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Alternative Banking Channels in the Greek Banking Sector

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Abstract:

Purpose: *This study examines the alternative banking channels employed in Greek banking sector. It investigates customers' perceptions regarding the advantages and the drawbacks of the existing alternative banking channels. Furthermore, it investigates the effect that the coronavirus pandemic had on the public's inclination to use alternative banking channels.*
Design/Methodology/Approach: *A questionnaire survey was conducted and a sample of 241 questionnaires was analyzed. In addition, the financial statements of the major Greek banks for the period 2014-2021.*
Findings: *Findings affirmed the predominant role of alternative banking channels compared to traditional forms of banking. Most respondents were satisfied with them and uses them for a wide variety of everyday transactions.*
Practical implications: *It seems that coronavirus pandemic has played a significant role in enhancing the acceptance and penetration of alternative banking channels in Greece. In addition, the extensive use of alternative banking channels appears to have reduced the banks' operating expenses by lowering banks' personnel expenses, while operating revenues per employee have increased.*
Originality/Value: *This study contributes to the existing literature on alternative banking channel. Our research has been conducted during the Covid-19 pandemic period and provides evidence testifying that pandemic increased customers' inclination to use alternative banking channels while affected banks' business strategies and operations.*

Keywords: *Alternative banking channels, coronavirus pandemic, internet banking, operating profits.*

JEL codes: *M41, M31.*

Paper type: *Research article.*

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1. Introduction

Technological progress and socioeconomic changes along with globalization, increased customer demands, and rising competition have led to the rapid development and adoption of alternative banking channels (ABC hereinafter) such as ATM, POS, phone banking, internet banking, mobile banking, and automated branches. These innovative forms of banking are becoming the new mainstream and are expected to completely substitute most of a traditional branch's functions in years to come. Until recently Greece was somewhat lacking in this area compared to other developed countries but in recent years has made leaps towards modernizing its banking system (Andreou and Anyfantaki, 2019).

This study aims to capture the present situation in Greece with respect to alternative banking channels. It analyzes their penetration level, usage frequency, pros and cons as well as determine the level of customer satisfaction in relation to them. In addition, the impact of the coronavirus pandemic has been examined.

A questionnaire survey has been conducted. The questionnaire was electronically distributed, and 241 questionnaires were collected. Moreover, the financial statements of the major Greek banks for the period 2014-2021. The findings of the research confirmed that alternative banking channels are the dominant form of banking nowadays. Respondents of both genders and all ages, occupations and education levels are using alternative banking channels and for the most part see them as offering advantages. The gap between Greece and other advanced countries is closing very fast in this field due to the top-notch services offered by domestic banks and unpredicted phenomena such as the outbreak of the coronavirus pandemic which greatly affected the habits of bank customers.

In addition, we examine whether the extensive use of alternative banking channels have reduced the banks' operating expenses and increase operating revenues resulting in improvement of banks operating results.

2. The Historical Development of Alternative Banking Channels

The first attempt by the banking system to move its operations outside the branch was the ATM. It was initially conceived by John Sheperd-Barron in the 60s ATMs gained much popularity in the 80s mostly due to technological innovations that greatly extended their available functions (Betiz-Lazo, 2015). Alpha Bank was the first to introduce ATMs in Greece in 1981, followed by Citibank in 1985.

The next attempt was telephone banking, which was introduced in the 80s, with Girobank in the UK being the trailblazer that offered a relevant product in 1980 (Telegraph, 2014). By 1999 about 20% of bank customers were enrolled in the phone banking service (Ahmad and Buttle, 2002). EFTPOS originally conceived in the 70s was another channel, which debuted in the 80s (Alexander, Hine, and

Howells, 1991). In the 90s mobile versions of the terminals appeared further increasing their usefulness. The first such endeavor took place in Australia in 1994 (Elliot, 1996). Home banking the precursor to online banking was introduced in the beginning of the 80s in the United States but had limited success and most projects were abandoned by the end of the decade (Prendergast, 1992). Wells Fargo took the initiative by providing internet-based services in 1994. Security First Network Bank created the first fully functional internet banking environment the same year (Aggelis, 2005).

The first bank to develop and introduce e-banking services in Greece was Egnatia Bank in 1997, which offered a very limited range of services such as balance request, mini statements, and money transfer between accounts of the bank. In 2000 Piraeus Bank introduced a more sophisticated and comprehensive e-banking suite called Winbank. Since then, all major banking organizations have joined this at the time new trend and operate their own full-featured platforms (Aggelis, 2005).

SMS banking appeared in the 90s following the wide spread of mobile telephone usage. Very limited by nature it nevertheless led to the evolution of mobile banking through WAP services that were first seen in Norway in 1999 introduced by Fokus Nettbank (Arntzen, 1999). From 2010 and onwards smartphones (using either android or iOS as their operating system) became the norm on mobile phones and soon banks taking advantage of this new technological leap, developed dedicated mobile versions of their sites and specialized applications for this type of phones that truly revolutionized mobile banking (Cleveland, 2016).

One of the most recent trends is the automated bank branch, a new type of branch alternative in which customers can use a lot of existing technologies such as ATMs etc. (Freed, 2005), while in addition, they can use ITMs through which they can contact a remote teller using a video system and an interactive screen to complete a much wider range of transactions. These transactions were previously available only at traditional branches and required the physical presence of a bank employee. The first automated branch in Greece called e-branch was introduced by Piraeus Bank in 2016 (Kathimerini, 2016).

3. Advantages and Disadvantages of Alternative Banking Channels

Advantages for the Banks:
Banks were quick to understand the importance of ABCs and the advantages of the digital transformation they brought, changing every aspect of the traditional banking image. According to Aggelis (2005) and Angelakopoulos and Mihiotis, (2011) by adopting and incorporating them into their strategy planning banks have the following benefits:

- Reduced Operating Cost.
- Innovative products.

- Wider Range of Available Service Channels.
- Service Quality Upgrade.
- Client Base Development.
- Amelioration of Company Image and Reputation.
- Access to new geographic regions.
- Branch workload reduction.
- Data Collection and Usage.
- Increased Revenue: Fees applied to transactions such as ATM withdrawals, POS purchases and internet banking services (that reach people in previously unavailable regions) boost earnings.
- Competitive Advantage: A well designed ABC network can assist in the company's attempts at achieving a competitive advantage over its rivals.
- Cost Savings due to personnel reduction: By moving a large percentage of the transactions to ABCs banks can reduce the number of employees since they are no longer needed and thus save a lot of money (Myrtidis, 2008)
- Improved Marketing and Advertising: ABCs can be used to promote personalized product offerings around the clock and reach clients that would otherwise be difficult to approach through traditional means (Myrtidis, 2008)

Disadvantages for the Banks:
Even though the advent of ABCs has revolutionized banking there are still some drawbacks worth mentioning. For the financial institutions this include the following (Angelakopoulos and Mihiotis, 2011):

- Intensification of competition. Clients can search for the best available alternative solution regarding his needs. This intensifies competition and nowadays banks must compete not only among themselves but also with financial institutions of other types that have entered the field.
- Installation and maintenance costs.
- Personnel education.
- Promotion expenses.

Advantages for Consumers:
According to Aggelis (2005) the main advantages for customers include the following:

- Time saving.
- 24/7 availability: Most ABCs function non-stop or with extended working hours compared to branches so no or minimal restrictions apply to when a customer can conduct his business.
- Queue avoidance.
- Lower transaction fees.
- Access from everywhere.

- Ease of use.
- Transaction speed.
- Transaction range.
- Elimination of the need for physical records.
- Easier transactions for persons with special needs.
- Better Transaction Management and Control (Kareklis, 2003).
- Available Information: Customers gain access to large amounts of information regarding their banking, professional and private needs (Kareklis, 2003).
- Increased Security: While some security issues are raised when using ABCs there are many instances when security is greater through them. A classic example is not having to carry around cash in order to move them from one bank to another (Angelakopoulos and Mihiotis, 2011).

Disadvantages for Consumers:
While bank customers can profit immensely from leaving behind classic banking channels and switching to ABCs there are some aspects that can be a cause of concern. The main disadvantages for the customers are (Angelakopoulos and Mihiotis, 2011):

- Security Issues: The main deterrent factor for people to adopt ABCs concerns security issues. This are primarily detected in using internet banking (phishing, malicious software, hackers etc.) but problems also exist in using ATMs and other ABCs.
- Inadequate technological competence: The use of ABCs prerequisites some basic knowledge regarding the latest relevant devices and software which some people lack.
- Ownership of the necessary equipment: For ABCs such as internet or mobile banking the customer must own a pc, tablet, or smartphone and while in our age that is very common, not everyone has easy access to such a device and therefore some people are excluded from enjoying these services.
- Absence of personal contact: Many people value the speed and ease of use of ABCs but for some interpersonal contact with a bank employee is indispensable.

ABCs have been on the rise for many years replacing, substituting, and complementing traditional branches. The attributing factors to this trend are numerous, but aside from the gradual adoption of these channels brought on by slow moving social, technological, and economical processes, there are some noticeable events that caused leaps in that course. The onset of events such as these makes the percentage of the public that embraces ABCs rise rapidly and causes a permanent change in societal culture regarding them.

One such extraordinary event in Greece were the capital controls imposed by the government in 2015 to stop the imminent bank run. The impact that the capital controls had on ABC adoption was spectacular. The card usage skyrocketed in terms of both number of transactions as well as transaction value (Andreou and Anyfantaki, 2019). At the same time bank customers of all institutions took a massive turn to e-banking and mobile banking for their everyday transactions (Hellenic Banking Association, 2021).

Another extraordinary event that changed consumer habits regarding ABCs is the coronavirus pandemic which had a profound effect that is still developing. Clients once again turned to digital channels for their transactions impelled by the strict rules and regulations applied to bank branch visits during the various lock down phases and fear of the virous. All systemic banks saw massive inflows of new internet and mobile banking subscribers as well as a rise in the number of transactions from new and existing users (Velesioti, 2021). Card transactions also exhibited a notable upsurge despite private consumption declining at the same period and became a norm for simple transactions augmented by the contactless transaction limit rise to 50 euros (Tzortzi, 2021).

