

# Hofstede's cultural dimensions impact on the insurance demand

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**Abstract.** Factors determining the demand for insurance have been the subject of many studies, which covered different types of insurance, impact of numerous factors on the demand for insurance products as well as consumer behaviours. One of the factors researched were the cultural dimensions, however, the results achieved in the studies conducted till now are very diverse, what is directly the motivation for this research. The aim of this current study is to verify the relationship between culture and insurance demand based on data from selected European countries. As variables in the models Hofstede's cultural dimensions indices (an certain aspect of culture that could be measured and thus determine the position of a given culture in relation to others) as well as insurance density (total premiums per inhabitant in EUR) in constant exchange rates have been used. The research was conducted on secondary data taken from the Insurance Europe website (2004-2020) as well as geerthofstede.com. The assessment of the occurrence of a relationship between culture and insurance was conducted for various types of insurance: all insurance, life insurance, property and casualty insurance (P&C) insurance, motor insurance, property insurance, general liability insurance and health insurance for 28 countries. Research confirmed the lack or a very weak relationship between most of the Hofstede's cultural dimensions and the demand for insurance, except indulgence dimension. For this factor relationship with insurance density turned out to be significant, what is important not only from a methodological point of view (little interest in this indicator in the literature) but also from the business perspective (e.g. marketing communication).

**Keywords:** insurance, demand, Hofstede's cultural dimensions

**JEL:** G22, G40

**Streszczenie.** Czynniki determinujące popyt na ubezpieczenia były przedmiotem wielu badań, które obejmowały różne rodzaje ubezpieczeń, wpływ wielu czynników na popyt na produkty ubezpieczeniowe oraz zachowania konsumentów. Jednym z badanych czynników były wymiary kulturowe, jednak wyniki uzyskiwane w badaniach są bardzo zróżnicowane, co stało bezpośrednią motywacją niniejszej pracy. Celem badania jest weryfikacja zależności między kulturą a popytem na ubezpieczenia na podstawie danych z wybranych krajów europejskich. Jako zmienne w modelach przyjęto wskaźniki wymiarów kulturowych Hofstede (pewien aspekt kultury, który można zmierzyć i tym samym określić pozycję danej kultury w stosunku do innych) oraz gęstość ubezpieczeń (składki ogółem na mieszkańca) w stałych

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kursach walutowych używany. Badania przeprowadzono na danych wtórnych zaczerpniętych z serwisu Insurance Europe (2004-2020) oraz geerthofstede.com. Badanie relacji między kulturą a popytem na ubezpieczenia przeprowadzono dla różnych rodzajów ubezpieczeń: ubezpieczeń ogółem, ubezpieczeń na życie, ubezpieczeń majątkowych i osobowych, komunikacyjnych, odpowiedzialności cywilnej i zdrowotnych dla 28 krajów. Badania potwierdziły brak lub bardzo słaby związek między większością wymiarów kulturowych Hofstede a popytem na ubezpieczenia, z wyjątkiem wymiaru określanego jako Powściągliwość. Dla tego wymiaru kultury związek z popytem na ubezpieczenia okazał się istotny, co jest znaczące nie tylko z metodologicznego punktu widzenia (małe zainteresowanie tym wskaźnikiem w literaturze), ale także z perspektywy biznesowej (np. komunikacja marketingowa).

**Słowa kluczowe:** ubezpieczenia, popyt, wymiary kultury Hofstede

## 1. Introduction

Culture plays an important role in all spheres of human life. No wonder that economic analysis more often takes into account cultural factors that play a role in business, economics finance, and management (Kostro, 2009). Although it is becoming more and more common to state that the role of cultural factors in economic processes will decrease as globalization gains momentum, this role will not be completely marginalized. Despite the convergence of the economic environments around the world, based on the emergence of a universal system of values, beliefs, and attitudes, cultural differences will continue to exist (Kostro, 2009).

One of the breakthroughs in the study of culture was the Geert Hofstede's cultural dimensions theory, presented, among others, in Hofstede (1983, 1995, 2001). This concept was established as a framework for cross-cultural communication and it shows the effects of a society's culture on the values of its members, and how these values relate to behaviour, using factor analysis (Hofstede, 1983, 1995, 2001). Hofstede included six key aspects of national culture country comparison scales (Hofstede, 2001): the power distance index (PDI), individualism vs. collectivism (IDV), masculinity versus femininity (MAS), uncertainty avoidance index (UAI), long-term orientation versus short term normative orientation (LTO) and indulgence versus restraint (IVR). The creation of cultural indexes made it relatively easy to incorporate cultural factors into management, economic and finance research, including insurance.

Although since Hofstede's (1995) publication in the Geneva Papers on Risk and Insurance, which opened the door to research about the influence of cultural factors on the insurance market (Outreville, 2013), many widely cited papers have been published (Park et al., 2002; Park and Lemaire, 2011a i b; Chui and Kwok, 2009; Treerattanapun, 2011), it is surprising that this subject has remained unexplored for a long time (Outreville, 2013). Furthermore, the results achieved in research work are very diverse, which is directly the motivation of this research.

The aim of this study is to verify the relationship between culture and insurance demand based on data from selected European countries. As variables in the models, Hofstede's cultural dimensions indices as well as insurance density (total premiums per inhabitant in EUR) in constant exchange rates have been used. The relationship between culture and insurance was studied for various types of insurance: all insurance, life insurance, property and casualty insurance (hereinafter referred as P&C insurance), motor insurance, property insurance, general liability insurance and health insurance.

## 2. Hofstede's cultural dimension

The cultural dimensions theory was formulated in 1980 by Dutch management expert Geert Hofstede (Hofstede, 2001). Hofstede's cultural dimensions were first identified through a sizable study carried out throughout the 1960s and 1970s that looked at value variations among various divisions of IBM, a worldwide manufacturer of computers (Hofstede, 2001).

Over 100,000 workers from 50 different nations participated in this survey across three business areas of the firm. Individualism and collectivism, power distance, uncertainty avoidance, and masculinity and femininity were the first four value dimensions that Hofstede defined using a particular statistical technique known as factor analysis. Long-term or short-term orientation was fifth dimension later discovered by Chinese sociologists in their investigation (Bond, 1991). Finally, a replication of Hofstede's research carried out in 93 different nations, established the validity of the five dimensions and discovered a sixth, referred to as indulgence and restraint (Hofstede, 2001). The dimensions of culture according to Hofstede are briefly characterized in the table 1. The exact method of each cultural index calculation can be found on the website [geerthofstede.com](http://geerthofstede.com), in sections: "values survey module 2013" and "research and values survey module", where detailed manuals and methodological notes are presented (Hofstede, 2013).

**Table 1.** Hofstede's cultural dimensions definitions

Dimension	Definition
Power distance index (PDI)	"The extent to which the less powerful members of organizations and institutions (like the family) accept and expect that power is distributed unequally" is how the power gap index is defined. A higher Index score means that society's hierarchy is undeniably established and followed without hesitation or justification. A lower Index value indicates that individuals challenge authority and want to share power.
Individualism vs. collectivism (IDV):	This index investigates how well members of a society are incorporated into organizations. Individualistic cultures tend to have weak relationships that frequently only connect a person to his or her immediate family. Instead of emphasizing "us," they focus on "I." Its opposite, collectivism, defines a society where closely interwoven ties arrange people into in-groups, including extended families. These in-groups have an undeniable bond of loyalty and stand by one another when there is an issue with another in-group.

Dimension	Definition
Uncertainty avoidance (UAI)	The uncertainty avoidance index is referred to as "a society's tolerance for ambiguity," and it measures how willingly or reluctantly individuals accept or avoid an occurrence that is unexpected, uncharted, or inconsistent with the status quo. Societies with high scores on this index tend to have strict rules of conduct, regulations, and a general belief in absolute truth, or the idea that there is one single truth that governs everything and that everyone is aware of it. A lower score on this metric indicates a greater tolerance for opposing viewpoints. The environment is more free-flowing, ambiguity is more common, and society tends to put few restrictions.
Masculinity vs. femininity (MAS)	Men are classified as being masculine if they "prefer achievement, heroism, aggressiveness, and pecuniary incentives for success in society." A propensity for collaboration, modesty, helping the weak, and quality of life is represented by its opposite. Women tend to exhibit distinct ideals in their respective communities. They hold the same humble and compassionate ideals as males in feminine civilizations. Women are relatively forceful and competitive in society that values masculinity, but far less so than males. They still acknowledge the discrepancy between male and female values, in other words. In communities that are predominately masculine, this component is typically seen as forbidden.
Long-term orientation vs. short-term orientation (LTO)	This dimension links the relationship between the past and present-day actions and obstacles. A lesser degree of this indicator (short-term) suggests that constancy is prized while customs are respected and upheld. Societies that score highly on this measure (over the long term) see adaptability and pragmatic, contextual problem-solving as essential. While long-term-oriented nations continue to rise to a level of wealth, short-term-oriented impoverished nations often have little or no economic progress.
Indulgence vs. restraint (IND)	This dimension is the extent to which societal standards permit persons to pursue their human aspirations. According to the definition of indulgence, it is "a culture that permits virtually unrestricted satisfaction of fundamental and normal human wants to be connected to enjoying life and having pleasure." Its opposite is described as "a society that controls gratification of needs and regulates it by means of strict social norms".

Source: own study based on Hofstede (2001).

Hofstede's cultural dimensions model became one of the most widely referenced books in the social sciences after its 1980 publishing (Green, 2016). The theory has sparked a great deal of empirical research over the past 40 years, broadening the field of study from pure psychology to many other areas. It is a challenging endeavour to examine the Hofstede model's use and effects because of how extensively it has been applied. Some studies have examined the use and impact of the Hofstede's cultural model within the context of this research stream in order to recommend future research options (Beugelsdijk et al., 2017; Kirkman et al., 2006; Taras et al., 2010).

