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Artificial Intelligence and Corporate Social Responsibility in the Online Gambling Industry

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In Memory of Jack Ritchie and Chris Bruney

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ABSTRACT

Background: Digital technology and the Internet have created the preconditions for the development of online gambling. Gamblers can play or bet online whenever they want and wherever they are. Gambling should be entertaining, allowing players to keep it in balance with other activities in their lives. However, players can develop gambling addiction, also known as problem gambling. Artificial intelligence (AI) is used in marketing strategies combined with incentives, such as bonuses and free bets. AI is also applied in the concept of responsible gambling, where various tools are designed to prevent the potential harm associated with gambling through early detection of addictive gambling behaviour. Corporate Social Responsibility (CSR) is the way companies should do business in terms of being good corporate citizens. CSR contains economic, legal, ethical, and philanthropic dimensions.

The purpose of the research is to examine and explain CSR of operators and the use of AI in relation to problem gambling in online gambling, to present solutions related to these phenomena that can ensure the reduction and prevention of gambling-related harm as a prerequisite for a sustainable gambling industry. **The research question** is: *"How can CSR and AI ensure the reduction and prevention of gambling-related harm in the context of the sustainable online gambling industry?"* **The methodology** included a qualitative research strategy, the combination of participant observations and semi-structured interviews with key industry stakeholders such as companies, customers, suppliers, regulators, data analysts, as well as other experts and researchers from inside and outside the online gambling industry.

Findings and conclusions: At the heart of the problem is gambling addiction, and huge profit addiction, which in many cases contains a significant portion of bad profits. Main findings are bad profits earned through unscrupulous marketing with incentives, reactivation of high-risk gamblers, increase in gambling addiction in adolescents, the low effectiveness and efficiency of responsible gambling tools for problem gamblers, lack of a clearly defined common goal in the industry, and non-existence of a common customer database and gambling standards. However, there are socially responsible companies that have expressed a willingness to make money in the long run, having many green players, who gamble in a controlled manner. They need the support of the government and financial institutions to tackle problem gambling even more decisively and move towards sustainability, which includes, among other things, the systematic and effective prevention of the operations of unlicensed companies.

Contribution: The profit-oriented nature of companies makes them vulnerable, and they are easily seduced by bad profits. Customer-oriented Moral and Systemic Proactivity (COMSP) is a new CSR conceptual framework developed by the researcher that can help gambling companies. It involves shifting the company's focus from profit to customer, which does not mean that profit is irrelevant. Namely, profit moves into the sphere of moral proactivity, where through standard operating procedures the filtering and acceptance of moral profit and the rejection of bad profit takes place. COMSP contains three elements: a customer-oriented purpose, moral proactivity, and systemic proactivity. COMSP values are the focus on customer well-being through the structurally minimally harmful product and gambling-related harm reduction and prevention (G-HARP), acceptance of moral profit - "the rule of harmlessness of profit", corporate ethics - "the rule of good parent to customer", transition to the mode of proactivity, future G-HARP tools, legality, a regulated proactive system, a future Cloud-based Global Gambling Registry (CGGR) and establishing International Gambling Standards (IGAS).

Keywords: Online gambling, Responsible gambling, Gambling addiction, Problem gambling, CSR, AI, Moral profit, Customer-oriented Moral and Systemic Proactivity, COMSP, Gambling-related Harm Reduction and Prevention, G-HARP, Cloud-based Global Gambling Registry, CGGR, International Gambling Standards, IGAS

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1. INTRODUCTION

This chapter provides an overview of the research and contains basic information about the industry, main phenomena, research problem, purpose of the research, research question, delimitations, and disposition of the thesis.

1.1 Background

Gambling or betting is the conscious acceptance of risk by betting on valuables, such as money or property on an uncertain event or outcome of a game, which may be determined by chance or be unexpected due to miscalculated gambler expectations (Rickwood et al., 2010; Ferentzy & Turner, 2013; Glimne, 2019). Gambling elements are consideration (an amount wagered), chance, and prize (Lionel Sawyer & Collins, as cited in Santoni, 1995).

Gambling is older than history, and it is known that first gamblers did not play for recreation or entertainment, but for religious reasons, because it was believed that the gods revealed their intentions after people randomly threw objects, known as cleromancy, divination by casting lots (Schwartz, 2006). People used knucklebones in ancient Sumer at least 5000 BC, and the first six-sided dices were found in Iran and Iraq, 3000 BC (Carr, 2017). Mercantile or commercial gambling began in northern Italy in the 14th century and spread throughout the continent (Schwartz, 2013). People played everywhere, in streets, squares, pubs, but Schwartz explained that under pressure from governments and frequent interruptions by the police in the 16th century, gambling took place indoors and was organized during parties. This avoided embarrassing situations, primarily for high-ranking politicians and the nobility. According to Schwartz (2013) indoor gambling led to the opening of the first modern casino in Venice (1638), called Ridotto, which was associated with the famous Venetian Carnival, and all gamblers, except the nobility, had to wear masks. Over the next few centuries, many casinos opened across the continent. In the 20th century, first electromechanical slot machines appeared in the 1960s, while the digital revolution and the Internet disrupted the gambling industry with commercial gambling websites, which began operating in 1996 (Schwartz, 2013).

To understand the impact of digitalization and the Internet on the gambling industry, it is necessary to get acquainted with the processes of technical change and entrepreneurship as forces that Schumpeter has placed at the root of economic growth "to explain the role of innovation in economic growth and on the cyclicality of the system" (Perez, 2010, p. 185). In 1942, in his famous work "Capitalism, Socialism and Democracy", Schumpeter explained that

perennial gale comes from within the industry through destruction of the old, and incessantly creation of the new structure (Schumpeter, 2013). Schumpeter established the theory of creative destruction, where fundamental impulse of innovative and destructive processes in never stationary capitalism "comes from the new consumers' goods, the new methods of production or transportation, the new markets, the new forms of industrial organization that capitalist enterprise creates" (Schumpeter, 2013, p. 83). Following this theory in the modern context of the gambling industry, the researcher agrees with Schumpeter about new products and markets. Digital technology and Internet have expanded the gambling offer, encouraging further digital changes throughout the industry, including the transformation of traditional casinos. Current digitalization is still ongoing and there are few possible scenarios for the industry development, again depending on disruptive innovative technologies, primarily artificial intelligence, virtual reality, augmented reality, blockchain, etc. (Cristea, 2020).

1.1.1 Online gambling

Online gambling or internet gambling includes online casinos, online poker sites, online bookmakers or sports betting, online betting exchanges, online lotteries, etc. (Griffiths & Parke, 2008). Beside operators and consumers key stakeholders in gambling industry are government and their agencies of public protection, health service and other welfare providers, and community groups, which work in favour or are opposed to legalized gambling (Blaszczynski et al., 2004). Online gambling applications provided to players speed, by allowing them to play or bet whenever they want, convenience to dress how they want, and variety through app customizing options so players can easily select their own preferences (Young, 2020).

Online gambling growth continues in Europe, "with mobile betting increasingly popular" (European Gaming & Betting Association [EGBA], n.d.-a). Between 2010 and 2019, the European online gross gambling revenue (GGR) went up from 10 to approximately 25 billion EUR, while offline GGR roughly stagnates around approximately 77 billion EUR (Lock, 2020b). The number of online players inclined in last few years, especially in Netherland, Spain, and France, where number of online accounts doubled, while in the UK even quadrupled (Lock, 2020a). Detailed European information for 2019 collected from five member companies, such as bet365, Betsson Group, Entain, Kindred Group, and William Hill shows that they have in total 16 million online customers, 63% of customers used at least one safer gambling tool, average customer win/return rate of 94.3%, 1.2 million direct interventions with customers to promote safer gambling, combined 5.6 billion EUR in online GGR-23% of the European

market, 145 online gambling licenses across 17 European countries, and they closed 1.8 million customer accounts due to activities that are not in accordance with legal regulations (EGBA, 2020b). Covid-19 pandemic caused Europe's total gambling revenues drop 23% in 2020 (EGBA, n.d.-a). Revenues from land-based gambling have declined in 2020, but online gambling has maintained growth in both the EU and the UK (EGBA, n.d.-a; Gambling Commission, 2020).

1.1.2 Problem gambling

Problem gambling is a general term for "all of the patterns of disruptive or damaging gambling behaviour" (Meyer et al., 2009, p. xx). Gambling addiction is a social issue in the EU and the UK. The Public Health Agency of Sweden stating that "the proportion of problem gamblers in the Swedish population is around 1 percent on a yearly basis, or in figures approximately 100,000 persons", and in addition they emphasize that the number is even greater, because there is a large turnover among problem players (Folkhälsomyndigheten, n.d.). The proportion of gamblers who played and had gambling problems, either as gambling behaviour involving risk or gambling abuse was 2% in Sweden in 2015 where 66% of the total population gamble, 3.3% in Finland in 2015 where 80% of population gamble, and 3,2% in Denmark in 2016 where 63% of the total population gamble (Nordic Welfare Centre, 2017). Data for Italy for 2017-2018 were 2.4% (Statista Research Department, 2021). In the UK, the figures vary between the official 0.7%, and those from the non-governmental sector, which, based on survey (N=16,000), and using Problem Gambling Severity Index (PSGI), find that the numbers of adult problem gamblers are significantly higher at 2.7%, or nearly 1.4 million people (Davies, 2020b).

1.1.3 Artificial intelligence

Brynjolfsson and McAfee (2017) point out that artificial intelligence (AI) is the most important general-purpose technology of our time. Machine learning method is the analysis of large amounts of data with the ability to create or build automated models, where people do not have to explain to the computer how to work to perform various complex tasks and where the computer learns to make decisions independently on different examples and thus achieves superhuman performance (Brynjolfsson and McAfee, 2017). Deep learning is a subset of machine learning that can create flexible models for specific tasks, i.e., real-time fraud detection

(Ravelin, n.d.). The researcher believes that there are two areas of use of AI in online gambling that are most associated with problem gambling, and these are advertising and promotions, and responsible gambling, and therefore special emphasis is placed on them.

In *advertising and promotions* operators create customer profiles, which serve to develop detailed models of consumer behaviour, retention programs and loyalty schemes, but at the same time this information can serve unscrupulous operators to target problem gamblers with customized free bets encouraging them to play more and spend more money (Griffiths & Parke, 2002). The most common incentives are free samples, discounts, opportunities to win prizes, deposit and reload bonuses, generous 'refer a friend' programs, affiliate programs, online retail stores, free demo practice sites, and online tourneys (Hing et al., 2014). In combination with big data, various potentially unscrupulous internet tactics are used to influence consumer choices, such as nudging, search engine word embeddings, pop-ups, and circle jerks (Griffiths & Parke, 2002).

Responsible gambling concept covers a wide range of practices and policies in which machine learning is used to prevent potential gambling-related harm through early detection of excessive gambling or addictive gambling behaviour, through responsible protective measures and continuous interaction with gamblers (Blaszczynski et al., 2004; Haefeli et al., 2011).

1.1.4 Corporate social responsibility

Corporate Social Responsibility (CSR) implies the obligation of a businessman to adhere to policies, decisions and actions that are in line with the goals and values of society (Bowen, 1953, as cited in Carroll, 1999).

The researcher believes that theoretical perspectives of CSR suitable for online gambling describe two types of operators. The first are companies that are not good corporate citizens. These companies mainly focus on obligations according to the interest of shareholders, with only profits within legality, open competition, and market mechanism being followed (Friedman, 1970). In contrast, other companies, in addition to economic and legal responsibilities, want to incorporate the principle of fairness, consistent ethical and moral behaviour and make efforts to build strong relationships and create value for stakeholders, also engaging in philanthropic activities, precisely in the way good corporate citizens are described in different theoretical perspectives of CSR (Carroll, 1991; Donaldson & Preston, 1995; Freeman, 1984; Phillips, 1997).

1.2 Research problem

The research problem is the use of CSR and artificial intelligence in online gambling in relation to problem gambling and gambling-related harm reduction and prevention. Current statistics justify timeliness of this research and indicate that more attention should be paid to problem gambling, which is becoming a social issue.

"A typical problem gambler affects six others" (Goodwin et al., 2017, p. 1). The prevalence of pathological gambling is more present in online gambling; those who gamble online are 10 times more likely to have a gambling disorder than other gamblers (Wood &Williams, 2007, as cited in Chóliz et al., 2019). This ratio was confirmed in the results of a 2015 Spanish national study, which showed that the prevalence of pathological gambling online was 7.26%, while among those who did not gamble online it was 0.69% and therefore, online gambling in Spain is considered a current public health problem with a discouraging prospect (Chóliz et al., 2019, p. 10). An online gambling survey conducted in the Netherlands in 2018 showed that 5% of respondents were addicted to online gambling, of which 1% were actively addicted at the time of the survey and 4% who said they were addicted but no longer (Lock, 2021c). The results of a Polish online gambling study conducted on 2000 adults over the age of 18 in 2019 showed that 4.1% of respondents were involved in online gambling and "26.8% of them could be classified as problem gamblers", or approximately 1.1% of all respondents (Lelonek-Kuleta et al., 2020, p. 1).

Online gambling is rapidly evolving market segment and increasingly involves young people who are well acquainted with Internet technology and online commerce (Gainsbury, 2015). Data of gambling disorder among minors gambling online show high rates. An Italian study conducted on a large sample of adolescent students aged 15-19 (N=14,778), showed that 504 of them, or 3.4%, were addicted to online gambling (Canale et al., 2016). Among high school students in Cyprus, 2.5% of all respondents showed symptoms of addiction using online gambling (Floros et al., 2015). The promotion and legalization of Internet gambling in Spain has resulted in a significant increase in the number of pathological online gamblers among young population, age 16-25 (Chóliz, 2016). In Galicia (northwest region of Spain), prevalence of online gambling among minors aged 12-17 has evolved, from 1.5% in 2010, to 3.8% in 2014, up to 6.5% in 2016 (Gómez et al., 2019). In Finland, 16% of minors gambled online in 2015, while 31% gambled online in 2019 (Finnish Institute for health and welfare, 2020). "Having children, playing online scratch cards, and online sport betting-but not online lotteries-turned out to be typical for problem online gamblers" (Lelonek-Kuleta et al., 2020, p. 1). Young men

are especially vulnerable to big data hyper nudging strategies, e.g., betting inducement ads (Victorian Responsible Gambling Foundation, 2018). Social casino games are not currently regulated, and "the minimum age requirement to create a profile on Facebook and engage in social casino games is 13 years of age", which allows children to develop gambling addiction early through social media (Reynolds, 2019, p. 116).

Finally, in advertising and promotions, the online gambling industry uses third parties to harvest customers' data to help bookies and Internet casinos to target poor people and ex-gamblers with gambling ads in browsers (Busby, 2017). AI is used for purposes of customer profiling and to predict customer behaviour, to keep gamblers hooked, where "every click is scrutinised in order to optimise profit, not to enhance a user's experience" (Busby, 2018). Gambling sites use "website stickiness" algorithms as "tactics to keep people playing or return to their website later," causing them to develop addiction (Effertz et al., 2018, p. 1).

1.3 Purpose of the research

Griffiths et al. (2009) point out that little empirical research had focus on CSR within the context of gambling. The researcher agrees with this and hopes that this research, which in addition to CSR includes AI, will fill the gap by providing new insights into industry.

The research topic should include two preconditions, the researcher's interest in a specific subject and the choice of ideas which can be further explored and refined (Allen, 2017). As the researcher believes that both conditions were met, next step is to understand the purpose of the research, which is a process of framing out the field of research action and explaining the reasoning why phenomena or factors such as variables, constructs, or concepts, should be explored and answered in one or more research questions (Bell et al., 2018).

The focus of the research is problem gambling, then the two areas of use of AI in online gambling that are most associated with problem gambling: advertising and promotions, and responsible gambling, as well as relevant theoretical CSR perspectives applied by online gambling operators.

The purpose of the research is to examine and explain CSR of operators and the use of AI in relation to problem gambling in online gambling, to present solutions related to these phenomena that can ensure the reduction and prevention of gambling-related harm, as a prerequisite for a sustainable gambling industry. Additionally, a conceptual framework for CSR will be developed. The researcher hopes to convince readers that conclusions are plausible and

defensible, and that the generated theory can find practical business application and serve for further research.

1.4 Research question

A good research depends on well-specified research question (Gioia et al., 2013). Bell et al. (2018) emphasize that research question must be clearly answerable and to explicitly explain what is going to be investigated and what the researcher wants to know by examining relationships between variables and why they occur. Furthermore, clear research question guides the choice of literature, support decisions on research design, data collection and analysis, it helps in writing-up of findings, saves precious time and energy in taking unnecessary directions and provides to researcher a clear sense of the research purpose (Bell et al., 2018).

