Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Systems Engineering and Informatics

Bachelor Thesis

Market Development Of Mobile Applications

Tugay DEMİR

Declaration

I declare that I have worked on my bachelor thesis titled "Market Development of Mobile Applications" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break copyrights of any their person.

In Prague on 11/ 03/ 2021   _____

Acknowledgement

During the writing of this thesis, I would like to express my gratitude and respect to my consultant Assistant Professor Inna Čábelková, who has embraced and followed my work meticulously, for his valuable contributions and efforts. On this occasion, I would like to thank all my teachers and also my family and friends who did not spare their support and patience during the execution of my work; I sincerely thank you.

Market Development of Mobile Applications

Abstract

With the advanced functionality of smartphones today, the number of smartphones in the world is moving forward every day. In 2021, the number of smartphones in the world is 3.8 billion.Since each of the 3.8 billion devices is a potential customer, the mobile application market is one of the most important markets in the world. Companies and developers who are aware of this number of users aim to implement everything that can be carried to mobile in life. The applications we use today affect many parts of our lives. While we can choose coffee to drink and dessert to eat with the Cofe application, we can see which fuel station is cheaper with the Waze application and shop there. We can even meet a new partner and maybe even marry with Tinder.

This bachelor thesis aims to describe and analyze Mobile Application Market and it will clarify how important sectors affected by it. The theoretical part will shed light on the theoretical context for the subject based on literature review while using secondary data. While the theory part will illuminate the sectors affected by mobile applications, it will also examine sample mobile applications in these sectors.The empirical part will focus dating apps for understanding mobile apps to human life in a better way.Dating apps are reached over 300 million users and the empricial part is going to analyze the differences in the purposes of using the dating app by the genders and the effects of these applications on different genders.The result of theory part was Mobile Applications Market is developing everyday and it is changing our life rapidly and affecting our world with daily increase. In the empirical part, although the gender difference in the use or results of dating apps is not in all areas, it has been revealed that the lives of dating apps users affect their lives economically and psychologically.

Keywords: market analysis, mobile applications, software, mobile devices, modern dating, dating apps.

Vývoj mobilních aplikací na trhu

Abstrakt

S pokročilou funkčností chytrých telefonů dnes se počet smartphonů na světě každým dnem posouvá kupředu. V roce 2021 je počet smartphonů na světě 3,8 miliardy. Vzhledem k tomu, že každé z 3,8 miliardy zařízení je potenciálním zákazníkem, je trh mobilních aplikací jedním z nejdůležitějších trhů na světě. Společnosti a vývojáři, kteří si uvědomují tento počet uživatelů, se snaží implementovat vše, co lze v životě přenést do mobilu. Aplikace, které dnes používáme, ovlivňují mnoho částí našeho života. Zatímco s aplikací Cofe si můžeme vybrat kávu k pití a dezert k jídlu, s aplikací Waze můžeme vidět, která čerpací stanice je levnější a nakupovat tam. Můžeme dokonce potkat nového partnera a možná se i vzít s Tinderem.

Tato bakalářská práce si klade za cíl popsat a analyzovat trh mobilních aplikací a objasnit, jak důležité sektory jsou jím ovlivněny. Teoretická část osvětlí teoretický kontext předmětu na základě literární rešerše s využitím sekundárních dat. Zatímco teoretická část osvětlí sektory ovlivněné mobilními aplikacemi, prozkoumá také ukázkové mobilní aplikace v těchto sektorech. Empirická část se zaměří na seznamovací aplikace pro lepší pochopení mobilních aplikací pro lidský život. Seznamovací aplikace dosáhly více než 300 milionů uživatelé a empriciální část bude analyzovat rozdíly v účelech používání seznamovací aplikace podle pohlaví a účinky těchto aplikací na různá pohlaví. Výsledkem teoretické části bylo, že trh mobilních aplikací se každým dnem vyvíjí a mění náš život rychle a s každodenním nárůstem ovlivňuje náš svět. V empirické části, ačkoli genderový rozdíl v používání nebo výsledcích seznamovacích aplikací není ve všech oblastech, se ukázalo, že životy uživatelů seznamovacích aplikací ovlivňují jejich životy ekonomicky i psychologicky.

Klíčová slova: Mobilní zařízení, mobilní aplikace, mobilní marketing, mobilní trh, moderní seznamka, seznamovací aplikace.

Table of Content

List of Figures

9

List of Picture

1. Introduction

Mobile apps are software programs designed to operate on mobile devices such as tablets, smartphones, and computer tablets.They provide consumers a service comparable to that of a personal computer.The primary goal of mobile apps is to give online services to consumers through internet access on their mobile phones.

In the current market, there are many different types of mobile applications that connect consumers to numerous industries such as banking, entertainment, healthcare, hotels & restaurants, tour & travel, and so on. Because necessity is the mother of all inventions, the growing demand for globalization and an IoT-connected world is moving the mobile app industry forward. Online banking, health monitoring, and entertainment enterprises all benefit from mobile applications. Developer-trusted or native fitness apps and a variety of gaming apps have now become indispensable companions for each smartphone user. Third-party application developers are attempting to capture the largest market opportunity by improving the user experience through interactive and improved user int erfaces. As a result, increased competition for improved and upgraded mobile applications is expected to drive market growth throughout the forecast period. The limited internet access in some regional and underdeveloped regions, on the other hand, may limit industry expansion.

Mobile apps have been one of the fastest-growing sectors for more than two decades. The App business grew and continuing to grow to its full potential in the United States, where it first emerged around the turn of the last century. But today, with the development and localization of technology, it creates a market all over the world.

In this context, the subject of the study has been determined as "Market development of mobile applications". There are two chapters in the thesis. In the first part, the beginning of mobile applications, the current situation, when it gained importance economically and the current market will be explained. While we are explaining those topics we will emphasize how many mobile phones are used, how they earn money and how much is the total market

cap with secondary data. In the second part, we will take the Starbucks company and examine the contributions of its mobile application to it.

2. Literature Review

The Mobile Applications

Mobile applications consist of software/set of program that runs on a mobile device and perform certain tasks for the user.Mobile application is a new and fast developing Segment of the global Information and Communication Technology (Islam, 2010, p. 104).

Apps can be free or paid.Users can pay for extra features in some applications, but it is a known fact that even if it's completely free, apps are a huge market and the boundary of growth is hard to predict. Everything in the application world has a shortcut.The word application has App.The word App listed for word of the year in 2010(American Dialect Society, 2010).

2.1.1. The emergence of mobile applications

With the introduction of mobile phones in the early 1990s, Mobile Applications were born. Nothing could be done with the first mobile applications except make calls and send messages to our friends and family. The fact that the original Mobile Operating Systems were fairly simple and did not allow full use of the hardware was a significant factor for being with limited features.

The fact that mobile phones did not have enough memory for advanced features contributed to the simplistic and basic character of mobile apps. This low capacity also limited the number of contacts that could be saved in the phone book on mobile devices, as well as the amount of data that could be saved. During this era, when mobile apps were still in their beginnings, mobile applications came pre-installed on the device, and there was no way to delete or replace them. These mobile applications have begun to make life simpler in both the corporate sector and daily life. As example, a new "Contacts" application for smart mobile devices has launched.

13

These mobile apps may readily keep the phone numbers of hundreds of individuals we know or do business with on a single mobile device, allowing them to quickly find the phone number of the person they need. On mobile devices, however, there were limited and simple mobile programs such as a calendar, calculator, and ringtone editor. These programs were created solely by corporations that manufacture mobile devices, and they did not share their resources with anybody else.

In 1997, the Nokia 6110 included a built-in version of the basic arcade game "Snake," which many consider the first mobile app. The first iPod would also come with built-in games: Solitaire and Brick. (Taggart, 2019).

In the 2000s, big companies such as Nokia, Ericsson and Motorola started to develop various applications for their phones, but the problem of these applications was that they were developed only in line with the wishes of the telecommunication companies. This also caused difficulties in reaching the end user in the balance of supply and demand.

In July 2008, the platform that changed the game was released. The App Store was in our lives with the 500 applications. Most of people were not aware of how this would change our lives.

2.1.2. The Rise of Mobile Applications

The flame that emerged after the release of the Apple App store in 2008 spread with the Android Market, which was released in October of the same year. Android Market (Google Play) contained only 167 mobile apps one week after release.However, it would grow up quickly.

By September 2009, the Android Market passed 10,000 applications. By February of 2010, Android Market share doubled again, and the market size grew again to include 19,897 applications. By April of 2010, the number of Android applications has reached 27,243 and there's no sign of its growth slowing down(Perez, 2010).

14

Figure 1:Number of mobile app downloads worldwide from 2016 to 2021

Number of mobile app downloads worldwide from 2016 to 2021
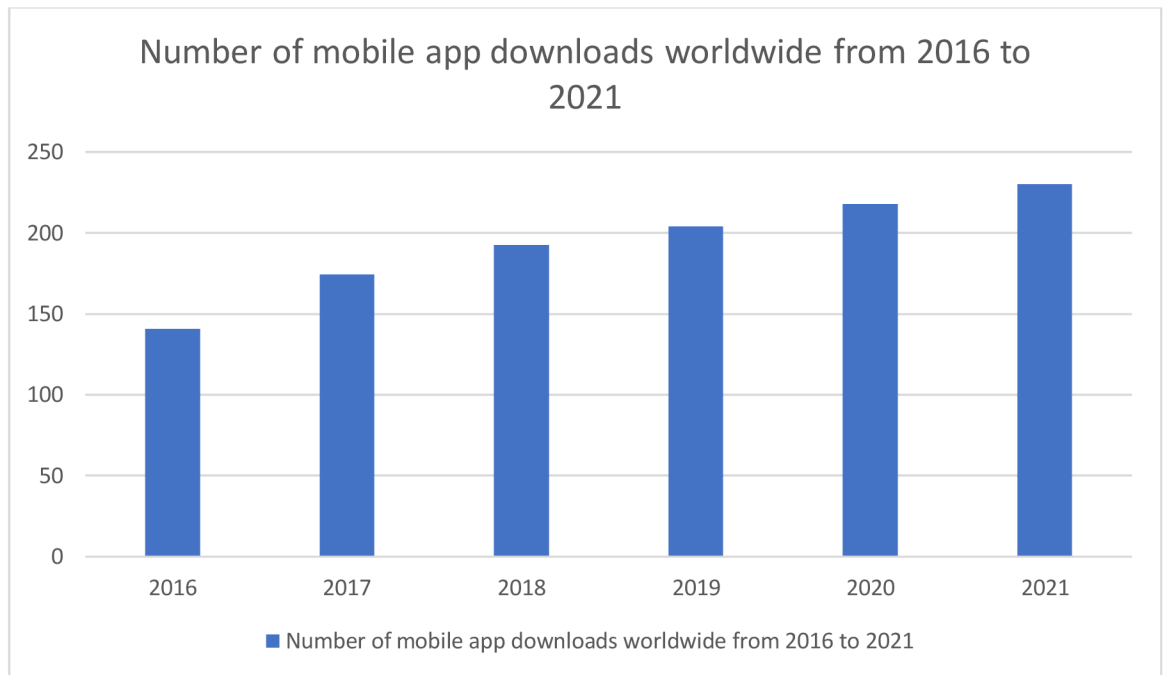
Emerging operating systems, particularly Android and Microsoft's Windows Phone 7, were predicted to grow in popularity in 2011. Microsoft has sought to boost developer interest in its platform by inviting programmers to create pre-release apps. Microsoft has also put a lot of effort into marketing its new product, including by promoting positive reviews from technology reviewers. This huge campaign made Windows Phone 7 one of the most popular amongst mobile operating systems.

Figure 2: Share of Mobile Application Distribution for Different Mobile Operating System

15

Share of Mobile Application Distribution for Different Mobile Operating System
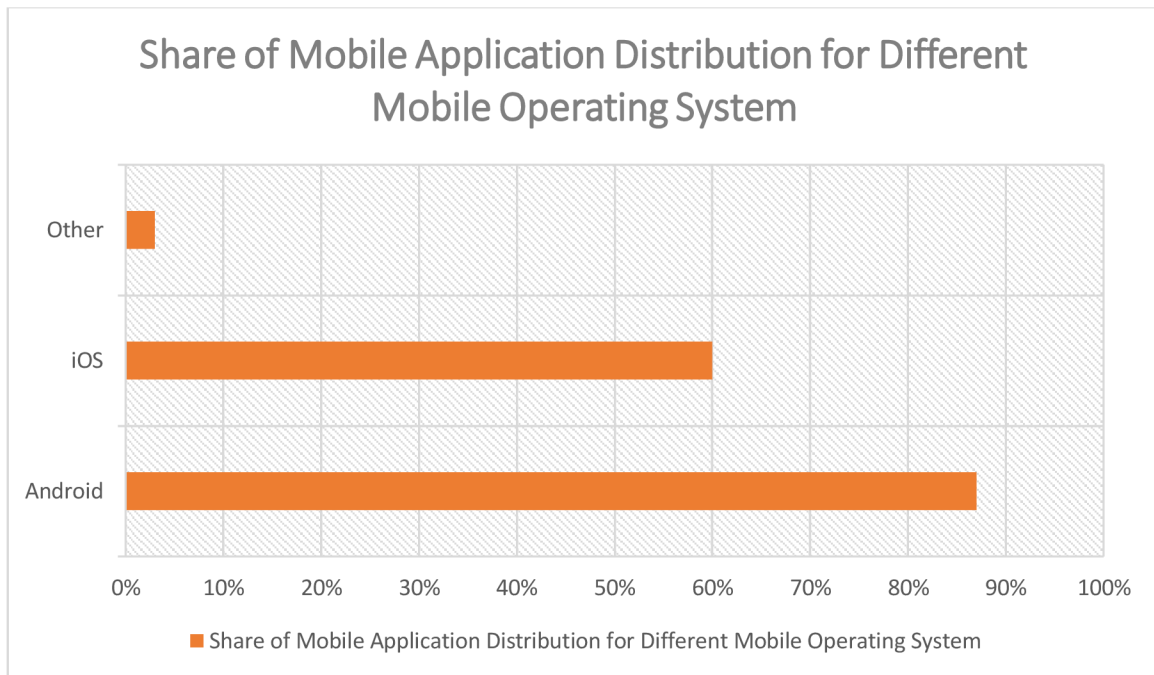
Source: statista.com

The Application Developers Alliance was introduced at the Consumer Electronics Show in Las Vegas, Nevada, in early 2012. This group was founded to help mobile app developers improve their skills by giving additional training opportunities, offering access to cloud hosting services, and facilitating government lobbying chances.(Michael,2012).

