “easy to access everything and shopping” as main reasons. As differences between people on Main Street and Inonu boulevard, it can be claimed that people on Main Street consider stores, activities, and attractiveness of downtown life, whereas people on Inonu consider location and accessibility for everything in determining a place to live. People responding No for this question on both case study streets specified “expensive rent price,” “traffic and finding parking spot,” and “I like my neighborhood” as main reasons. It is clear that the reasons for not desiring to live in these streets showed similarities.

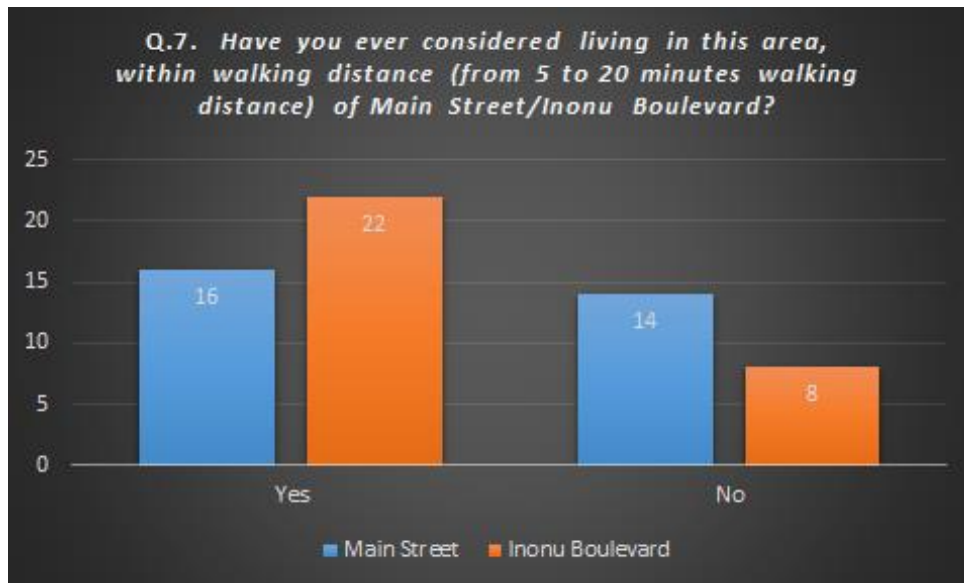


Figure 5.4. (a) shows interview results for Question 7.

Q.8. Do you feel safe while walking or hanging out on Main Street/Inonu Boulevard?

The literature attaches great importance to making streets secure places as enhancing vibrancy and attracting people to the street (Jacobs 1961, Newman 1972, Hunter and Terry 1982, and Painter 1996). “This is something everyone already knows: A well-used city street is apt to be a safe street. A deserted city street is apt to be unsafe” (Jacobs 1961, 33). When looking at the result of Q.8, most of the participants stated that they feel secure on both case study streets. Those people specified the existence of police and security staff around them as main reasons for feeling safe (27 people for Main Street and 20 people for Inonu Boulevard) (see Fig. 5.4. (b)). It can be claimed that seeing police or security staff directly affects people’s perception about safety, according to similar interview responses. As mentioned earlier in section 5.2.1, holes and breaks ups on the sidewalk affected the perception of people on Inonu Boulevard regarding safety.



Figure 5.4. (b) shows interview results for Question 8.

In addition to sidewalk issues, two-way, four-line traffic flow was another reason for not feeling safe, according to people on the Boulevard. The literature shows that traffic calming implementations can be used to make streets a pedestrian-friendly place. Therefore, improving traffic calming implementations and enhancing sidewalks on the boulevard could be a tool for attracting more people and increasing walkability.

Q.9. How much do street amenities, such as sidewalks, pavements, street furniture, lighting, trees etc., affect your decision to come and to walk on the site?

People on Main Street Corridor consider street design amenities such as pavement, lighting, and street trees and landscaping in walking on the street and spending time much more than people on Inonu Boulevard. While 15 people on Main Street responded a lot, just 5 people on Inonu Boulevard responded a lot. Most of the participants on the boulevard stated that street design amenities do not affect their decision to come to the site. If considering the data from pedestrian counting on weekday

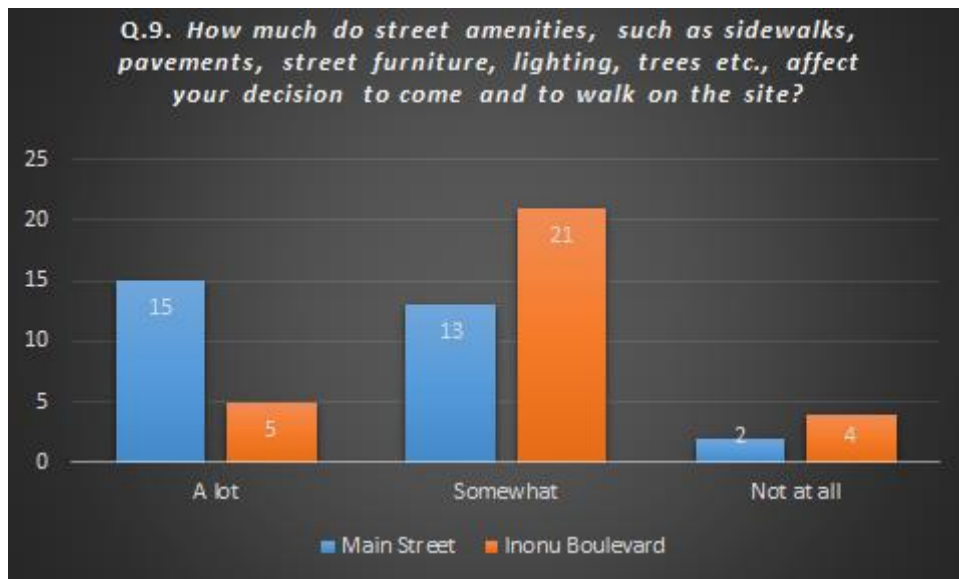


Figure 5.4. (c) shows interview results for Question 9.

and weekend, Inonu Boulevard has more pedestrian on weekdays and weekends, morning, noon, and evening, than Main Street has. Therefore, if people on the Boulevard don't consider street design elements as much as people on Main Street do, it could be claimed that the Boulevard is more engaged in the daily life of the city and has a more vital public life than Main Street so the Boulevard has more pedestrians at any time of the day.

Q.10. Please rate from 0 to 5 the strength that the following street elements influence your decision to walk on this street?

Participants on the Main Street Corridor gave the street elements higher ratings overall than did people on Inonu Boulevard. The street skyline, mixed-use activities; variety of entertainment, leisure, and cultural amenities, and sidewalks are the highest three elements by people on Main Street Corridor (124 the skyline, 119 mixed-use activities, and 115 sidewalks respectively see Fig.5.4. (d).). However, stores, display windows, and street skyline

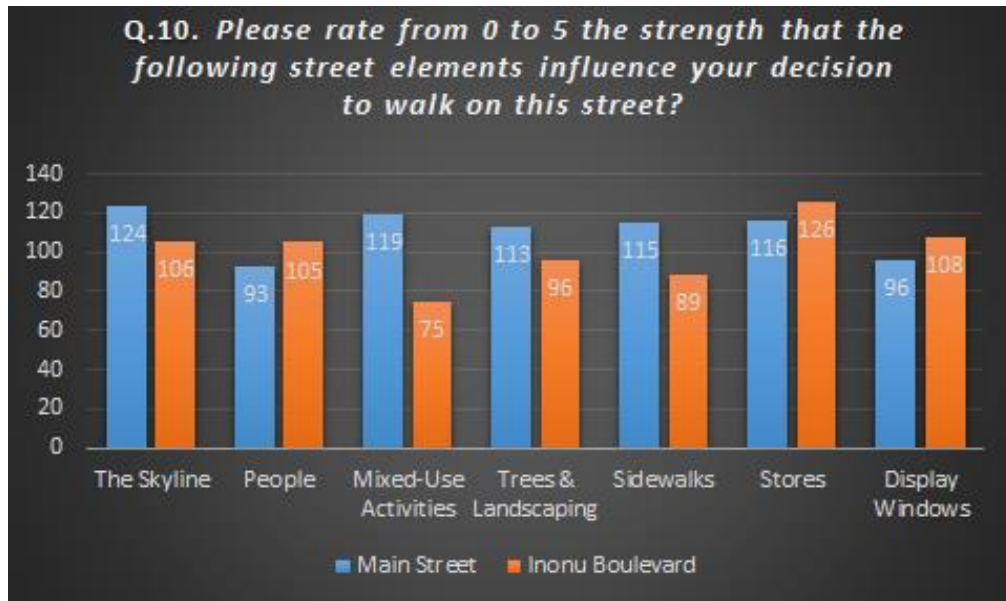


Figure 5.4. (d) shows interview results for Question 10.

come into prominence as the highest rated street elements (126 store, 108 display windows, and 106 street skyline, respectively for the Boulevard).

It can be stated that overall, Fig. 5.4. (a) shows that street users on Main Street attach importance to street design amenities such as trees and landscaping, street skyline, and sidewalk etc. and entertainment and leisure time activities much more than participants on Inonu Boulevard. As pedestrian counting data discussed in the previous question, stores rated as the highest street elements on the Boulevard for influencing users' decision to come. This reveals that the Boulevard serves people's daily needs rather than serving people for leisure time activity and it generates more pedestrians on the sidewalks at any time of day than on Main Street.

