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# EVALUATION OF SHIPPING CONTAINER USE AS HOUSING SOLUTIONS FOR GENERATION Z AS CHANGING CONSUMERS

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**Abstract**

**Introduction:** The architectural demands of the near future will have very different characteristics from those of the recent past. With the change in means of communication and transportation, the possibilities of rapid relocation and easy communication have altered many concepts and traditions associated with place. This change will alter the utilization and scale of space. Architecture is undergoing significant changes with Industry 4.0. The consumer of the near future who will demand this today is Generation Z. In parallel, the architectural environment has inherited many environmental problems that started in the recent past and continue to increase in severity. In this rapid change/transformation, environmental problems require sustainable solutions that can be in harmony with nature, which is much more natural than developing technology.

The basis of this study is using shipping containers as a sustainable solution and determining the approach of Generation Z as changing consumers to this solution. **The study aims** to determine how Generation Z, living in Turkey, evaluates the use of shipping containers as an alternative to housing. **Methods:** In the course of the study, a survey was conducted with participants who are both members of Generation Z and architecture students. The purposive sampling method was used in the research.

**Keywords:** shipping container house; sustainable architecture; generations; Gen Z.

## Introduction

With the global environmental problems that started in the 1970s and continue today, solutions have been sought through national and international cooperation, regulations, and structural changes. The construction sector's priority is to reduce the use of primary resources and energy consumption, and to change the approach to architectural production in a way that supports this goal, such as through recycling, reuse, and re-purposing.

For example, aside from re-purposing an existing building, incorporating systems that have been produced for a different purpose into architectural production offers an alternative source of re-purposing. The changing user/consumer plays a crucial role in evaluating the effectiveness of these reused resources. While industrialization and subsequent technology have provided benefits in many areas that can facilitate life, the user/consumer has also undergone significant changes during this period. These changes have also transformed the architectural needs and desires of consumers.

Each country has different national characteristics, with technology developing within the social, cultural, and political environment, as well as the needs and behaviors of the users and consumers. Technology, architectural environment, and consumer behavior have different approaches and scales of development within the unique conditions of each country. On the other hand, each country interprets the global environmental problem experienced by the world today differently within its own conditions and takes different measures. Within these measures, the construction sector also adopts various approaches.

The rapid changes in technology not only offer new construction systems and material options to the architectural production environment, but also alter the factors that influence architecture, with expanding and diversifying stakeholders, as well as changing consumers/users/generations, changing needs and comfort requirements, as well as exploring different spatial concepts within the production/design environment.

Changing consumers/generations have started to have a say in the production environment, especially in post-Fordism after 1980. The fast pace of the industry, coupled with individual preferences, has led to mass customization, where design and production are tailored to the individual. This has created a growing demand for personalized products in the neoliberal market. This situation implies that consumers/generations will take on a more active role in the near future.

In the near future, it will be more efficient to understand the different generations and plan the production environment in line with their preferences. While consumers/generations form

the basis of near-future scenarios, it is also important to consider the environmental dimension of the solutions to be produced and the diminishing world resources. For this reason, it is very important to understand the preferability and environmental impact of the solutions being developed for consumers/generations.

This study focuses on Generation Z, the consumers of the near future, taking into account the changing consumer/generation characteristics. Therefore, it is important to determine the consumption characteristics and architectural preferences of Generation Z. The prominent characteristics of Generation Z in the research conducted are being mobile, easily bored, digitally addicted, and sensitive to the environment. Given these characteristics, the preferability of shipping containers as housing for Generation Z has been questioned.

The fact that the issue of consumption will be quite important in the near future, especially for Generation Z, and that the economy is based on continuous consumption, will necessitate taking precautions. Due to the recyclable structure, the use of shipping containers in architecture can contribute to sustainable architecture with economical, minimal, portable structures as an alternative solution to traditional building materials.

There are many architectural examples designed and constructed using shipping containers. Although there are few examples in Turkey, both academically and practically, a significant amount of shipping container waste is regularly generated. Containers manufactured for international transportation are melted down at the end of their useful life (seven years) in order to be recycled since their material is steel. Considering the energy, labor, and cost spent on this process, it is more appropriate to use it as a building material. Due to their robust construction and dimensions that are suitable for humans, it is possible to use shipping containers as standalone buildings or as building materials in a modular system by stacking them on top of each other or placing them side by side. It should be noted that their use is rapidly increasing.

*Generations as Changing Consumers*

With the dynamic nature of industrialization and its evolution over time, production methods and consumption preferences have undergone significant changes from the past to the present.

Starting in the 18$^{th}$ century, mechanization and Fordism, which developed at the end of the 19$^{th}$ century, met basic needs through mass production. Until the third industrial revolution, manufacturers managed and directed consumer demands. The effects of Fordism continued until the 1970s, when the understanding of post-Fordism supporting production in line with the demands of the consumer started developing. Since 2000, consumers have been increasingly involved in the production and design process.

Technologies, political systems, and social institutions have changed in the three industrial periods, and this change has been effective not only in the field of industry but also in people's perspectives, their relations with each other, and their interactions with the world (Halis, 2012). Consumer changes became more evident, especially after the First World War, leading to the emergence of the concept of "generation" and the classification into generations. Although it is commonly believed that generations change every twenty years, it is not simply a matter of being born in the same period; they also need to experience common political, economic, and sociological events together and develop shared ways of thinking, experiences, and reactions (Mannheim, 1952).

The social structure has been influenced by significant historical events, wars, and economic crises, leading to changes in the behaviors, values, and attitudes of individuals within that society (Arslan and Staub, 2015). These events shape the attitudes and behaviors of individuals within the same generation, as well as their common reactions to events within the same period (Akdemir et al., 2013).

The behaviors exhibited by each generation have changed depending on the dynamics of the period they live in, and this is reflected in their consumption habits based on the conditions of the period they live in. Production and consumption have become interdependent (Table 1).

Political, economic, and development policies, as well as culture and traditions, have led to the emergence of different consumer behaviors in each country, based on its unique historical period and social structure. It is necessary to examine and assess the production and consumption environment in Turkey within the particular conditions (Table 2).

For a consumer, consumption implies not only nutrition, healthcare, and clothing, but also demands for architectural structures and material preferences. Architectural structures are also changing depending on the preferences and needs of the consumer.

With the changing consumer/user (generation) and world conditions, the main idea of designs in future housing production has evolved from the past to the present. In particular, the concepts of sustainability and mobility have come to the forefront.

The consumption behavior and architectural preferences of each generation differ from one another. The consumer/user of the near future is Generation Z. When we look at the distribution of this generation in Turkey, Generation Y and Generation Z constitute a significant portion of the population. The highest proportion in Turkey's population is 31.16 % of Generation Y individuals between the ages of 19 and 40, while the proportion of Generation Z,

