

ANALYSIS OF THE PRESENCE OF MOBILE PHONE INSURANCE ON THE MONTENEGRIN INSURANCE MARKET

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Abstract: *The modern lifestyle and the accelerated development of information technology lead to the fact that a mobile phone becomes a very important personal item of an individual in the realization of private and professional duties. In this regard, owning a high-quality and expensive mobile phone is a key precondition for a modern lifestyle, but also an indicator of an individual's social status. As according to the requirements of the insured, insurance companies should innovate existing, but also introduce new insurance products, that's why Montenegrin companies came up with the idea of introducing mobile phone insurance, as a type of personal items insurance. In addition to compensation for damage in the event of certain physical damage to the mobile phone, this insurance can also cover the risk of mobile phone theft, misuse, and the like.*

The aim of this paper is to examine the level of development of mobile phone insurance in Montenegro, what are the main characteristics of this product, as well as to evaluate the perspective of its development. For this purpose, a web survey was conducted among the citizens of Montenegro in the period May - September 2023. By analyzing the collected data, information was obtained about the current level of representation of this type of insurance in Montenegro, the motives of the insured for (not)concluding an insurance contract, as well as the process and dynamics of claims settlement based on this type of insurance. Also, by applying the χ^2 test, this paper examines whether there are statistically significant differences in the

insured's motives for (not)concluding an insurance contract, and what role the socio-demographic characteristics of the insured play in this regard. As the same or similar researches have not been done on this topic, especially when consider the market of the Western Balkans, it is clear that this paper has a significant scientific and practical contribution.

Key words: *mobile phone insurance, personal items, damage, insurance market, Montenegro*

JEL classification: *C12, C83, G22*

1. INTRODUCTION

Developed insurance markets offer a diverse range of non-life insurance products predominantly tailored to demand, or the needs of potential insurance users. As people often lose or suffer damage to personal belongings, insurers offer insurance products aimed at providing coverage for the loss or damage of insured's personal belongings in line with their value, such as credit cards, keys, jewelry, phones, and others.

The development of information technologies has led to mobile phones no longer being used solely as a means of communication but also as a tool for learning, payment, i.e., generally for conducting business. It is believed that the mobile phone, or mobile technologies, will be a significant channel for the development of e-commerce in the future, and according to some estimates, will surpass the internet and take over its position as the dominant

business channel for e-commerce. New generations of mobile phones, so-called smartphones, are not only expensive but are also increasingly susceptible to mechanical damage. Some studies have shown that even one out of three people breaks or loses their phone in the first year of use, which has led insurers to introduce a new insurance product - mobile phone insurance. Namely, insurers collaborate with mobile network operators, usually through alternative sales channels such as "Business to Business" sales (B2B sales channel), to market their product to citizens or subscribers of the operators they collaborate with. Through this collaboration model, insurance products are most commonly sold as part of a package with the partner's basic product (mobile phone) or can be additionally contracted. Mobile phone insurance mainly covers one or more accidental damages, losses, technical malfunctions, and theft of the phone, as well as abuse related to any fraudulent use of the lost or stolen device.

Around the world, people are increasingly reliant on their mobile phones. Simultaneously, the threat of cyber attacks is also growing. However, the majority of citizens remain unprotected from the risks of so-called malicious software and/or viruses, as mobile phone insurance protection is mainly limited to covering mechanical damage, i.e., offering what is known as extended warranty for the mobile phone. More precisely, most insurers provide coverage for "traditional risks" related to malfunction, breakage, or theft of the mobile phone. Risks such as misuse of mobile phones, specifically virus attacks manifested through false calls, fraudulent use of e-wallets, etc., are covered by certain insurance companies operating in developed markets. For example, one study showed that in only 6 out of 35 observed countries, there were around 10% of insurance policies providing protection against a single false call, e-wallet use, or virus attack. Virus attacks were covered by only 3% of policies in the observed countries, mainly policies issued in the insurance markets of India and Poland. Protection against false calls or e-wallet use, according to this research, is most prevalent in the United Kingdom.¹

In the market of Montenegro, there are insurance products for mobile phones distributed predominantly through mobile operators. The aim

of this paper is to examine the demand, or the factors influencing demand, and the level of development of mobile phone insurance in Montenegro through the analysis of primary data obtained by surveying Montenegrin citizens. Accordingly, the following research questions and hypothesis are defined:

RQ1: What are the key reasons why citizens of Montenegro do (not) have mobile phone insurance policies?