Criteria for evaluating research question are to be clear, to hold a quality to be researchable, to be connected to established theories, to contain the potential to contribute to knowledge, not too broad nor too narrow and to explain what exactly a researcher wants to find out (Bell et al., 2018). Analysing all the above, having in mind the purpose of the research, a decision is made on the research question:

"*How can CSR and AI ensure the reduction and prevention of gambling-related harm in the context of the sustainable online gambling industry?"*

1.5 Delimitations

This research explores the online gambling industry. The decision to investigate online gambling instead of land-based gambling was made in part for practical reasons to avoid difficulties and limitations in data collection due to the shuttering of land-based casinos during the Covid-19 pandemic. Therefore, this delimitation was judged to be suitable for the research. Furthermore, illegal, or unregulated online gambling markets were excluded from the research. Although considered, no further exclusions were made with respect to areas within online gambling, as this would be insignificant. The research does not focus on types of online gambling or on specific products or services designed for different areas of application, but on phenomena, concepts, and practices present in all forms of online gambling.

However, the researcher set some restrictions in geographical terms, and decided that the research applies only to the European Union (EU) and the United Kingdom (UK). The data

shown may be aggregated, EU-wide or UK-wide, or country-specific, e.g., Sweden, Spain, Italy, etc. The territorial line of demarcation is not respected in terms of theoretical contribution of international researchers, as they have knowledge extremely valuable for understanding research phenomena and concepts. The researcher also believes that science, knowledge, and research should never be limited by boundaries. Therefore, the participation of researchers from all over the world during the data collection process is warmly welcomed.

Finally, the research focuses only on CSR of operators based on theoretical perspectives relevant and currently used in online gambling and examines in detail only two main applications of artificial intelligence specifically related to problem gambling, namely advertising and promotions, and responsible gambling. All relevant data available to the researcher will be collected and analysed. If necessary, in order to better understand the environment in which online gambling takes place, and to determine the extent to which certain legal or operational solutions of other stakeholders affect the more effective application of CSR by operators, the researcher will examine these facts, e.g., social responsibility and engagement of government or various institutions.

1.6 Disposition

The research is divided into six main chapters or sections. Introduction explains the background of the research, problem, purpose, research question, and delimitation factors, followed by the literature review. In methodology section research strategy, design, methods, quality, and the ethical considerations are presented. Empirical data contain collected data from interviews and participant observations, while in analysis section comparison between theory, secondary data and empirical findings is conducted. Conclusions contain answer to the research question, theoretical contribution, and discusses the future research projects in relation with this research. Disposition of the research is shown in Figure 1.

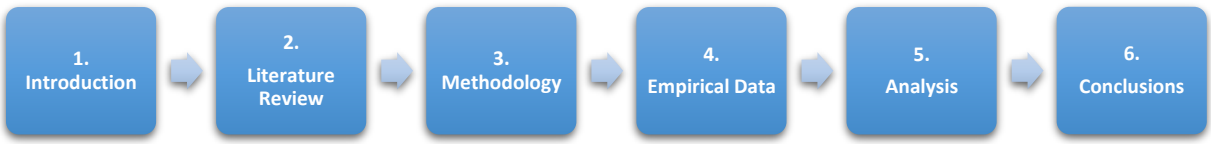

Figure 1 – Disposition of the research (Source: developed by the researcher)

2. LITERATURE REVIEW

The chapter provides information on problem gambling. Furthermore, the researcher believes that there are two areas of use of AI in online gambling that are most associated with problem gambling, such as advertising and promotions, and responsible gambling. Therefore, special emphasis is placed on them. Finally, three theoretical perspectives of CSR that are currently used by operators in online gambling are presented: shareholder theory, stakeholder theory and Carroll's pyramid of CSR. It is important to emphasize that the presentation of these theoretical perspectives is given for two reasons. First, CSR in online gambling is much broader than the very concept of responsible gambling and cannot be reduced to just that, which is a common misconception. The second reason relates to the understanding of what CSR is, what dimensions are included in it, so that in this regard all relevant aspects for online gambling operators are taken into account. The literature review follows the focus of the research shown in Figure 2. The stakeholder theory and Carroll's pyramid have many similarities, especially in terms of business ethics and stakeholder treatment, and therefore they are shown together.

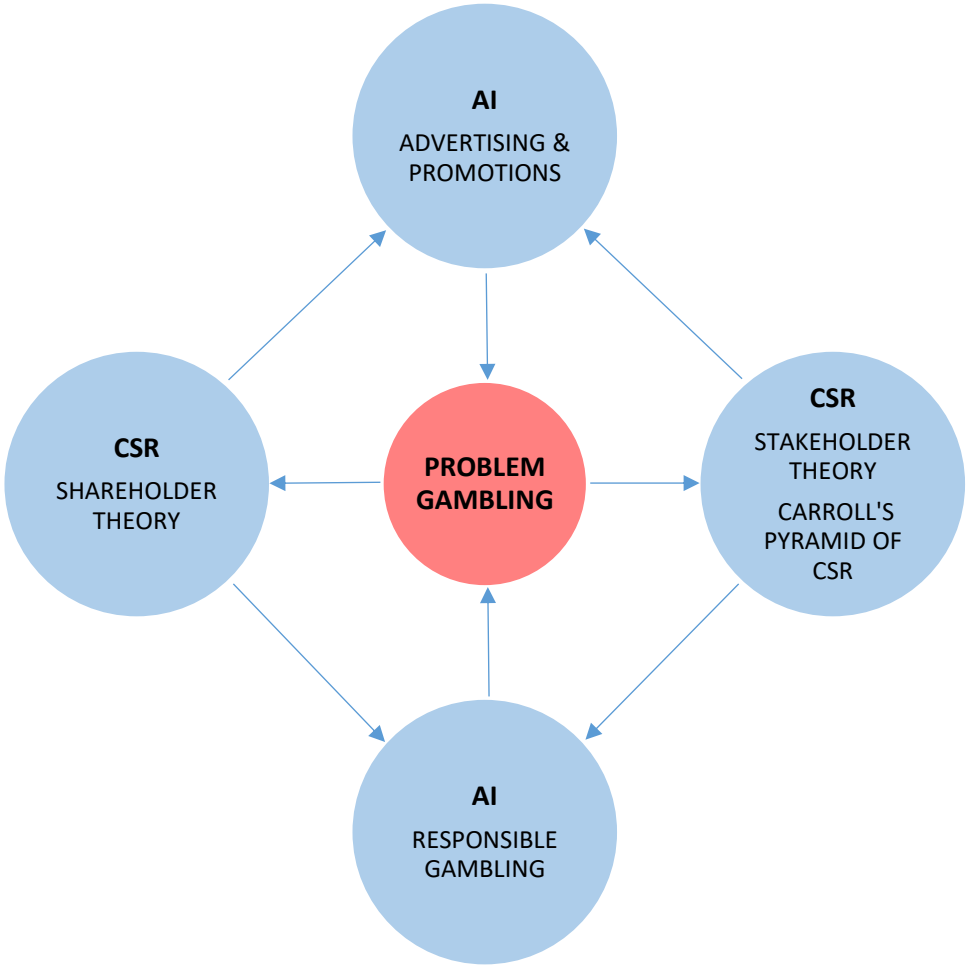

Figure 2 – Focus of the research (Source: developed by the researcher)

2.1 Problem gambling

Problem gambling refers to the "impaired control over money and/or time spent gambling" with harmful consequences for the gambler, family and/or community (Hing et al., 2015, p. 1076). In the Diagnostic and Statistical Manual of Mental Disorders, DSM–5, gambling disorder is defined as persistent and recurrent problematic gambling behaviour, classified under diagnostic categories of non-substance-related disorders, as well as substance-related and addictive disorders, based on the evidence "that gambling behaviours activate reward systems similar to those activated by drugs abuse", with comparable symptoms produced by substance use disorders (American Psychiatric Association [APA], 2013, p. 481).

According to Yau and Potenza (2015, p. 1) addiction has following elements "(1) continued engagement in a behaviour despite adverse consequences, (2) diminished self-control over engagement in the behaviour, (3) compulsive engagement in the behaviour, and (4) an appetitive urge or craving state prior to engaging in the behaviour."

A widely used method for measuring problem gambling level is the Problem Gambling Severity Index (PGSI), which is the nine-item scale for measuring severity of gambling problems with four types of gamblers: non-problem, low-risk, moderate risk, and problem gamblers (Currie et al., 2013; Holtgraves, 2009). There is also the Canadian Problem Gambling Index (CPGI) for measuring severity of gambling behaviour in the general population (Ferris & Wynne, 2001).

2.1.1 Risk factors

"Despite some indications of a positive correlation, the relationship between Internet gambling participation and problems has not been confirmed" (Gainsbury, 2015, p. 187). Nevertheless, Internet gambling is one of the categories of gambling most strongly associated with problem gambling, especially its interactive forms, such as Internet poker and casino (Binde, 2011). Presumably, main reasons for this are combination of "risk factors, such as a short time between bet and outcome, high play continuity, and bet outcomes that often depend on both chance and skill" (Griffiths et al., 2006; Ranade et al., 2006; Williams & Wood, 2007, as cited in Binde, 2011, p. 14). Furthermore, high accessibility or availability through desktop or mobile device, then immersive interface combined with the ease of spending money additionally enhance concerns that "Internet gambling may increase rates of disordered gambling" (Gainsbury, 2015, p. 1).

Gainsbury (2015) explains that many studies show higher rates of health and mental comorbidities, including smoking, drug and alcohol use, as well as mood disorder and self-harm among Internet as compared to non-Internet players. If taken into account what Binde (2011) points out, that social control of gambling on Internet is weak, because it often takes place privately with less external control, and referring to the description of associated features supporting diagnosis given in American Psychiatric Association (APA, 2013) where it is explained that gambling can be accompanied by a manic episode of hostile and threatening behaviour toward others, and when it is delusional, the behaviour can be even physically assaultive or suicidal, the researcher concludes that online gambling hides additional risks that can favour the freer impulsive expression of disinhibition, aggression, violence, or result in self-harm, which would not be possible in a controlled traditional casino environment for instance.

Furthermore, Cemiloglu et al. (2020) include risk factors such as attention-grabbing and persuasive web techniques of marketing and advertising, especially practices of using gambling data for targeted advertising where players have problem to resist ads that fast, almost instantly, tempt them to satisfy their gambling desire. Gambling sites also use website stickiness algorithms as "tactics to keep people playing or return to their website later," causing them to develop addiction (Effertz et al., 2018, p. 1).

Risk factors for developing gambling disorders may be related to ignorance of the likelihood and risk assessment.

> The study findings emphasise the difficulty individuals have in understanding complex concepts related to return to player percentages when presented in current formats and content. Treatment and responsible gambling policies need to adopt strategies to effectively improve knowledge of this aspect of the structural characteristics of gaming machines (Beresford & Blaszczynski, 2020).

Different games have different levels of volatility and thus different variances or deviations in returns and players need to learn and know this. Usually, each game comes with information about return to player (RTP). This is "information on the proportion of total stakes returned in prizes, or the odds of winning prizes from play on a machine known as the 'return to player' (RTP)" (Collins et al., 2014). This is the total theoretical sum that one game returns in cash and is calculated over a longer period of time. This is not a message about win / loss possibilities over a typical gambling session, nor is it a message about volatility. "Volatility represents the variance in pay-out over time as a gambling product is played" (Percy et al., 2021, p. 2). The volatility or variance of the game means, e.g., "whether small prizes are given frequently or large prizes are given infrequently" (Collins et al., 2014, p. 57). This means that

if a player gives an advantage to a game with high volatility, it means that it is a game with higher risk, it pays out less, but larger amounts in relation to the invested, but not always and necessarily. “Players of more volatile games can see large deviations from that average RTP (Turner, 2011, as cited in Persy et al., 2021, p. 2).

2.1.2 Social cost of gambling

The manifestation of players pathological gambling addiction may develop even outside affordable financial limits because gamblers borrow money to play (Swanton & Gainsbury, 2020). Thereby, gambling disorder results not only with different health problems, but also contributes to individual debt accumulation over the period, making players incapable to financially balance their gambling passion with other responsibilities in life (López-Torres et.al, 2021).

However, the cost of problem gambling is not only a private matter, and there are also the social costs that are not insignificant. In 2018, 1.42 billion EUR or 0.30% of the Swedish GDP were related to problem gambling costs, like i) direct costs (health care and legal costs), ii) indirect costs (loss of productivity due to unemployment), and iii) intangible costs (reduced quality of life due emotional stress), resulting that “the societal costs were more than twice as high as the tax revenue from gambling in 2018.” (Hofmarcher et al., 2020, p. 1). Effertz et al. (2018) confirm that economic health cost is also high in Germany, due to gambling activities, where is estimated that 218.43 million EUR are gambling treatment costs per year, of which 27.24 million EUR or 12.47% are directly caused by online gambling. Prevention and treatment of addicts is an important public health issue. National public health care systems and gambling addicts’ associations take the most part in the process by providing the self-help groups and gambling addiction professional treatments (Jiménez-Murcia et al., 2014; Griffiths et al., 2009). There are also a school-based gambling educational programs for youth in primary and secondary schools designed to prevent and reduce gambling problems (Keen & Blaszczynski, 2017; Walther et al., 2013).

Some social costs related to gambling disorders are more difficult to measure as “desperate gamblers have been known to resort to stealing, prostitution, embezzlement, insurance fraud, and the use of loan sharks to finance ongoing gambling” (James, 1999, as cited in Fong, 2005, p. 29). In addition, violent behaviour of gamblers with disorders are particularly visible in domestic violence where “pathological gamblers’ families have been shown to have higher rates of spousal and child abuse” (Fong, 2005). Gambling study among adolescent in

Finland showed that "both gambling frequency and the number of gambling-related harms were linked to violent behaviour as well as to positive attitudes towards violence" (Räsänen, 2015, p. 1).

2.1.3 Youth gambling

"Past research has estimated that problem gambling is more common among youth than adults" (Keen et al., 2017, p. 1). Online gambling research conducted in Finland (15-25 years) confirmed that new forms of online gambling are potentially risky for younger generations who increasingly spend more time online (Oksanen et al., 2019). An Italian study conducted on a large sample of adolescent students aged 15-19 (N=14,778), showed that 504 of them, or 3.4%, were addicted to online gambling (Canale et al., 2016). Research conducted by Bozzato et al. (2020) showed that approximately 9% of high school students in Italy are classified as at-risk gamblers and 3.75% of them as problem gamblers, and many of them play online.

Among high school students in Cyprus, 2.5% of all respondents showed symptoms of addiction using online gambling (Floros et al., 2015). The promotion and legalization of Internet gambling in Spain has resulted in a significant increase in the number of pathological online gamblers among young population, age 16-25 (Chóliz, 2016). In Galicia (northwest region of Spain), prevalence of online gambling among minors aged 12-17 has evolved, from 1.5% in 2010, to 3.8% in 2014, up to 6.5% in 2016 (Gómez et al., 2019). "Having children, playing online scratch cards, and online sport betting-but not online lotteries-turned out to be typical for problem online gamblers" (Lelonek-Kuleta et al., 2020, p. 1).

Social casino games are not currently regulated, and "the minimum age requirement to create a profile on Facebook and engage in social casino games is 13 years of age", which allows children to develop gambling addiction early through social media (Reynolds, 2019, p. 116). Essau and Delfabbro (2020) also highlight the issue of social casino games on social media sites, where adolescents play games like Slotomania, Zynga Poker, etc., which are not legally classified as gambling because there are no monetary outcomes. Various studies "found evidence that a small proportion of adolescents who gamble on simulated activities also tend to gamble on commercial gambling activities" (Essau & Delfabbro, 2020, p. 161).

Finally, many video games contain embedded gambling-like activities (Gainsbury et al., 2014, as cited in Essau & Delfabbro, 2020). Various multiplayer online role-playing, or virtual world games, e.g., 'Second Life', "have featured realistic gambling elements," emphasized Essau and Delfabbro (p. 161), who also noticed the emergence of so-called 'loot boxes', which

are not currently categorized as gambling because the generated items cannot be used outside of the game.

2.2 Artificial intelligence

To explore what AI is, one must first understand the meaning of intelligence. According to Colom et al. (2010) intelligence is a general mental ability to reason, learn, and solve problems, which due to its general nature includes cognitive functions, components, or elements such as perception, attention, memory, language, planning, and so on. Intelligence must include the ability to adapt to new circumstances in terms of creating new patterns of behaviour or actions for something that results from that change (Copeland, 2020).