It is worth noting, however, that there is a noticeable variability in terms of researchers' interest shown in each of Hofstede's dimensions. The literature review indicates that the power distance, individualism and masculinity cultural dimensions are underrepresented relative to the remaining values. However, according to the table below, the indulgence dimension has been the least occurring theme in Hofstede-inspired research (Leonavičiene and Burinskiene, 2022). Although the table 2 concerns research on internationalization (Leonavičiene and Burinskiene, 2022), it provides an interesting view of the popularity of each cultural dimension among researchers.

**Table 2.** The number of Hofstede's cultural dimensions research

Year	Literature on cultural aspects (number of papers)	Hofstede's cultural dimensions					
		Power distance	Individualism	Masculinity	Uncertainty avoidance	Long-term orientation	Indulgence
1994-1998	360	2	3	0	6	10	0
1999-2003	487	2	2	1	103	141	3
2004-2008	1 790	7	7	3	245	453	2
2009-2013	2 040	40	58	4	287	843	3
2014-2018	3 870	7	79	4	329	656	3
2019-2021	3 600	8	8	4	333	676	4
<b>Total</b>	<b>12 147</b>	<b>66</b>	<b>157</b>	<b>16</b>	<b>1303</b>	<b>2779</b>	<b>15</b>

Source: Leonaviciene and Burinskiene (2022).

Research shows that since the initial publishing of Hofstede's theory in 1980, cultural dimensions framework has been incorporated in more than 1000 studies (Bradley 2006, Zhou et al., 2020). Authors of the meta-analysis of Hofstede-related inquiries indicate that the publications primarily cover psychology, sociology, and general social sciences field therefore there is a theoretical and application gap in the context of Hofstede-inspired research in the economy and insurance sector (Zhou et al., 2020). This paper addresses not only this application gap but also focuses on the least covered cultural dimension (indulgence).

The table 3 provides an exhaustive literature review of Hofstede-inspired research in the following areas: “change management, HRM, leadership & entrepreneurship, work-related attitudes, negotiation, reward allocation Group processes and personality, Entry modes, Foreign direct investment, Joint venture characteristics and performance, Innovation and research and development, Societal outcomes (e.g., wealth, national accounting systems, number of intellectual property violations) & insurance” (Kirkman et al., 2006). A literature review devoted specifically to the area of insurance is presented in chapter 3 of the paper.

**Table 3.** The summary of covered subjects in Hofstede's cultural dimensions research papers

Covered subject	Available research
Change management	Seidenfuss (2022), Firican (2022)
Human resource management	Newman and Nollen (1996), Roth and O'Donnell (1996), Ryan et al. (1999)
Leadership & Entrepreneurship	Offerman and Hellmann (1997), Thomas and Mueller (2000)
Work-related attitudes	Schneider and DeMeyer (1991), Van de Vliert and Van Yperen (1996), Peterson and Smith (1997), Robie et al. (1998), Gong et al. (2001),
Negotiation	Smith et al. (1998), Shen (2022)
Group processes and personality	Krug and Nigh (1998), Oyserman et al. (2002)

Covered subject	Available research
Entry modes	Kogut and Singh (1988), Erramilli (1991), Kim and Hwang (1992), Shane (1992), Shane (1994), Erramilli (1996), Pan (1996), Anand and Delios (1997), Erramilli et al. (1997), Barkema and Vermeulen (1998), Hennart and Larimo (1998), Arora and Fosfuri (2000), Brouthers and Brouthers (2000), Brouthers and Brouthers (2001), Chang and Rosenzweig (2001), Harzing (2002), Erramilli et al. (2002), Pan (2002), Nachum (2003)
Foreign direct investment	Benito and Gripsrud (1992), Li and Guisinger (1992), Loree and Guisinger (1995), Kallunki et al. (2001), Habib and Zurawicki (2002), Andrianova (2022)
Joint venture characteristics and performance	Li and Guisinger (1991), Datta and Puia (1995), Barkema et al. (1996), Barkema et al. (1997), Barkema and Vermeulen (1997), Gomez-Mejia and Palich (1997), Park and Ungson (1997), Morosini et al. (1998), Glaister and Buckley (1999), Luo and Peng (1999), Merchant and Schendel (2000), Hakanson and Nobel (2001), Luo (2001a), Luo (2001b), Luo and Park (2001), Luo et al. (2001), Reuer (2001), Pothukuchi et al. (2002)
Innovation and research and development	Shane et al. (1995), Richards and De Carolis (2003),
Societal outcomes (e.g., wealth, national accounting systems, number of intellectual property violations	Franke et al. (1991), Diener and Diener (1995), Diener et al. (1995), Diener et al. (2000), Salter and Niswander (1995), Riahi-Belkaoui (1998), Husted (1999),
Insurance	Park et al. (2002), Park and Lemaire, (2011a i b), Chui and Kwok (2009), Treerattanapun (2011)

Source: own study based on Kirkman et al. (2006); Outreville (2013); Leonaviciene and Burinskiene, (2022).

### 3. Cultural factors determining the demand for insurance – literature review

Due to the role of insurance in the economy, factors influencing the demand for insurance have been the subject of many studies. These factors were analysed across different perspectives such as geographical, social or economic and were also considered because of their impact on the different types of insurance, including life and non-life insurance. The multitude of studies and publications has also resulted in the availability of several studies that summarize the results of other studies, such authors as: Jaspersen (2016), Zietz (2003), or Śliwiński (2016, 2019). These publications point to the role and importance of cultural factors in the demand for insurance.

The most important ones include publications indicated in the Introduction (Park et al., 2002; Park and Lemaire, 2011a and 2011b ; Chui and Kwok, 2009; Treerattanapun, 2011). A study published by Park et al. (2002) was one of the first to examine the relationship between culture and insurance pervasiveness across countries. Using data from a representative sample of 37 countries across the globe, the authors of the aforementioned paper found that certain cultural and socio-political variables can significantly influence the level of insurance pervasiveness. Specifically, it turned out that MAS Hofstede's dimension of national culture had statistically significant effects (among other variables such as aggregate income, socio-political stability, and government regulation (Park et al., 2002).

A classic research position in the field of the impact of culture on the demand for insurance is also papers published by Park and Lemaire (2011a i b). In the first paper Park and Lemaire (2011a) used regression techniques to an unbalanced panel data set of 68 countries observed over a ten-year period, to explore the factors that affect non-life insurance demand. Park and Lemaire (2011a) discovered that non-life insurance consumption is adversely impacted in countries where a large fraction of the population has Islamic beliefs. Moreover, three of Hofstede's dimensions turned out to be statistically significant: PDI, IDV and UAI (Park and Lemaire, 2011a). Another important finding from Park and Lemaire (2011a) is that culture impacts non-life insurance more in affluent countries, with an adjusted R-square coefficient increasing by 11.7%, than in developing countries where the R-square coefficient increase due to cultural impacts is only 1.2%. These results have implications for multinational insurers seeking to enter a new market (Park and Lemaire, 2011a). *Ceteris paribus*, these insurers should target locations, and population segments within these countries, that exhibit low Power Distance, and high Individualism and Uncertainty Avoidance scores (Park and Lemaire, 2011a).

In the second paper Park and Lemaire (2011b) extend Chui and Kwok's work (2009) by analysing the fifth Hofstede's cultural dimension: LTO. After building a database that includes values of 17 variables for 27 countries over a period of 9 years, they apply an unbalanced panel GLS regression model to prove that LTO has a strong positive influence on life insurance demand (Park and Lemaire, 2011b), which confirmed several robustness tests.

The study from Chui and Kwok (2009) has also of great importance for the analysis of the impact of culture on the demand for insurance. This was cross-disciplinary research that examined how national culture and cultural practices affect cross-country variations in life insurance consumption (Chui and Kwok, 2009). Chui and Kwok (2009) use the refined measure of the GLOBE project which includes several additional cultural dimensions not included in Hofstede's analysis as the proxy for national culture dimensions. Using 1966–2004 data across thirty-eight countries, Chui and Kwok (2009) analysis reveal a strong relationship between life insurance consumption and the practice scores of in-group collectivism (IDV) as well as PDI. Chui and Kwok (2009) discovered a strong relationship between cultural variables and the insurance demand continues to hold, even after controlling for other country-level variables such as national income, expected inflation rate, banking sector development, investor protection index, dependency ratio, life expectancy and religion.

One of the recent research that investigates the impact of culture on non-life insurance consumption is a paper published by Treerattanapun (2011). Various economic institutional, and cultural variables regarding 82 countries across a 10-year period were considered to build the best and most parsimonious regression model. The research found that nations with a low degree of PDI level, a high level of IDV, and a high degree of UAI tend to have a high level of non-life insurance consumption (Treerattanapun, 2011). The empirical results suggest that consumers may respond to insurance solicitations according to their cultural beliefs, not only economic rationality (Treerattanapun, 2011).

A summary of the cited studies below provides a summary of which Hofstede's dimensions of culture turned out to be significant.

**Table 4.** Selected research papers on the impact of the Hofstede's cultural dimensions influence for insurance demand

Author	Key conclusions (significant Hofstede's cultural dimensions)
Park et al. (2002)	MAS
Chui and Kwok (2009)	PDI, IDV
Park and Lemaire (2011a; 2011b)	PDI, IDV, UAI, LTO
Treerattanapun (2011)	PDI, IDV, UAI

Source: own study.

It is worth emphasizing that the IDV dimension is underrepresented in the literature not only pertaining to the subject of insurance but also in general (as presented in Table 2).

Finally, it is also worth emphasizing not only the diversity of results, emerging from the table above, but also the fact that the researchers did not always receive the same results. As is demonstrated in the publication by Esho et al. (2004), who highlight that the demand for property–liability insurance is not significantly affected by cultural factors. Therefore, Hofstede cultural dimensions' impact on insurance demand remains unexplored (Outreville, 2013).

## 4. Research method

In order to conduce the empirical part of this study, widely available secondary data have been used. Hofstede's cultural dimensions indices come from the website dedicated to this project<sup>1</sup> and insurance density (EUR, total premiums per inhabitant) in constant exchange come from Insurance Europe<sup>2</sup>. The data used to prepare the regression models are presented in the tables 5 and 6. The study was based on statistics from 28 countries from 2004-2020.