Q.11. In your opinion, which statement best describes your perception of Main Street/Inonu Boulevard?

Most of the participants on both streets responded chose the “very vibrant” option among multiple choices offered in this question (18 people for Main Street Corridor; 19 people for Inonu Boulevard, see Fig.5.4. (e)). In other words, most of the participants responded that the street was a very vibrant place verifying the initial claim of this

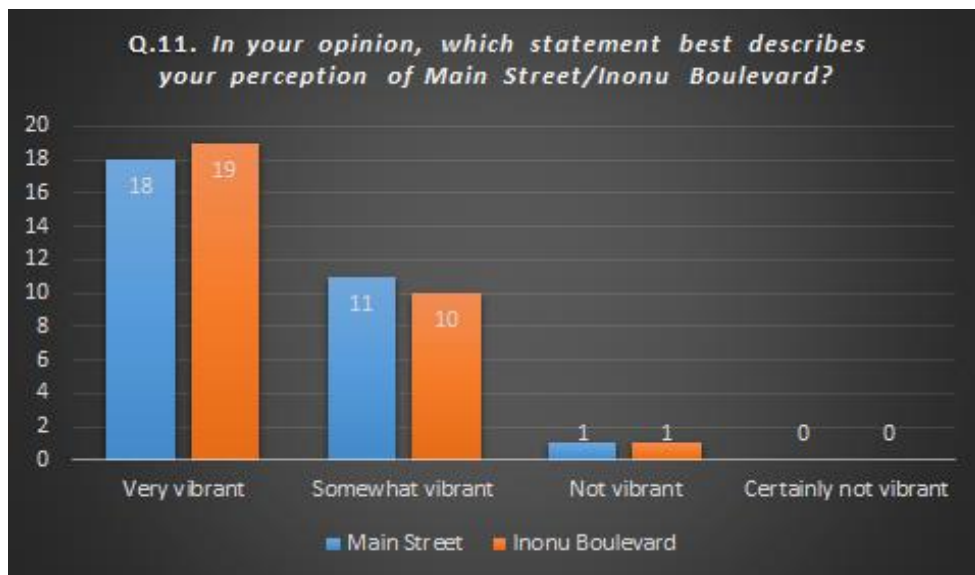


Figure 5.4. (e) shows interview results for Question 11.

research that the case study streets are vibrant street examples. Moreover, participants' reasons regarding vibrancy in the following sub-question allowed this research to compare users' perception and factors affecting their perception about vibrancy specific to Main Street and Inonu Boulevard.

If respondents' answers are grouped into a variety of activities, different kinds of stores, restaurants, and bars, crowdedness, friendly people, and ambiance are the major reasons that make Main Street Corridor a vibrant place. For instance, one participant stated that “there is always something going on here. You can find a lot of activities to spend time. You cannot get bore while you are around here.” Another participant stated

that “it is crowded and you can see lots of people around here. People seems pleasant and friendly. You can see lots of people enjoying and interacting with each other especially around Sundance Square.” Another participant specified the reason as “the street has a very hospitable especially buildings look historical, which makes me feel good.” Another participant said that “there are lots of restaurants and bars. You can see many people eating and entertaining. Especially at nights, there is a live music in Sundance Square.”

As understood from the respondents' answers, people on the Main Street Corridor consider the variety of activities, such as eating, entertainment, shopping etc., the crowdedness of the place, the mood of other people, and design and quality of the built environment as reasons for vibrancy of place in their perception.

For Inonu Boulevard, participants' responses about the boulevard's vibrancy centered on crowdedness, meeting places, shopping and entertainment places, historical sites, and its central location in the city. For example, one participant explained the reason as “you can see a number of people around here every time. The street is always full with people during late time of night.” Another participant stated that “you can see children with parents, youth, and elderly people around here. It is a meeting place for all residents of the city. While you are walking here, you can see your friends, relatives, and acquaintances whom you have not seen for a long time.” Another participant points out that “the street reflects our culture and who we are. You can see many historical buildings that remain from our ancestors around here. Those buildings remind me of the identity and history of our community.” Another participant stated that “you can find many stores and restaurants or cafes to eat and drink local stuff. The street offers a variety of options for stores and restaurants ranging from cheapest to most expensive ones or ranging from local brand to luxury brand. You can eat or shop according to your money or personal

preference.” Those quotations from participants’ responses show that socializing with other people in the place, finding diversity in stores or eating/entertainment amenities, the cultural background of the site and its significance to individuals, and seeing other people while hanging out hits user’s perception regarding vibrancy of place.

Just one participant in both case study streets expressed the opinion that these streets were not a vibrant place. The participant expressing this opinion about Main Street stated that “The street seems very busy and noisy. There is no attraction for me. It seems a typical downtown.” The other participant expressing this about Inonu Boulevard pointed out that “the street is too crowded and it is a noisy place. I like a deserted and quiet place to hang out. Also, there are no activities I am interested in doing here”.

Q.13. In your experience, what is the most memorable aspect of this street?

This question directly addresses the memorable aspects of case study streets in the users’ perception. For Main Street Corridor, Sundance Square Plaza is the most memorable aspect of the site with 13 responses (see Fig. 5.4. (f)). In addition to Sundance Square Plaza, a variety of stores and eating/entertainment sites along the street come into prominence as the second highest memorable part of Main Street. If looking at Inonu Boulevard, historical buildings around Sivas Urban Square create the most memorable aspects of the site with 12 responses. Besides historical buildings, crowdedness of the site is rated as the most memorable aspect of the site with the second highest rate by participants.

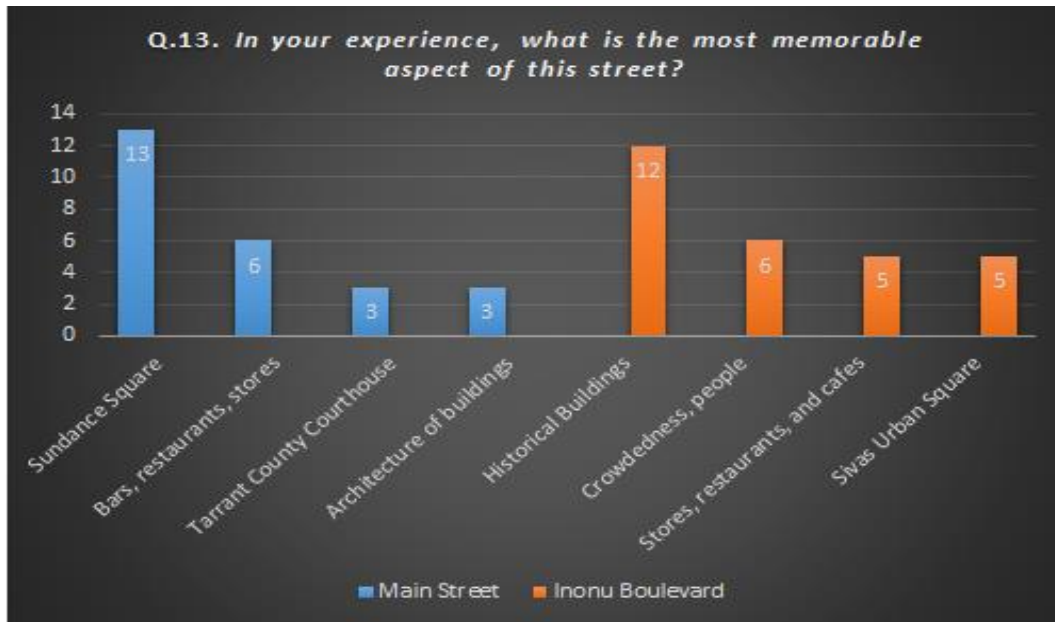


Figure 5.4. (f) shows interview results for Question 13.

Q.15. Do you feel a sense of belonging or attachment to the street and the site?

This question tries to investigate whether these two vibrant street examples initiate a sense of belonging or attachment to the site among users. Approximately half of the interviewees indicated that they have to some degree a sense of belonging or attachment to the site on both case study streets. For the Main Street Corridor, historical ambiance and familiarity with the site or growing up around the site are the main reasons for feeling a sense of belonging. Similarly, participants on Inonu Boulevard, feeling a sense of belonging to the site also shows familiarity with the site or growing up there as main reasons. Another remarkable finding in this question's responses, for both case study streets, was the response that "it is not my neighborhood." This was the common reason for not feeling a sense of belonging to the site. It is claimed that a place in which people live and make daily contact with people and the surrounding environment creates

a sense of belonging in individuals and increases attachment to the site more than any public space for doing activities and spending leisure time.