John McCarthy first used the term artificial intelligence in 1956 to describe the ability of machines to simulate intelligence (Andresen, 2002). Computers can develop the "ability to reason, discover meaning, generalize or learn from the past experience" (Copeland, 2020).

One of the widespread techniques of AI is machine learning. Machine learning refers to second-generation AI techniques for automated learning, and finding solutions to problems by machine itself, without being explicitly programmed for that (Boucher, 2020). Algorithms do not need human experts' intervention, or any sort of explanation how to accomplish given tasks, where they have opportunity to improve its performance, as these systems are excellent learners (Brynjolfsson & Mcafee, 2017). In recent years, the most successful category of machine learning is supervised learning, emphasize Brynjolfsson and Mcafee, which requires millions of stored labelled data, so-called training examples, where inputs are mapped to deliver the correct outputs. After the check and training is done, the system can be loosed to investigate new examples with high rate of result accuracy. Contrary to a supervised, unsupervised learning algorithm learn independently of all available unidentified and unlabelled inputs, creating new clusters and associations, and is used whenever high-quality labelled data are unavailable, while semi-supervised learning includes some labelled examples used to mine information from large collection of unlabelled data (Russell & Norvig, 2020).

2.2.1 Areas of application of AI in online gambling

In online gambling supervised machine learning is mostly used in the concept of responsible gambling through preventive protective measures or tools (Blaszczynski et al., 2004; Bonello & Griffiths, 2019; Deng et al., 2019; Haefeli et al., 2011; Percy et al., 2016;

Reilly, 2017). In addition, machine learning support stable, long-term operator revenues and customer retention by providing improved security and satisfaction (Percy et al., 2016). Semi-supervised learning is used to detect fraud, and a "novel generative adversarial network based on semi-supervised learning of sparse auto-encoders" copes particularly well with the data imbalance present in the real world, where the number of fraud cases is significantly lower than normal transactions, and this technique show better experimental results than major discriminative techniques, e.g., logistic regression, random forest, and multi-layer perception (Charitou et al., 2020, p. 1).

In addition to detecting and preventing fraud, AI and big data are used in real-time for immediate decision making, to preserve the legality of services, to monitor and control online gambling operators, to prevent and detect cheating, match-fixing, money laundering, to verify customer identity, for consumer protection licensing and criminal investigation (Banks, 2016; Becker et al., 2016; Brito et al., 2014; Gainsbury & Blaszczynski, 2017; Lopez-Gonzalez & Tulloch, 2015; Munné, 2016; Pavlovic, 2018). Neural networks and deep learning are used to model gambler behaviour and decisions and to predict cumulative winnings or losses (Chan, 2010). Finally, convolutional neural networks can be successfully used in forecasting the outcome of games in sports betting on the Internet, as a sports prediction model, providing generally highly accurate predictions of match outcomes. (Hubáček et al., 2019).

However, as the focus of this research is two areas of AI use that the researcher believes are particularly associated with problem gambling, and these are advertising and promotions, and responsible gambling, special emphasis is placed on them.

2.2.2 Advertising and promotions

Consumers are the most important stakeholder of corporations (Strenitzerová & Gaňa, 2018). Hing et al. (2014) point out that the goal of marketing strategies is to increase consumption, acquire new customers, retain current customers, as well as gain a larger share of customers in the market.

Advertising and promotions often go hand in hand with big data, which contains consumption patterns of individuals (Kshetri, 2014). Big data are very large, diverse big and complex datasets of structured, semistructured and unstructured data, from different sources, and in different sizes, captured and processed in real time with low latency driven by AI (Zikopoulos et al., 2013). Datasets are consisted of trillions of words and texts, billions of images and hours of audio video material, vast amounts of social network data, etc., that were

facilitated with advancing computing power and creation of Internet (Russell and Norvig, 2020). Big data can be characterized by any or all characteristics such as high volume, variety, and velocity (O'Leary, 2013; Gandomi & Haider, 2015). AI is the most promising solution for self-learning, autonomous exploitation of big data (Iafrate, 2018). According to Baesens (2014) big data analytics is applied in various settings through different applications in real time, and categories related to advertising and promotions are: retention modelling, customer segmentation, web analytics, social media analytics, and text analytics.

"Advertising has been defined as a paid, mediated form of communication from an identifiable source, designed to persuade the receiver to take some action, now or in the future" (Richards & Curran, 2002, as cited in Hing et al., 2014, p. 394). The growth of online gambling sites is exponential, as are "annual marketing budgets in the tens of millions of US dollars" (Weibe, 2008, as cited in Hing et al., p. 396).

Internet gambling operators are commercial enterprises that collect various sorts of data about gamblers when players join loyalty schemes or online gambling sites, e.g., name, address, email, telephone number, date of birth, and gender, or through online customer tracking, e.g., time spent on gambling, type of games they play, amounts they have wagered (Griffiths & Parke, 2002, as cited in Griffiths & Whitty, 2010). These data are then used for creating customers' profiles, that serve as an input in development of detailed consumer behaviour models, retention programs and loyalty schemes, and all these things and practices are supposedly introduced to enhance user experience, what is questionable since more unscrupulous operators may target problem gamblers with tailored free bets encouraging them to play more and spend more money (Griffiths & Parke, 2002).

Moreover, potentially unscrupulous Internet gambling practices or tactics in combination with big data analytics are embedding, where gambling operators index their casino sites with certain hidden word as a meta-tag, i.e., compulsive gambling, and whenever people search for information about it or addicted gamblers seek for help about their problem in the search engine, they will get casino sites "popping up in front of them" (Griffiths & Parke, 2002, p. 314). In addition, Griffiths & Parke mention circle jerks in the form of telescoping windows, so when gamblers enter the site and want to get out another box offering similar service pops up in never-ending loop tempting them to play.

Cemiloglu et al. (2020) also highlighted compelling web marketing and advertising techniques, especially the practice of using gambling data for targeted advertising where players have trouble rejecting ads that tempt them to almost instantly satisfy their desire to gamble.

It was "found that recruitment strategies included advertising on search engines and affiliate networks, pop-ups and banner displays on websites, traditional advertising through television, radio and print, event or team sponsorships and creative guerilla marketing tactics" (Weibe, 2008, as cited in Hing et al., 2014, p. 396). Parke et al. (2014) emphasized:

> New marketing techniques utilising the social media platform are able to instil emotive and positive attitudes towards gambling brands and products, as well as enabling consumers to widely share and recommend gambling products across their online community, sometimes exposing under-age and vulnerable populations to gambling.

Advertising messages can resonate especially with young players (Reynolds, 2019). Evidence suggests that young single men are the target segment of sports betting and poker, while women are targeted for online casino and bingo (Weibe 2008, as cited in Hing et al. 2014, p. 396). It was found that advertising and promotions have limited effects in attracting new customers and stronger effects among existing ones (Hing et al., 2014).

The bottom line is that gambling addicts, as well as all people when it comes to big data, willingly and actively allow themselves to be "continuously, pervasively and increasingly subject to Big Data hypernudging strategies" accepting the asymmetric collusion form of relationships with operators, where gambling industry maximize returns by successfully harnessing algorithmic analytics to adapt game design layouts to satisfy their customers (Dow Schull, 2012, as cited in Yeung, 2017, p. 131).

Promotions are "a shorter-term strategy than advertising, designed to attract attention" by offering immediate incentives, e.g., free samples, discounts, or opportunities to win prizes (Hing et al., 2014, p. 394). Promotions arouse the desire to gamble through incentives, and problematic gamblers are a particularly vulnerable category (Hing et al., 2014). Typical "highly attractive incentives and inducements are deposit bonuses, reload bonuses, generous 'refer a friend' programs, affiliate programs, online retail stores, free demo practice sites, and of course online tourneys," and they are used by operators constantly and aggressively to attract the attention of gamblers (McMullan, 2011, as cited in Hing et al., p. 396). Hing et al. also mentioned that some usual incentives were given as part of registration process, such as welcome bonuses, free games, and giveaways. In addition, "retention was encouraged through bonus programmes (e.g., sign-up bonuses, referral bonuses, random draws) and reward systems (e.g., for making the largest deposit of the day, deposit credits, loyalty programmes, happy hour events)" (Hing et al., 2014, p. 396). Finally, customer data can be obtained from big data containing individuals' consumption patterns and with that information "gambling companies can identify problem gamblers and lure them with free bets" (Kshetri, 2014, p. 1137).

Perhaps it is precisely these examples of the use of machine algorithms in online gambling marketing that best illustrate what is explained as a dual-use dilemma, and that is the capacity of the same technology to be applied "for both good and ill" (Rashid et al., 2009, p. 34). Rashid et al. stressed that it is a fact that digitalisation improves the availability of services and people's interaction, but also raises some ethical issues regarding data protection, privacy or monitoring, confronting those who use them with a dual-use dilemma.

2.2.3 Responsible gambling

According to Drosatos et al. (2018), as cited in Cemiloglu et al. (2020, p. 2), many gambling operators adopt *responsible gambling* to be part of their CSR and recognize it as the concept used "to tackle excessive gambling and improve the image of their industry perception". Operators developed the responsible gambling concept to "increase player satisfaction while demonstrating corporate social responsibility" (Monaghan, 2009, p. 4).

To mitigate negative effects of problem gambling on individuals and the society, gambling industry designed voluntary "early codes of conduct to set out "mission statements", principles, and guidelines that gambling operators should follow to provide a "safe" gambling product or environment", which were supplemented with government-imposed regulations for customers' protection (Blaszczynski et al., 2011, p. 568). Responsible gambling refers to policies and practices for reducing and preventing the negative consequences of gambling, by applying consumer protection through various measures before an excessive gambling problem develops and any harm to health occurs (Blaszczynski et al., 2004; Haefeli et al., 2011). Many studies have shown that players perceived and rated measures as satisfactory and effective in controlling gambling problems, i.e., pop-up messages, money limits, etc. (Auer and Griffiths, 2013; Gainsbury et al., 2013a; Monaghan, 2009; Nelson et al., 2008; Wohl et al., 2013; Wood and Griffiths, 2008, as cited in Hing et al., 2015, p. 1077).

Preventive protective measures in online gambling include: i) exclusion (partial-single types of games, self-exclusion, prescribed), ii) limitation (gambling- deposited amounts on accounts, time, volume, or frequency) iii) design of gaming structure (pop-up messages, succinct presentation of the gambling-time, volume, or frequency), iv) information offering (awareness material and responsible gambling advice, self-test, interactive self-help tools, contact with qualified support structure), v) under age protection (access limitations), vi) handling credit (no award of credit) (Haefeli et al., 2011). In addition to these, behavioural tracking measure, also known as player tracking or tracking behavioural characteristics is

applied (Bonello & Griffiths, 2019; Deng et al., 2019; Reilly, 2017). Finally, there is also responsible gambling motivational telephone intervention to high-risk gamblers "aiming to encourage the gambler to set deposit limits, practice self-exclusion, or seek help" (Håkansson et al., 2020, p. 1).

2.2.3.1 Self-exclusion

It is a procedure where players voluntarily exclude themselves from online gambling platforms, by giving a personal instruction for deactivation or blocking of their own accounts, usually after they recognize an increased risk of losing control during Internet gambling (Percy et al., 2016). Furthermore, Percy et al. explained that machine learning algorithms first identify players who have used a self-exclusion protection tools, to analyse trends in their gambling behaviour, and then to compare other players, who show similar behaviour with labelled data taken from gamblers who used self-exclusion tools. In that way algorithms detect problematic patterns of behaviour and to implement measures to reduce the risk of harmful outcomes (Percy et al., 2016).

"Voluntary self-exclusion is a proxy measure for problem gambling" (Catania & Griffiths, 2021, p. 1). However, it may not always be the best measure indicator for at-risk or problem gamblers in the online gambling since there is no evidence of a direct connection and players reported several other reasons for self-exclusion (Griffiths & Auer, 2016, as cited in Bonello & Griffiths, 2017, p. 44).

Prediction of the self-exclusion is common task for AI, different machine learning statistical techniques like logistic regression, neural networks, Bayesian networks and random forest, while benefits of prediction are: i) players' protection (concern raised on user's gambling behaviour or if potentially unhealthy gambling levels develops; may also imply operators' authorized staff intervention for the ban) and ii) more stable, long-term operators' revenues in a sense that players who want to gamble less than before, stay on a platform, but with improved security and satisfaction (Percy et al., 2016).

2.2.3.2 Behavioural tracking

It refers to approach where machine learning algorithms are developed and applied to track users in online environment in order to identify those who show or experience disordered gambling behaviour, to the challenge of predicting high-risk users, their harmful

patterns of gambling and introduce interventive preventive measure (targeting of interventions) before the problem occurs (Deng et al., 2019; Reilly, 2017). Behavioural tracking is a tool for "monitoring and logging consumers' activity at minimal costs for the operator" (Griffiths, 2009b; Griffiths & Whitty, 2010, as cited in Bonello & Griffiths, 2019, p. 42). Additionally, it is intended to be characterized as customer centric tool serving to support customers' decisions (Auer & Griffiths, 2013). Machine learning algorithms have huge potential in accurately differentiating high-risk online gamblers from healthy gamblers by tracking different combinations of behavioural variables inherent in disordered online gambling, so-called "behavioral tracking data at higher resolutions, including bet-by-bet analyses" (Deng et al., 2019, p. 162). Deng et al. also mentioned a "demographic and payment-related information" tracking (p. 159). Online gambling datasets, typically specific to a single online operator, are collection of valuable information for risk and harm reduction, containing various behavioural markers derived from gamblers' play, classified as non-monetary and monetary markers, including variables such as frequency, intensity, variability, and trajectory (Deng et al., 2019, Table 1). This data is shown in Table 1.

Behavioral marker	Specific marker	Data set	PG marker
Non-monetary markers	Number of different games played	Bwin	Account closure
			RG flags
	Average duration of session	Win2day	Self-exclusion
	Number of days an individual plays	Bwin	Self-reported PG symptoms
	Total number of bets	Bwin	RG flags
Monetary markers	Variability of bet size	Bwin	RG flags
	Net loss	GTECH	Self-exclusion
	Net loss	Paf (Finland)	Unprompted limit setting, limit removal
	Increasing net loss over time	Bwin	Account closure
	Increasing bet amount over time	Bwin	Account closure

Table 1 - Behavioural markers that can be derived from online gambling play, and their linkages with indicators for disordered gambling (Deng et al., 2019, Table 1)

"Compared with classical statistics, machine learning is expressly designed for predictive modeling" (Deng et al., 2019, pp. 159-160). The benefits of machine learning flexibility are visible through the possibility that operators can offer an intervention to all high-risk gamblers, as well as to a certain subset of users, e.g., gender, type of a game, etc., while some concerns have been raised in terms of transparency, as it is a multivariate black box procedure, although explanations of the solution for individual predictions become available (Deng et al., 2019). Despite constant improvements in behavioural tracking, peer-

reviewed evidence still shows that there is no algorithm that predicts problematic patterns of gambling behaviour (Reilly, 2017).

2.2.3.3 Self-limitation

Self-limitation is a mean of pre-commitment, a "type of voluntary agreement between the customer and the operator", based on various measures like limiting of deposited amount on players' accounts on specified period of time (i.e., weekly), which provides better control, as well as other limitations that can be observed in real time like wagers, losses, duration of gambling, etc. (Haefeli et al., 2011, p. 275). However, effective in practice were deposit limits (Nelson et al., 2008, as cited in Haefeli et al., p. 275), while other types showed limited effectiveness (Broda et al., 2008, as cited in Haefeli et al., p. 275). Norsk Tipping, the Norwegian Government-owned gambling operator had introduced a mandatory global loss limit across its gaming portfolio (Auer et al., 2020).

2.2.3.4 Structural design of games (Display of messages)

Structural design includes in-play notifications which alert customers about their behaviour during play (Auer & Griffiths, 2013). Different structural factors can play role in players' behaviour and can be related to playability, payment, reward, education/provide information, or ambient features/use of colour and sound (Parke & Griffiths, 2007). Automated informative pop-up messages with responsible gambling content to a player can hold information, i.e., about total amount wagered or duration of the gambling session (Haefeli et al., 2011). However, messages that encourage self-appraisal, i.e., "Have you spent more than you intended? Do you need to think about a break?" showed better results in behavioural change than those messages with purely informative content (Monaghan & Blaszczynski, 2010, as cited in Haefeli et al., p. 274). However, various peer-reviewed studies show mixed results on the effectiveness of messaging and there is no 'real-world setting' research that offers reliable evidence that game features reduce harm (Reilly, 2017).

