

MAPPING THE PSYCHOLOGICAL LANDSCAPE OF SOCIAL PREFERENCES AND ATTITUDES TOWARDS VOLUNTARY INSURANCE PRODUCTS IN THE WESTERN BALKAN REGION

Ardita TODRI

Associate Professor, University of Elbasan
ardita.todri@uniel.edu.al

Imelda SEJDINI

Associate Professor, University of Elbasan
imelda.sejdini@uniel.edu.al

Petraq PAPAJORGJI

Professor, Proinfinit Consulting Tirana
petraq@gmail.com

Christos Ap. LADIAS

Professor, Regional Science Inquiry Journal, Greece
Ladias@rsijournal.eu

Abstract

This study investigates the factors affecting demand for voluntary life and non-life insurance in the Western Balkan region, focusing on age and gender preferences. Using the Mind Genomics technology in an online experiment, 2,448 participants from Albania, Bosnia-Herzegovina, Montenegro, North Macedonia, Serbia, and Kosovo provided insights. The research identified four meaningful categories of interest. The most preferred insurance products across all demographics were those for livestock, crops, agricultural tools, machinery, and motor vehicle liability. Additionally, pension plans were noted as promising for retirement income planning. The study suggests that financial institutions should tailor their awareness strategies to these preferences.

Keywords: age, gender, mind genomics, preferential voluntary insurance products, Western Balkan region

JEL classification: C3, G22, G52

1. Introduction

This research paper examines preferred approaches to voluntary insurance portfolio products, focusing on the attitudes of citizens in the Western Balkan region. The goal is to identify opportunities for insurance market growth, considering the significance of primarily voluntary insurance as an essential risk management tool in low-income countries. Therefore, it is crucial to emphasize the importance of financial awareness, particularly in Western Balkan region countries like Albania, Kosovo, North Macedonia, Serbia, Bosnia-Herzegovina, and Montenegro, which lack historical experience in this area. In these countries, increasing financial awareness may boost public understanding of insurance.

During the early 1990s, following their post-communist era, the Western Balkan countries transitioned from centralized economic systems to open markets. Since then, they have experienced significant economic growth, largely driven by the development of their financial sectors. In response to market demands, insurance markets have evolved with mechanisms for transferring risks. Nevertheless, voluntary insurance markets currently face challenges. One primary reason is that the population has become accustomed to social welfare systems in which only state-owned insurance companies operate with limited options, thus monopolizing the market (Sharku and Bajrami 2021).

Over the years, the existing state-owned insurance companies have transferred ownership to new private insurance companies, primarily foreign (Kozarevic et al. 2011; Curak et al. 2009; Tipurić et al. 2008; Pye 2005). As a result of these circumstances, these companies have been required to expand their portfolio. Furthermore, in order to meet the requirements for European Union accession, the Western Balkan countries have implemented

various reforms in several areas. Thus, reforms related to the risk management and regulation of insurance companies were necessary to comply with the Solvency I and II European directives (Linder and Ronkainen 2004). However, despite these interventions, the insurance market remains underdeveloped.

In general, the Western Balkan countries tend to focus more on non-life insurance products (Insurance and Risk Financing Opportunities in Western Balkans 2024 report). These include accident insurance, land vehicle insurance, property insurance against fire and natural disasters, insurance for other types of property damage, and motor vehicle liability insurance. On the other hand, life insurance products such as debtor's life, group life, combined life, travel life, and health plans are less favored. Similarly, cash plans and life with savings are not as popular in these countries.

According to the Insurance and Risk Financing Opportunities in Western Balkans 2024 report, Bosnia-Herzegovina stands out as the Western Balkan country with the highest inclination towards life insurance products, accounting for 37.5% of the market. However, non-life insurance products are more popular in the country, representing 62.5% of the insurance market. Montenegro follows closely behind, with life insurance products making up 19.6% of the market share, while non-life insurance products hold a significant majority at 80.4%. Serbia ranks third in terms of preferences for life insurance products, which only contribute to 11.3% of the overall market share, while non-life insurance dominates with an 88.7% share of the market. In Kosovo, life insurance products account for 9% of the market, while non-life insurance products are preferred and make up 91% of the market. In Albania, life insurance occupies 7.02% of the total market share, with non-life insurance being the most preferred at 92.98%. Among Western Balkans countries, North Macedonia has a lower preference for life insurance products compared to others, representing only 4.43% of the market. Non-life insurance products are the most preferred in North Macedonia, with a significant share of 95.57%.