RQ2: What is the satisfaction of policyholders with the dynamics of claims reimbursement?

H1: There is a significant relationship between the socio-demographic characteristics of respondents (gender, age, education, income, etc.) and their motives for (not) insuring mobile phones.

For this purpose, descriptive statistics and the χ^2 test will be used to confirm/reject the hypothesis.

2. LITERATURE REVIEW

There are very few scientific studies that deal with the specifics of this type of insurance. For example, Prashad et al (2013) emphasize that mobile phones are powerful means of accessing current and potential insurance clients and point out that there are providers offering mobile phone insurance services with added value to make the products tangible and attractive to citizens.² The authors explain that mobile phone insurance can be offered for free when purchasing a phone or must be additionally contracted and paid for. When offering this type of insurance, insurers and operators need to assess the market penetration of the product, the perception and understanding of insurance by potential buyers, and adjust their products accordingly. The authors also believe that in markets with limited experience in mobile phone insurance, loyalty-based schemes should be implemented, including free insurance products embedded in the basic offering of mobile operators. However, as markets grow and customers gain experience with this type of insurance, in addition to free insurance services, customers should be offered the opportunity to purchase additional risk coverage for their phones. Independent mobile phone insurance products, covering various risks paid for by the client, should be most prevalent in markets characterized by a more developed insurance culture. Selling insurance under the brand of a mobile operator builds trust in these insurance products, so using

¹ See more: Finaccord report 2021, https://www.finaccord.com/getattachment/Home/About-Us/Press-Releases/10-8-2021-12-00-00-AM/press_release_global_mobile_phone_insurance_2021.pdf.aspx?lang=en-US

² For example, services such as weather forecasts, various alerts, and information about crop prices and derivatives on the commodity exchange, which clients receive via mobile phones as part of their insurance package.

the operator's brand in the initial stage of market development makes sense from a distribution standpoint. However, insurers should build their own brand, recognizable to clients, enabling the development of other distribution channels, including independent or direct sales of mobile phone insurance.

Wondirad (2020) in his study explores how mobile insurance works and its impact on clients and microfinance institutions (MFIs) in Kenya. The author conducts research and shows that Africa has 600 million mobile subscribers, of which 44 million are insured. The author also concludes that both types of mobile phone insurance products (loyalty-based and paid) are practiced in the Kenyan insurance market and emphasizes that microfinance institutions should partner with mobile network operators, insurers, and other stakeholders to be financially and socially sustainable.

Jovanović (2019) explains in his study that the subject of insurance for portable electronic devices can also be individual devices from different manufacturers, so it is possible that only mobile phones are covered under specific insurance conditions or as part of an insurance program. The author gives an example of the practice of the Bank of Scotland regarding comprehensive insurance for current account holders, which, in addition to travel insurance, sudden vehicle breakdown or household breakdown insurance, also provides coverage for repair or replacement costs of one mobile phone up to £2,000 per claim due to loss, theft, damage, or breakage. The aim of authors of this paper is to point out the possibilities of insuring portable electronic devices, including mobile phones, in Serbia.

According to the author's knowledge, except for the last one mentioned, so far, neither in Montenegro nor in other countries of the Western Balkans, have studies been conducted regarding mobile phones, the risks they are exposed to, insurance methods and distribution, perceptions, and analysis of citizens' needs for this insurance product, etc.