2.2.3.5 Assisting in the process of informed choice (Information offering)

It is a principle of customer protection where "the gambling industry, in collaboration with government and the community, must ensure that individuals receive

sufficient information to enable them to make responsible gambling choices" (Blaszczynski et al., 2008). Providing of such information may include awareness material and responsible gambling advice, self-test, interactive self-help tools, contact with qualified support structure, or similar assistance (Haefeli et al., 2011). Sufficient and necessary information that influence formation of attitudes for making informed gambling decisions and should be provided to players are related to i) potential risks and harm associated with gambling, ii) characteristics of games and probability of winning, as well as information about the role of skill, if any, that may play significance, iii) responsible gambling practices, iv) assistance to players in monitoring expenditure levels (time and money) (Blaszczynski et al., 2008).

2.3 Corporate social responsibility

The term corporate social responsibility (CSR) was coined by Howard R. Bowen in his book Social Responsibilities of the Businessman, publicized in 1953 (Preston, 1975). According to Carroll (1999, p. 269-270) Bowen deserves and should be called the father of CSR because of this early and seminal work, where Bowen refers to CSR as social responsibility, most probably because "the age of the modern corporation's prominence and dominance in the business sector had not yet occurred or been noted" and argues that social responsibility is a concept which "contains an important truth that must guide business in the future". The 1960s brought an evolution of thought about CSR, but since then attempts to reach a strong consensus on the definition of CSR have failed (McWilliams et al., 2006).

Some researchers define it as a concept that describes notion of obligation toward society constituent groups, the stakeholders, other than shareholders, and beyond that legal or union contract requires (Jones, 1980). Other researchers insist not on obligation, but rather on the discretionary right, as Kotler and Lee (2011) for instance, who define CSR as commitment of organizations to improve well-being of society through discretionary or voluntary business activities and contributions of (non)monetary resources. "Socially responsible behaviour is performed voluntarily above the framework of the law and contractual arrangements and permeates all of a company's activities" (Dahlsrud 2008; Jones 1980, as cited in Tetrevova and Patak, 2019, p. 1442).

There is also a view that agrees on voluntarism, but insists on institutional normative, primarily relied on internal private self-regulation mechanism, where industrial organizations generate and implement discretional CSR initiatives based on public and private international law norms, to mitigate social harm, promote public good and improve community well-being

(Sheehy, 2015). There are many reasons for complications in unique definition of CSR, such as the type of business, different attempts at academic definition, confrontation of political philosophies, and Sheehy concluded that CSR has become a tool for government to address social and environmental issues.

According to Smith (1994) corporate social initiatives or philanthropic initiatives emerged in the 1990s because of a strategic transition from obligations to the new corporate philanthropy, reflected in the willingness of many companies to fund long-term initiatives for specific social issues, both for the benefit of community, and to support their own advanced corporate business goals. Corporate social initiatives can be philanthropy, cause-related marketing, employee volunteering, or innovative programs (Lichtenstein et al., 2004).

2.3.1 Theoretical perspectives of CSR used in online gambling

The researcher believes that online gambling companies can be divided into *two groups* in relation to the theoretical thought of CSR. The first group consists of companies that do not apply ethical behaviour, focusing only on profitability within the law, open competition, and market mechanism, typical of *shareholder theory*. Other companies are in the second group. In addition to economic and legal responsibilities, they demonstrate a commitment and consistency of fairness, ethical and moral conduct, especially in advertising and promotions, as well as in building strong relationships and creating value for stakeholders, inherent in *stakeholder theory*, and *Carroll's pyramid of CSR*, which also includes philanthropy.

For the following reasons, the researcher is very convinced that all three theoretical perspectives provide a good basis for researching and explaining the current CSR practices of online gambling operators:

a) The shareholder perspective is useful for examples of the absence of more than the legally required ethics in corporate conduct.
b) The stakeholder theory has its value in analysing relationships and explaining value creation for stakeholders in terms of corporate sustainability.
c) Finally, the Carroll CSR pyramid can display all CSR dimensions in which gambling operators are active, including philanthropy for which evidence has been found in secondary sources, such as organizational websites. In addition, Carroll's moral management of organizational stakeholders published also in the article on the pyramid provides a thorough explanation of sustainable stakeholder governance suitable for analysis.

2.3.1.1 Shareholder theory

According to shareholder theory business is arrangement between shareholder and manager where shareholder as the owner advance capital to manager for business purposes, with obligation that capital must be used in accordance with shareholder's wishes and returned to shareholder as ownership interest in the venture after business goals are achieved (Hasnas, 1998). Friedman doctrine is the example of this theory, which was often criticized most probably because of Friedman's strong capitalistic attitude against social responsibility. He claims that there is only one social responsibility in business and that is to increase its profits through actions based on "open and free competition without deception or fraud" (Friedman, 1970, p. 112). However, shareholder theory does not hold instruction to managers that they must do anything to increase profits, without implying any moral or ethical standards, rather they have obligation to pursue profit by all legal and nondeceptive means and must spend money of owners only in ways authorized by them, regardless of social benefits (Hasnas, 1998).

Furthermore, Milton Friedman wrote that mere existence of social responsibility in a firm is the sign of the agency problem within organizations, where CSR represents a self-serving behaviour of corporate chief executive officer's (CEO), that reduces the wealth of shareholders by spending their money for general social interest, which indirectly results in higher prices of goods for customers and lower wages of employees (Friedman, 1970). Friedman explained that agency problem occurs when executives do not work to maximize returns to shareholders. CEOs exercise a distinct social responsibility only if they spend resources in a different way than owners, customers, and employees would have spent it. Instead, companies' funds should rather be returned to owners or invested in internal projects, and not on projects of social responsibility, unless a manager as individual proprietor specifically wants to exercise social responsibility by spending his own money (Friedman, 1970). Manager who is appointed to act on behalf of owners is their agent only, serving their interests, and therefore cannot serve the public at the same time, emphasized Friedman, because such a behaviour would undoubtably represent the conflict of interests. CSR implies that collectivist ends can be reached without collectivists means and therefore it is a "fundamentally subversive doctrine" (Friedman, 1970, p. 112).

Friedman (1970) concludes that CSR means nothing more than a cloak for actions grounded in something else than social responsibility, for instance, invisible marketing purposes, attraction of desirable employees, contributing to charitable causes that company

favours, or reasons related to law on tax deduction of corporate charitable funds. In addition, Friedman mentioned that it can also be motivated by manager's personal reasons or agenda, self-promotion, and career advancement.

2.3.1.2 Stakeholder theory

The stakeholder approach is theoretical concept presented in 1984 by Robert Edward Freeman that explains relationship between executives and stakeholders, with special focus on effective strategic management actions undertaken by executives to meet expectations of many constituents, individuals, and groups, and not just owners. Stakeholder is any party that can affect the firm, or be affected by firm's decisions or actions, like for example shareholders, employees, customers, suppliers, governments, competitors, consumer advocates, banks, unions, environmentalist, media, and different organizations, or special interest groups, legitimate and illegitimate, that can support and help, or work against and harm a company (Freeman, 1984). "Stakeholder theory posits that the essence of business primarily lies in building relationships and creating value for all its stakeholders" (Freeman & Dmytriyev, 2017, p. 10).

Managers and firms cannot isolate social effects of business, and therefore executives need to effectively manage relationships with stakeholders in the action-oriented way. This includes responsiveness to stakeholders, development of voluntarism approach where organization must satisfy the needs of as many key stakeholders as possible, which represents a driving force of organization. However, the real complication of this strategical management approach is that CEO must consider variety of "stakes" or constituents, results of multiple level of strategical analysis in the process of articulation of firm's strategy, and to invent new processes how to effectively consider stakeholder concerns (Freeman, 1984). Example of stakeholder map is presented in Figure 3.

Additional contribution to stakeholder theory has been made by other authors emphasizing the ethical and moral dimensions in business, where businesses are considered moral agents (Donaldson & Preston, 1995). Phillips (1997) points out the principle of fairness, while Jones (1995) stresses out that recurring transactions between a company and stakeholders based on trust and cooperation motivate further commitment to honest ethical behaviour, which brings competitive advantage and other benefits.

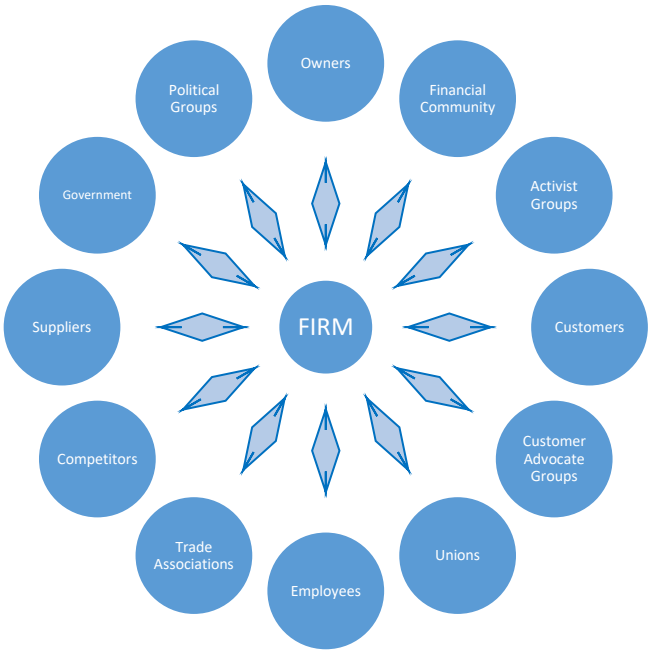

Figure 3 – Stakeholder Map of a Very Large Organization (Freeman, 1984)

2.3.1.3 Carroll's pyramid of CSR

In his article from 1991, Archie B. Carroll presented the pyramid model of CSR and introduced element of morality in the context of management of organizational stakeholders (Carroll, 1991). Morality refers to a set of personal or social standards that distinguish between good and bad behaviour and character, where good has the quality of being right, honest, or acceptable (Dictionary Cambridge, 2021a). Carroll relates morality to social responsibility achievement, explaining that social responsibility is possible only "if more managers become moral instead of amoral or immoral" (Carroll, 1991, p. 1). Moral management implies profitability as a business goal, but only if accomplished within law and ethics, where law is minimal ethical behaviour, while sound ethical principles, like justice, rights, utilitarianism, and the Golden Rule are investigated by moral managers and serve as guidance in their decisions making process. Hypothesis of moral management are that shareholders' short-term and long-terms interests are central factor and to do that in best manner is to treat all stakeholder claimants fairly and ethically. Manager seeks and finds mutual interdependency between community and company goals (Carroll, 1991).

Four CSR components are economic, legal, ethical, and philanthropic (Carroll, 1991). The Pyramid Model represents a four-part conceptualization of CSR as a need to reconcile economic with social orientation of a firm, which in a way means establishing a CSR legitimacy, by having included entire spectrum of obligations that business has to

society. Economic is the most fundamental, and other responsibilities are based upon it. Figure 4 shows the pyramid of CSR.

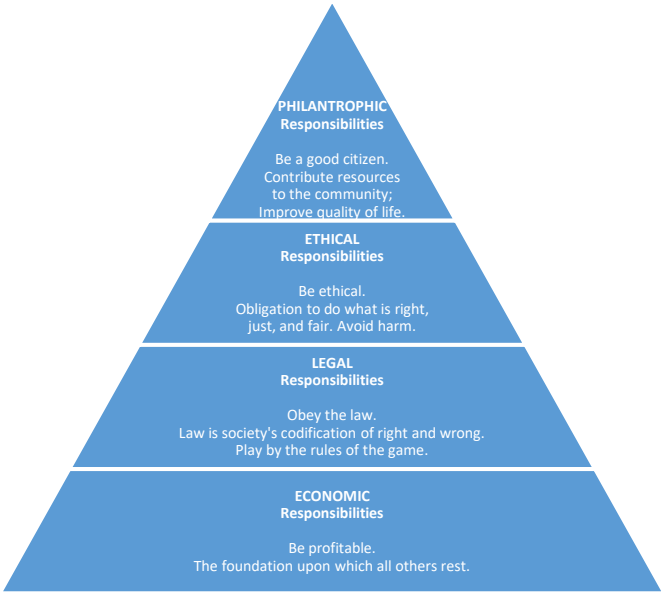

Figure 4 - The Pyramid of CSR (Carroll, 1991)

Each category has different set of responsibilities that are important for manager and organization (Carroll, 1991). Figure 5 describes components of CSR in detail.

Economic responsibilities	*Legal responsibilities*	*Ethical responsibilities*	*Philanthropic responsibilities*
• Consistency with earnings per share maximization • Commitment to maximum profitability as possible • Maintaining a strong competitive position • Maintaining the high level of operating efficiency • Profitability consistency as the measure of firm's success	• Business performance in a manner that consistently fulfil expectations of government and law • Compliance with regulations on different government levels (federal, state, local) • Law-abiding corporate citizen commitment • Legal obligations fulfilment as the measure of firm's success • provision of products and services "that at least meet minimum legal requirements"	• Consistency in activities that are in accordance with social mores and ethical norms expectations • Recognition and respect of new ethical/moral norms adopted by society • Preventing the compromise of ethical norms for the purposes of corporate goals achievement • Promotion of good corporate citizenship by doing what is moral or ethical • Firm's integrity and ethical behavior recognition which means to go beyond mere legal compliance	• Consistency in philanthropical and charitable activities that are expected and welcomed by society • Dedicated assistance to fine and performing arts • Voluntary and charitable participation of managers and employees in local communities • Assistance to private and public educational institutions • Voluntary assistance to community projects that enhance the "quality of life" of its members

Figure 5 – Components of CSR (Carroll, 1991)

Components of CSR of online gambling operators

Economic responsibilities. Hing et al. (2014) explain that commercial pressures through achieving profitability are related to the total consumption of products and services provided by online companies. Profitability dictates the need to attract and retain customers, as well as to expand the evolving market segment, so internet gambling therefore has the potential of a profitable source of income per capita over long periods of time, Hing et al.

pointed out. However, a profit-centric culture of companies based on financial indicators, budgets, accounting metrics, sales, and profit, often puts customers in the background, so companies may easily succumb to pressure and be seduced by bad profits (Reichheld, 2011). Bad profits among many things can include various shady deals, deceptive messages, deceiving customers in any way, and making money to the detriment of customers, Reichheld explained. There is also a study that has investigated CSR and the financial interests of operators in the case of responsible gambling programs, which showed "that financial interests reduce the effectiveness of CSR" (Fiedler et al., 2020, p. 1).

Legal responsibilities. Online gambling, as a form of gambling activity, is regulated to ensure a safer environment and consumer protection from unscrupulous operators, which in turn will provide tax revenue (Monaghan, 2009, as cited in Yani-de-Soriano et al., 2012, p. 2). Operators as part of their licensing obligations must comply with national gambling laws governing gambling markets, and in the UK, for example, the Gambling Act is in force (Yani-de-Soriano et al., 2012). Also important is the legal aspect of the use of big data, which must comply with data privacy laws. "The introduction of Internet gambling has come at a price, and that price is an invasion of the gambler's privacy" (Griffiths & Parke, 2002, p. 315). Therefore, the GDPR, the EU data privacy law, was designed and entered into force on 25 May 2018, so that individuals have greater control in the process of collecting, using, and protecting their personal data online (Voigt & Von dem Bussche, 2017; Greengard, 2018). Furthermore, operators must pay attention to are national anti-money laundering laws related to online gambling (Banks, 2016; Brooks, 2012; Mangion, 2010). Finally, responsible gambling is a socially responsible activity that has been introduced into national legislation on gambling as an obligation, and for example, in the Czech Republic it is regulated that from 1.1.2017. operators must provide these measures as part of the Gambling Act (Tetervova & Patak, 2019). Although responsible gambling contains elements of ethics, the moment the concept was imposed as a legal obligation, it became the legal responsibility of the operator, the researcher believes. There are other legal regulations, but since this is not the focus of the research they will not be further exposed.

Ethical responsibilities. As Carroll (1991) explained, ethical responsibilities include attitudes that promote good corporate citizenship by doing what is moral/ethical and are there to prevent the compromise of moral/ethical norms adopted by society for the purposes of corporate goals achievement. Ethical CSR practices of operators are aimed at preventing or minimizing the harm associated with their activities (Yani-de-Soriano et al., 2012). In this sense, the ethical responsibility of online gambling operators is linked to a

way of advertising and promotion aimed at abstainers and gamblers who have a problem, thus undermining their desire to stop gambling, which has been partially confirmed in various studies (Hing et al., 2014). “The industry should not rely on revenue from problem gamblers, nor should their behaviour be reinforced by marketing activities (i.e. rewards)” (Yani-de-Soriano et al., 2012, p. 1).