It is necessary to note that the insurance and finance sector in the region heavily depends on traditional distribution channels, such as agents and intermediaries, for sales and customer acquisition. This approach has hindered the adoption of modern technology and digital marketing methods, which are transforming the global insurance business landscape (Insurance and Risk Financing Opportunities in the Western Balkans 2024). Additionally, there is considerable untapped potential for collaboration between banks and insurance companies, which limits the diversification of financial services and overlooks cross-selling opportunities.

A substantial body of literature exists on the determinants of demand for voluntary life and non-life insurance products (Lin et al. 2017; Elango and Jones 2011; Feyen et al. 2011). Some researchers (Dragota et al. 2015; Dragoş et al. 2020) analyze behavioral factors related to voluntary insurance such as socio-demographic factors, general behavioral factors, specific behavioral factors, as well as insurance knowledge. Other studies focus on buying motives (Url 2017; Tamulienė and Pilipavicius 2017) along with trust and experience.

The main objective of this research study is to further investigate and depict the primary factors that influence the demand for both life and non-life voluntary insurance products, as well as people's preferences towards these products. This study focuses on various aspects of the insurance market in Western Balkan countries and their social preferences for voluntary insurance products. It should be noted that there is no other survey-based study addressing these issues together, making this study unique.

To gain insights into people's minds, a well-known technology called Mind Genomics is employed. Mind Genomics utilizes advanced technologies such as statistical regression models, data mining, and clustering techniques to conduct a multifactorial analysis of numerous factors that impact the decision-making process (Moskowitz et al. 2006; Moskowitz et al. 2012).

Another ultimate objective of this paper is to provide line institutions with valuable insights to consider in the financial awareness process concerning voluntary insurance products, which aim to capitalize on the growing opportunities in the insurance market. The remaining sections of this paper are structured as follows: the methodology section outlines the data utilized for analysis and the scientific approach employed; the results and discussions section presents a comprehensive list of findings derived from this study. Lastly, the

conclusions and policy implications section summarize the key findings obtained from this research.

2. Literature review

Insurance products play a crucial role in transferring financial risk and managing unforeseen events. As a result, the insurance sector is essential for the economic and financial development of countries. Life and non-life insurance products serve individuals, businesses, and the overall economy by offering vital functions. To ensure successful business development in insurance, companies must focus on relevant insured segments and efficiently address their insurance needs and expectations (Kiyak and Pranckevičiūtė 2014). Understanding the insured's preferences, needs, expectations, and behavior in the insurance market allows insurers to make informed decisions, develop effective marketing campaigns, and implement measures to encourage potential customers to choose their company or adjust their behavior according to desired outcomes (Kindurys 2008).

Various studies have reported on the macroeconomic and microeconomic factors that influence insurance decisions (Kurdyś-Kujawska and Sompolska-Rzechuła 2019; Tsendsuren et al. 2018; Dragoş et al. 2020, 2017; Lin et al. 2017; Kiyak and Pranckevičiūtė 2014; Elango and Jones 2011; Feyen et al. 2011; Ulbinaitė 2010). Other research on this topic (Dragoş et al. 2017; Dragota et al. 2015) has delved into the analysis of behavioral factors influencing insurance decisions, including socio-demographic factors, general behavioral factors, specific behavioral factors, and insurance knowledge. This last aspect is crucial as certain insurance products are still not widely utilized. To address this issue, several studies suggest that improving consumer awareness and the quality of employment in the insurance sector is necessary. This can be referred to as "insurance education" (Waseem-Ul-Hameed et al. 2017; Dalkilic and Kirkbesoglu 2015; El Monayeri 2013). Additionally, there are further studies that focus on customer preferences (Tamulienė and Pilipavicius 2017) and the factors influencing buying motives, trust, and experience with voluntary insurance products (Url 2017).