Table 1. **Generations and Their Characteristics (Demirler, 2019; Saygın, 2021; Yazıcı, 2019) (developed based on these sources)**

| Period | Generations | Generation Characteristics | Important Developments in the Generation Period | Cultural Elements | Consumption Behavior |
|---|---|---|---|---|---|
| 1925–1945 | Traditionalists / Silent Generations | Dislikes taking risks, complies with social requirements, respectful, self-restrained, disciplined, stable, works for a living | World Wars I and II, economic difficulties, and the Great Depression | large family, strong neighborhood | Consuming necessities |
| 1946–1964 | Baby Booming | Rule-oriented, hardworking, leader, patient, loyal, lives to work, respects authority, finds change risky, bohemian, values art | Post-war mobilization, migration, economic relief, human rights, transition to a multi-party era | Extended family, the generation that first raises their children and then takes care of their elders in the same household | Careful, conscious consumer, information addict, willing to be informed about products and make choices in line with core values |
| 1965–1979 | Generation X | Careful, conscious consumer, information addict, willing to be informed about products and make choices in line with core values | Oil crisis, introduction of household appliances into daily life, rise of radio and TV | Decrease in the marriage rate, shrinking and disintegration of the family, individualistic structure | The first generation where the impact of mass consumption is dominant and brand loyalty is present |
| | | | rapid changes | | |
| | | | development and sale of the first personal computer | | |
| 1980–1999 | Generation Y | Effective use of technology | Global high competition | Complex family structure with elderly parents, nuclear family, prevalence of divorce | Quickly bored, consumption-oriented; the telephone is an important tool for consumption. Internet shopping is widespread, and people see consumption as entertainment or a game. Desire to be special and unique, with a high tendency to consume products and brands that will make them feel special. High brand awareness, people are conformist while being conscious and questioning. Active in sustainability, ethics, and social problems |
| | | being the center of attention, having high expectations, having clear goals, socializing, valuing freedom, and being independent individuals who are not loyal to authority. Focused on getting rich, consuming, spending, and constantly being on the move, traveling | global brand value is important, digital media, economy, and intercultural relations are intense | | |
| 2000– | Generation Z | Internet generation, remote socialization, intense desire for independence. No geographical boundaries, the idea that everything should be their own. Open to change, can quickly give up conditions | Technology, communication tools, transportation facilities | Poor family relations and communication | They want to be producers rather than consumers of what is offered to them |
| | | | | | They influence consumption trends |
| | | | | | There is no brand loyalty. They have a tendency to buy, consume, and then re-consume immediately |
| | | | | | They have a transient and changeable nature |
| | | | | | They can take on different roles as consumers: sustainable, ecological consumers |

Table 2. **20th Century Consumption and Production Environment**

| Period | Generations | Economic Regime | Production System | Role of the Consumer | Consumption Behavior | Efficiency in Production |
|---|---|---|---|---|---|---|
| 1925–1945 | Traditionalists / Silent Generations | Statism/ Liberalism | Fordism (mass production) | Consumers are homogeneous and passive | Passive, resistant to change, loyal | Design enabled by the manufacturer |
| 1946–1964 | Baby Booming | Liberalism | | | | |
| 1965–1979 | Generation X | Liberalism | | | | |
| 1980–1999 | Generation Y | Neo-liberalism | Post-Fordism (flexible production, mass customization) | Consumers are heterogeneous and active | Adventurous, brave, easily bored, always ready to move to new places | Design enabled by the consumer |
| 2000– | Generation Z | Neo-liberalism | | | | |

which consists of individuals under the age of 19, is 30.71 % (Yıldız, 2021). Therefore, it is Generation Z that will be effective in shaping the architectural production environment of the near future.

*Generation Z and Their Preferences*

Twenge (2006) coined the term “iGeneration” for the generation born in the period when the Internet and mobile phones were widely used. This term comes from the initials of the words “iPhone”, “Internet”, and “individualism”. Referring to Generation Z, who cannot imagine life without the Internet, Acılıoğlu (2015) stated that the devices they use to connect to the Internet and social media are almost like a limb. This generation, which constantly checks their mobile phones, continues to live their lives in virtual environments (Acılıoğlu, 2015; Twenge, 2018).

This generation has the ability to perform many tasks simultaneously and develop a specific focus for each of them, as rapidly advancing technology provides the ability to easily use various digital tools. With these abilities, it will have the potential to adapt to a different working order by creating a new working system in case of a possible encounter with artificial intelligence in the future. The ability to perform almost all their work through computers leads this generation to have a marked tendency to laziness, and these living conditions cause them to socialize in a virtual environment, that is, through computers (İnce, 2018)

In addition, seeking their rights to the end, being able to express their wishes and demands easily, establishing social relations with different social groups, and being creative are the characteristics of this generation (Aydın and Başol, 2014).

This generation, for whom speed is important, is affected by consumption, and their consumption tendencies are influenced by the discourses of “must have now” and “buy now” (Batı, 2015).

In research on the future of Generation Z, it can be observed that their incomes will be higher compared to other generations. They will not want to be subject to geographical restrictions, and social roles will change in male-female relationships. Additionally, there will be an intense desire to live alone (Şenbir, 2004).

In Turkey, Generation Z is also referred to as the Crystal Generation. Generation Z in Turkey can quickly adapt to global trends thanks to the Internet and new technologies, which align with the characteristics of the period in which they were born. Compared to other generations, they have almost all the opportunities for consumption. For this reason, shopping malls became one of the favorite places for consumption in the 2000s (Başcı, 2015). However, nowadays, they can easily access all products via the Internet. This consumption shows that the need for space has diminished.

Generation Z can be described as a creative generation. They want to be producers instead of being consumers of the goods offered to them. In this context, they create their own content (Kuran, 2018). The generation born on the Internet can be called the speed generation, and the words “right now» are associated with them. They are heavily influenced by consumption, but they also have a profile that affects consumption trends (Altuntuğ, 2012). This generation, which is very active in using technology, is addicted. They can make instant, simultaneous, and multiple decisions. Generation Z is oriented towards new consumption products, desiring immediate access to the products they want to consume (Altuntuğ, 2012). Generation Z, which is not reliable in brand loyalty, exhibits variable and temporary attitudes (Özel, 2017).

In recent years, there has been an observed increase in places such as cafes and restaurants that directly target consumers. The rapidly increasing new-generation coffee chains are among these examples. These spaces, which offer the opportunity to work, relax, and socialize, provide Internet access services and comfortable furniture choices to ensure that customers spend more time there. Generation Z, which exhibits more individualistic behaviors compared to other generations, makes up a significant portion of the market in these areas. While they may not currently have the opportunity to express their architectural preferences directly,

the participants in the consumption environment play a significant role in shaping their social spaces, particularly through the trends of their generation. Generation Z has started to involuntarily actively participate in shaping, decorating, and implementing tools in the architecture of social spaces.

While individual behavior is an important issue for Generation Z, digital platforms have allowed them to create their own avatars, design their homes, and socialize in a new world where their freedom is unlimited, and they can choose the city they live in. There are opinions that this situation may create the problem of loneliness for this generation in the future (Table 2) (Demirler, 2019; Saygın, 2021; Yazıcı, 2019).

On the other hand, "digital addiction", which is seen as the plague of the age, has made individuals lonely. Loneliness resulting from digital addiction was identified in young people aged 16–24 who took part in the "Loneliness Study" conducted by the University of Manchester, which involved 55,000 participants. Prof. Dr. Nevzat Tarhan, who believes that the situation is no different for Turkey and that digital addiction causes social isolation in young people, stated that this situation is also reflected in divorces (Milliyet, 2019).

The events that took place in the world and in Turkey during the period in which they live have behaviorally influenced this generation, causing it to be more aware and sensitive.

However, in this new world, the decline in physical activity, the decrease in physical labor, and the fact that they only view the world from behind a screen significantly affect their spatial preferences. It should also be taken into consideration how the change in the social environment, the concept of family, the disappearance of the concept of "home" and the sense of belonging attributed to houses will affect this generation psychologically and sociologically. This may lead to them becoming semi-robots in the future.

*Generation Z and Mobility*

Man is naturally inclined to move. Thanks to this feature, people should not be confined to one place. This aspect of humanity has been a source of inspiration for architects and designers. Thanks to the advancements in technology, the concepts of power, speed, intelligence, and beauty have gained significant importance. When we examine movable structures, we are referring to structures that can be moved from one place to another. Thanks to this feature, they should respond positively to the needs of users over time in order to maintain their functionality in everyday life (Ekmekçi, 2005).

Today, the concept of mobile housing is being discussed more frequently. The goal is to maximize the use of these spaces by reducing their size through the shrinking and streamlining of their internal equipment. The concept of mobility can be exemplified by the fact that a dwelling can be produced in one place and transported to the region where it will be located. Additionally, the dwelling can be transported without being in a specific place by attaching wheels or a similar device to it. In order for these features to be realized, the material should be lightweight, flexible, and the modular parts should be removable (Kronenburg, 2002).