Numbers of mobile apps have reached 7 billion mobile devices in 2015.It means one for every person on earth and mobile application market would continue to grow with this development. In 2017 we were using mobile applications in daily life. Czech Republic residents could order food from Damejidlo or we could do our grocery shop on Rohlik.

16

2.1.3. The current state of mobile applications

In search from Wurmser(2020) estimated that US adults will spend,on average, more than 4 hours with mobile internet,with %88 of that time within apps.

Figure 3: Average daily internet consumption in Usa

Mobile Internet: Average Daily Time Spent in the US, App vs. Browser, 2018-2022
hrs:mins per day among population

	2018	2019	2020	2021	2022
Total	3:15	3:35	4:01	4:06	4:11
App	2:49	3:10	3:35	3:41	3:47
Browser	0:25	0:24	0:25	0:24	0:23

■ App   ■ Browser
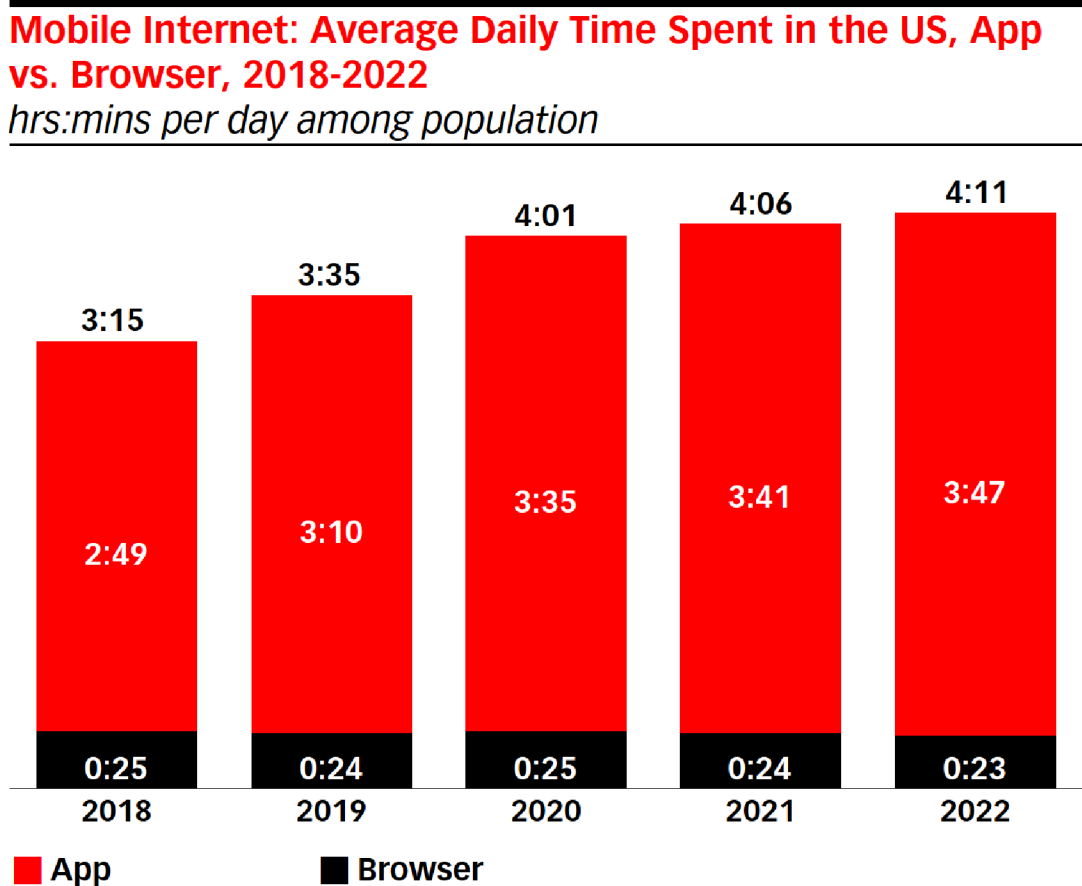
Note: ages 18+; includes all time spent with internet activities on mobile devices, regardless of multitasking; numbers may not add up to total due to rounding
Source: eMarketer, April 2020

T11005   www.**eMarketer**.com

Source:emarketer.com

If amount and time would be taken into account, it is seen that why mobile application market grows rapidly and consistently. Usa citizens can spend this amount because Usa has one of the biggest mobile application market. Although the mobile application market has reached 582 billion dollars revenue, there are 4 main markets where these applications are published.Those markets are Google Play,Apple App Store,Windows store and Amazon Appstore.

2.1.3.1. Google Play Store

In 2008, the Google Play Store was known as the "Android Market." It was created to distribute apps and games, and it debuted alongside the first Android devices. At first, the Android Market was pretty primitive. Until 2009, it did not support paid apps or games. The Android Market expanded in tandem with the Android platform. Google Play Store has over 3.500.000 Android applications and games by 2021.

The Google Play Store was launched in 2012 as a combination of three online markets that Google was running at the time. It merged the Android Market, Google Music Store, and Google eBookstore into one app. Android applications and games, movies and TV episodes, eBooks, and audiobooks may all be found on the Google Play Store nowadays. YouTube Music has surpassed Google Play Music in popularity. After YouTube music became popular, Google Play Music was taken down on December 3, 2020. One of the most successful such business verticals is Play Store, which made $17.3 billion revenue in the first half of 2020 and is growing at 21% annually(Shivesh,2020).

2.1.3.2. Apple App Store

The App Store, which was first launched in 2008, is Apple's one-stop shop for content for Apple products. Apple may produce applications such as Keynote or GarageBand, or

third party developers like Netflix or Spotify can produce applications. The App Store is pre-installed on all Apple devices, and all consumers need is an Apple ID (Apple ID) to utilize it.

Apple's App Store is a core growth area for the company. It's reported as part of Apple's Services division, which reported $53.7 billion in sales in Apple's fiscal 2020, which ended in September.

The money that Apple makes from its App Store has become a flash point for critics of Apple which argue it has too much power. Apple charges 30% for digital sales through its platform, with a few exceptions. Apple recently altered its fee structure, and now it only takes a 15% cut from companies that generate less than $1 million in the App Store.A congressional subcommittee found in 2020 that Apple has monopoly power over iPhone app distribution, which it said gives Apple outsized profits(Leswing, 2021).

Figure 4 : Paid amount by Apple to developers

Estimated Apple App Store sales

Though Apple does not disclose total App Store sales numbers, the company does provide details on how much it pays store developers. Using those figures and assuming the company takes a 30% cut of all sales, the App Store had gross sales around $64 billion last year.
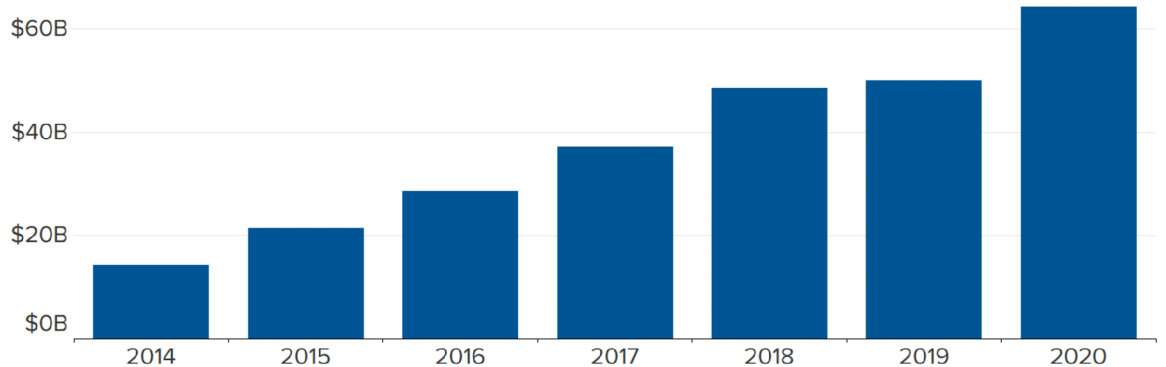
SOURCE: Company statements, CNBC calculations

Source: cnbc.com

2.1.3.3   Windows Store

When the original Windows Phone was released in late 2010, it came with the Windows Phone 7 operating system pre-installed. This was a significant event at the time because consumers had just two options and they had third option. After Apple's iPhone debuted three years previously, Windows Phone was the most daring and unique rethinking of what a smartphone might be. Unlike Android, Windows Phone did not attempt to recreate the iOS icon grid; also, unlike Android, Windows Phone worked quickly and fluidly on extremely minimal hardware.

But the Windows Phone Store did not reach the market value that Windows wanted and fell behind Google Play and Apple App Store in market share.One of the most important reasons why it fell behind was that it could not attract enough developers and did not have enough applications.

2.1.3.4   Amazon App Store

The store, which debuted in 2011, is Amazon's major distribution channel for apps for the Kindle Fire tablet, phone, and streaming box. It is pre-installed on those devices. Since Amazon devices rely on the Android operating system, the Amazon App Store is also suitable for third-party Android phones and tablets. It is not available in the Google Play store . However, if you purchased an Android phone from the Verizon network in the United States, you may find that the Amazon Appstore is pre-installed.

Figure 5: Numbers of app by app markets

20

Number of Mobile Apps in Leading App Stores Worldwide in 2020
(As of Q4 2020)

App Store	Number of Apps
Google Play	3148832
Apple App Store	2098224
Window Store	669000
Amazon Appstore	459167

Designed by FinancesOnline
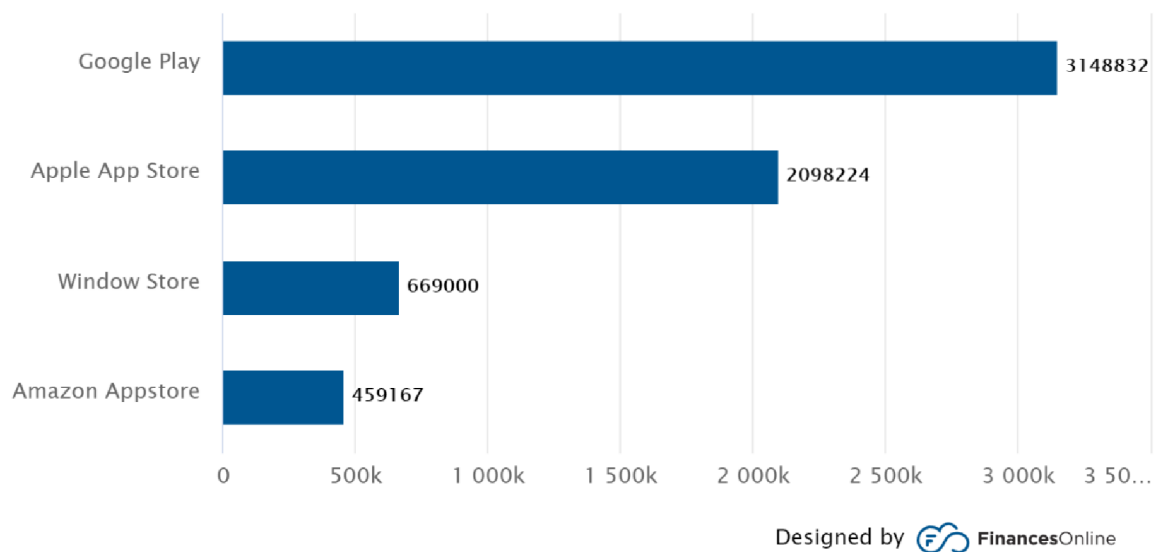
Source: financesonline.com

2.1.4. Effect of mobile application on people's lifes

Simply, if a typical day of a working person or a student is taken as an example, when he wakes up in the morning, he starts the day with an alarm, a mobile application. Later, while having breakfast, he uses the mobile news application to follow the developments of the previous evening. While leaving the house, you can check the traffic situation with the mobile application. In addition, depending on the plan to be made during the day, he can look at the weather with the mobile meteorology application. After getting on the car or train, he prepares himself for a mentally tiring day by listening to his favorite music from the Spotify app. After going to school/work, he/she can create his/her study plan more

effectively thanks to mobile note applications. When he returns home in the evening, he can still spend time in mobile entertainment applications.

To summarize, it is not a very realistic approach for human life not to be affected by this technology at this level of technology today. Especially when used correctly and restrictively, today's mobile applications provide a small benefit in almost every aspect of human life. All these developments enable the mobile application sector to develop very rapidly.

2.1.4.1.   The effects of the mobile applications on entertaiment

The way we listen to music has changed significantly. We now have paid memberships to internet streaming services on our mobile devices, providing us millions of songs at our fingertips, when there was formerly peer-to-peer sharing of music files from sites like LimeWire and strong demand for MP3 players. The sale of physical media is quickly declining. This paradigm change did not occur suddenly, but it has accelerated in past years.

Spotify is audio streaming service which is published in 2006. The number of subscribers of this service is 30 million in 2016, reaching 100 million in 2019, reaching more than 3 times more subscribers.