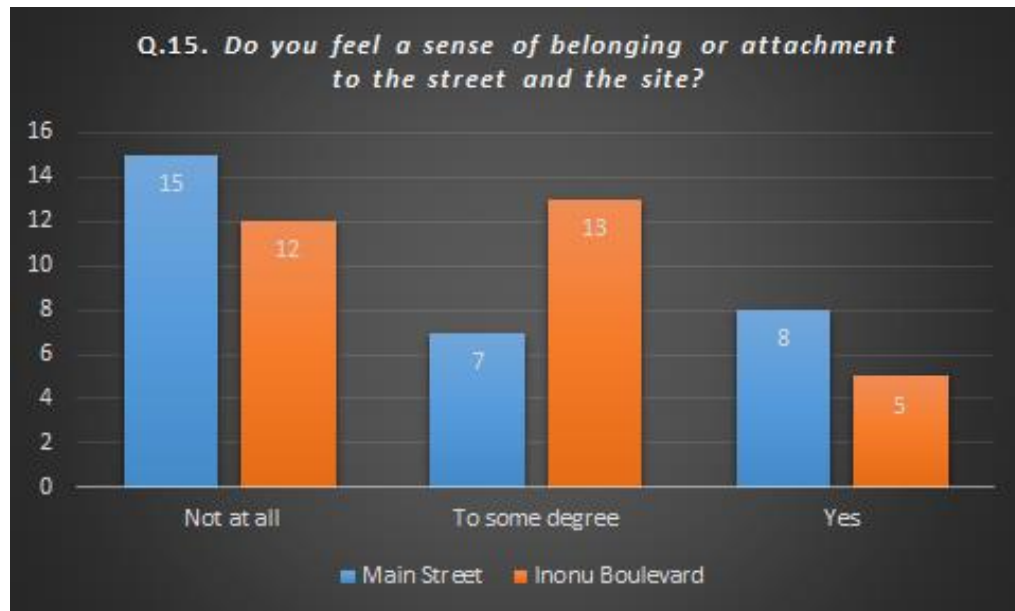


Figure 5.4. (g) shows interview results for Question 15.

Q.16. if the city allows food vendors along the street, would you buy lunch or dinner from them?

The literature mentions street food, especially in downtown areas, as a way of enhancing the vibrancy of space, attracting people and visitors to streets, and fostering sidewalk culture (Richard 2002, Haven-Tang and Jones 2005, and Newman and Burnett 2013). “If you want to seed a place with activity, put out food. ... you will almost invariably find a food vendor at the corner and a knot of people around him—eating, schmoozing, or just standing” (Whyte 1980, 50). This question address whether allowing food vendors on the case study streets will bring more people on the streets to eat lunch or dinner and increase the vitality of the sites or not. According to responses, street food can enhance the vitality of Main Street Corridor and can be catalyst for the attraction power of the

street. Those participants showed “cheap,” “tasty,” “convenient,” and “variety” as features of street food that affect their decision to choose it.



Figure 5.4. (h) shows interview results for Question 16.

On the contrary, the majority of participants on Inonu Boulevard find street food unhealthy and unsanitary, so they will be unlikely to buy lunch or dinner from food vendors on the street (see. Fig. 5.4. (h)). Overall, street food could enhance the vitality of Main Street, attracting more people to try and taste from food vendors on the street, especially during lunch hours. However, according to interview responses, it is assumed that street food would not work for Inonu Boulevard as it would for the Main Street Corridor.

Q.18. What time of day do you prefer to walk on Main Street/Inonu Boulevard?

On the Inonu Boulevard, the preference of people to come and walk on the site is different than on the Main Street Corridor. Afternoons and evenings are the most preferable time to come to Main Street, according to responses to this question (18 response for evenings and 9 responses for afternoon). This correlates with initial findings from site observations indicating that people mostly start to come to the site after noon

time to do leisure time activities and hang out and that the peak-time for hanging out is evenings. For Inonu Boulevard, it is hard to say a most preferable time to come to the site according to responses (10 evenings, 10 afternoon, and 7 noon (lunch time) see Fig. 5.4. (h)). This diversified user preferences to come to the site can generate more people on the site every part of the day. Moreover, it could be claimed that Inonu Boulevard has more pedestrians on sidewalks in every part of the day than Main Street has because of this diversified time preference.

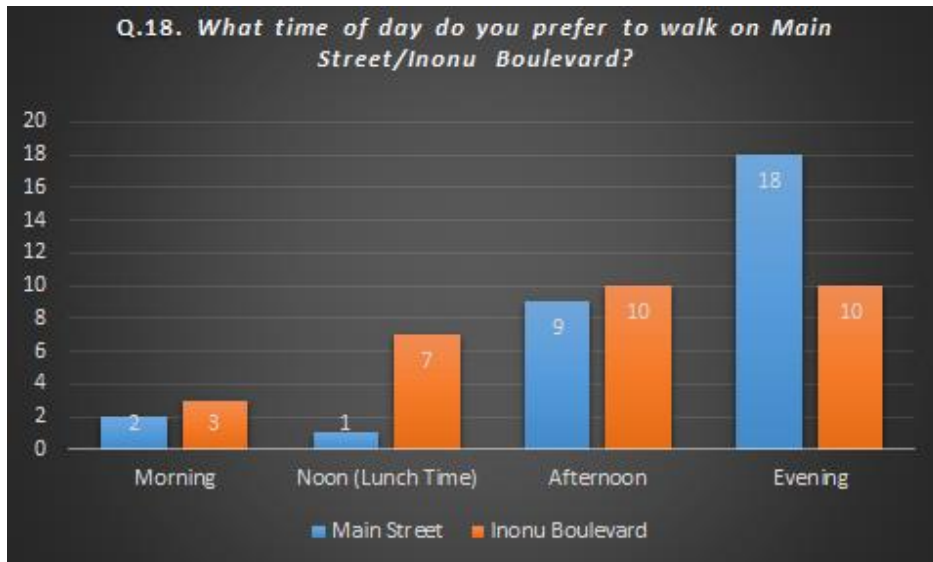


Figure 5.4. (i) shows interview results for Question 18.

Q.19. Do you usually walk alone or with someone else?

Who people come and spend time with is as important as what kinds of activities people do on the street in revealing the vitality. Therefore, in the site interview the question regarding with whom you walk on the street was asked to respondents. For both case study streets, most of the people answered that they walk on the street with either family and relatives or friends (12 response with family and 13 responses with friends on Main Street, 12 responses with family and 14 response with friends on Inonu Boulevard).

This finding matches up with the findings from site observations regarding many of families with children and people in groups while walking or hanging out on the streets. Furthermore, people walking on the street with families somehow shows that both of case study streets seem like safe public spaces because crime fears, such as robbery and burglary etc., discourage people from bringing their family to any place.

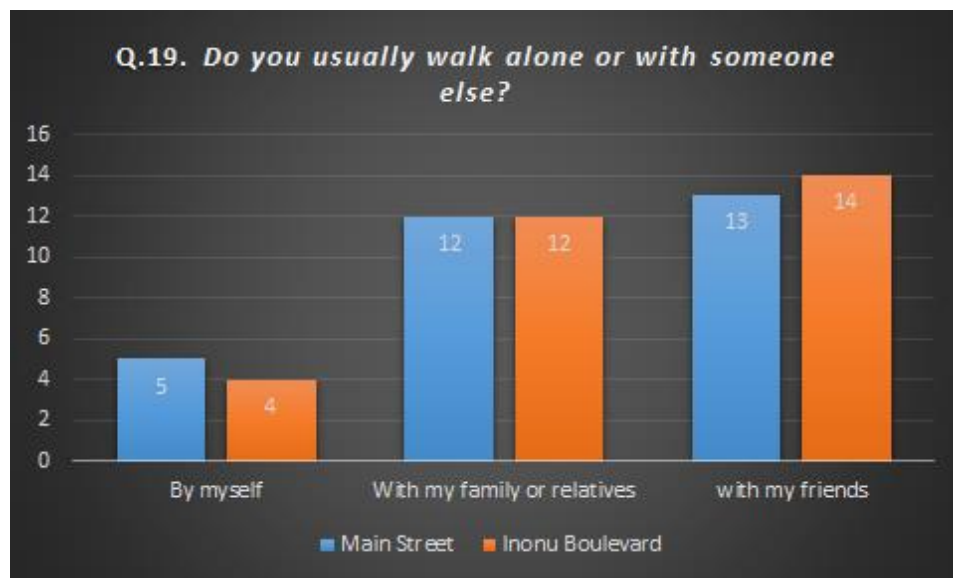


Figure 5.4. (j) shows interview results for Question 19.

Q.20. When you walk on this street what other things do you most often do?

Entertainment or eating places located on Main Street Corridor provide a dominant activity generation spot according to interview responses. However, it can be shown that stores along Inonu Boulevard are the strongest street amenity for attracting people. On the contrary to Inonu Boulevard, shopping is the third highest chosen activity for Main Street Corridor with 6 responses (see Fig. 5.4. (j)).