<sup>1</sup> <https://geerthofstede.com/research-and-vsm/dimension-data-matrix/>, available as at: 25.01.2023.

<sup>2</sup> <https://www.insuranceeurope.eu/>, available as at: 25.01.2023.



**Table 5.** Hofstede's cultural dimensions indices

Country	Hofstede's cultural value dimensions					
	PDI	IDV	MAS	UAI	LTO	IND
Austria	11	55	79	70	60	63
Belgium	65	75	54	94	82	57
Bulgaria	70	30	40	85	69	16
Croatia	73	33	40	80	58	33
Czech Rep	57	58	57	74	70	29
Denmark	18	74	16	23	35	70
Estonia	40	60	30	60	82	16
Finland	33	63	26	59	38	57
France	68	71	43	86	63	48
Germany	35	67	66	65	83	40
Great Britain	35	89	66	35	51	69
Greece	60	35	57	112	45	50
Hungary	46	80	88	82	58	31
Ireland	28	70	68	35	24	65
Italy	50	76	70	75	61	30
Latvia	44	70	9	63	69	13
Malta	56	59	47	96	47	66
Netherlands	38	80	14	53	67	68
Norway	31	69	8	50	35	55
Poland	68	60	64	93	38	29
Portugal	63	27	31	104	28	33
Romania	90	30	42	90	52	20
Slovak Rep	104	52	110	51	77	28
Slovenia	71	27	19	88	49	48
Sweden	31	71	5	29	53	78
Switzerland	34	68	70	58	74	66
Turkey	66	37	45	85	46	49
<b>AVG</b>	<b>51</b>	<b>59</b>	<b>47</b>	<b>70</b>	<b>56</b>	<b>45</b>

Source: own study based on <https://geerthofstede.com/research-and-vsm/>, available as at: 25.01.2023.

**Table 6.** Average insurance density per inhabitant from 2004-2020 (EUR, constant exchange rates)

Country	Average insurance density per inhabitant from 2004-2020 (EUR, constant exchange rates)						
	All insurance	Life insurance	P&C insurance	Motor insurance	Property insurance	General liability (GL) insurance	Health insurance
Austria	1955.54	770.69	1048.56	360.51	295.49	89.06	211.63
Belgium	2575.67	1656.48	703.40	315.79	230.19	67.67	268.08
Bulgaria	125.29	18.48	107.44	76.17	17.76	2.43	3.35
Croatia	287.92	80.35	192.51	108.28	39.50	9.81	15.05
Czech Rep	540.86	217.39	297.48	151.11	83.98	26.86	19.15
Denmark	4344.33	3038.19	1270.94	322.23	417.72	68.44	47.11
Estonia	252.66	64.59	187.19	116.29	48.22	5.57	5.39
Finland	3733.93	2987.38	650.40	264.13	160.84	37.31	106.36
France	3109.79	2011.15	917.92	295.88	229.02	90.71	207.36
Germany	2198.85	1070.10	707.75	287.87	206.36	88.51	421.02
Great Britain	3697.87	2568.31	1092.60	265.39	267.74	150.12	86.09
Greece	399.54	189.13	204.19	122.50	28.77	7.67	7.45
Hungary	252.25	124.15	126.08	62.38	44.88	6.12	2.36
Ireland	4121.12	3612.84	706.02	323.75	211.73	113.83	517.36
Italy	2375.79	1703.31	650.86	324.83	90.07	58.53	38.29
Latvia	198.59	39.14	133.00	73.72	23.14	4.81	30.53
Malta	1194.12	752.95	381.54	197.99	77.27	24.74	66.67
Netherlands	4375.54	1163.78	2143.32	264.25	204.89	62.67	2223.19
Norway	2275.84	1479.19	840.93	342.52	313.27	26.67	111.75
Poland	264.47	111.00	151.63	89.82	28.66	9.17	2.93
Portugal	1242.25	806.70	378.62	155.26	69.95	9.94	105.47
Romania	80.59	13.72	63.93	46.72	10.26	2.03	2.90
Slovak Rep	335.07	186.29	177.97	110.67	42.89	11.26	14.59
Slovenia	959.79	271.46	594.60	246.01	105.77	25.60	219.46

Country	Average insurance density per inhabitant from 2004-2020 (EUR, constant exchange rates)						
	All insurance	Life insurance	P&C insurance	Motor insurance	Property insurance	General liability (GL) insurance	Health insurance
Sweden	2660.47	1916.70	630.27	220.49	278.30	29.74	143.97
Switzerland	6452.57	3525.51	2644.90	659.54	455.79	228.45	1051.12
Turkey	49.26	6.64	35.37	18.86	9.24	1.06	5.65
<b>AVG</b>	<b>1 854</b>	<b>1 125</b>	<b>631</b>	<b>216</b>	<b>148</b>	<b>47</b>	<b>220</b>

Source: own study based on <https://www.insuranceeurope.eu/statistics>, available as at: 25.01.2023.

In the next step, regression models were built between the explained variable (insurance density (total premiums per inhabitant) for all insurance, life insurance, P&C insurance, motor insurance, property insurance, general liability insurance and health insurance) and the explanatory variable (all Hofstede's cultural dimensions indices: PDI, IDV, MAS, UAI, LTO, IND). This is how 42 econometric models were created. However, importantly, the indices describing the dimensions of the Hofstede's cultural dimensions cannot be considered individually, but only when compared to a selected point of reference (e.g. another country). That is why the final form of the estimated models can be presented according to the formula (1) below:

$$\ln (density_{i,j} / density_i) = A_i * \ln (HOF_{i,j} / HOF_i) + C \quad (1)$$

where:

$density_{i,j}$  – density for i-type of insurance,

$j$  – country,

$HOF_{i,j}$  – Hofstede's index value for i-dimension and j- country,

$A_i$  (for i-th dimension),

$C$  – estimated model parameters.

In the next step, the estimation of econometric models has been done, where all Hofstede's cultural dimensions indices (PDI, IDV, MAS, UAI, LTO, IND) were analysed in the first iteration for each type of insurance, and then statistically insignificant variables were removed. In other words, equation (2) as presented below were estimated:

$$\ln (density_{i,j} / density_i) = \sum_{i=1}^6 A_i * \ln (HOF_{i,j} / HOF_i) \quad (2)$$

where:

$density_{i,j}$  – density for i-type of insurance,

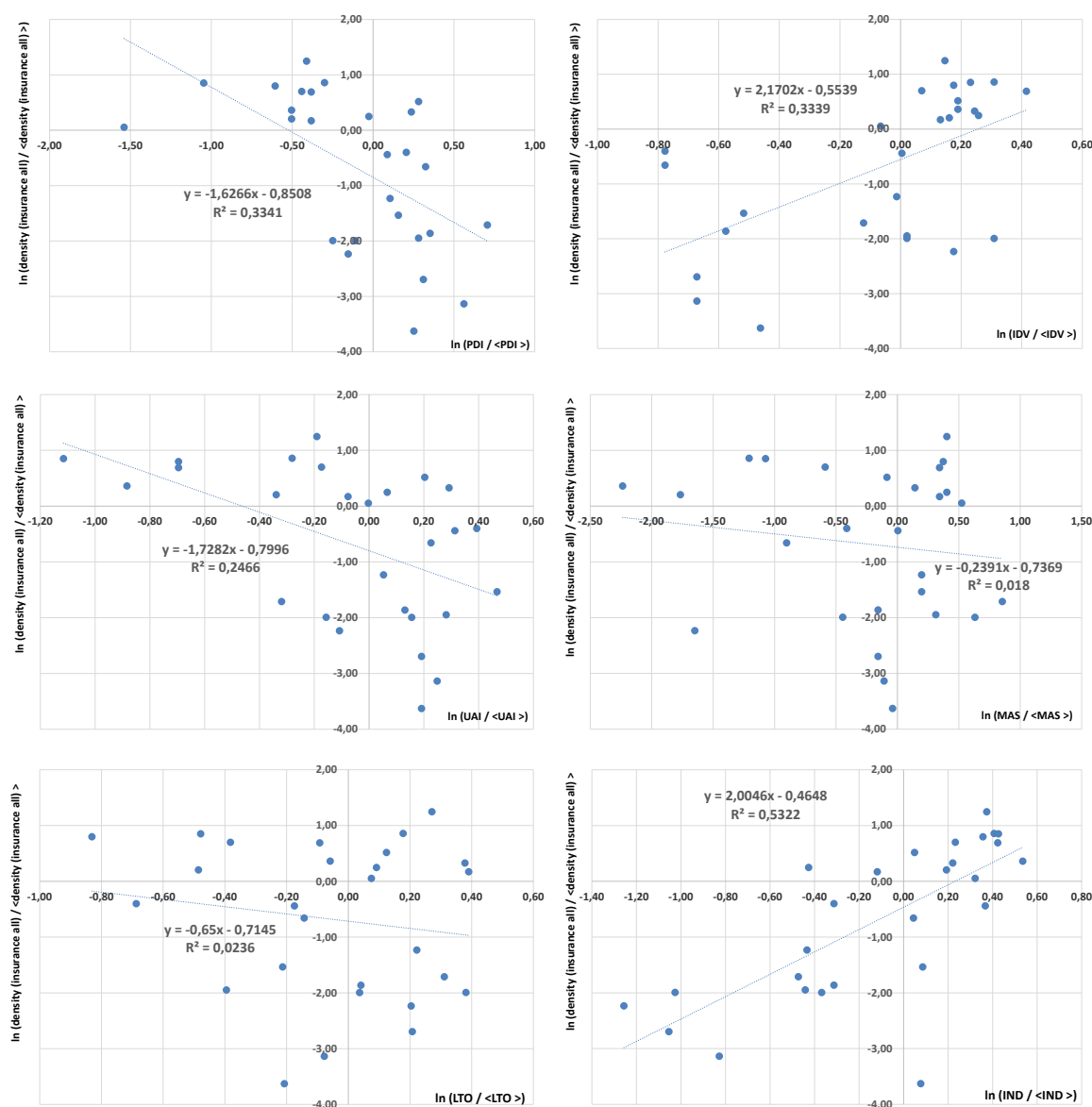
$j$  – country,

$HOF_{i,j}$  – Hofstede’s index value for i-dimension,  
 $j$  – country,  
 $A_i$  (for i-th dimension) – estimated model parameters.