Figure 6: Numbers of subscribers in Spotify app
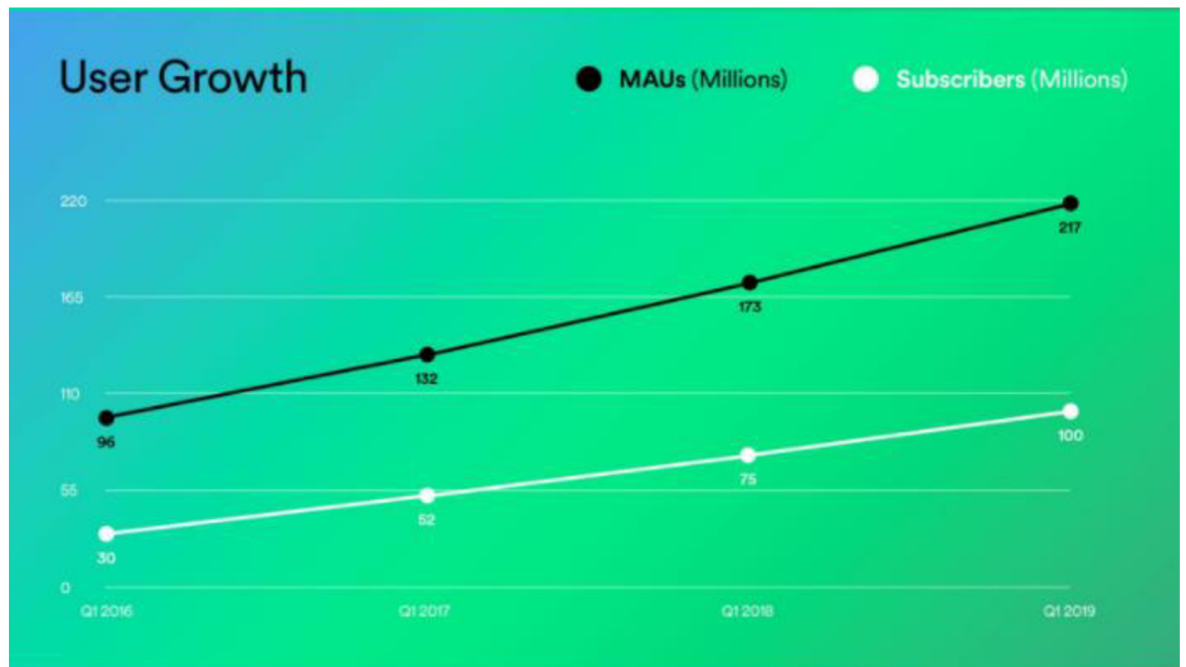
Source: newsroom.spotify.com

Apple Music, which debuted in 2015 and currently boasts 60 million paying customers worldwide, follows a similar path.

Independent musicians are taking control of their careers by skipping record labels, submitting their work to internet streaming platforms, and communicating directly with their followers through social media. According to Wintel Report, global independent market share increased 39.9% between 2017-2018 in overall music sector (Worldwide Independent Network, 2021). With these developments, new artists can reach success and music lovers without proving their talents to labels. This gives new musicians opportunity and encouragement.

2.1.4.2.   The mobile gaming market

Gaming, particularly mobile gaming, is continuing to grow in the entertainment sector.. Culturally, the introduction of needs with various brands and features is due to the desire of people to buy that product and to meet at a common point, even if they do not need it. In the last 10 days of March, global playtime reached a high of almost 90 million hours, up 62 percent from the first ten days of January. That's long enough to binge-watch the whole Lord of the Rings trilogy ten times. Obviously, some of this is due to the increased number of players. However, people are playing for longer periods of time on average.

Figure 7: Mobile game played times by month
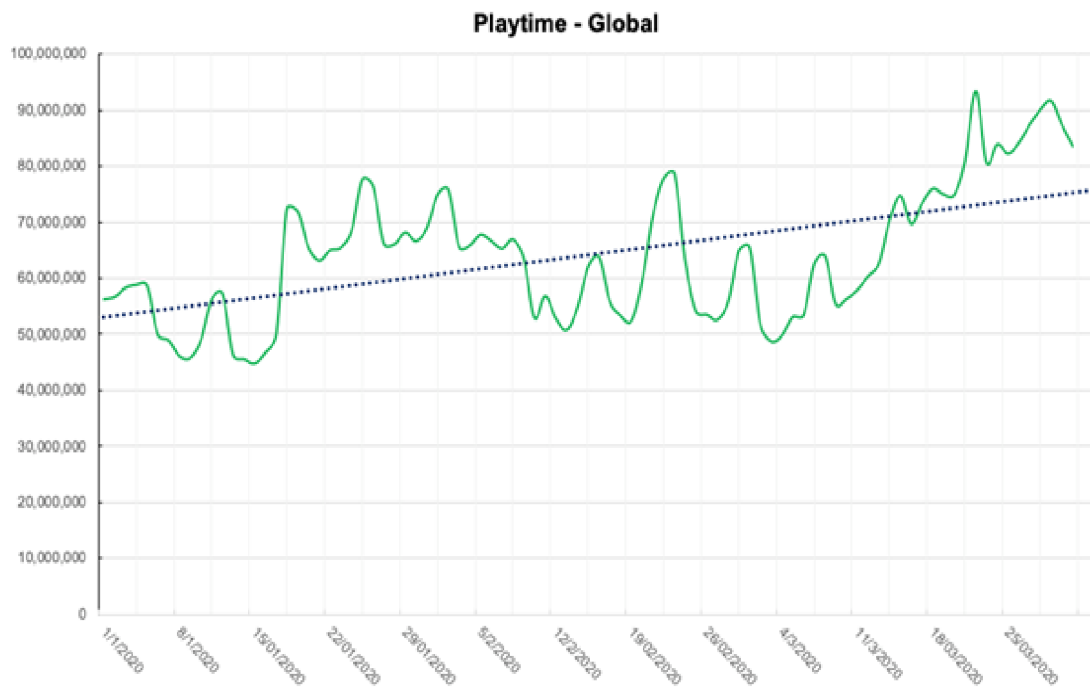
Source: gamesindustry.biz

With the effect of the pandemic, the mobile game industry reached a value of 85 billion dollars and continued its leadership in the game industry.

Figure 8: Gaming sector market

Source: visualcapitalist.com

2.1.4.3. The effects of the mobile applications on food service industry and hospitality

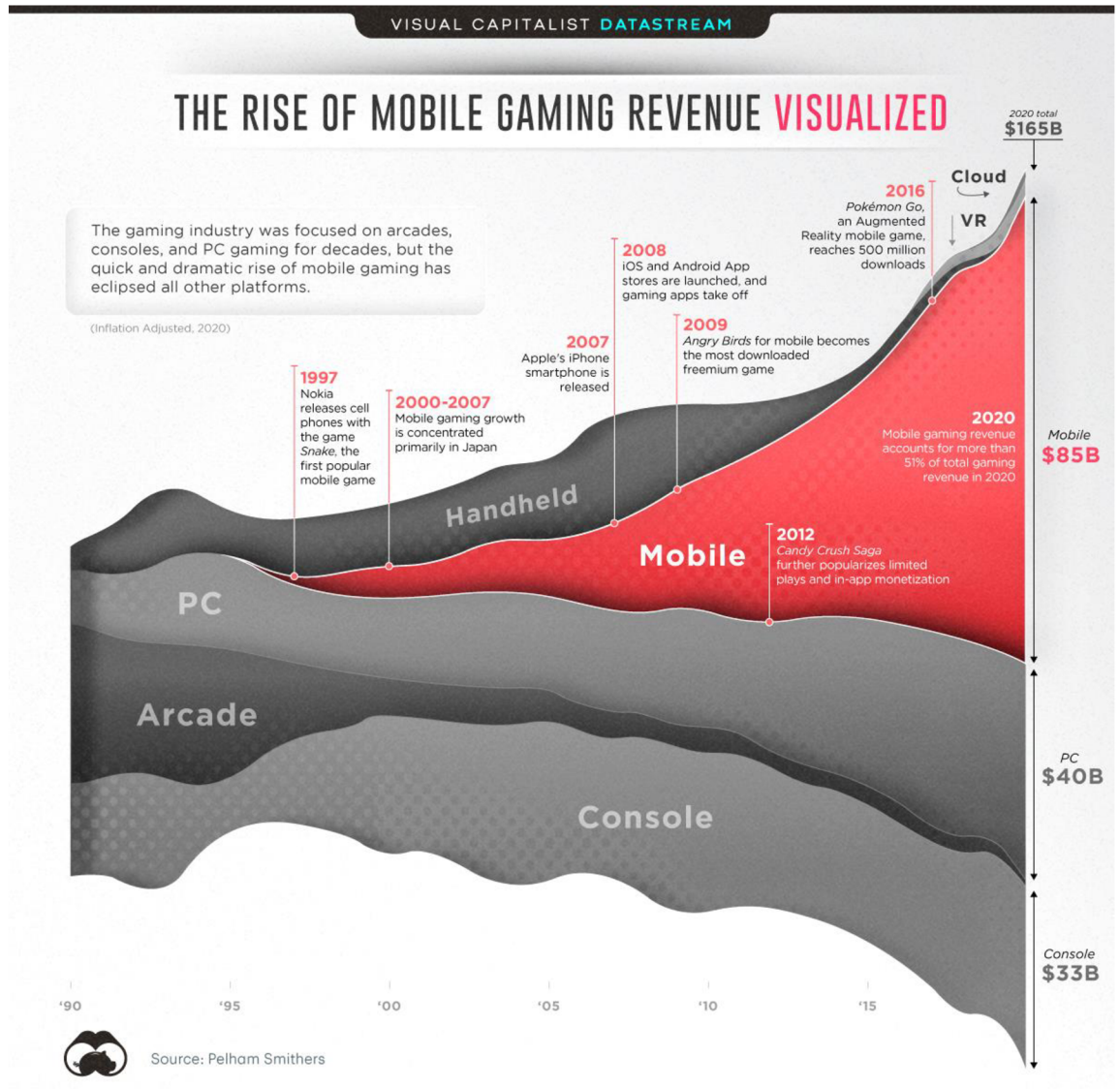The impact of mobile technology on tourism is considerable. Multiple travel ideas and modalities, such as mobile tourism, smart tourism, e-tourism, and sustainable tourism, have originated or grown further with the use of mobile-related gadgets, technology, data, and services Mobile technology is being promoted as the next big thing in the tourist and hospitality industries. Furthermore, mobile technology is becoming more important in the travel experience, and more travel research is being done in this area.

One of the important apps is Kiwi.com. It is Czech online travel agency and it was founded in 2011 in Brno.It became one of the most successful startups in Europe and in the world. In June 2019 General Atlactic became main shareholder and General Atlantic invested around 3 billion czk until that time. Information technology solutions are used by the food and restaurant industry to improve overall performance, efficiency, quality, and customer happiness. Information technology has not only aided restaurant owners in improving the quality of client service, but it has also enabled them to reshape their companies beyond their previous constraints.

Czech market has also important apps for restaurants. Biggest and oldest one Damejidlo.cz works with more than 4000 restaurants.Damejidlo.cz can reach %60 of Czech population today. It is purchased by Deliveryhero which is German company in 2015.

2.1.4.4. The effects of the mobile applications on logistics and transportation

The early usage of mobile applications in the transportation sector was mostly for navigation and location-based services. Engineering education, traffic data collecting, travel information, route planning, and ridesharing are just a few of the transportation-related applications that mobile apps are utilized for as of 2016. Some uses, on the other hand, pose

difficulties, particularly in the fields of police departments and traffic safety. Some applications, for example, may detect a speed camera or radar gun and warn the user to slow down a set distance before crossing the intersection. Digital technology have had a significant impact on the transportation business. Several mobile applications are being developed to improve the consumer and driving experience. It has contributed to network coverage for a variety of modes of transportation, including bus, metro, tram, rail, and airline.

The influence of mobile technologies on transportation management is expected to grow in 2021 and beyond. Many transportation-related processes, such as ticket booking, courier delivery, tracking the status of fleet and courier traffic, route data, route planning, cargo booking, and so on, are conducted utilizing logistics and transport software. Many technology-based transportation and logistics firms have integrated logistics technology into their operations in order to better serve consumers, clients, and government agencies.

These innovations will have a significant influence on how we utilize transportation and logistics systems in the future. Companies who have access to cutting-edge technology will be able to more accurately personalize their services. IoT, data analytics, additive layer manufacturing, and electric mobility will all transform the sector.

2.1.4.5. The effects of the mobile applications on automotive industry

In the automobile industry, apps have traditionally fulfilled a variety of functions. These services include assisting customers in navigating highways, locating inexpensive gasoline, and even locating their automobiles in busy parking lots. Apple Carplay and Android Auto allow us to link our automobiles to mobile applications today.

We can listen to any music we want on Spotify, and we can use the Waze program to locate the quickest route. We can also make and receive phone calls. So, instead of looking at maps to find a route or searching for the radio to get the music we want, we use mobile

applications, which integrate the capabilities of several devices to provide us with a speedier service.

2.1.4.6. The effects of the mobile applications on banking and finance

Mobile banking, which formerly provided services such as SMS and WAP banking, now provides far more complex services owing to advances in technology and the increasing adoption of smart phones. Mobile banking, which is still in its early stages, has fast become a service that banks use due to its advantages. Simultaneously, banks and personal financial firms that mainly provide mobile applications emerged. Simultaneously, banks and personal financial firms that mainly provide mobile applications emerged.