Philanthropic responsibilities. The most common philanthropy is corporate giving and collaboration with non-profit organizations, while other forms such as support for individual employee volunteering, support for donation activities among employees, and corporate volunteering, are much less practiced and reported (Tetervova & Patak, 2019).

2.3.2 Other theoretical perspectives of CSR

Other theoretical perspectives of CSR that are more focused on explaining intra-organizational relationships, achieving lasting competitive advantage by solving environmental problems, or through company resources, and emphasizing the role of institutions in relation to CSR, are largely irrelevant to online gambling, so therefore not considered. These are agency theory (Mitnick, 2018; Jensen & Meckling, 1976; Eisenhardt, 1989; Williamson, 1985), stewardship theory (Donaldson & Davis, 1991; Davis et al., 1997: Menyah, 2013; Godos-Díez et al., 2011), resource-based view of the firm (McWilliams & Siegel., 2001; Russo & Fouts, 1997; Branco & Rodrigues, 2006), natural-resource-based view of the firm (Hart, 1995), institutional theory (Campbell, 2007).

2.4 Sustainable gambling industry

The researcher believes that reducing and preventing damage from gambling would give impetus to the development of a sustainable gambling industry. Sustainable development requires following “a development path where human welfare or well-being does not decline over time” (Atkinson, 2000, p. 236). At the internal corporate level, many scholars believe that sustainability is achieved through an organizational culture that integrates the principles of sustainability as a unified system of values and beliefs adopted and nurtured by employees led by leaders who "have to abandon a purely economically driven paradigm and achieve a more balanced set of socially and environmentally responsible values" (Linnenluecke & Griffiths, 2010, p. 363). Sustainable gambling operations should be an acceptable balance between purely economic and social orientation to gambling (Hing, 1999).

3. METHODOLOGY

This chapter provides an overview of the research methods that have been followed. It provides information on research strategy, research design, and research methods, where it is explained how data were collected and how they were analysed. Criteria used to assess the quality of the research are also presented, as well as the ethical considerations.

3.1 Research strategy

The thesis examines and explains the current use of CSR and AI in online gambling and presents new insights related to these phenomena that can support the sustainable development of the online gambling industry. The quantitative approach involves the collection and analysis of numerical and statistical data in order to explain certain social and human activities, and the qualitative approach is more subjective in nature and involves examining and reflecting on perceptions to understand social dynamics and use words and images (Bell et al., 2018; Collis & Hussey, 2003). Therefore, the decision to use a qualitative research strategy for this research came quite naturally. The researcher believes that this is a suitable strategy for answering the research question, understanding the phenomena, concepts, and meanings of stakeholder complex social dynamics, their subjective reality, as well as understanding and explaining the reasons that influence stakeholder decisions. In addition, there are several other reasons for deciding on this type of strategy. Taking a qualitative research means to collect subjective data (Collis & Hussey, 2003). During the interview for instance, the respondents' interpretations must be fully examined and noted (Bell et al., 2018). In addition, Bell et al. emphasized that qualitative approach is also better when there is inability to collect data from many participants who would have sufficient knowledge of the phenomena.

The characteristics of a qualitative research strategy, which correspond to this research, follow (Bell et al., 2018).

i) Ontological position is constructivism.

ii) Epistemological assumptions are based on interpretivism.

iii) Importance is given to induction and abduction in the relationship between theory and research, with an emphasis on creating a grounded theory based on data, rather than deduction, or testing the theory based on already formulated hypothesis.

iv) Social reality is based on experience, and it is subjective, not objective, or external, which means that it is continuously changing and arises in the process of interaction of subjects. The protagonists in online gambling are active creators of their dynamic social relationships.

v) Naturalism is respected as a principle through observation of respondents, where data collection took place in real situations, as a vivid description of stakeholders, who were observed and not influenced in any way, for example, player gamble/bet online, or while stakeholder representatives give speeches at conferences or webinars recorded in real time.

The researcher is aware of criticisms, limitations, risks or shortcomings of qualitative research strategy and they are considered and controlled to minimize any negative effects that may affect the conclusions. The most common issues raised are subjectivity and impressionistic behaviour of a researcher, difficulties of research replicability, lack of generalizability of the findings, lack of transparency regarding participant selection, biases, and developing close affinity with the people being studied (Bell et al., 2018). In this research, special attention is paid to biases related to either the personal biases of the researcher or the intrusion of values, i.e., subjective interpretations of data collected during interviews, which could influence the research conclusions, or biased answers of interviewees, if they do not understand the question, or if the answer presents them unfavourably, and is therefore avoided or altered (Bell et al., 2018).

3.1.1 Inductive and abductive logics of inquiry

Induction and abduction are approaches that represent main relationship between theory and this research. "Abduction and induction can be usefully integrated when trying to solve complex theory development tasks" (Flach & Kakas, 2000, p. 27). Inductive researchers as a background to their qualitative investigation often use a grounded theory approach for data analysis and theory generation, which stand in close relationship to one another during the research process, as is the case with this research (Bell et al., 2018). Grounded theory is generation of theory from empirical data (Glaser & Strauss, 1967). According to Glaser and Strauss, process of research consists of two methods that are to be used jointly; the first method conducted for the purpose of theory development as it emerges is *theoretical sampling*, in which data are collected, coded and analysed jointly, conceptualized in comparison groups with categories and properties, and where sampling is done until reaching a saturation point, when no additional data are being found, while in second method of *constant comparison*, simultaneous coding and analysis in theory generation is conducted systematically by using

explicit coding and analytical procedures. Grounded theory is a good approach when a researcher wants to know how meanings are constructed out of intersubjective experience and how individuals understand and interpret the reality, as is the case with this research (Suddaby, 2006). Moreover, it corresponds well to interpretivism which has clear objective of understanding how and why activities between actors happens, what do they mean in the social context (Bell et al., 2018).

Abductive reasoning is mode that "acknowledges the importance of cognitive reasoning in theory building", which means that it goes beyond rational, computational reasoning in order to provide logical and best explanation or interpretation of a puzzle or surprise found in reality, that researchers try to solve or simplify (Bell et al., 2018). The hermeneutical interpretative circle in which researchers operate encourage them to understand relationships between data and their previously acquired beliefs or attitudes (preunderstandings), where researcher is open to surprising facts in data, rather than simply using it for confirmation of preunderstandings (Bell et al., 2018). Finally, Bell et al. concluded that abduction overcomes some limitations of induction, criticized that "no amount of empirical data will necessarily enable theory-building" (p. 24).

3.1.2 Ontological and epistemological considerations

As for the ontological consideration of research phenomena in a particular context, the goal is to understand what constitutes the reality of stakeholders and to find deeper relationships that lead to the generation of knowledge about them through *constructionism***,** where social dynamics is explored and revealed as a result of mutual relations between subjects (stakeholders) involved in social processes, including new technologies and social responsibility, which cannot be viewed in isolation without being linked to individuals or organizations that are social actors (Bell et al., 2018). In this sense, the challenge is to find and understand the meanings behind social activities and present them in a particular version of reality related to the topic and research question.

Following the adoption of constructionism, epistemological explanations led to active data collection by interviewing stakeholders about the way they experience and shape their social reality (Bell et al., 2018). *Interpretivism* is the epistemological approach of this study, where the researcher wants to understand the reality of stakeholder relationships through empathy. This provided a certain degree of reflexivity, "through which greater confidence in the findings can be claimed" (Bell et al., 2018, p. 153). Stakeholders in the online gambling

industry and their activities can change their reality and create new meanings that will affect the quality of their relationships, the researcher believes. Although participants observations are used in the process, stakeholders will not only be observed and their relationships will not only be explained objectively and externally (positivism), but through interviews and direct contacts the reasons behind their behaviour will be understood and how and why various social phenomena occur, "including the processes whereby things happen" (Bell et al., 2018, p. 31).

3.2 Research design

Research design is the overall framework for processes of data collection and data analysis that provides an understanding of interconnections and meaning between different variables (Bell et al., 2018). The research design is cross-sectional (social survey research) and features of cross-sectional design that correspond to this study are (Bell et al., 2018):

i) More than one case: researcher was interested in variations in respect of different stakeholders, and condition that more than one case is examined was fulfilled.

ii) At a single point of time: data were gathered more or less simultaneously, and not in phases. Interviews were held only at a single point of time with each interviewee.

iii) Two or more variables: a body of collected data contained two or more different variables that were further examined, so the patterns of association could have been detected.

iv) Even more typical for quantitative research, a form of this design type is also used in qualitative research, especially when (un)semi-structured interviewing with a number of participants are employed, as well as qualitative content analysis is performed.

Limitations with social survey research exist mainly because of the problem of unambiguously imputing causality (Bell et al., 2018). The criteria for assessing the quality of business research described by Bell et al., which relate to research design, are discussed in the final section of this chapter.

3.3 Research methods

According to Bell et al. (2018) research method refers to techniques of the data collection for data analysis, in order to get new information and better understand the topic. In this research secondary data are gathered and theory was presented in the *systematic literature review*. Additionally, the qualitative content analysis of collected secondary data was conducted, which was used together with literature review in discussion part. Primary data

collection was carried out through combination of *semi-structured interviews* and *participant observation*, as form of naturalism.

A planned-systematic approach to data collection was conducted (Bell et al., 2018). However, some elements of emergent-spontaneous approach were not excluded during data collection, semi-structured interviews, by taking an opportunistic attitude, meaning to express readiness to respond to such situations where participants unexpectedly wanted to share interesting or generative information in the form of fact or documents that created significant contribution to this research. Data were also gathered through immersion, where inherent patters emerged out of observation of new data that potentially hold a value are appreciated, even the meanings behind data are yet to be discovered (Bell et al., 2018).

A theoretical sampling method was used in data collection for generating theory in the research, whereby data were jointly collected, coded, and analysed, organized in comparison groups with conceptual categories and their properties, and further systematically analysed through constant comparison method of grounded theory (Glaser & Strauss, 1967). All activities on data collection and data analysis were performed through "repetitive interplay between the collection and analysis of data", known as the *process of iteration* (Bell et al., 2018, p. 518).

3.3.1 Secondary data collection

A systematic review of the literature is an evidence-based approach that provides a more reliable basis on for research design research, where findings from previous studies describing phenomena of interests are critically examined for a deeper understanding of research subject (Bell et al., 2018). In this research, there are two main variables, AI and CSR, which are explained in detail, keeping in mind the possible aspects of use relevant to the topic of this research. In addition, the phenomenon of problem gambling and the concept of responsible gambling related to the main phenomena and specific context of the online gambling industry are investigated. Special attention is paid to sections in the literature that contain information on the forms of application and the nature of the relationship between the variables to find out whether previous research papers have found this link or not.

To minimize author biases existing literature sources were thoroughly investigated and presented in the form of systematic literature review taken within the theoretical field of research phenomena (Bell et al., 2018). Search strategy was developed after defining research question (Bowers-Brown & Stevens, 2010).

The first step of search process is called the initial review. The research field was examined, based on the headlines and abstracts, then words, followed by inclusion and exclusion criteria related to research question. The main inclusion criteria were related to literature and researchers' articles about AI and CSR, including models or concepts describing these phenomena, as well as online gambling and responsible gambling. Exclusion criteria were related with delimitations of the research where literature and articles describing land-based casinos, or any form of off-line gambling were excluded. Exclusion criteria related to territory outside the EU and the UK.

The second step of the search process was an extensive literature review with using of keywords for collecting all available information and knowledge on RQs phenomena. This step is related to reveal the full content and support potential theoretical contributions of this research. The keywords like "CSR", "AI", "corporate social responsibility", "social responsibility", "corporate sustainability", "sustainability", "GDPR", "gambling regulation", "gambling advertising", "gambling promotions", "online gambling", "igambling", "internet gambling", "harmful gambling", "gambling problem", "disordered gambling", "gambling addiction" and "responsible gambling", were used as the initial step in finding relevant literature, with a lean toward English literature written literature written in the second half of the 20th century and in the 21st century. Databases Business Source Premier, PsycINFO, Science Direct, Google Scholar, the Gothenburg University Library and personal collection of articles and books related to this research were used during entire research process

Additionally, collected materials that were used as supplementary sources of secondary data in qualitative content analysis included texts, visual documents, media outputs, certain public documents (legal documents, official reports) obtained via organization/company website, including organizational documents, such as "annual reports, mission statements, reports to shareholders, transcripts of business leaders' speeches, press releases, advertisements, and websites" (Bell et al., 2018, p. 504-505). Secondary collection/analysis was conducted in combination with primary data collection as a comparative element "incorporated into the research design" (Bell et al., 2018, p. 296).

3.3.2 Primary data collection

With an open mind, enabling the creation of new categories and theory from data, where importance is given to understanding the specific context in which the topic is analysed, the researcher used a combination of participant observations and semi-structured interviews (Bell

et al., 2018). Detailed information on the observed participants and interviewed respondents is given in Appendix 2.

Primary or empirical data were initially gathered through *participant observations*. This was done based on principles of naturalism or collecting data in "naturally occurring situations and environments" (Bell et al., 2018, p. 48). Participants were listened to and watched in real time, i.e., stakeholder representatives at the gambling conference and webinar, while participating in discussions, giving statements or interviews, giving speeches or the gambler while gambling / betting online. The observed people were not affected in any way.

According to Gioia et al. (2013) interviews are the heart of a research study. *Semi-structured interviews* were conducted with key stakeholders, such as operators, suppliers, customers, researchers in the field of responsible gambling and sustainability, journalists, as well as with other experts and researchers from inside and outside the online gambling industry. The one-to-one or the individual interview is a valuable method of gaining detailed information about phenomena of interest, or "gaining insight into people's perceptions, understandings and experiences" (Ryan et al., 2009, p. 1). Semi-structured interviews were found to be the most effective type of interview for this study because they allow for less structured questioning and obtaining unforeseen responses that may arise from open-ended questioning, allowing "the exploration of spontaneous issues raised by the interviewee" (Ryan et al., 2009, p. 2). Semi-structured interviews were based on the Interview Guide, showed in Appendix 1. Additional open questions that were not planned were asked out of curiosity.

As for the sampling technique, the form of non-probability sampling was initially used, known as *purposive sampling*, where participants were selected purposively based on their ability to contribute to a theoretical understanding of the subject and their relevance to the research question (Bell et al., 2018). This means that participants were not sought at random but were selected by the researcher who had clear goals in mind. Semi-structured interviews were "conversations with a purpose" (Burman, 1994 as cited in Bell et al., 2018, p. 12). In addition, an invitation to various stakeholders to participate in the interview was posted via social media at the beginning of the interview process, to increase the likelihood of achieving a satisfactory sample size, but no participant voluntarily expressed a desire to participate. Snowball sampling was applied in several cases, when participants were asked to recommend or suggest other potential respondents with a similar level of relevance to the research (Bell et al., 2018). However, this technique was not intended to be an initial approach to sampling in this research but served as an additional opportunity to expand the subject base. Sample size was solely determined by the factor of achieving data saturation and relevance to generating

the theory, which is the approach advocated by grounded theory (Bell et al., 2018). In order for this research project to become an example of social commitment and further motivate new participants to join the process, the researcher decided to make a personal donation for each successfully conducted interview of which participants were informed. Donations were delivered digitally to the Swedish childhood cancer foundation after each interview, as a modest contribution to their work in preventing and combating cancer in children, and as a token of gratitude to the participants for participating in the interview.

The process began by making initial lists of possible participants. Respondents were sent a short introductory letter explaining the research, after which interviews were scheduled. Participants were not familiar with the questions before the interview in order to preserve spontaneity in the given answers. Most respondents signed an informed consent form to participate in the interview. In some cases, chief administrators in organizations have been asked for support to save time and energy and provide support to organizational authorities at the highest level. Due to time constraints, as well as other considerations, five to ten planned questions from the interview guide were answered per interview. The choice of questions was made before each interview, and it depended on the role of the respondents in the organisation and the level of personal and professional knowledge possessed in a particular area. However, the questions covered all the main research topics. The exact number and order of questions varied depending on the course of the interview. Interviews were in most cases organized online, via video conference call, or in person. Nature of activity was documented whenever data were collected: with observation protocol number, participant name and position, date, and duration of interview (Bell et al., 2018). Each interview began with a self-presentation and presentation of the role / position / occupation of the participants. The duration of the interview was 30-60 minutes.