## 5. Results and discussion

The results of the research carried out in accordance with the procedure described in section 4 for all insurance are presented in the Figure 1.

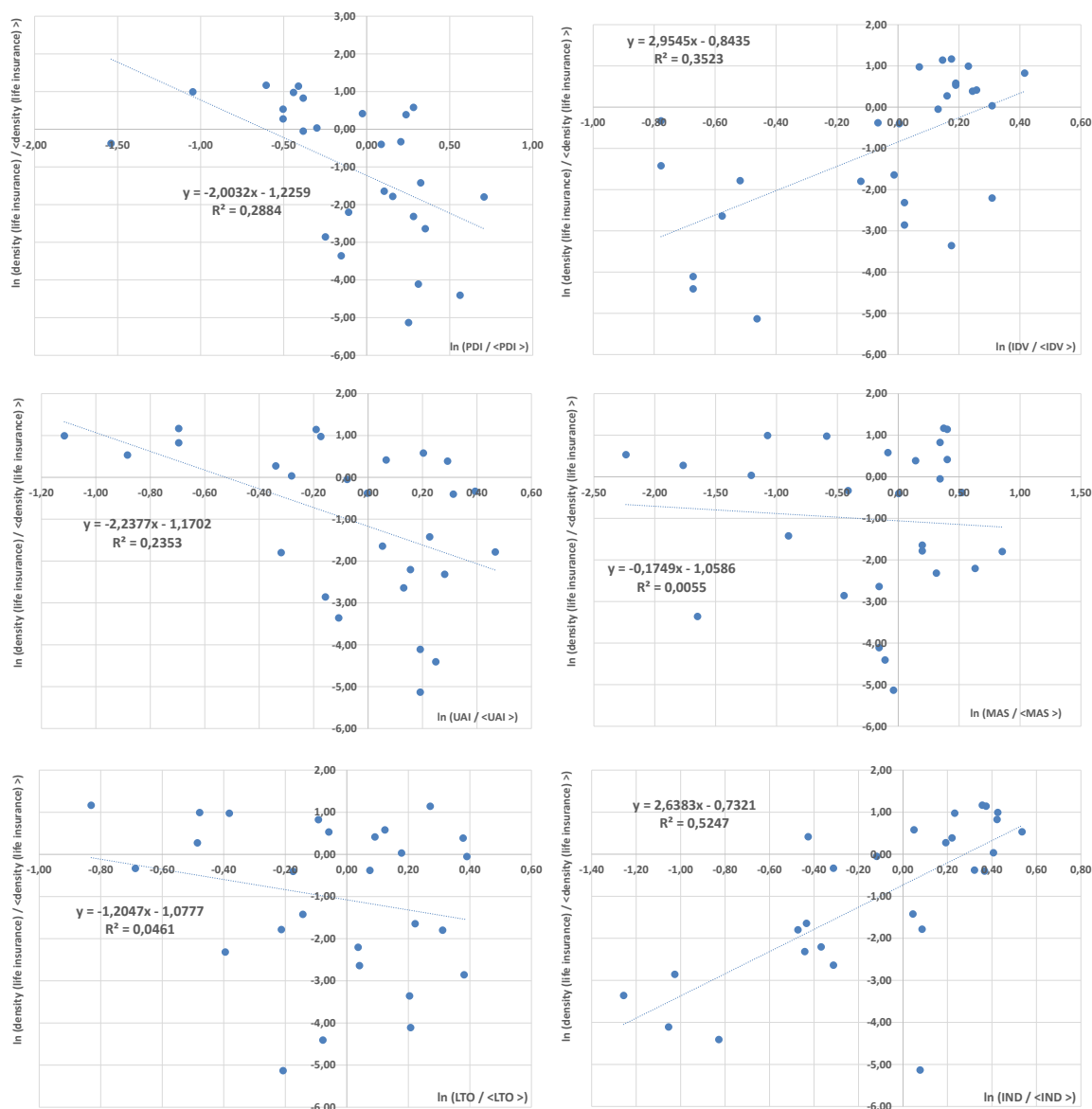
**Figure 1.** Results of linear regression models for all insurance density in EUR, constant exchange rates



Source: own study based on data from Table 5 and Table 6.

The results of the research carried out in accordance with the procedure described in section 4 for life insurance are presented in the Figure 2.

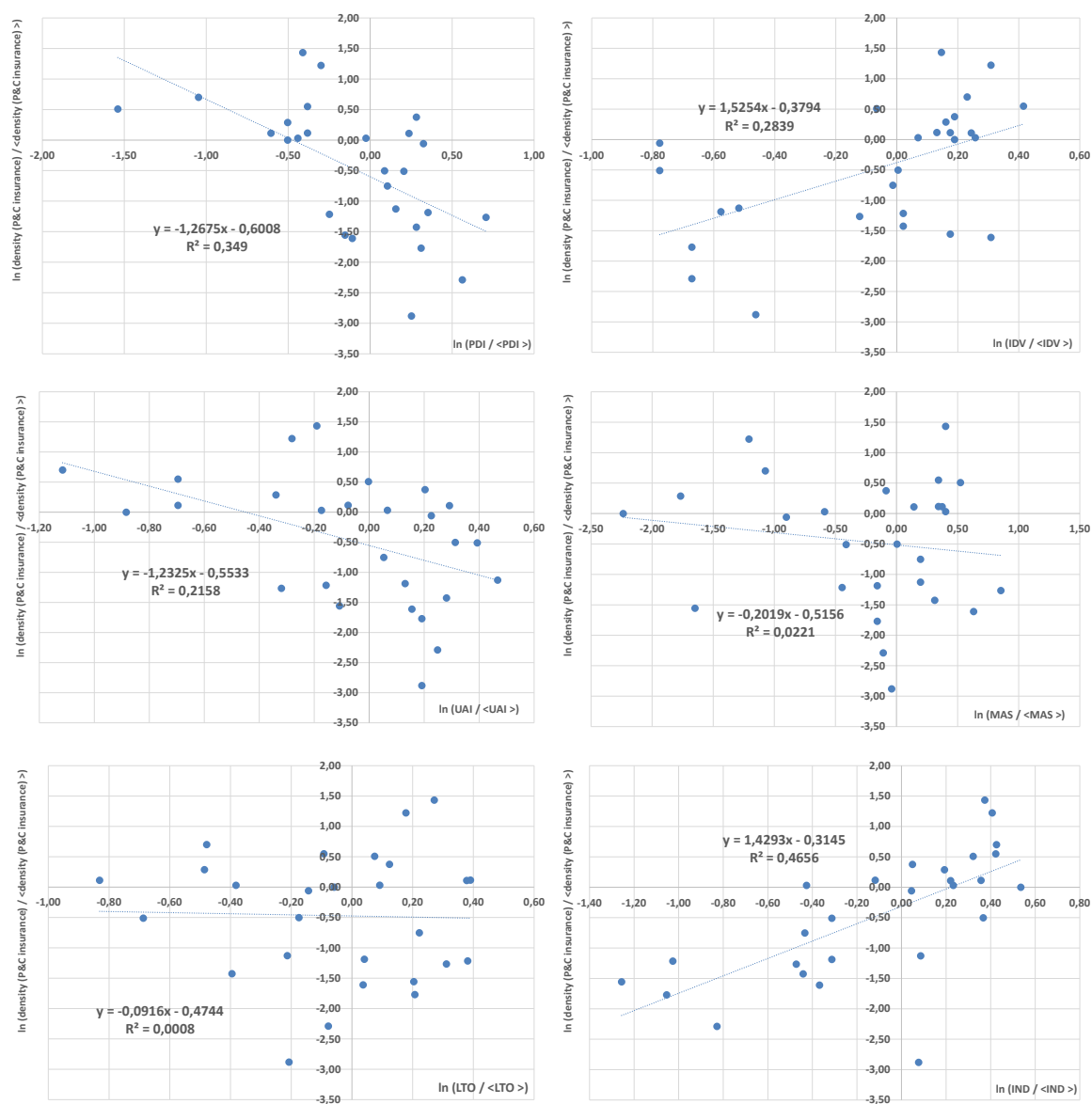
**Figure 2.** Results of linear regression models for life insurance density in EUR, constant exchange rates



Source: own study based on data from Table 5 and Table 6.

The results of the research carried out in accordance with the procedure described in section 4 for P&C insurance are presented in the Figure 3.