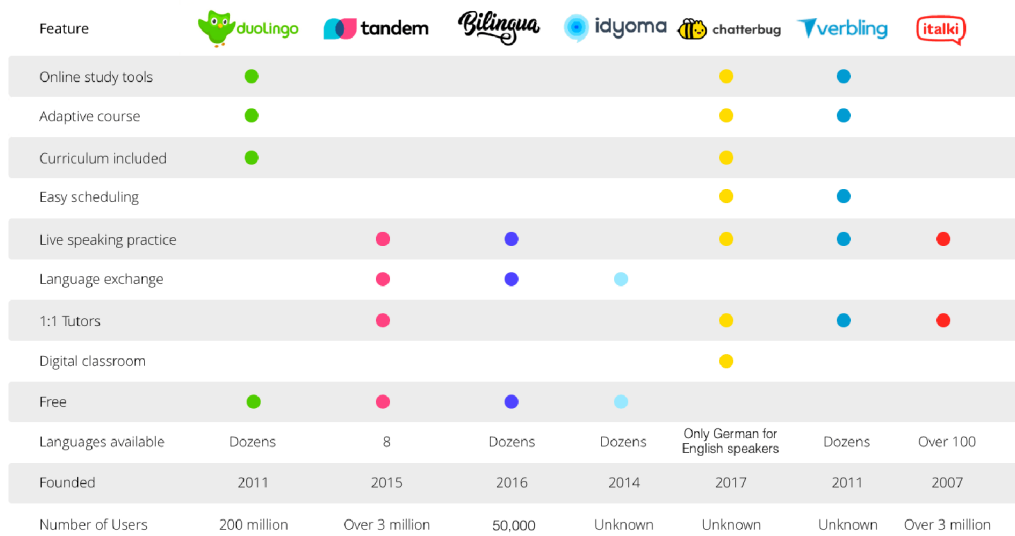Picture 1 Revolut Jr. app's balance and profile screen

Source: techcrunch:com

2.1.4.7. The effects of Mobile applications in Education

Advanced technology is playing an increasingly important part in the lives of students, with online platforms, eBooks, and the ability to engage with experts and receive helpful information from the organization's websites. Students can register for examinations and even apply for jobs by conducting interviews via the internet. People may select the most appropriate learning method for themselves using mobile applications.

Figure 9: Mobile learning applications by feature

Feature	duolingo	tandem	Bilingua	idyoma	chatterbug	verbling	italki
Online study tools	●				●	●	
Adaptive course	●				●	●	
Curriculum included	●				●		
Easy scheduling					●	●	
Live speaking practice		●	●		●	●	●
Language exchange		●	●	●			
1:1 Tutors		●			●	●	●
Digital classroom					●		
Free	●	●	●	●			
Languages available	Dozens	8	Dozens	Dozens	Only German for English speakers	Dozens	Over 100
Founded	2011	2015	2016	2014	2017	2011	2007
Number of Users	200 million	Over 3 million	50,000	Unknown	Unknown	Unknown	Over 3 million

Source: christyallison.com

2.1.4.8. The effects of Mobile applications in government

One way the government is working to improve the way they relay information to citizens is by developing mobile apps. With mobile apps, government agencies can relay important information such as emergency alerts or special news bulletins quickly and easily.

29

Turkish government published e-Devlet app in 2015.The word Devlet means government in Turkish. Turkish citizens can process their work in public areas with their phones. Turkish citizens can process transactions of all 16 ministries. After e-devlet app Turkish citizens can solve their problems without visiting government offices. So number of officers in government offices can be reduced and with less bureaucracy, citizens can solve their problems faster.

Picture 2 E-devlet mobile app
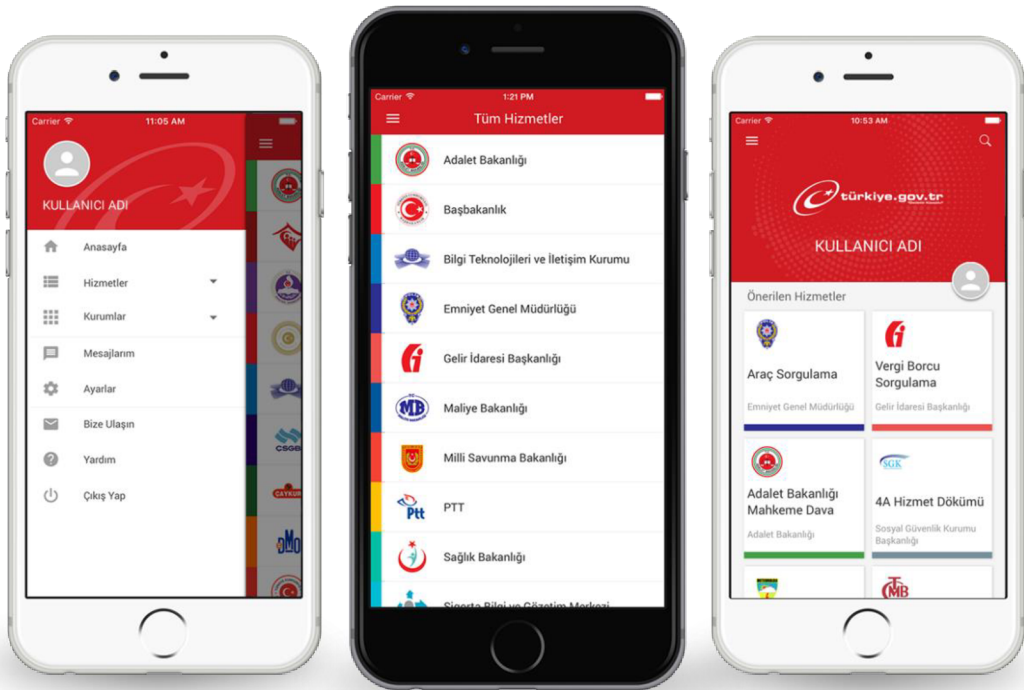
Source: static.turkiye.gov.tr

2.1.4.9. The effects of mobile applications in health industry

Mobile health is transforming healthcare by allowing people to access vital services, personal data tracking, and clinicians no matter where they are. These apps provide quick assistance or establish a link between doctors and patients.

Luxembourg based Doctena app offers online booking to patients and with this app patients can find easily appointment or can have videocalls with doctors.

Doctena App provides service in 6 European (Luxembourg,Belgium,Germany,Austria,Switzerland,Netherlands) countries.

Picture 3 Doctena app's doctor selection screen
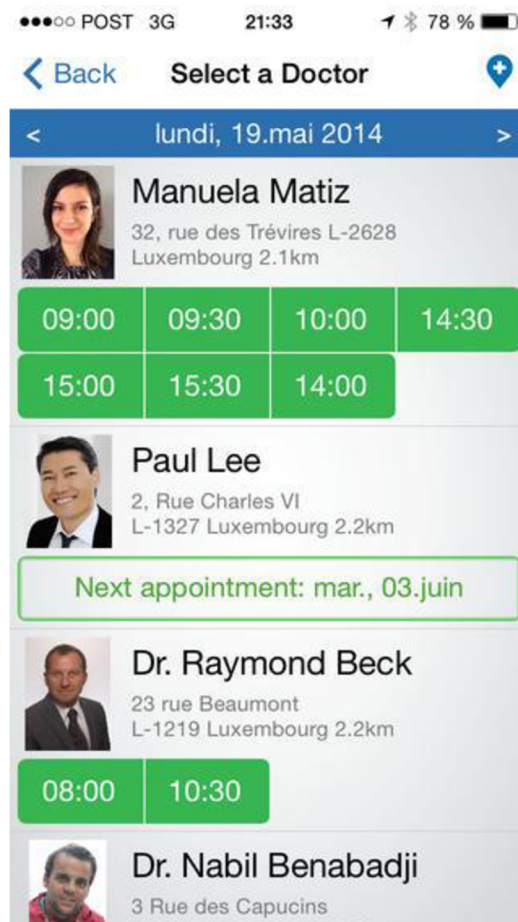
Source: mobihealthnews.com

2.1.4.10. The Effects of mobile applications in real estate market

Due to the current rapid rise in the usage of mobile devices, realtors now consider it an appropriate platform for real estate marketing, communication, and transactions. Google Maps is a ground-breaking mapping and navigation tool that has permanently transformed the face of the travel industry. However, the smartphone app has had a bigger impact on the real estate and property market than you may think. You may now rely on the personal experience of the people who live in the region thanks to clever algorithms and reputable review sources.

People may also use Google Maps to find local hospitals, schools, and shopping malls so that people can get the necessities in the region.

Furnishing and decorating real estate and properties to assist renting or selling is one of the most important jobs involved in acquiring them. You don't have to worry about moving anymore thanks to smartphone applications that allow you to buy heavy furniture online and have it delivered to your home in a couple of hours.

The sophisticated logistics and transportation solutions make it simple to move between locations without fear of losing precious items.

Figure 10:Classification of the real estate

Classification of the real estate apps

Real estate apps

- Real estate search/Information on surrounding area
- Land register
- Tools for flats/Real estate administration
- Information on real estate
- Infotainment
- Shopping center
- Architecture/Interior design
- Dimensions/Plannings
- Lexicon/Languages
- Tools for calculation/financial calculation
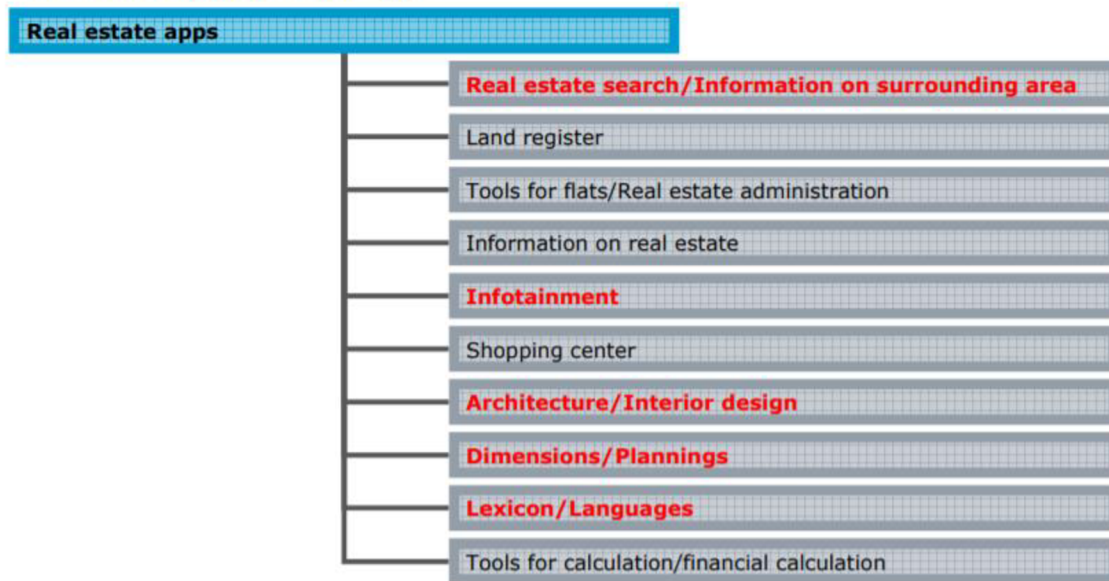
Source:Real Estate Applications for Smartphones a Market Overview for Austria and Germany

2.1.5. The future state of the industry

Mobile applications act in a systematic way to respond to the needs of today's modern people in the light of technological developments. Therefore, it is a fact that mobile communication will gain different areas with the increasing technological discoveries in communication. Increases in device sales are indicative of new developments that will make people's daily lives easier. The number of applications on devices was more than 1 million in 2011.

The most demanded applications in applications are location-based applications. The fact that people live too mobile and want to be constantly informed about each other shows that such applications will develop in different directions. Especially, it is most likely that applications that benefit the operators will use less personnel in the workplaces, and that

33

most transactions will be brought to a level that can be monitored on phones or integrated (YASED, 2012, p.56).

It is claimed that mobile phones will not have a charging problem in the future. The based opinion on this is that the human body that produces electricity will meet the charging needs of mobile phones. On the other hand, according to the claims of Qualcomm, the largest communication company in America and the world, mobile phones will have five major features in the future (Sergeant, 2017, p.66).

- Piezoelectric fingerprint scanners: future cell phones will be able to detect fingerprints with piezoelectric layers and recognize the person. However, the extreme directionality of the phones may be inviting to be hacked.

- Artificial Intelligence Cameras: By determining the properties of the objects you will take a picture of, it will automatically adjust the shooting setting according to the characteristics of the object you are aiming at.

- NFC (Near Field Communication): This technology already exists today. However, in future use, when you make a payment, it will be sufficient to keep your phone only for M2M to be paid.

Picture 3 Payment facility in NFC technology
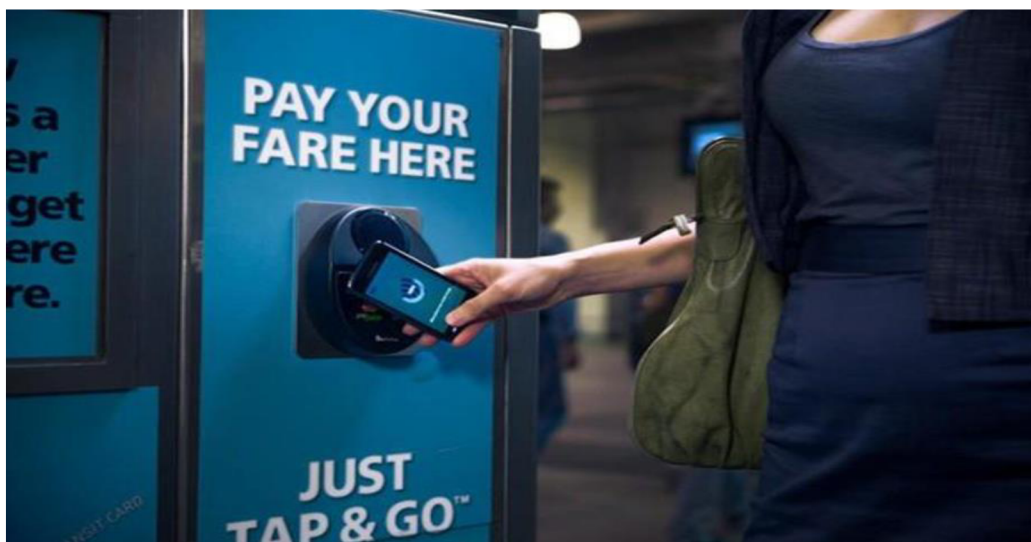
- Camera that reads Handwriting: It is a camera system that will make handwriting that cannot be read too much. Camera systems will be developed that make them readable by recognizing the writings that were taken quickly but then could not be understood.