3. MOBILE PHONE INSURANCE IN MONTENEGRO

According to the latest research from the World Economic Forum's Global Competitiveness Index for 2019, Montenegro ranks as high as 4th among 141 observed countries when it comes to the number of active mobile phone subscribers. Specifically, in Montenegro, there are 180 mobile subscriptions per 100 inhabitants. Besides

Montenegro, Lithuania and Russia also dominate among European countries in this indicator. Hong Kong holds the first position with almost 260 active mobile devices per 100 inhabitants, while in the United Arab Emirates, there are twice as many mobile subscriptions as the population. In Ethiopia, only 37 out of 100 inhabitants have at least one mobile phone.³

Looking at the countries in the region, Slovenia, Croatia, and recently Bosnia and Herzegovina, have an average of over 100 active mobile devices per 100 inhabitants. In North Macedonia, Serbia, and Albania, penetration is below 100, meaning that there might still be citizens who do not use mobile phones at all. Both Albania and North Macedonia have experienced a decline in the number of active users. Since the indicator in both countries was above 100 a few years ago, this suggests that some users have gradually stopped the practice of carrying two phones over time.⁴

In Montenegro, phones are primarily insured through mobile operators. For example, the company One, in cooperation with Lovćen Insurance, offers mobile phone insurance to all postpaid users. Users have the option to choose a package that covers accidental physical damage (resulting from falls, impacts, pressure, contact with any type of liquid) and damage caused intentionally by third parties with a police report. There is also an additional package that, in addition to the aforementioned risks, covers most cases of theft (burglary, robbery, pickpocketing - theft from the user's pocket or from the handbag the user is carrying), unauthorized calls after theft within the first 24 hours, and provides extended warranty for one year after the expiration of the warranty for internal damages. Under these conditions, only mobile phones purchased from the One company can be insured, and the insurance policy can be concluded within 7 days from the day of purchase of the device.⁵ According to the General Insurance Terms⁶, this product does not cover aesthetic damages that do not affect the device's performance, deterioration of the battery condition, damages caused by unauthorized servicing, negligence, or illegal behavior while driving by the insured, as well as damages related to additional equipment provided or used with the

³ See more:

https://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport2019.pdf

⁴ See more: www.bankar.me

⁵ See more: <https://1.me/cg/privatni/usluge/osiguranje-telefona/>

⁶ General Insurance Terms for the insurance of mobile electronic devices purchased from the mobile telephony service provider, Lovćen Insurance Podgorica

device. Additionally, theft risk is excluded under these terms if it occurs by leaving the phone unattended in a public place or if the device is simply lost.

The premium amount depends on the type of device and the selected insurance package, and a deductible is also mandatory, which also depends on the insurance package and the value of the phone itself. The Picture 1 shows the premium amounts paid within the defined insurance offer packages.

Telekom Montenegro, in collaboration with Sava Insurance, offers its customers coverage for physical damage to mobile phones due to falls or impacts, as well as coverage for burglary and robbery theft for phones priced over €350. The insurance contract for mobile phones is concluded for a period of 12 or 24 months and includes a deductible franchise. The offer from Sava Insurance Podgorica is provided in Table 1.

Picture 1. Mobile phone insurance's offers, Lovćen Insurance Podgorica

Standard package	
Price of the device: up to 150 EUR Participation in damages: 20.00 EUR	1.99 EUR/month.
Price of the device: up to 300 EUR Participation in damages: 40.00 EUR	2.99 EUR/month.
Price of the device: up to 500.00 EUR Participation in damages: 50.00 EUR	4.99 EUR/month.
Price of the device: up to 1000 EUR Participation in damages: 75.00 EUR	6.99 EUR/month.
Price of the device: up to 2000 EUR Participation in damages: 120 EUR	8.99 EUR/month.
Premium package	
Price of the device: up to 150 EUR Participation in damages: 20.00 EUR	2.49 EUR/month.
Price of the device: up to 300 EUR Participation in damages: 40.00 EUR	3.49 EUR/month.
Price of the device: up to 500.00 EUR Participation in damages: 50.00 EUR	5.99 EUR/month.
Price of the device: up to 1000 EUR Participation in damages: 75.00 EUR	8.99 EUR/month.
Price of the device: up to 2000 EUR Participation in damages: 120 EUR	10.99 EUR/month.

