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Literature Review

Consumer Behavior and Decision Making from Officed-based Doctors. A Systematic Literature Review

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Abstract

The aim of this literature review is to systematically summarize the existing knowledge and theories on the subject of decision-making behavior in general and in particular, when doctors have to decide for or against insurance for their own practice.

Publications on decision psychology, behavioral economics, consumer behavior and modern brain research were evaluated. Special interest was paid to studies with regard to insurance demand and the regulatory framework.

Each branch of science deals with decisions that people make consciously and unconsciously. Conducted worldwide studies of insurance demand have been directed to try to confirm or disprove certain theories using experiments. In summary, research in recent years has been increasingly in the area of behavioral economics in particular behavioral patterns. It has been confirmed that decision behavior related to insurance demand is very much shaped by determinants such as risk, uncertainty, and cognitive systems. Insurance consulting must continue to take these determinants into account in a more targeted manner in the future.

Keywords

decision-making, doctors in private practice, insurance demand, behavioral patterns

1. Introduction

A doctor who runs his own practice should act responsibly for himself and his employees and protect himself against economic damage. In the event of a loss of business, wages, rents, etc. must continue to be paid. Similarly, regulations must be made when a doctor, for example becomes ill, who then continues his surgery. In addition, there are constantly increasing numbers of cyber-attacks in Germany

on patient data. Economic damage can be insured in Germany with existing insurances. Also, with a power of attorney, the doctor can already order his representation in his individual surgery, should he, for example, become ill for a long time or legally incapacitated. (In group surgeries, a regulation is already made in the joint contract between the doctors).

There are no regulations as to which insurance policies must be contracted. Only the conclusion of professional liability insurance is regulated in the professional code of conduct for doctors. This professional liability is to be concluded with adequate cover (*(*Model) Professional Code for Physicians in Germany [English version 2018]. 2018, Art.21.)

Further insurance is not required, and each doctor bears his own responsibility for his or her existence. New risks, such as cyber risks, must not be ignored. With increasing digitalization, measures for the defense and protection of sensitive data are also becoming more and more important.

In these situations, the doctor assumes economic risks. The term risk is also equated with hazard in the insurance industry. “The term hazard is understood to mean the possibility of an economic adverse event occurring” (Kuckerts et al., 2016, p. 33).

There are many recommendations from the insurance industry as to which insurances a doctor should take out. Even the medical press recommends that you take out these insurances (Bandering, 2006). The same insurances are always recommended and classified as indispensable, very important, etc.

From the work as a consultant of many years, not only for doctors, it turns out time and again that important insurances are not contracted and insurances are not adapted to the current status.

The following review deals with the question: How are decisions generally made from the point of view of the four scientific disciplines consumer behavior, psychology, behavioral economics and modern brain research? The path emerges on the basis of the findings in the field of behavioral economics.

In relation to insurance demand, Jaspersen (2015) provides studies and experiments that have already been assembled into a review. Jaspersen’s review presents hypothetical surveys and experimental studies on insurance demand. An overview of the current state of the literature was extracted and with the review of methods, researchers were able to see how experiments on insurance demand can be designed in the future. It has equally been shown in recent years that behavioral patterns are relevant in the insurance industry. Richter et al. (2018) describe considerations from the perspective of modern behavioral economics on how needs and decision processes of insurance customers can be better understood. Using a selection of behavioral patterns, judges illustrate how insurance is not contracted and risks are misperceived.

Kunreuther et al. (2013) already described this misunderstanding in the decision-making behavior of taking out insurance in 2013 and see opportunities for improvement in one of the most misunderstood industries.

Recently, the field of behavioral economics has also increasingly focused on “nudging” (Richter, 2018). This term goes back to Thaler and Sunstein (2008) specifically in their book Nudge. Behaviors of

people can be influenced in a predictable way with small “nudges”. Whereby the issue of regulation in Germany should not be neglected. Here, too, the literature review addresses the issues of consumer policy and consumer protection and elaborates on important findings in the context of behavioral economics. Within the framework of the IDD (Insurance Distribution Directive) (Note 1), the distribution of insurance products is strongly regulated bay law, subject to the Versicherungsvertragsgesetz (Insurance Contract Act) and also supervision by BaFin (Note 2). It concludes with a study using a behavioral economics perspective on consumer decision making.

2. Method

The aim of the systematic review is to summarize the literature on how to explain the decision-making behavior of doctors when it comes to taking out insurance for one’s own practice and thus its existence.