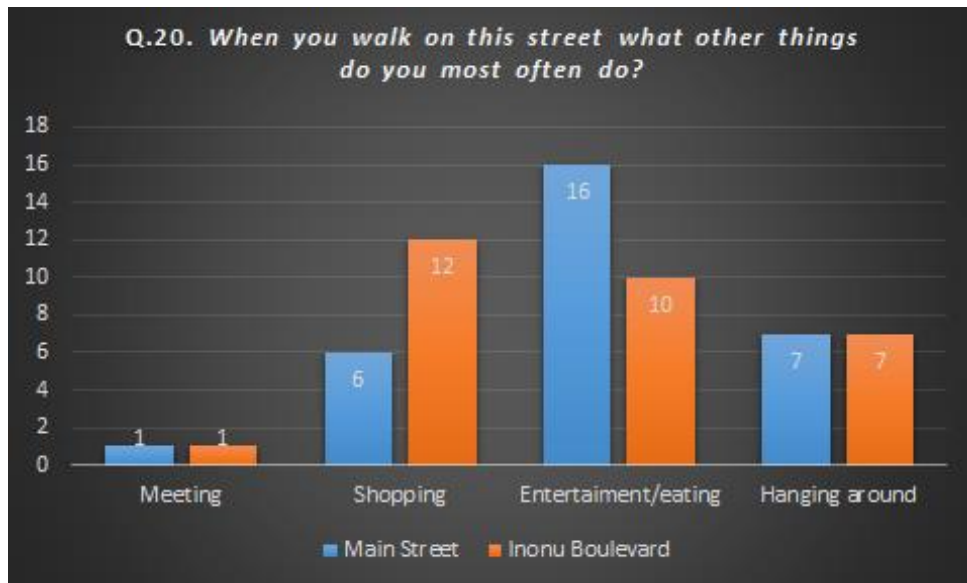


Figure 5.4. (k) shows interview results for Question 20.

Q.21. How much time do you usually spend when you come to this street?

The site interview addressed how much time people spend on the case study streets because this, along with the kinds of activities they do, is accepted as a clear indicator or measurement of vitality. Most of the participants on Main Street indicated that they just spend a few hours when they come to the street. Responses of less than an hour or half of day are considerably lower than responses of a few hours. However, although a few hours are the prevalent response for Inonu Boulevard too, responses about how much time people spend on Inonu Boulevard is more varied than for Main Street Corridor. The number of people responding less than hour and more than half of day is considerable in comparison to Main Street Corridor. This diversified response about how much time people spend on Inonu Boulevard can be accepted as a strength of the Boulevard for vibrancy. It can be claimed that the number of stores along the Boulevard serving to meet people's daily needs cause people to respond "less than an hour" more often than people on Main Street.

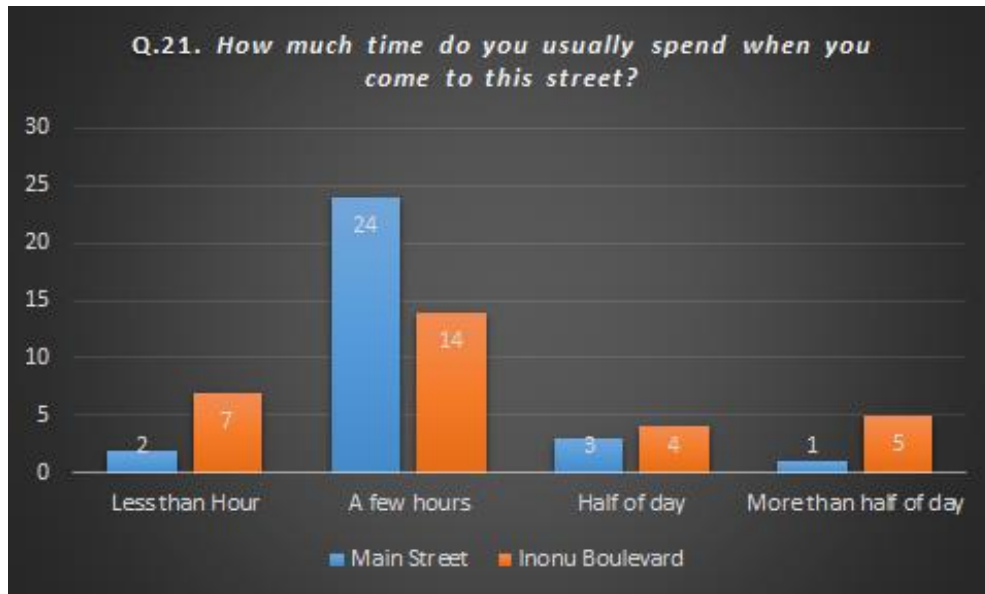


Figure 5.4. (I) shows interview results for Question 21.

Q.22. Do you usually have friendly encounters or conversations with store owners or store employees while shopping or walking on this street?

This question address whether people on the case study streets tend to make social contact with other people and easily interact with social life along the streets. For both case study streets, it can be said that people tend to have social interaction with other people because of the remarkable number of responses indicating having friendly encounters or conversations with store owners or employees while shopping or walking (22 response for Main Street, 23 responses for Inonu Boulevard). This can be accepted as one of the clear similarities between case study streets.



Figure 5.4. (m) shows interview results for Question 22.

5.5. Summary of Chapter

In this chapter, findings obtained from data gathering methods conducted on the case study streets were revealed. Findings from reconnaissance reveals that Main St. Corridor has well maintained street design elements and a more attractive built environment than Inonu Blvd. (see Table 5.5 (b)). Moreover, retail stores are more diversified on the Boulevard than on the Main St. Corridor. The concentration of these stores on the Boulevard along with other stores adjacent to downtown area plays a significant role in making the site a commercial and a retail node and in attracting people from the entire province to the site.

Existence of police or security on the street comes into prominence as striking similarities for affecting street users' sense of vibrancy on both streets (see Table 5.5 (a)). For another striking similarity between case study areas, parking and rent price are significant factors for people's preference of where to live.

For participatory observation findings, another remarkable finding (see Table 5.5. (b)) is that street users and store owners or employees on the Boulevard tend to take care of sidewalks and to have a more territorial attitude to the street than on the Main St. Corridor. Besides that, people on the Boulevard tend to have more social interaction with other people and is a significant finding of the participatory observation. Furthermore, both weekend and weekday pedestrian activity at any time of day on the Boulevard is stronger than on the corridor and can be shown as one of the major findings attained from the site research.

Table. 5.5 (a) Similarities between findings obtained from case study streets.

Similarities	
Physical & Amenities	<ul style="list-style-type: none"> • Open space or an urban square along the street is a catalyst for increasing vibrancy and they have an effect on bringing more people to the street.
Security & Social	<ul style="list-style-type: none"> • The existence of security and police on the site directly affects users' perception toward the street as a secure, vibrant place. • People on the case study streets find it important to have social interaction with other people while doing an activity on the site.
Life Style & Culture	<ul style="list-style-type: none"> • People on case study streets tend to come and spend time with their families or friends. • Case study streets have not initiated a strong sense of belonging or attachment between users and the streets, as people tend to have sense of belonging or attachment to where they live. • Rent price and parking spaces came into prominence as common considerations between two case study sites.

Table. 5.5 (b) Differences between findings obtained from case study streets.

Differences		
	Main Street Corridor	Inonu Boulevard
Physical & Amenities	<ul style="list-style-type: none"> Pavement, street furniture, lighting, trees, and building facades have more effect on people's decision regarding vibrancy on Main Street. Street art amenities such as monuments and statues are a significant catalyst for attracting people around them on Main Street. Allowing food vendors along the Main Street Corridor can be a catalyst for increasing street vibrancy and attracting more people to the site. 	<ul style="list-style-type: none"> Pavement, street furniture and other street design amenities are not strong factors affecting street users' vibrancy perception on Inonu Boulevard. Existence of historical buildings or historical value of the site is more significant for people on the Inonu Boulevard and contributes to the vibrancy of the site.
Economic and Shopping Culture	<ul style="list-style-type: none"> People tend to shop at big box retailers and to shop online rather than going independent stores on the street. 	<ul style="list-style-type: none"> People tend to use Independent or domestic chain stores on downtown streets for daily needs rather than big box retailers located on outside of inner-city.
Security & Social		<ul style="list-style-type: none"> People (passersby, store owners or employees) tend to have more territorial behavior and control of sidewalks on the street.
Lifestyle & Culture	<ul style="list-style-type: none"> People on Main Street most often spend a few hours on the street while doing activities or walking. People on the Main Street Corridor prefer a place to live with a variety of stores and activities to do, where people easily reach out and public life flourishes with many public events and entertainment activities throughout the year. 	<ul style="list-style-type: none"> The preference of people for spending time on Inonu Boulevard has a diversified range from less than hour to more than half of day. People on Inonu Boulevard consider a place to live where it is a node for accessing other parts of the city and their work place, with amenities meeting the daily needs of people, such as shopping and paying the bills etc.

If analyzing the responses for open-ended questions, there are some striking differences and similarities in street users' perception. At first, "rent price" and "finding a parking spot" constitute the theme of interviewees' responses (see Table 5.5 (c)). For both streets, people attach importance to affordable rent and easily finding a parking spot. For Main Street Corridor, people consider downtown life and being close to events held in downtown areas in choosing where to live, whereas people on the Boulevard state the location of the Boulevard and to be able easily reach everything and meet daily needs. The responses from people on the boulevard matches with findings about consumers' preference of proximity in shopping in Turkey as mentioned in the literature review section.

Another striking finding from open-ended question responses is that people on the Main Street Corridor consider restaurants, bars and other entertainment destinations to spend time as a vibrancy factor in their perception. However, people on Inonu Boulevard indicate that the existence of other people on the site and encountering friends or acquaintances as a significant aspect of the street in their vibrancy perception. As mentioned in the literature review, walking with friends or relatives is a common leisure time activity in Turkey. Downtown areas (called "Carsi" in the Turkish Language) are important places in Turkish culture because people tend to socialize with others by hanging out while shopping rather than shopping in malls, at big box retailers, or online.

Table. 5.5 (c) Responses obtained from open-ended questions in site interview.