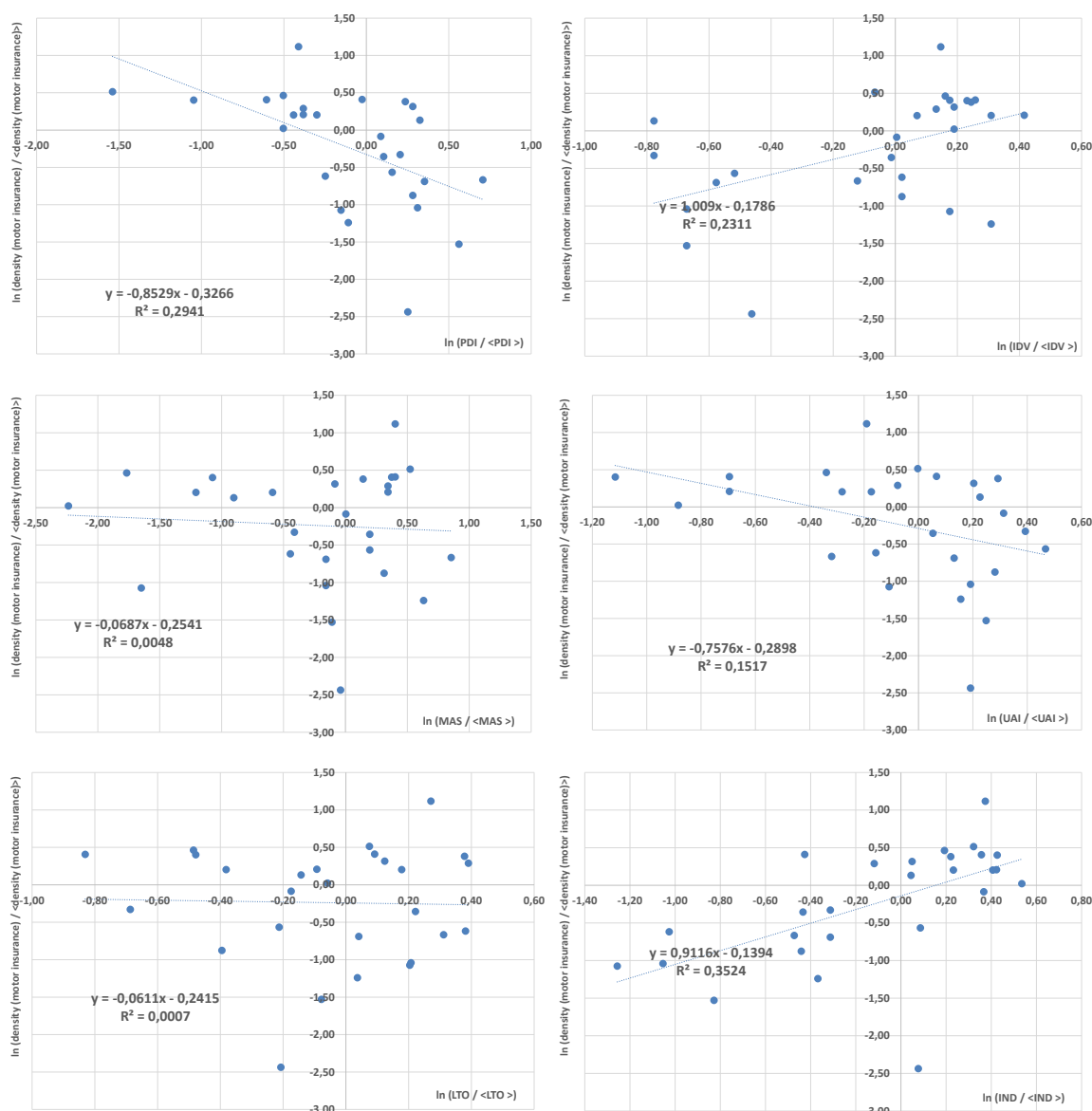
**Figure 3.** Results of linear regression models for P&C insurance density in EUR, constant exchange rates



Source: own study based on data from Table 5 and Table 6.

The results of the research carried out in accordance with the procedure described in section 4 for motor insurance are presented in the Figure 4.

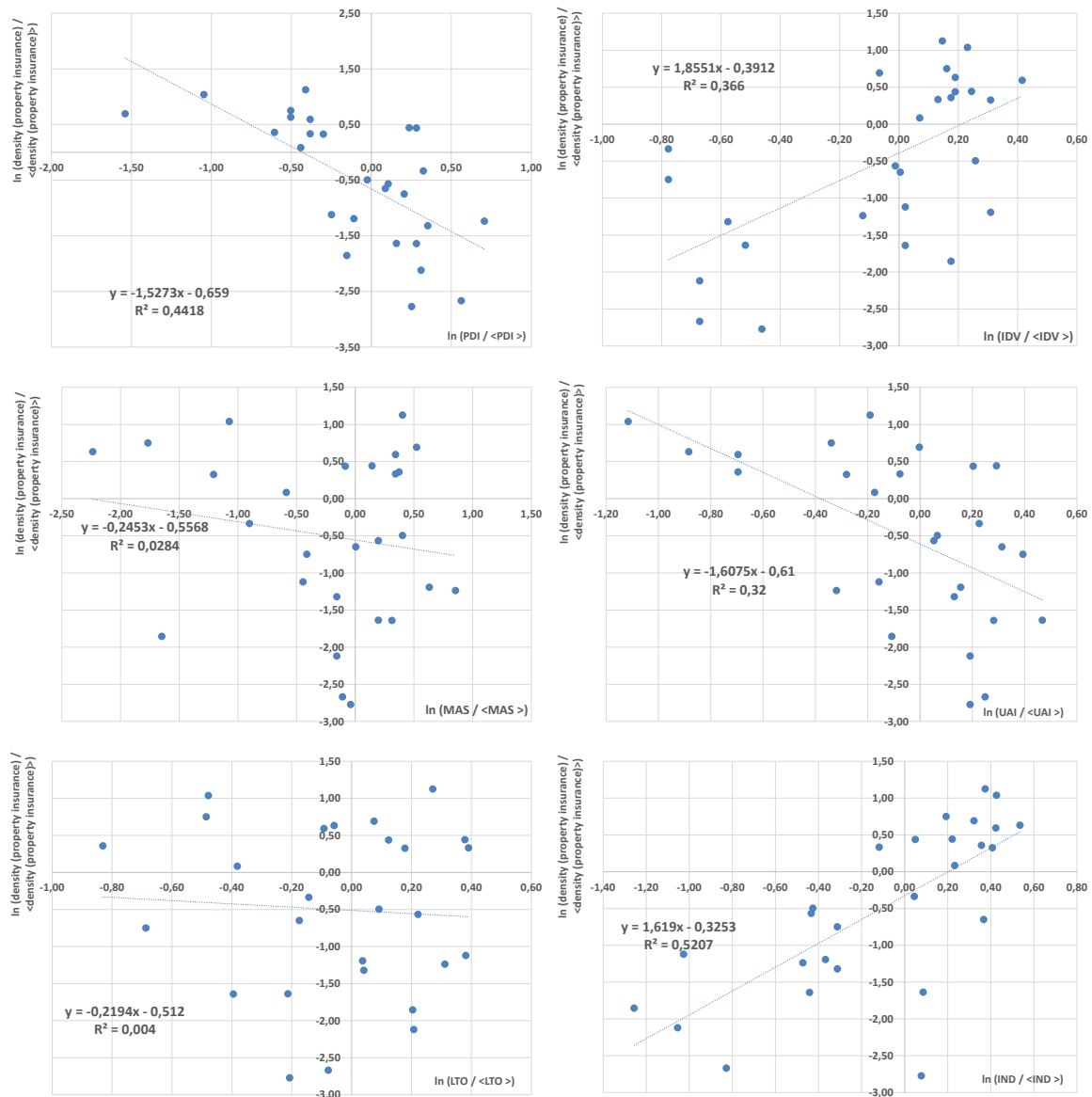
**Figure 4.** Results of linear regression models for motor insurance density in EUR, constant exchange rates



Source: own study, based on data from Table 5 and Table 6.

The results of the research carried out in accordance with the procedure described in section 4 for property insurance are presented in the Figure 5.

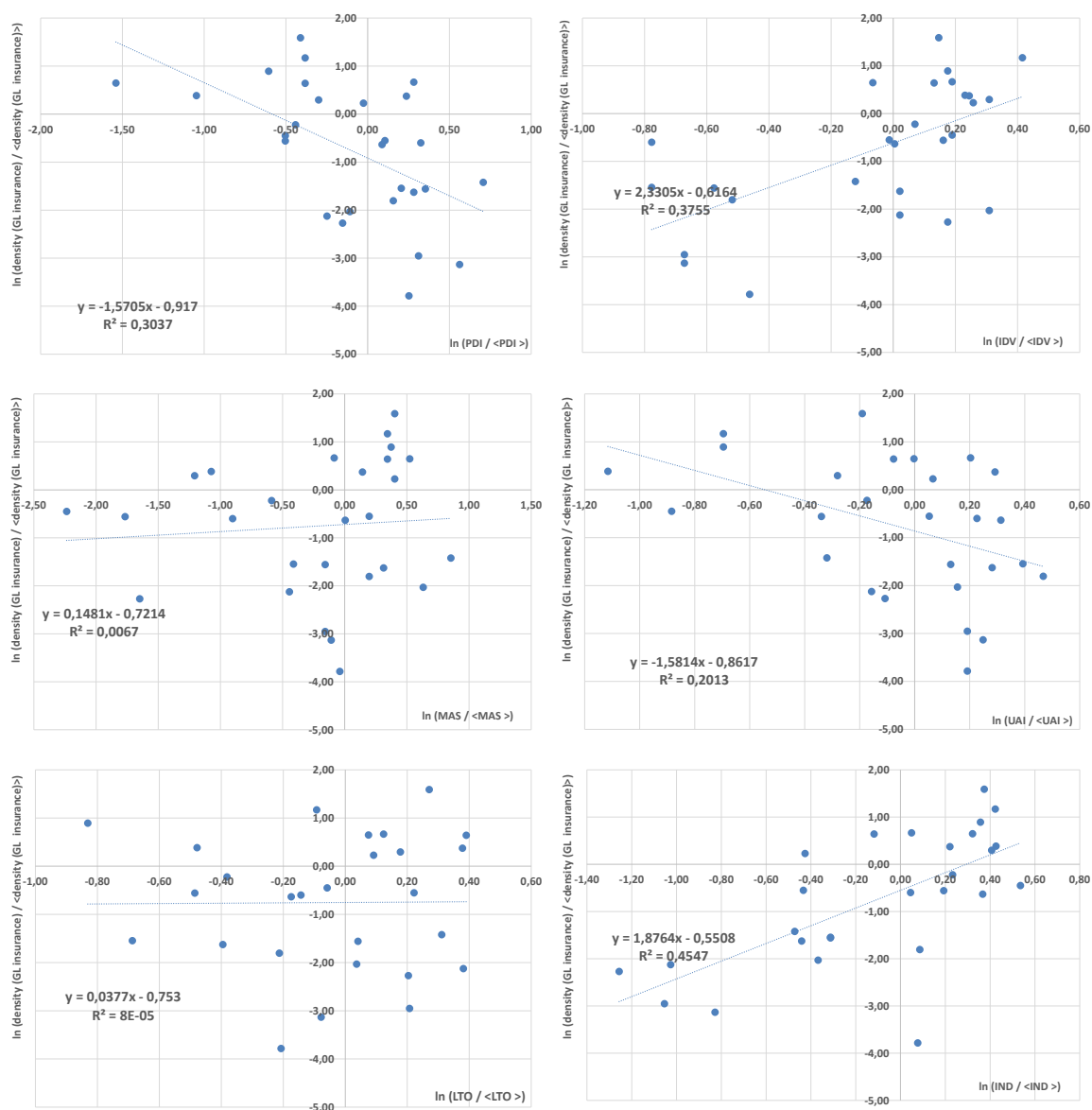
**Figure 5.** Results of linear regression models for property insurance density in EUR, constant exchange rates



Source: own study based on data from Table 5 and Table 6.