Picture 4 Camera that makes unreadable handwriting readable
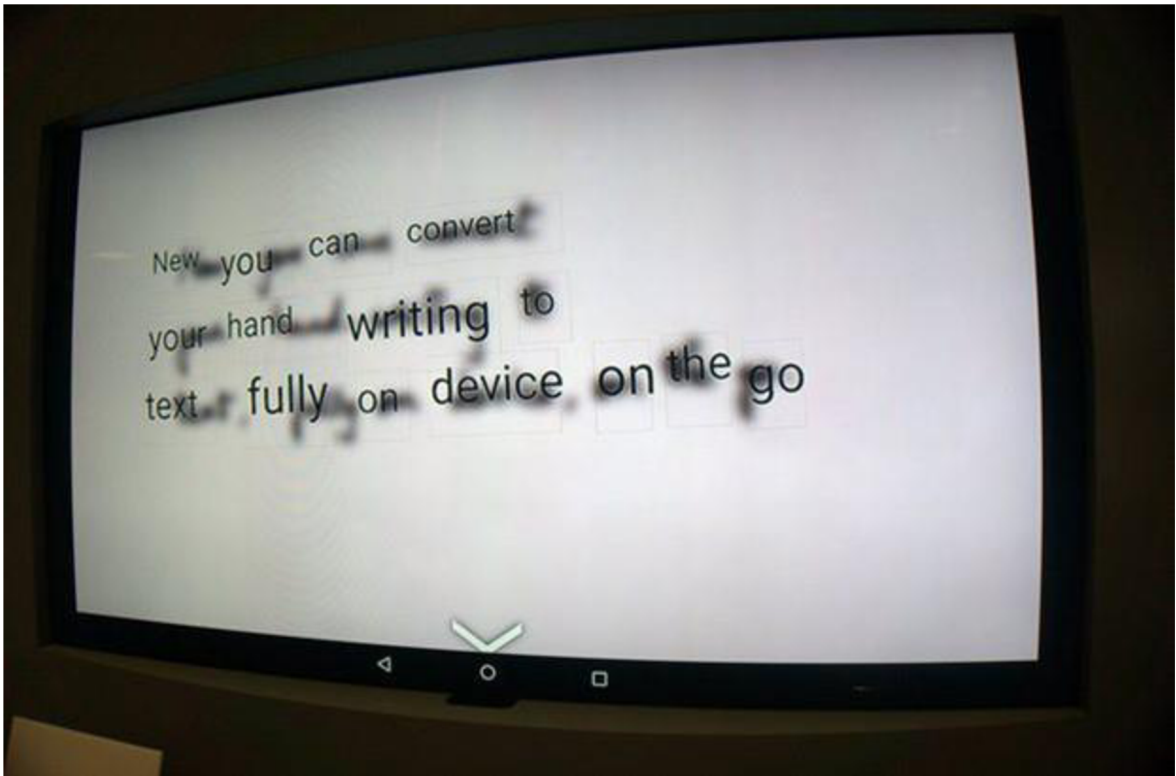
- Non-Networked Communication: In a natural disaster (earthquake, flood, avalanche) where there is no communication with this vital technology, this feature, called P2P, will direct the person to the nearest communication center.

2.1.6. The place of mobile applications in the market

The number of downloads and revenues are increasing rapidly in the mobile apps. The "mobile" adventure that started with the shift of e-commerce to mobile commerce continues.

35

Growths exceed predictions in the mobile application market. With the widespread use of smart mobile phones, users are more interested in mobile applications. The world is getting more mobile. In the last year, revenue from apps has grown significantly, and the money spent on apps has reached nearly $ 60 billion. According to the report released by Sensor Tower, which measures the mobile ecosystem and user experience, the global mobile application market, which reached a total volume of $ 43.5 billion in 2016, grew by 35 percent, and the size of the global mobile application market increased to $ 58.7 billion at the end of 2017. Apple was the most revenue generating company in the market. Apple users spent $ 38.5 billion on apps in 2017, while this rate remained at $ 20.1 billion on the Android side. According to the research conducted by Statista, the mobile application market will exceed $ 189 billion in 2020. In 2021, consumers are expected to download 352 billion mobile applications. Netflix, which has the highest revenue among non-game applications in the world, has generated gross revenue of approximately $ 510 million from its users according to estimates. Thus, user spending of 215 million dollars increased approximately 2.4 times in 2016 (Dünya Gazetesi, 01.02.2021).

As in 2016, Facebook applications continued to dominate the mobile application market. WhatsApp, Messenger and Facebook were the top three most downloaded apps, both in general and on Google Play. In the Apple Store, Google's application Youtube, which interfered with the WhatsApp, Messenger, Facebook rankings, broke down. Youtube, which ranked 3rd in the Apple Store, pushes Facebook to the 4th place (Dünya Newspaper, 01.02.2021).

Snapchat, which Instagram is trying to take its place with its new features, ranked 5th just below Instagram among the most downloaded ones worldwide. Monster Strike is the world's best mobile game and indeed the most lucrative mobile app for the 3rd time in a row. Pokémon GO, which created a global sensation in 2016, failed to enter the top 10 worldwide or on the App Store, despite the publisher Niantic's attempt to rekindle the craze, but ranked 9th on Google Play. More than 60 percent of mobile connections can now be classified as 'broadband', which shows that mobile data connections are getting faster. More than 200

million people bought their first mobile device in 2017, and two-thirds of the world's 7.6 billion population, or 5.1 billion people, own a smartphone. Social media usage also continues to grow rapidly. In the last 12 months, the number of people using it in each country has increased by approximately 1 million every day. More than 3 billion people around the world now use social media every month. 9 out of 10 people access their chosen platform via mobile devices. All these data reveal the potential in the mobile application market (Dünya Gazetesi, 01.02.2021).

2.1.7   Starbucks example in mobile app

Starbucks is a brand established in Seattle, America in 1971 with the motto of "sharing the perfect coffee and contributing to the improvement of the world" in the company's own words. Starbucks, which has more than 30,000 stores in 80 countries, promises its customers not only coffee culture but also an experience. It is named after Herman Melville's first friend in Moby Dick. Its logo is also inspired by the sea, featuring a twin-tailed siren from Greek mythology.

As of 2016, the countries where the stores are located are: Andorra, Argentina, Aruba, Australia, Austria, Azerbaijan, Bahamas, Bahrain, Belgium, Bolivia, Brazil, Brunei, Bulgaria, Cambodia, Canada, Chile, China, Colombia, Costa Rica, Curacao, Cyprus. Czechia, Denmark, Egypt, El Salvador, Finland, France, Germany, Greece, Guatemala, Hong Kong, Hungary, India, Indonesia, Ireland, Japan, Jordan, Kazakhstan, Korea, Kuwait, Lebanon, Macau, Malaysia, Mexico, Monaco Morocco, Netherlands, New Zealand, Norway, Oman, Panama, Peru, Philippines, Poland, Portugal, Puerto Rico, Qatar, Romania, Russia, Saudi Arabia, Singapore, Slovakia, South Africa, Spain, Sweden, Switzerland, Taiwan, Thailand , Turkey, United Arab Emirates, United Kingdom, United States, Vietnam.

Starbucks products include more than thirty types of coffee mixes and single origin coffee; handmade freshly brewed coffee, hot and iced espresso drinks, Frappuccino coffee and non-blended coffee drinks, Refreshers drinks, smoothies, teas; coffee and tea brewing equipment, mugs and accessories, packaged goods, books and gifts; baked pastries,

sandwiches, salads, bistro boxes, salad and cereal bowls, oatmeal, yoghurt parfait and fruit bowls.

Brand portfolio; Starbucks Coffee consists of Seattle's Best Coffee, Teavana, Tazo, Evolution Fresh, La Boulange, Ethos Water and Torrefazione Italia Coffee brands (www.starbucks.com.tr).

The Starbucks siren logo is one of the most recognizable company logos in the world. Starbucks ranked 48th in Interbrand's 2019 Best Global Brands list, with an increase of 23% (www.comparecamp.com).

The main features of the Starbucks mobile app are as follows (www.statista.com):

- It gives the first coffee as a treat to the users who download the application and create a membership.
- While the application is open, it allows quick and practical contactless payments with the QR code opened when the phone is shaken.
- Earns one star on every purchase (within the minimum purchase amount); When the specified number of stars is reached, the user identifies 1 free drink.
- It creates special offers only for Starbucks Mobile application members or Starbucks Card holders.
- It defines 1 coffee on the user's birthday.
- It provides the opportunity to load money on the Starbucks Card, view the balance, number of stars and past transactions.
- It provides information about the addresses and locations of Starbucks stores and the products offered.
- Starbucks mobile app can be used in some countries.

According to the statistics in Figure 1, which shows the brand value of the most valuable 10 fast service restaurant brands worldwide in 2020; Starbucks' brand value was approximately 47.8 billion USD.

Figure 11 Brand Value of 10 Most Valuable Fast Service Restaurant Brands in the World in 2020
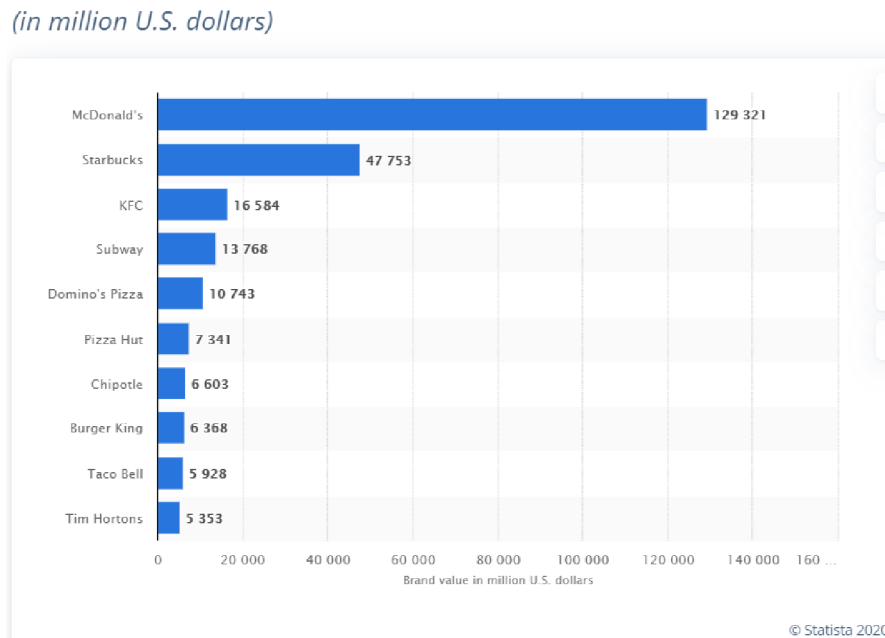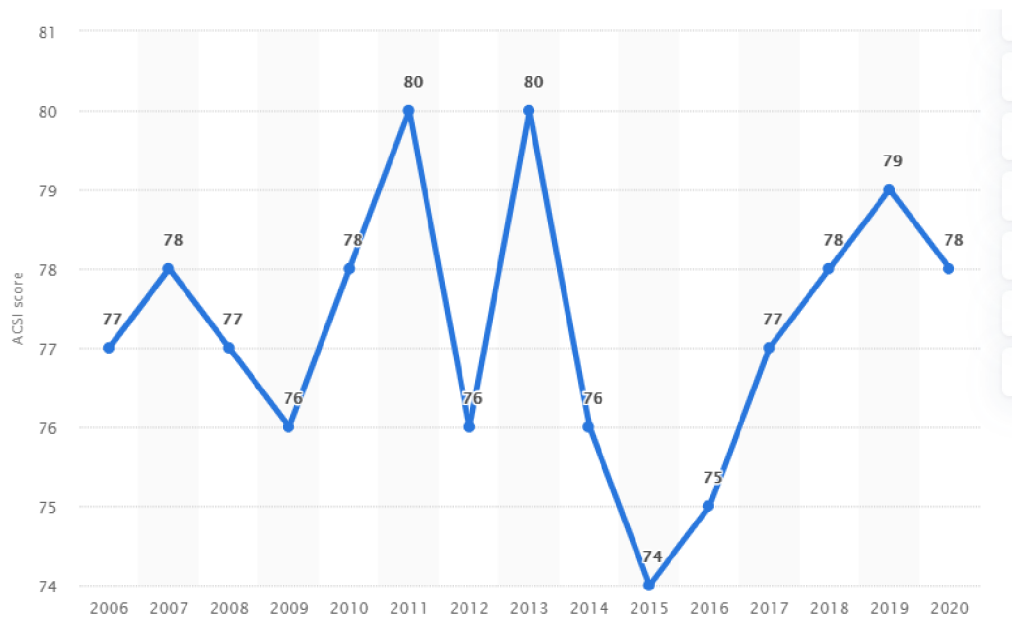

Source: statista.com

Starbucks' net income reached US $ 26.51 billion in 2019. The global coffee chain store has increased its revenue year on year over the past decade. Looking at the revenue of Starbucks by country, the highest part of the revenue came from the United States, where it has US $ 16.65 billion. International stores, on the other hand, recorded revenue of US $ 6.19 billion in 2019.

Starbucks spent US $ 245.7 million on advertising in its fiscal year ending September 2019. This figure represents a decrease in global advertising investment compared to the previous year (The coffee chain spent nearly $ 15 million more in 2018 to promote its products and services). On a global scale, the value of the Starbucks brand in 2018 was USD 32.42 billion.

The statistics given in Figure 2 show the American Customer Satisfaction Index scores of Starbucks in the United States from 2006 to 2020. Starbucks has a score of 78 ACSI (American Customer Satisfaction Index) in 2020 (www.statista.com).