2.1 Selection Criteria and Findings

2.1.1 Consumer Behavior

The starting point of previous research was consumer behaviour as a sub-discipline of marketing. The international standard work Kroeber-Riel and Gröppel-Klein (2019) was first published in 1975 and is now in its 11th revised edition. „Das grundsätzliche Ziel der Konsumentenforschung liegt in dem Verstehen und Erklären des Verhaltens von Konsumenten sowie der Ableitung von Handlungsempfehlungen zur Beeinflussung eben dieses Konsumentenverhaltens”(Note 3) (Kroeber-Riel & Gröppel- Klein, 2019, p. 10). Two competing approaches such as the positivist and the understanding approach try to clarify the “how” of buyer behaviour. Kröber-Riel and Gröppel-Klein distinguish the positivist approach as a problem-solving strategy for practise by means of consumer research. Whereas the understanding approach rejects this “instrumentalisation of the subject” (Kroeber-Riel & Gröppel-Klein, 2019, p. 10).

The S-O-R paradigm / S-O-R model is formative for consumer research. Meffert et al. (2008, p. 101) show, behavioural laws have, in simple terms, a stimulus (Stimulus S) that is applied to an individual and therefore a reaction (R) can be expected (SR- model). The further development of the S-O-R model originates from neo-behaviourism and should make facts empirically interpretable. In concrete terms this means that a stimulus (S) triggers internal processes in the organism (O) and leads to a reaction (R). This organism (0) is thus the intervening variable that triggers psychological processes between reaction (R) and stimulus (S). E.g., enlightenment/information of an insurance product (S) leads to conclusion (R). The intervening variable (O) could thus have been a change of attitude (Kroeber-Riel & Gröppel-Klein, 2019, p. 15) repeatedly see operationalisation as a challenge. How can theoretical concepts be transferred into measurable indicators, as well as internal mental processes and complex, multi-causal data relationships be represented. So, the development went in the direction of brain research.

Both authors see consumer behavior research as applied behavioral science and complement it with science from human behavior, including psychology, brain research, behavioral economics, etc. This

view of applied behavioral science is also called explanatory approach. In the context of the development of consumer research, Thaler (1985) and Kahneman and Tversky (1979) also discussed theories with microeconomic references and roots, especially Prospect Theory (Kroeber-Riel & Gröppel- Klein, 2019, p. 21). Due to the interplay between behavioral economics and consumer research and the increasing importance of this science, the authors added behavioral economics to their standard work (Kroeber-Riel & Gröppel-Klein, 2019, p. 22 ff).

2.1.2 Behavioral Economics

Camerer, 1999, p. 10575 shows "Behavioral economics" improves the realism of the psychological assumptions underlying economic theory, promising to reunify psychology and economics in the process. Beck (2014) dedicates his textbook Behavioral Economics, Eine Einführung (Behavioral Economics, An Introduction) to this behavioral economics.

The book introduces the most important ideas and concepts of this discipline of economics and enriches economic models, such as that of expected utility theory (Rational Choice Theory). Beck writes (2014, p. 101 ff) "Die Erwartungsnutzentheorie ist die zentrale Theorie der Ökonomie zur Bestimmung menschlicher Entscheidung unter Unsicherheit" (Note 4). The founder of the utility theory was Daniel Bernoulli, born in Basel/Switzerland in 1700. The utility of monetary amounts does not correspond to the objective monetary values, but depends on the subjective size and wealth that a person possesses (Pfister et al., 2019, p. 3 ff.).

Topics such as the "Heuristics -and Biases" programme and Prospect Theory and their consequences are also discussed (Beck, 2014, pp. 25-191 ff.). Behavioral and decision-making strategies can arise from biases in decision-making (Beck, 2014, p. VI, preface). Also show Richter (2018, p. 2) "Diverse kognitive Verzerrungen (Biases) können massiven Einfluss auf menschliche Entscheidungen haben" (Note 5).