In the case of voluntary non-life insurance products, it has been confirmed that customers tend to favor products recommended by intermediaries such as property and motor vehicle liability insurance (Dominique-Ferreira 2017). Moreover, the Outreville (1996) research suggested that the preference for these types of products can even be influenced by national culture. Another study conducted by Kindurys (2003), found that price is the primary factor driving consumers' demand for voluntary non-life insurance products. However, this trend does not hold true for experienced customers and financial institutions (Pye 2005).

Several studies have been conducted to investigate insured preferences for voluntary life insurance products across different countries. These studies have identified several factors that significantly influence the choices individuals make regarding voluntary life insurance products. These factors include GDP per capita, inflation (actual, anticipated, or feared), the development of the banking sector, institutional indicators (such as investor protection, contract enforcement, and political stability), and dominant religion (Beck and Webb 2003; Outreville 1996; Browne and Kim 1993). Furthermore, researchers have also found that certain variables have a borderline impact on voluntary life insurance products (Poposki et al. 2015). These variables include education level, the old and young dependency ratio (the ratio of the population above the age of 65 or below 15 to the number of persons aged 15 to 64), urbanization rate, size of the social security system, life expectancy, and market structure.

In addition to the usual voluntary life and non-life insurance products, there are other complex insurance products available, such as agricultural and pension funds. It is worth noting that in recent years, farmers and forest business owners have been compelled to insure their agriculture-related activities and crops due to natural disasters, particularly climate-related risks like cyclones, floods, droughts, storms, landslides, and earthquakes. These types of insurance serve as a financial mechanism that aims to cover losses resulting from adverse weather conditions and similar events that are beyond the control of growers. Previous research conducted by Ghalavand et al. (2011) states that the main factors influencing

farmers' preferences for crop insurance are their level of education and business incomes. On the other hand, preferences towards livestock insurance are mainly related to economic cycles (Ghalavand 2005).

Livestock insurance policies in the region are relatively new compared to traditional risk management strategies like hedging, using options, or entering into forwarding fixed or minimum price contracts. These techniques are also unfamiliar to farmers. Tversky and Kahneman (1974) observed that risk-averse farmers are more likely to insure during periods of lower prices rather than for potential gains. They also found that age and experience play a significant role in farmers' preferences toward livestock insurance. Specifically, Mohammed and Ortmann's (2005) study reveals that older and more experienced dairy farmers have less willingness to purchase livestock insurance. Additionally, farmers have utilized voluntary insurance to protect their agricultural assets such as tools, machinery (production equipment, irrigation systems), agricultural buildings, and structures (Rola 2020).

In this context, the insurance preferences of farmers revolve around their aversion to risk. However, several studies (Läpple and Van Rensburg 2011; Mzoughi 2011) provide evidence supporting a positive correlation between farmers' predisposition towards risk tolerance and their adoption of organic farming insurance practices.

Turning to complex insurance products such as pension funds, they are commonly utilized by workers as a means to save money during their working lives and utilize it during retirement. The objective behind these initiatives is to increase income during the final period while maintaining a consistent level of lifetime utility (Van Der Crujisen and Jonker 2019). Similarly, Holt and Laury's study (2002) argues that pension funds are personalized for everyone's pension income based on their current income in order to accurately reflect the trade-offs between risk and return.

State pensions and income taxes play a significant role in influencing pension fund investment decisions (Fischer and Jensen 2015). Thus, the Salminen (1993) study explains that employers have taken the initiative to implement a decentralized pension fund scheme with private insurance companies as carriers.

Furthermore, due to the circumstances arising from the post-COVID-19 pandemic and extensive marketing campaigns, health insurance has recently become the most popular voluntary insurance product. There are two main reasons for its popularity: first, people have varying preferences when it comes to convenience in healthcare consumption; second, private contracts have long-term structures that incentivize individuals to enroll before their risk type is revealed (Polyakova 2016). However, in contrast to these findings, Geruso (2017) demonstrates that older individuals tend to enroll in more comprehensive plans compared to younger individuals with similar healthcare expenditures.

