Crime, Law and Social Change (2020) 73:249–273
https://doi.org/10.1007/s10611-019-09857-2

Why do consumers perpetrate fraudulent behaviors in insurance?

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Published online: 2 September 2019

Abstract

Insurance fraud is an increasing problem with major financial, societal and humanitarian impact. Several disciplines have attempted to explain fraudulent behaviors in insurance perpetrated by consumers from economics to criminology and social psychology. Drawing on data from a national survey in Portugal, this study analyzed the levels of acceptance of and justifications underlying fraudulent behavior related to automobile, workplace accidents, and health insurance. Cluster analysis revealed two main groups of respondents with divergent positions: those who consider fraud unacceptable and unjustifiable vs. those who consider it normal and justifiable. A third cluster of respondents consider fraud generally unacceptable but justifiable when it attempts to restore justice. Results are discussed considering the importance of contractual, individual, relational as well as cultural and macrosocial factors in dealing with the complexity of consumers' unethical behavior. We argue for an integrated approach to research and prevention of consumer insurance fraud.

Keywords Customer ethics · Insurance fraud · Automobile insurance · Health insurance · Workplace accident insurance

Insurance fraud is not a new problem. However, in the last four decades the magnitude and impact of financial frauds, of which insurance fraud is one of the most important,

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have been expanding at alarming levels [1–3], greatly resulting from the ongoing process of globalization [4, 5].

Although it is almost impossible to determine the costs of insurance fraud precisely [6], the Coalition Against Insurance Fraud (CAIF) [7] estimates its losses of up to 80 billion of dollars a year, across all types of insurance, accounting for 5 to 10% of claims expenditure in the United States (US). Similar levels were estimated in Europe by Insurance Europe [8], with detected and undetected fraud representing up to 10% of all claims' costs. However, fraud costs are not only limited to claims' costs, but they also must consider costs with fraud prevention and investigation [5].

Insurers are not the only ones facing losses. Consumers are also affected by insurance fraud through increase of premiums [3, 9] and declining quality of products and services due to lengthy assistance, regular inspections or by diminishing risk protection. "Crash for cash"[1] frauds and fraudulent practices in health insurance frequently put people's lives in danger and infringe painful, invasive and unnecessary procedures [10–14]. As fraudulent behavior becomes widespread, fraud puts pressure on health and legal public services and erodes societal trust [3]. Thus, besides financial impacts, insurance fraud has also major societal and humanitarian impacts (cf. [10, 14]), contributing to deterioration of social relations based on trust and ethical values [5].

This matter has been widely discussed in the literature [9, 15–23]. In this article, we begin by summarizing the most relevant theoretical contributions in explaining consumer insurance fraud,[2] which have different implications for insurance fraud prevention and combat. Then, we present the results from a national survey in Portugal which analyzed acceptance and justification of fraudulent behavior in insurance. The main findings are discussed in terms of their implications for fraud prevention and combat, alluding to an integrative approach for the advancement of research on consumer insurance fraud.

Definition of Insurance Fraud

One of the obstacles pointed out for the measurement and deterrence of fraud, in general, and insurance fraud, in particular, is the absence of a consensual definition (e.g. [5, 14, 28–30]. Among the several definitions that have been proposed (for a review see, for example, [30]), this article endorses the one by Pimenta and Afonso [5], who defined insurance fraud as "any intentional act by persons, individual or collective, perpetrated with deception that causes, effectively or potentially, advantages for someone or damage to others and which violates either good social practices or the law" (p. 11) in an insurance matter.

It is well-known that insurance fraud comprises several situations: fraud committed by insurance costumers toward insurer companies or by insurer companies toward consumers; fraud perpetrated by intermediaries toward insurers and/or policyholders; fraud carried out by insurer employees with or without the collusion of others; fraud involving organized crime and gangs, etc. [3, 10, 11, 31]. The present analysis focuses on consumer insurance

[1] In "Crash for Cash" fraud scams, fraudsters intentionally crash into other vehicles (of an innocent victim or of another fraudster) or use a sledgehammer (or other instruments) to imitate the effects of a crash in order to submit false claims.

[2] It is beyond the scope of this paper to review theoretical developments in consumer ethics research in general or processes of decision making in ethical issues in business, however, whenever appropriate, references to them may be made (see, for instance: [22–27]).

fraud which refers to fraud perpetrated by ordinary consumers against insurance companies. According to Beals, DeLiema, and Deevy [32] taxonomy of fraud, this type of fraud falls into fraud against a non-governmental business committed by an external perpetrator.

Consumer insurance fraud may occur at any stage of the business exchange, from the insurance application, by omitting relevant information or misrepresenting facts, to "padding" or inflating genuine claims, exaggerating/building up injuries, inventing/staging accidents, submitting claims for injuries or losses that never took place, or even by collusion with insurers' employees or service providers [9, 11, 17, 30].

The literature on consumer insurance claims fraud distinguishes between *planned fraud,* when a claim is filed and no insured event occurred, and *opportunistic fraud,* when insured consumers attempt to profit from a real loss by misrepresenting the circumstances of the insured episode. Planned fraud is usually perpetrated by criminal organizations, not only with the goal of profiting at the expense of insurers but also for money laundering purposes, while opportunistic fraud is more common among the usually law-abiding individuals [9, 30, 33]. It is believed that opportunistic fraud is considerably more common than planned fraud [9, 30].

Public opinion on Insurance Fraud

Survey research has revealed that the levels of acceptance of consumer insurance fraud have been increasing, in line with the increase of prevalence of fraud (for a review, see, for instance, [14, 30, 34]).

A national survey in the US in 1997 commissioned by the CAIF indicated that 91% of the interviewed participants considered unethical behaviors padding a claim and 93% misrepresenting an incident to obtain coverage of a loss. The same questions asked a decade later using the same method showed an increase in acceptance of fraud, with the corresponding percentages dropping to 84% and 87%, respectively [35].

A study conducted in 2013 in the United Kingdom (UK) by ABI [36] showed that 95% of participants answered that making an exaggerated, false or inflated insurance claim should be classified as fraud, however, 42% admitted considering insurance fraud an easy way to "make a quick buck". In previous consumer surveys (e.g., [6]) 7%, 9% and 11% of the respondents in 2003, 2009 and 2008, respectively, admitted having made a fraudulent claim.

According to the 2010 European Social Survey database,[3] of the more than 52 thousand Europeans inquired, 84.4% answerer that to make an exaggerated or false insurance claim was wrong, but only 57.6% considered likely or very likely to be caught by doing so.

In sum, the public opinion research findings, in different countries, point out high levels of tolerance and perceived prevalence of fraud in insurance.

Theoretical approaches

Several disciplines have contributed to the understanding of the different determinants of unethical consumer behavior in insurance, for example economics, business, ethics,

[3] ESS Round 5: European Social Survey Round 5 Data (2010). Data file edition 3.4. NSD - Norwegian Centre for Research Data, Norway – Data Archive and distributor of ESS data for ESS ERIC. doi:https://doi.org/10.21338/NSD-ESS5-2010.

sociology, law, psychology, philosophy, marketing, political science, criminology, and semiology (cf. [9, 15–22, 37]).