Figure 12 American Customer Satisfaction (ACSI) Index Scores of Starbucks in the United States from 2006 to 2020

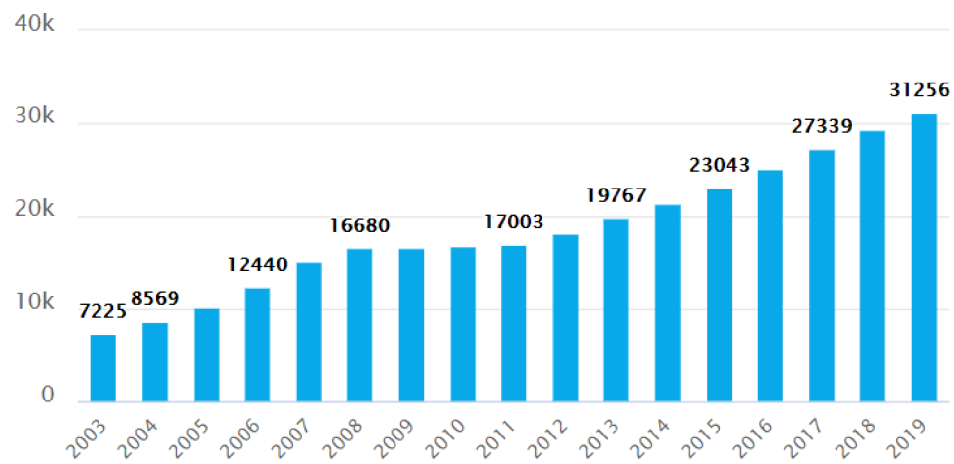© Statista 2020

Source: https://www.statista.com/statistics/216719/starbucks--customer-satisfaction-in-the-us/ (01.05.2020).

Figure 14 shows the number of stores of Starbucks company from 2003 to 2019 (www.comparecamp.com).

Figure 13 Number of Starbucks Stores Worldwide

40

Number of Starbucks Stores Worldwide (2003 to 2019)

Source: Starbucks Annual Report 2019

Created by CompareCamp.com

Source: https://comparecamp.com/starbucks-statistics/#TOC1 .

Below are some information and statistics about Starbucks' use of technology (www.comparecamp.com):

- Since the third quarter of 2016, the Starbucks mobile application has accounted for 25% of all in-store purchases in US stores.
- The Starbucks mobile app, powered by Microsoft, uses reinforcement learning technology, a type of machine learning system that helps Starbucks continually improve customer experience personalization.
- In some locations, up to 20% of orders placed during peak hours come via mobile pre-order.
- In December 2018, Starbucks partnered with Alibaba to open a virtual store that integrates all of its digital services in a single location in China.
- The total number of Starbucks' mobile order and mobile payment users reached 16.3 million at the end of 2018.
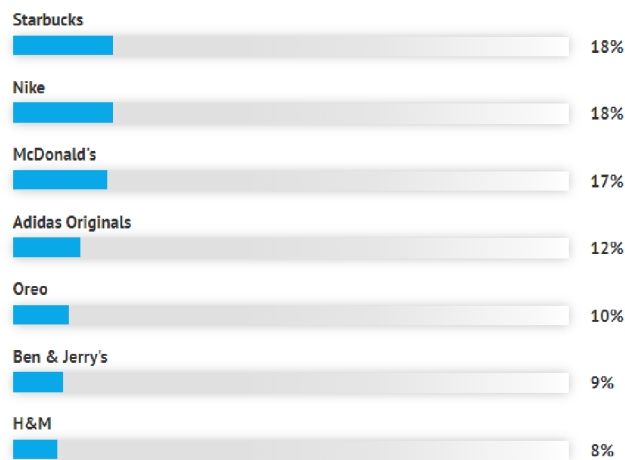
41

- 38% of Starbucks purchases come from rewards or gift cards.

Due to the need to better interact with customers and at the same time be visible on platforms where potential or future customers spend time online; The brand has a sizable social media and digital presence, which has been a renewed focus in recent years. Statistics about this are given below (www.comparecamp.com)):

- With 36,934,939 fans, Starbucks is the fourth beverage brand with the most Facebook fans worldwide as of 2019.

- In an online survey of American consumers in 2019, 18% of consumers said they bought something from Starbucks thanks to an Instagram ad they came across. The statistics of Starbucks and other brands ranking in the top seven are shown in Figure 4.

- The same survey revealed that 77% of the participants know Starbucks at least by name.

- Ranking of restaurant and bar brands in the UK; It shows that Starbucks was mentioned about 3.1 thousand times in print, online and social media.

- In August 2019, Starbucks Coffee Japan became the sixth most popular Instagram account of domestic brands in the country.

- With more than 49,000 images, Starbucks became the most photographed food and beverage brand in Instagram posts worldwide in July 2017.

Figure 14 Instagram affected purchase by brand

Top Brands Purchased through Instagram Advertisements in the US, 2019

Brand	Percentage
Starbucks	18%
Nike	18%
McDonald's	17%
Adidas Originals	12%
Oreo	10%
Ben & Jerry's	9%
H&M	8%

Source: Social Media Advertising in the US, 2019

Created by CompareCamp.com
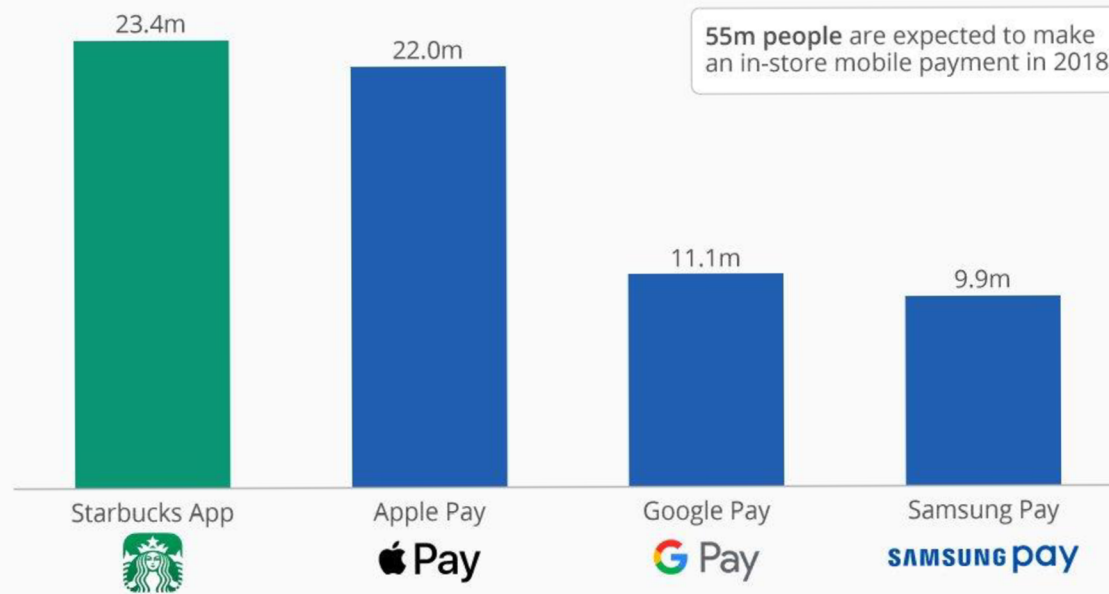
Source: https://comparecamp.com/starbucks-statistics/#TOC1.

One of the reasons why starbucks is in a different position from the coffee seller today is its mobile application. In 2018, the Starbucks mobile application became the most used mobile payment method in the USA.

Figure 15: Most Used Mobile Payment Systems in the USA in 2018

Starbucks Brings Mobile Payment to the Masses

Estimated number of people using proximity mobile payment services in the U.S. in 2018*

23.4m

22.0m

55m people are expected to make an in-store mobile payment in 2018

11.1m

9.9m

Starbucks App

Apple Pay

Google Pay

Samsung Pay

* ages 14 and over
@StatistaCharts   Source: eMarketer

statista

Source: statista.com

The following examples can be given for the purpose of using the Starbucks mobile application:

- Paying order in-store
- To order ahead
- To review to menu
- To have delivery Starbucks order

3. Empiricial Part

3.1 Dating Apps

Dating apps are software applications designed to create connections between people interested in romance, casual sex, or friendship. Downloaded to mobile phones, their algorithms are based on factors such as the user's age, gender and desired partner, as well as the distance the user has traveled. Many apps also access information from social media platforms like Facebook to create potential couples. Dating apps run over Wi-Fi or data and use real-time geo-social information to update user profiles, which differentiates them from more traditional online dating sites that use raw information entered into a user's profile to generate matches item.

As early as the mid-1990s, service providers such as AOL, Craiglist and Prodigy provided chat rooms where users could connect, and it soon became clear that the Web could also be used to meet new people who also presented an opportunity to find a potential dating partner (Wiederhold 2015).

The online dating industry was estimated at 6 billion dollars in 2017 and is expected to grow to 9 billion dollars by 2025, rising at a CAGR of 4.7% between 2018 and 2025 (Thomas 2019). It is a fast-growing industry, and there has been a substantial increase in sales over the last few decades (Thomas 2019).

Analysts report that "Approximately half of the Internet users are single, and we predict that 20 percent will be able to use online dating applications by 2020 (up from 15 percent in 2015), which is equal to about 310 million people worldwide (excluding China)" (Rapier 2019).

As a result of these developments online dating has a possibility to become one of the biggest industries in the future

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45

3.1.1. Evolution of Dating Apps

The first major player in the e-dating market was Match.com in 1995. It allowed users to decide what they wanted in a match, including gender, age, place, hobbies, and lifestyle habits and paved the way for others to adopt (S. Lee 2016).

As of 2021, Match has 12 million paid subscribers and 37 million monthly visitors and is responsible for more events, partnerships, and weddings than any competitor.

Five years after Match was released, eHarmony, a dating site with a way to do things, arrived on the scene. Not only was it intended for people who want only longterm relationships, but it also balanced them through a one-of-a-kind in-depth study, evaluating 29 measurements of compatibility. These include emotional energy, adaptability, intelligence, physical energy, and conflict resolution abilities (Payne 2017).

The introduction of cell phones, especially the iPhone, and their general acceptance led to one of the first dating sites to offer a mobile app called Zoosk. Zoosk allows users to synchronize their

Facebook or Google+ accounts, making it super easy to sign up and quickly filter all

participants in one sitting (Jung et al. 2019).

In the case of Tinder, a consumer can see their matches and then click right for yes or left for no based on whether they want meeting them throughout real life. Tinder often takes location-based matching to another level. While dating platforms and apps have always allowed users to search by region, Tinder displays matches in your area in real time.

Online dating can be categorized into two groups, the first being websites such as Match.com or eHarmony, which require users to go through the registration process, complete personal assessments and personality questionnaires, which are then used for compatibility with users of the services (Schwartz and Velotta 2018).

The second category, like Tinder, Hinge and Grindr, does not deliver the same time-consuming essays and questionnaires. Users can just sign up through e-mail, or they can just connect to their Facebook, Twitter, or even Instagram accounts and start utilizing dating services. The second category comes within the "less-serious" and "instant hook-up" categories as it offers freemium subscription (Ewens and Sprigings 2017).

The graph shows the most used online dating platforms in the country, including applications and websites. Tinder leads the entire market, preceded by Badoo and Bumble.

Figure 16: Number of users of dating platforms in 2021 (in millions)
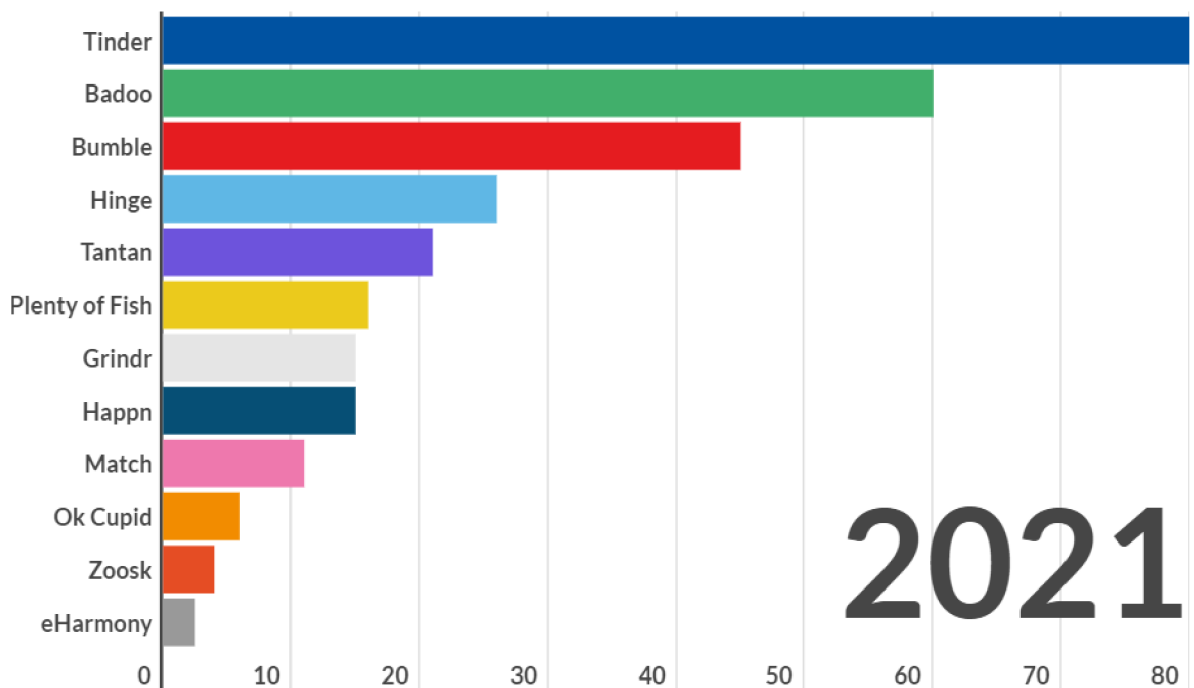
Sources: App Annie, Bumble, Dating Site Reviews, Match Group

Typically, the key gamers in the industry are drawing close the heterosexual section of the market. Nevertheless, this effect has been even more pronounced in same-sex marriages.

Nearly 60 percent of same-sex marriages have occurred as a result of partners connecting on online dating applications. The impact of same-sex marriage is immense due to two reasons, persons of same-sex attraction prefer to keep their identity secret. And the second factor is that people are unlikely to meet another group from face-to-face encounters in their daily lives (Schwartz and Velotta 2018).