Source:
<https://l.me/cg/privatni/usluge/osiguranje-telefona/>

Table 1. Mobile phone insurance's offer, Sava Insurance Podgorica

Mobile phone price	Amount of franchise	Monthly premium (24 months)
€350-€600	€40	€4
€600,01-€900	€60	€6
Over €900	€100	€10

Source: <https://telekom.me/privatni-korisnici/osiguranje-telefona>

This insurance does not cover damages identical to those provided by Lovćen Insurance. In cases where the phone cannot be repaired or repair is not economically viable, or if the phone is stolen, the insured party is compensated for the total loss amount, with the insured sum reduced for depreciation and the agreed deductible. The monthly depreciation rate is 2% and is not charged for the first 6 months from the purchase of the phone.⁷

4. METHODOLOGY AND DATA

Further analysis in this paper is aimed at examining the prevalence of mobile phone insurance in Montenegro, as well as the motives for (not) concluding insurance contracts, and determining the influence of socio-demographic factors on the decision to (not) conclude a contract. In this regard, a web survey was conducted among citizens of Montenegro from May to September 2023. The survey was structured into three parts: 1) general data about the respondents, 2) questions regarding the characteristics of the policy and the motives driving the policyholders to conclude insurance policies, and 3) questions related to the procedure and dynamics of claims settlement, as well as satisfaction with them. The research included 882 citizens of Montenegro with different socio-demographic characteristics.

To provide answers to the research questions and test the hypotheses, the obtained data were processed using descriptive statistics and the χ^2 test. These two statistical methods, given their characteristics, are fully applicable in this type of research.

Among the respondents, 64.3% were female, while the age group most represented was respondents aged between 25 and 39 years (39,5%). Following them were respondents aged 18 to 24 years (32,3%), while the least represented age group was respondents over 65 years old, comprising only 2% of the total sample. The respondents were predominantly from the central region (69%) and

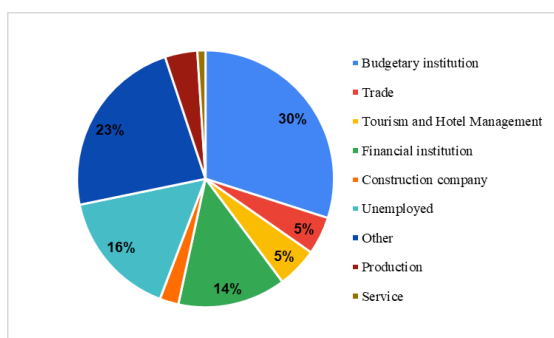
⁷ See more: <https://telekom.me/privatni-korisnici/osiguranje-telefona>

had a high level of education, with 81% of the total number of respondents having a high level of education.

Regarding employment criteria, 81,3% of the respondents were employed, of which 58,4% worked in the public sector.

Employed respondents predominantly worked in budgetary institutions (around 30%), followed by financial institutions (13,6%), and approximately 23% of respondents worked in unspecified sectors, as shown in Graph 1.

Graph 1. Type of institution/company where respondents work



Source: Authors' calculation

The last analyzed criteria were marital status and monthly income. The majority of respondents were not married (55,4%), followed by respondents who were married with children (36,7%). Regarding income, 18% of respondents did not have stable monthly income. The largest percentage of respondents, 40,1%, had income in the range of €450-€700. 29,6% of respondents had income between €700 and €1.000, while over €1.000 per month was received by approximately 12,3% of surveyed citizens of Montenegro.

5. RESULTS

As previously mentioned throughout the paper, answers to the research questions, as well as the decision to accept/reject the hypothesis, will be provided through the application of descriptive statistics and the χ^2 test.