Questions	Responses			
	Main Street Corridor		Inonu Boulevard	
	YES	NO	YES	NO
“Why is the street a vibrant place or not?”	“lots of restaurants, bars, and activities to spend time” “you cannot get bored while you are around here”		“you can see a number of people around here every time” “a variety of options for stores and restaurants ranging from cheapest to most expensive”	
	YES	NO	YES	NO
“Is this street a secure public space or not ?”	“police and security staff around here”	“people and Crowd”	“police and security staff around here”	“holes on sidewalks and cars on the road”
	YES	NO	YES	NO
“Why would you like to live around here or not?”	“Being close to downtown life and public events” “lots of things to do”	“expensive rent price” “traffic and finding parking spot”	“better location” “easy to access everything and shopping”	“expensive rent price” “traffic and finding parking spot”

The following chapter provides overviews of this thesis work and finalizes the findings by answering the questions this study asked at the beginning and correlates initial research claim.

Chapter 6 Conclusion

6.1. Introduction

This thesis intends to address the question of what makes a street a vibrant public place. As a result of the analysis of the field-work, and collected data, the key findings and lessons from two different vibrant street examples are shared in this chapter. Furthermore, initial research questions of this study are re-addressed with an effort to broadly seek answers for each of them. This chapter ends with suggestions for the two case study streets for fostering vibrancy and making them more attractive public spaces as well as provides suggestions for future research.

6.2. Research Summary

This research aims to find an answer for what makes a street a vibrant public place and to reveal the factors fostering vibrancy on street as a public realm by analyzing two case study examples. There are three research questions forming the scope of objectives in this research;

1. What are the factors promoting vibrancy on the street?
2. To what extent do these factors affect users' perception of street vibrancy?
3. What are the similarities and differences in users' perception toward street vibrancy between two case study areas?

To address the above-mentioned research questions, two case study streets, one from downtown Fort Worth, Texas, USA, and other from downtown Sivas, Turkey, were chosen as research sites. The justification of this research stems from the author's interest as a native Turkish citizen who has worked as a planner in Turkey and gained a comparative understanding of Sivas and a North Texas city, Fort Worth. The current literature regarding street vibrancy and public life on the street was reviewed. Some key criteria or features most mentioned in the literature for street vibrancy were identified to

determine what or which issues would be investigated on the case study sites. To analyze the findings obtained from the case study streets and reveal the factors making streets more attractive public spaces, comparative research was chosen as a main research approach. To collect data necessary for accomplishing the initial research objectives, site reconnaissance, participatory observation, and semi-structured interviews were utilized as main data collection techniques. In the analysis section findings obtained from data analyses were documented through tables, graphs, and pictures taken during the site reconnaissance to reveal differences and similarities between the American and Turkish street case studies.

6.3. Research Questions

6.3.1. *What are the factors promoting vibrancy on the street?*

Urban scholars' claims and findings regarding factors fostering vibrancy on the streets were grouped into six main elements as Compactness and Built Environment—mixed-use and building size, density, ground floor uses, street furniture, and street trees; Traffic Management and Pedestrianization Implementations and Security; Street Food; Culture of Leisure Activities; Function of CBD or Downtowns; and Street as a Festival, Celebration, and Parade Place. To understand the vibrant street notion and improve the above-mentioned six elements, the definition of a vibrant and livable street was investigated in the literature. Those factors helped frame the case study research as well as to investigate users' perception of vibrancy and other aspect of streets as public space on the case study streets.

6.3.2. To what extent do these factors affect users' perception of street vibrancy?

After determining factors fostering street vibrancy, the second question raised in this study was to what extent do these factors affect users' perception of street vibrancy. Conducting the data interpretation process in a comparative manner allowed for an understanding regarding to what extent factors or elements mentioned by the literature affect street users' perception. The literature attaches great importance to street design amenities such as, sidewalks, street furniture, street trees, lighting, and building size, etc. However, according to findings obtained from site reconnaissance and observation, pedestrian counting, and site interviews, it was observed that street design based factors did not have a strong effect on users' perception on Inonu Boulevard as compared to Main Street. Another remarkable finding for answering this question is street food. The literature also shows street food as a tool for attracting people and making the street or public space vibrant. Findings from case study streets illustrated that street food would foster vibrancy on Main Street and attract more people to the site. However, findings showed that street food would not be a tool for promoting vibrancy on Inonu Boulevard. Overall, this study shows that many of the design and activities mentioned in the literature don't affect vibrancy to the same extent everywhere because local culture and lifestyle, urban form, and economic functions as well as mobility modes in the cities affect how individuals value and perceive factors influencing street vibrancy.

6.3.3. What are the similarities and differences in users' perception toward street vibrancy between the two case study areas?

As one of the research objectives, this study investigated similarities and differences in users' perception toward street vibrancy between the two case study areas through site-interview and site observation data gathering methods. The existence of

security or police on the street directly affects street users' perception about a place as vibrant and secure. Furthermore, people on the case study streets tend to come to the street with family or friends and spend time together. Both case study streets have not initiated a remarkable sense of belonging or attachment between them and people. Rent price and parking space availability in living place preference was found as another striking similarity between case study street users.

The foremost striking difference in the users' perception is that street design elements are a major consideration for people on the Main St. Corridor to come and spend time on the street, whereas people on Inonu Blvd. consider proximity to destinations meeting daily needs.

6.4. Correlation of the Research Claim

Pedestrian counting data shows that Inonu Boulevard has three to four times more pedestrians on the sidewalk at any part of the street at three different parts of day (morning, noon, and evening) during the weekday and weekend than at any part of Main Street Corridor (see Table 5.3. (a)-(b).). If findings from site reconnaissance and observations are considered, the street design and built environment features of the Main Street Corridor are more qualified and diverse than those of Inonu Boulevard. Besides that, the population of the City of Fort Worth is double the population of the City of Sivas. If looking at the function of downtown Fort Worth, it represents a business center that includes national or international finance, banking, science and technological, and insurance companies and headquarters for DFW and surrounding other regions. Also, retail activities selling expensive boutique-type or specialty retail (most likely to survive in the downtown) serve all cities in the DFW Metroplex. Moreover, both to attract visitors in

the surrounding regions to the downtown and the automobile being the dominant transportation mode in the city of Fort Worth (92.9%) a considerable amount of space (46,000 parking spaces) is devoted to parking for those using personal car as transportation mode. By looking at population numbers, street design and built environment quality of the site, the regional function of the downtown in DFW Metroplex, and the characteristics of retail activities on the site, it would be expected that the Main Street Corridor would generate more people on the sidewalks and attract more people to the corridor than to the Boulevard.

However, pedestrian counting findings indicate the exact opposite to the above expectation. It is believed that local retail stores serving daily needs of the community and commercial activity of the city along or nearby Inonu Boulevard play a major role in bringing more people to the site and keeping the boulevard's sidewalks more crowded and vibrant at day and night than the street design elements and built environment quality of the Main Street Corridor. Also, it can be said that low automobile ownership (approximately 0.8 per household) and more pedestrian and transit reliant mobility (45.7% public transportation and 2.3% walking) in the city supports these mix of retail and service destinations serving daily needs. Furthermore, downtown as a socializing spot, shopping destination and place to walk with friends on the streets, especially inner-city streets also help draw pedestrians to Inonu Boulevard, as these are common leisure time activities in Turkish culture. These findings correlate to the claim of the thesis research in which the quality and diversity of street design elements such as sidewalks, street furniture, street trees, and buildings facades, etc. are not a strong factor for increasing pedestrian activity and flourishing public life on the sidewalks in comparison to local activities on the street serving and meeting daily needs of the individuals and the community.

6.5. Lessons for Urban Planners in Case Study Cities

Findings obtained from case study streets include some key lessons for urban planners in case study cities regarding how to make the street a vibrant public place in downtown areas by enhancing public life on the sidewalks and attracting more people to the street.

Besides enhancing public life on the sidewalks and creating a crowded and busy street by attracting more people at different times of the day, it is believed that independent retail stores along the Inonu Boulevard play a role in creating a more social environment and bringing people together on the street as well as initiating territorial behavior mentioned by Newman (1972) and a sense of controlling of the street among people. While conducting site observations, store owners or employees standing in front of the stores and watching passersby and greetings acquaintances, sometimes having quick conversations just in front of the door or with passersby on the sidewalk greetings each other and stopping to chat, was frequently experienced along Inonu Boulevard. Therefore, keeping diversity of independent small retail stores along or nearby the Boulevard and preventing major retail discounters such as BIM, Carrefour, and Migros etc. from displacing small store owners will be an efficient strategy for protecting the vibrancy of the Boulevard. Also, protecting independent small retail stores in the downtowns can be a way to reduce the impact of globalization and the developing Turkish economy's pressure on transforming Turkish cities in terms of cultural and spatial characteristics.

Moreover, it is believed that the greater number of residential units along the Boulevard in comparison to the Main Street Corridor contributes to keeping the boulevard a vibrant public place, busy during both days and nights. This is another significant lesson from this research to urban planners in the City of Sivas regarding how to keep

the boulevard alive at day and night. Developing feasible strategies and plans for urban regeneration projects as to keep current residents on the site could be a way to protect downtown Sivas vibrant and busy at day and night and could increase livability as well.