Mobile housing can be used on land as well as on water. They can be a permanent or non-permanent structure. Today, examples of these include caravans, prefabricated houses, modular houses, container houses, tiny houses, disaster houses, sea vehicles, and floating houses (Tuncel, 2007).

In the information age, it has become possible for employees to be mobile. Thanks to portable technological devices such as mobile phones, tablets, and computers, it is now possible to manage work life from anywhere. While mobile architecture was previously seen as a temporary solution that rejected the economic alternative concept or disposable logic, today it has evolved into a building alternative to fixed structures with ecological consciousness. It has also been defined as an experimental resource for fixed structures, with its flexible application and economy (Kronenburg, 2002).

Generation Z can perceive the world not only physically but also virtually, as they have no spatial boundaries. They spend an average of more than three hours a day on the computer outside of work or school, and the fact that this time continues to increase indicates that the physical environment is not as significant (Stillman and Stillman, 2018).

The fact that they were born into a mobile world and do almost all of their work with digital tools, such as mobile phones and tablet computers, indicates that the needs of this generation should be taken into account. They may prefer a more ecological lifestyle due to their awareness, involvement in social responsibility projects, and sensitivity to issues such as the climate crisis, which is greater than that of previous generations.

As the pace of mobile working increases, it is predicted that residences and lifestyles will also become more mobile. In the research conducted by the International Data Corporation (IDC) to measure the number of mobile workers worldwide, it was stated that the number of mobile workers would reach 1.3 billion by 2015. The ratio of this data to the world population constitutes 37.2 % of the total labor force (Abh, 2024).

It is observed that the mobile-collar population is also on the rise in Turkey. This new working model, which appears to be more comfortable, also seems to be a more cost-effective option for companies (Adıgüzel et al., 2014).

*Mobile and Sustainable Solution: Shipping Containers*

80 % of global trade is facilitated by maritime transportation. Containers produced in standard

sizes are used to facilitate transportation and ensure quick and efficient loading and unloading with minimal labor. Containers, whose main purpose is to carry cargo, are manufactured from robust and lightweight materials for transporting heavy tonnage loads in various types and sizes to accommodate all kinds of cargo. They have flexible features for purposes such as transportation, relocation, and stacking.

A container used in the international transport sector completes its service life in terms of transportation in a short period of seven years. This situation creates a large amount of high-quality waste every year (ISBU Association, 2017). Containers, whose main raw material is steel, are produced using a technology that is difficult to implement and requires high energy. For this reason, the raw materials from containers that have completed their service life can be reused. However, 8000 kWh of electrical energy must be consumed for the melting process of this 3.5-ton steel box. The energy required to recycle this material and use it for a container house is approximately 400 kWh. This accounts for 5 % of the total energy to be consumed (Islam et al., 2016). For this reason, the fact that containers generate high-quality waste as well as the continuous waste generation in high volumes annually attract the attention of designers with an environmentally sensitive and sustainable approach.

These wastes constitute an important resource for re-purposing. It is a valuable resource that can be especially useful in architectural space production. For this reason, when considering containers as an alternative to existing building materials for sustainable architecture, many architects and companies have focused on this issue.

The existence of different types of containers designed for transporting different types of cargo allows each to be evaluated for distinct architectural purposes. Their most widely recognized advantages, including construction time, portability, stackability, recyclability, and low cost, are also viewed disadvantageously due to high thermal conductivity.

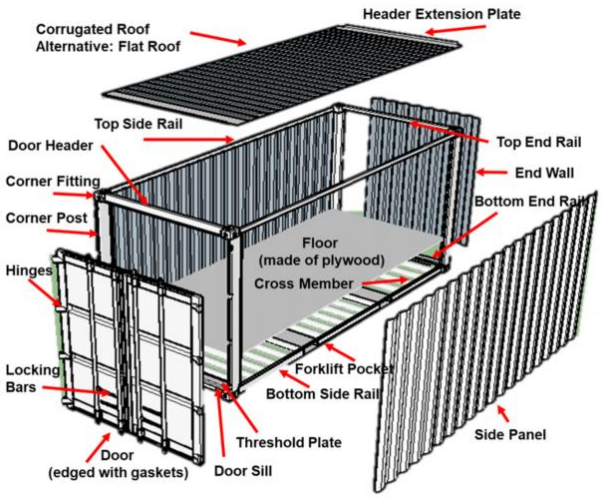



Fig. 1. Construction Elements of Shipping Containers (Shen, J., Copertaro, B., Zhang, X., Koke, J., Kaufmann, P., & Krause, S, 2019)

In architecture, the most preferred containers are 20-foot, 40-foot, and 40-foot HC (High Cube) containers, which are extensively used in international trade. These containers, commonly used for general cargo transportation, can accommodate various types of cargo, whether palletized or non-palletized, that can pass through their doors (Demirlioğlu, 2008) (Fig. 1).

Re-purposing containers provides a sustainable solution that offers various living space possibilities in mobile or fixed configurations at different scales. While this solution may not cater to the comfort preferences of every consumer, it does address the consumer's desire for excitement and action.

Although there are numerous examples of architectural container use, it has not yet become widespread in Turkey. However, considering the significant volume of maritime trade in Turkey and the substantial amount of container waste generated, the utilization of these containers in architecture could offer a solution.

*Survey and Results*

During the research, it was decided to focus on Generation Z, as this demographic is crucial for the near future and possesses distinct characteristics compared to other generations. Furthermore, given that this generation comprises aspiring architects who have begun their architectural education, it was decided that the survey would include participants from Generation Z as well as architecture students. This approach may offer insights into future architectural trends.

In the research, a survey was conducted with Generation Z, which consists of first- and second-year students at Mimar Sinan University, Faculty of Architecture, Department of Architecture.

Before the survey, information about shipping containers was provided, along with visuals of various plan solutions designed on the subject. Three-dimensional designs were prepared using different container types, and visuals related to their application on different types of land were shared. Therefore, it was ensured that the participants could visually understand the different container layout solutions and their relationship with the immediate environment (Fig. 2).

A total of 22 questions, divided into three main sections, were directed to the Generation Z students of the Department of Architecture at Mimar Sinan University. The survey was conducted among approximately 175 people born after 2000.

*Study Sample Definition*

The population of the study consisted of first- and second-year students of the Department

of Architecture at Mimar Sinan Fine Arts University. The total number of the two classes was 200. The sample consisted of 175 people who voluntarily participated in the study. The questionnaires were conducted using Google Forms.

The purposive sampling method was used in the study. Purposive sampling allows for in-depth research by selecting information-rich situations based on the purpose of the study. It is preferable when you want to work in one or more specific cases that meet certain criteria or have certain characteristics. Since Generation Z was the target of this study, the purposive sampling method was appropriate.

The number of samples to be drawn from the specific population was determined to be 80 people for p = 0.50 and q = 0.50 (Table 3), with a 0.05 sampling error, as developed by Yazıcıoğlu and Erdoğan (2004).

The formula used to determine the sample size from the determined universe is as follows:

- Sample size;
- Main population (universe) (200 people);
- Probability of occurrence of the event (0,5);
- Probability that the event will not occur (0,5);
- t test level (1,96);
- Margin of error (5 %).

With a 5 % margin of error, it was calculated that the minimum sample size to represent the main population should be 80 people.

In addition to the classical approach to sample selection given above, another approach is to determine the number of samples according to power analysis. Power analysis reveals at least how many samples are required in any analysis. In other words, it determines the number of samples with a different approach.