Trust was a prerequisite for a stress-free interview, which seemed more like a pleasant conversation, based on communication with respect. There was flexibility during the interview and whenever the respondent wanted to expand the answer, it was more than welcome. The discussion began with explicit questions, but participants were encouraged to discuss the topic freely. Such spontaneous discussion was the best that the semi-structured interviews provided. Respondents shared independent thoughts, which could not be revealed if they sat with peers in a focus group (Bell et al., 2018). Moreover, this has made it possible to maintain an open mind about the new information that has emerged from the data and to examine some unexplored and unknown territories with existing problems. Ethical considerations and protection of participants were respected (Ryan et al., 2009). The interviews were voluntary,

and the interviewees were not reimbursed for their participation. Interviews were recorded only if the respondent agreed. Anonymity and confidentiality were respected.

3.3.3 Data analysis

Bell et al. (2018) emphasize that primary data analysis is a process where researcher who collected data conducts the analysis on it. Data analysis happens together with data collection, before, during and after the interviews or observations (Bell et al., 2018). One of the main strategies of qualitative data analysis, adopted for this research, is *grounded theory*, which is a theory generation emerged from ongoing data collection and analysis, rather than merely analysis of pre-coded themes, i.e., thematical analysis, and for this reason it is important to not start out the process of data collection/analysis with too many preconceptions (Bell et al., 2018).

Grounded theory refers to structuring data through the development of codes that inductively appear in interviews/observations, and further through the discovery of categories and their properties and the finding of mutual relations in the theory (Glaser & Strauss, 1967). The process of checking the literature with the collection of primary data (empirical data) and recoding is called by Glaser & Straus as *theoretical sampling*. The next phase is the phase of *constant comparison*, known as the second method of grounded theory, which requires systematic analysis of data and constant comparison of existing and new data, as well as concepts and categories with their properties, and this is repeatedly conducted (Glaser & Strauss, 2018).

The grounded theory in this research is constructed as follows. The first step in data analysis of the research was a raw data management, where transcription process started by uploading raw data into MS Word software, then *coding* the participant observations/semi-structured interview transcripts, which is the process of breaking down data into components and labelling them (Bell et al., 2018). Open coding included detection of recurrences of sequences of coded text by identifying connections between different parts that led to development of preliminary concepts, descriptive 1st-order (informant-centric) terms and codes (Gioia et al., 2013). Next step was axial coding to “develop a comprehensive compendium”, expand or collapse terms and codes to organize them into emergent 2nd-order (theory-centric) themes, which were at the final stage distilled into 2nd-order aggregate theoretical dimensions. This was a process of building of *data structure* shown in Figure 6 (Gioia et al., 2013).

Figure 6 – Building a data structure (Source: developed by the researcher, based on Gioia et al., 2013)

The theoretical construction of this research is presented in more detail at the end of the chapter of empirical data in Figure 8.

Furthermore, data reduction was implemented during entire data analysis stage, because large collection of data had to be reduced and systematically reorganized so the researcher could make sense of them (Bell et al., 2018). In addition, two criteria were used during data collection/analysis and theory generation (Whetten, 1989):

i) comprehensiveness (are all relevant data included?)

ii) parsimony (should some data be deleted because they do not provide enough value?)

Data collection was carried out until theoretical, or data saturation was achieved, until new findings could no longer be obtained, and new codes could not be generated (Bell et al., 2018). It was then decided that no further interviews with participants were required. There are some criticisms regarding coding and data saturation, such as those that coding fragments data and that data saturation lacks transparency because the researcher rarely explains how and when the saturation point is reached (Bell et al., 2018).

Finally, in combination with primary data collection/analysis, a qualitative analysis of the content of secondary data collected in the meta-analysis of existing research studies, as well as on data from other researchers, companies, or different organizations, was used as a comparative element "incorporated into the research design" (Bell et al., 2018, p. 296).

3.4 Relationships of methodology elements

In order to understand all the main methodological elements of this research work, it is important to observe them in their independence, as well as in their interdependence, or unity, the researcher believes. Together with other parts of the research, clearly established relationships between the elements of the methodology form the foundation of a successful research project (Bell et al., 2018). Excluding or neglecting any element in the iteration process can result in blind spots during different phases of the project, where the researcher may inadvertently miss important facts (Bell et al., 2018).

For this reason, the great importance of the elements of the methodology and their relationships is given from the very beginning of the research project. The relationships of the elements of the research methodology are shown in Figure 7.

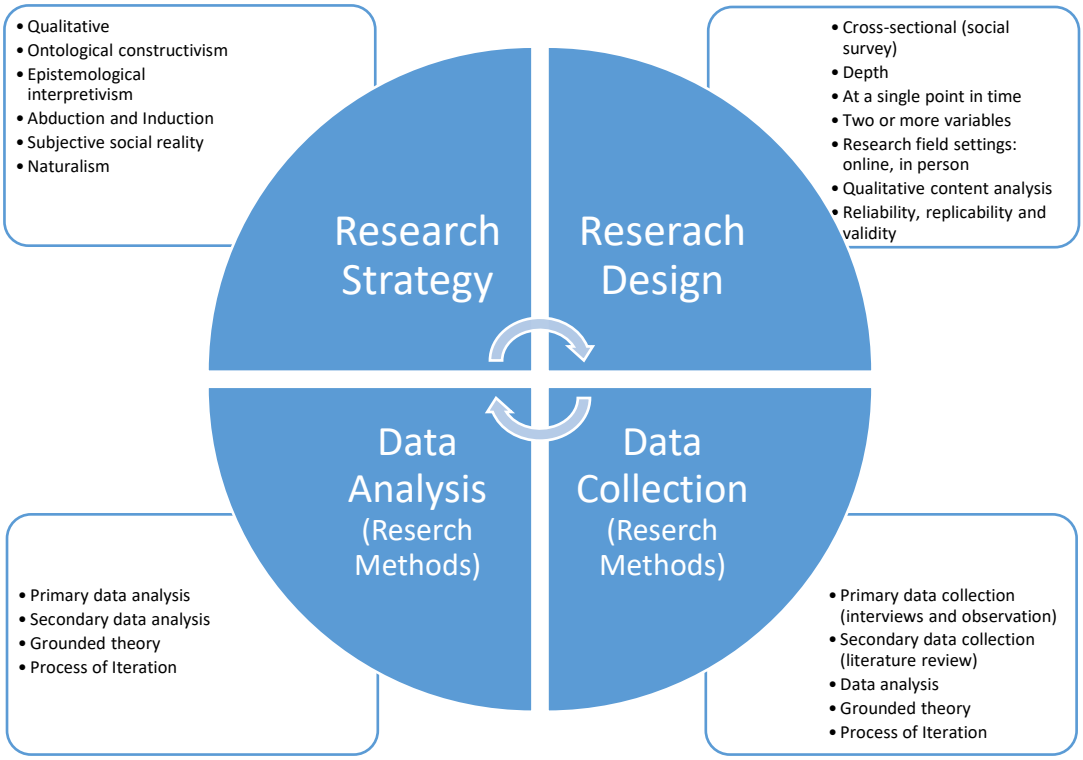

Figure 7 – Relationships of the Research Methodology Elements (Source: developed by the researcher)

3.5 Quality of the research

Three of the most prominent criteria in establishing and assessing the quality of business research reliability, replicability, and validity were applied (Bell et al., 2018).

3.5.1 Reliability

Reliability refers to repeatability of research results, which means that the results should be the same or similar if new research on the same topic is conducted on two or more occasions in the future, and in this sense, the quality of the measures used to explain the terms of interest should be consistent and should not be affected by the timing of the research or the researcher conducting the research (Bell et al., 2018). To ensure reliability in this research, qualitative indicators of social dynamics were established and used whenever different social phenomena

could not be directly measured, e.g., online gambling advertising in traditional media. In addition, this research met reliability factors of the measures, such as stability, keeping all measures stable over time, then internal reliability, maintaining consistent relationships between indicators, and inter-rater reliability, where subjective judgment in relation to the interpretation and categorizing of data by multiple researchers was rejected because there is only one researcher (Bell, et al., 2018).

3.5.2 Replicability

Replicability is related to necessity that research can be replicated. This can be the case if other researcher is suspicious about evidence, results, or outcomes of a study, which does not help in understanding the issue or the topic (Bell et al., 2018).

In this research replicability is achieved through transparent selection process for participants based on purposive sampling, thoroughly presenting data analysis process and procedure for designing codes, themes and aggregate dimensions of the theoretical construct, and presentation of research instruments, e.g., the interview guide.

3.5.3 Validity

Validity is concerned about integrity of a study, and contain measurement or construct validity, internal, external, and ecological validity (Bell et al., 2018).

The researcher believes that validity of this research is satisfied. Measurement or construct validity is fulfilled because the measures that were applied capture the phenomena and are reliable, all measures were stable over time, did not fluctuate, each indicator measured a specific, and only one phenomenon on different occasions, as explained under reliability (3.5.1). Internal validity was met through causality in relationships between variables. External validity is achieved because result can be generalized beyond the research context and include transparent criteria for selection of participants (Bell et al., 2018). The researcher strongly believes that even participants were not randomly selected, due to complexity of observed phenomena in the specific context, that this fact did not produce greater damage to research integrity. Bell et al. explained the ecological validity of the findings, which is applicable in everyday natural circumstances. Stakeholders were observed in natural settings or naturalistic context where events occur, e.g., while a player is betting, or the CEO is giving a statement at the conference.

3.5.4 Alternative quality criteria

There are disagreements that reliability and validity are more concepts for quantitative studies and many researchers "propose *trustworthiness*, as a criterion of evaluation in qualitative studies" (Bell et al., 2018). Therefore, quality of this research was additionally evaluated through following alternative criteria of trustworthiness, such as credibility – findings are believable, transferability – findings can be applied in another context, dependability – findings can be likely applied at other times, and confirmability – findings are objective enough.

In addition, the use of triangulation using two methods of data collection, participant observation and interviews, also contributes to the validity and reliability of the research, as it eliminates the researcher's bias and increases his "truthfulness of a proposition about some social phenomenon" (Denzin, 1978, as cited in Golafshani, 2003, p. 604).

3.6 Ethical considerations

Ethical considerations refer to the ethical principles used in a business research project, in order to avoid any ethical issues between the researcher and the participants (Bell et al., 2018).

Respondents in interviews were informed about the author and the details of the study. The informed consent form for participation in the interview was signed in most cases before the interview or was recorded. Participation was voluntary and there was no compensation for participating in this research. Respondents were informed of this before the interview. They were assured that the information will only be used for academic purposes.

No friends were included as respondents in the interview. No misleading methodologies were used, nor were respondents at risk. As a result of the interview, the respondents were not hurt or embarrassed.

Furthermore, the principles of confidentiality and anonymity were respected. The privacy of the respondents was protected, and their identity remained undisclosed, in accordance with their wishes. There was no recording of the interview unless approved by the participants. If they expressed a wish, the quotes that were planned for use were sent to them for approval. The researcher concluded that there was no reason not to reveal the identities of the observed conference participants and webinar, because information about these events was publicly available.

There is no connection and conflict of interest regarding the research, as the researcher acts independently, and the research has not been funded by any individual, organisation, or institution to present the findings in any other way than objectively. Findings are based exclusively on the collected and analysed data, with the application of quality research standards.

Finally, rules on Academic integrity and plagiarism are respected (University of Gothenburg, n.d.). All sources are properly integrated, and respondents were cited in accordance with the seventh edition of the APA Publication Manual (American Psychological Association [APA], 2020).

4. EMPIRICAL DATA

This chapter presents empirical data collected from participant observations and semi-structured interviews. The data were separated into different 2nd-order aggregate dimensions, according to the theoretical construction of the research as shown in Figure 8 at the end of this chapter. Detailed information on the observed participants and respondents in the interviews is given in Appendix 2.

4.1 Problem gambling

When it comes to responsibility for addiction and the development of problem gambling, it is interesting to note that players cite shared personal responsibility with the responsibility of companies and the media. Although he believes that commercials have a negative impact, especially on the youngest players, when asked who is most responsible for his gambling addiction, the customer respondent A replied: "I, myself. We are responsible. All gamblers are responsible for themselves. We all think we won't lose, but when we lose, most play again." But some, like customer respondent C, feel that the media is most responsible for his problem and the development of problem gambling. The customer respondent B also highlights the power of the media in gaining new customers and increasing problems, as well as incentives and game design. The effects of advertising and promotion will be discussed in more detail later in section 4.2.

4.1.1 Risk factors

Alexander Blaszczynski, professor emeritus at the School of Psychology, University in Sydney, the former director of the Gambling Treatment & Research Clinic, University in Sydney, a distinguished researcher, and clinical psychologist with a long history of involvement in pathological gambling, explained that there are a number of factors that contribute to the problem gambling in online gambling:

> Firstly, it's availability, and then it's a promotion and the way in which is advertised makes it attractive to a number of people. The accessibility effectively means that you can gamble virtually globally on a variety of different sports and events, on smartphones, laptops, computers, it's available 24/7. On the top of that there is the capacity for bonus bets, advertising, and other inducements to participate. Other factors

of course are the standard factors that contribute to excessive gambling: personality factors, erroneous cognitions, and chasing losses.

The supplier respondent also stated that availability is one of the main factors for the development of problem gambling. In addition, the promotion of products that are quite advertised creates a huge, easily accessible offer, that affects especially those who are struggling with their economy, who have psychological problems, feel lonely, have a meaningless job, and so on. “People with problems are good customers because they lack control,” the supplier respondent concluded.

Problem gambling is associated with alcohol use disorder. This was also confirmed by the customer respondent C, who often drinks alcohol while gambling online. Dr Dylan Evans, statistician, and head of development for three charities in Wales: CAIS, Hafal, and Adferiad Recovery, which run a gambling cessation and treatment program ‘Beat the Odds’ explained:

> A major factor that increases the problem is alcohol. Let us say that, in most of online gambling, e.g., mobile phones, players set the limit of X per day, but when people are inebriated, then those limits become a lot more flexible and they will push themselves in order to get that win back, and win back, and so they’ll spend a lot more money than they realize, without they knowing they’re doing that.

Evans also added that in addition to alcohol, there are speed of play, ease of paying with a credit card, and the misconception people have about probability, which they do not even understand how it works. For example, if the probability of winning is one in four, “that does not mean that for every 100 bets people get 25 wins,” which gamblers assume, Evans said.

> So, if you make a bet, bet number one, you lose. That does not influence what happens in bet number two. It is completely independent, and that is the thing that people find it difficult to understand. So, by the time they get to bet number 10 they still have not won, and they think it is unfair, and then they start to chase it.

This is the case because “people are bad generally in understanding the risk, unless they are trained to understanding it,” Evans concluded. The customer respondents admit, there have been situations where they have completely lost control over their gambling.

The company respondent explained that some risks are embedded in games that can affect emergence of problem gambling. With ease of availability as a common risk known from various studies, an online gambling environment or sense of privacy can be especially dangerous. Players indulge in gambling forgetting other things around them. In addition, there is a link with alcohol and drugs and lower economic status. The researcher observed the

customer respondent C while gambling online and concluded that gamblers focus easily and lose their sense of the environment.

The customer respondent B, who has been gambling online for 15 years and who is a professional poker player, thinks that game design makes games attractive, especially sound effects, for example in slot machines, when a player gets a bonus or similar, it "creates a feeling of happiness," explained the customer respondent B. The customer respondent C emphasized that game design can influence gamblers to play more. “Game interface design, various themes and templates, and so on,” he stressed.

An aspect to keep in mind is that unlike various addictions, such as alcohol, gambling is quite easy to hide. “The gambling becomes the greatest social problem. It can be hidden until the point that everything is lost,” Evans stated. The customer respondents A and C hid gambling addiction from their family and friends for a long time, until it became too visible and impossible to hide.

4.1.2 Multiple accounts with several operators

Players circumvent the restrictions by registering accounts with several operators. “We know that those who play at high level, about 90% of them, play with multiple operators. They typically have, I think, two to ten accounts with different operators,” said Axel Lyckberg, responsible gambling specialist and data scientist from the Swedish operator Svenska Spel. “One player can play 10% with Svenska Spel, and 90% with other operators. They are not loyal,” Lyckberg said. The lack of complete data on customer gambling history because customers have accounts with several operators represents noise in the data, making it difficult to classify gambling damages. Additional noise in the data is also income, family situation, etc., Lyckberg concluded.