The last suggestions for urban planners in the City of Sivas is to start a membership process for joining CittaSlow international network or a similar movement aimed at protecting local culture and domestic commercial and retail activities. Becoming a member of this movement can be a significant step for how to protect compact urban form and local retail activity based in the downtown area. This organization can provide more efficient technical supports for increasing livability of the downtown.

6.6. Future Research

The following research questions are proposed as worthy of future research

1. What are the factors making a street children and women friendly public place by comparing Main Street Corridor, Texas, and Inonu Boulevard, Turkey examples?
2. Investigating the factors affecting the vitality of public squares by comparing Sundance Square Plaza, Texas, USA and Sivas Urban Square, Sivas, Turkey.

APPENDIX A Site Interview Questions

Descriptive Questions

1) How old are you?

- a) 18-24 b) 25-34 c) 35-44 d) 45-54 e) 55-64 f) ≥ 65

2) What is your gender?

- a) Male b) Female c) Other

3) What is your occupation?

.....
.....

4) What is your highest education level?

- a) high school b) bachelor's degree c) master's or PhD d) other.....

5) Do you live within the walking distance (say, from 5 to 20 minutes walking distance) of Main Street?

- a) Yes b) No, please answer the following question **5.1** c) Used to live within walking distance of Main Street, please answer the question **5.2**

5) 1. Where do you currently live?

- a) in Downtown Fort Worth b) in the city of Fort Worth c) in Dallas Fort Worth Metroplex
d) outside Dallas Fort Worth Metroplex, please jump to question **7**

5) 2. If you used to live within the walking distance of Main Street, why did you move?

.....
.....

Core Questions

PART I.

6) If you are living along the Main Street, how satisfied are you with living this street?

- a) very satisfied b) satisfied c) neither satisfied nor dissatisfied (neutral) d) dissatisfied
e) very dissatisfied

6) 1. Could you briefly state some reasons for your satisfaction level response?

.....
.....

7) Have you ever considered living in this area, walking distance (from 5 to 20 minutes walking distance) of Main Street?

- a) Yes, why? Reason or reasons.....

.....

b) No, why? reason or reasons.....
.....

8) Do you feel safe while walking or hanging out on Main Street?

a) Yes, please tell me why?.....

b) No, please tell me why?.....

9) How much does street amenities, such as sidewalks, pavements, street furniture, lighting, trees etc., affect your decision to come and to walk on the site?

a) a lot b) somewhat c) not at all

10) please rate from 0 to 5 the strength of [.....] in influencing your decision to walk on this street.

a) the skyline b) people c) mixed-use activities; a variety of stores, businesses, and foods

d) trees & landscaping e) sidewalks f) stores g) display windows

h) if you have others, please specify.....

11) In your opinion, which statement best describes your perception of Main Street?

a) It is a very vibrant place. b) It is a somewhat vibrant place. c) It is not a vibrant place

d) It is certainly not a vibrant place

11) 1. (if you responds a or b) please list the reasons that influence your perception of Main Street as a vibrant street:

.....
.....

12) In your opinion, is Main Street a socially inviting place, where street users enjoy interacting with passersby and watching other people?

a) not at all b) to some degree c) yes

12) 1. please list the reasons that influence your perception of Main Street as a public space

.....
.....

13) In your experience, what is the most memorable aspect of this street?

.....
.....

14) In your experience, what are the main obstacles that keep you from coming to the site?

.....
.....
15) Do you feel sense of belonging or attachment to Main Street and site?

a) not at all b) to some degree c) Yes

15) 1. please, specify the reason or reasons for above response
.....
.....

16) If the city allows food vendors along the street, would you buy lunch or dinner from them?

a) Yes, I definitely would. b) I might. c) No, I don't think so.

16).1 please explain your above responds.
.....
.....

PART II.

17) How often do you walk along Main Street?

a) first time b) every day c) a few times a week d) once a week e) once a month

18) What time of day do you prefer to walk on Main Street?

a) morning b) noon (lunch time) c) afternoon d) evening

19) Do you usually walk alone or with someone else?

a) by myself b) with my family or relatives c) with my friends

20) When you walk on this street what other things do you most often do?

a) Meeting b) shopping c) entertainment/eating d) hanging around
e) other, please state
.....
.....

21) How much time do you usually spend when you come to Main Street?

a) less than hour b) a few hours c) half of day d) more than half of day

22) Do you usually have friendly encounters or conversations with store owners or store employees while shopping or walking on this street?

a) No b) Yes, sometimes

23) How much does Sundance Square affect your decision to come to this place or site?

a) a lot b) to some degree c) not at all

APPENDIX B IRB Approval and Consent Document



UNIVERSITY OF
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ARLINGTON

OFFICE OF RESEARCH ADMINISTRATION
REGULATORY SERVICES

June 9, 2017

Bilal Caliskan
Dr. Ivonne Audirac
Planning & Landscape Architecture
The University of Texas at Arlington
Box 19588

IRB No.: 2017-0666

Title: *Examining the street vibrancy topic with Main Street Fort Worth case study example*

EXEMPT MINOR MODIFICATION APPROVAL MEMO

The UT Arlington Institutional Review Board (UTA IRB) Chair (or designee) reviewed and approved the modification(s) to this exempt protocol on **June 9, 2017** in accordance with Title 45 CFR 46.101(b). Therefore, you are authorized to conduct your research. The modification(s), indicated below, was/were deemed minor and appropriate for exempt determination/acknowledgment review.

- Add Inonu Boulevard in Silvas, Turkey as an international research site for the conduct of the research study
- Add a Turkish translated version of the consent form and the interview questions, which were translated by the PI, a native Turkish speaker

Pursuant to Title 45 CFR 46.103(b) (4) (iii), investigators are required to, "promptly report to the IRB any proposed changes in the research activity, and ensure that such changes in approved research, during the period for which IRB approval has already been given, **are not initiated without IRB review and approval** except when necessary to eliminate apparent immediate hazards to the subject."

The modification approval will additionally be presented to the convened board for full IRB acknowledgment [45 CFR 46.110(c)]. All investigators and key personnel identified in the protocol must have documented Human Subjects Protection (HSP) training on file with the UT Arlington Office of Research Administration; Regulatory Services.

The UT Arlington Office of Research Administration; Regulatory Services appreciates your continuing commitment to the protection of human research subjects. Should you have questions or require further assistance, please contact Regulatory Services at regulatoryservices@uta.edu or 817-272-2105.

REGULATORY SERVICES
SERVICES

The University of Texas at Arlington, Center for Innovation
202 E. Border Street, Ste. 201, Arlington, Texas 76010, Box#19188
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OFFICE OF RESEARCH ADMINISTRATION
REGULATORY SERVICES

**Institutional Review Board
Notification of Exemption**

May 22, 2017

Bilal Caliskan
Dr. Ivonne Audirac
Planning & Landscape Architecture
The University of Texas at Arlington
Box 19588

Protocol Number: 2017-0666

Protocol Title: *Examining the street vibrancy topic with Main Street Fort Worth case study example*

EXEMPTION DETERMINATION

The UT Arlington Institutional Review Board (IRB) Chair, or designee, has reviewed the above referenced study and found that it qualified for exemption under the federal guidelines for the protection of human subjects as referenced at Title 45CFR Part 46.101(b)(2).

- (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, either directly or through identifiers linked to the subject; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

You are therefore authorized to begin the research as of **May 22, 2017**.

Pursuant to Title 45 CFR 46.103(b)(4)(iii), investigators are required to, "promptly report to the IRB any proposed changes in the research activity, and to ensure that such changes in approved research, during the period for which IRB approval has already been given, are **not initiated without prior IRB review and approval** except when necessary to eliminate apparent immediate hazards to the subject." All proposed changes to the research must be submitted via the electronic submission system prior to implementation. Please also be advised that as the principal investigator, you are required to report local adverse (unanticipated) events to the Office of Research Administration; Regulatory Services within 24 hours of the occurrence or upon acknowledgement of the occurrence. All investigators and key personnel identified in the protocol must have documented Human Subject Protection (HSP) Training on file with this office. Completion certificates are valid for 2 years from completion date.

The UT Arlington Office of Research Administration; Regulatory Services appreciates your continuing commitment to the protection of human research subjects. Should you have questions or require further assistance, please contact Regulatory Services at regulatoryservices@uta.edu or 817-272-2105.

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REFERENCES

- "A Street You Go To, Not Just Through: Principles for Fostering Streets as Places."
Project for Public Spaces. Accessed March 15, 2017.
<https://www.pps.org/reference/8-principles-streets-as-places/>.
- Appleyard, Donald, M. Sue Gerson, and Mark Lintell. 1981. *Livable Streets, Protected Neighborhoods*. University of California Press.
- Appleyard, Donald. 1983. "Streets Can Kill Cities: Third World Beware: Guidelines for Street Design in Third World Cities." *Habitat International* 7, no. 3: 111-122.
- Aslan, Neşe, and Kadir Aslan. 2012. "What is Leisure for Turkish Parents?" *Procedia - Social and Behavioral Sciences* 55: 390-98. doi:10.1016/j.sbspro.2012.09.517.
- Audirac, Ivonne, Anne H. Shermyen, and Marc T. Smith. 1990. "Ideal Urban Form and Visions of the Good Life Floridas Growth Management Dilemma." *Journal of the American Planning Association* 56, no. 4: 470-82.
doi:10.1080/01944369008975450.
- Audirac, I. 1999. "Stated Preference for Pedestrian Proximity: An Assessment of New Urbanist Sense of Community." *Journal of Planning Education and Research* 19, no. 1: 53-66. doi:10.1177/0739456x9901900105.
- Barnett, Jonathan. 2003. *Redesigning Cities: Principles, Practice, Implementation*. Chicago, IL: Planners Press.
- Bendix, Reinhard. "Concepts and Generalizations in Comparative Sociological Studies." *American Sociological Review* 28, no. 4 (1963): 532-39. doi:10.2307/2090069.
- Bossellmann, Peter. 1987. *Experiencing Downtown Streets in San Francisco*. Edited by Anne Vernez Moudon. New York: Van Nostrand Reinhold.

