

Investigating the Behavior of Generation Z Customers in Online Banking Services (Case Study of a Bank of Iran)

Elham Mahmoudabadi

Department of Computer Engineering, Amirkabir University of Technology
Tehran, Iran
mahmoudabadi@aut.ac.ir

Esmail Mollaahmadi

Department of Mathematical Sciences, Sharif University of Technology
Tehran, Iran
mollaahmadi@cert.sharif.edu

Abstract— Communication sciences experts have categorized generations according to the phenomena of the virtual world and technology. Due to the advancement of technology, members of different generations have different values and behaviors. In this categorization, the Generation Z refers to a group of people who were born after 1995. This generation is almost simultaneous with the seventies and eighties solar decade of Iran. The Generation Z has been facing technologies such as the web, social networks and mobile phones ever since they were born. In fact, this generation does not remember the pre-internet era. That's why this generation is sometimes referred to as digital citizens. Most members of the Generation Z will use digital communications and media for all their lives. Now it is estimated that about 40% of the world's population is Generation Z. However, the proportion of the population of Generation Z in Iran is lower than that of other generations in comparison with the global population, but it is very important to consider the characteristics and interests of this generation as new customers of banks and financial institutions. Banks and financial institutions can create competitive benefits that guarantee their survival and durability by creating products and services commensurate with the values of this generation. In this article we briefly examine some of the characteristics of Generation Z in using the services of one of the Iran's banks, and we'll review the growth of this generation's interest in using the bank's online services over the last nine years.

Keywords—*gen zers customers; digital metamorphosis; online services; banking without branch office services; banking without a bank*

I. INTRODUCTION

The number and type of customer's demands and purchasing power varies according to the technology, culture and economics changes. Nowadays one of the major challenges of the banks and financial institutions is to deal with people of different generations with different values and needs. This difference in needs and interests requires its own unique methods and principles for marketing and customer attracting. Communications sciences experts have categorized generations into different categories based on their confrontation with technology and virtual world phenomena. Depending on the possibilities and technologies available to each generation, the demands and values of each generation vary. The Generation Z

that born in the second half of the 1990s, has no pre-internet and mobile experience. In fact, this generation has no experience of the pre-digitalization era. This generation not only uses smartphones easily, but also live with their phones. It is estimated that, this generation that is the future customer of banks and financial institutions, currently is about 40% of the world's population [1]. The purchasing power of this generation is estimated at \$3.4 trillion. It is also estimated that this generation's purchasing power is \$143 billion in the United States [1].

On the other hand, digital banking technologies are becoming more and more popular and it is expected that digital banking will be used by a large number of the population in the future. Customer-orientation is the foundation of digital banking. In customer-orientation discussion, knowing the customer experiences and interests is very important. In fact, the customers expect that the banks and financial institutions offer unique suggestion according to their unique characteristics, and it is necessary for banks to change from bank- or transaction-orientation to customer-orientation. In other words, each customer is an independent identity, each of them may have different interests and needs, and expects services that fit to their financial interests. The basic issue is how banks and financial institutions will treat Generation Z customers along with their other customers. The demands and interests of this generation are different from those of previous generations, and according to the emergence of new players in the financial area, including startups and fintechs, with new ideas fit to new generations, if banks and financial institutions couldn't make a fast and innovational respond to the needs of this part of society, they will lose some market share.

In this article, we briefly study the characteristics and interests of Generation Z then we examine the behaviors of this generation's customers in one of the Iran's banks, and we compare the behaviors of this generation with other customers' generations. The data that is used in this article are from the last nine years (2011 to 2019). In this article we focus on examining the behaviors of Generation Z customers in the bank's online and offline services and comparing these behaviors with those of other generations. Banks and financial institutions can improve the services that customers request from banks and financial institutions fit to their needs and

interests, by studying the behaviors and interests of customers of different generations, including Generation Z.

II. SUBJECT LITERATURE

Experts of knowledge have divided humans into different generations. Each generation is a group of people who were born at the same time and have common experiences. Communication sciences experts have categorized members into different generations based on dealing with the cyberspace phenomena and communication technologies. Members of different generations have different values and behaviors.