Since relationship analysis was to be performed in the study, the minimum number of samples required was determined by obtaining the results of power analysis for these two methods. Power analysis was conducted using G*POWER 3.1. According to Cohen (1988) and Prajapati et al. (2010), a statistical power of 1-β = 0.80 is considered sufficient. The results were obtained by calculating correlations and group differences. Statistical significance α = 0.05.

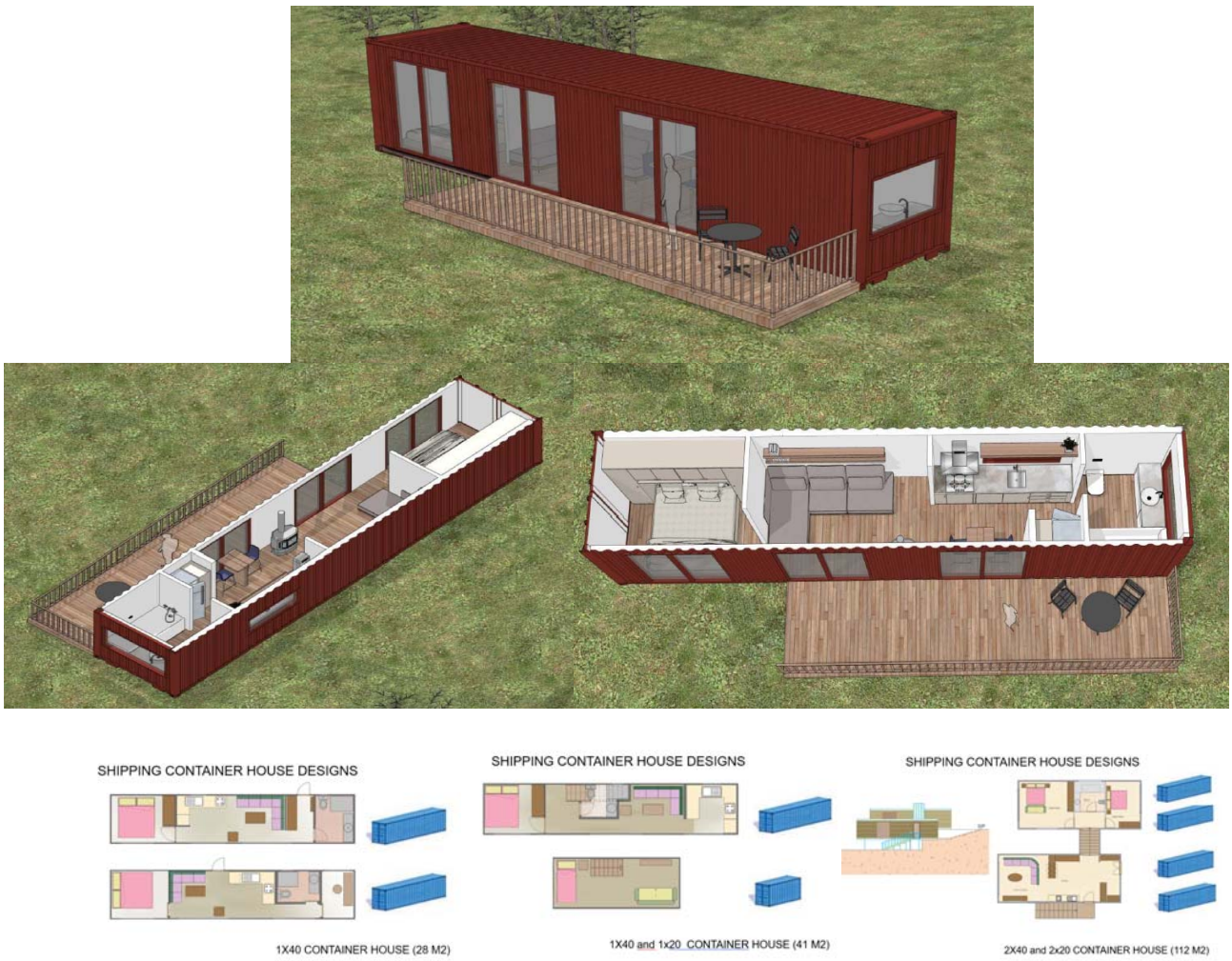



Fig. 2. Shipping Container House Design

Table 3. **Sample Sizes (Yazıcıoğlu and Erdoğan, 2004)**

| Population Size | ± 0.03 sampling error (d) | | | ± 0.05 sampling error (d) | | | ± 0.10 sampling error (d) | | |
|---|---|---|---|---|---|---|---|---|---|
| | p=0.5 q=0.5 | p=0.8 q=0.2 | p=0.3 q=0.7 | p=0.5 q=0.5 | p=0.8 q=0.2 | p=0.3 q=0.7 | p=0.5 q=0.5 | p=0.8 q=0.2 | p=0.3 q=0.7 |
| 100 | 92 | 87 | 90 | 80 | 71 | 77 | 49 | 38 | 45 |
| 500 | 341 | 289 | 321 | 217 | 165 | 196 | 81 | 55 | 70 |
| 750 | 441 | 358 | 409 | 254 | 185 | 226 | 85 | 57 | 73 |
| 1000 | 516 | 406 | 473 | 278 | 198 | 244 | 88 | 58 | 75 |
| 2500 | 748 | 537 | 660 | 333 | 224 | 286 | 93 | 60 | 78 |
| 5000 | 880 | 601 | 760 | 357 | 234 | 303 | 94 | 61 | 79 |
| 10000 | 964 | 639 | 823 | 370 | 240 | 313 | 95 | 61 | 80 |
| 25000 | 1023 | 665 | 865 | 378 | 244 | 319 | 96 | 61 | 80 |
| 50000 | 1045 | 674 | 881 | 381 | 245 | 321 | 96 | 61 | 81 |
| 100000 | 1056 | 678 | 888 | 383 | 245 | 322 | 96 | 61 | 81 |
| 100000 | 1066 | 682 | 896 | 384 | 246 | 323 | 96 | 61 | 81 |
| 100 million | 1067 | 683 | 896 | 384 | 245 | 323 | 96 | 61 | 81 |

Based on the power analysis, the validity of the study was determined to require a minimum of 115 samples for the relationship analysis. In this study, compliance was achieved with 175 people (Fig. 3).

*Data Collection Tool*

This subject was organized under three main headings. In the questionnaire, general questions were initially asked. The first part began with inquiries about age, gender, type of residence, and previous experience with container-style housing.

In the first part, the spatial preferences of Generation Z were questioned. In this context, first of all, the questionnaire addressed their working space, living preferences, and housing preferences. After gathering this information, the participants were asked to rank their spatial priorities. An attempt was made to determine the connection between the priorities of items in space and the spaces themselves.

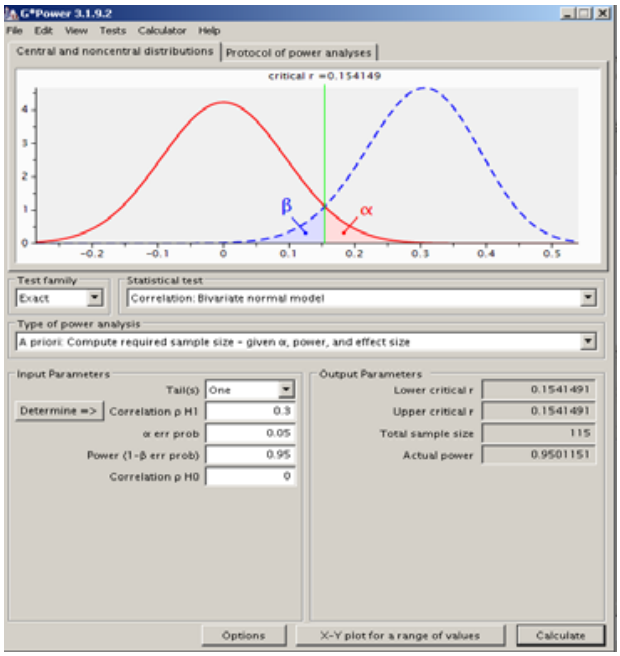



Fig. 3. Power Analysis Results for Relationship Analysis Screen Output

In the second part, the economic perspectives of Generation Z on housing were examined. First, information about the family structure was gathered. Then the connection between this structure and economic conditions was analyzed. An attempt was also made to determine if the housing they live in is a choice or a necessity. The study also aimed to determine whether they would continue with this arrangement in the future, despite their preference to live with their families. In addition, their perspectives on whether they see housing as a commercial tool or for shelter purposes were analyzed. The goal was to determine whether housing is an economically beneficial element and whether it can be considered a life choice. Additionally, as architecture students, they were asked about their perspective on building the houses they design under current economic conditions.