2.1.3 Excurses Psychology

Beck (2014, p. 9) describes "Behavioral Economics is the attempt to reconcile the human image of economics with the human image of psychology". For example, Pfister et al. (2019) in his textbook: Die Psychologie der Entscheidung, Eine Einführung, (The Psychology of Decision, An Introduction) includes insights from psychology, such as heuristics and biases, decision-making under uncertainty, emotions, etc. These patterns of human behavior are not compatible with the ideas of homo economicus (utility maximiser). Traditional economics assumed that people always make their decisions exclusively according to rational criteria. "The consequences of economic decisions are evaluated exclusively according to the benefit for the decision-maker, independent of the situational context or emotions and without errors in information processing" (Richter et al., 2018, p. 1 ff). This classical theory of utility maximisation specifies how people should decide rationally. It is also understood as a normative theory. Behavioral economics is more descriptive. "…versucht, die tatsächlich beobachtbaren Verhaltensmuster von Menschen zu identifizieren, zu beschreiben und zu verstehen" (Note 6) (Richter et al., 2018, p. 2 ff).

2.1.4 Behavioral Insurance as a part of Behavioral Economics

Richter et al. (2018) describe this approach under the generic term “behavioral insurance”, as it is increasingly used in insurance economics. Numerous studies based on real data already exist, e.g., Browne et al. (2015) Behavioral bias and the demand for bicycle and flood insurance, Sydnor (2010) (Over) insuring modest risks and Barseghyan et al. (2013) The nature of risk preferences: Evidence from insurance choices. Jasperson (2015) as mentioned earlier, reviewed 95 articles consisting of 45 experiments and 55 hypothetical surveys relating to insurance demand. All the findings of this review cannot be presented in detail within this framework. In summary, the design of the study is the determining factor for the outcome of the studies, i.e., can decision theories be confirmed? Or can the existence of heuristics, biases and perceptual biases be confirmed or do the subjects behave in the opposite way? However, it has been shown that expected outcomes, such as the falsification of expected utility theory in executed experiments, depend strongly on the design aspect. So that the result is not reversed. Furthermore, Jaspersen (2015) gives directions for the design of future studies in experimental behavioral economics.

2.1.5 Behavioral Finance

In his dissertation, Wiersich (2013) investigates the influence of emotions on insurance decisions in order to derive practical relevance for insurance marketing. It is based on findings from behavioral finance. Within the scope of two conducted studies, once the influence of emotions on the willingness to pay for an insurance and once the effect of emotional states in insurance advertisement are examined. Wiersich (2013 p. 76 ff and p. 120 ff) comes to the following conclusions, among others: potential insurance customers must be informed about risk and a possible insurance contract at an early stage. Images that stimulate the customer’s imagination should be integrated into advertisements. Willingness to pay for insurance is reinforced by affection, as the desire for security increases, for an insurance object.

2.1.6 Criticism of Behavioral Economics

Behavioral economics concepts described above, such as those of “heuristics and biases”, are central concepts of behavioral economics.

Gigerenzer (2018), however, states: “In its portrayal, people have systematic cognitive biases that are not only as persisent as visual illusions but also costly in real life—meaning that governmental paternalism is called upon to steer people with the help of “nudges.” These biases have since attained the status of truisms. In contrast, I show that such a view of human nature is tainted by a “bias bias,” the tendency to spot biases even when there are none”. Prejudices are formed even when there are none. No distinctions are made between small and large samples, volatility errors are confused with systematic errors, or that intelligent inferences are confused with logical errors etc. Gigerenzer has been engaged in a scientific discourse with Kahneman in this area since the 1990s (Fehr, 2019).

2.1.7 Excursus Brain Research

In their book Emotional Selling, Bittner and Schwarz (2015, p. 12 ff) describe how purchase decisions

are made in practice on the basis of a word "problem" in the customer's head. The Supervisory Attentional System (SAS) - a combination of the insula and the nucleus accumbens - decides whether to buy or not. The probability of buying a product is determined by the activity of the nucleus accumbens (the stronger) and the insula (the weaker). The insula is responsible for processing subjective and emotional experiences as well as conscious and unconscious feelings. It has an inhibitory effect on activity. MRI studies have found that when a problem is addressed, e.g. during a sale, negative emotions such as aversion and dislike are evoked, which are difficult to reverse. Purchasing decisions regarding an important and useful insurance policy are very likely to be negative. Words and sentences arrive in the brain in thousandths of a second. Millions of pieces of information can be processed per second. Moreover, 99% of this takes place unconsciously.