The Silent generation are those who were born during 1929, the year of the economic crisis of the United States of America and the years that followed (1916 to 1946). Baby boomers refers to those who were born during the explosion of population growth after World War II (1945-64). They belong to an era when technology has not made much progress. This group prefers logical advertising. They may have the ability to work with mobiles, but their knowledge of technology is less than other generations. Gen Xers, were born between 1965 and 1979 and during the emergence of technology they have grown in their daily lives [2]. Their level of education is higher than the previous generations and lower than the subsequent generations [3]. The generation Y members who were born during 1980 to 1994 and are known as the millennials. They have been exposed to the digital world early in their lives and, unlike previous generations, have been identified as digital immigrants [4]. For this generation, learning is an active experience and they are not dependent on past learning approaches any more [5]. Gen Zers refers to those who were born in the second half of the 1980s. Oblinger and Oblinger calls this generation the generation after millennials [6]. Prensky calls Gen Zers the digital natives [7]. Many other experts have given this generation titles such as Facebook generation, network generation, etc. In this article we use the title Gen Zers and this generation includes all those who were born in the years 1996 to 2010. In other words, members of the Gen Zers are now between 9 and 24 years old. Due to the advancements of ICTs and their continuous presence in today's world, Gen Zers has unlimited ways to learn. They care about their lives more than any other generations, and life without technology is impossible for this generation [8].

At 2019, the Gen Zers is 32% of the world's population, and it is estimated that this percent will reach to 40% by the end of the 2020 [1]. Researchers have tried to find out more about the behavioral traits and interests of different generations, including the Gen Zers, while knowing more about this generation, provide appropriate solutions for dealing with the new generation. As this generation grows, their relationship with the banks and financial institutions will increase. Gen Zers are future customers of the banks and financial institutions. Banks and financial institutions can gain more profits by attracting new customers. Therefore, the study of the characteristics of this generation has attracted the attention of many researchers in this field.

According to IBM, 22% of 13- to 15-year-olds have a good relationship with a brand, and this fact has risen to 46% for the 19 to 21 ages [9]. So providing relationships over this period of

lifespan and providing a good, positive experience will make the bank or financial institution a brand for the customer. On the other hand, the financial impact of this age range will be significant in the future. Gen Zers members are customers with strong communications. The biggest group that affects them is their family and friends. Therefore, Gen Zers expects to have the same relationship with the service providers. Gen Zers has lots of communications with electronic devices and smartphones. According to the provided statistics, 46% of the Gen Zers cannot live a normal life for more than an hour without their phones [10]. So offering the applications that can run on smartphones will be a successful way to keep Gen Zers customers. Banks and financial institutions should keep in mind that their plans must be simple. On the other hand, Gen Zers, is interested in learning [1]. So one of the ways that banks can keep customers committed to them is to educate them to manage their finances better.

According to data from the Statistical Centre of Iran [11], the population of Iran was about 80 million in 2017. TABLE I shows the population of each generation in 2017. As it is known, the Gen Zers made about 22% of the population of Iran in 2017. As this generation grows, their relationship with banks and financial institutions will increase. This shows the importance of examining the behavioral characteristics of this generation of society. Banks and financial institutions have to study the behavioral characteristics of this generation in order to provide products and services fit to this generation's interests and values. TABLE I. shows the proportion of different generations in 2017 census.

TABLE I. IRAN GENERATION'S POPULATION

<i>Generation name</i>	<i>Birth years</i>	<i>Iran population</i>	<i>%</i>
-	2010-Now	9.6 million	12.04
Gen Zers	1996-2010	17.5 million	21.96
Millennials	1981-1995	22 million	27.58
Gen Xers	1965-1980	18.3 million	22.94
Baby boomers	1947-1964	9.4 million	11.79
Silent generation	1916-1946	2.9 million	3.69

III. RESEARCH METHODOLOGY

This research is applied and descriptive in nature and purpose, and in terms of method, descriptive and analytical. In this study, we want to describe the behavioral realities of Gen Zers customers of banks and financial institutions. So, we have examined the behavior of customers of one of the Iran's banks in all banking services. The customers surveyed in this study were natural person customers and their behavior has been studied from 2011 to 2019 (the last nine years). Fig. 1. The percentage of different account types shows the ratio of different accounts including Qarz Al-Hasaneh accounts, current accounts, short-term deposits and long-term deposits in the studied bank.