4. Research Design

For the purposes of the study a questionnaire survey was conducted. A structured questionnaire with closed questions was formed. Moreover, the financial statements of the major Greek banks for the period 2014-2021.

4.1 Questionnaire

Participation in questionnaire survey was completely anonymous. The questions were of various types such as multiple choice, dichotomous, rating scales and matrix questions. The questionnaire consists of sixteen questions in total which are divided into four separate sections as described below:

- ABC usage current status and consumer viewpoint.
- ABC evaluation and consumer satisfaction.
- The effect of the pandemic.
- Demographics.

The final version of the questionnaire can be found in Appendix A.

The questionnaire was distributed electronically through various channels (e-mail, social media, instant messaging applications etc.), for a period of fourteen days starting on November 25, 2021, and ending on December 8, 2021. The number of respondents was 241 which was deemed sufficient for the ensuing analysis.

5. Results

The demographic characteristics of the participants are presented in Table 1.

Table 1. *Participants' demographic characteristics*

Gender	**Frequency**	**Percentage**
Male	96	39,83%
Female	145	60,17%
Total	241	100,00%
Age Group	**Frequency**	**Percentage**
18-25	19	7,88%
26-35	59	24,48%
36-45	110	45,64%
46-55	43	17,84%
>55	10	4,15%
Total	241	100,00%
Education Level	**Frequency**	**Percentage**
High school	18	7,47%
University	107	44,40%
Postgraduate	111	46,06%
Doctorate	5	2,07%
Total	241	100,00%
Main Occupation	**Frequency**	**Percentage**
Private Sector Employee	128	53,11%
Public Sector Employee	63	26,14%
Freelancer/Self-employed	26	10,79%
Unemployed	8	3,32%
Pensioner	4	1,66%
Student	10	4,15%
Housewife/Househusband	2	0,83%
Total	241	100,00%

Source: *Own study.*

5.1 Alternative Banking Channel Usage

5.1.1 Participants' bank of choice

In this question participants were asked to select the bank whose services they primarily use. It should be noted that only one participant used the services of a bank other than the four systemic ones, which is a clear reflection of the dominance of these four banks in the Greek banking system.

Table 2. *Participants' Preferred Bank*

Bank	**Frequency**	**Percentage**
Alpha Bank	44	18,26
Ethniki Bank	68	28,22%

Eurobank	45	18,67%
Piraeusbank	83	34,44%
Other	1	0,41%
Total	241	100,00%

Source: *Own study.*

5.1.2 ABC Usage Frequency

This question requests participants to identify how often they use (if they do) the various ABCs. In Table 3 are presented the frequencies regarding the usage of ABCs. For the ATM the results reveal that only a minuscule fraction (2,91%) does not use it at all supporting the view that only a slim portion of people still relies on branches for money withdrawals. Most people use the ATM at least once per month (63,48%) with the majority using it more than twice per month or once-twice per month. Very few participants use it daily (3,32%) while about a third uses it less than once per month indicating a decreased need for cash in the present-day economy.

Table 3. *ABCs Usage Frequency*

ATM	**Frequency**	**Percentage**	**Cumulative Percentage**
Never	7	2,90%	2,90%
Rarely (less than once per month)	81	33,61%	36,51%
Sometimes (once-twice per month)	55	22,82%	59,33%
Often (more than twice per month)	90	37,35%	96,68%
Daily	8	3,32%	100,00%
Total	241	100,00%	
POS	**Frequency**	**Percentage**	**Cumulative Percentage**
Never	4	1,66%	1,66%
Rarely (less than once per month)	15	6,22%	7,88%
Sometimes (once-twice per month)	12	4,98%	12,86%
Often (more than twice per month)	72	29,88%	42,74%
Daily	138	57,26%	100,00%
Total	241	100,00%	
Phone Banking	**Frequency**	**Percentage**	**Cumulative Percentage**
Never	157	65,15%	65,15%
Rarely (less than once per month)	42	17,43%	82,58%
Sometimes (once-twice per month)	11	4,56%	87,14%
Often (more than twice per month)	20	8,30%	95,44%
Daily	11	4,56%	100,00%

Total	241	100,00%	
Internet Banking	**Frequency**	**Percentage**	**Cumulative Percentage**
Never	13	5,39%	5,39%
Rarely (less than once per month)	32	13,28%	18,67%
Sometimes (once-twice per month)	32	13,28%	31,95%
Often (more than twice per month)	111	46,06%	78,01%
Daily	53	21,99%	100,00%
Total	241	100,00%	
Mobile Banking	**Frequency**	**Percentage**	**Cumulative Percentage**
Never	65	26,97%	26,97%
Rarely (less than once per month)	27	11,20%	38,17%
Sometimes (once-twice per month)	27	11,20%	49,37%
Often (more than twice per month)	63	26,14%	75,51%
Daily	59	24,49%	100,00%
Total	241	100,00%	
Automated Branches	**Frequency**	**Percentage**	**Cumulative Percentage**
Never	190	78,84%	78,84%
Rarely (less than once per month)	30	12,45%	91,29%
Sometimes (once-twice per month)	12	4,98%	96,27%
Often (more than twice per month)	9	3,73%	100,00%
Daily	0	0,00%	100,00%
Total	241	100,00%	

Source: *Own study.*

As far as the POS is concerned the first thing that we notice is that a very large percentage of the participants uses it on a "daily" basis (57,26%) or "more than twice per month" (29,88%). These two categories added together account for a staggering 87,14% of the sample delineating the importance and wide-spread use of card payments. Very few respondents use it less than twice per month and only 4 people never pay with some type of card. The data about phone banking clearly indicates that most people "never" uses it (65,15%). This can probably be attributed to bank customers being drawn to other channels such as internet or mobile banking which to an extent serve the same purpose.

Nevertheless, there are quite a few people that on occasion use these services (less than once per month 17.43%) and some that use it "regularly" (more than twice per month 8,3%, once-twice per month 4,56%). There even exists a portion of the participants that relies on phone banking for its daily transactions (4,56%) indicating

that phone banking is not yet obsolete. Regarding internet banking the results demonstrate that the greatest part of the respondents uses it "more than twice per month" (46,06%) or even "daily" (21,99%) expressing the degree to which electronic means (with internet banking being the most prominent) have established themselves as the new norm in banking. The rest of the participants use it "once-twice per month" or "less than once per month" with equal percentages (13,28%) and only 5,39% of them "never" uses internet banking. The replies for mobile banking reveal that most of the respondents uses it "daily" or "more than twice per month" (50,63% aggregated) while another large portion "never" uses it at all (26,97%).

This contradiction probably has to do with many people liking the convenience of mobile banking while others some prefer internet banking or other channels as more reliable (this is also supported by the answers to a following question where mobile banking has the highest percentage of people pointing security as its main drawback among all ABCs). The rest of the participants are equally divided between the "less than once per month" and the "once-twice per month" group. Automated branches are a very recent arrival and have only been around for a few years.

Moreover, not all banks have automated branches yet and the ones that do, have them in small numbers. All this is reflected in the percentage of the participants that "never" visit automated branches that is an overwhelming 78,84%. An adequate portion of the sample visits them "less than once per month" while smaller numbers chose "once-twice per month" or "more than twice per month". It is indicative than no one chose the "daily" option.

5.1.3 ABC Preferred Services

This question asked respondents to identify the transactions/services they normally use in ABCs. As seen in the graph below the participants mainly use ABCs to make purchases with their cards, pay bills, request balances and statements, transfer money to others and withdraw cash. Other common transactions include transfers between one's accounts, credit card and loan payment and card management/pin reissue. Insurance and investment product management, new account applications and loan/credit card applications are not so popular indicating a probable luck of trust for that kind of service or even the need for interaction with a human.

5.2 Alternative Banking Channel Evaluation

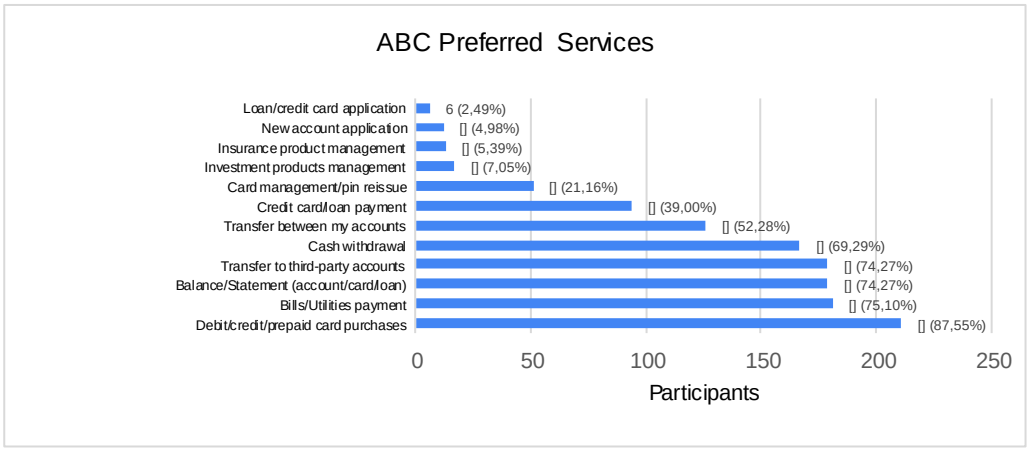
This section consisting of six questions examines the respondents' views on alternative banking channels and investigates their opinion and positive or negative attitude towards them.