Professor Dr. Dr. Gerhard Roth, a renowned brain researcher from Germany and head of the Roth Institute (Note 7), dedicates his book Personality, Decisions and Behaviour to the interplay of neurobiological and psychological knowledge (Roth, 2011). Chapter 2 p. 40 ff. is completely devoted to a look into the human brain, including an excursus on brain research methods. The aim of new methods of brain research was to find out by means of enormously improved electroencephalography (EEG), functional magnetic resonance imaging, surveys of vegetative-physiological reactions such as skin resistance measurements, heart rate, etc., what happens in a person's brain when he or she decides to do something specific, or even more generally, how behavior is controlled in the first place, and thus to substantiate the empirical statements of psychologists (Roth, 2011 p. 10). Chapter 3, p. 97 ff. shows that the unconscious is action-determining and much more comprehensive, greater than the conscious. Consciousness requires a lot of energy and shifts things into the "unconscious" and the "preconscious". In chapter 5, p. 158 ff. Roth deals with the economics and psychology of human decision-making processes. He criticises the rational choice theory of human action and refers to models of bounded rationality (Gigerenzer & Selten 2002), Gigerenzer's "Gut feelings" (Gigerenzer, 2007) and (Dörner, 2000) "The logic of failure- strategic thinking in complex situations". Roth derives recommendations on rational-conscious, unconscious-intuitive or heuristic decision-making behaviour in different situations from this. As Roth describes (2011 p. 171 ff.) "Gigerenzer und Kollegen haben herausgefunden, dass in vielen Fällen eine »heuristische Entscheidungsfindung«, die auf einer sehr schmalen Informationsbasis beruht und ganz simple Regeln anwendet, genauso oder fast genauso effizient ist wie die komplexesten Rechenoperationen, aber zugleich viel schneller und billiger" (Note 8).

2.1.8 Behavioral Economics and Information Intake

Richter et al. (2018 p. 2) emphasize that decisions are also strongly determined by the context in which information is presented to the decision-maker.

According to the Federation of German Consumer Organisations (vzbv) (Note 9), information should make it easier for consumers to make decisions. The more complex the market, the larger the offer and the more costly the potential consequences of a decision, the more reliable information is needed.

Consumer policy in Germany would like to provide consumers with as much information as possible via

ever new media and technical possibilities, so that they can make decisions for themselves. The vzbv is thus also concerned with the limits of the information provided (a lot helps a lot?) for the consumer and demands that politicians also examine their behavior in dealing with information within the framework of consumer research (Verbraucherzentrale Bundesverband, 2011).

Already in 2008, the vzbv commissioned a study: Behavioral Economics –eine neue Grundlage für Verbraucherpolitik? (Behavioral Economics -A new basis for consumer policy?). In the context of information perception/search and information processing, storage and implementation of the consumer, the study also deals with heuristics and biases. Thus, these empirical findings from non-rational behavior are reflected in consumer behavior (Reisch & Oehler, 2008).

Reisch and Oehler (2008 p. 25 ff.) state: "Das zentrale Informationsproblem von Verbrauchern ergibt sich daher verkürzt in dem Satz: Was Verbraucher wissen wollen, können sie nur wissen, wenn sie wissen, was sie wissen müssten" (Note 10). This then gives rise to another challenge. According to the traditional economic approach, advice on insurance is superfluous, since rational consumers and perfect markets do not need auxiliary institutions. However, a new paradigm of institutional economics shows that consumers are not fully rational, nor are markets perfect. Consumers therefore have little or no overview of the available products and services on the market and must trust the providers, the authors say. However, providers (insurance companies), financial intermediaries (insurance advisors) are also subject to the bounded rational behavior described above. The authors explain further, "Die Qualifikation des Finanzvermittlers bestimmt sich also – vereinfacht formuliert – durch die Verwertbarkeit hinsichtlich seiner Leistungen für den nachfragenden Anlage-, Versicherungs- und/oder Kreditkunden" (Note 11). The recommendation was to concretise general advisory standards, which included professional competence, including problem-solving and methodological competence. These included, among others, detailed knowledge of product types and product forms, unsolicited provision of information, clarification of financial consequences, recommendations also worked out at the client's request, independent of any house products and opportunities and risk analyses for the future.

Ernste and Hüther (2011) summarise the following findings in the context of position paper number 50 on behavioral economics and regulatory policy on the provision of information and refer to Oehler and Reisch, 2008 "Taking into account the behavioral economic findings on, among other things, bounded rationality, limited information processing capacities and low involvement (ego participation and interest), especially in the case of less tangible products with long reward deferral such as retirement provision products or financial services in general, it becomes apparent that information asymmetries cannot be overcome precisely by means of more information".