Examining the current level of prevalence of this type of insurance among citizens of Montenegro, the research showed that a staggering 93,9% of respondents do not have mobile phone insurance policies. In terms of gender, 65,2% of respondents without a policy are women, while considering age within this category of respondents (without a policy), the youngest respondents, aged between 18 and 39 years, are the most represented (72,46%). On the other hand, policies are most commonly held by respondents aged 18-24 years and 40-65 years (both at 38,9%).

When considering the reasons why citizens do not have insurance contracts for their mobile phones, the primary reason highlighted is respondents' lack of knowledge of the existence of this type of insurance (69,4%), followed by the fact that 16% of respondents believe they do not need such insurance because they "take pretty good care of their mobile phone." Following these are reasons such as viewing this type of insurance as "a waste of money," and nearly 8% of respondents stating they have a less expensive phone model that does not require insurance.

On the other hand, reasons cited by respondents who have insurance policies include owning an expensive phone, the necessity of this type of insurance due to today's lifestyle, and entering into an insurance contract based on the recommendation of the seller/operator. Predominantly, policies are concluded through operators from whom the phone was purchased.

This also provides an answer to RQ1, which pertains to the reasons for (not) possessing a mobile phone insurance policy.

When considering the satisfaction of policyholders with the dynamics of claim compensation, only 11% of respondents who have a policy experienced some form of damage covered by the insurance contract, half of whom were satisfied with the compensation process and the amount of compensation received. The rest filed a complaint against the decision of the insurance company, which was subsequently upheld by the commission. Due to the small percentage of individuals with mobile phone insurance policies and therefore a small percentage of those who experienced damage, it is difficult to confidently provide a precise answer to the second research question regarding the satisfaction of policyholders with the dynamics of claim compensation. Data from this paper suggests a moderate level of satisfaction among policyholders with the dynamics of claim compensation for mobile phone insurance.

For the statistical analysis of the relationship between decisions to conclude insurance contracts and the socio-demographic characteristics of respondents, the χ^2 test is used. This is a specific type of non-parametric statistical test used when the variables observed are categorical, and it is used to determine the level of independence or agreement between variables. The complete analysis conducted below was performed using the statistical software package SPSS 27. This test was used to test the hypothesis set forth in the paper.

In the first part, it was analyzed the relationship between the decision to possess a mobile phone

insurance policy and various demographic characteristics of respondents. The results summarizing the values of the χ^2 test, along with the corresponding p-values and the appropriate values of the Cramer's V coefficient, are provided in the following table.

Table 2. Determining the connection between the decision to own a policy and socio-demographic characteristics

Variable	χ^2	p-value	Cramer's V
Gender	1,704	0,192	0,076
Age	3,272	0,352	0,105
Region	2,601	0,272	0,094
Education	0,948	0,330	0,057
Employment	0,000	1,000	0,000
Sector	0,944	0,624	0,057
Activity of company	7,103	0,526	0,115
Marital status	3,165	0,367	0,104
Monthly income	12,558	0,014*	0,207*

*level of significance – 5%

Source: Authors' calculation

The first column of the table lists the variables whose values were determined by the survey. The second column provides the values of the χ^2 test, where the coefficient size indicates the differences between expected and observed frequencies. The third column displays the p-values and provides information on whether these differences are statistically significant. Finally, the fourth column contains data on the values of Cramer's V, which measures the strength of association between the corresponding variable from the first column and the variable indicating whether the respondent has a policy or not.

The results from the table indicate that most socio-demographic characteristics do not have a statistically significant relationship with the decision to possess a mobile phone insurance policy, as the p-values are greater than 0,05, except for the variable "monthly income," where the p-value is 0,014, indicating a statistically significant difference. The Cramer's V for monthly income is 0,207, indicating a relatively weak to moderate association between income level and the decision to possess a mobile phone insurance policy.

These results unequivocally suggest that among the examined socio-demographic characteristics, income level may have the greatest influence on the decision to obtain mobile phone insurance. Other characteristics have very weak or no association with this decision.