5.2.1 ABC Advantages

With this question, participants were asked to identify which they considered as the main advantages of the various ABCs. With respect of ATM the most prominent

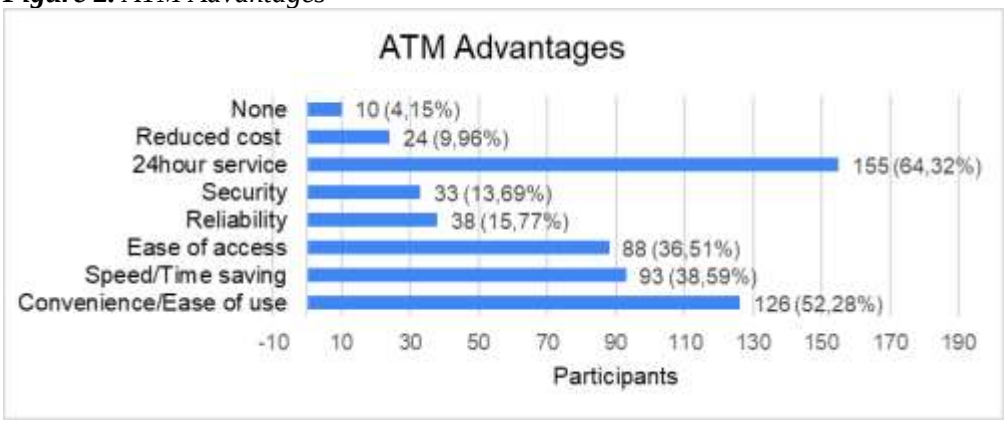
features are the "24-hour service" and the "convenience/ease of use" (above 50%), while "speed/time saving", and "ease of access" are also considered to be important pluses. Only 10 out of the 241 participants think that there is no advantage to using the ATM.

Figure 1. *ABC Preferred Services*



Source: *Own study.*

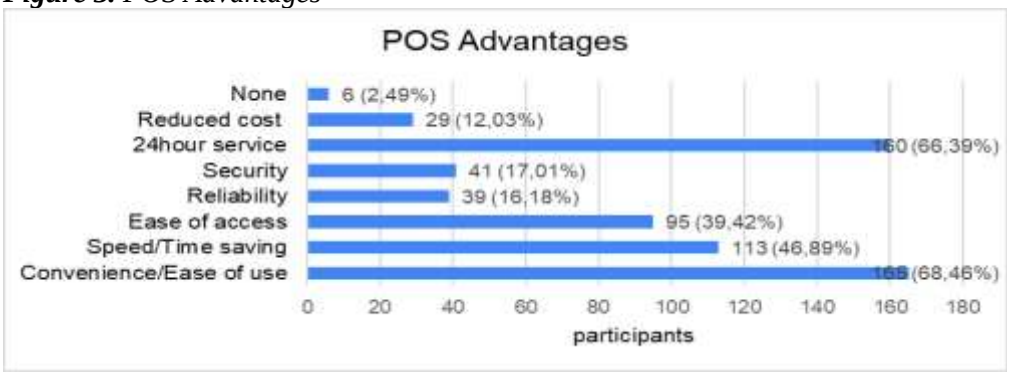
Figure 2. *ATM Advantages*



Source: *Own study.*

Regarding the POS "convenience/ease of use" and "24-hour service" are the two most important advantages with percentages above 60%. "Speed/time saving" and "ease of access" also score high and are important to respondents. The "none" category is almost nonexistent for POS with only six participants choosing it.

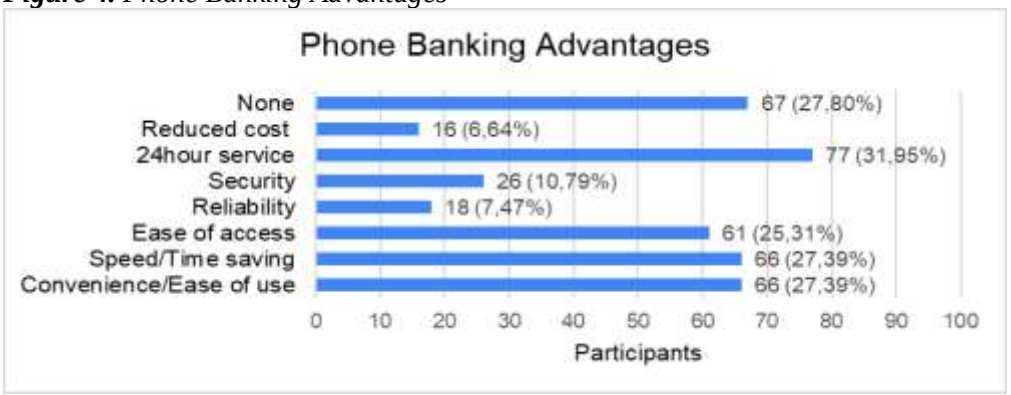
Figure 3. *POS Advantages*



Source: *Own study.*

Concerning phone banking the participants elected "24-hour service", "ease of access", "speed/time saving" and "convenience/ease of use" to be the most significant advantages but all with low percentages of about 25-30%. It should also be noted that about 28% of the sample thinks there is no advantage to phone banking.

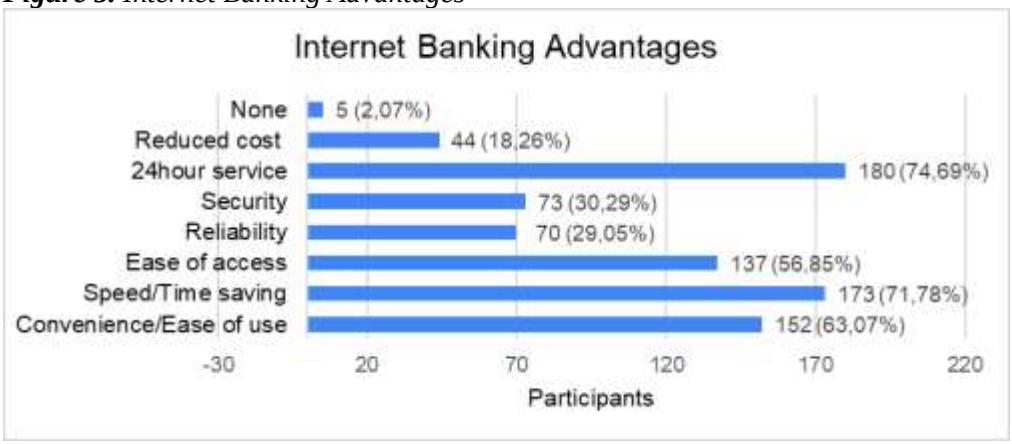
Figure 4. *Phone Banking Advantages*



Source: *Own study.*

The internet banking has the smallest number of participants responding "none", indicating that is considered to be a mainstream and very useful form of banking. "24-hour service" and "speed/time saving" are both above 70% while "convenience/ease of use" is around 63% and "ease of access" at about 57%.\

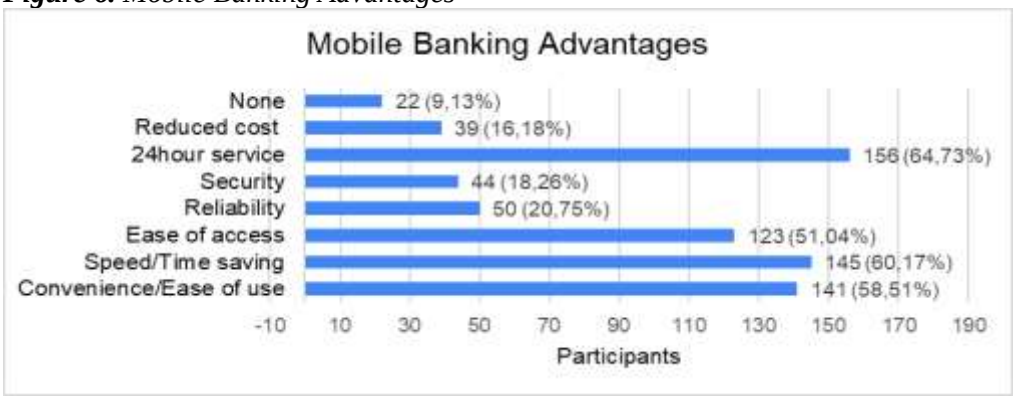
Figure 5. *Internet Banking Advantages*



Source: *Own study.*

Mobile banking is perceived to have many of the advantages; a fact that supports the suggestion that many people prefer the convenience of using a mobile device and as younger generations become economically active this channel becomes more important with each passing day. "24-hour service", "speed/time saving", "convenience/ease of use" ang "ease of access" all have percentages above 50% up to almost 65%.

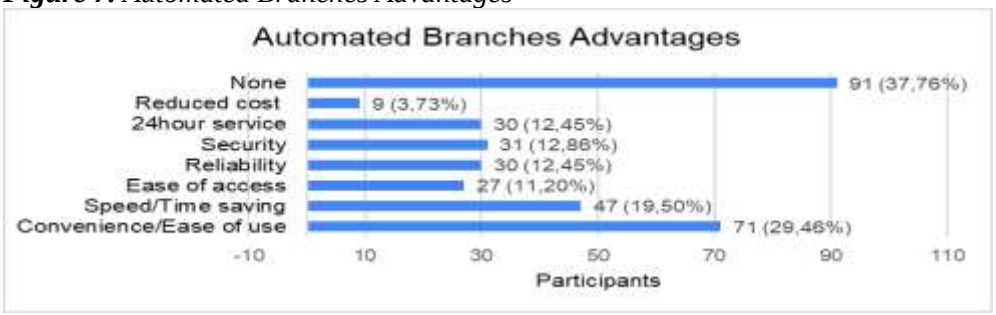
Figure 6. *Mobile Banking Advantages*



Source: *Own study.*

When it comes to automated branches participants do not believe that they offer significant advantages. The only notable exceptions appear to be the "convenience/ease of use" and "speed/time saving".