In the third and final part, information was collected about their preferences for sustainable architecture, mobile architecture, and modular architecture, considering their future housing preferences and their perspectives on the global climate crisis. For this purpose, efforts were made to gather information about the preferences for mobile, addable, and removable houses in line with current conditions, as well as to explore the potential for adopting this style in response to evolving family structures and future lifestyles. The importance of comfort, along with the principle of sustainable housing preferences, was questioned, and efforts were made to gather information about the conditions and limits under which this could be achieved. Efforts were also made to understand the conditions under which the preferences for recyclable materials, an important aspect of sustainability, can be prioritized.

**Research Method**

The data obtained were analyzed using the IBM SPSS 27.0 software package. At the first stage, percentage and frequency distributions

of demographic and general information were presented.

*Findings Related to the Demographic Characteristics of the Participants*

When the genders of the participants were analyzed, it was observed that 72.0 % were female and 28.0 % were male. When the living arrangements of the participants were analyzed, it was observed that 58.9 % of them lived with their families, 10.3 % lived alone, 8.0 % lived in dormitories, and 22.9 % lived temporarily in student housing.

When the participants were asked about their previous experiences with housing such as containers, caravans, bungalows, and tiny houses, it was found that 30.3 % of them had such experience, while 69.7 % had not.

When the preferred working environments were analyzed (Table 4), it was observed that 28.6 % of the participants would prefer working from home (home office), 34.3 % would prefer working from an office, 28 % would prefer co-working or working independently in an open office, and 9.1 % would prefer a corporate space or cafe.

When the participants were asked where they would prefer their residence to be located, it was observed that 78.3 % of them preferred the city center, while 21.7 % preferred the city outskirts. When the participants' preferences for a second residence in the future, such as a summer house or weekend residence, were analyzed, it was observed that 78.2 % would prefer that, 2.9 % would not prefer that, and 18.9 % would consider it depending on the conditions.

Table 5 presents information on the priorities of the individuals participating in the study in terms of housing characteristics preferences. Safety for 4.0 % of the participants, comfort for 5.7 %, functionality for 32.6 %, accessibility for 24.6 %, proximity to social life for 35.4 %, mobility/portability for 96.0 %, space dimensions for 60.0 %, and design for 46.3 % were not among the priorities.

Table 6 presents information on the priorities of the individuals participating in the study in terms of housing type preferences. Apartment units for 31.4 % of the participants, detached housing for 1.1 %, residences for 30.3 %, housing estates for 22.3 %, public housing for 65.1 %, container buildings for 72.6 %, caravans for 55.4 %, and tiny houses for 36.6 % were not among the priorities.

Table 7 presents information on the priorities of the individuals participating in the study in the terms of the number of rooms. Studio apartments for 56.0 % of the participants, 1+0 houses for 58.9 %, 1+1 houses for 31.4 %, 2+1 houses for 14.9 %, 2+2 houses for 38.3 %, 3+1 houses for 17.7 %, 3+2 houses for 64.6 %, 4+1 houses for 59.4 %, and 4+2 houses for 80.6 % were not among the priorities.

Table 4. **Values of Generation Z's Spatial Preferences in Housing**

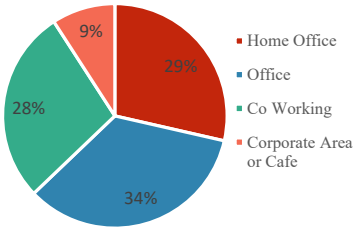
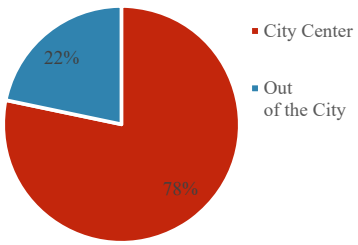
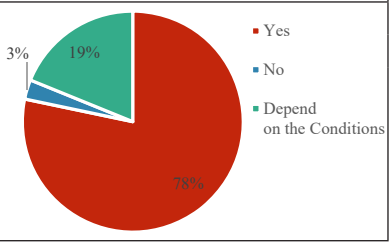
| | n | % | |
|---|---|---|---|
| What kind of working environment do you find close to you? | | | |
| Home Office | 50 | 28.6 |  |
| Office | 60 | 34.3 | |
| Co Working | 49 | 28.0 | |
| Corporate Area or Cafe | 16 | 9.1 | |
| Where would you prefer your residence to be located? | | | |
| City Center | 137 | 78.3 |  |
| Out of the City | 38 | 21.7 | |
| Would you prefer a second home in the future, such as holiday home, weekend residence, etc? | | | |
| Yes | 137 | 78.2 |  |
| No | 5 | 2.9 | |
| Depending on the conditions | 33 | 18.9 | |

Table 5. **(Section I) Spatial Preferences of Generation Z in Housing / Percentage Distribution of Priorities in Housing Characteristics Preferences**

| | 1st Preference | | 2nd Preference | | 3rd Preference | | 4th Preference | | 5th Preference | | Do not prefer | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | n | % | n | % | n | % | n | % | N | % |
| Safety | 102 | **58.3** | 27 | 15.4 | 15 | 8.6 | 12 | 6.9 | 12 | 6.9 | 7 | 4.0 |
| Comfort | 34 | 19.4 | 67 | **38.3** | 40 | 22.9 | 17 | 9.7 | 7 | 4.0 | 10 | 5.7 |
| Functionality | 8 | 4.6 | 30 | 17.1 | 29 | 16.6 | 22 | 12.6 | 29 | 16.6 | 57 | **32.6** |
| Accessibility | 15 | 8.6 | 27 | 15.4 | 39 | 22.3 | 34 | 19.4 | 17 | 9.7 | 43 | **24.6** |
| Proximity to social life | 9 | 5.1 | 11 | 6.3 | 25 | 14.3 | 36 | 20.6 | 32 | 18.3 | 62 | **35.4** |
| Mobile/Portable | 1 | 0.6 | 0 | 0 | 0 | 0 | 1 | 0.6 | 5 | 2.9 | 168 | **96.0** |
| Space dimensions | 1 | 0.6 | 5 | 2.9 | 9 | 5.1 | 24 | 13.7 | 31 | 17.7 | 105 | **60.0** |
| Design | 5 | 2.9 | 8 | 4.6 | 17 | 9.7 | 26 | 14.9 | 38 | 21.7 | 81 | **46.3** |