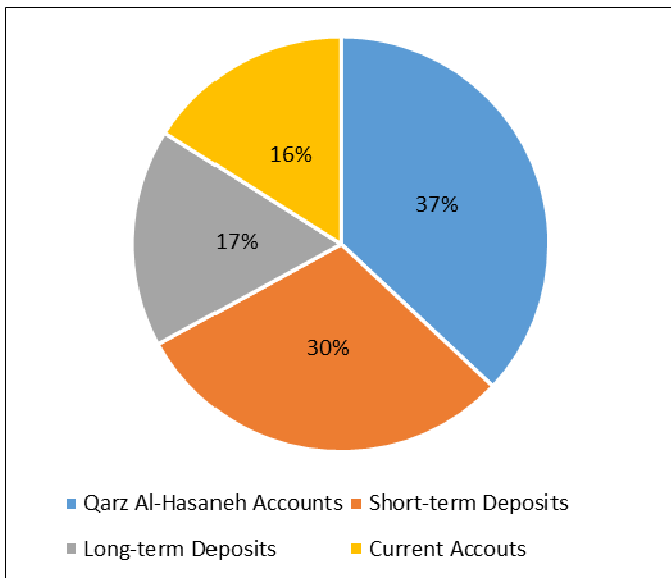


Fig. 1. The percentage of different account types

In this study all banking services listed in TABLE II. are examined.

TABLE II. BANK SERVICES

#	Service name
1	Banking at a Branch
2	Internet Banking
3	Mobile Banking
4	Telephone Banking
5	SMS Banking
6	ATM
7	POS

The data analyzed in this study are related to all transactions and behaviors of the customers of the studied bank during a period of one month each year (December). According to TABLE III. bank's customers are classified into different generations.

TABLE III. BANK'S CUSTOMERS IN DIFFERENT GENERATION

Generation name	Birth years	Iran population
Gen Zers	1996-2010	8.82
Millennials	1981-1995	34.12
Gen Xers	1965-1980	30.56
Baby boomers	1947-1964	19.53
Silent generation	1916-1946	6.97

In this study, we minutely examine the behavior of Gen Zers customers in different banking services in the studied

bank for the last nine years. Because of confidentiality, in many cases, we have refused to disclose real transaction data and just stated the ratio of transactions to total transactions.

IV. FINDINGS AND RESULTS

In this section, we will investigate the behavior of Gen Zers customers by the data of the studied bank. First we examine how much is the Gen Zers share of banking transaction. Then we compare this generation's behavior to other generations in banking without branch office and online banking services and finally we have a look at this generation in 2019.

A. Investigation of Gen Zers share of the all banking transactions

Reviewing the data of the studied bank showed that Gen Zers customers are about 9% of total customers (TABLE III.). TABLE IV. shows the Gen Zers customers share of transactions performed in the same months during different years.

TABLE IV. BANKING TRANSACTIONS IN DECEMBER (2011-2019)

Year	Gen Zers	Millennials	Gen Xers	Baby boomers	Silent generation
2011	1.83	34.18	41.05	18.97	3.97
2012	1.58	39.47	39.52	16.59	2.84
2013	1.64	41.78	38.55	15.65	2.38
2014	2.01	43.38	37.42	15.05	2.14
2015	3.32	45.42	34.58	14.45	2.23
2016	3.35	45.69	35.51	13.84	1.81
2017	6.43	47.18	32.46	12.18	1.75
2018	6.87	46.85	32.99	11.91	1.38
2019	8.23	47.13	32.12	11.25	1.27

As shown in TABLE IV. , share of Gen Zers customers compared to the other customers was 1.83% in 2011, while it reaches to 8.23% for the same month in 2019. The data in TABLE IV. generally shows the growth rate of Gen Zers customer's share of the total number of transactions. In TABLE V. , TABLE VI. TABLE VII. and TABLE VIII. , the shares of Gen Zers customers in the studied bank are respectively compared with the types of current accounts, Qarz Al-Hasaneh accounts, short-term deposits and long-term deposits over the same period in the different years.