Building on the systematization work advanced by Tennyson [9], further developed by Lesch and Brinkmann [17][4] it is possible, in our opinion, to consider four not mutually exclusive and strongly interrelated theoretical and conceptual approaches to insurance fraud, each of them pointing out to different but complementary approaches to understand and combat fraud: a) the economic-contractual; b) the individual psychological; c) the relational psycho-sociological; and d) the cultural and macrosocial. Here, we explore each of them with the support of the diagram presented in Fig. 1.

Economic-contractual approaches

The economic-contractual approach sees insurance fraud as an economic response to the contractual relationship between insurer and policyholders, and it is analyzed on the basis of the theories of moral hazard [9]. Moral hazard may be conceived as the tendency of an agent (the insured), to change his/her behavior when the cost of that behavior will be borne by others (the insurer; cf. [38]). For example, in opportunistic insurance fraud, insured consumers may take advantage of an accident by exaggerating the amount of loss claimed or by presenting fictitious claims [39]. The decision to file a fraudulent insurance claim is based on the expected gains in relation to its perceived costs, i.e. the size of the penalties from an unsuccessful claim and the probability of detection (cf. [9, 39], see also [40]). Thus, consumers perceive insurance fraud as low opportunity cost, being driven by principles of efficiency and gain to the detriment of axiological references. Some authors [37, 41], delineate the specificities of insurance contracts that are more prone to fraud.

From this perspective, consumer insurance fraud is perceived as a risk intrinsic to the insurance business [9] making all applications and claims to be under suspicion. The adequate response to fraud is therefore the deterrence through claims investigation [9, 17].

Individual psychological approaches

The economic model of balancing financial gain/loss with the possibility of detection or penalties overlaps with the individual psychological approaches insofar as individuals are motivated to maximize self-interest [17]. However, the psychological approaches also take other motivations and psychological determinants into account.

Personality traits such as risk aversion/propensity, levels of moral development, self-control, or personal values [17, 22, 42–44] are powerful individual determinants of behavior. In a study analyzing different scenarios of dishonesty in insurance, Brinkmann [42] found that the willingness to misrepresent facts to obtain insurance coverage and/or to deliberately exaggerating an insurance claim was related to the level of morality of individuals (see also the author's discussion about egoism, utilitarianism, and relativism).

Other studies also show a positive association between acceptance of insurance fraud and fraudulent claiming [9, 19, 45], although positive attitudes are only necessary but not sufficient conditions for behavior to occur [46, 47]. Moreover, attitudes toward

[4] Building on the moral-sociological, moral-psychological, and contractual-economic approaches proposed by Tennyson [9], Lesch and Brinkmann [17] added two more: social construction and customer as co-creator.

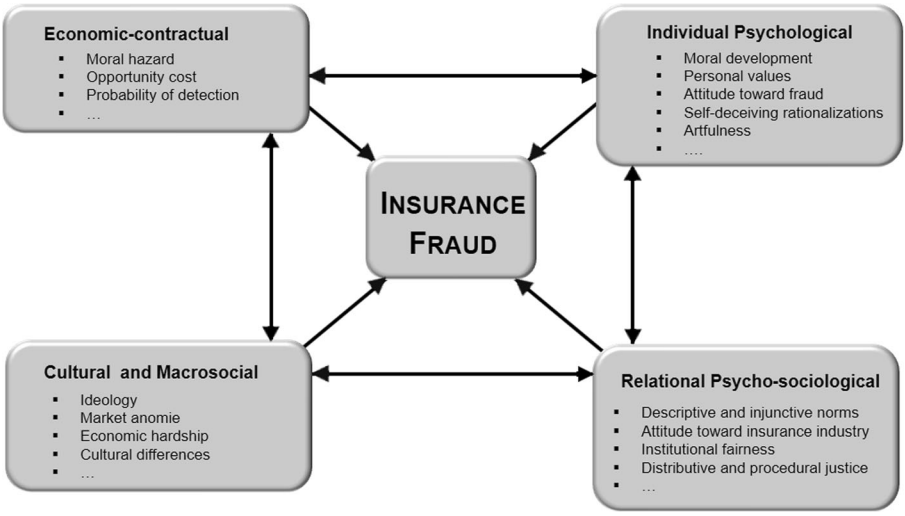

Fig. 1 Theoretical approaches

fraud vary with sociodemographic, cultural or institutional characteristics (e.g. [19, 20, 34, 48, 49]).

The link between attitude and behavior can go in both directions, as consumers who see themselves as ethical allow themselves to behave unethically in some circumstances through cognitive techniques such as rationalizations or neutralization[5] [9, 17, 42, 51, 55]. For instance, the CAIF study revealed that more than half of the respondents believed that insurance fraud was a "victimless" crime [35, 56]. In a study about automobile insurance fraud in Portugal, Maio [57] found a similar percentage (45.2%) of respondents thinking the same.

In a more extreme view, fraudulent acts may even not be seen as fraud but as an astute way of reducing insurance costs, a "smart way of going about it" ([58], p. 6), or as an "artfulness" in the presence of legislative confusion and impunity (Gonçalves, 2013, as cited in [59], p. 613).

Strategies to combat fraud should therefore focus on reminding consumers of their standards for honesty and on challenging rationalization techniques, for example, by stressing insurance fraud "victims", the consequences of fraud and insured consumers' responsibility ([9], see also [42], about the importance of entailing a differential approach to honest and dishonest customers).

Relational psycho-sociological approaches

The psycho-sociological approaches emphasize the role of social relations and social norms in fraudulent behavior. Social psychology theories have highlighted the inconsistency between individual attitudes and behaviors to stress the importance of context and social

[5] Other cognitive techniques have been showed to be linked to unethical behavior: moral re-construal, euphemistic labelling, advantageous comparisons, displacement, diffusion or denial of responsibility, attribution of blame, moral disengagement, disregard or distortion of consequences, dehumanization, denial of injury or of the victim, appeal to higher "loyalties" or "condemning the condemners" [22, 42, 44, 50–54].

influence [60]. Social norms have been proven to be a concept more useful than individual attitudes to explain that behaviors are regulated by social influence. Social norms have been broadly operationalized through their des*criptive* aspect, that considers what *most people do,* and *injunctive* aspect that prescribes what *ought to be* done, what constitutes morally approved and disapproved behavior [61]. Perceiving insurance fraud as common or accepted by others in their social groups, contributes to view fraud as an acceptable behavior and to raise the likelihood of enacting a fraudulent behavior [9, 18].

Using data from the European Social Survey, Lopes [18] suggested that in countries where not only injunctive but also descriptive norms prevent deviance from ethical behavior, fraudulent behaviors are driven by feelings of economic hardship. On the contrary, in countries where fraudulent behavior is more generalized, opportunity plays a determinant role in facilitating fraudulent behavior.