Users may be categorized among four groups within the online dating industry.

First and oldest one was the Membership Subscription. It allows users to pay for certain time. This creates a higher barrier to use. Member's subscription dating services include Zoosk, eHarmony, Chemistry, and Our Time. Paid memberships are usually cheaper by a month if the customer commits to a longer period.

The Freemium Model is the second option. This model allows users to log in and access the app's basic capabilities for free, while the app makes revenue through commercials or the sale of premium features.

The Freemium – Advertising model is the third option. In-app advertisements are a way for a company to earn money via downloads, photos, or sales with advertisers. Native advertising, or commercials that complement the appearance and feel of the media format in which they appear, benefit from specific apps and the "swipe left or right" strategy.

Freemium - Upgraded Features is the fourth model. While basic membership is free, advanced services like as Tinder and Bumble can be purchased for a fee.

Figure 17:Number of Paying and Non-Paying Online Dating Users

48
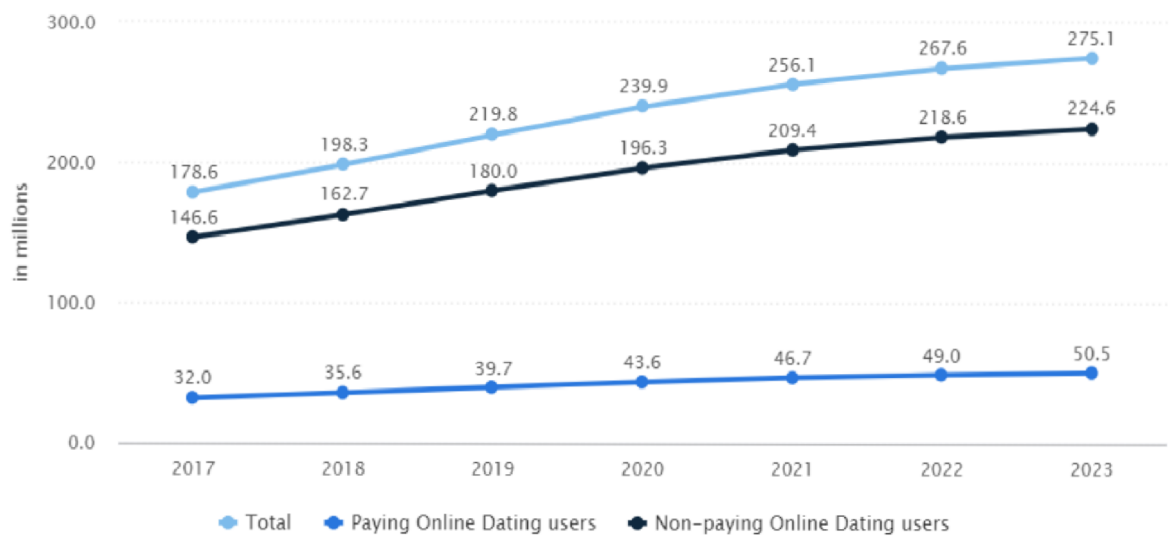
Source: Statista.com

The dating apps industry is not going away anytime soon. In the future years, the market will continue to grow, which is beneficial for business and for any newcomers attempting to break into the market and start making money. Nonetheless, because online dating programs frequently fail to satisfy user expectations, success in this business may be tough. Customers expect quick results from an online dating service, which is why new entrants usually end up losing money due to unhappy customers (Coleman 2011).

The primary issue in this industry is long-term stability. When an app does its job, which is matching users, the main challenge these firms have is that once users meet a possible partner, they will stop using the service. As a result, dating apps and websites will need to discover new ways to attract new users.

3.2 Research Questions

The main objective of thesis is to showing usage of mobile apps and showing their affects on human life. The research is used for examining different gender perspectives on dating apps and their influence on people's life. Due to investigative character of this research, our research questioned may be listed as (but not limited to):

- Why do you use dating apps?
- Would you make friends with use dating apps?
- How affects dating apps different genders dating life?
- Do you think dating apps do dating easier?
- Have you ever reached your goals with dating apps?

We had a question in which we can choose more than one option the question was whether dating apps changed the people's life or not. The choices were:

- I am exposed to larger number of potential partners.
- I can narrow down the pool of potential partners more easily.
- I can find a friend more easily.
- I can find a person to spend an evening more easily.
- I can find a sex partner more easily.
- I can find the stable relation more easily.
- I can reach further locations of my potential partners.
- I can meet potential partners from wider variety of social, economic, or age groups.
- I have boosted my self-esteem.
- My life got brighter.
- I always have a person to talk to.
- I am more depressed.
- I feel I am losing my value.
- I feel ugly.
- I feel unwanted.
- I feel poorer.
- I spend more money on women/men.

3.2.1 ANALYSIS AND FINDINGS

This section summarizes the findings of structured interviews with users of online dating applications 100 applicants in different ages were based different cities around the world. Respondents were answered 32 questions concerning their usage of dating apps and affects to them. Respondents recruited randomly by contacting them on their social media accounts. It is divided mainly 2 groups. (Man and woman).

People of various genders are required to gain insights into the use of online dating apps, to obtain more detailed information about their usage and reflection when using online dating services, and to prevent bias and remain as objective as possible. The primary goal of the interviews is to create a survey based on the topics that emerge from the interviews. Creating an early thematic framework for the study is critical and will help to focus the survey on developing themes. All the participants are anonymous, and we will not reveal their real names in order to preserve their privacy.

3.2.3 Survey Questions and Collacted Answers

The survey consisted of two parts. The first part questions collatedded the personal data of respondents and the second part was dating apps affects and their usage.

The first part is included the following questions:

1. How old are you was the first question of survey and the survey had a choices as:
- 15-19
- 19-24
- 24-29
- 29-34
- 34-above

As a result of the answers collected, the following information was obtained:

- Most common age group is 24-29 with 40 respondents.
- The group with the fewest participants is 15-19 with 3 respondents.
- There are 30 respondents between 19-24.
- There are 16 respondents between 29-34

- There are 11 respondents 34 years old and above.

How old are you?
100 yanıt
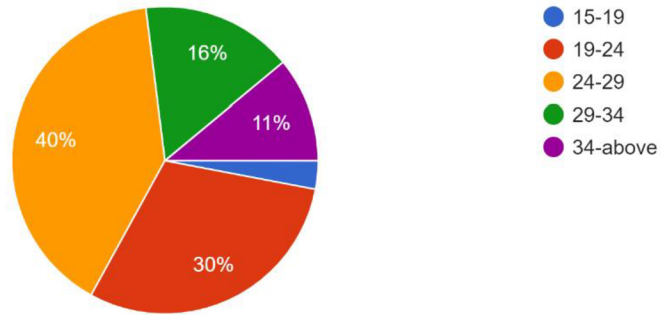
2. The second question of survey was nationality of respondents. The question stated as: What is your nationality. The respondents could write their own answer in this question.

As a result of the answers collected, the following information was obtained:

Nationality	Number of respondents	Nationality	Number of Repondents
Albanian	1	Kurdish	1
Australian	1	Latvian	1
Bangladeshi	1	Mexian	1
British	5	Mongolian	1
Cambodian	1	Nigerian	1
Cameroonian	1	Pakistani	2
Colombian	2	Peruvian	1
Crotian	2	Polish	1
Czech	7	Russian	2
Danish	1	Saudi	1
Dutch	1	Spanish	7
Ecuadorian	1	Swedish	1
Estonian	1	Swiss	1
French	3	Taiwanese	1
German	2	Turkish	23
Greek	5	Ukranian	1
Hungarian	2	Usa	2
Indian	8	Uzbek	1
Indonesian	1	Vietnamese	1
Italian	2	Zimbabwe	1
Japanese	1	**Total**	100

3. The third question of survey was gender's of respondents. The question stated as: Gender
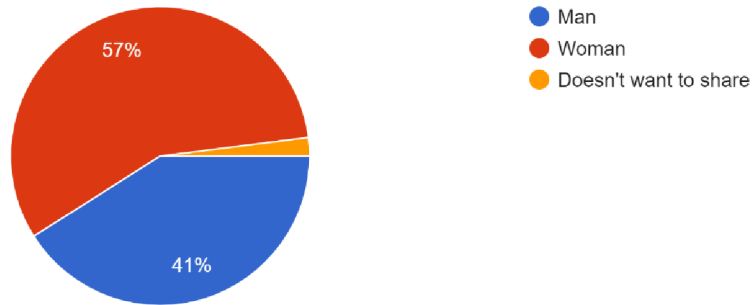
The survey had three choices for this question and all respondents could choose only one.

The choices were:

- Man
- Woman
- Doesn't want to share

57 men and 41 women answered the survey. 2 respondents didn't want to share their gender.

100 yanıt

4. The fourth question of survey was education level of respondents. The question is stated as: What is your education level?

The question had 5 choices and those choices were:

- Basic
- Secondary
- Higher (bachelor)
- Higher (master)
- Higher (Ph.D.)

Most common educational level was bachelor's degree with 46 respondents. There are 45 master's degree. There are 5 secondary degree owner and 3 basic degree owner. The smallest educational degree is Ph. D. degree with one respondent. While all basic degree owners were women the only Ph.D. owner is also woman.

What is your education level?
100 yanıt

- Basic
- Secondary
- Higher (bachelor)
- Higher (Master)
- Higher (Ph.D.)
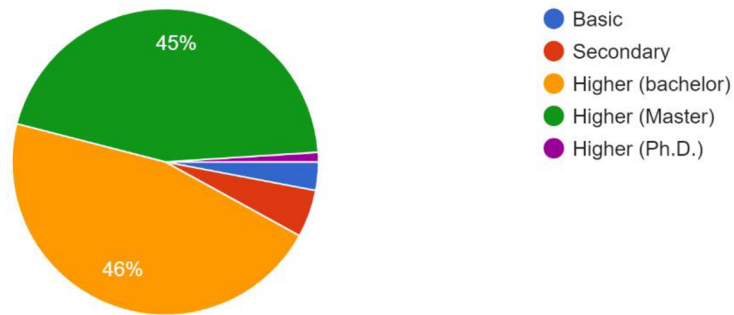
5. The fifth question of survey was employment status of respondents. The question is stated as: What is your employment status?
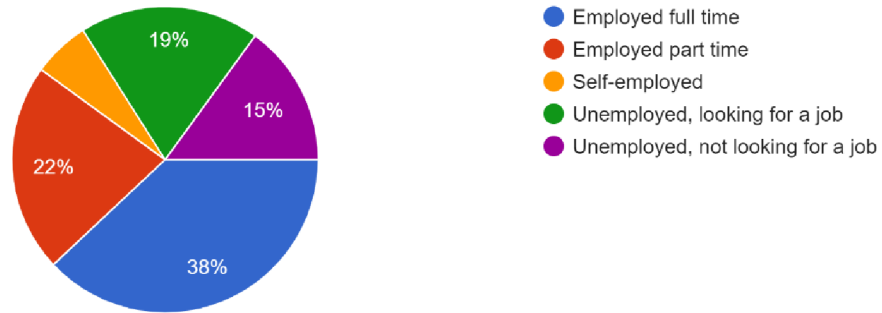
The question had 5 choices and each respondent could choose one option. The choices were:

- Employed full time
- Employed part time
- Self-employed
- Unemployed, looking for a job
- Unemployed, not looking for a job

38 people from respondents employed full time while 22 employed part-time.6 respondents is self-employed. 34 respondents isn't employed while 19 of them are looking for a job.

What is your employment status?

100 yanıt

- Employed full time
- Employed part time
- Self-employed
- Unemployed, looking for a job
- Unemployed, not looking for a job

6. The sixth question of survey aimed to measure the rate of respondents continuing their education. The question stated as: Are you currently studying any university program?
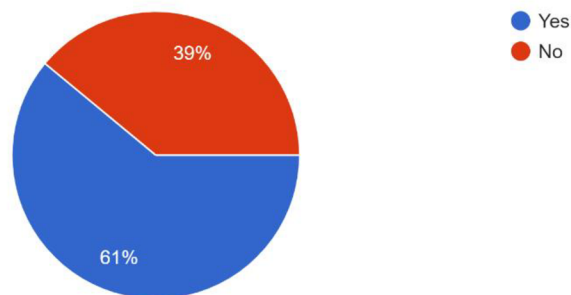
The question had two choices and each respondent could choose one choice. The choices were:

- Yes
- No

61 of the respondents are still student while 39 people isn't continue their education.

Are you currently studying any university program?

100 yanıt

- Yes
- No

3.3 Dating Apps Usage and Its Affects

The second part of survey consisted of questions for desired analysis. In this part questions were focused the purpose of usage of dating apps and affects of dating apps to respondents. The survey had 5 questions in this part. In the analysis of the results obtained in this section, the differences in the use of dating apps between male and female genders and the different effects of dating apps on these genders were examined. There were 2 genders in the analysis and the Column 1 is represents men. The Column 2 represents women. Anova analysis was chosen and applied as the method.

Dating App Recommendation to Friends

The first question of second part of the survey asked if the respondents would recommend it to their friends. The question is stated as: Would you make your friends use dating apps?

The respondents could answer on linear scale between 1 and 5. In the answer 1 represented Strongly Disagree and 5 represented Strongly Agree. As a result of the analysis of the data obtained, the following data were obtained:

Anova: Single Factor						
SUMMARY						
Groups	*Count*	*Sum*	*Average*	*Variance*		
Column 1	41	107	2,609756	2,143902		
Column 2	56	175	3,125	2,038636		
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	6,283851	1	6,283851	3,016791	0,085648	3,941222
Within Groups	197,8811	95	2,082959			
Total	204,1649	96				

In the light of the information given, there was no difference in the preference of recommending dating apps for men and women. This does not indicate that women and men are the same. It shows that no difference was found as a result of this analysis. We used the given P value to analyze this analysis. If the P value was less than 0.05, a difference could be noted, but in this question, no difference can be specified as it is large.