This data indicates that Gen Zers customers, among the types of accounts, have a higher share of Qarz Al-Hasaneh accounts.

TABLE V. BANKING CURRENT TRANSACTIONS IN DECEMBER (2011-2019)

Year	Gen Zers	Millennials	Gen Xers	Baby boomers	Silent generation
2011	0.02	29.18	49.52	19.29	1.99
2012	0.01	33.33	47.08	17.77	1.81
2013	0.12	36.91	44.45	16.88	1.64

2014	0.25	39.13	42.60	16.35	1.67
2015	0.46	39.65	42.22	16.02	1.65
2016	0.97	42.38	40.09	15.02	1.54
2017	7.19	48.26	32.27	10.70	1.58
2018	3.60	45.43	37.22	12.61	1.14
2019	4.88	46.63	35.91	11.60	0.98

TABLE VI. BANKING QARZ AL-HASANEH TRANSACTIONS IN DECEMBER (2011-2019)

Year	Gen Zers	Millennials	Gen Xers	Baby boomers	Silent generation
2011	1.29	42.26	38.07	15.03	2.35
2012	1.55	47.11	35.99	13.5	2.30
2013	1.94	47.31	35.76	12.90	2.09
2014	2.84	48.06	34.81	12.34	1.95
2015	3.66	47.81	34.38	12.24	1.91
2016	5.09	49.40	32.94	10.98	1.59
2017	7.26	48.47	32.07	10.63	1.57
2018	9.02	48.51	31.26	9.98	1.23
2019	10.33	48.12	30.97	9.43	1.15

TABLE VII. BANKING SHORT-TERM TRANSACTIONS IN DECEMBER (2011-2019)

Year	Gen Zers	Millennials	Gen Xers	Baby boomers	Silent generation
2011	4.50	28.32	36.23	24.06	6.89
2012	3.27	34.56	36.65	20.71	4.81
2013	2.80	40.33	35.86	17.57	3.44
2014	2.90	42.82	34.99	16.51	2.87
2015	3.23	43.76	34.23	16.24	2.54
2016	3.98	45.11	33.43	15.25	2.73
2017	5.01	45.10	32.77	14.67	2.45
2018	6.67	45.82	31.90	13.86	1.75
2019	8.37	46.50	30.78	12.76	1.59

TABLE VIII. BANKING LONG-TERM TRANSACTIONS IN DECEMBER (2011-2019)

Year	Gen Zers	Millennials	Gen Xers	Baby boomers	Silent generation
2011	4.15	21.37	30.45	28.01	16.02
2012	4.41	23.32	30.19	27.40	14.68
2013	6.89	14.96	29.47	35.74	12.94
2014	5.04	16.71	29.25	36.09	12.91
2015	6.40	24.70	30.96	26.67	11.27
2016	6.73	26.40	31.49	25.39	9.99
2017	7.71	29.62	30.74	23.68	8.25
2018	8.09	26.61	30.42	24.98	9.90
2019	8.55	24.59	30.10	25.73	11.03

B. Comparing the Gen Z customer's behavior with other generations in the use of banking without branch office services

As shown in TABLE IX. , the financial transactions of the various bank services of the studied bank, have been studied in the same months in the last nine years. TABLE IX. shows the ratio of using the banking without branch office services in the same months for different generations.