Figure 7. *Automated Branches Advantages*

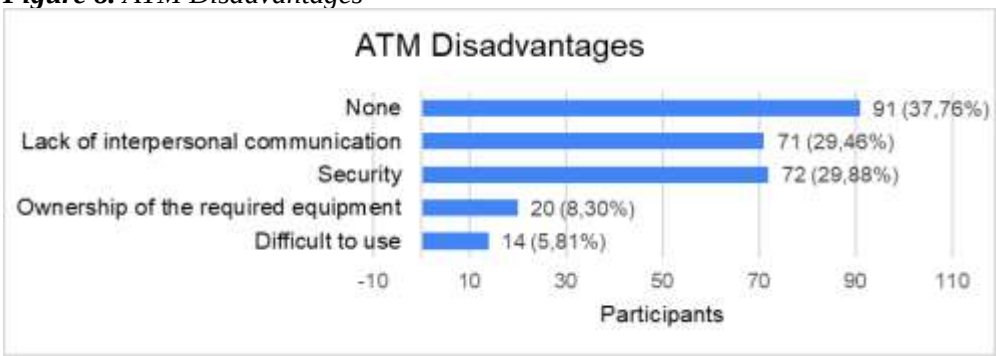


Source: *Own study.*

5.2.2 ABC Disadvantages

With respect to the ATM nearly 38% of the sample could not find a single flaw. The two concerns worth mentioning are "lack of interpersonal communication" and "security" which both have a percentage of roughly 29%.

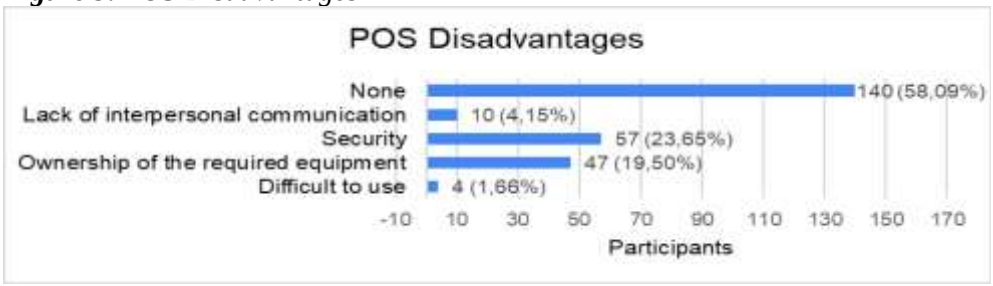
Figure 8. *ATM Disadvantages*



Source: *Own study.*

Regarding the POS most participants stated that it has no disadvantages (the highest number between all ABCs) reaching a percentage of 58%. The main disadvantage identified by the survey was "security".

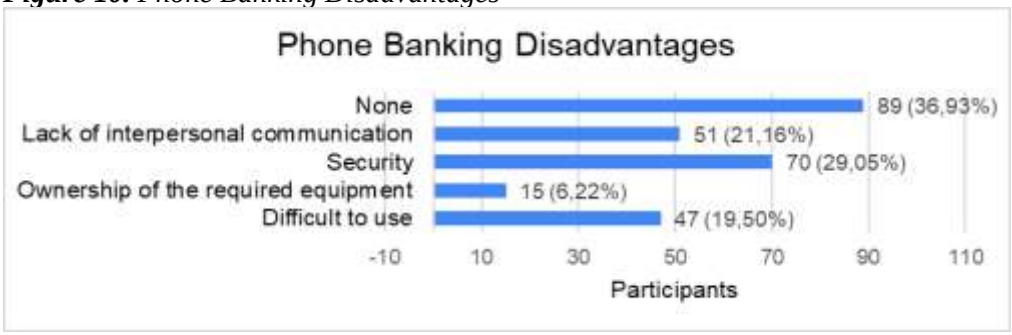
Figure 9. *POS Disadvantages*



Source: *Own study.*

Concerning phone banking we observe another high percentage of respondents choosing the no-disadvantage option. The main concern is security with 29% while "lack of interpersonal communication" and "difficulty to use" also raise some concerns.

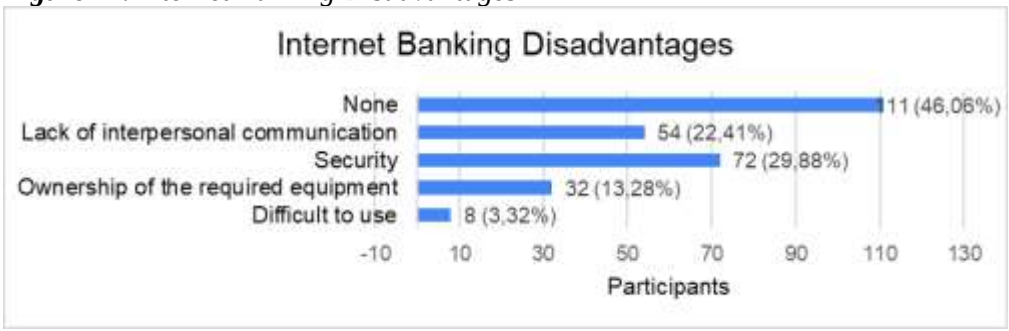
Figure 10. *Phone Banking Disadvantages*



Source: *Own study.*

Internet banking also has a sizable group of respondents in the no-disadvantage group with 46%. "Security" and "lack of interpersonal communication" are the two main issues raised by the survey.

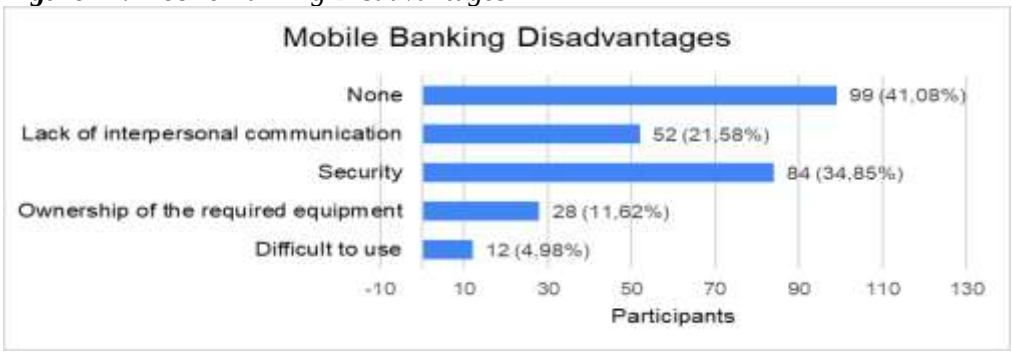
Figure 11. *Internet Banking Disadvantages*



Source: *Own study.*

As far as mobile banking is concerned the no disadvantage group once more is large with 41%. "Security" seems to be the main problem exhibiting the highest percentage among all ABCs whereas "lack of interpersonal communication" is selected by fewer people.

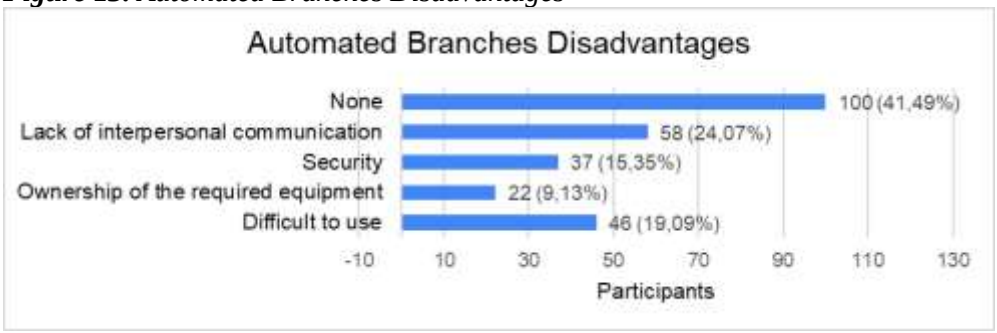
Figure 12. *Mobile Banking Disadvantages*



Source: *Own study.*

The responses pertaining to the automated branches revealed that while a large subset of the sample (41%) did not find a disadvantage, smaller groups of participants chose to point out lack of interpersonal communication and difficulty to use as the main drawbacks.

Figure 13. *Automated Branches Disadvantages*



Source: *Own study.*

5.2.3 Satisfaction from using ABCs

This question requested respondents to specify how satisfied they were from the ABCs they use. The results presented regarding the satisfaction level for each ABC are based only on the answers of people that use that particular ABC (Table 4).

For the ATM the results reveal a high level of satisfaction. Only 2,53% of the sample is "not at all" or "only a little" satisfied. The most popular answer is a lot with 43,46%, followed by "extremely" with 32,91% (combined this two reach a percentage of 76,37%) while 23,63% feels "moderately" satisfied.

Table 4. *Satisfaction from using ABCs*

ATM	**Frequency**	**Percentage**	**Cumulative Percentage**
Not at all	1	0,42%	0,42%
A little	5	2,11%	2,53%

Moderately	50	21,10%	23,63%
A lot	103	43,46%	67,09%
Extremely	78	32,91%	100,00%
Total	237	100,00%	
POS	**Frequency**	**Percentage**	**Cumulative Percentage**
Not at all	0	0,00%	0,00%
A little	3	1,26%	1,26%
Moderately	25	10,55%	11,81%
A lot	82	34,60%	46,41%
Extremely	127	53,59%	100,00%
Total	237	100,00%	
Phone Banking	**Frequency**	**Percentage**	**Cumulative Percentage**
Not at all	11	10,00%	10,00%
A little	10	9,09%	19,09%
Moderately	32	29,09%	48,18%
A lot	27	24,55%	72,73%
Extremely	30	27,27%	100,00%
Total	110	100,00%	
Internet Banking	**Frequency**	**Percentage**	**Cumulative Percentage**
Not at all	1	0,44%	0,44%
A little	0	0,00%	0,44%
Moderately	14	6,17%	6,61%
A lot	70	30,84%	37,45%
Extremely	142	62,55%	100,00%
Total	227	100,00%	
Mobile Banking	**Frequency**	**Percentage**	**Cumulative Percentage**
Not at all	3	1,68%	1,68%
A little	7	3,91%	5,59%
Moderately	22	12,29%	17,88%
A lot	45	25,14%	43,02%
Extremely	102	56,98%	100,00%
Total	179	100,00%	
Automated Branches	**Frequency**	**Percentage**	**Cumulative Percentage**
Not at all	16	21,62%	21,62%
A little	11	14,86%	36,48%
Moderately	20	27,03%	63,51%
A lot	12	16,22%	79,73%
Extremely	15	20,27%	100,00%
Total	74	100,00%	