- Bosselmann, Peter, Elizabeth MacDonald, and Thomas Kronemeyer. 1999. "Livable Streets Revisited." *Journal of the American Planning Association* 65, no. 2: 168-180.
- Botta, Marina. 1987. *Cars and People in Stockholm*. Edited by Anne Vernez Moudon. New York: Van Nostrand Reinhold.
- Bromley, Professor D. B. "Academic Contributions to Psychological Counselling. 1. A Philosophy of Science for the Study of Individual Cases." *Counselling Psychology Quarterly* 3, no. 3 (1990): 299-307.
doi:10.1080/09515079008254261.
- Burda, Michael, Hamermesh, Daniel and Weil, Philippe. (2013). Total Work and Gender: Facts and Possible Explanations, *Journal of Population Economics*, 26: 1, 239-261, <http://EconPapers.repec.org/RePEc:spr:jopoec:v:26:y:2013:i:1:p:239-261>
- Campo, Daniel, and Brent D. Ryan. 2008. "The Entertainment Zone: Unplanned Nightlife and the Revitalization of the American Downtown." *Journal of Urban Design* 13, no. 3: 291-315. doi:10.1080/13574800802319543.
- Chapple, S., and M. Ladaïque. 2009. "Society at a Glance 2009: OECD Social Indicators." *OECD Social Indicators*: OECD.
- Chang, Shu-Chun. 2009. "Assessing Economic Activities – An Example From Central Business Districts." *Applied Economics* 41, no. 14: 1791-797.
doi:10.1080/00036840601131680.
- Collier, David. 1993. "The Comparative Method." *Political Science: The State of Discipline II*, Ada W. Finifter, ed., American Political Science Association, 1993.
Available at SSRN: <https://ssrn.com/abstract=1540884>
- Dandekar, Hemalata C. 2003. *The Planner's Use of Information*. Chicago, IL: American Planning Association.

- Darke, Peta, Graeme Shanks, and Marianne Broadbent. 1998. "Successfully Completing Case Study Research: Combining Rigour, Relevance and Pragmatism." *Information Systems Journal* 8, no. 4: 273-89. doi:10.1046/j.1365-2575.1998.00040.x.
- Downtown Fort Worth Inc. 2016. *State Of Downtown 2016*. Report. 12th ed. Fort Worth, TX: Downtown Fort Worth Inc.
- Duany, Andres, Elizabeth Plater-Zyberk, and Jeff Speck. 2001. *Suburban Nation: The Rise of Sprawl and the Decline of the American Dream*. New York: Macmillan.
- Dumbaugh, Eric, and J. L. Gattis. 2005. "Safe Streets, Livable Streets." *Journal of the American Planning Association* 71, no. 3: 283-300.
- Emmons, David. 1965. *The Pedestrian Count*. Report no. 199. American Society of Planning officials. Chicago, IL: American Society of Planning officials.
- Engwicht, David. 1993. *Reclaiming Our Cities and Towns: Better Living With Less Traffic*. Philadelphia, Pennsylvania: New Society Publishing.
- Farthing, Stuart M. *Research design in urban planning: a student's guide*. Sage, 2016.
- Fidel, Raya. 1984. "The Case Study Method: A Case Study." *Library and Information Science Research* 6, no. 3: 273-288.
- Fischer, Claude S. 1981. "The Public and Private Worlds of City Life." *American Sociological Review* 46, no. 3: 306. doi:10.2307/2095062.
- Francis, Mark. 1987. *The Making of Democratic Streets*. Edited by Anne Vernez Moudon. New York: Van Nostrand Reinhold.
- Forsyth, Ann, Mary Hearst, J. Michael Oakes, and Kathryn H. Schmitz. 2008. "Design and Destinations: Factors Influencing Walking and Total Physical Activity." *Urban Studies* 45, no. 9: 1973-1996.

- Gans, Herbert J. 1962. "City Planning and Urban Realities." Review of *The Death and Life of Great American Cities* by Jane Jacobs. *Commentary* 33: 170-175.
- Gehl, Jan. 2009. *Cities for People*. Washington DC: Island Press.
- , 2011. *Life Between Buildings: Using Public Space*. Island Press.
- Glaeser, Edward L., and Joshua D. Gottlieb. 2006. "Urban Resurgence and the Consumer City." *Urban Studies* 43, no. 8: 1275-299.
doi:10.1080/00420980600775683.
- Greenberg, Kenneth. 1987. *Toronto: Streets Revived*. Edited by Anne Vernez Moudon. New York: Van Nostrand Reinhold.
- Gottdiener, Mark, and Alexandros Ph. Lagopoulos. 1986. *The City and the Sign: an Introduction to Urban Semiotics*. New York: Columbia University Press.
- Guney, Yasemin Ince, Ayse SemaKubat, Ozlem Ozer, and Hatice Ucar. 2009. "A Syntactic Analysis of Recent Changes in CBD of Balikesir, Turkey." In *Proceedings of the 7th International Space Syntax Symposium, School of Architecture and the Built Environment, KTH, Stockholm, Sweden*.
- Gürbüz, B., and Karla Henderson. 2013. "Exploring The Meanings of Leisure Among Turkish University Students." *Croatian Journal of Education* 15, no. 4: 927-957.
- Hale, C. 1996. "Fear of Crime: A Review of the Literature." *International Review of Victimology* 4, no. 2: 79-150. doi:10.1177/026975809600400201.
- Harrison, S. Michael. 1987. *Promoting the Urban Experience in Portland, Oregon*. Edited by Anne Vernez Moudon. New York: Van Nostrand Reinhold.
- Hass-Klau, Carmen. 1993. "Impact of Pedestrianization and Traffic Calming On Retailing. A Review of the Evidence From Germany and the UK." *Transport Policy* 1, no. 1: 21-31. Accessed March 1, 2017.

<http://publiekeruimte.info/Data/Documents/rc5abtiq/39/Pedestrianization---retailing.pdf>.

Hass-Klau, Carmen, Graham Crampton, Clare Dowland, and Inge Nold. 1999. *Streets As Living Space: Helping Public Places Play Their Proper Role*. London: ETP/Landor.

Haven-Tang, Claire, and Eleri Jones. 2006. "Using Local Food and Drink to Differentiate Tourism Destinations Through a Sense of Place: A Story From Wales—Dining at Monmouth Shire's Great Table." *Journal of Culinary Science and Technology* 4, no. 4: 69-86.

Hawley, Zackary B. 2012. "Does Urban Density Promote Social Interaction? Evidence from Instrumental Variable Estimation." *The Review of Regional Studies* 42, no. 3: 223-48.

Hunter, Albert, and Terry L. Baumer. "Street Traffic, Social Integration, and Fear of Crime." *Sociological Inquiry* 52, no. 2 (1982): 122-31. doi:10.1111/j.1475-682x.1982.tb01244.x

Huston, Sara L., Kelly R. Evenson, Philip Bors, and Ziya Gizlice. 2003. "Neighborhood Environment, Access to Places for Activity, and Leisure-time Physical Activity in a Diverse North Carolina Population." *American Journal of Health Promotion* 18, no. 1: 58-69. doi:10.4278/0890-1171-18.1.58.

Jacobs, Allan B. 1993. *Great Streets*. Cambridge, MA: MIT Press.

Jacobs, Jane. 1961. *The Death and Life of Great American Cities*. New York: Vintage.

Kaplan, David H., Steven R. Holloway, and James O. Wheeler. 2009. *Urban Geography*. Second ed. Hoboken: John Wiley.

Kıray, M. 1984. "İstanbul: Metropolitan Kent." *İstanbul: The Metropolitan City*, Mimarlık Dergisi 1: 28-33.