Several studies have also shown that more accepting attitudes toward fraud tend to be reported by consumers with negative views of insurance institutions [9, 19, 20, 35, 42, 56], suggesting the relevance of consumer-insurer trust relationship and perceived institutional fairness [9, 19, 21]. Fukukawa [15] defined perceived unfairness as "the extent to which an actor is motivated to redress an imbalance between firms and costumers, that is perceived as unfair" (p. 105). Justice judgments refer not only to resources allocation - *distributive justice* - but also to the process leading to such distributions - *procedural justice* [62, 63]. Consumers who feel that insurance companies treat them unfairly (procedural justice) or who consider that insurers have disproportionate profits or determine premiums unfairly (distributive justice) tend to be more tolerant to insurance fraud [9, 19, 21]. Several studies (cf. [21, 64]) have shown that perceived fairness increase people's trust and loyalty in business relations while unfair treatment or outcomes lead to customer dissatisfaction, shift, revenge and intention to engage in ethically questionable behaviors [15, 50]. A survey conducted by Accenture in 2004 found that 32% of respondents in the US considered that people commit insurance fraud because they pay too much [30]. In the studies commissioned by CAIF [35, 56] about 40% of respondents in the US believed that if insurers treated policyholders with more respect they would not lie so much. This proportion reached 76.7% in the study conducted by Maio [57] in a Portuguese sample.

Lesch and Brinkmann [17] analyzed the characteristics of the insurer-insured relationship to determine what may contribute to the perceived unfairness, stressing the gap between expectations and behavior present in both parts: consumers buy a service that they do not fully understand because they choose by comparing price or on the basis of insurers "sales stories"; insurance companies view customers as unreliable to manage their risks and in some cases may fail to fully disclose their obligations and their rights.

The results of qualitative studies conducted with insurance fraud investigators supported this interpretation: insurers' publicity of high profits, high salaries, and company perks contribute to the negative attitudes toward the industry by consumers. Perceiving insurers as "big and bad" ([14], p. 99) justifies that "it is perfectly acceptable to rip them off" (p. 99). On the other hand, as insurers tend to consider fraud as an intrinsic cost of doing business, they frequently do not prosecute all possible fraudulent claims, contributing to the perception of low risk of being caught and the lack of clarity about insurance fraud.

Understanding insurance fraud from a psycho-sociological perspective implies that efforts to address insurance fraud include strategies to enhance trust between insurance

companies and consumers and to improve the opinion about the insurance industry to reduce the perceived prevalence and acceptability of fraud [9, 15], see also [3, 17].

Cultural and macrosocial approaches

Research has also shown the relevance of ideological, cultural and macrosocial factors. For Karstedt and Farrall [64], consumers' insurance fraud falls into a category of acts defined within a grey zone of legality and morality. They consider these crimes of everyday life the result of the cultural changes associated to the transition to neo-liberal economies in the twentieth century, characterized by economic models of behavior regulated by self-interest and profit seeking. These values are not specific of the economic sphere, as they have spread to other sectors and vital institutions of society. The emergence of a "syndrome of market anomie" may explain according to these authors the willingness of consumers to engage in unethical practices in the marketplace.[6] The syndrome of market anomie is characterized by a *lack of trust* in businesses and others in general; *fear of becoming a victim* of others' unrestrained self-interest pursuits, accompanied by feelings of insecurity and vulnerability; and *legal cynicism,* when legal norms are perceived as having no validity for themselves and others ([64]; see also [67]). Based on data from the 2004 European Social Survey, Karstedt [68] found out that the higher the perception that businesses are only concerned with profits, the higher the fear of being treated dishonestly, and the lower the commitment to legal norms.

The impact of macroeconomic factors such as economic hardship on the willingness of consumers to engage in fraudulent behavior is not clear. Some authors consider that economic crises aggravate fraud [2, 69] due to economic/financial pressures on individuals, increased opportunity to mischief, and stronger reasons for rationalization [11]. These three factors are the elements of the fraud triangle [70].

In a study conducted by Skiba and Disch [14], individuals who have lost their job or have suffer a loss in their salary tended to refer to insurance fraud as an income generator. Similarly, cheating was also viewed as more acceptable in times of economic hardship. Some authors suggest that the spread of fraudulent behavior may result simply from an increase of reported cases of fraud, when, for instance, a bereaved worker becomes a whistle-blower as a result of staff cutbacks ([71], see also [72]).

Some authors also mention the interaction between cultural and economic factors. For example, Lopes [18] showed with data from the 2004 European Social Survey that when economies grow faster the conditions for consumer fraud to arise are maximized, specifically linked to new opportunities for fraud as people interact more with the market. However, this mechanism applies only to countries whose gross domestic product (GDP) stands above the European average. In countries with GDP below the European average, cultural factors related to economic morality and religiosity play an important role in fraud deterrence.

According to this approach, insurance fraud deterrence should be framed into the broader macroeconomic and cultural context in which fraud occurs, considering cultural values, institutional and welfare regimes and how these interact with social and individual factors.

[6] For a recent discussion about anomie and crime see DiCristina [65]. See also Merton's work [66] about criminal behavior as an innovative response to the failure in attaining monetary success through institutional norms.

Several authors suggested integrated approaches, for example, the general process model of ethical decision making proposed by Hunt and Vitell [25, 26] and the further developments of Ajzen's [46] Theory of Planned Behavior (e.g. [50, 73, 74]), that consider individual, relational and cultural factors in explaining unethical behavior in insurance. The different approaches that stress different levels of determinants to explain insured consumers' unethical behavior are not mutually exclusive. They provide complementary and interrelated explanations for consumers' fraudulent behavior.

Consumers' positions in relation to Insurance Fraud

Some studies (see Table 1 for a resume) have demonstrated that the general public is not all alike and that different positions toward insurance fraud may be found.

Thus, the studies conducted by CAIF [35, 56] identified four different positions based on the level of acceptance of fraudulent behavior sustained by the reasons that justify such behavior and the penalty sanctioned against the defrauders. The *critics*, holding the most lenient attitude to fraud, justified fraudulent behavior on the basis of the insurers' unfairness, defending little or no penalties for fraudsters; The *conformists*, who also expressed high tolerance to fraud, believed that this was a common practice and

Table 1 Studies concerning consumers' positions in relation to insurance fraud

Authors	Clusters	Measures for cluster analysis	Country sample
CAIF [35, 56]	Moralists Realists Conformists Critics	Acceptance of fraudulent behavior Reasons that justify behavior Penalty against defrauders	US
Brinkmann and Lentz [75]	Moralists Realists Conformists Critics	Acceptance of fraudulent behavior Reasons that justify behavior Penalty against defrauders	Norway and Germany
Dehghanpour and Rezvani [43]	Non-conservatives Self-protectionists Socially focused Hedonist	Attitude toward insurance fraud Values Degree of religiosity Life satisfaction Demographic variables	European Social Survey Round 5 Data (2010)
Babakus et al. [48]	Puritans Realists Indifferents Tolerants Cynicals	Attitude toward unethical consumer behavior	Austria, Brunei, France, Hong Kong, the UK, and the US
Alalehto and Larsson [45]	Condemners Conformists Partly intolerants Pragmatists Liberals	Attitudes toward tax fraud, insurance fraud and bribery	Sweden, Germany, Spain, and the UK, from the European Social Survey Round 2 Data (2004)

defended only a moderate punishment; The *realists* had low tolerance to fraud but considered that some fraudulent behaviors were justifiable thus, did not advocate a tough punishment; and finally the *moralists* the less tolerant to fraud, who believed that there was no possible justification for fraud and advocated severe punishment for defrauders. These same four types of positions derived from a sample in the US were also found in samples from Norway and Germany by Brinkmann and Lentz [75] but with different prevalence. These four positions were showed to be associated with individuals' experience with insurance industry: The critics had more experience with claims and some experience with fraudulent behavior within their network compared to the other three clusters (94% of the Norwegian and 71% of the German samples).