The results of the research carried out in accordance with the procedure described in section 4 for general liability insurance are presented in the Figure 6.

**Figure 6.** Results of linear regression models for general liability insurance density in EUR, constant exchange rates

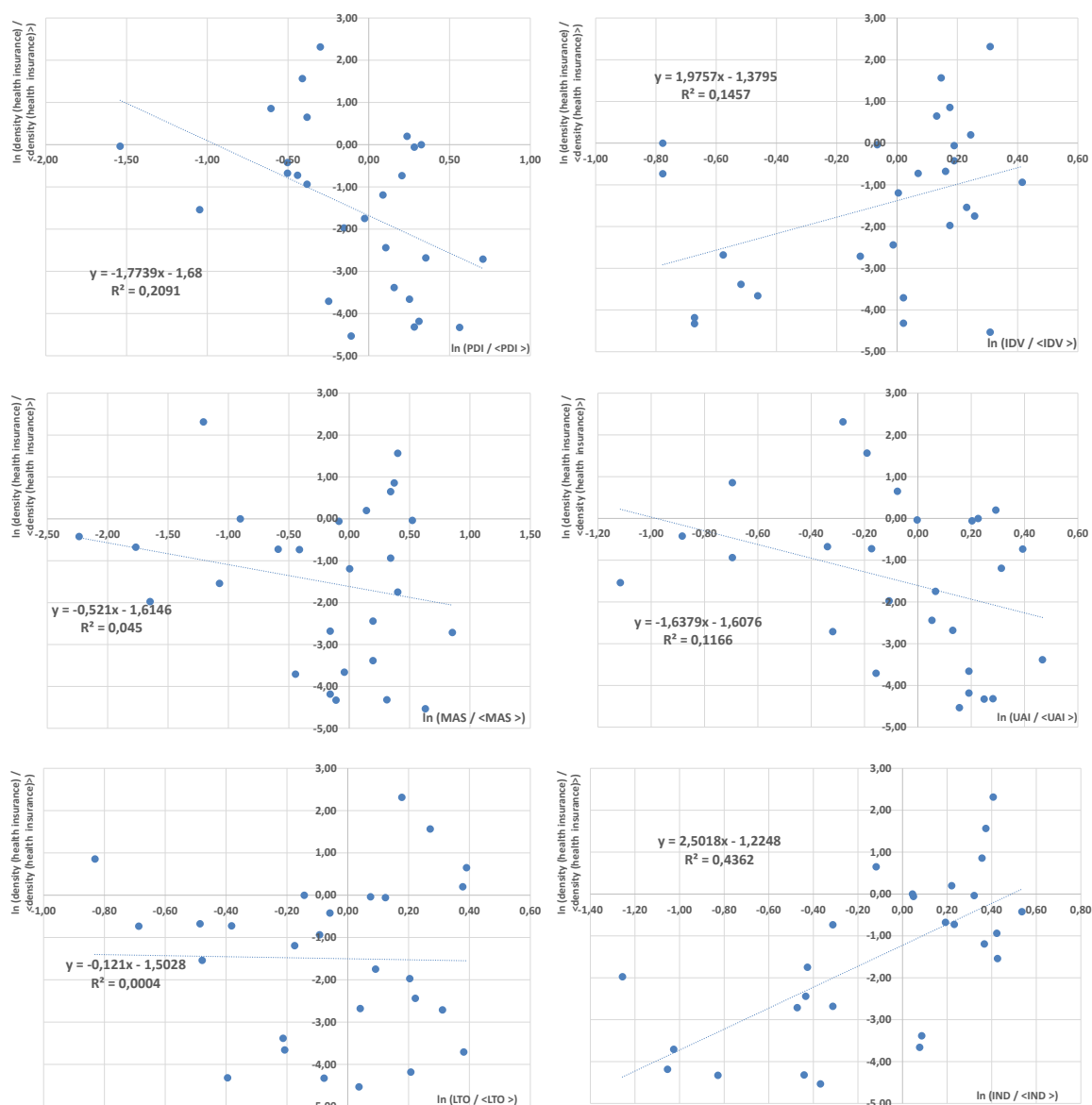


Source: own study based on data from Table 5 and Table 6.

The results of the research carried out in accordance with the procedure described in section 4 for health insurance are presented in the Figure 7.



**Figure 7.** Results of linear regression models for health insurance density in EUR, constant exchange rates



Source: own study based on data from Table 5 and Table 6.

Summary of the linear regression results presented in the Figures 1-7 is summarised in table 7 for all analysed types of insurance.

**Table 7.** Hofstede's cultural dimensions regression results summary

Type of insurance	Hofstede's cultural dimensions							
	PDI				IDV		MAS	
All insurance	$y = -1,6266x - 0,8508$ $R^2 = 0,3341$ ; $F = 12,5406$ ; significance $F = 0,0016$				$y = 2,1702x - 0,5539$ $R^2 = 0,3339$ ; $F = 12,5342$ ; significance $F = 0,0016$		$y = -0,2391x - 0,7369$ $R^2 = 0,018$ ; $F = 0,4582$ ; significance $F = 0,5047$	
	$A_i$	-1,6266	$C$	-0,8508	$A_i$	2,1702	$C$	-0,7369
	SE	0,4593	SE	0,2287	SE	0,6130	SE	0,2831
	$t_{stat}$	-3,5413	$t_{stat}$	-3,7205	$t_{stat}$	3,5404	$t_{stat}$	-2,6025
	pvalue	0,0016	pvalue	0,0010	pvalue	0,0016	pvalue	0,0153
Life insurance	$y = -2,0032x - 1,2259$ $R^2 = 0,2884$ ; $F = 10,1301$ ; significance $F = 0,0039$				$y = 2,9545x - 0,8435$ $R^2 = 0,3523$ ; $F = 13,5974$ ; significance $F = 0,0011$		$y = -0,1749x - 1,0586$ $R^2 = 0,0055$ ; $F = 0,1378$ ; significance $F = 0,7136$	
	$A_i$	-2,0032	$C$	-1,2259	$A_i$	2,9545	$C$	-1,0586
	SE	0,6294	SE	0,3133	SE	0,8012	SE	0,3777
	$t_{stat}$	-3,1828	$t_{stat}$	-3,9124	$t_{stat}$	3,6875	$t_{stat}$	-2,8029
	pvalue	0,0039	pvalue	0,0006	pvalue	0,0011	pvalue	0,0087
P&C insurance	$y = -1,2675x - 0,6008$ $R^2 = 0,349$ ; $F = 13,4049$ ; significance $F = 0,0012$				$y = 1,5254x - 0,3794$ $R^2 = 0,2839$ ; $F = 9,9116$ ; significance $F = 0,0042$		$y = -0,2019x - 0,5156$ $R^2 = 0,0221$ ; $F = 0,5647$ ; significance $F = 0,4593$	
	$A_i$	-1,2675	$C$	-0,6008	$A_i$	1,5254	$C$	-0,3794
	SE	0,3462	SE	0,1723	SE	0,4845	SE	0,1792
	$t_{stat}$	-3,6613	$t_{stat}$	-3,4862	$t_{stat}$	3,1483	$t_{stat}$	-2,1175
	pvalue	0,0012	pvalue	0,0018	pvalue	0,0042	pvalue	0,0443
Motor insurance	$y = -0,8529x - 0,3266$ $R^2 = 0,2941$ ; $F = 10,4146$ ; significance $F = 0,0035$				$y = 1,009x - 0,1786$ $R^2 = 0,2311$ ; $F = 7,5160$ ; significance $F = 0,0111$		$y = -0,0687x - 0,2541$ $R^2 = 0,0048$ ; $F = 0,1195$ ; significance $F = 0,7323$	
	$A_i$	-0,8529	$C$	-0,3266	$A_i$	1,0090	$C$	-0,1786
	SE	0,2643	SE	0,1316	SE	0,3680	SE	0,1361
	$t_{stat}$	-3,2272	$t_{stat}$	-2,4826	$t_{stat}$	2,7415	$t_{stat}$	-1,3127
	pvalue	0,0035	pvalue	0,0201	pvalue	0,0111	pvalue	0,2012
Property insurance	$y = -1,5273x - 0,659$ $R^2 = 0,4418$ ; $F = 19,7854$ ; significance $F = 0,0002$				$y = 1,8551x - 0,3912$ $R^2 = 0,366$ ; $F = 14,4347$ ; significance $F = 0,0008$		$y = -0,2453x - 0,5568$ $R^2 = 0,0284$ ; $F = 0,7309$ ; significance $F = 0,4007$	
	$A_i$	-1,5273	$C$	-0,6590	$A_i$	1,8551	$C$	-0,3912
	SE	0,3434	SE	0,1709	SE	0,4883	SE	0,1805
	$t_{stat}$	-4,4481	$t_{stat}$	-3,8555	$t_{stat}$	3,7993	$t_{stat}$	-2,1665
	pvalue	0,0002	pvalue	0,0007	pvalue	0,0008	pvalue	0,0400
General liability insurance	$y = -1,5705x - 0,917$ $R^2 = 0,3037$ ; $F = 10,9034$ ; significance $F = 0,0029$				$y = 2,3305x - 0,6164$ $R^2 = 0,3755$ ; $F = 15,0349$ ; significance $F = 0,0007$		$y = 0,1481x - 0,7214$ $R^2 = 0,0067$ ; $F = 0,1696$ ; significance $F = 0,6840$	
	$A_i$	-1,5705	$C$	-0,9170	$A_i$	2,3305	$C$	-0,6164
	SE	0,4756	SE	0,2368	SE	0,6010	SE	0,2222
	$t_{stat}$	-3,3020	$t_{stat}$	-3,8729	$t_{stat}$	3,8775	$t_{stat}$	-2,7738
	pvalue	0,0029	pvalue	0,0007	pvalue	0,0007	pvalue	0,0103
Helath insurance	$y = -1,7739x - 1,68$ $R^2 = 0,2091$ ; $F = 6,6091$ ; significance $F = 0,0164$				$y = 1,9757x - 1,3795$ $R^2 = 0,1457$ ; $F = 4,2628$ ; significance $F = 0,0495$		$y = -0,521x - 1,6146$ $R^2 = 0,045$ ; $F = 1,1774$ ; significance $F = 0,2882$	
	$A_i$	-1,7739	$C$	-1,6800	$A_i$	1,9757	$C$	-1,3795
	SE	0,6900	SE	0,3435	SE	0,9569	SE	0,3538
	$t_{stat}$	-2,5708	$t_{stat}$	-4,8908	$t_{stat}$	2,0646	$t_{stat}$	-3,8987
	pvalue	0,0165	pvalue	0,0000	pvalue	0,0495	pvalue	0,0006
Type of insurance	Hofstede's cultural dimensions							
	UAI				LTV		IND	
All insurance	$y = -1,7282x - 0,7996$ $R^2 = 0,2466$ ; $F = 8,1809$ ; significance $F = 0,0084$				$y = -0,65x - 0,7145$ $R^2 = 0,0236$ ; $F = 0,6038$ ; significance $F = 0,4444$		$y = 2,0046x - 0,4648$ $R^2 = 0,5322$ ; $F = 28,4405$ ; significance $F = 1,579E-05$	
	$A_i$	-1,7282	$C$	-0,7996	$A_i$	-0,6500	$C$	-0,7145
	SE	0,6042	SE	0,2414	SE	0,8365	SE	0,2739
	$t_{stat}$	-2,8602	$t_{stat}$	-3,3121	$t_{stat}$	-0,7771	$t_{stat}$	-2,6083
	pvalue	0,0084	pvalue	0,0028	pvalue	0,4444	pvalue	0,0151
	$A_i$	2,0046	$C$	-0,4648	$A_i$	2,0046	$C$	-0,4648
	SE	0,3759	SE	0,1919	SE	0,3759	SE	0,1919
	$t_{stat}$	5,3330	$t_{stat}$	-2,4221	$t_{stat}$	5,3330	$t_{stat}$	-2,4221
	pvalue	0,0000	pvalue	0,0230	pvalue	0,0000	pvalue	0,0230