TABLE IX. THE PERCENTAGE OF USING THE BANKING WITHOUT BRANCH OFFICE SERVICES IN DECEMBER (2011-2019)

Year	Gen Zers	Millennials	Gen Xers	Baby boomers	Silent generation
2011	0.61	38.97	42.85	15.52	2.05
2012	0.77	42.27	40.61	14.62	1.73
2013	0.96	43.07	39.72	14.60	1.65
2014	1.49	43.95	38.25	14.59	1.72
2015	4.02	50.25	33.99	10.62	1.12
2016	4.15	49.95	34.78	10.25	0.87
2017	7.73	50.85	31.27	9.20	0.95
2018	8.56	50.48	31.41	8.82	0.73
2019	9.66	80.49	30.62	8.53	0.70

Fig. 2 shows the number of banking without branch office services usage by Gen Zers customers in 2011 and 2019. While 19% of Gen Zers customer transactions were done in December 2011 through banking without branch office services and without visiting the bank, this number has been grown substantially during the same period in 2019 (Fig. 3).

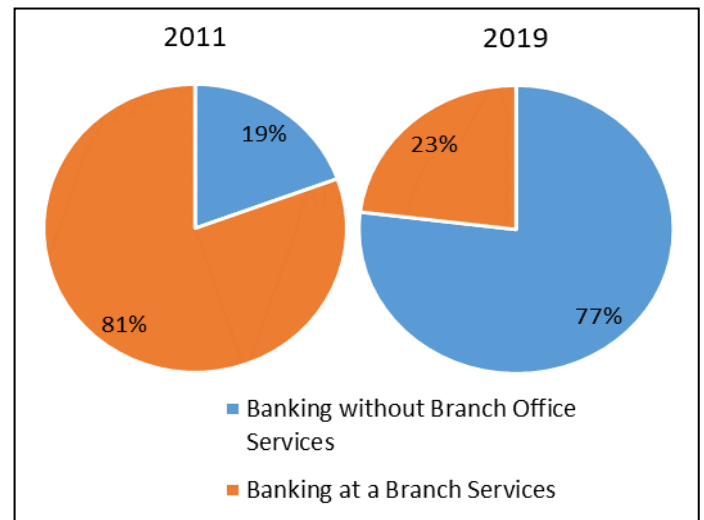


Fig. 2. Comparison of Gen Zers customers use of banking without branch office services in December (2011 & 2019)

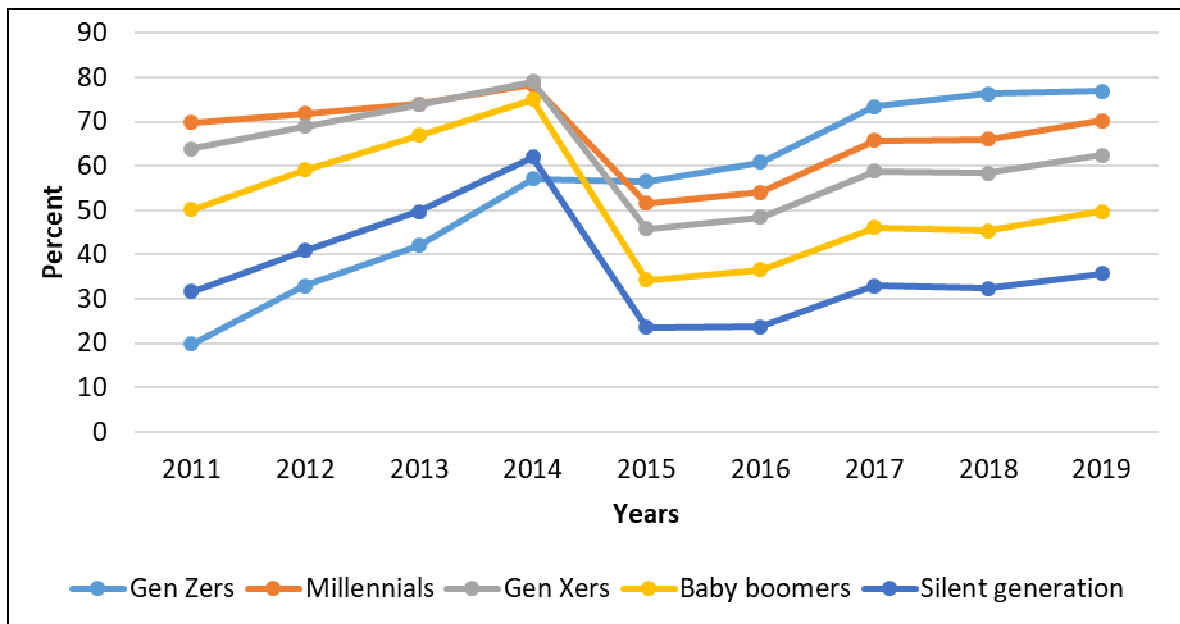


Fig. 3. The growth of the use of banking without branch office services in different generations in December (2011-2019)