All interviewed customer respondent stated they have accounts with several operators to circumvent restrictions, e.g., Unibet (Maria Casio), Bet365, 888casino, The Stars Group (PokerStars), etc. At PokerStars, gamblers from all over Europe play poker, from the former Yugoslavia, Kazakhstan, Armenia, France, etc., plus Canada but not the US, he stressed. Brand image is important, and gamblers perceive value through a secure gambling environment, payment security, and a variety of incentive offerings. They prefer licensed operators.

4.1.3 Youth gambling

"There are social media games, which effectively mimic gambling," Alexander Blaszczynski noted, explaining that "as they fall outside of definition of gambling, they are not regulated by the relevant policies and regulators."

> It exposes young children to the notion that gambling is fun. You have casino type games, poker, or slot machines games, roulette, etc. This let children to believe that they have a chance of winning, simply because the odds generally are in favour of the player in free-to-play sites. So, this promotes the illusion of control, or personal skills, particularly with games like Texas Hold'em Poker. The person then shifts over, when they reach adolescence, into the pay-to-play sites and then the odds are changed in the favour of the operator, and so you get then the cycle of gambling.

The company respondent expressed concern about the dangers that exist in social casino games and children, and about the problems with gambling in adolescents in the future.

The supplier respondent is not aware of the extent of the problem, how big the problem actually is, and believes that gambling should be for adults. "There is a reason why there is an 18+ age limit," the supplier respondent concluded.

Axel Lyckberg pointed out that Svenska Spel, which is a licensed Swedish operator, respects the legal age limit for online gambling, which is 18+. Svenska Spel pays special attention to young people aged 18-19, because "most of them don't have a job, have small wallets and they also experience gambling for the first time." They want to teach this age group how to deal with gambling and show them different techniques so that they as customers have control, Lyckberg explained.

Evans thinks that parents need to find ways to prevent children from playing. The customer respondent A started gambling when he was 15 years old.

4.2 Advertising and promotions

The use of AI and big data analytics, including social media analytics, is most prevalent in marketing and promotional strategies, which aim to increase consumption, acquire and retain customers, and increase customer share in the market. As the data show, both operators and their affiliates are involved in these activities.

4.2.1 Promotions and incentives

Standard marketing programs and marketing in general is to draw attention to a product, Alexander Blaszczynski explained. Companies give discounts to attract customers to buy the product and then want to maintain their loyalty. They offer a variety of loyalty programs and schemes, and in the process collect a lot of customer data. In online gambling, operators should know their customers, and the data is used for various legal requirements and to protect customers when the operator recognizes their problems. But also, this data given with the consent of the users is used for different marketing strategies, for customer profiling, different predictions. The algorithms collect surf data, social media data and large data, which the operator analyses and uses for various promotional activities. Advertisements and incentives, bonus bets, are most often used to persuade the customer to participate more in gambling. Blaszczynski stressed that operators should adhere to good commercial practices, balancing between responsible, appropriate advertising and exploitative advertising, unfair advertising, or potentially harmful inducements, similar to alcohol advertising, but what often happens in practice is the following:

> If a gambler has a gambling account and want to stop gambling, and then an operator gets back with advertising of big race meeting or big sports event, with an offer that they will provide a 50 dollars bonus bet. That is an inducement, and if a gambler wins, it will reignite his urge of gambling. I think, those sorts of inducements need to be stopped.

Several years ago, the customer respondent C wanted to stop with gambling. After taking a month off from gambling he received a phone call from an operator. They noticed that he no longer gambled and offered to deposit a certain amount into gambling account on his name. After being offered a bonus, he returned to gambling. The customer respondent B explained the content of the incentive ads, e.g., "Come to the page, you will get 100 crowns for every 100 crowns laid" or "come to the page and you will get 50 free spins," which "attracts gamblers a lot." However, he confirmed that after January 1, 2019, the number of incentives dropped drastically in Sweden, following the introduction of the new law. The customer respondent A has been gambling for over 35 years and usually plays online poker for seven to eight hours a day. With a big smile on his face and visibly excited, he said, “I love bonus bets so much, and operators should offer them to me even more.”

Some operators adhere to good commercial practices and use a balanced approach in advertising or at least claim so. Axel Lyckberg from Svenska Spel said that the red segment or

the high-risk segment, “which is around 2% of the players,” is excluded from their direct marketing. “Players from this segment don’t get emails, text messages, etc.,” Lyckberg said.

The company respondent said they use moderate marketing strategies and stressed: “We do not do any direct marketing for casino slots.”

The supplier respondent said that before sending direct ads to a person who has gambling problems, the operator "must check as well as they do if they are allowing someone to play." From the point of view of responsible gambling, it is important that the high-risk segment should never be a target of sales strategies, and therefore these customers should not receive promotional materials or incentives, explained the supplier respondent. However, from a sales perspective, information about the high-risk segment has a completely different meaning. Salespeople see the high-risk segment as a segment with VIP customers, and the sales logic is “we need to sell more to these people,” the supplier respondent explained.

Maris Catania, Head of Responsible Gambling and Research at Kindred explained that “there used to be some campaigns where they tried to get back some people who were customer churn, so they were no longer playing, but we found it was not a good approach, especially if there was a history of self-exclusion.”

4.2.2 Advertising

There are sales-related systems that use AI tools to predict which customers will lose, which customers will self-exclude or leave the operator, and then target such customers with offers, advertisements and the like, the supplier said.

Inspired by the book The Age of Supervisory Capitalism, written by Shoshana Zuboff, and in the context of the use of AI in modern society, Anders Sandoff commented that “observation is that there is a business model of the tech companies that don’t show you the whole setup.” That companies do with search engines and browser data, they collect data, Sandoff said, explaining further:

> We as society become more and more aware of the part of the deal that is not visible to us, and we in due time will demand more and more understanding of, ‘ok, let’s show me the whole deal.’ So, if you have AI that is extremely smart and that tricks me into playing more, or do something to me, collect information about me or whatever, that I’m not aware of, that is, I don’t think will be possible to align with sustainable, responsible, corporate behaviour.

Sandoff believes that transparency of the whole deal is important. Customer data collected by AI must not be sold or misused by someone who possesses such information, and some protection mechanism must exist against it, Sandoff concluded.

Mattha Busby, a freelance journalist, who researched online gambling and wrote several articles for the Guardian in 2017 and 2018, pointed out that operators and their betting affiliates-companies that refer customers to online bookmakers, use unscrupulous, non-transparent tactics to combine AI, third-party data, big data, and ads to make huge profits, ignoring the fact that in the process they harm many customers, especially those at high risk. Through entire advertising process, AI is used in the process of profiling customers based on their gambling behaviour, then predicting their behaviour, and accurate targeting through advertising ads and incentives, Busby stated.

An industry source explained to Busby that operators applied data analysis in customer acquisition to reduce the cost of traditional ads made. Operators hire advertising agencies, and one digital marketer, who had betting companies as clients before leaving the agency, confirmed that they bought the data for a fee from so-called "data houses" that collect various customer data such as age, income, debt, loans, and insurance details, and so on. Then they analyse the data and segment customers, tailor ads, for example, based on their income, and target lower-income gamblers, who were btw., "among the most successfully targeted segments," a digital marketer told to Busby. There is also a method called 'dynamic retargeting' used by advertising companies "to single out people who may not have gambled for a while and try to entice them to pick up the habit again – potentially luring back recovering addicts who have self-banned from these sites, thus undermining industry schemes," Busby explained.

However, opposite words came from the company respondent, who confirmed that they pay special attention to retention. It is cheaper and easier to return the old than to create a new customer, but they do it responsibly, without offering any incentives to self-excluded or high-risk players.

Maris Catania said that they at Kindred accomplish shifting marketing from commercial to more sustainable gambling approach by:

> promoting deposit limits, promoting more open communication as well, as well as harmful revenue, you know, it was also part of our marketing, we come and say these things, and want to have a good conversation about it, because we realized gambling can be fun, but there are a lot of cases where it's not. If we don't care of this everyone loses.

Furthermore, a lot of data about potential customers is collected on social networks. Moreover, *"*gamblers' every click, page view and transaction are scientifically examined so that ads statistically more likely to work can be pushed through Google, Facebook and other platforms", stressed out Busby.

"Recurring adverts as pop-ups in a browser can be disabled easily," said Dylan Evans, but problem gamblers usually don't do that, because of their condition:

> If they make a choice to disable the adverts, or the pop-ups, every browser can do it, what they're saying tacitly or subconsciously, or hopefully consciously, is that they don't want to be drawn by game, by the reality is probably the opposite.

The customer respondent A thinks that online ads that offer any kind of gambling and pop up when customers visit sites that have nothing to do with gambling, e.g., cars, sporting events, etc., should be banned, because it represents a kind of nudging. This is a danger for young people, not for us who have been addicted to gambling for a long time, concludes customer respondent A.

Customer data can be also resold to other vendors for affiliate fees, Busby explained, and this is the case even with the data of lapsed players. Betting affiliate programs are risk-free and a very lucrative way for advertisers to make money, who are paid a cost for each acquisition and/or a lifetime revenue share percentage on the losses of each client they introduce, explained Busby.

Customers are often offered with cash prices and gifts, and then they unwittingly consent to in lengthy terms and conditions and provide their detailed personal data. From that moment they enter the room where inducements, bonusses, and advertising can influence them, because they demonstrated an interest in a particular product, Alexander Blaszczynski noted.

All interviewed customer respondents said that they do not read these extensive terms and agree with everything. They just want to play and if possible, get a free bet or bonus.

4.2.3 Online gambling advertising in traditional media

Increasingly aggressive online gambling advertising is noticeable in traditional media, such as TV and radio. The customer respondent C commented on TV and radio commercials: "The media is the biggest problem." The customer respondent A believes that "even advertising can't affect him much because he is already addicted, yet it negatively affects children under the age of 18, which is not good."

Dylan Evans is particularly concerned about online gambling ads that may affect his children and believes that every parent should recognize the dangers of online or television ads and limit their children's exposure to advertising. It was a rugby game recently, Evans said, and what caught his eye was the amount of online gambling advertising during breaks.

> In 15 minutes, there were three ad breaks, and in each of those ad breaks, which lasted approximately two and a half to three minutes, there were three gambling adverts, different gambling sites, online, in each one. That is nine in 15 minutes.

Evans then decided to pay attention and counted all the ads that Saturday night. "From around 9 p.m. until around 11 p.m., there were over 50 adverts for online gambling." Evans concluded resignedly.

This example from Wales is comparable to Sweden, where all the gamblers interviewed stated that advertising in the media is too aggressive, which is not good. Curiosity attracts people, e.g., they see a casino TV commercial and if they win the first few times, they are attracted to gambling. The power of first winnings is the most dangerous, claimed the customer respondent B.

Indeed, advertising really creates a huge offer. It "meets individual's needs, or sometimes creates needs," the supplier respondent concluded.

4.3 Responsible gambling

The observed participants of the conference and webinar obviously pay special attention to responsible gambling, the concept of proactive measures aimed at identifying and interactively assistance to gamblers before problematic gambling occurs. Two CEOs stressed the importance and their commitment to continuous tool improvement through research and innovation. An interesting AI application which is still in the process of development was presented at the conference by Chris Eade, who is Founder of Zafty Intelligence. They develop it in cooperation with Kindred. It is a mobile application that will analyse patterns of problem gambling behaviour and mitigate it by providing solutions. It will also help players keep track of their gambling habits and the money they have spent. As CEO Tjärnström said, the app will allow players to be in better control. He believes that technology, like AI, should be implemented transparently, for what they consider best for customers. As CEOs claim, they are committed to fair treatment, product development, customer protection, new responsible gambling tools and applications. The responsible gambling managers and specialists for the concept of responsible gambling pointed out that the focus is on reducing harm by early

detection of addiction with effective diagnostics and prevention of problem gambling. Currently, there are various tools of responsible gambling such as monitoring player behaviour, voluntary self-exclusion, self-limitation, self-assessment test, customer service and consultancy, etc. Dr. David Forsström, a researcher in the Department of Psychology at Stockholm University, explained that gamblers must be educated about responsible gambling tools, which should be done by operators. Operators agreed. The use of AI is important, especially in responsible gambling, and these were also the opinions of all three regulators. In regulated markets, it is mandatory to integrate various responsible gambling tools into websites and games. Svenska Spel has advisor Rickard Lönn, who had gambling problems and helps the company get in touch with gamblers. As someone who has had experience with the real consequences of gambling, he finds a common language with gamblers that they understand and whose advice they accept.

4.3.1 Responsible gambling tools

The supplier respondent explained that responsible gambling tools are required by the Swedish gambling law, and that "operators need to have self-test, to monitor customer behaviour; there must be possibility to self-exclude via spelpaus, and it should be as a banner at the top of every page with displayed limits, spelpaus, and take a self-test". If companies suspect the existence of a gambling problem, they must take action to investigate whether there is a problem. If so, then operators "need to limit the gambling or exclude the gambler," the supplier respondent concluded. Yanica Sant said that in Malta they do not have self-exclusion in online gambling, such as spelpaus in Sweden, and for now this measure is provided only in land-based casinos.

Responsible gambling requires that "operator should know the customer, should know which customer gamble frequently, they need to take a proactive step to identify and verify that person is not a problem gambler," Blaszczynski said, adding, "operators need to be proactive in terms of identifying and responding appropriately to people who got a problem." Kajsa Nylander, Head of Sustainability at Svenska Spel, also mentioned this proactive role of responsible gambling tools in detecting problems at an early stage. Peter Marcus, Director & Principle Consultant stressed that obtaining more indicators of gambling problems at an earlier stage can intervene more effectively.

One interviewed customer respondent has a moderate problem with gambling, while the other two are addicted. They have stated that they attach very little or moderate importance to

the currently available responsible gambling tools. The customer respondent B thinks self-exclusion is a great option and has helped his friends. "You are completely excluded from all gambling sites, and you can't even enter a traditional casino," explained the customer respondent B, concluding that “problem with self-exclusion is that many gamblers don’t have the guts to do so.” Customer Respondent A, who is a keen gambler, does not use responsible gambling tools, nor do his colleagues who have been gambling addicts for many years. “A small number of them use it,” he underlines.

Responsible gambling is a preventative approach created to help customers, and at Svenska Spel they started segmenting risk based on gambling behaviour long ago, in 2007, Axel Lyckberg explained. The algorithms currently in use are fully automated. Some of the parameters in the model are total consumption, playing time, monetary amounts, e.g., in one month, then the intensity of the play, e.g., if gamblers play long time sessions, then whether they can plan their gambling in advance or not, e.g., if they make several deposits in one day, which is a categorized as risky behaviour because they did not plan how much money they will spend. “All the algorithms are combined to make a machine learning classifier,” points out Lyckberg. These medium and high-risk players are then separated and contacted, through push communication, messages of type “maybe you should check your gambling limits” or “please do a self-assessment test,” typically when they log in on the site, emphasize Lyckberg. About 100,000 self-assessment tests are taken each year:

> This is a very good responsible gambling tool. We encourage players to take them. We get a really good source of knowledge on customers, how the game play proceeds with test, how does it look like, the time that passes before the test is taken, are the players increase their bets, are you depositing a lot of money, chasing, as well, the signs of risk.

The company respondent explained that “in player tracking system a lot of research going on to be able to react more in real time, exactly when things happen”. Algorithms are changed as needed to integrate responsible gambling and innovation into games and to create a better gaming experience for customers, said the respondent operator, adding:

> “With player tracking system we have an external supplier, and that is very good thing for us, because then we as a company have an external guarantee for that we are not manipulating the system, and say for instance, we do not have a problem gambling”

Svenska Spel recalibrates its algorithms to improve them, but not as often, about every two to three years, said Lyckberg. They use machine learning methods of logistic regression and linear regression, which allow them transparency and possibility to “look under the hood,” as Axel Lyckberg expressed himself metaphorically. This is the process of examining what

types of behaviours they can find and how much they can explain the overall problem, or which two components they can draw from the logistic regression algorithm. Basically, both methods work in a similar way. Different variables are checked to establish a relationship and find correlation. Logistic regression is used to segment customer risk from the standpoint of responsible gambling, while linear regression is used as Lyckberg described:

> If we see that two things have linear relationship, e.g., if you play a lot of time at night and this explains that increases the problem possibility that you experience harm, then we can establish the relationship, and so, we use these components, these features in them, and then the algorithm try to get the best match of these behaviours. How much of each behaviour constitutes risk and how well it fits the problem? So, the key at logistic regression is that you get probabilities. So, you have a probability of experiencing, or have gambling problems, if you take a self-test, given your gambling behaviour that we feed the classifier training algorithm.