Life insurance	$y = -2,2377x - 1,1702$ $R^2 = 0,2353$ ; $F = 7,6915$ ; significance $F = 0,0103$				$y = -1,2047x - 1,0777$ $R^2 = 0,0461$ ; $F = 1,2085$ ; significance $F = 0,2821$				$y = 2,6383x - 0,7321$ $R^2 = 0,5247$ ; $F = 27,5968$ ; significance $F = 1,938E-05$			
	$A_i$	-2,2377	C	-1,1702	$A_i$	-1,2047	C	-1,0777	$A_i$	2,6383	C	-0,7321
	SE	0,8069	SE	0,3224	SE	1,0958	SE	0,3589	SE	0,5022	SE	0,2564
	$t_{stat}$	-2,7733	$t_{stat}$	-3,6300	$t_{stat}$	-1,0993	$t_{stat}$	-3,0031	$t_{stat}$	5,2533	$t_{stat}$	-2,8554
	pvalue	0,0103	pvalue	0,0013	pvalue	0,2821	pvalue	0,0060	pvalue	0,0000	pvalue	0,0085
P&C insurance	$y = -1,2325x - 0,5533$ $R^2 = 0,2158$ ; $F = 6,8795$ ; significance $F = 0,0146$				$y = -0,0916x - 0,4744$ $R^2 = 0,0008$ ; $F = 0,0202$ ; significance $F = 0,8882$				$y = 1,4293x - 0,3145$ $R^2 = 0,4656$ ; $F = 21,7798$ ; significance $F = 8,835E-05$			
	$A_i$	-1,2325	C	-0,5533	$A_i$	-0,0916	C	-0,4744	$A_i$	1,4293	C	-0,3145
	SE	0,4699	SE	0,1878	SE	0,6450	SE	0,2112	SE	0,3063	SE	0,1564
	$t_{stat}$	-2,6229	$t_{stat}$	-2,9467	$t_{stat}$	-0,1421	$t_{stat}$	-2,2461	$t_{stat}$	4,6669	$t_{stat}$	-2,0116
	pvalue	0,0146	pvalue	0,0069	pvalue	0,8882	pvalue	0,0338	pvalue	0,0001	pvalue	0,0552
Motor insurance	$y = -0,7576x - 0,2898$ $R^2 = 0,1517$ ; $F = 4,4724$ ; significance $F = 0,0446$				$y = -0,0611x - 0,2415$ $R^2 = 0,0007$ ; $F = 0,0167$ ; significance $F = 0,8981$				$y = 0,9116x - 0,1394$ $R^2 = 0,3524$ ; $F = 13,6033$ ; significance $F = 0,0012$			
	$A_i$	-0,7576	C	-0,2898	$A_i$	-0,0611	C	-0,2415	$A_i$	0,9116	C	-0,1394
	SE	0,3583	SE	0,1431	SE	0,4729	SE	0,1549	SE	0,2472	SE	0,1262
	$t_{stat}$	-2,1148	$t_{stat}$	-2,0242	$t_{stat}$	-0,1293	$t_{stat}$	-1,5598	$t_{stat}$	3,6883	$t_{stat}$	-1,1050
	pvalue	0,0446	pvalue	0,0538	pvalue	0,8982	pvalue	0,1314	pvalue	0,0011	pvalue	0,2797
Property insurance	$y = -1,6075x - 0,61$ $R^2 = 0,32$ ; $F = 11,7643$ ; significance $F = 0,0022$				$y = -0,2194x - 0,512$ $R^2 = 0,004$ ; $F = 0,1012$ ; significance $F = 0,7530$				$y = 1,619x - 0,3253$ $R^2 = 0,5207$ ; $F = 27,1646$ ; significance $F = 2,156E-05$			
	$A_i$	-1,6075	C	-0,6100	$A_i$	-0,2194	C	-0,5120	$A_i$	1,6190	C	-0,3253
	SE	0,4687	SE	0,1873	SE	0,6897	SE	0,2259	SE	0,3106	SE	0,1586
	$t_{stat}$	-3,4299	$t_{stat}$	-3,2574	$t_{stat}$	-0,3182	$t_{stat}$	-2,2669	$t_{stat}$	5,2120	$t_{stat}$	-2,0511
	pvalue	0,0021	pvalue	0,0032	pvalue	0,7530	pvalue	0,0323	pvalue	0,0000	pvalue	0,0509
General liability insurance	$y = -1,5814x - 0,8617$ $R^2 = 0,2013$ ; $F = 6,3023$ ; significance $F = 0,0189$				$y = 0,0377x - 0,753$ $R^2 = 8E-05$ ; $F = 0,0019$ ; significance $F = 0,9652$				$y = 1,8764x - 0,5508$ $R^2 = 0,4547$ ; $F = 20,8470$ ; significance $F = 0,0001$			
	$A_i$	-1,5814	C	-0,8617	$A_i$	0,0377	C	-0,7530	$A_i$	1,8764	C	-0,5508
	SE	0,6299	SE	0,2517	SE	0,8572	SE	0,2807	SE	0,4110	SE	0,2098
	$t_{stat}$	-2,5104	$t_{stat}$	-3,4237	$t_{stat}$	0,0440	$t_{stat}$	-2,6828	$t_{stat}$	4,5659	$t_{stat}$	-2,6254
	pvalue	0,0189	pvalue	0,0021	pvalue	0,9653	pvalue	0,0128	pvalue	0,0001	pvalue	0,0146
Helath insurance	$y = -1,6379x - 1,6076$ $R^2 = 0,1166$ ; $F = 3,2985$ ; significance $F = 0,0814$				$y = -0,121x - 1,5028$ $R^2 = 0,0004$ ; $F = 0,0108$ ; significance $F = 0,9182$				$y = 2,5018x - 1,2248$ $R^2 = 0,4362$ ; $F = 19,3454$ ; significance $F = 0,0002$			
	$A_i$	-1,6379	C	-1,6076	$A_i$	-0,1210	C	-1,5028	$A_i$	2,5018	C	-1,2248
	SE	0,9018	SE	0,3603	SE	1,1666	SE	0,3820	SE	0,5688	SE	0,2904
	$t_{stat}$	-1,8162	$t_{stat}$	-4,4612	$t_{stat}$	-0,1037	$t_{stat}$	-3,9338	$t_{stat}$	4,3983	$t_{stat}$	-4,2180
	pvalue	0,0814	pvalue	0,0002	pvalue	0,9182	pvalue	0,0006	pvalue	0,0002	pvalue	0,0003

Note. The colours used in the table correspond to the level of the  $R^2$  coefficient and therefore level of explanation the dependencies between analysed variables:  $R^2 \in [0,0-0,1)$ - no dependencies/ grey colour,  $[0,1-0,4)$ - weak explanation/ light green colour,  $[0,4-0,6)$ - clear explanation/ green colour,  $[0,6-0,9)$ - meaningful explanation/ dark green colour,  $[0,9-1,0)$ - very meaningful explanation/ blue colour. SE- standard error.

Source: own study, based on data from Table 5 and Table 6.

Based on the Figures 1-7 and Table 7 it can be concluded that:

- PDI, IDV, UAI dimensions allow for weak explanation of insurance demand measured as insurance density in constant exchange;
- LTO does not allow for an explanation of insurance demand measured as insurance density in the constant exchange rate;
- the greatest importance (the highest  $R^2$ ) allows for an explanation of insurance demand measured as insurance density in constant exchange from Hofstede's cultural dimensions has

IND factor. For this factor relationship with insurance density turned out to be the most significant;

- finally, the results achieved for various insurance groups as well as for insurance in general are very similar, in each case, the significance of distinct Hofstede's cultural factors is very similar.