From several points of view, this research is the first attempt to comprehend the main factors that influence the demand for voluntary life and non-life insurance products, as well as people's preferences towards these types of products in the Western Balkans. It investigates demographic factors like gender and age of individuals in or out of the active labor force, with the aim of adopting a comprehensive approach to this subject matter.

3. Methodology

3.1. Participants and Settings

An online survey was sent to 4.200 Western Balkans citizens, with 2.448 citizens agreeing to participate. The majority of participants were female (52.2%) compared to male participants (47.8%). The breakdown of participants by citizenship is as follows: Albanian (ALB, 17.1%), Bosnian (BH, 16.2%), Montenegrin (MNG, 15.8%), Macedonian (NM, 16%), Serbian (SRB, 17.9%), and Kosovo's (KO, 17%).

A diverse team from Western Balkan countries, including Albanians, Bosnians, Montenegrins, Macedonians, Serbians, and Kosovars, consisting of university students (24%), professors (20%), citizens (26%), as well as financial and insurance professionals (30%), were invited to participate in this study, regardless of their use of voluntary insurance products. The age distribution of participants is as follows: 16.2% are aged 18-24, 14.8% are

aged 25-34, 26.8% are aged 35-44, 12.2% are aged 45-54, 15% are aged 55-64, and 15% are aged 65 and above.

3.2. Data

Participants provided some personal data (see Table 1) such as gender, age, and citizenship by answering to four subjects/pillars related to voluntary insurance products preferences' such as: what do you think about buying voluntary insurance?; what kind of voluntary insurance options do you use?; which voluntary insurance policies related to agriculture and livestock are the most preferred?; is it interesting to invest in pension funds?.

The participants are invited to choose from a range of parameters regarding the use of voluntary insurance products, including:

1. Experience and Circumstances Play an Essential Role in Voluntary Insurance;
2. Voluntary Insurance Provides Financial Guarantees;
3. COVID-19 pandemic also affected decisions regarding voluntary insurance;
4. Voluntary Insurance is an Issue of Mentality.

Table 1. Demographic statistics of the study participants

The demographic information of the participants	Gender			Age						Environment			
	Total	Male	Female	18 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65+	Students	Citizens	Professors	Financial and insurance professionals
Base size	2.448	1.170	1.278	396	363	656	301	372	360	581	642	499	726
ALB	420	259	161	70	92	81	86	69	22	85	140	95	100
BH	398	162	236	64	72	78	69	70	45	102	95	120	81
KO	415	182	233	82	29	120	21	74	89	96	102	82	135
MNG	386	224	162	61	41	84	35	89	76	120	71	50	145
NM	392	176	216	78	67	95	29	41	82	91	116	92	93
SRB	437	167	270	41	62	198	61	29	46	87	118	60	172

Source: Mind Genomics experiment data

3.3. Mind Genomics experiment

This research utilizes Mind Genomics, a cutting-edge technology designed to investigate mental processes and individual variations in how people perceive and comprehend complex everyday information (Gofman et al. 2010; Moskowitz et al. 2006). Mind Genomics is a widely recognized statistical tool used for analyzing extensive data sets. This technology, available as a web-based service, employs sophisticated statistical regression models, data mining, and clustering techniques through experimental methods and computational models to assess and elucidate variances in individuals' responses to stimuli (Moskowitz and Gofman 2007; Gofman et al. 2010; Moskowitz et al. 2012; Porretta et al. 2019).

The research context begins with the design of a 4x4 experiment, which involves four study subjects or pillars and four answers that encompass the entire range of potential responses for each pillar. These answers aim to provide a deep understanding of the subject matter, rather than simply being haphazardly compiled (Todri et al. 2020).

The following (see Table 2) are the four pillars of this study: **What is your opinion on purchasing voluntary insurance? What types of voluntary insurance options do you currently utilize? Which voluntary insurance policies related to agriculture and livestock are most preferred? Is investing in pension funds considered interesting?**

Relevant research on the existing literature was undertaken to understand and define the study's pillars. An online survey was distributed to regional colleagues to gather their perspectives and assist in facilitating the survey administration process.