Reviewing the data of banking without branch office service transactions in December 2011 until now, shows that Gen Zers customers using proportion of card reader has increased compared with the other generations. Fig. 4 shows the usage percentage of POS services by different generations

in 2011 to 2019. While in 2010, 6.44% of Gen Zers customer transactions were POS transactions, in the same period in 2019 this number increased to 50.43%.

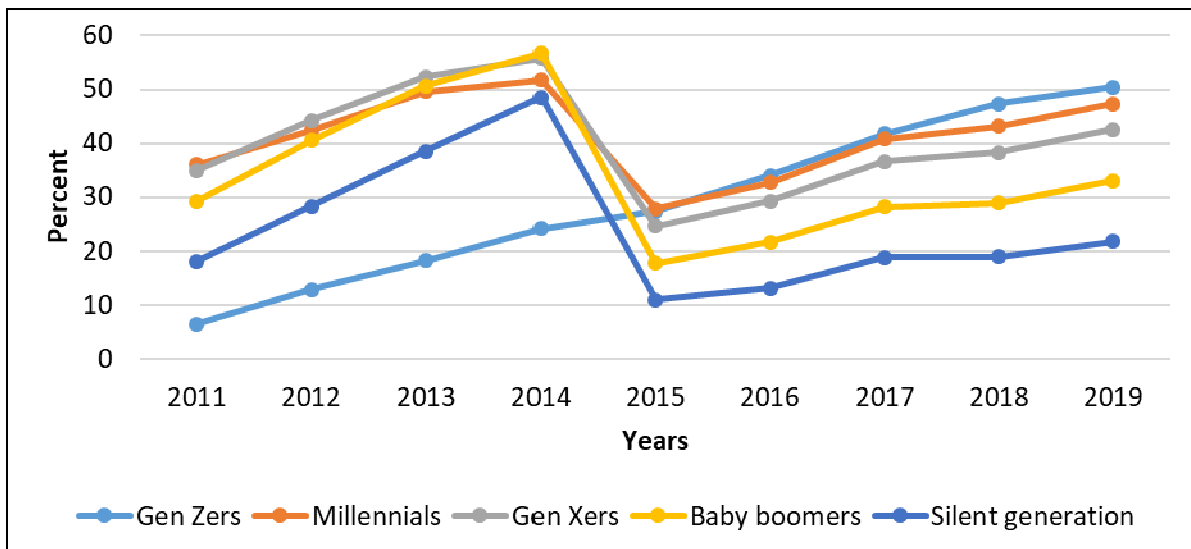


Fig. 4. Percentage of use of different generations of POS in the last 9 years

C. Investigating the behaviors of Gen Zers customers in online services

By growing the online banking services such as Internet Banking and Mobile Banking, studying the behaviors of different generation's customers in using these services will be important. Fig. 5 shows that Gen Zers customer's use of online services (mobile banking and internet banking) has increased in

the same period over the last 9 years. While in 2011, 2.11% of Gen Zers customer transactions were related to online transactions. During the same period in 2019, 5.46% of Gen Zers customer transactions were dedicated to online transactions.