A different study, conducted by Dehghanpour and Rezvani [43] with data from the 2011 European Social Survey, identified four groups of consumers within respondents who had reported exaggerated or false insurance claims at least once in the past five years. These groups were established on the basis of the respondents' values (Schwartz values' scale), attitudes toward insurance fraud, and demographic variables. Only one of the four identified groups considered that insurance fraud was not wrong at all – the *hedonists*. This group of respondents reported the highest frequency of fraudulent behavior and underestimated the probability of detection, presenting the highest level of the value hedonism and the lowest level of religiosity. The other three groups considered insurance fraud somewhat wrong even though they may have occasionally engaged in such a behavior in the past. Similarly to hedonists, the *non-conservatives* underestimated the probability of being caught but in contrast, they were the most religious group. They manifested low scores of values such as security, confidence, and tradition. The *self-protectionists,* also being the least religious*,* identified the highest probability of detection and punishment, with universalism, hedonism, and benevolence being least endorsed values. Finally, the *socially focused* individuals witnessed the lowest probability of detection and punishment but reported the highest levels of universalism, benevolence, security, conformity, and tradition.

Babakus et al. [48] examined the individual tolerance for unethical consumer behavior based on scenarios that included insurance fraud (reporting a lost item as stolen in order to collect insurance money) using sample data from Austria, Brunei, France, Hong Kong, the UK, and the US. The authors identified five clusters of respondents, from less favorable responses to unethical behavior (*puritans*) to more favorable (*cynicals*), being the other three intermediary positions (*realists*, *indifferents* and *tolerants*). Results show differences according to nationality, age and religion, with interaction effects between nationality and age: younger consumers from the UK, France and the US hold more favorable views of unethical consumer behavior while older consumers in Austria hold those views.

Alalehto and Larsson [45] analyzed the correlation between attitudes toward three categories of white-collar crime (tax fraud, insurance fraud and bribery) and self-reported white-collar crime in Sweden, the UK, Germany and Spain. The authors identified five clusters of respondents: *condemners* (condemn seriously all crime categories); *conformists* (condemn insurance fraud and bribery but not tax fraud); *partly intolerants* (similar to the conformists except that they condemn these types of crime to a substantially greater extent than the conformists); *pragmatists* (condemn bribery but not tax and insurance fraud); *liberals* (have the most tolerant attitude to all crime categories). Although the size of the different clusters varied between countries, the authors found that people with

more liberal attitudes toward white-collar crime have higher probability of committing crime than people with condemning attitudes across all countries. Age was a determinant of cluster membership but socio-demographic profiles of fraudsters are country specific.

These studies show how societal contexts influence attitudes and behaviors and how individual, group level and relational explanations co-exist within the same society.

Current study

The objective of this study is to advance the knowledge about public perception of consumer insurance fraud in a Portuguese sample, by identifying different positions in relation to fraud, using data from a country-wide representative survey on insurance fraud using face to face interviews (for a full description of the study see [76]). We borrowed the methodology by CAIF [35, 56] to identify groups of respondents based on their acceptance of fraudulent behaviors in automobile, workplace accident and health insurance, sustained by particular justifications of such behaviors. We also examined group differences in relation to their opinions about and contact with insurance companies and their socioeconomic background. The results are discussed considering the implications for fraud prevention and combat and for future directions for research.

Method

Participants

Participants in the survey were 1001 adults living in Continental Portugal, with ages between 18 and 65. Only questionnaires with at least 90% of the questions answered were considered for this study. Of the 1001 respondents, 627 fulfilled the criteria, being 319 men and 308 women (Men age: $M = 41.70$, $SD = 12.72$; Women age: $M = 41.68$, $SD = 12.39$). Regarding the professional situation, more than half were employees (53.7%), 20.4% were unemployed, 11.2% were self-employed, 6.5% were retired, 4.9% were housewives and 3.2% were students. The majority (75%) owned one or more insurance policy (85% automobile, 46% home, 29% workplace accident, 27% health and 22% life insurance).

Questionnaire and procedure

The data collection was handled by a well-established opinion research institute in Portugal (GFK Metris) with fieldwork conducted between the 6th and the 16th of March, 2015. The potential participants were contacted in person at their homes by a trained interviewer and were invited to answer a questionnaire about insurance. After acknowledging the anonymity and confidentiality of the research process, informed consent was obtained from the respondents.

The questionnaire consisted of 52 closed or semi-closed questions, organized into four sections: i) opinions about insurance companies; ii) fraudulent behaviors against insurance companies; iii) commercial relation with insurance companies; iv) socio-demographic data (for a full description of the instrument see [76]). All questions were

adapted from existing questionnaires about insurance fraud (e.g. [6, 9, 21, 35, 56, 57, 75, 77–81] or designed based on external communication documents and practical experience of the insurance companies.

Measures

Opinions about insurance companies

Participants were asked to rate their opinion about insurance companies on a scale from 1 = *totally negative* to 7 = *totally positive* and their trust in insurance companies on a scale from 1 = *total distrust* to 7 = *total trust*. The ratings of these two items were averaged by respondent to provide a reliable scale of attitudes toward insurance companies (the correlation coefficient between the two items is r (627) = .87).

The participants were also asked to give their opinion on nine statements about insurance companies on a seven-point scale from 1 = *strongly disagree* to 7 = *strongly agree*. The principal component factor analysis (PCA) with *varimax* rotation performed on those items extracted three dimensions explaining 75.7% of the total variance. Table 2 presents the configuration of the components, the percentages of variance explained by each component, as well as the internal consistency, measured by Cronbach's alpha, of the sub-scales constructed from the factorial solution.

The first component, which explained 34.6% of the variance, reflected an idea of integrity, availability, and consideration of insurance companies and the transparency, fairness, quality, and efficiency of the service provided by said companies. The second component, which covered negative perceptions about prices, profit and process of claim regularization, explained 23.7% of the variance. Finally, the third component, which explained 17.5% of the variance, pointed to the importance of the service provided by insurance companies to society, namely the increased security and tranquility in people's lives.