An algorithm was utilized to merge responses into concise vignettes comprising 2, 3, or 4 answers, ensuring no more than one answer from each pillar was included. These vignettes were then presented to respondents for evaluation using a Likert scale ranging from 1 to 9 as it offers a wide range of meaningful evaluations to assess respondents' attitudes, opinions, or perceptions regarding the research topic. Our Likert scale is structured as follows: 1. Strongly Disagree, 2. Disagree, 3. Somewhat Disagree, 4. Neutral, 5. Somewhat Agree, 6. Agree, 7. Strongly Agree, 8. Very Strongly Agree, 9. Extremely Agree. Further, the respondents' data are transformed using the equation relating the presence/absence of the 16 research elements rating, which is expressed as $\text{Transformed Rating} = k_0 + k_1(A1) + k_2(A2) \dots + k_{16}(D4)$, where the independent variables A1-D4 contain the 16 answers. The response transformation process via Mind Genomics technology is performed through complex statistical regression models considering that each respondent evaluates 24 different contexts of the research topic.

In this research study, the results are distributed according to gender, age group, and parameters proposed at the beginning of the study.

Table 2. Mind Genomics experiment pillars

Question 1 – What do you think about buying voluntary insurance?	
A1	I have no information regarding voluntary insurance
A2	I do not see necessary buying voluntary insurance
A3	I have information regarding voluntary insurance
A4	I agree to invest in voluntary insurance
Question 2 – What kind of voluntary insurance options do you use?	
B1	I do not use any kind of voluntary insurance option
B2	I mainly use voluntary motor vehicle liability insurances
B3	I usually use voluntary policies related to health insurance and life
B4	I usually use voluntary policies related to property and accidents
Question 3 – Which voluntary insurance policies related to agriculture and livestock are the most preferred?	
C1	Voluntary insurance policies related to agriculture and livestock are inexistent.
C2	The most preferred voluntary insurance policies are related to agricultural tools and machineries
C3	The most preferred voluntary insurance policies are related to livestock and crops
C4	The most preferred voluntary insurance policies are related to greenhouses and organic farming
Question 4 – Is it interesting to invest in pension funds?	
D1	Investing in pension funds is not interesting as the contribution to it is subject of taxes
D2	Investing in pension plans is interesting as it allows for planning additional income for retirement
D3	Investing in pensions is of interest only for people with higher income
D4	Investing in pension plan is interesting if it is financed by employers

Source: Mind Genomics experiment pillars

4. Results and discussions

Only 70.7% of professionals contacted by e-mail completed the questionnaire.

According to these data, 37.5% of the elements evaluated in this questionnaire were rated 4 (participants agree with AI use in the financial services industry), and the rest of 62.5% were rated 3 (participants are undecided about AI use in the financial services industry; see Table 3).

Mind Genomics offers a coefficient known as an intercept or additive constant. This coefficient represents the level of optimism regarding the experiment's success in the absence of any other information. The findings indicate that 26% of interviewees from the Western Balkans are receptive to voluntary insurance. Additionally, this coefficient is 31% for females compared to 22% for males, suggesting that females are more inclined towards using voluntary insurance products.

In general, the interviewees of both genders belonging to the group from 18 to 65+ have the following evaluation of the pillars of the experiment: the voluntary insurance products related to agriculture and livestock are the most preferred (1.75); the interest to invest in pension funds (1.75); the use of voluntary insurance options (1.5); thinking about buying voluntary insurance (0.25).

Referring to the first pillar, the data show that preferences for voluntary insurance are predominantly related to crops and livestock (valued at 4). Mainly the interviewees' group ages state that they prefer voluntary insurance products related to livestock and crops (C3); they evaluate this item on average at 4. The only interviewees' that have a contrary opinion are those of 25-34 group age (they value this item at -1). Females and males have the same opinion regarding this aspect; females evaluate this item at 5 while males at 4.