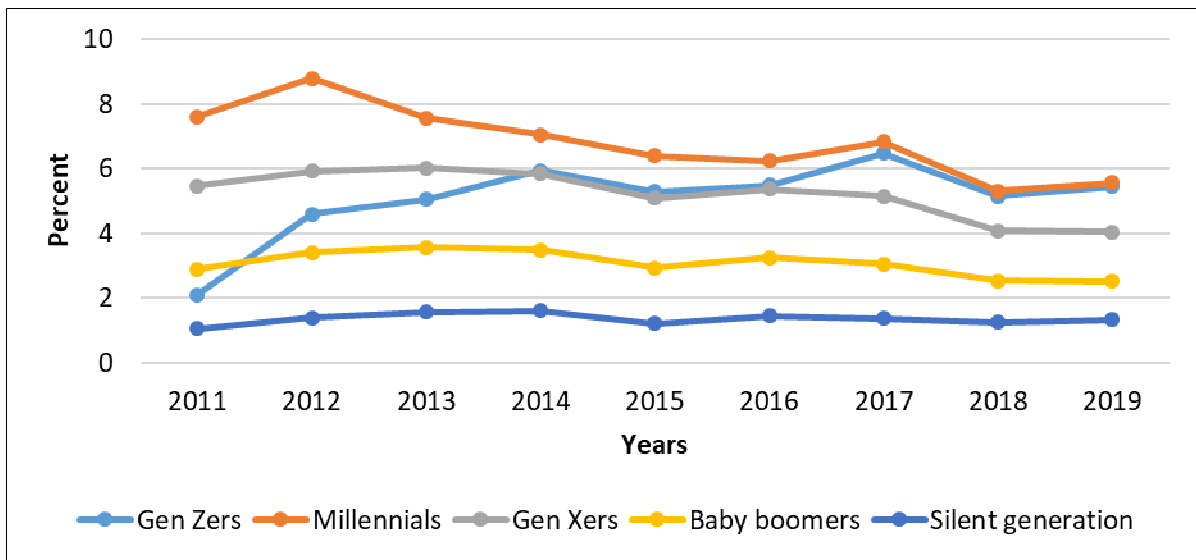


Fig. 5. The interest of different generations of customers in using online services in the last 9 years

D. Investigation of Gen Zers Customer Behavior in 2019

Surveys show that most of the Gen Zers customer accounts in the studied bank are Qarz Al-Hasaneh accounts. This generation of customers has shown interest in short-term, long-

term deposits and current accounts, respectively. Fig. 6 shows the percentages of Gen Zers customer types of accounts.

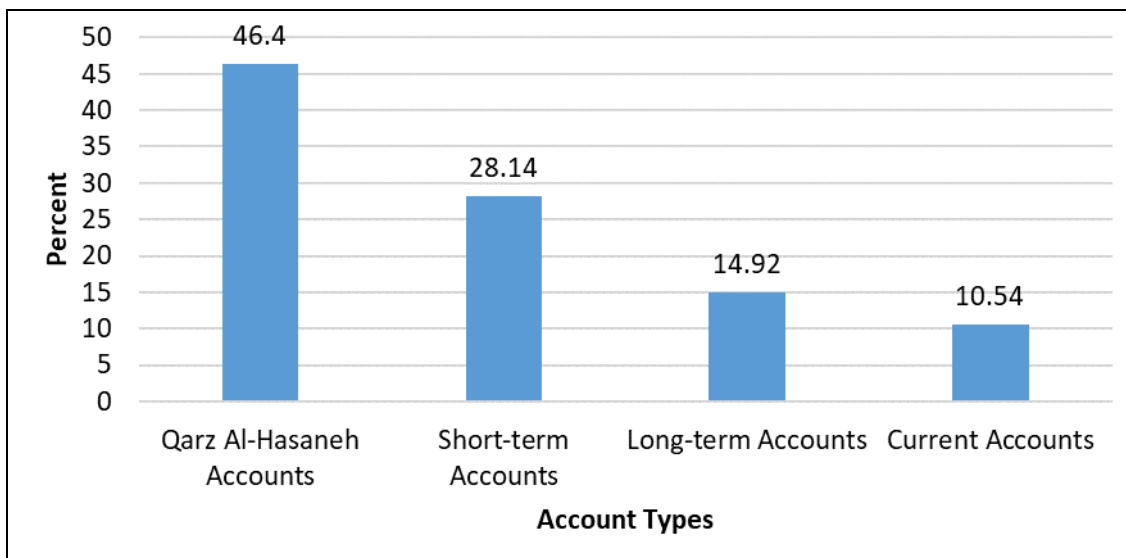


Fig. 6. The percentages of Gen Zers customer types of accounts in December (2019)

As mentioned earlier, the largest share of banking without branch office services in 2019 is for Gen Zers customers. Fig. 7 shows the ratio of transaction types of Gen Zers customer

different services in the studied bank. POS transactions with 50.43%, have the highest share of Gen Zers transactions.