Source: *Own study.*

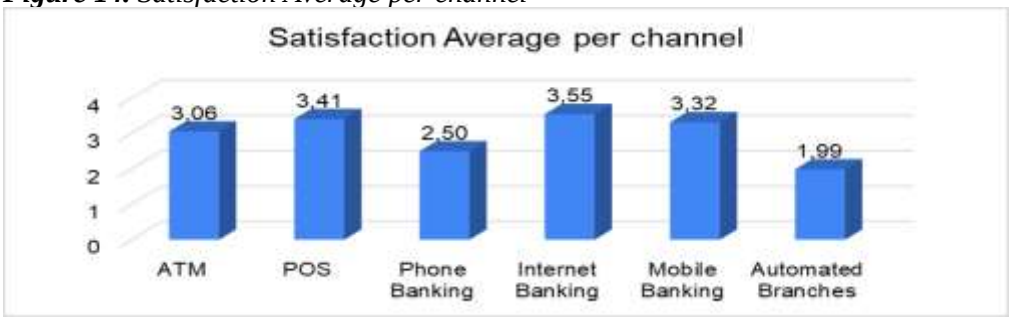
The POS exhibits an even higher satisfaction level with more than half of the respondents choosing “extremely”, while another 34,6% opted for “a lot”. Remarkably not even a single participant declared “no” satisfaction at all while only 3 of the 241 people that took part in the survey picked “a little”. The percentage of “moderately” satisfied was around 10%.

Regarding phone banking the level of satisfaction revealed by the findings was a bit lower than that of ATM and POS but still quite high. Almost 20% of the sample is "not at all" or "a little" satisfied but at the same time a bit more than 50% is a "lot" or "extremely" satisfied. The largest group is the one that chose "moderately" which accounts for about 29% of the sample. When it comes to internet banking the study shows that it is the channel with which customers feel more content. The largest portion of the sample feels "extremely" satisfied with a percentage of almost 63%.

Another large part of about 31% is a "lot" satisfied and the two categories combined reach a 93%. Around 6% are "moderately" satisfied, no one chose "a little" and only one person selected "not satisfied at all". Pertaining to mobile banking almost 60% of the sample feels "extremely satisfied" and another 25% "a lot". A further 12% is "moderately" satisfied whereas only 6% is "not at all" or only "a little" satisfied.

Automated branches seem to have the lower level of satisfaction with customers that visit them being spread across all categories. The largest group is the one that chose "moderately" with 27%. "Not at all" and "a little" combined represent 36% while "a lot" and "extremely" account for almost 36 %. Comparing the results of all ABCs (0-Not at all, 1-A little, 2-Moderately, 3-A lot, 4-Extremely) we ascertain that people are most satisfied with internet banking followed closely by POS and mobile banking. Phone banking is also on the positive side while automated branches have the lowest score. The overall average of all channels is 2,97 demonstrating that the public is remarkably satisfied by ABCs.

Figure 14. *Satisfaction Average per channel*



Source: *Own study.*

5.2.4 Customer service and experience improvement attributed to ABCs

The results reflect the profound effect ABCs have on consumers and their interaction with their financial institution of their choice. It is indicative that the people that chose "a lot" and "extremely" represent almost 91% of the sample while on the other hand "not at all" and "a little" was selected by only 7 out of 241 participants.

Table 5. *Customer service and experience improvement attributed to ABCs*

	Frequency	**Percentage**	**Cumulative Percentage**

Not at all	3	1,25%	1,25%
A little	4	1,66%	2,91%
Moderately	15	6,22%	9,13%
A lot	128	53,11%	62,24%
Extremely	91	37,76%	100,00%
Total	241	100,00%	

Source: *Own study.*

5.2.5 ABCs' Influence in choosing a bank

Once more, the persons that chose "Extremely" and "A lot" represent the vast majority of the sample with a combined percentage of 64,73%. Another 17,43% is "moderately" influenced while only 17,84% is "not at all" or "a little" influenced. These results indicate the importance of ABCs for financial institutions since most of their existent or potential customers take ABCs offered under consideration when picking a bank.

Table 6. *ABCs' influence in bank selection*

	Frequency	**Percentage**	**Cumulative Percentage**
Not at all	21	8,71%	8,71%
A little	22	9,13%	17,84%
Moderately	42	17,43%	35,27%
A lot	104	43,15%	78,42%
Extremely	52	21,58%	100,00%
Total	241	100,00%	

Source: *Own study.*

5.2.6 ABC recommendation to other people

In the final question of this section participants were asked to state whether they would recommend using ABCs to someone else. The result was 97,5% for "Yes" which clearly signifies that ABCs are an integral part of todays' as well as tomorrow's' banking.

5.3 The Effect of the Coronavirus

The first question of this section asked participants to define the extent to which the coronavirus affected their banking habits. "A lot" and "extremely" combined reach a percentage of about 40%. "Moderately" and "a little" aggregated also have a similar percentage. "Not at all" has only 18,67%. These results indicate that most people were influenced to some extent by the pandemic.

Table 7. *Degree of coronavirus' influence on customers' banking habits*

	Frequency	**Percentage**	**Cumulative Percentage**
Not at all	45	18,67%	18,67%
A little	39	16,18%	34,85%
Moderately	60	24,90%	59,75%
A lot	46	19,09%	78,84%

Extremely	51	21,16%	100,00%
Total	241	100,00%	

Source: *Own study.*

In the second question respondents were asked to declare whether they first used an ABC due to the pandemic or not. From the results we ascertain that the coronavirus did in fact usher people to use ABCs. The channel that had the most people introduced to it is mobile banking with 12% of the sample with internet banking following with a little below 10%. New phone banking users account for 7% of the participants while automated branches and POS both have a percentage of 5%. ATM's portion of new users is almost nonexistent and below 1%.

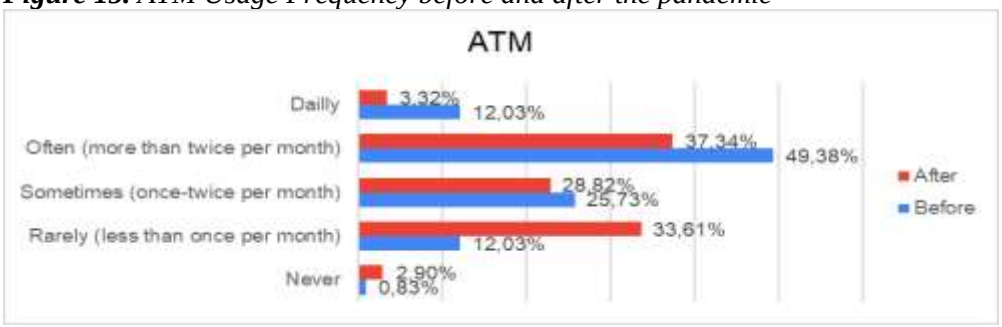
Table 8. *First contact/registration due to the coronavirus*

	ATM	**POS**	**Phone Banking**	**Internet Banking**	**Mobile Banking**	**Automated Branches**
Yes	2	13	17	23	29	13
No	239	228	224	218	212	228

Source: *Own study.*

The final question of this part requests respondents to identify the frequency with which they used each ABC before the pandemic. The results are presented in comparison to the results of the similar question regarding the current ABC frequency usage.

Figure 15. *ATM Usage Frequency before and after the pandemic*

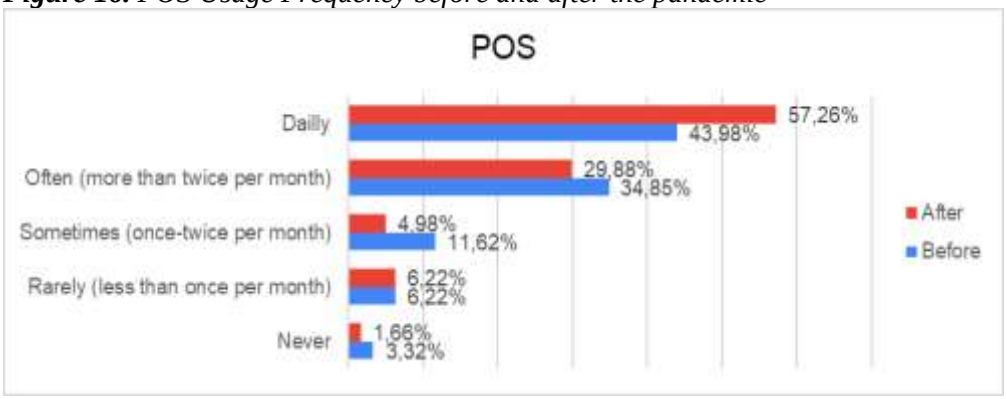


Source: *Own study.*

Regarding ATM there is a notable decrease in the frequency usage located mainly in the "daily" and "often" category; a smaller decrease can also be seen in the "sometimes" group. On the other hand, there is a significant rise in the number of respondents stating that they "rarely" use the ATM and a slight increase in those stating they no longer use the ATM at all.

Concerning the POS, the survey reveals a significant rise in the number of participants declaring that they use it "daily" whereas there are less participants selecting "often" or "sometimes". The "never" group is also smaller.