Interviewees evaluate at 2 the option the most preferred voluntary insurance policies are related to agricultural tools and machinery (C2). All interviewees, regardless of their age, regarding voluntary insurance prefer products related to agricultural tools and machinery; they evaluate this option on average at 1.66. Females and males share the same opinion regarding this option; females evaluate it at 3 while males at 2.

The study results show that there are interviewees considering inexistant voluntary insurance policies related to livestock and agriculture (C1); they have evaluated this option at 1. The same opinion is shared by group ages 18-24 and those of 35-44; they evaluate this option respectively at 5 and 6. Group ages 25-34 and 45+ do not share the same opinion; they evaluate the same option at -6, -1, -1, and -4, respectively. Males have a favorable opinion on this issue; they evaluate it at 3, while females evaluate it negatively at -1.

Regarding the voluntary insurance products dealing with greenhouses and organic agriculture (C4), both genders have the same indifferent approach and evaluate it at 0.

Furthermore, interviewees consider that the most beneficial aspect of investing in retirement plans is the ability to plan for additional funds (D2) is evaluated at 3. Group ages favoring this opinion are 18-24 and those over 35; they value this item at 2,6,14, and 7, respectively. Meanwhile, group ages 25-34 and over 65 are indifferent as they evaluate it at 0. Females are more favorable to this issue; they evaluate it at 5 while males at 2.

Despite this, interviewees think investing in retirement funds becomes less attractive because it is subject to taxation (D1), this item is evaluated at 2. This opinion is shared by the group ages 45+; they evaluate this item at 6, 7, and 6, respectively. Instead, group ages 18-44 do not consider this issue of any concern; they evaluate this item at -2, -4, and -3, respectively. Females are more attentive to this issue than males; they evaluate this item at 4 while males at 1.

The abovementioned arguments favor the idea that investing in retirement funds primarily benefits people of high income. Thus, the item Investing in pensions is of interest only for people with higher income (D3) is evaluated at 1. However, different groups of interviewees share different opinions regarding this issue. Group ages 18-24, 45-54, and 65+ do not consider that only higher-income people will benefit from investing in private retirement funds; they evaluate this item at -1, -8, and -3, respectively. Meanwhile, group ages 25-44 and 55-64 think the opposite; they evaluate this item at 4, 3, and 1, respectively. Males judge investing in private retirement funds is beneficial only to higher-income people; they evaluate this item at 3. Meanwhile, females share a different opinion; they evaluate this item at -6.

Regarding investing in retirement funds, interviewees think it is an exciting idea if employers finance it; the item Investing in pension plan is interesting if it is financed by employers (D4), is evaluated at 1. Group ages 18-34 and 55-64 years old share the same opinion; they evaluate this item at 3, 7, and 5, respectively. Group ages 35-54 and 65+ do not share this opinion; they evaluate this item at -2, -5, and -3, respectively. Males favor this opinion more; they evaluate it at 2, while females evaluate it at 1.

Referring the issue of voluntary insurance, interviewees consider the most beneficial auto insurance. Thus, the item I mainly use voluntary motor vehicle liability insurances (B2), is evaluated at 3. These products are preferred for group ages 18-24 and 55+; they value it with 15, 9, and 14, respectively. Group ages 25-54 do not share the same opinion; they evaluate it on average at -5. These insurance policies are more preferred by males; they evaluate it at 6 while females at 1.

Part of the interviewees revealed they do not use any voluntary insurance; they evaluated the item I do not use any kind of voluntary insurance option (B1) at 1. Group ages 18-24 and 55+ confirm this conclusion; they evaluate this item at 11, 13, and 6, respectively. Group ages 25-54 do not share the same opinion as they evaluate the same item on average at -8. Males favor this item more than women; males evaluate it at 3 while females at 2.

Interviewees share the opinion that among voluntary-insurance products, they prefer the ones related to health and life. Thus, they evaluate the item I usually use voluntary policies related to health insurance and life (B3) at 1. Group ages 18-24, 35-44, and 55+ use these insurance products; they evaluate it at 6, 2, 1, and 12, respectively. Group ages 25-34 and 45-54 do not appreciate these insurance products; they evaluate this item at -13 and -5, respectively. Males prefer these products and evaluate them at 5, while women do not; their evaluation is -4.