The Purpose of Using Dating Apps

The second question of second part asked for understanding the purpose of the dating apps. This question stated as: Why do you use dating apps? This question has 6 parts, and every part can be answered from 1 to 5 in linear scale.1 represented Strongly disagree and 5 represented Strongly Agree.

1. The first part second question asked if respondents used dating apps to find a serious relationship. The section stated as: To find serious relationship. As a result of the analysis of the data obtained, the following data were obtained:

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Column 1	41	101	2,463415	1,954878		
Column 2	57	159	2,789474	1,633459		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	2,535275	1	2,535275	1,43448	0,233984	3,940163
Within Groups	169,6688	96	1,767383			
Total	172,2041	97				

As a result of the information obtained, the p value was found to be greater than 0.05 in the analysis. This result does not show any difference in the serious relationship use of men and women.

This does not indicate whether there is a difference or not, it is simply not detected as a result of this analysis.

2. The second part of this question asked to determine if there is difference between man and woman in usage for one night stand. The section stated as: To find one night stand. As a result of the analysis of the data obtained, the following data were obtained:

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Column 1	41	158	3,853659	1,728049		
Column 2	57	178	3,122807	1,895363		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	12,7377	1	12,7377	6,977079	0,009639	3,940163
Within Groups	175,2623	96	1,825649			
Total	188	97				

The p value reached in this part is less than 0.05. This means that there is a difference in using a dating app to find a one-night stand between men and women.

3. The third part of this question asked to determine whether there is a difference in the use of dating apps to find friends between men and women. The section stated as: To find a friend
As a result of the analysis of the data obtained, the following data were obtained:

59

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Column 1	41	100	2,439024	2,102439		
Column 2	57	163	2,859649	1,72995		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	4,219124	1	4,219124	2,238079	0,137929	3,940163
Within Groups	180,9748	96	1,885154			
Total	185,1939	97				

Since the P value is greater than 0.05, a difference cannot be mentioned here. This does not indicate that men and women are the same. It shows that no difference was found as a result of this analysis.

4. The fourth part of this question asked to determine whether there is difference in the use of dating apps to boost self-ego between men and women. The section stated as: To boost self-ego
As a result of the analysis of the data obtained, the following data were obtained:

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Column 1	39	103	2,641026	2,499325		
Column 2	57	160	2,807018	2,051378		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	0,638031	1	0,638031	0,285797	0,594189	3,942303
Within Groups	209,8516	94	2,232463			
Total	210,4896	95				

Since the P value is greater than 0.05, a difference cannot be mentioned here. This does not indicate that men and women are the same. It shows that no difference was found as a result of this analysis.

5. The fifth part of this question asked to determine whether there is difference in the use of dating apps to find casual sex between men and women. The section stated as: To find casual sex
As a result of the analysis of the data obtained, the following data were obtained:

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Column 1	41	155	3,780488	1,97561		
Column 2	57	182	3,192982	2,408521		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	8,23107	1	8,23107	3,694141	0,057569	3,940163
Within Groups	213,9016	96	2,228141			
Total	222,1327	97				

Since the P value is greater than 0.05, a difference cannot be mentioned here. This does not indicate that men and women are the same. It shows that no difference was found as a result of this analysis.

6. The sixth part of this question asked to determine whether there is difference in the use of dating apps to find to have some fun between men and women. The section stated as: To have some fun
As a result of the analysis of the data obtained, the following data were obtained:

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Column 1	26	101	3,884615	2,186154		
Column 2	54	202	3,740741	1,780573		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	0,363283	1	0,363283	0,190144	0,664001	3,963472
Within Groups	149,0242	78	1,910567			
Total	149,3875	79				

Since the P value is greater than 0.05, a difference cannot be mentioned here. This does not indicate that men and women are the same. It shows that no difference was found as a result of this analysis.

Affects of Dating Apps on Modern Dating

The third question of second part asked for determine the affects of dating apps on modern dating. This question stated as: Do you think dating apps do dating easier? This question can be answered from 1 to 5 in linear scale.1 represented Strongly disagree and 5 represented Strongly Agree.

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Column 1	41	136	3,317073	2,121951		
Column 2	57	196	3,438596	1,679198		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	0,35217	1	0,35217	0,188965	0,664755	3,940163
Within Groups	178,9131	96	1,863679			
Total	179,2653	97				

In the light of the information given, there was no difference in dating apps for men and women to make modern dating easier. This does not mean that men and women are the same. It shows that no difference was found as a result of this analysis. We used the given P value to analyze this analysis. If the P value was less than 0.05, a difference could be noted, but in this question, no difference can be specified as it is large.

Reaching to Goals with Dating Apps

The fourth question of second part asked for determine the differences between man and woman in the reaching the goal while using dating apps. This question stated as: Have you ever reached your goals with dating apps? This question can be answered from 1 to 5 in linear scale.1 represented Strongly disagree and 5 represented Strongly Agree.

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Column 1	41	126	3,073171	2,919512		
Column 2	57	158	2,77193	2,214912		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	2,164016	1	2,164016	0,862675	0,355321	3,940163
Within Groups	240,8156	96	2,508496			
Total	242,9796	97				

Since the P value we obtained, 0.355321, is greater than 0.05, we cannot talk about a difference between men and women here. This does not indicate that men and women are the same. It shows that no difference was found as a result of this analysis.
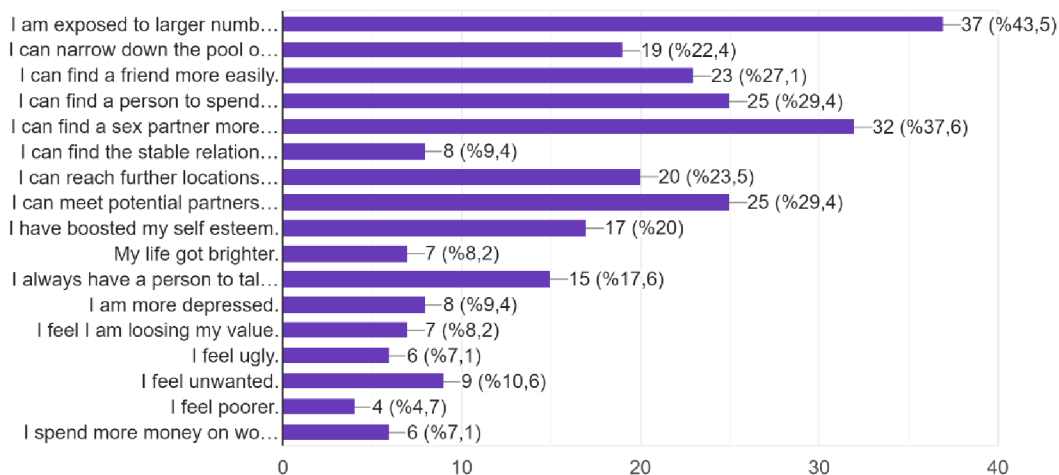
63

Impact of Dating Apps on People

In the 5th and last question, 17 options that can be chosen were specified. Respondents were asked to mark their effects after using dating apps out of 17 options. Respondents did not have to choose an option in this question, or they could choose more than one option. Those options were:

- I am exposed to larger number of potential partners.
- I can narrow down the pool of potential partners more easily.
- I can find a friend more easily.
- I can find a person to spend an evening more easily.
- I can find a sex partner more easily.
- I can find the stable relation more easily.
- I can reach further locations of my potential partners.
- I can meet potential partners from wider variety of social, economic, or age groups.
- I have boosted my self-esteem.
- My life got brighter.
- I always have a person to talk to.
- I am more depressed.
- I feel I am losing my value.
- I feel ugly.
- I feel unwanted.
- I feel poorer.
- I spend more money on women/men.

Please comment on whether dating apps changed your dating life. After I started to use dating apps,(You can choose more than one choice.)

85 yanıt

Chart data:
- I am exposed to larger numb…: 37 (%43,5)
- I can narrow down the pool o…: 19 (%22,4)
- I can find a friend more easily.: 23 (%27,1)
- I can find a person to spend…: 25 (%29,4)
- I can find a sex partner more…: 32 (%37,6)
- I can find the stable relation…: 8 (%9,4)
- I can reach further locations…: 20 (%23,5)
- I can meet potential partners…: 25 (%29,4)
- I have boosted my self esteem.: 17 (%20)
- My life got brighter.: 7 (%8,2)
- I always have a person to tal…: 15 (%17,6)
- I am more depressed.: 8 (%9,4)
- I feel I am loosing my value.: 7 (%8,2)
- I feel ugly.: 6 (%7,1)
- I feel unwanted.: 9 (%10,6)
- I feel poorer.: 4 (%4,7)
- I spend more money on wo…: 6 (%7,1)

- %43.5 can exposed to larger numbers of potential partners with dating apps.
- %22.4 of respondents can narrow down the pool of potential partners easily
- %27.1 of respondents can find friends easier with dating apps
- %29.4 of respondents can find a person to spend evening more easily.
- %37.6 of respondents can find a sex partner more easily.
- %9.4 of respondents can find stable relationship easily
- %29.4 of respondents uses dating apps for reaching further locations
- %20 of respondents think they boosted self esteem with dating apps.
- %8.2 of respondents think that their life got brighter
- %17.6 of respondents have a person to talk always with dating apps
- %7.1 of respondents feel ugly after using dating apps.
- %10.6 of respondents feel unwanted after using dating apps.
- %4.7 of respondents feel poorer after using dating apps.
- %7.1 spends more money to another gender after using dating apps
- Dating apps doesn't have any influence on %15 of respondents.

65

4. Results and Findings

Based on the resulting analysiss, statistically significant variables were determined. Furthermore, using the calculation of Anova analysis, it was found that there are no significant differences in the use of dating apps between the genders and the effects of dating apps on different genders. Conversely, the only difference in usage between the genders emerged in One Night Stand.

The most notable affect of using Dating Apps is that individuals can reach more partners.While other affects of dating apps affects users It cannot be said that all users are affected in the same way.

Although no effect reached 50% of respondents, 85% of respondents were at least slightly affected by these practices.

Regardless of gender, dating apps affect users psychologically, sociologically and economically. Considering that the number of users is constantly increasing, dating apps can cause significant changes in human life in the future with these impact rates.

5. Conclusion

In order to keep up with the developing market today, the importance given to mobile applications, which is developing with technological innovations and to mobile applications, which is one of today's trends, has increased. Companies that want to turn technology into opportunities need to determine their marketing strategies in order to be able to hold on to the market and ensure its continuity. For this purpose, it is expected that knowing the effects of mobile applications, which provide continuous interaction between companies and customers, on consumer behavior will contribute to the marketing literature.

After all the limitation of mobile environmeand mobile application,usage and popularity of mobile applications are increasing day by day. Most people try to use mobile devices and mobile apps instead of desktops for simple tasks. The use of mobile applications has gradually increased along with the use of desktop applications. All handset manufacturers and mobile application developers are improving capacity, quality and functionality. Therefore, modern mobile applications are more powerful and user-friendly for users. The global impact of mobile applications is increasing.

With this understanding, it is undeniably important that consumption will be shaped according to new consumer behaviors, and mobile applications is a research area that needs to be examined.

As seen in the example of Starbucks, mobile applications are now indispensable for companies as they provide users with time saving, ease of use and extensive content. Starbucks mobile application also has a share in Starbucks' long-term policies by collecting and using the data of all users of Starbucks.Today, it is essential for a company to reach its customers, as it is the most common way for governments to reach their citizens or for individuals to reach other individuals.

Just as mobile applications do on companies, mobile applications for individuals have effects on individuals. Dating apps, which form part of the apps that bring individuals together with individuals, are very common nowadays, especially among young individuals.

Regardless of gender, the most common usage purpose is to reach more partners in a wider geography, based on the result that emerged in the empirical part.While the majority of users try to achieve this goal, mobile applications affect users economically and psychologically. Today, whether you are an individual or a company, mobile applications facilitate many areas of life and these areas are expanding every day. Since it is possible to reach more people or companies faster with mobile applications, mobile applications will become more common in the future and will be a part of every part of human life.

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7.Appendices

Survey Questions

Affects of dating apps on modern dating

Form açıklaması

Personal Information

Açıklama (isteğe bağlı)

How old are you? *

○ 15-19

○ 19-24

○ 24-29

○ 29-34

○ 34-above

What is your nationality? *

Kısa yanıt metni

Gender *

○ Man

○ Woman

○ Doesn't want to share

What is your education level?

○ Basic

○ Secondary

○ Higher (bachelor)

○ Higher (Master)

○ Higher (Ph.D.)

What is your employment status?

○ Employed full time

○ Employed part time

○ Self-employed

○ Unemployed, looking for a job

○ Unemployed, not looking for a job

Are you currently studying any university program?

◯ Yes

◯ No

What is your income ? (Please write with currency.)

Kısa yanıt metni

Conclusion About Dating Apss

Açıklama (isteğe bağlı)

Would you make your friends use dating apps?

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

Why do you use dating apps?

Açıklama (isteğe bağlı)

To find serious relationship

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly Agree

One night stand

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

To find a friend

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

To boost self-ego

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

To find casual sex

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

To have some fun

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

Do you think dating apps do dating easier?

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

78

Have you ever reached your goals with dating apps?

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

Please comment on whether dating apps changed your dating life. After I started to use dating apps, (You can choose more than one choice.)

- [ ] I am exposed to larger number of potential partners.
- [ ] I can narrow down the pool of potential partners more easily.
- [ ] I can find a friend more easily.
- [ ] I can find a person to spend an evening more easily.
- [ ] I can find a sex partner more easily.
- [ ] I can find the stable relation more easily.
- [ ] I can reach further locations of my potential partners.
- [ ] I can meet potential partners from wider variety of social, economic, or age groups.
- [ ] I have boosted my self esteem.
- [ ] My life got brighter.
- [ ] I always have a person to talk to.
- [ ] I am more depressed.
- [ ] I feel I am loosing my value.
- [ ] I feel ugly.
- [ ] I feel unwanted.
- [ ] I feel poorer.
- [ ] I spend more money on women/men.