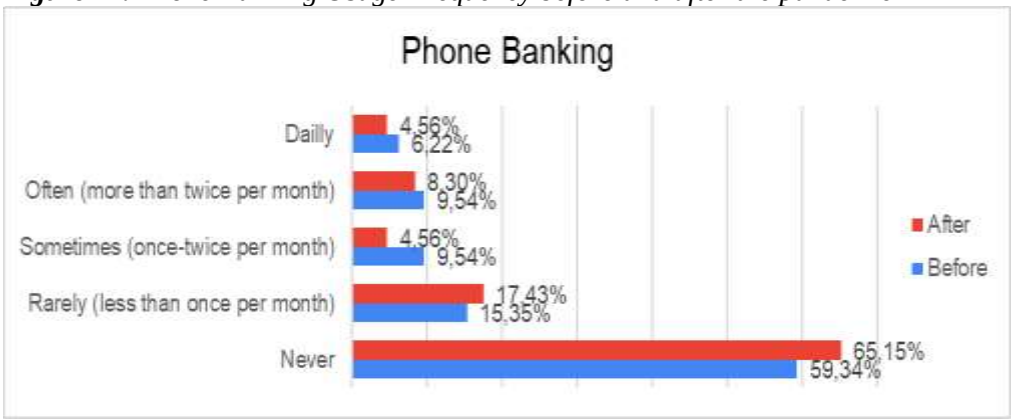
Figure 16. *POS Usage Frequency before and after the pandemic*



Source: *Own study.*

The results about phone banking reveals that more respondents chose "never" or "rarely" with the former showing a larger increase. The "sometimes" group is quite smaller while "often" and "daily" exhibit a minor downward trend.

Figure 17. *Phone Banking Usage Frequency before and after the pandemic*

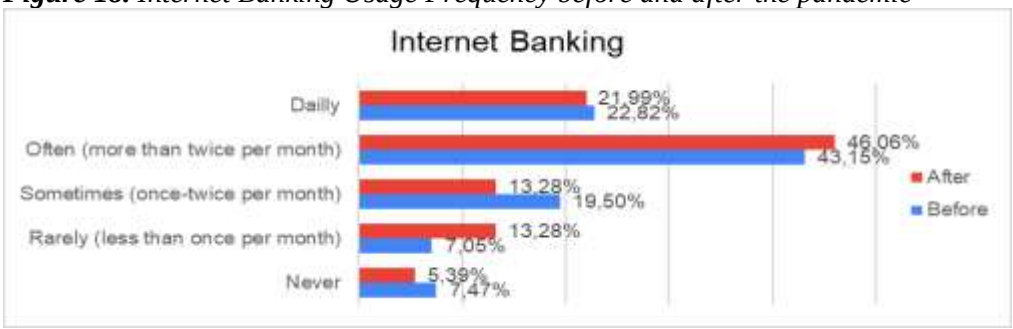


Source: *Own study.*

For internet banking the answers exhibit an increase in respondents selecting "rarely" and "often" whereas the response "sometimes" is diminishing. "Daily" and "never" response also present a small decrease.

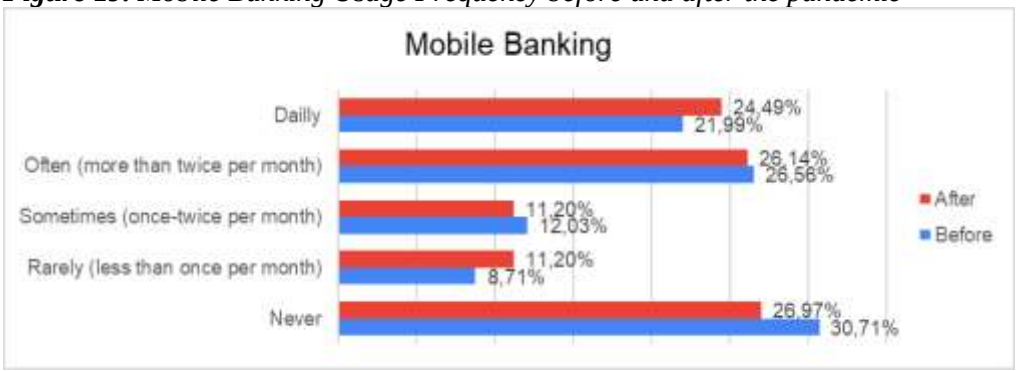
The overall picture for mobile banking is almost invariable with only minor changes. The most notable ones are the decrease of people stating they "never" use it, the increase in those stating they "rarely" use it and the increase in the number of those using it on a "daily" basis.

Figure 18. *Internet Banking Usage Frequency before and after the pandemic*



Source: *Own study.*

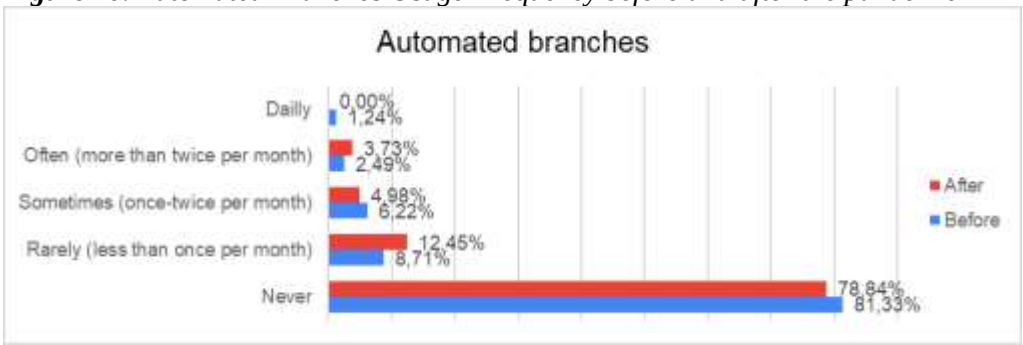
Figure 19. *Mobile Banking Usage Frequency before and after the pandemic*



Source: *Own study.*

Finally with reference to automated branches the responses present only minor differences with the most noteworthy being the rise in the number of people responding “rarely” and the decline in those responding “never”.

Figure 20. *Automated Branches Usage Frequency before and after the pandemic*

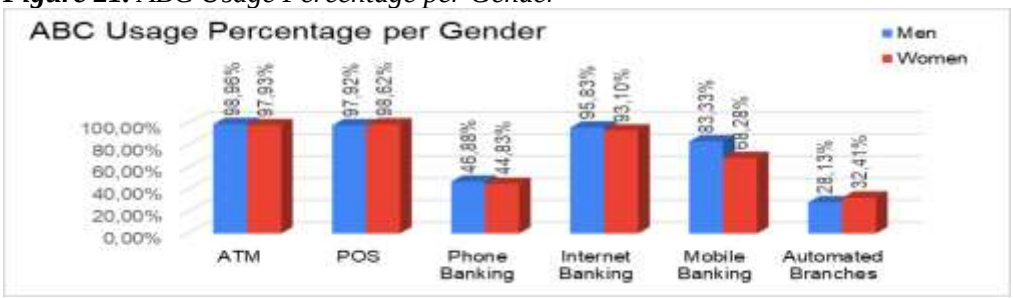


Source: *Own study.*

5.3.1 ABC Usage and Demographics

Concerning gender for most ABCs the percentages are almost identical for both men and women. The only notable exception is mobile banking, where there is a 15% difference with men and women. There is also a small difference of around 4% in automated branches where women have the lead.

Figure 21. *ABC Usage Percentage per Gender*

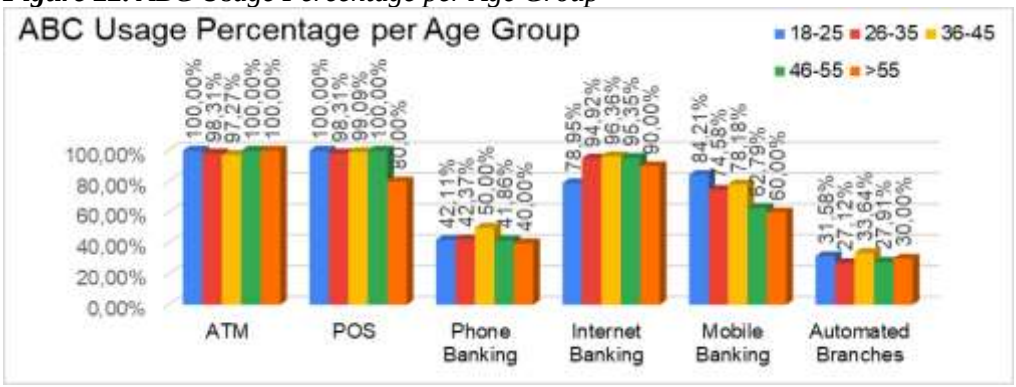


Source: *Own study.*

The data about age reveals differing results for the various ABCs. For the ATM the numbers are practically the same for all ages. The same goes about the POS with the only difference located in the >55 group where the percentage is lower. Phone banking has a percentage circa 40% for all categories except 36-45 where it rises to 50%.

For internet banking all groups have percentages about 90%-95% with the exception of the 18-25 group where the percentage is only about 79%. In mobile banking there are a few differences. The 18-25 group comes first with 84%, 36-45 follows with 78%, then comes 26-35 with 75% and last with percentages around 60 % are 46-55 and >55 categories. Coming to automated branches we observe only some small differences as the percentages for all groups range from 27%-33%.