Table 6. **(Section I) Spatial Preferences of Generation Z in Housing / Percentage Distribution of Priorities in Housing Type Preferences**

| | 1st Preference | | 2nd Preference | | 3rd Preference | | 4th Preference | | 5th Preference | | Do not prefer | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | n | % | N | % | n | % | n | % | n | % |
| Apartment unit | 8 | 4.6 | 29 | 16.6 | 22 | 12.6 | 35 | 20.0 | 26 | 14.9 | 55 | 31.4 |
| Detached housing | 132 | 75.4 | 19 | 10.9 | 13 | 7.4 | 7 | 4.0 | 2 | 1.1 | 2 | 1.1 |
| Residence | 15 | 8.6 | 44 | 25.1 | 28 | 16.0 | 21 | 12.0 | 14 | 8.0 | 53 | 30.3 |
| Housing estate | 10 | 5.7 | 39 | 22.3 | 43 | 24.6 | 25 | 14.3 | 19 | 10.9 | 39 | 22.3 |
| Public housing | 1 | 0.6 | 6 | 3.4 | 9 | 5.1 | 20 | 11.4 | 25 | 14.3 | 114 | 65.1 |
| Container building | 3 | 1.7 | 1 | 0.6 | 15 | 8.6 | 15 | 8.6 | 14 | 8.0 | 127 | 72.6 |
| Caravan | 4 | 2.3 | 13 | 7.4 | 17 | 9.7 | 17 | 9.7 | 27 | 15.4 | 97 | 55.4 |
| Tiny house | 2 | 1.1 | 23 | 13.1 | 25 | 14.3 | 26 | 14.9 | 35 | 20.0 | 64 | 36.6 |

Table 8 presents information on the priorities of the individuals participating in the study in terms of space preferences. The living area for 2.9 % of the participants, kitchen for 4.0 %, bedroom for 2.9 %, toilet/bathroom for 29.1 %, study for 18.9 %, pantry for 97.1 %, laundry room for 95.4 %, hobby room for 56.0 % were not among the priorities.

Table 9 presents information on the priorities of the individuals participating in the study in terms of housing items. An armchair/couch for 15.4 % of the participants, dining table/chairs for 57.7 %, bed for 10.9 %, refrigerator for 26.9 %, TV set for 82.9 %, washing machine for 54.9 %, oven/microwave for 82.9 %, work desk for 37.1 %, coffee table for 96.0 %, wardrobe for 50.9 %, dryer for 97.1 %, iron / ironing board for 96.6 % were not among the priorities.

Table 10 presents information on the respondents' perception of housing as a commercial commodity.

Table 11 presents information on the approaches of the individuals participating in the study to their future residences.

**Results**

Based on the results of the questionnaire in Section I, which aimed to determine the spatial preferences of Generation Z in housing, the following can be concluded.

Even though the participants have not yet experienced working life, when we consider their working environment preferences, they show equal interest in working from home (home office), public space, or independent co-working place. Due to their digital predisposition, they have the ability to work from anywhere.

In terms of their housing preferences, it is evident that safety is of primary importance, followed by comfort. It should also be noted that the fact that safety is the top priority for Generation Z living in Turkey, whose behavior is influenced by the events in the country, reflects the atmosphere they live in. The fact that safety comes before design shows that the impact of the conditions they live in is quite essential for a Generation Z member who is a future architect.

This generation prefers a detached house (75.4 %), but they want to stay close to the city without leaving urban life.

Once again, the housing preferences of this generation are influenced by the country's economic conditions. The responses "depending on the conditions" suggest that the situation may change depending on the economy.

When choosing a house, 2+1 houses are the first preference (28 %). Preferences for 1+1 and 3+1 houses are close in percentage. The participants preferred small-scale housing, such as 1+1 and 2+1 units. This indicates the preference for living in smaller, minimal spaces is coming to the forefront.

When we look at the data on space priorities when choosing a house, it can be noted that

Table 7. **(Section I) Preferences of Generation Z in Housing / Percentage Distribution of Priorities in the Number of Rooms**

| | 1st Preference | | 2nd Preference | | 3rd Preference | | 4th Preference | | 5th Preference | | Do not prefer | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | n | % | n | % | n | % | n | % |
| Studio apartment | 10 | 5.7 | 6 | 3.4 | 13 | 7.4 | 18 | 10.3 | 30 | 17.1 | 98 | 56.0 |
| 1+0 house | 4 | 2.3 | 10 | 5.7 | 21 | 12.0 | 24 | 13.7 | 13 | 7.4 | 103 | 58.9 |
| 1+1 house | 31 | 17.7 | 29 | 16.6 | 33 | 18.9 | 14 | 8.0 | 13 | 7.4 | 55 | 31.4 |
| 2+1 house | 49 | 28.0 | 44 | 25.1 | 21 | 12.0 | 24 | 13.7 | 11 | 6.3 | 26 | 14.9 |
| 2+2 house | 7 | 4.0 | 20 | 11.4 | 24 | 13.7 | 22 | 12.6 | 35 | 20.0 | 67 | 38.3 |
| 3+1 house | 32 | 18.3 | 28 | 16.0 | 25 | 14.3 | 37 | 21.1 | 22 | 12.6 | 31 | 17.7 |
| 3+2 house | 6 | 3.4 | 13 | 7.4 | 22 | 12.6 | 9 | 5.1 | 12 | 6.9 | 113 | 64.6 |
| 4+1 house | 16 | 9.1 | 19 | 10.9 | 9 | 5.1 | 13 | 7.4 | 14 | 8.0 | 104 | 59.4 |
| 4+2 house | 18 | 10.3 | 4 | 2.3 | 2 | 1.1 | 2 | 1.1 | 8 | 4.6 | 141 | 80.6 |

Table 8. (**Section I) Spatial Preferences of Generation Z in Housing / Percentage Distribution of Priorities in Spatial Preferences in Housing**

| | 1st Preference | | 2nd Preference | | 3rd Preference | | 4th Preference | | 5th Preference | | Do not prefer | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | n | % | n | % | n | % |
| Living space | 85 | 48.6 | 23 | 13.1 | 25 | 14.3 | 24 | 13.7 | 13 | 7.4 | 5 | 2.9 |
| Kitchen | 10 | 5.7 | 46 | 26.3 | 53 | 30.3 | 35 | 20.0 | 24 | 13.7 | 7 | 4.0 |
| Bedroom | 38 | 21.7 | 48 | 27.4 | 43 | 24.6 | 29 | 16.6 | 12 | 6.9 | 5 | 2.9 |
| Toilet/bathroom | 18 | 10.3 | 22 | 12.6 | 22 | 12.6 | 37 | 21.1 | 25 | 14.3 | 51 | 29.1 |
| Study | 19 | 10.9 | 25 | 14.3 | 19 | 10.9 | 25 | 14.3 | 54 | 14.3 | 33 | 18.9 |
| Pantry | 0 | 0 | 0 | 0 | 2 | 1.1 | 1 | 0.6 | 2 | 1.1 | 170 | 97.1 |
| Laundry room | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1.7 | 5 | 2.9 | 167 | 95.4 |
| Hobby room | 5 | 2.9 | 11 | 6.3 | 10 | 5.7 | 17 | 9.7 | 34 | 19.4 | 98 | 56.0 |