2.1.9 Excursus Regulation

13 years later, the EU has done a lot of regulation in the insurance market. (As this is not a focus topic of this LR, the development up to the present day will not be discussed further here). As mentioned at the beginning of page two, the recast IDD Directive came into force in 2018. By 23 February 2018, EU member states had to transpose the Insurance Distribution Directive into national law. Among other things,

the new directive aims to ensure consumer protection when purchasing insurance products from an insurer directly as well as indirectly from an insurance intermediary. When designing new products, insurance companies are to review and take into account the needs of the customer and already at this stage determine a so-called target market for a product group. Product development processes shall be documented. Customers are to be better informed than hitherto through product information sheets (Bafin, 2021, incl. footnotes). In order to ensure the quality of the advice provided by an insurance intermediary, not only have further training obligations been in force in Germany since 2018, but there is also a general legal obligation to obtain a license. An insurance intermediary (insurance broker and insurance agent) requires this permit according to §34d paragraph 1 GewO if they wish to broker insurance or reinsurance contracts on a professional basis. The Chambers of Industry and Commerce at the location of the respective resident place of business of the insurance broker are responsible for issuing this permit requirement and the further permit requirements according to §34d paragraph 5 GewO (IHK, 2021).

Milanova (2018) in her dissertation: consumer behavior and decision making in the insurance industry, studied the strategy of decision making from different perspectives. One perspective is presented from the consumer's point of view in the context of consumer protection. One size does not fit all! Due to different consumer groups and their different requirements (e.g. financial literacy, information behavior), it can be assumed that one-size-fits-all regulation (as adopted in 2018) is ineffective.

2.1.10 Outlook into the Future with Behavioral Economics

To conclude this chapter, a study by the European Commission provides behavioral economics perspectives for further research approaches (European Commission, 2016). The aim of the study (Note 12) is to investigate and understand consumer decision-making in the non-life insurance market. The consumer should be able to make better decisions and not succumb to behavioral patterns such as systematic misjudgments of probabilities. The most important findings in the information consultation and purchasing process are, among other things, that information should be presented in a concise, eye-catching and user-friendly manner so that the consumer also deals with it. Consumers want pauses in the buying process to reflect on decisions and, if necessary, to be able to change them. This also includes the insurer, the contract and contract features. Consumers also rely on personal advice and also on comparison portals on the internet. These are supposed to be objective and impartial, but also independent and comprehensive.

This current study shows that Behavioral Economics and its explanatory approaches have continued to gain acceptance and are also being used by the European Commission. In the already mentioned study from 2008 by the vzbv (Reisch & Oehler 2008), there were also criticisms of the application of Behavioral Economics in the context of consumer policy. (Productivity Commission from Australia hosted a roundtable on "Behavioral Economics and Public Policy, August 8-9, 2007). Neoclassically oriented scientist such as J. Howard Beales (Beales, 2008) and Chris Field (Field, 2007) rejected the approach in the framework of a systematic repositioning of consumer policy. However, the scientists do make some concessions - consumer information and communication can be optimized.

2.2 Overview of Literature Sources

Table 1. Summary of Used Literature

Author	Topic	Book	Report	Journal Article	Website Article	Doctoral thesis
BaFin. (2021)	Versicherungsvertrieb				x	
Beales, J. H. (2008)	Consumer Protection and Behavioural Economics: To BE or not to BE?			x		
Bandering, M. (2006)	Versicherungen für den niedergelassenen Arzt: Die unabdingbaren Vier			x		
Barseghyan et al. (2011)	The Nature of Risk Preferences: Evidence from Insurance Choices			x		
Beck, H. (2014)	Behavioral economics: Eine Einführung	x				
Becker et al. (2020)	Behavioral science in insurance—Nudges improve decision making		x			
Bittner and Schwarz (2015)	Emotion Selling: Messbar mehr verkaufen durch neue Erkenntnisse der Neurokommunikation	x				
Browne et al. (2015).	Behavioral bias and the demand for bicycle and flood insurance			x		
Bundesanstalt für Finanzdienstleistungsaufsicht BaFin. (2021)	Die BaFin stellt sich vor				x	
Camerer, C. (1999)	Behavioral economics: Reunifying psychology and economics			x		
Camerer and Hogarth (1999)	The Effects of Financial Incentives in Experiments: A Review and Capital-Labor-Production Framework			x		
Consumers, Health, Agriculture and Food Executive Agency (2017)	Studie über die Entscheidungsfindung von Verbrauchern bei Versicherungsdienstleistungen: Eine verhaltensökonomische perspektive : Kurzfassung		x			