Fraudulent behaviors in insurance and reasons for carrying out such behaviors

Participants were then asked to assess the acceptability of 32 fraudulent behaviors in insurance (11 behaviors in automobile insurance, 11 behaviors in workplace accident insurance and 10 behaviors in health insurance) using a six-point scale ranging from 1 = *totally unacceptable* to 6 = *totally acceptable*. The behaviors were presented as plausible situations of insurance claims with actions such as omitting or distorting facts on an insurance application, "padding" or building up actual claims, submitting claims for accidents, injuries or damages that did not occur, "staging" accidents, falsifying receipts, not disclosing prior damage, or making agreements with service providers to obtain undeserved money or other benefits. In this study, acceptance ratings were averaged across insurance sectors to form reliable scales: acceptance of fraudulent behavior in automobile insurance (Cronbach's alpha = .92), acceptance of fraudulent behavior in workplace accident insurance (Cronbach's alpha = .94), and acceptance of fraudulent behavior in health insurance (Cronbach's alpha = .95).

For each set of fraudulent behaviors, which were presented through a counterbalanced design, participants were asked to give their opinion on a scale from 1 = *totally disagree* to 7 = *totally agree* about 10 reasons generally evoked by people to justify the adoption of such behaviors. The principal component analysis with *varimax*

Table 2 Opinion on insurance companies

	Components			*M (SD)*
	1 34.60% $\alpha = .89$	2 23.67% $\alpha = .79$	3 17.47% $\alpha = .76$	
Integrity and quality of service				
Insurance companies are honest.	**0.89**	−0.12	0.13	4.09 (1.41)
Insurance companies provide a transparent and fair service.	**0.87**	−0.05	0.18	4.00 (1.47)
Insurance companies provide a service efficient and of quality.	**0.81**	−0.03	0.31	4.34 (1.32)
Insurance companies are helpful, supportive and have consideration and respect for the insured.	**0.77**	−0.08	0.31	4.18 (1.49)
				4.15 (1.24)
Own benefit/profit				
Insurance companies charge/practice very expensive prices.	−0.00	**0.85**	−0.09	5.87 (1.23)
For insurance companies, when it comes to sell, everything is simple, when it comes to pay, everything is difficult.	−0.10	**0.83**	0.06	5.72 (1.41)
Insurance companies get exaggerated profits at the expense of the insured.	−.08	**.83**	.15	5.82 (1.26)
				5.80 (1.09)
Utility and purpose				
Insurance companies provide a service that is essential to society.	0.27	0.08	**0.88**	5.06 (1.43)
Insurance companies help people to live safer and secure.	0.48	0.07	**0.73**	4.85 (1.45)
				4.95 (1.29)

Factor solution, mean (M) and standard deviation (SD) of items, 1 = totally disagree; 7 = totally agree; Highest loadings for each item in bold

rotation performed on these items extracted five dimensions explaining 65.3% of the total variance (see Table 3).

Contact with insurance companies, economic situation and sociodemographic data

Participants were also asked about their previous experience with insurance companies (e.g. number and type of insurance policies and coverage held, claims, and satisfaction with insurance companies); the satisfaction with their present economic situation and its evolution in the past 5 years; and sociodemographic data, namely sex, age group, marital status and economic status. Characteristics concerning residence area were also collected.

Figure 2 presents the measures according to their association with the theoretical approaches. It should be noted that the composed measure *Victimless crime socially acceptable,* occupies an intermediary position between the individual psychological and the psycho-sociological approaches, as this item results from the aggregation of the

three items loading on the second component of the factor solution obtained for the reasons for carrying out fraudulent behaviors in insurance (see, Table 3).

Data analysis

Descriptive statistics (means, standard deviations, medians, skewness and kurtosis) were calculated for all questions. Missing answers were replaced by group means defined by a combination of sex and professional occupation.[7] Following the procedures proposed by Tabachnick and Fidell [83], the influence of outliers was reduced by altering extreme values and the assumptions of normality and homogeneity of variances across groups were assessed.

In order to identify groups of participants that were similar in terms of their acceptance of fraud in insurance and the reasons that explain such behaviors, we performed a hierarchical cluster analysis using Ward's method to measure the squared Euclidean distance. The decision on the number of clusters was taken from the dendrogram produced. The inclusion of the subjects in each cluster was obtained with the application of the non-hierarchical procedure K-Means.

To assess the differences between clusters, several one-way analyses of variance were computed considering the cluster membership as the independent variable and using post hoc *LSD* tests for multiple comparisons whenever significant effects were found. In the case of violation of the assumption of homogeneity of variances, we performed the Welch correction and the Games-Howell test to assess differences between groups.

Chi-square tests were also performed in order to check whether cluster membership was independent from socio-demographic variables.

All statistical analyses were performed using the IBM SPSS Statistics software v. 21.

Results

The dendrogram produced by the hierarchical cluster analysis suggested the retention of three clusters. Table 4 presents the number of respondents classified in each cluster, obtained through the application of the method k-means cluster ($k = 3$), as well as the means and standard deviations for each variable.

Table 4 shows that the clusters of participants differ in their acceptance of fraudulent behaviors and in the degree of agreement with the reasons that justify such behaviors. Larger effect sizes were found for tolerance to fraud and procedural and distributive justice motives. The participants included in the second cluster differ from those included in the first and third cluster by presenting the highest degree of tolerance to fraudulent behavior. They are also the most likely to consider that insurance fraud does not hurt anyone and that it is a normal behavior accepted by society. They also expressed less disagreement with artfulness and the highest openness to partake in fraudulent behaviors. On the contrary, the respondents included in the third cluster differ from the

[7] Several studies have reported differences regarding ethical issues in insurance according to sociodemographic characteristics, namely sex [19, 20, 34, 56, 57, 82], age [19, 82], occupation [19, 82], education [19, 56], income [20, 56], etc. Since considering all combinations of categories would be extremely complex, sex and professional occupation were chosen considering the results of main empirical studies.