Table 9. **(Section I) Spatial Preferences of Generation Z in Housing / Percentage Distribution of Priorities in Housing Items**

| | 1st Preference | | 2nd Preference | | 3rd Preference | | 4th Preference | | 5th Preference | | Do not prefer | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | n | % | n | % | n | % | n | % | n | % |
| Armchair/couch | 46 | 26.3 | 46 | 26.3 | 26 | 14.9 | 16 | 9.1 | 14 | 8.0 | 27 | 15.4 |
| Dining table / chairs | 0 | 0 | 13 | 7.4 | 21 | 12.0 | 24 | 13.7 | 16 | 9.1 | 101 | 57.7 |
| Bed | 85 | 48.6 | 36 | 20.6 | 17 | 9.7 | 8 | 4.6 | 10 | 5.7 | 19 | 10.9 |
| Refrigerator | 8 | 4.6 | 37 | 21.1 | 27 | 15.4 | 34 | 19.4 | 22 | 12.6 | 47 | 26.9 |
| TV set | 4 | 2.3 | 3 | 1.7 | 8 | 4.6 | 8 | 4.6 | 7 | 4.0 | 145 | 82.9 |
| Washing machine | 1 | 0.6 | 8 | 4.6 | 20 | 11.4 | 17 | 9.7 | 33 | 18.9 | 96 | 54.9 |
| Oven/microwave | 2 | 1.1 | 1 | 0.6 | 5 | 2.9 | 11 | 6.3 | 11 | 6.3 | 145 | 82.9 |
| Work desk | 26 | 14.9 | 20 | 11.4 | 28 | 16.0 | 18 | 10.3 | 18 | 10.3 | 65 | 37.1 |
| Coffee table | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 3.4 | 1 | 0.6 | 168 | 96.0 |
| Wardrobe | 3 | 1.7 | 8 | 4.6 | 21 | 12.0 | 25 | 14.3 | 29 | 16.6 | 89 | 50.9 |
| Dryer | 0 | 0 | 1 | 0.6 | 0 | 0 | 2 | 1.1 | 2 | 1.1 | 170 | 97.1 |
| Iron / ironing board | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1.1 | 4 | 2.3 | 169 | 96.6 |

the living space is the first preference (48.6 %), and the bedroom is the second preference (21.7 %). This indicated that this iGeneration may prioritize the bedroom since it is easier to use an iPad or iPhone in this area. The kitchen and bedroom are close in terms of preference distribution. After the living space, bedroom, and kitchen, the toilet comes next.

When it comes to furniture preferences, 48.6 % of the respondents preferred a bed. This is followed by an armchair/couch and a desk. This shows that this generation can spend a long time using comfortable furniture such as a bed, sofa, or chair, with mobile devices in their hands. Their second preference includes an armchair/couch, desk, and refrigerator.

These results show that Generation Z is more inclined towards small-scale, independent dwellings. They are not fully committed to the working life yet, but they prioritize their home and independent space options. They also prefer environments and items that offer comfort and solitude in residential space.

Table 10. **(Section II) Percentage Distribution of Generation Z's View of Housing as a Commercial Commodity**

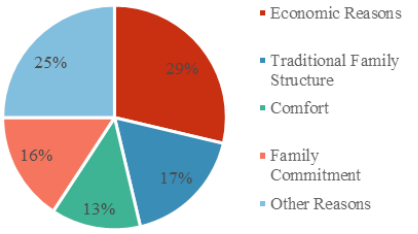
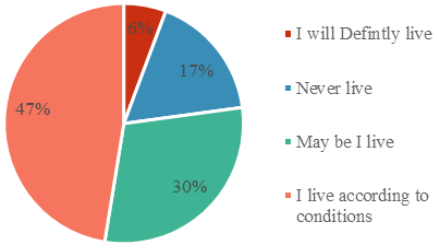
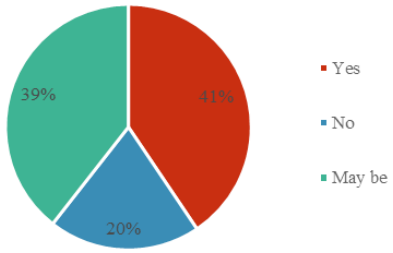
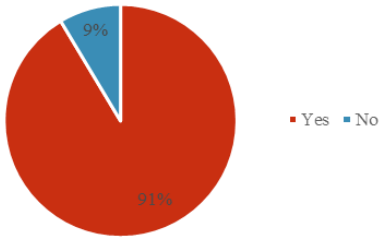
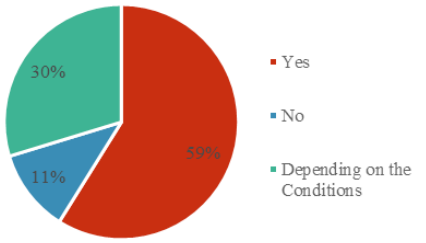
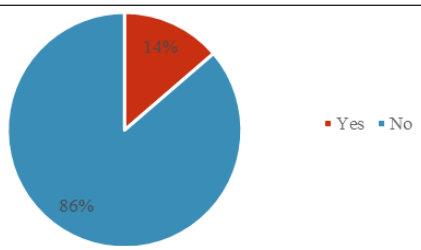
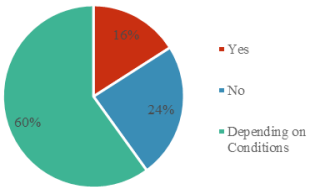
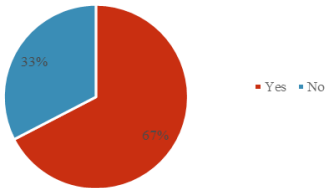
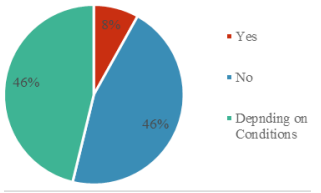
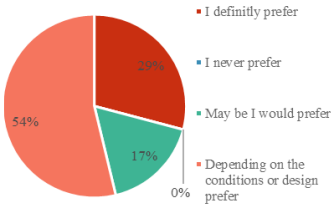
| | | | n | % | |
|---|---|---|---|---|---|
| Do you live with your parents? | | | | | |
| Yes | What is the reason living with your family? | Economic Reasons | 31 | 24.2 |   |
| | | Traditional Family Structure | 39 | 30.5 | |
| | | Comfort | 14 | 10.9 | |
| | | Family Commitment | 17 | 13.3 | |
| | | Other Reasons | 27 | 21.1 | |
| | | TOTAL | 128 | 73.1 | |
| No | | | 47 | 26,9 | |
| Would you consider continuing your life in the house where you live with family house offered to you (such as inheritance, investment)? | | | | | |
| I will defintly live | | | 10 | 5.7 |   |
| Never live | | | 30 | 17.1 | |
| Maybe I will live | | | 52 | 29.7 | |
| I live according to conditions | | | 83 | 47.4 | |
| Dou you want to allocate a budget for spatially unused or underused parts of the house? | | | | | |
| Yes | | | 71 | 40.6 |   |
| No | | | 35 | 20.0 | |
| Maybe | | | 69 | 39.4 | |
| Dou you like to design and build your home yourself with the DIY(Do It Yourself) technique? | | | | | |
| Yes | | | 160 | 91.4 |   |
| No | | | 15 | 8.6 | |
| Dou you see housing as an investment instrument? | | | | | |
| Yes | | | 103 | 58.9 |   |
| No | | | 20 | 11.4 | |
| Depending on the Conditions | | | 52 | 29.7 | |
| Would you consider owning a house by borrowing (20 years)? | | | | | |
| Yes | | | 24 | 13.7 |   |
| No | | | 151 | 86.3 | |

Table 11. **(Section III) Percentage Distribution in terms of Generation Z's Future Housing Approach**

| | | | | | |
|---|---|---|---|---|---|
| Dou you prefer your home to be portable or mobile? | | | | | |
| Yes | | | 28 | 16.0 |  |
| No | | | 42 | 24.0 | |
| Depending on the Conditions | | | 105 | 60.0 | |
| Would you like your home to be expandable or demolish in the future, depending on whether your family increase or decrease? | | | | | |
| Yes | | | 118 | 67.4 |  |
| No | | | 57 | 32.6 | |
| Would you prefer sustainable housing for the future? | | | | | |
| Yes | Dou you compromise on comfort when choosing sustainable housing? | Yes | 14 | 8.1 |  |
| | | No | 79 | 45.7 | |
| | | Depending on the Conditions | 80 | 46.2 | |
| | | Total | 173 | 98.8 | |
| No | | | 2 | 1.2 | |
| Dou you prefer the use of recycled, industrial or steel materials in housing? | | | | | |
| I definitely prefer | | | 51 | 29.1 |  |
| I never prefer | | | 0 | 0 | |
| Maybe I would prefer | | | 30 | 17.1 | |
| Depending on the conditions or design I prefer | | | 94 | 53.7 | |

In Section II, Generation Z's views on housing as a commercial commodity were evaluated.