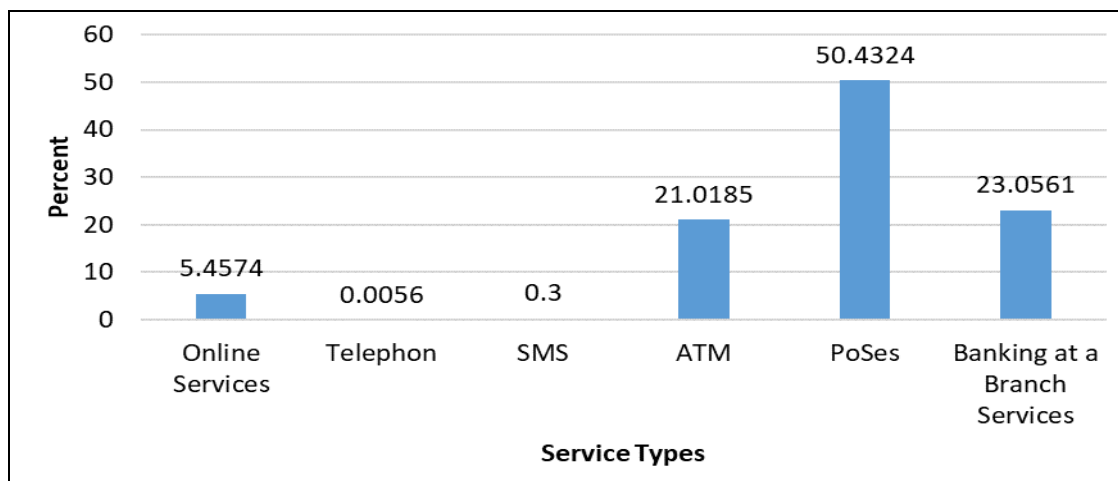


Fig. 7. The ratio of transaction types of Gen Zers customer different services in December (2019)

V. CONCLUSION

As technology advances, banks are expanding their communication ports with customers, banks are increasing their communication ports with customers. Once, branches were the only way for customers to interact with banks, but nowadays bank customers use a variety of tools such as mobile phones, computers, ATM, POS, etc. to connect with the banks and perform financial transactions. The concept of banking is changing and the emergence of new generations that have grown up with digital tools will intensify this process. The new generations will do through numerous digital tools and current e-banking methods will not meet their needs. The process of digitizing banks has begun.

This indicates that banks should improve their interactions with their customers by enhancing the digital literacy of their colleagues. Soon banking without a bank will be institutionalized in the country, and there will be no bank branches as there are today.

Banks need to learn how to deal with customers properly in order to survive. However, millennials and earlier generations are still a significant part of the bank customers. But banks need to plan to deal with the Gen Zers customers who are their future customers. Gen Zers, who are between 9 and 24 years old, will be an important part of bank customers in the near future.

A distinctive characteristic of this generation is that its members were born in the digital era. This generation has no experience of the pre-internet and mobile era. Knowing the behaviors and interests of this generation will help banks and financial institutions to attract these customers by offering appropriate services and products.

In this article, we examine the behavior and activities of the Gen Zers in one of the major banks of the country and compare the behavior of this generation with other generations. The survey results of transactions of the last 9 years of the studied bank show that there is a growing interest in the new generation in using of banking without branch office services. Gen Zers members are more interested in using banking

without branch office and online services than previous generations. Thus, banks can provide better and simpler services, and can ensure their future survival by attracting Gen Zers customers.

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