Table 3 Reasons for carrying out fraudulent behaviors in insurance

	Type of insurance	Components					
		1 17.95% $\alpha = .91$	2 17.35% $\alpha = .91$	3 11.31% $\alpha = .86$	4 10.74% $\alpha = .87$	5 7.91% $\alpha = .85$	*M (SD)*
Distributive and procedural justice							
If insurance companies treated consumers with more respect these behaviors would not happen.	AI	**0.81**	0.08	0.05	0.10	0.09	4.33 (1.81)
	HI	**0.80**	0.12	0.06	0.11	0.10	4.19 (1.86)
	WAI	**0.77**	0.10	−0.07	0.14	0.24	4.29 (1.83)
Insurance companies are always finding easons for not paying compensation.	AI	**0.76**	−0.13	0.12	0.16	0.07	4.92 (1.79)
	HI	**0.75**	−0.11	0.17	0.15	0.14	4.83 (1.84)
	WAI	**0.74**	−0.14	0.09	0.12	0.23	4.81 (1.81)
With these behaviors people only seek to recover in a fair way what they have already paid.	AI	**0.70**	0.36	0.19	−0.03	−0.10	3.89 (1.72)
	HI	**0.66**	0.42	0.20	0.01	−0.05	3.76 (1.77)
	WAI	**0.65**	0.38	0.09	−0.03	0.06	3.85 (1.70)
Victimless crime socially acceptable							
These behaviors do no harm anyone, do not hurt anyone.	AI	0.02	**0.76**	0.24	0.01	0.11	2.66 (1.54)
	HI	−0.01	**0.74**	0.27	0.05	0.18	2.70 (1.52)
	WAI	−0.02	**0.73**	0.22	0.04	0.25	2.69 (1.54)
These are normal behaviors that society accepts.	HI	0.11	**0.68**	0.08	0.43	0.11	3.20 (1.68)
	AI	0.14	**0.67**	0.13	0.39	0.07	3.19 (1.62)
	WAI	0.12	**0.66**	0.08	0.38	0.20	3.27 (1.64)
Almost nobody tells the whole truth on their insurance applications.	AI	0.20	**0.54**	0.23	0.34	0.06	3.54 (1.65)
	WAI	0.21	**0.51**	0.11	0.35	0.34	3.58 (1.65)
	HI	0.19	**0.47**	0.26	0.39	0.22	3.56 (1.69)

Table 3 (continued)

	Type of insurance	Components					
		1 17.95% α = .91	2 17.35% α = .91	3 11.31% α = .86	4 10.74% α = .87	5 7.91% α = .85	*M (SD)*
Artfulness							
Who adopts these behaviors is smart.	AI	0.23	0.08	**0.74**	0.27	0.04	3.12 (1.67)
	HI	0.20	0.14	**0.72**	0.24	0.18	3.14 (1.73)
	WAI	0.17	0.12	**0.68**	0.20	0.25	3.17 (1.73)
I see no problem with these behaviors, I could adopt some of them myself. If everybody does it, I do it too.	AI	0.05	0.39	**0.68**	−0.04	0.02	2.26 (1.38)
	HI	0.02	0.48	**0.65**	−0.07	0.09	2.24 (1.40)
	WAI	0.03	0.47	**0.61**	−0.08	0.17	2.31 (1.43)
Transfer of fraud costs /entitlement							
Insurance rates are based on the assumption that these behaviors happen.	HI	0.12	0.17	0.06	**0.82**	0.11	3.99 (1.80)
	WAI	0.11	0.15	0.09	**0.81**	0.20	4.06 (1.85)
	AI	0.14	0.18	0.14	**0.81**	0.06	4.04 (1.83)
Low risk of detection and punishment							
The possibility of discovering that such behaviors happen is low, but in case of being caught, the worst that can happen is to have to return the money received.	WAI	0.16	0.26	0.12	0.15	**0.82**	3.54 (1.74)
	HI	0.16	0.25	0.23	0.17	**0.73**	3.54 (1.76)
	AI	0.26	0.23	0.19	0.14	**0.70**	3.62 (1.70)

Factor solution, mean (M) and standard deviation (SD) of items, 1 = totally disagree; 7 = totally agree: Highest loadings for each item in bold

AI – automobile insurance; HI – health insurance; WAI - workplace accident insurance

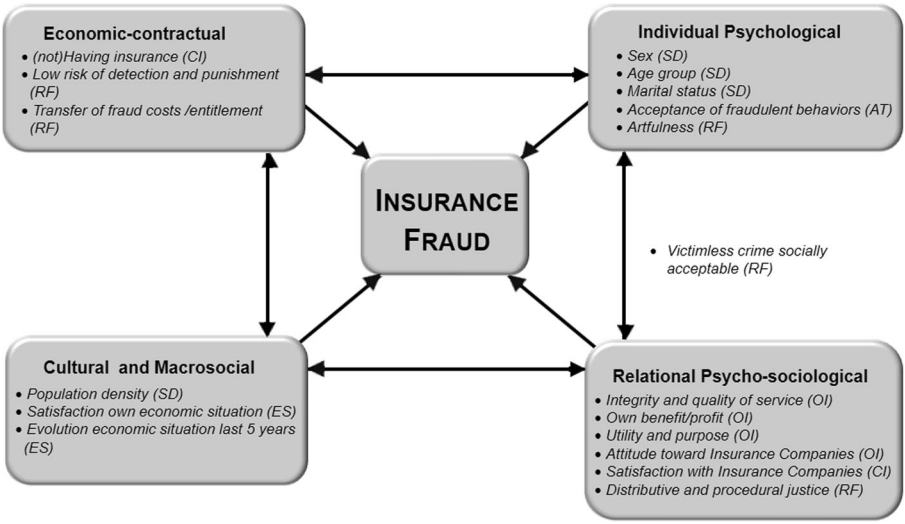

Fig. 2 Measures according to the theoretical approaches. Note: RF – reasons for fraud; CI – contact with insurance; AT – attitude toward fraud; SD – sociodemographic data; OI – opinion on insurers; ES – economic situation

Table 4 Positions in relation to insurance fraud. Means and standard deviations (in parentheses)

	1 Fraud unacceptable but that may occur to restore justice ($n = 255$) 40.7%	2 Fraud normal and deserved ($n = 183$) 29.2%	3 Fraud unacceptable and unjustifiable ($n = 189$) 30.1%	Total N=627	F	η^2
Acceptance of fraudulent behavior in automobile insurance	1.47a (0.51)	3.01b (0.75)	1.53a (0.59)	1.94 (0.92)	305.63***	.56
Acceptance of fraudulent behavior in workplace accident insurance	1.47a (0.52)	2.79b (0.71)	1.50a (0.57)	1.86 (0.84)	254.76***	.50
Acceptance of fraudulent behavior in health insurance	1.38a (0.46)	2.71b (0.71)	1.39a (0.52)	1.77 (0.82)	266.03***	.54
Distributive and procedural justice	5.19a (0.92)	4.57b (0.97)	2.89c (1.04)	4.32 (1.37)	312.50***	.50
Victimless crime socially accepted	3.29a (1.08)	4.05b (0.91)	2.10c (0.79)	3.16 (1.22)	253.08***	.39
Artfulness	2.87a (1.12)	3.47b (1.03)	1.74c (0.68)	2.70 (1.19)	209.75***	.33
Transfer of fraud costs	4.66a (1.64)	4.19b (1.22)	3.01c (1.48)	4.03 (1.63)	65.11***	.18
Low risk of detection and punishment	4.06a (1.55)	4.21a (0.97)	2.28b (1.06)	3.57 (1.52)	190.34***	.31

Different letters on different lines indicate significantly different means

*$p \leq 0.05$; **: $p \leq 0.01$; ***: $p \leq 0.001$

other respondents by expressing the highest disagreement with all the reasons presented. For these participants, insurance fraud is unacceptable and unjustifiable.