Figure 22. *ABC Usage Percentage per Age Group*

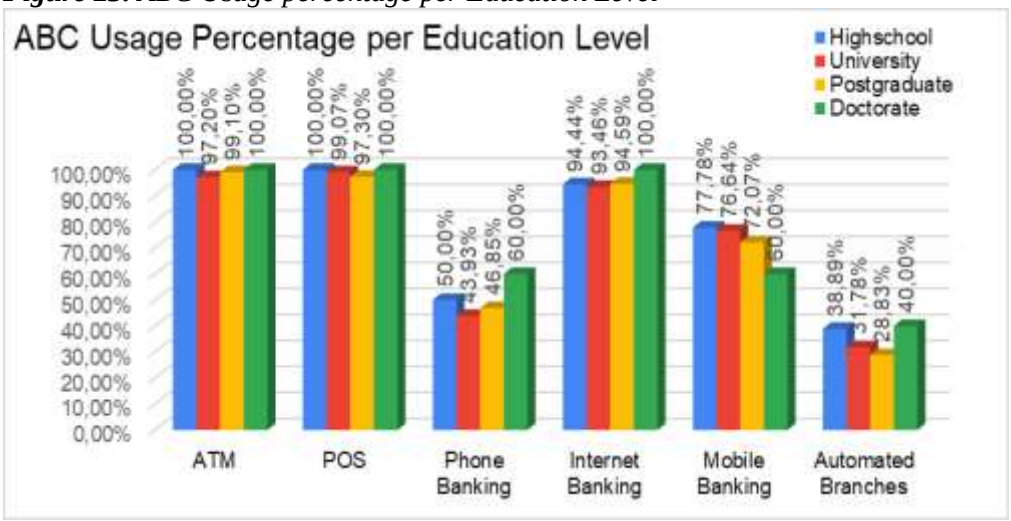


Source: *Own study.*

Concerning education level, for the ATM and POS there are no significant differences between the various groups. For phone banking there are some differences with the doctorate group reaching a percentage of 60%, the high school one following with 50%, postgraduate being at about 47% and lastly university with around 44%. Regarding internet banking the answers reveal similar levels of around 94% for all groups except the doctorate group where all respondents use it.

Mobile banking exhibits somewhat similar levels of usage for high school, university, and postgraduate ranging from roughly 72%-78% while doctorate has a percentage of 60%. The usage of automated branches starts from roughly 29% for postgraduate and reaches 40% for doctorate with university at about 32% and high school at 38%.

Figure 23. *ABC Usage percentage per Education Level*



Source: *Own study.*

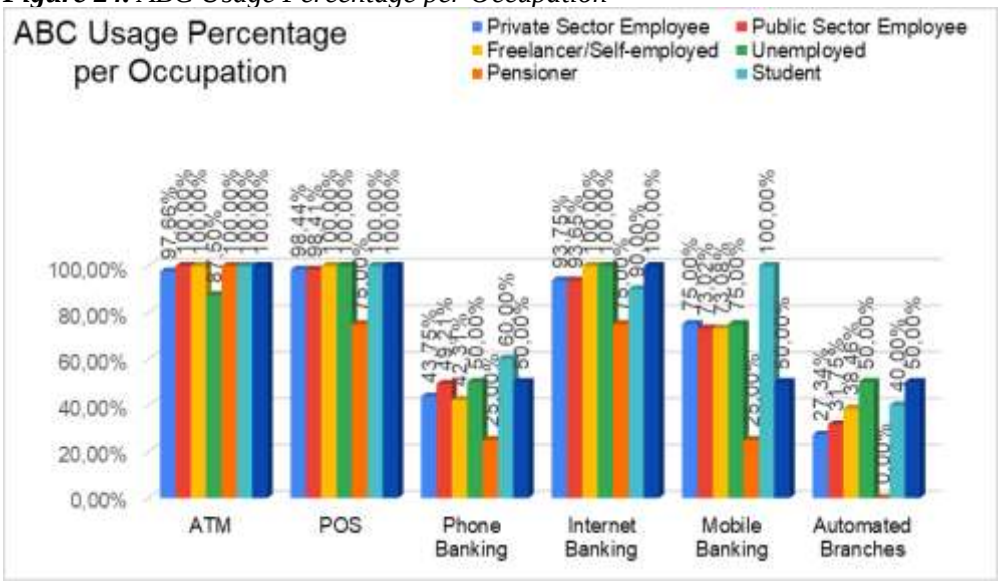
As far as occupation concerns, for the ATM the percentages are all similar for all groups. The data about the POS also shows a usage percentage of almost or equal to 100% for all categories except pensioners that are at 75%. Regarding phone banking most categories fall within the 40%-50% range except for students who climb to 60% and pensioners who fall to 25%. With respect to internet banking all categories have percentages ranging from 90%-100% apart from pensioner who are at 75%.

In mobile banking we find percentages circa 73%-75% for most categories with pensioners being at only 25%, housewife/househusband at 50% and students at 100%. Finally for the automated branches we observe various percentages for the different groups. Unemployed and housewife/househusband both have 50%and from there in declining order come students, freelancers, public sector employees, private sector employees and last pensioners with none selecting automated branches.

5.3.2 ABC Satisfaction per bank

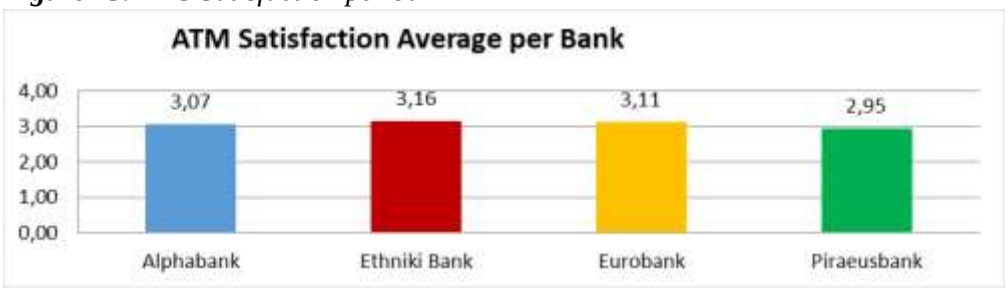
We calculate and compare the average satisfaction for the customers of the four systemic banks for each ABC (Figure 24). The results indicate only minor differences between the four banks.

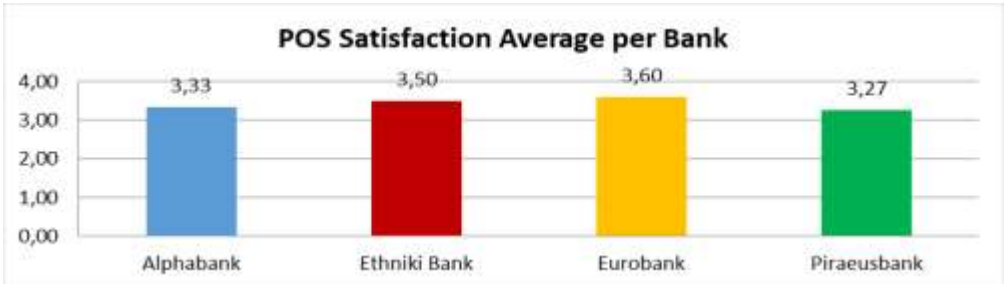
Figure 24. *ABC Usage Percentage per Occupation*

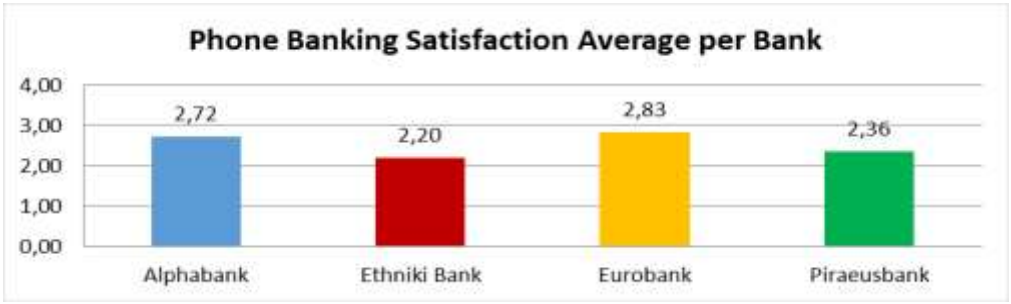


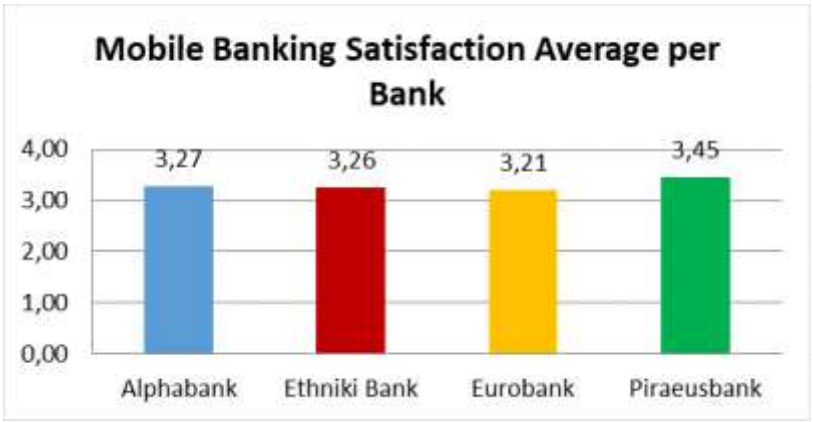
Source: *Own study.*

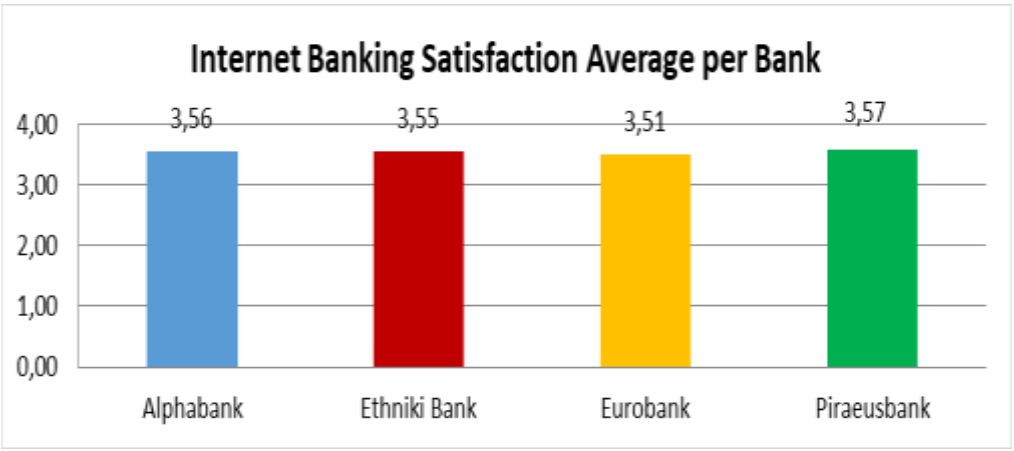
Figure 25. *ABC Satisfaction per bank*











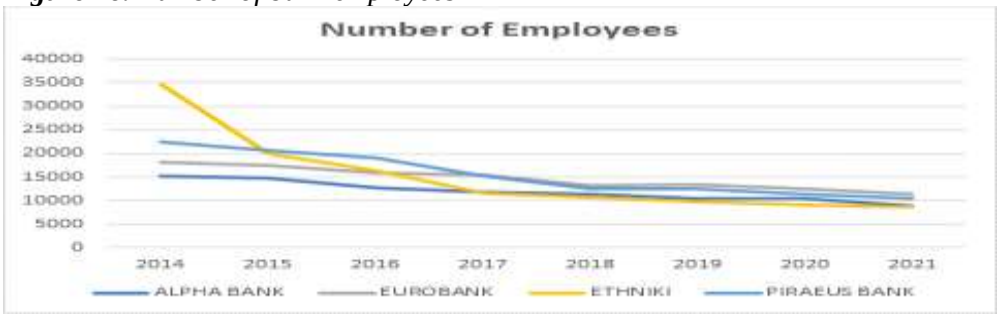
Source: *Own study.*

Regarding automated branches, the results are limited to the two banks that at the time of writing this paper offered such a service. Piraeus Bank has a noticeably higher satisfaction average (2,25) comparing to Ethniki Bank (1,74).