Regarding property-insurance products and those related to accident insurance, both genders are indifferent; they evaluate the item I usually use voluntary policies related to property and accidents (B4) at 0.

The study shows that the least appreciated element is the lack of knowing more about insurance products. Thus, the item I have no information regarding voluntary insurance (A1) is evaluated at -1. Group ages 25-54 and 65+ think information about voluntary insurance products is abundant; they evaluate this item at -12, -1, -3, and -7, respectively. The opposite opinion is shared by group ages 18-24, 55-64; they evaluate this item at 3, and 18, respectively. Males seem to be less informed regarding voluntary-insurance products as they evaluate this item at 4; meanwhile, females evaluate it at -1.

Based on these remarks, interviewees do not consider it necessary to buy voluntary insurance; thus, the item I do not see as necessary for buying voluntary insurance (A2) is evaluated at 2. This opinion is shared by group ages 35-44 and 55+; they evaluate it at 9, 11, and 4, respectively. Group ages 18-24, 25-34, and 45-54 do not share the same opinion; they evaluate this item at -4, -6, and -4, respectively. Females are more reluctant to buy these products; they evaluate it at 3 while males at 2.

In general, interviewees share the opinion that they are knowledgeable about voluntary insurance products. Thus, they evaluate the item I have information regarding voluntary insurance (A3) at 1. Interviewees of all group ages and regardless of gender, believe they are knowledgeable about voluntary insurance products; on average, they evaluate this item at 1.

Meanwhile, some interviewees do not agree to buy voluntary insurance products; they evaluate the item I agree to invest in voluntary insurance (A4) at -1. Group ages 18-34 and 45+ share the same opinion; they evaluate this item on average at -5. Meanwhile, group ages 35-44 are comfortable investing in similar products; they evaluate this item at 4. Females favor investing in such products; they evaluate this item at 4, while males have a different opinion as they evaluate it at -1.

5. Conclusions

This paper provides an analytical overview of the attitudes towards voluntary insurance products in the Western Balkans countries, as investigated through an online experiment called Mind Genomics. Further, the study explores the preferences of citizens in the Western Balkans regarding various voluntary insurance products, considering age and gender. This study indicates that voluntary insurance products are more favored by women (with a base coefficient of 31%) than men (with a base coefficient of 22%) in the Western Balkan region. Furthermore, individuals aged 25-34, 45-54, and those over 65 years old exhibit the highest

demand for voluntary insurance products, with coefficient values estimated at 43, 38 and 34 respectively.

Four categories of people are distinguished in the study based on how they behave regarding insurance. The first category, with a rating of 1.46, includes individuals who see voluntary insurance as a means of financial security, thereby making their decision to purchase voluntary insurance significant. They mainly opt for voluntary motor vehicle liability insurance and prefer policies related to agricultural tools and machinery, livestock, and crops. This mentality is common among males and females of 35-44 years old.

The second category, valued at 1.5, pertains to individuals who consider experience and circumstances crucial in voluntary insurance. They mainly use voluntary motor vehicle liability insurances and policies related to property and accidents. Their most preferred policies are those related to greenhouses and organic farming. They do not find investing in pension funds interesting due to tax implications and believe it is only relevant for people with higher income. However, they express interest in employer-financed pension plans. Individuals with this mindset, are males and females over 55 years old.

The third category, evaluated at 0.42, encompasses individuals who view voluntary insurance as a matter of mentality; they prefer insurance policies related to livestock and crops. This category is predominantly observed among females aged between 45-54 years old.

The fourth category, rated at 1.13, is attributed to individuals who believe that the COVID-19 pandemic has influenced decisions regarding voluntary insurance. Due to lack of detailed information on the subject, they mainly utilize voluntary motor vehicle liability insurances along with health and life insurances. Their most preferred policies are those related to agricultural tools and machinery as well as livestock and crops. This category includes males and females under the age of 34.