When considering the potential intention to conclude a policy in the future for those respondents who currently do not have a policy, it is interesting to examine the relationship between socio-economic characteristics and their responses to whether they would conclude a mobile phone insurance policy in the future. In this regard, the following are the results of the χ^2 test and Cramer's V values.

Table 3. Determining the connection between the decision on the intention to conclude a policy and sociodemographic characteristics

Variable	χ^2	p-value	Cramer's V
Gender	7,670	0,053	0,162
Age	5,689	0,771	0,139
Region	6,701	0,349	0,151
Education	1,383	0,709	0,069
Employment	0,414	0,937	0,038
Sector	1,316	0,971	0,067
Activity of company	18,501	0,778	0,251
Marital status	6,103	0,730	0,144
Monthly income	13,784	0,315	0,217

*level of significance – 5%

Source: Authors' calculation

The coefficients in the second and third columns indicate that there is no statistically significant association between any of the identified socio-demographic characteristics and the decision to conclude a policy in the case of current non-possession, not even the amount of monthly income.

Additional analysis has revealed several other interesting results, which are presented in the following table.

Table 4. The connection between knowledge about the risks covered by the policy and other matters of importance for the decision to own the policy

Question 1/ Question 2	Do you know what risks the policy covers?		
	χ^2	p-value	Cramer's V
Do you have a policy?	170,44	0,001	0,781
Are you satisfied with the product?	257,57	0,001	0,936
Are you planning to renew your policy?	253,471	0,001	0,929

Source: Authors' calculation

For instance, when considering the correlation between knowledge about the policy and the decision to conclude it, it can be concluded that there is a strong association between the decision to possess the policy and having information about the risks covered by the policy ($\chi^2 = 170,44$, and Cramer's $V = 0,781$).

Furthermore, there is a correlation between satisfaction with the insurance product and the level of knowledge of the respondents about the coverage of risks by the policy, which supports the argument that awareness and product knowledge are crucial for the decision to purchase insurance policies, highlighting the importance of campaigns for client awareness.

It's also evident from the table that knowledge of risk coverage is associated with plans to renew the policy in the future, further supporting the previous argument.

The results of this research provide a clear insight into the current state and prospects of mobile phone insurance in Montenegro, highlighting the factors influencing individuals' decisions to insure their mobile phones. These results unequivocally demonstrate that awareness of the need for mobile phone insurance is still underdeveloped and largely determined by the amount of monthly income and individuals' awareness of the information about the risks that can be covered by such a policy.

CONCLUSION

Mobile phone insurance is becoming an increasingly important aspect of modern lifestyles, as people frequently rely on expensive phones to fulfill their personal and business obligations. The fast-paced way of life often leads to situations involving loss, damage, or theft of mobile phones, prompting non-life insurance companies to include mobile phone insurance in their offerings.

The aim of this research was to outline the basic characteristics of mobile phone insurance and assess the current state of the market in Montenegro regarding the level of development and prospects of this type of insurance. Based on surveying citizens of Montenegro, the researchers addressed two research questions and tested one hypothesis. The findings indicate that a large number of respondents are unaware of mobile phone insurance, and some believe they carefully safeguard their phones, therefore not needing insurance. The main reasons for not having mobile

phone insurance among citizens of Montenegro are lack of awareness about this insurance product and ignorance of the risks covered by the policy.

Although a small percentage of respondents have mobile phone insurance, they generally acquired it because they own an expensive phone or were persuaded by the phone retailer from whom they purchased the device. Regarding satisfaction with the claims process, the results suggest partial satisfaction, but given the small sample size, this finding should be interpreted with caution.

Testing the hypothesis revealed a statistically significant relationship between income and the decision to (not) purchase insurance, while awareness of mobile phone insurance in Montenegro is still not at an acceptable level and is primarily influenced by monthly income and individuals' knowledge of the risks covered.

This paper provides a significant scientific contribution, complementing existing literature on mobile phone insurance. Additionally, the research findings can be useful for insurance companies in Montenegro to enhance the promotion of this product among citizens and raise awareness of its importance.

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