It should be noted that 31 % of the participants stated that they live with their parents for economic reasons, while 27 % chose "other reasons" for their answer. Additionally, 39 % of the participants chose the traditional family structure as the reason for staying with their parents. This indicates that the traditional structure of their parents' generation and Turkish society in general is still influential, and the country's economic level has its impact on their preferences too.

Besides, 47.4 % of the respondents chose the option "depending on the conditions" as their preference for continuing to live in the house where they live with their family or the family house offered to them (such as inheritance, investment, etc.). In addition, 5.7 % of the participants preferred the option "I would definitely live here".

As for the next question, 91.4 % of the respondents answered "yes" to the idea of designing and building their own house using the DIY (Do It Yourself) technique. Since they are still aspiring architects, they are keen on the idea of designing and building their own houses. While shipping containers are designed to facilitate the creation of solutions in limited spaces, their light weight and portability align with this preference. This system can be easily assembled by individuals, making construction with the DIY technique quick and convenient.

The percentage of those who view housing as an investment instrument is 58.9 %. Depending on the economic conditions of the country, many people view housing as an investment instrument due to its potential for future security. Owning a title deed is highly valued in this country. However, the survey showed that 86.3 % of the respondents are not inclined to borrow money to own a house within the next 20 years.

Based on the findings of Section II, this generation, due to the traditional family structure and economic reasons, tends to live with their families. They do not prioritize inheritance or living in the family home to a great extent. Instead, they view housing as an investment instrument but are reluctant to take on long-term loans to own a house, preferring to build their own homes. This situation shows that the desire to live in a separate house is predominant if economic conditions and traditional family structure allow it. People see housing as an

investment instrument due to traditional attitudes and for reasons of feeling safe. On the other hand, this generation grew up during the period of urban transformation. The subject has become more valuable through the transformation. Witnessing this process also justifies the view of housing as an investment instrument.

Section III aimed to determine the future housing approach.

Ad for housing mobility, 24 % would not prefer their house to be mobile, and 60 % responded that it would depend on the conditions. These results show that they are more favorable to the idea of mobility. In Section I, 30 % of the participants stated that they had experienced living in a tiny house, caravan, or container building. The result shows that inexperienced individuals are actually favorable to this idea, depending on the conditions.

As for other findings, 67.4 % of the participants answered “yes” to the question of whether they would prefer their house to be added or removed in the future, depending on the expansion or reduction of their family. This result shows that, in addition to fixed solutions, various options are favorable for removable systems.

As for preferences for sustainable housing in the future, 98.8 % of the respondents stated that they would prefer it. However, about half of them also mentioned that they would not be willing to compromise on comfort. The concept of comfortable and sustainable housing is a positive one.

When it comes to using recycled, industrial, or steel materials in housing, 29.1 % stated that they would definitely use those, while 53.7 % answered that they would consider it depending on the conditions. It is evident that they are favorable towards recycling and open to using different materials other than reinforced concrete.

**Conclusions**

The purpose of this study was to determine the approach of Generation Z, the consumer of the near future, which has a significant population in Turkey, towards the use of shipping containers as a sustainable solution. Both architect students and Generation Z members living in Turkey were surveyed to determine their opinions on the use of shipping containers as housing solutions.

Studying the inclinations of Generation Z members, who are mobile, fast-paced, easily bored, and value home life, based on their generational traits, in relation to the use of shipping containers, which is considered a viable solution, will provide insights into the approach to housing production in the near future.

The architectural preferences of this generation, which is also sensitive to environmental issues, are being questioned, and there is an attempt to determine sustainability sensitivity through the use of reusable shipping containers. Shipping containers offer significant advantages as a housing choice for Generation Z due to their mobility, cost-effectiveness, eco-friendliness, and recyclable features.

Many social, cultural, traditional, and political factors in Turkey, from the past to the present, primarily determine consumer/generation characteristics. An appropriate consumption demand environment is formed accordingly. For this reason, the same results will not be obtained if this study is conducted in a different country. In this study of Generation Z, while Generation Z exhibits similar characteristics globally, it is common for them to have different traits, consumption habits, and preferences based on social, economic, and political factors in Turkey. Additionally, the experiences and generation characteristics of the parents raising them also have a significant impact.

The use of idle shipping containers as a sustainable and environmentally friendly solution, with the re-purposing approach, offers positive solutions to reduce resource use, energy consumption, and negative environmental impacts.

Shipping containers are a valuable resource generating a high amount of waste due to geopolitical location of the country, surrounded by seas on three sides, and also associated with the high volume of maritime trade as well as characterized by limited lifespan (seven years). Shipping containers are recyclable, easy to obtain, and can be added, removed, and used side by side or stacked on top of each other. With re-purposing, the transformation/construction time is very short, and economic solutions are flexible. The fact that their lifespan is as short as seven years is important for the continuity of this resource. It offers a fast, economical, and sustainable option for housing production.

Approaches of the participants, both Generation Z members and architecture students, to the use of shipping containers for sustainable housing solutions are as follows:

- Generation Z, who are economically strong, tend to not prefer to live with their families.
- They tend to not prefer living in a family house or inherited house.
- Safety and economic conditions have a dominant influence on housing preferences.
- They want to have small-scale, detached, and independent housing still remaining part of the social life of the city.
- They have the option to work independently or from home.
- Comfort in residential spaces is essential, with preferences for beds and armchairs/couches taking center stage.
- They support the sustainability approach but do not want to compromise on comfort and favor the idea of a predominantly conventional mobile home.

- They prefer using recycled materials.

When we consider the housing preferences of Generation Z, the criteria of safety, independence, small scale, sustainability, portability, proximity to the city but in nature, and proximity to social areas come to the forefront. The preferences of Generation Z, who will be the consumers/users of the near future, contain important information for both architects and non-architects. It is concluded that the desired features in residences are not multi-story and large-scale, but rather detached/independent, in nature, close to the city, environmentally friendly, and sustainable due to the use of recycled materials and systems.

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# ОЦЕНКА ИСПОЛЬЗОВАНИЯ МОРСКИХ КОНТЕЙНЕРОВ В КАЧЕСТВЕ ЖИЛЬЯ ДЛЯ ПОКОЛЕНИЯ Z КАК МЕНЯЮЩЕГОСЯ ПОТРЕБИТЕЛЯ

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**Аннотация**
**Введение:** Архитектурные требования ближайшего будущего будут иметь совершенно иные характеристики, чем в недавнем прошлом. С изменением средств коммуникации и транспорта, благодаря возможности быстрого перемещения и легкого общения также поменялись и традиционные представления о жилище. Эти изменения повлекут за собой перемены в использовании пространства и его масштабе. Архитектура претерпевает значительные изменения в связи с появлением Индустрии 4.0. В ближайшем будущем непосредственным потребителем, который будет предъявлять такие требования уже совсем скоро, станет поколение Z. Одновременно с этим архитектурная среда унаследовала множество экологических проблем, которые возникли в недавнем прошлом и продолжают обостряться. В условиях стремительных изменений/трансформаций экологические проблемы требуют устойчивых решений, которые вполне могут находиться в гармонии с природой, что гораздо более естественно, чем развитие технологий.
В основе данного исследования лежит использование морских контейнеров в качестве устойчивого решения и определение подхода поколения Z как меняющегося потребителя к этому решению. **Цель исследования** — выяснить, как поколение Z, живущее в Турции, оценивает использование морских контейнеров в качестве альтернативы жилью. **Методы:** В ходе исследования был проведен опрос лиц, которые одновременно являются представителями поколения Z и студентами архитектурных вузов. В исследовании использовался метод целенаправленной выборки.

**Ключевые слова**: дом из морского контейнера; устойчивая архитектура; поколения; поколение Z.