- Krampen, Martin. 2013. *Meaning in the Urban Environment*. London: Routledge.
- Lee, Chanam, and Anne Vernez Moudon. 2008. "Neighbourhood Design and Physical Activity." *Building Research and Information* 36, no. 5: 395-411.
- Lee, Roger, and Jane Wills. 1997. *Geographies of Economies*. London: Arnold.
- "Leisure varies across countries and cultures." White Hutchinson - Leisure & Learning Group. May 2009. Accessed July 06, 2017.
<https://www.whitehutchinson.com/news/enews/2009/may/article109.shtml#article>
- Lynch, Kevin. 1984. *Good City Form*. Cambridge: MIT Press.
- Mahmoudi, Mohadeseh, and Faizah Ahmad. 2015. "Determinants of Livable Streets In Malaysia: A Study of Physical Attributes of Two Streets In Kuala Lumpur." *Urban Design International* 20, no. 2: 158-174.
- May, Anthony D., Peter G. Hopkins, and I. G. Turvey. 1985. *Studies of Pedestrian Amenities*. Working paper no. 204. University of Leeds. Leeds: White Rose University Consortium.
- Mehta, Vikas. 2007. "Lively Streets Determining Environmental Characteristics to Support Social Behavior." *Journal of Planning Education and Research* 27, no. 2: 165-187.
- Monheim, Rolf. 1992. "Town and Transport Planning and the Development of Retail Trade in Metropolitan Areas of West Germany." *Landscape and Urban Planning* 22, no. 2-4: 121-36. doi:10.1016/0169-2046(92)90017-t.
- Montgomery, Roger. 1998. "Is There Still Life in The Death and Life?" *Journal of the American Planning Association* 64, no. 3 (1998): 269-274.
- Morales, Alfonso, and Gregg Kettles. 2009. "Healthy Food Outside: Farmers' Markets, Taco Trucks, and Sidewalk Fruit Vendors." *Journal of Contemporary Health Law and Policy* 26, no. 1 (Fall): 20-48.

- Moudon, Anne Vernez. 1987. *Public Streets for Public Use*. New York: Van Nostrand Reinhold.
- Murphy, Raymond E. 2008. *The Central Business District: A Study in Urban Geography*. New Brunswick, NJ: Aldine Transaction.
- Newman, Oscar. 1972. *Defensible Space: Crime Prevention Through Urban Design*. New York: MacMillan.
- Newman, Lenore Lauri, and Katherine Burnett. 2013. "Street Food and Vibrant Urban Spaces: Lessons From Portland, Oregon." *Local Environment* 18, no. 2: 233-248.
- Ocakçı, Mehmet. 1989. *Metropolitenleşme Sürecinde İmalat Sanayii Ve Metropoliten Şehir İlişkileri*. PhD diss., İTÜ Fen Bil.Enst.
- Oktaç, Derya. 2004. "Urban Design for Sustainability: A Study on the Turkish City." *International Journal of Sustainable Development and World Ecology* 11, no. 1: 24-35. doi:10.1080/13504500409469808.
- Painter, Kate. 1996. "The Influence of Street Lighting Improvements on Crime, Fear and Pedestrian Street Use, After Dark." *Landscape and Urban Planning* 35, no. 2-3: 193-201. doi:10.1016/0169-2046(96)00311-8.
- Rahman, Norhafizah Abdul, Siti Rasidah Md Sakip, and Nadiyahanti Mat Nayan. 2016. "Physical Qualities and Activities for a User-friendly Shopping Street in the Context of a Malaysian City." *Procedia - Social and Behavioral Sciences* 222: 196-202. doi:10.1016/j.sbspro.2016.05.147.
- Rehan, Reeman Mohammed. 2013. "Sustainable Streetscape as an Effective Tool in Sustainable Urban Design." *HBRC Journal* 9, no. 2: 173-86. doi:10.1016/j.hbrj.2013.03.001.
- Richards, Greg. 2002. "Gastronomy: An Essential Ingredient In Tourism Production and Consumption." *Tourism and Gastronomy* 11: 2-20. 21

- Ridder, Hans-Gerd. "The Theory Contribution of Case Study Research Designs."
Business Research, 2017. doi:10.1007/s40685-017-0045-z.
- Riggs, William, and John Gilderbloom. 2015. "Two-Way Street Conversion: Evidence of Increased Livability in Louisville." *Journal of Planning Education and Research* 36, no. 1: 105-118. 10739456X15593147.
- Roark, Carol E. *Fort Worth & Tarrant County: An Historical Guide*. TCU Press, 2003.
- Rubenstein, Harvey M. 1992. *Pedestrian Malls, Streetscapes, and Urban Spaces*. New York: John Wiley & Sons.
- Saelens, Brian E., James F. Sallis, and Lawrence D. Frank. 2003. "Environmental Correlates of Walking and Cycling: Findings from the Transportation, Urban Design, and Planning Literatures." *Annals of Behavioral Medicine* 25, no. 2: 80-91. doi:10.1207/s15324796abm2502_03.
- Sarkar, Chinmoy, Chris Webster, Matthew Pryor, Dorothy Tang, Scott Melbourne, Xiaohu Zhang, and Liu Jianzheng. 2015. "Exploring Associations Between Urban Green, Street Design and Walking: Results from the Greater London Boroughs." *Landscape and Urban Planning* 143: 112-25.
doi:10.1016/j.landurbplan.2015.06.013.
- Sauter, Daniel, and Marco Huettenmoser. 2008. "Liveable Streets and Social Inclusion." *Urban Design International* 13, no. 2: 67-79.
- Shamsuddin, Shuhana, and Norsidah Ujang. 2008. "Making Places: The Role of Attachment in Creating The Sense of Place for Traditional Streets in Malaysia." *Habitat International* 32, no. 3: 399-409.
- Schofield, Janet Ward. 2009. "Increasing the Generalizability of Qualitative Research." *Case Study Method*: 69-97. doi:10.4135/9780857024367.d8.

Schor, Juliet B. 1998. *The Overworked American: The Unexpected Decline of Leisure*.

New York, NY: Basic Books.

"Streets as Places: How Transportation Can Create a Sense ..." Project for Public

Spaces. Accessed October 22, 2016. <http://www.pps.org/reference/streets-as-places-how-transportation-can-create-a-sense-of-community/>.

The Trinity Uptown Plan. Report. 2004. Accessed May 27, 2017.

http://www.trinityrivervision.org/docs/PDFDocuments/pr_04tu_full.pdf.

"Turkey Retail Overview: Characteristics, Developments and Prospects." Fung Global

Retail & Technology. Accessed July 19, 2017.

<https://www.fungglobalretailtech.com/research/turkey-retail-overview-characteristics-developments-prospects/>.

Turvey, I G., Anthony D. May, and Peter G. Hopkins. 1985. *Counting Methods and Sampling Strategies Determining Pedestrian Numbers*. Working paper no. 242.

University of Leeds. Leeds: White Rose University Consortium

Üçeçam Karagel, D., and H. Karagel. 2013. "*Analysis of a Historical Commercial Centre in Terms of Marketing Geography: Uzun Çarşı / the Long Bazaar*

(Antakya/Turkey).".

Urban October. 2015. *Public Spaces for All Designed to Live Together*. Accessed April 03, 2017.

<http://www.urbanoctober.org/downloads/UrbanOctoberBackgroundPaper.pdf>.

Uredi, Kadir. 2010. "Sivas'a Vurulan Bir Cumhuriyet Mührü İstasyon Caddesi." *Hayat*

Agaci, September: 34-39.

Van Dyck, Delfien, Ester Cerin, Terry L. Conway, Ilse De Bourdeaudhuij, Neville Owen, Jacqueline Kerr, Greet Cardon, Lawrence D. Frank, Brian E. Saelens, and

James F. Sallis. 2013. "Perceived Neighborhood Environmental Attributes

- Associated With Adults' Leisure-Time Physical Activity: Findings From Belgium, Australia and the USA." *Health and Place* 19: 59-68.
- Vaughan, Diane. 1992. "Theory Elaboration: The Heuristics of Case Analysis." *In What is a Case?*, 173-202. New York, NY: Cambridge University Press.
- Vaus, David De. "Comparative and cross-national designs." *In Social Research Methods*. London: Sage, 2008.
- Vibrant Streets: Toronto's Coordinated Street Furniture Program: Design and Policy Guidelines*. 2006. Toronto, ON: Transportation Services, City Planning, and Beautiful City Secretariat. Accessed February 25, 2017.
https://www1.toronto.ca/city_of_toronto/city_planning/urban_design/files/pdf/vibrant_streets.pdf
- Yin, Robert K. 2003. *Case Study Research: Design and Methods*. 2nd ed. Thousand Oaks, California: Sage Publications.
- , 2009. *Case Study Research: Design and Methods*. 4th ed. Thousand Oaks, CA: Sage Publications.
- , 2011. *Qualitative Research From Start to Finish*. New York, NY: The Guilford Press.
- White, Garland F. 2006. *Crime Prevention Through Environmental Design: How Investing in Physical and Social Capital Makes Communities Safer*. Lewiston, NY: E. Mellen Press.
- Whyte, William Hollingsworth. 1980. *The Social Life of Small Urban Spaces*. Washington, DC: Conservation Foundation.
- Zaidah, Zainal. "Case study as a research method." *Jurnal Kemanusiaan* 9 (June 2007).
http://psyking.net/htmlobj-3837/case_study_as_a_research_method.pdf.

Zucker, Donna M., "How to Do Case Study Research" (2009). Teaching Research

Methods in the Humanities and Social Sciences. 2.

http://scholarworks.umass.edu/nursing_faculty_pubs/2

Biographical Information

Bilal Caliskan was born and grew up in Sivas, Turkey. He received a bachelor's degree in City and Regional Planning from Istanbul Technical University (ITU), Istanbul, Turkey, in 2012. He also worked as an urban planner in the City of Sivas Housing and Urban Development Department from 2012–2014. He was awarded a graduate-level foreign scholarship by the Turkish Ministry of Education in 2014. He completed a master's degree in City and Regional Planning at the University of Texas at Arlington in 2017. He will begin a doctoral degree program in City and Regional Planning at the Ohio State University in the fall of 2017.