Author	Topic	Book	Report	Journal Article	Website Article	Doctoral thesis
Dekeulenaer et al. (2017)	Study on consumers' decision making in insurance services: A behavioural economics perspective : final report				x	
Dörner, D. (2000)	Die Logik des Mißlingens. Strategisches Denken	x				

	in komplexen Situationen				
Eckardt, M. (2007)	Insurance intermediation: An economic analysis of the information services market		x		
Enste and Hüther (2011)	Verhaltensökonomik und Ordnungspolitik: Zur Psychologie der Freiheit		x		
European Commission (2016)	STUDIE ÜBER DIE ENTSCHEIDUNGSFINDUNG VON VERBRAUCHERN BEI VERSICHERUNGSDIENSTLEISTUNGEN: EINE VERHALTENSÖKONOMISCHE PERSPEKTIVE				x
European Commission (2016)	Study on consumers'decision-making in insurance services: A behavioural economic perspective				x
Fehr, G. (2019)	Mit weniger mehr erreichen: Wie man einfache Regeln für komplexe Entscheidungen designt				x
Field, C., 2008,	Having One's Cake and Eating it Too – An Analysis of Behavioural Economics from a Consumer Policy Perspective				x
Gigerenzer, G. (2018)	The Bias Bias in Behavioral Economics. Review of Behavioral Economics			x	
Gigerenzer and Kober (2013)	Risiko wie man die richtigen Entscheidungen trifft	x			
Gigerenzer et al. (2002)	Bounded rationality: The adaptive toolbox	x			
Gigerenzer and Todd (1999)	Simple heuristics that make us smart		x		
IHK München und Oberbayern. (2021)	Gewerbeerlaubnisse Versicherungsvermittler/in und -berater/in				x
Jaspersen, J. G. (2016)	HYPOTHETICAL SURVEYS AND EXPERIMENTAL STUDIES OF INSURANCE DEMAND: A REVIEW			x	
Kahneman, D. (2016)	Schnelles Denken, langsames Denken	x			
Kahneman and Tversky (1979)	Prospect Theory: An analysis under decision under risk				
Kroeber-Riel and Gröppel-Klein (2019)	Konsumentenverhalten	x			
Kuckertz, W. (2016)	Privatkundenberatung zur Absicherung von Personen-, Sach- und Vermögensschäden	x			
Kunreuther and Pauly (2005)	Insurance Decision -Making and Market Behavior.		x		

	Foundations and Trends® in Microeconomics					
Kunreuther et al. (2013)	Insurance and Behavioral Economics: Improving Decisions in the Most Misunderstood Industry	x				
Laury, Susan. (2008)	Insurance Decisions for Low-Probability Losses		x			
Meffert et al. (2008)	Marketing: Grundlagen marktorientierter Unternehmensführung ; Konzepte, Instrumente, Praxisbeispiele	x				
Milanova. (2018)	Consumer behavior and decision making in the insurance industry					x
Oehler and Reisch (2009)	Zur Qualität der Finanzberatung von Privatanlegern: Probleme des Beratungsprozesses und Lösungsansätze.		x			
Pfister et al. (2017)	Die Psychologie der Entscheidung: Eine Einführung	x				
Reisch and Oehler (2008)	Behavioral Economics: Eine neue Grundlage für die Verbraucherpolitik?					
Richter et al. (2018)	Moderne Verhaltensökonomie in der Versicherungswirtschaft	x				
Roth, G. (2011)	Persönlichkeit, Entscheidung und Verhalten Warum es so schwierig ist, sich und andere zu ändern	x				
Schmidt, U. (2012)	Insurance Demand under Prospect Theory: A Graphical Analysis.			x		
Shanteau, J. (1992)	Decision Making under Risk: Applications to Insurance Purchasing					
Sydnor, J. (2010)	(Over) insuring Modest Risks		x			
Thaler, R. (1985)	Mental Accounting and Consumer Choice	x				
Thaler and Sunstein (2008)	Nudge: Improving decisions about health, wealth, and happiness.					
Verbraucherzentrale Bundesverband (2011)	Informationen sollen Verbrauchern die Entscheidung erleichtern				x	
Wiersich W. (2013)	Der Einfluss von Emotionen auf Versicherungsentscheidungen					x
Zweifel and Eisen (2000)	Versicherungsökonomie	x				

3. Result

The literature review examined 53 sources on the topic of decision making in general and on insurance demand and insurance contracts in particular. Decision making was embedded in the legal framework of insurance advice and brokerage in Germany to represent the current state of research.