Additional findings from this study, regardless of age group, gender, or study parameters reveal that the primary issues identified through interviews are as follows: C3. Livestock and crop-related voluntary insurance policies are the most favored options (4); C2. Agricultural tools and machinery-related voluntary insurance policies are also highly preferred (2); B2. Voluntary motor vehicle liability insurances rank as the top choice among voluntary products (3); D2. Investing in pension plans is deemed interesting due to its ability to provide additional income during retirement (3); D1. However, investing in pension funds is considered unattractive because contributions to it are subject to taxes (2); A2. Some individuals do not perceive purchasing voluntary insurance as necessary (2).

The first two findings, regardless of the age of the interviewees' group, confirm that the primary needs of Western Balkan countries regarding voluntary insurance products are focused on the agriculture sector. This sector is crucial for their developing economies. Consequently, in order to support agriculture and livestock and establish a sustainable business strategy, insurance companies should pay attention to these customer preferences as well as their buying motives. It is important to offer more affordable voluntary insurance products suitable in terms of price to businesses operating in Western Balkan countries that are exposed to climate-related risks. At the same time, there is an increasing need for education among farmers and entrepreneurs on this matter since these products can be complex.

The third finding reveals that among younger (18-24) and older (over 55) age groups, voluntary motor vehicle liability insurance remains the most preferred non-life insurance product. Individuals in these ages use this type of insurance as a fundamental risk transfer tool, as well as an obligation stemming from financial contracts with banks and other financial institutions.

In light of this, it is important to emphasize that debtor customers and non-debtor customers should be offered customized voluntary insurance policies. These policies are not required to be the same for both groups. Moreover, when calculating the risk premium for motor vehicle liability insurances, it is crucial to consider the accident rate.

Moreover, with a strong focus on securing their future, citizens of the Western Balkans believe that investing in the pension fund is attractive regardless of their age. However, individuals aged 18-44 express concern over the fact that expenses related to pensions are not tax-deductible. To address this issue, it is crucial to implement an effective pension reform in

collaboration with fiscal reforms. Additionally, exploring a comprehensive tax-deduction mechanism to offset premium costs and other insurance expenses can not only incentivize potential buyers but also foster growth in the insurance market.

The last, but not least important, point to consider is that interviewees, specifically those within certain age groups such as 18-34 and 45-54 years old, believe that purchasing voluntary insurance products is unnecessary. One possible explanation for the lack of interest in buying insurance could be a severe lack of trust in the insurance industry. In the case of healthcare insurance, the historical context of the Western Balkan countries, which were part of the communist bloc, plays a significant role. In these countries, healthcare was offered for free, and this tradition still persists in most of them. However, when consumers remain skeptical about insurance products and services, it becomes challenging to foster market development.

Thus, it is suggested that the need for insurance education may be connected to various factors, including the customers' and employees' lack of knowledge in the insurance sector and the requirement for a more proactive marketing campaign regarding financial awareness. By providing adequate education, individuals can become more informed and discerning, leading to a healthier competitive environment. Consequently, there should be a focus on offering distinctive voluntary insurance products at reasonable prices to cater to different age groups and professions.

Furthermore, the legal, regulatory, and institutional framework pertaining to insurance in the Western Balkans needs to be revised simultaneously with the aim of providing a substantial boost to the business climate. Specifically, to foster sustainable market growth, it is crucial to prioritize the adoption of technology and digital marketing strategies. This approach intends to enhance efficiency and decrease costs while also exploring collaboration opportunities between banks and insurance companies. Such synergies will better cater to customer needs and promote overall efficiency within the insurance industry.

This study has a limited scope as it only considers the gender and age of the interviewees, without evaluating other factors such as level of education, profession, and citizenship. Follow-up research can take these factors into account in the second round of study results.

Meanwhile future research may also focus on investigating the psychological landscape involved in the expansion of insurance offerings to include products such as area yield index insurance, multi-peril crop insurance (MPCI), business interruption insurance, environmental impairment liability insurance, micro-insurance, parametric insurance, and political risk insurance. These offerings promise opportunities for the development of the insurance and financial markets in the Western Balkans.

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