6. Alternative Banking Channels and Operating Results

We analyzed the financial statements of the major Greek banks for the period 2014-2021. The results presented in the following figures indicate that the use of alternative banking channels is associated with significant reductions in operating expenses. In particular, the number of employees has steadily reduced throughout the period 2014-2021.

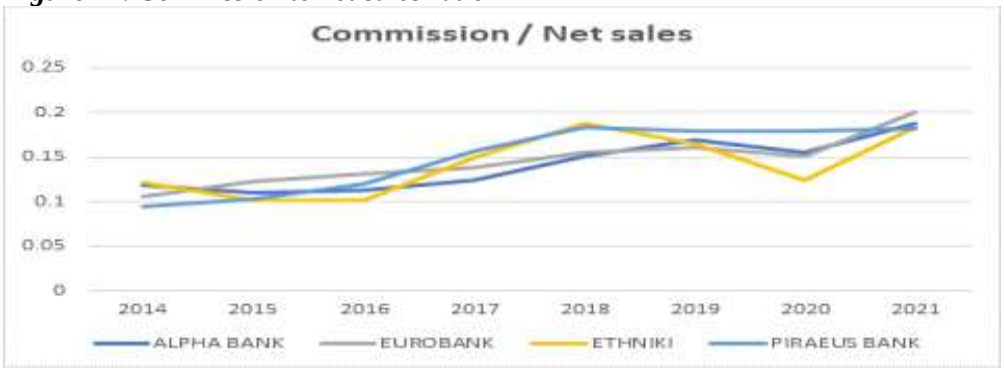
Figure 26. *Number of bank employees*



Source: *Own study.*

Furthermore, operational revenues appear to increase as the use of alternative banking channels expand. In particular, the commission/net sales and commission per employee increase throughout the period 2014-2021.

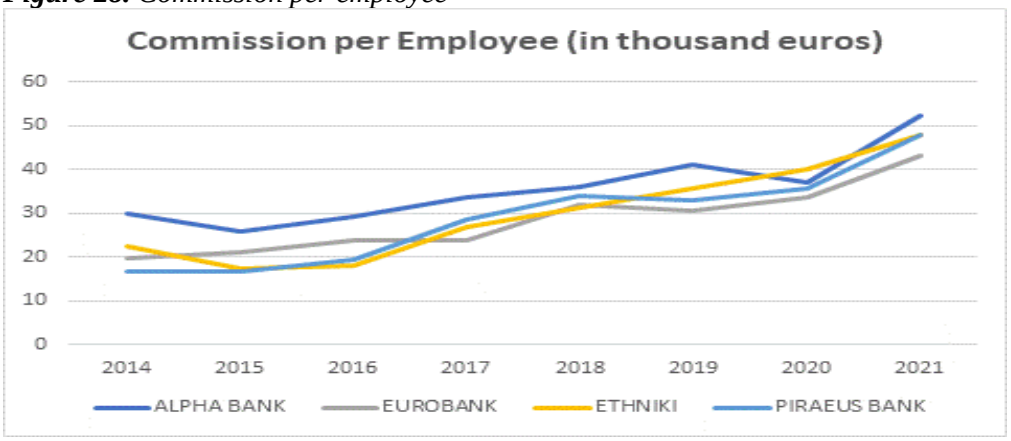
Figure 27. *Commission to net sales ratio*



Source: *Own study.*

These results support Aggelis (2005) and Angelakopoulos and Mihiotis (2011) arguments that the extensive use of ABC could result in significant improvement of banks operating results.

Figure 28. *Commission per employee*



Source: *Own study.*

7. Conclusions

The results of the survey unequivocally confirm that ABCs have become an integral part of the public's everyday life. As far as the advantages of ABCs are concerned the one that seems to stand out the most is 24-hour service (with the natural exception of automated branches that have more limited working hours). Important elements are also convenience/ease of use and speed/time saving. Ease of access also plays a role, especially regarding internet and mobile banking. When it comes to disadvantages security is the major concern. Lack of interpersonal communication is also a problem for some respondents.

The satisfaction level of the participants is quite high reflecting the excellent level of ABC services that the Greek financial institutions provide. Automated branches are the only ABC that struggles to present a favorable image among participants. It is indicative of the generally positive disposition towards ABCs that 97,5% would recommend them to others.

The findings of the survey revealed that the coronavirus had a significant impact on the public's perception and everyday banking habits. A respectable proportion of the respondents first encountered some of the ABCs due to the coronavirus. The usage of ABC does not appear to be significantly associated with gender, occupation, age or education. Respondents do not believe that a single bank has an advantage in all ABCs compared to the rest. These results of the analysis of banks' financial statements indicate that the extensive use of ABC results in significant improvement of banks operating results.

The findings of this study indicate that ABCs' advantages largely outweigh their disadvantages, and this has led to most everyday transactions being conducted through them. This trend will only intensify in the future as the role of the traditional

branch will further diminish (even though it is not going to vanish in the foreseeable future) and this sector will continue to be one of the most challenging areas where new technologies and trends come into the foreground.

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Appendix A: "Questionnaire"
Alternative Banking Channels
Part A – Alternative Banking Channels Usage

1. Which bank's services do you primarily use? (One choice allowed)
   - Ethniki
   - Piraeusbank
   - Alpha Bank
   - Eurobank
   - Other

2. How often do you use alternative banking channels? (One option per row allowed)

	Never	Rarely (less than once per month)	Sometimes (once-twice per month)	Often (more than twice a month)	Daily
ATM					
POS					
Phone banking					
Internet Banking					
Mobile Banking					
Automated Branches					

3. Which are the main alternative banking channels transactions/services you usually use? (Many choices allowed)

   - Balance/Statement (account/card/loan)
   - Cash withdrawal
   - Debit/credit/prepaid card purchases
   - Transfer between my accounts
   - Transfer to third-party accounts
   - Credit card/loan payment
   - Bills/utilities payment
   - New account application
   - Loan/credit card application
   - Card management/pin reissue
   - Investment products management

- Insurance product management

Part B – Alternative Banking Channels Evaluation

4. Which do you consider to be the main advantages of alternative banking channels? (Many choices per row allowed)

	Convenience/Ease of use	Speed/Time saving	Ease of access	Reliability	Security	24hour service	Reduced cost	None
ATM								
POS								
Phone Banking								
Internet Banking								
Mobile Banking								
Automated Branches								

5. Which do you consider to be the main disadvantages of alternative banking channels? (Many choices per row allowed)

	Difficult to use	Ownership of the required equipment	Security	Lack of interpersonal communication	None
ATM					
POS					
Phone Banking					
Internet Banking					
Mobile Banking					
Automated Branches					

6. How satisfied are you from using alternative banking channels? (One choice per row allowed)

	Not at all	A little	Moderately	Very	Extremely	I do not use this channel
ATM						
POS						
Phone Banking						
Internet Banking						
Mobile Banking						
Automated Branches						

7. How much do you believe alternative banking channels improve customer service and experience? (One choice)

    - Not at all
    - A little
    - Moderately
    - A lot
    - Extremely

8. How much do available alternative banking channels and their quality influence you in choosing a bank? (One choice)
    - Not at all
    - A little
    - Moderately
    - A lot
    - Extremely

9. Would you recommend using alternative banking channels to someone?
    - Yes
    - No

Part C – The effect of the coronavirus

10. How much did the coronavirus influence your banking habits? (One choice)

    - Not at all
    - A little
    - Moderately
    - A lot
    - Extremely

11. Was your first contact/registration with the following alternative banking channels due to the coronavirus? (One choice per row)

	Yes	No
ATM		
POS		
Phone banking		
Internet Banking		
Mobile Banking		
Automated Branches		

12. How often did you use alternative banking channels before the pandemic? (One choice per row)

	Never	Rarely (less than once per month)	Sometimes (once-twice per month)	Often (more than twice a month)	Daily

ATM					
POS					
Phone banking					
Internet Banking					
Mobile Banking					
Automated Branches					

Part D – Demographics

13. Gender (One choice)

    - Male
    - Female

14. Age Group (One choice)

    - 18-25
    - 26-35
    - 36-45
    - 46-55
    - >55

15. Education Level (One choice)

    - Primary school
    - Secondary school (gymnasium)
    - Highschool (lyceum)
    - University
    - Postgraduate
    - Doctorate

16. Main occupation (One choice)

    - Private sector employee
    - Public sector employee
    - Freelancer/Self-employed
    - Unemployed
    - Pensioner
    - Student
    - Housewife/Househusband