Summary of the linear regression results, according to equation (2), is presented in table 8 for all analysed types of insurance.

**Table 8.** Hofstede's cultural dimensions regression models results

Specification	Approach						
	Models						
Explained variable from equation (2) associated with:	Density all insurance	Density life insurance	Density P&C insurance	Density motor insurance	Density property insurance	Density general liability insurance	Density health insurance
Explanatory variables from equation (2) used to first iteration of models estimation associated with:	PDI,IDV,MAS,UAI, LTO,IND						
Constant	No (C=0)	No (C=0)	No (C=0)	No (C=0)	No (C=0)	No (C=0)	No (C=0)
Dependency type	linear, as in equation (2)						
Explanatory variables from equation (2) statistically significant after the last iteration of models estimation associated with:	IND IDV	IND IDV	IND IDV	IND	IND IDV	IND IDV	IND
Evaluation of models parameters							
A <sub>1</sub> (IND)	1,8017	2,3841	1,2852	0,9697	1,4073	1,6382	3,0129
Standard error A <sub>1</sub>	0,3801	0,5230	0,3115	0,2425	0,2960	0,4135	0,7130
t <sub>stat</sub>	4,74061	4,55833	4,12546	3,99892	4,75412	3,96166	4,22594
p-value	0,00007	0,00012	0,00036	0,00047	0,00007	0,00055	0,00026
If p-value <0,05?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
A <sub>2</sub> (IDV)	1,5052	2,1226	1,0442	-	1,3177	1,7748	-
Standard error A <sub>2</sub>	0,5247	0,7221	0,4301	-	0,4087	0,5709	-
t <sub>stat</sub>	2,8687	2,9396	2,4277	-	3,2242	3,1089	-
p-value	0,0083	0,0070	0,0227	-	0,0035	0,0046	-
If p-value <0,05?	Yes	Yes	Yes	-	Yes	Yes	-
Model quality assessment							
R <sup>2</sup>	0,6519	0,6437	0,5821	0,3808	0,6706	0,6128	0,4072
Adjusted R <sup>2</sup>	0,5979	0,5894	0,5254	0,3424	0,6175	0,5574	0,3687
Model standard error	0,94	1,29	0,77	0,64	0,73	1,02	1,89
F-value for the variance test	23,41	22,58	17,41	15,99	25,45	19,79	17,86
Significance of F	0,00000	0,00000	0,00002	0,00050	0,00000	0,00001	0,00028
If significance of F <0,05?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Residuals randomness based on the series test	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Source: own study, based on data from Table 5 and Table 6.

The conclusions drawn from the combined models (presented in Table 8) are, in principle, very similar to those drawn from Figures 1-7 and Table 7:

- the greatest importance (statistical significance in each model) for an explanation of insurance demand measured as insurance density in constant exchange from Hofstede's cultural dimensions has IND factor;
- IDV turns out to be the second most important Hofstede's cultural dimensions index (statistical significance in five from seven econometric models). However, IDV's impact is much less than IND factor from a statistical point of view.

The results shown in Table 8 have significant methodological and practical implications in the field of cross-cultural insurance research. Significantly, this study sheds light on the sometimes disregarded yet crucial significance of the Indulgence vs. Restraint (IND) cultural factor in clarifying the dynamics of insurance demand across various forms of insurance. This analytical addition highlights the significant significance of IND, a factor that has hitherto been given very limited consideration in the current body of literature. Moreover, the consistent importance of IND across many insurance domains highlights the strength and generalizability of our results. The findings of this study suggest a strategic necessity for insurance businesses to align their product portfolios and marketing communication with the cultural norms upheld by indulgent civilizations. These principles prioritize not only the reduction of risk but also the improvement of quality of life, personal satisfaction, and the quest for pleasure. The implementation of strategic alignment has the capacity to enhance market competitiveness and foster customer resonance within culturally varied environments. Significantly, the aforementioned findings are supported by previous research, particularly the investigations conducted by Park and Lemaire (2011a, 2011b), Chui and Kwok (2009), and Treerattanapun (2011), which further strengthen the empirical basis of these conclusions. The study's adherence to Hofstede's cultural aspects framework confirms its theoretical foundation, enhancing our comprehension of the complex interaction between culture and insurance behaviour. In brief, this study contributes to the existing empirical information and enhances the theoretical underpinnings in the field of cross-cultural insurance research. It provides practical insights for insurance sector participants who aim to achieve relevance and competitiveness in varied worldwide markets.

How could these results be interpreted and what are the practical implications of this finding? An indulgent society is one that permits its citizens to freely satisfy their basic human wants to enjoy life (Hofstede, 2001). It is important to acknowledge that leisure preferences exhibit

significant variation across societies, irrespective of their classification as either indulgent or constrained. The perception of leisure within society is characterized by intricate and diverse elements, shaped by a confluence of economic, historical, and individual determinants. In the field of insurance marketing, it is crucial to possess a comprehensive awareness of the complexities associated with the value of leisure time. Instead of making an assumption about a direct correlation between cultural characteristics and the devaluation of leisure, it is more precise to examine the intersection of cultural values with wider society trends and economic situations. Insurance firms must customize their approaches to the distinct expressions of cultural values within the area of leisure, acknowledging that these values might be intricate and influenced by several factors. Moreover, in the context of insurance marketing, understanding the subtleties of freedom of expression within different cultural and political contexts becomes crucial. Insurance companies should be mindful of the diversity of perspectives within societies and avoid presumptions that certain political affiliations or cultural orientations uniformly dictate attitudes towards freedom of expression. The vast majority of leisure activities (i.e. summer and winter sports, water sports, extreme sports, hiking, etc.) cause significant health risks as well potential personal liability. Moreover, indulgent societies in general value longevity and well-being as the most important virtues. Because of this, the insurance companies could tailor their offering (different types of insurance) to the citizens of the countries which score high on IND dimension. This may be of practical importance for the marketing communication of insurance companies, which should consider the possibility of enjoying life and maintaining current standards of living in the event of unforeseen events covered by insurance.

Although this study offers interesting insights into the correlation between cultural aspects and the need for insurance, it is important to acknowledge numerous limitations. The findings presented in this study are contingent upon a particular dataset and sample size, hence constraining the extent to which the conclusions may be applied to a broader population. It is recommended that future investigations repeat this work with datasets that are both larger in scale and more diversified in nature. Furthermore, cultural aspects, while serving a practical purpose, offer a streamlined framework for comprehending the complexities of culture. The use of qualitative research approaches and the incorporation of other cultural frameworks might provide a more intricate and comprehensive viewpoint. The present study is based on cross-sectional data, which poses difficulties in demonstrating causality. The utilization of longitudinal research and experimental methods might potentially offer a means to overcome

this constraint. Moreover, it is important to delve into the examination of cultural variety among nations and the possible variances that exist within subcultures. This calls for further investigation in future study, which might be effectively conducted through the utilization of mixed-methods techniques. It is essential to acknowledge that cultural values have the potential to undergo transformation as time progresses, hence necessitating periodic reassessments of this study to account for shifting cultural landscapes. These many features offer prospective avenues for advancing our comprehension of the evolutionary process of cultural influences and their impact on the dynamics of insurance behavior. The investigation of these dynamics encompasses not only the interconnectivity of diverse variables but also the analysis of the individual progression of each of these phenomena over a period of time. It is crucial to establish clarity in order to thoroughly analyze the interaction between culture and insurance behavior by precisely defining the distinctive characteristics of these dynamics. Ultimately, an examination of how insurance businesses modify their marketing and communication tactics to conform to cultural values can yield valuable practical insights for the sector. These pathways serve to expand the academic investigation into the impact of culture on insurance demand, enhancing the field's comprehension and resolving the constraints of this study. An important limitation of the study is also analyzing the cultural aspect in isolation from other factors, which are undoubtedly a factors that influences the impact of culture on the demand for insurance (eg. wealth of nations as in Park and Lemaire (2011a).

## **6. Conclusions**

In the research, the relationship between Hofstede's cultural dimensions indices and insurance demand (insurance density (total premiums per inhabitant)) has been analysed. The study was conducted for various types of insurance: all insurance, life insurance, P&C insurance, motor insurance, property insurance, general liability insurance and health insurance.

The findings of the study emphasize the significant impact of the Indulgence vs. Restraint (IND) cultural component on different insurance kinds. These findings have important implications for insurance policy and marketing tactics. Insurance firms have the potential to use this understanding by strategically emphasizing the importance of enjoying life as a key value proposition in their marketing endeavours. This surpasses conventional methods of reducing risk, since it redefines insurance as a mechanism to facilitate leisure, individual satisfaction, and overall well-being. Moreover, it emphasizes the significance of customizing insurance offerings to correspond with the lives and tastes of affluent civilizations, providing

coverage for risks and activities associated with leisure that have great value in these particular cultures. Marketing techniques that are successful should be in accordance with the cultural norms of civilizations that prioritize indulgence. These strategies should highlight longevity and well-being as the most important qualities within the insurance industry. The research promotes the practice of focused market segmentation, utilizing cultural characteristics such as IND, which allows insurance companies to pinpoint areas or nations with high IND scores. This enables them to tailor their goods and communication strategies appropriately, so achieving a competitive advantage in various markets. Ultimately, the research serves as a source of inspiration for product innovation, leading to the creation of insurance offerings that align with the preferences and concerns of individuals in these cultural contexts. These offerings encompass various features such as adaptable policies, comprehensive coverage for recreational pursuits, and the integration of wellness initiatives within insurance packages. In conclusion, our findings serve to address methodological limitations and offer practical insights that can effectively improve customer interaction, broaden market reach, and stimulate company expansion for insurance companies operating in culturally varied regions.

The indicated results are not only of methodological importance (little interest in this indicator in the literature) but also from the business perspective. Marketing communication of insurance companies, should consider the possibility of positioning the enjoyment of life and longevity as the key value in the context of their marketing strategy built for indulgent societies.

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