The participants included in cluster 1 differ from the other two on their justification of insurance fraud for procedural and distributive justice reasons; they believe that insurers treat people with little respect and are always finding reasons not to pay for the indemnities. Thus, although they consider fraud to be unacceptable, they sustain that such behaviors may be justifiable to re-establish justice. They are also those with stronger beliefs that the price of insurance is calculated by taking the risk of fraud, i.e. that insurance companies transfer the costs of fraud to consumers. Respondents who consider fraud justifiable (clusters 1 and 2) also believe more than others that people commit fraud because the risk of detection and the severity of the penalty are not very high.

One-way analysis of variance (ANOVA) were also performed on the scales concerning opinions about insurance companies and items regarding the contact with insurance. Results presented in Fig. 3 show that respondents who consider fraud justifiable (cluster 1 and cluster 2) have a less positive attitude toward insurance companies than the respondents of cluster 3, $F\ (2,\ 624) = 9.86$, $p < .001$, $\eta^2 = .03$. The means differences are statistically significant according to *LSD test for multiple comparisons*, $p < .05$. Respondents in cluster 1 and 2 also present a higher level of distrust toward insurance companies and believe to a lesser degree that these are honest organizations that provide a transparent, fair, and good service, $F\ (2,\ 404.58) = 8.34$, $p < .001$, $\eta^2 = .02$. The means differ significantly ($p < .05$) according to *Games-Howell test for multiple comparisons*. Respondents who consider fraud unacceptable (cluster 1 and cluster 3) agree more than respondents of cluster 2, that insurance companies provide an essential service to society by helping people to live safer and more secure, $F\ (2,\ 624) = 12.64$, $p < .001$, $\eta^2 = .04$, with means differing significantly ($p < .05$) according to *LSD test for multiple comparisons*. Respondents who consider fraud to be unacceptable however justifiable to attain fairness (cluster 1), are those who believe the most that insurance companies act for their own benefit, $F\ (2,\ 378.31) = 33.58$, $p < .001$, $\eta^2 = .09$, with means differing significantly ($p < .05$) according to *Games-Howell test for multiple comparisons*. Finally, respondents who consider fraud to be unacceptable and unjustifiable (cluster 3), are the most satisfied with insurance

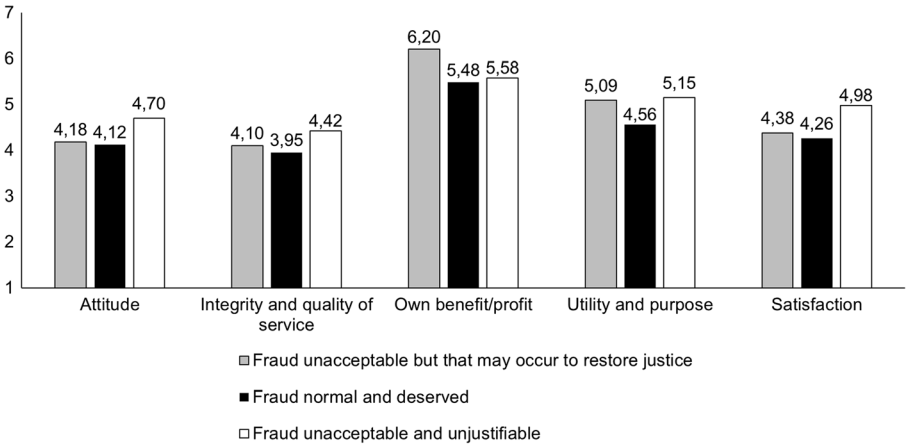

Fig. 3 Opinion about insurance companies. Means based on positioning

companies, F (2, 354.15) = 17.09, $p < .001$, $\eta^2 = .05$, with means differing significantly ($p < .05$) according to *Games-Howell test for multiple comparisons*.

The results of chi-square tests performed to examine whether cluster membership were associated with socio-demographic and economic variables showed independence in relation to sex, age group, marital, and economic status. On the other hand, cluster membership was dependent on the type of residential area and contact with the insurance industry. Participants who consider fraud unjustifiable (cluster 3) were more represented in areas with low density of population, while those who consider fraud justifiable (cluster 1 and 2) were mostly represented in densely populated areas, χ^2 (2) = 20.97, $p = .002$, $V = .13$. Participants without insurance were more represented in cluster 2, χ^2 (2) = 6.32, $p = .042$, $V = .10$.

The one-way analysis of variance performed on the variables of the economic situation of the household (see Fig. 4) show that the respondents in cluster 2 experienced lower satisfaction with their present economic situation compared to respondents in clusters 1 and 3, F (2, 615) = 9.33, $p < .001$, $\eta^2 = .03$, with means differing significantly ($p < .05$) according to the *LSD test for multiple comparisons.*

Cluster 2 respondents were also those who agreed the most that their economic situation had worsened in the last 5 years, F (2, 390.64) = 7.94, $p < .001$, $\eta^2 = .03$, with both means differing significantly ($p < .05$) according to *Games-Howell test for multiple comparisons*.

Discussion and concluding remarks

Insurance fraud is not a new problem but it has been increasing substantially in the last decades [1–3]. This article focuses on opportunistic consumer insurance fraud and fraudulent behaviors in insurance, which usually are perpetrated by the largely law-abiding citizens.

We started this paper by presenting in a non-exhaustive way, the main contributions of several disciplines that have attempted to explain consumers' fraudulent behavior in

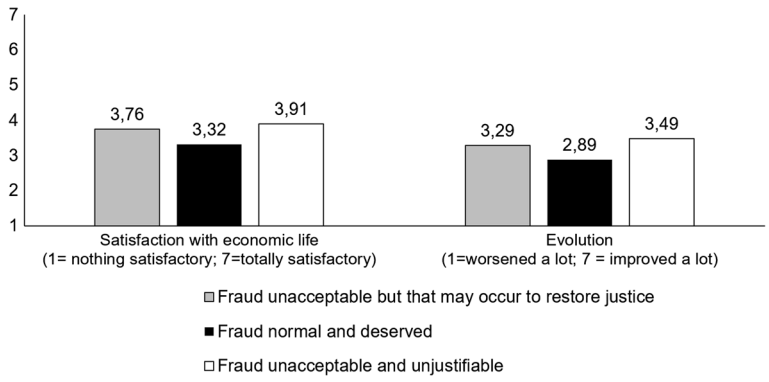

Fig. 4 Satisfaction with own economic situation and evolution in the last 5 years. Means based on positioning

insurance through different theoretical frameworks, and research methodologies. Thus, we highlighted that economic-contractual approaches stress the low opportunity cost of fraud and the misconceptions about the nature of the insurance business. We looked into the individual psychological approaches, emphasizing morality standards, human values, personality traits and the cognitive strategy of rationalization. The psycho-sociological approaches, underlying the importance of social norms in fraudulent behavior and perceived institutional fairness. The cultural and macrosocial approaches, focusing on the importance of broad cultural values, macroeconomic factors, and welfare regimes.

The results of a national survey conducted with Portuguese citizens over 18 years old related to consumer insurance fraud in automobile insurance, workplace accident, and health insurance are consistent with the approaches presented. Our findings show that the level of acceptance of fraud is similar to that revealed in the studies conducted in other countries such as the US, the UK, Spain, France, Norway or Germany [35, 43, 45, 48, 56, 75].