The starting point is consumer behavior with the SOR model and the "why", i.e. why is a purchase made or not, or why is a decision made for or against the purchase. On the occasion of the further development of consumer behavior research in different scientific disciplines, psychology, brain research, economics and behavioral economics were examined more closely as a result of the process of decision making and conclusions were drawn. In the literature, many explanatory approaches to decision making can be found from behavioral economics, which have also been increasingly adopted in relation to insurance demand. These approaches dominate the sciences mentioned above. Behavioral economics attempts to reconcile the human image of psychology with the human image of economics and is seen as a reunion of both sciences (Beck, 2014, p.9). Brain research also provides findings that substantiate the statements of psychologists. Findings of Behavioral Economics also provide criticisms, Gigerenzer 2018, such as the overvaluation of biases (bias-bias), to look for biases where there are none. There were initial approaches and attempts at explanation based on Behavioral Economics as early as 2007 in the context of consumer policy and the Productivity Commission in Australia. At that time, the findings still reached the limits of applicability from the perspective of neoclassical scientists.

In Germany, too, Consumer Protection published a study on the applicability of behavioral economics in the context of consumer policy as early as 2008 (Reisch & Oehler, 2008, commissioned by the vbzb). Again, the criticisms already described were found, but with prospects of applicability for the European Commission on an EU basis. In 2017, the European Commission published a 177-page study specifically on consumer decision-making within the framework of Behavioral Economics extended to the whole of Europe. In the field of retirement planning and insurance, Richter et al. 2018 published a book with the findings of behavioral science research in the context of modern behavioral economics. The consensus of this book is to provide food for thought and a better understanding of customer preferences, customer needs, and demand decisions of policyholders.

Jaspersen (2015) evaluated 95 experiments and hyperthetic studies on insurance demand in his review. The focus was on the design aspect of the studies as well as the methodology. Due to the large number of findings, it is impossible to make a blanket statement at this point. However, it has been shown that expected results, such as the falsification of the expected utility theory in executed experiments, strongly depend on the design aspect. So that the result is not reversed.

4. Discussion

Overall, the literature review shows the current state of research in decision making and the finding that theories and approaches from behavioral economics dominate.

It has also been shown that studies and research exist in the area of insurance demand, but no further findings have currently been published in the professional group of physicians.

Outlook and conclusion for further research: The results of the literature review show that a fundamental approach to decision making in the context of BE exists and is already applied to the finance and - insurance industry.

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Notes

Note 1. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L:2016:026:TOC

Note 2. The Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht - BaFin) supervises banks, financial services providers, insurance undertakings and securities trading. The objective of financial supervision is to ensure the proper functioning, stability and integrity of the German financial market. About Us. (2021). Abgerufen am 18. Januar 2021, von https://www.en.gdv.de/en/about-us

Note 3. Author's translation: "The basic goal of consumer research is to understand and explain the behaviour of consumers and to derive recommendations for action to influence this very consumer behaviour".

Note 4. Author's translation: "Expected utility theory is the central theory in economics for determining human decision-making under uncertainty".

Note 5. Author's translation: "Various cognitive biases can have a massive influence on human decisions".

Note 6. Author's translation: "…tries to identify, describe and understand the actually observable behavioral patterns of people".

Note 7. www.roth-institute.de

Note 8. Author's translation: "Gigerenzer and colleagues have found that in many cases, 'heuristic decision making' based on a very narrow information base and applying very simple rules is as or almost as efficient as the most complex computational operations, but at the same time much faster and cheaper."

Note 9. The Federation of German Consumer Organisations - vzbv - is a non-governmental organisation acting as an umbrella for 42 German consumer associations. It represents the interests of consumers in public and vis- à-vis legislators, the private sector and civil society.

Note 10. Author's Translation: The central information problem of consumers is therefore summarized in the sentence: What consumers want to know, they can only know if they know what they ought to know.

Note 11. Author's translation: The qualification of the financial intermediary is thus determined - to put it simply - by the usability with regard to his services for the inquiring investment, insurance and/or loan customer.

Note 12. https://ec.europa.eu/newsroom/just/item-detail.cfm?item_id=117420