The cluster analysis revealed different positions toward insurance fraud, from those who consider fraud unacceptable and unjustifiable to those who consider it normal and "deserved" by insurance companies. A third position was also identified, according to which fraud is unacceptable but may be performed to restore justice. These positions are associated to respondents' opinions about insurance companies and reflect a combination of the four theoretical approaches discussed in this article.

In line with individual psychological approaches, respondents who consider fraud unacceptable and unjustifiable (cluster 3), have low tolerance to fraudulent behaviors and disagree more that defrauding insurers is a smart behavior, expressing the lowest willingness to engage in fraudulent behaviors. A negative attitude toward fraud and fraudsters is related with a more favorable opinion about insurance companies and satisfaction with the service they provide, but also with the perception of a higher risk of fraud detection and punishment, which is in accordance with relational and economic-contractual approaches, respectively. Respondents who consider fraud unacceptable and unjustifiable are more represented in low-density population areas suggesting that cultural and macrosocial factors are also important, namely concerning fraud tolerance. This is in line with 1993 Insurance Research Council results reported by Weisheit, Falcone and Wells [84], who showed that 46% of large-city residents considered all right to build up a claim compared to 12% of rural residents. The authors argue that lower tolerance to fraud results from higher informal social control, attainable in small communities. A recent study by the Pew Research Center also shows that urban residents in the US are more likely than those living in rural areas to say that the economic system is unfair and that crime is a major problem [85, 86], suggesting that more cynical attitudes are found in urban densely populated areas by comparison with more rural low density areas.

Inversely, unfamiliarity with the insurance value proposition process seems important to characterize respondents who consider insurance fraud normal and deserved (cluster 2), which is in line with the relational psycho-sociological and economic-contractual approaches. In fact, these respondents agree less than the other respondents that insurance companies provide an essential service to society. Also, individuals without insurance are more represented in this cluster. Moreover, and in line with individual and relational psychological approaches, respondents grouped in this cluster are also those who present the lowest social desirability concerns, expressing a more favorable attitude in

relation to fraudsters and a higher willingness to engage in fraudulent behaviors. More than the other respondents, they also justify fraud based on rationalizations or neutralization techniques, considering that insurance fraud is a victimless crime. This position seems also to be sustained by descriptive group norms since these participants also tend to regard fraud as a normal and an acceptable behavior. Nonetheless, macroeconomic factors must not be discarded since respondents who consider fraud normal and "deserved", experience lower satisfaction with their present economic situation and are more likely to declare that their situation has deteriorated in the last 5 years. Their position aggregates two of the elements of the fraud triangle - economic/financial pressure and rationalization – and suggests the prevalence of some syndrome of market anomie, with legal cynicism and distrust in the insurance business industry.

The larger group of respondents, who consider fraud unacceptable but justifiable (cluster 1), although intolerant to fraud, consider that distributive and procedural justice are reasons that explain fraudulent behaviors in insurance. Cluster 1 respondents are also more likely to agree that insurers are mainly concerned with their own profit at the expenses of insured consumers. Both dimensions present the larger effect sizes when considering the reasons why people engage in fraudulent behaviors and opinions about insurance companies. Cluster 1 respondents also agree more with contractual dimensions that may be perceived as unfair business practices, namely the transference of the costs of fraud to consumers. From the point of view of the respondents, "restoring justice" seems directly associated with the difference of speed and processing between "sale" and "payment of damages" which erodes trust in the industry.

In sum, results show that the contractual, individual, relational and macrosocial factors are interconnected and provide conceptual frameworks useful to deal with the complexities of consumers' unethical behavior.

Additionally, our findings are useful for delineating actions in preventing and combating fraud. Understanding public perceptions on fraud is crucial to prevent and combat fraudulent behavior, in addition to fraud risk analysis and examination of fraud upon detection. Regarding fraud as "unacceptable and unjustifiable" or as common and "normal" behavior stresses the importance of considering individual differences in moral standards and in attitudes toward fraudulent behaviors. These are linked to social, cultural and macrosocial contexts, such as social norms, financial pressure, or market anomie. This increasing acceptance of insurance fraud is also associated with other types of fraudulent acts that, despite being illegal, are considered victimless and widely accepted, such as illegal downloading of movies and music.

On the other hand, regarding fraud as being "deserved" or "performed to restore justice", highlights risks of fraud that may be mitigated by a more consistent performance on the part of the insurance companies, namely by reducing the asymmetry of information and increasing the justice of procedures. These findings may also be relevant for other types of fraud against institutions (for instance tax fraud and evasion, etc.), in which unfairness of procedures, high payments or negative opinions on institutions are important arguments to justify fraudulent acts (see, for instance, [87]).

This study presents some limitations that are worth mentioning: the sensitive nature of the issue that influences social desirability in respondents' answers since the survey was conducted by interview, usual in questions about illegal and socially disputable behaviors (cf. [75]). However, the questions focused on agreement with motivations to

commit fraud and not on respondents' own fraudulent acts. As a less reactive question than asking about behavior, the risks of a social desirability bias were minimized.

In spite of these limitations, our findings underline the importance of an integrative approach to consumer insurance fraud research, in line with previous research [35, 43, 56, 75]. It would be desirable that further studies adopt a mixed methods approach, combining interviews, questionnaires, or experiments. Interviews are particularly important to explore the meaning of fraudulent behaviors, to distinguish between fraudulent intentions and omission, and to understand the interconnections between contractual, individual, relational, and macrosocial explanations in consumers reasoning; Questionnaires are useful instruments to test the influence of the different approaches and establish how they interact and influence each other through mediated effects; Experiments are important also to grasp aspects that are more difficult to capture due to the sensitive nature of the topic.

As several authors who have been studying fraud have suggested [5, 28], the articulation of different theoretical approaches and methodologies is essential for the advancement of the scientific knowledge about financial crime in general, and insurance fraud in particular. This knowledge is crucial if we want to break with the "vicious cycle of unfair behavior, erosion of good practices and normative standards" ([64], p. 1013) in which consumers and businesses, but also citizens and societies have engaged.

Acknowledgements This research was financed by the Portuguese Insurer Association (Associação Portuguesa de Seguradores - APS) and developed under the coordination of the Observatory of Fraud in Economics and Management (OBEGEF). Special thanks are due to the members of the technical teams of APS and OBEGEF for the valuable contributions in the development of the research and interpretation of results. A particular thank you is addressed to all those who commented on earlier versions of this paper, namely Alda Correia for her helpful suggestions and comments to the first draft, presented at the 3rd OBEGEF Conference, Interdisciplinary Insights on Fraud and Corruption – The Costs of Economic Crime, Claudia Abreu Lopes, and to the two anonymous reviewers. Usual disclaimers apply. This article was also possible due to the financial support of FCT - Portuguese Foundation for Science and Technology to Raquel Ribeiro (DL57/2016/CP1341/CT0030).

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Ethical approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee.

Human and animal studies This article does not contain any studies with animals performed by any of the authors.

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