Kajsa Nylander pointed out at the conference that if Svenska Spel finds that a player is showing problematic behaviour and may have negative consequences of gambling, the player is contacted then by phone. When she was interviewed, Nylander further explained that these are direct telephone counselling calls that are not only aimed at risky gamblers, as a reactive measure, but also at low-risk gamblers, who are contacted even though they show no signs of addiction as a proactive measure. Customer satisfaction with this type of company engagement "was measured 4.6, on a scale of 1 to 5."

The supplier respondent confirmed the same. Tools like players tracking system can also be useful to the operator for various measurements, e.g., the information on how much of the turnover comes from green, yellow, and red customers, and so on.

4.3.2 Low effectiveness and low efficiency of responsible gambling tools for problem gamblers

All interviewees agree that responsible gambling tools are not effective/efficient enough, especially for more than medium and problem gamblers. Blaszczynski claimed:

> No, the evidence indicates they are not efficient. Half of it basically relies on the individual to take action, or alternatively it imposes a restriction on the individual, which leads a gambler to go to other forms of gambling to bypass the intent of it.

Other tools are passive, which means that gambler set their own limits, e.g., time, expenditure, or messaging, in the sense that they need to respond to it, etc., so all they are all

passive, and “the fundamental floor is that the individual who has difficulty in controlling their behaviour is expected to control their behaviour,” Blaszczynski clarified.

Maris Catania explained what the effectiveness and efficiency of responsible gambling tools depend on:

> It depends on the point of the customer journey. If it’s at the beginning a deposit limit might help, a loss limit might help. But, if you get to the point that is too much, a deposit limit might help any more, and you need to have a proper break.

Dylan Evans believes that some kind of quick and efficient solution to gambling problems can be introduced, e.g., possibility of permanent self-exclusion, but there is lack of will:

> If a gambler that realizes they’ve got a problem, there should be one click option, which is industry standard across every known platform, but they have to link up as a part of law. If they click that button, they are disabled from every single site immediately. Technically that’s easily possible, but no one will do it.

The company respondent believe that responsible tools are not effective enough, but the company has found a way to address some of the shortcomings:

> That is why we complemented them, and we have our customer support, that make telephone calls to players that we are suspecting that they have a gambling problem. They take personal contact, they talk, make a personal recommendation, e.g., maybe to have a break, to exclude themselves for a while, or to contact support line.

Obviously, the tools aren't efficient enough, “but it helps people, not everyone, but at least helps some, those at the lower level of risk”, stressed out the supplier respondent. In most cases, players stop when they reach the limit, which should be set with each licensed company in a regulated market. However, when gamblers start to develop problems, they “just move over to another company, and that is sad,” the supplier respondent concluded.

The customer respondent B, a moderate risk gambler, thinks that responsible tools can help some, those with low risk. All customer respondents confirmed that they determine the amount of money and set the time limits, but as they have accounts with several operators, they easily bypass all restrictions. They don’t care much for messaging. They think that interactive pop-ups that alert them to restrictions, time, and so on are annoying.

> Before 2019 it was not like that. Now, every half hour there comes a note of how much you are in the minus or plus, or how much time you have been playing and interrupts me; it bothers me, and it disrupts my concentration, the customer respondent B stated.

The customer respondent C thinks that the messages are too interceptive, and he just rejects them, e.g., he presses the option to continue, if the message warns him that maybe it is time to rest. The customer respondents A and C who are high-risk gamblers say that advice or counselling through a phone call from an operator has a short-term effect on gambling addicts.

The concept of responsible gambling should be continuously developed and innovated, in order to develop new and effective tools, said the company respondent.

4.4 Legal responsibilities

Three representatives of regulators from different European markets were observed at the sustainable gambling conference. Camilla Rosenberg, The Director General of Swedish Gambling Authority – Spelinspektionen, expressed the view that the challenge for regulators is to collect data from operators when it comes to supervision and gambling measures, which have barely begun to be regulated. Together with Yanica Sant, Head of EU Affairs and Policy Regulators from Malta Gaming Authority and Isabelle Falque-Pierrotin, President L'Autorité Nationale des Jeux (ANJ), France, Mrs Rosenberg want to ensure that licensed operators understand and are compliant with laws/regulations and license conditions, in order to have gambling free from crime, and fair and safe for customers. In this regard, artificial intelligence and technology should be used. They stated that the protection of privacy is of great importance, and that operators are solely responsible for the collection, processing, storing, and sharing of data in accordance with the general data protection regulation (GDPR). This means that companies should inform customers about the ways in which their personal data will be used, on the basis of which law data are collected and processed, the period for which data is going to be stored, and details about the third parties that will receive their data, if any. Regulators are there to control the way how operators identify problem gamblers and how they deal with data privacy, said Falque-Pierrotin. Also, there are no AI tools that are specifically recommended for use by regulators. However, AI should be used in a controlled, supervised, and responsible way, and the results should be analysed by people, not machines, Falque-Pierrotin stressed out. AI is important to identify illegal bets, sports manipulation and detecting crime. All three regulators agreed to collaborate with each other and to learn from each other. Finally, regulators point out that they will assist licensed operators with a variety of legal solutions, thus strengthening their competitive advantage over illegal offers and websites.

4.4.1 Gambling laws/regulations

Isabelle Falque-Pierrotin said that in France they have a new legal obligation and now companies must identify problematic gamblers but respecting the GDPR, of which gamblers are informed. The company respondent stated that "it is really important that we have to protect the integrity of our players," explaining in detail how they handle customer data. Personal data is stored for a number of years and for various purposes in accordance with the legal framework and rules, based on the gambling law and the anti-money laundering law. For example, anti-money laundering law allows a company to know where the money is coming from. The company can ask questions to get information about it. When opening an account, customers are informed of the reason for which their personal data is collected and which law applies, although it is not specified for which period or the exact number of years. The stored data, among other things, prevents the customer from excluding themselves, closing the account, and then opening a new account in order to bypass self-exclusion. Customers can always get excerpts from the register to see what information the company has about them, the company respondent concluded.

In terms of combating money laundering, "being on welfare can be an exclusion criterion, like in Singapore, and if anyone is unemployed or on welfare, then they require a higher level of verification that they can afford it," Blaszczynski said.

The customer respondents stated that they left detailed personal information when they opened the account, and sent an identification document, such as scanned driver's license or ID card, as well as a copy of any invoice they paid in the last 30 days from the date of registration. They trust operators in terms of data privacy protection, who guarantee that their personal data will not be shared with third parties. The customer respondents use a credit card as a means of payment when gambling. Thus, they do not gamble on unlicensed sites. Operators' image, and their own security, are important to customers when they share privacy information with companies.

Furthermore, each online gambling market is regulated by the state gambling authority. In the UK that is the Gambling Commission, in Sweden is Spelinspektionen, in Malta it is the Malta Gaming Authority, etc. They issue licenses and regulate people and operators who legally provide gambling products and services on their territory. The Swedish Gambling Act, for example, entered into force on 1st of January 2019. "In Sweden, we have 100 licenses, and 70 of these are commercial licenses," Lyckberg explained, stating that beside gambling

law/regulations, GDPR and anti-money laundering law, Svenska Spel follows European Lotteries and World Lottery Association routines.

The license, legislation and penalties can be a powerful tool in the hands of government as part of a law that motivates operators to be socially responsible, thinks Blaszczynski.

There are unlicensed companies operating illegally in the Swedish market. The role of the government is important because gamblers have been found to use the services of unlicensed companies. This needs to be regulated, Nylander emphasized. Further problem is that there are many regulations, but they are not imposed on unlicensed operators, said the company respondent, adding that illegal operators use unethical and irresponsible tactics to target gamblers after they excluded themselves at the national self-exclusion register spelpaus:

> I have just heard that they have done that. It's tragic. There are a lot of efforts going on trying to prevent those companies to be able to act in the Swedish licensed market, but it has been hard to find out how to do that…maybe if they will not be able to use the payment systems, and those kinds of things, to prevent them from the Swedish market.

The supplier respondent also heard of these irresponsible targeting of illegal operators.

However, sometimes even licensed companies break the law and fail to protect self-excluded gamblers. In the UK, "online betting company 888 had been penalized a record 7.8 million pounds because more than 7,000 people who had voluntarily banned themselves from gambling were still able to access their accounts," emphasized Busby, adding that GDPR can be easily bypassed through affiliates, because there are no safeguard measures that can stop advertisers to copy customers data and reuse them for future promotions.

Player B noted that as of January 1, 2019, when the Swedish Gambling Act came into force, the number of bonuses and incentives has decreased due to gaming security, and during the coronavirus pandemic a maximum of SEK 5000 per week limit was set. To gamble from Sweden on international sites, the customer respondent B has heard that people use VPN.

4.4.2 Government social responsibility

The important issue is that "the government is not accountable for making sure that the operators identify and respond to problem gamblers," Alexander Blaszczynski said.

From the regulators point of view, the government so far showed the attitude or saying, "that it is ok that you lose as much money as you want from the gambling company, as long as you don't do money laundering," the supplier respondent stated, explaining:

> Just recently the government have started to formulate gambling politics and discuss about affordability and what is ok to lose, and so on, but for long time, or first, it was about defending the so-called monopoly, or the regulation we had before, it wasn't really a monopoly, and now it is all about canalization, that we need to try to keep as much gambling within the regulated Swedish market.

Furthermore, the Gambling Commission refused to provide raw data on problem gambling in Wales and the UK when Evans needed this information for some tenders they tried to prepare. Data should supposedly be available in the public domain:

> When I asked them for data on the subject, being a statistician, I've asked them for raw data, they've replied that they cannot give it to me. I've also asked the for data of increases or decreases or changes in trends during the Coronavirus lock-down, which they've make public comments on, they said they can't give it to me.

In addition, Evans would disagree with published data showing a reduction in problematic gambling in Wales and the UK in the period 2016 to 2018, which can be found on the Gambling Commission's website, mostly due to non-disclosure of raw data and non-transparency.

Sometimes governments apply double moral and ethical standards when protecting their interests in the gambling industry. This happens when the government loses gambling tax revenues, if customers play elsewhere, outside of government jurisdiction, and then make economically motivated decisions. "Now we have an economic conflict of interest, so the principle of harm minimization and CSR is set aside in preference to politics and economic gains," Alexander Blaszczynski said, concluding:

> The government is the prime agency that establishes the gambling environment. So, what is the social responsibility of the government in restricting access to international sites, websites, and regulated websites, for online gambling? What legislation do they allow to breach privacy laws in order for banks to provide information to operators and vice versa to protect individuals? So, you have social responsibility from the government who is in the conflict-of-interest position because of the taxation revenue, and at the same time they regulate the industry, and at the same time they determine what the gambling environment looks like.

The government did not set the acceptable levels of problem gambling either, which should be done believes the supplier respondent, stating that "if you don't set up goals, what can you measure?" "They did not say, if it's more than this we will close it down," pointed out the supplier respondent, explaining that there was a governmental poker evaluation in 2008,

after Svenska Spel introduced online poker in 2006 as the first governmental company in the world, and "the evaluation showed that approximately 20% of online poker players experienced some kind of problem," which was a huge number. The government then replied to critics with a statement: "We knew that this was a problem product, so there will be a lot of persons with a problem," concluded the supplier respondent. Finally, the Swedish government wants that money stays in Sweden, and together with operators opposed to proposals to create one system of deposit samples, with all payments and withdrawals, where client can set limits, being afraid that after reaching the limit players would play a broad, the supplier respondent said.

4.4.3 Social responsibility of financial institutions

Alexander Blaszczynski noted that there is a shared responsibility between operators, government, and banks. In this sense, the affordability needs to be investigated. "If you want to gamble beyond the certain amounts, then you have to provide a verification from your bank that you can actually afford it," Blaszczynski concluded.

The company respondent explained that there are limitations regarding the possibility for the operator to contact the bank directly to examine the customer's affordability, because of the GDPR and the national gambling laws. "Affordability has to go through the customer. We have to ask the customer," because of the duty of care, or the Gambling law, as well as the GDPR, is the opinion of the supplier respondent.

In terms of affordability, the company respondent is of the opinion that:

> The affordability is very important. That is why we do this personal contact, and we may pose such questions. If you have a desperate gambler, that will in conversation tell you about difficult economic situation, or that they play for money which is a loan, then there will be restriction taken from the company.

The opinion that beside government, there should be also responsibility of financial institutions, such as banks, expressed Axel Lyckberg from Svenska Spel. "Financial institutions and banks are entities that can help in the CSR or responsible gambling field," Lyckberg pointed out, noting that already about 60% of all customers in the UK can block their betting transactions on credit and debit cards. Sweden is lagging behind the UK in this sense, noticed Lyckberg, and more collaboration is needed:

> I think that maybe we have a share responsibility with other entities as well, and we will try do everything as a gambling company, but it is also important that banks do not give really fast loans, text message loans, credits, that banks can exclude from gambling, and

take a track of the expenditure, that could really give a better picture to be able to add these pieces as well.

Maris Catania emphasized importance of support financial institutions:

One idea that I would love to do would be, you know how online gambling operators tries to detect if someone is showing problematic signs. Imagine if financial institutions do this. Because they can see if I am playing with five operators. They can see transactions going out.

As one of the risks, Kajsa Nylander mentioned financial loan service entities that borrow the so-called "quick loans" to gamblers. According to the information available to her, there were cases when a gambler borrowed large sums of money on several occasions from different financial services in one day.

Finally, the company respondent emphasized that support of banks against unlicensed operators is needed, and one way could be to block payment systems for unfair competitors.

4.5 Profit (Economic responsibilities)

Profits of responsible operators “are being compromised by the irresponsible ones who see problem gambling as the non-existing issue, and don’t believe they are being existing account holders, or simply not interested in it and they’re moving towards the profit,” Blaszczynski stated. As the result of this. profits of responsible operators drop down, what makes shareholders nervous, and they blame managers that they are not performing well. “These are commercial conflicts that have to be taken into account,” Blaszczynski concluded.

Kajsa Nylander, Head of Sustainability at Svenska Spel, explained that the company has internal procedures for assessing profits and determining unhealthy profits.

From the industry perspective “it’s about money, it’s about profits,” resolutely claimed the supplier respondent, but in the case of the individual company perspective, there are different nuances, where profitability is combined with more or less of the duty of care:

To different extent companies care about customers or not. There are companies that I think do as little as possible. But every company do or try to fulfil the law, so it’s of importance what is in the law, and what a duty of care, for example, says, that the gambling has to do. Today, I would say that most companies in Sweden on the regulated market really don’t do the job yet talking about a duty of care.

Busby pointed out that the people he spoke to in the UK, claimed and provided evidence that “every click is scrutinized in order to optimize profit, not to enhance a user’s experience.”

Alexander Blaszczynski believes the problem is that the industry goes “for super profits, rather than reasonable profits.” With minimal server set-up costs, operators have a net margin of “a several hundred percent. I think people resent that,” Blaszczynski concluded.

All interviewed customer respondents think that gambling industry cares only about money. “99%,” the customer respondent B was more precise.

Respondents of the companies have confirmed that there are competent management bodies that decide on strategy and profit.

4.6 Philanthropy

There are various philanthropic projects in the company, said the company respondent, such as donations to certain funds, which are used for research, sports, or other social areas. Different organizations can apply for available funds.

Alexander Blaszczynski believes that supporting research can be one way of philanthropy.

The supplier respondent noted that sponsorship is more evident than the philanthropic activity of operators, referring to the Premiere League in the UK. “It is all about marketing,” clarified the supplier respondent. However, there were some examples of philanthropy, such as with Ray, a slot machine association in Finland, that supported war veterans with donations, welfare organizations, and so on. Philanthropic activities may have political or other motives, to serve as an alibi, and may therefore be debatable, the supplier respondent stated. At one point, the supplier respondent even questioned philanthropy as an independent activity of operators, because the state is the only one capable of carrying out this type of action without hidden interests, and in that sense to distribute funds collected through taxes for assistance projects to local communities, the supplier respondent concluded.

The customer respondents have different opinions about philanthropy and whether and to what extent philanthropy affects the image of the operator. Their opinions range from the point that philanthropy is good, to the fact that it is irrelevant to them. Still, they ultimately agree that it can positively impact customers. "They earn a lot, and they can give a part to the poor," the customer respondent A emphasized.

Anders Sandoff believes that philanthropy should not be used “to hide ugly things”. Actors should establish more permanent boundaries within which gambling takes place. “This is probably one of the best contributions,” although even helping the local community is not ruled out as an option, Sandoff concluded.

4.7 Cooperation and collaboration

Initiatives for cooperation between the observed participants of the conference and webinar are noticeable. Expectations of other stakeholders gain on importance. They believe that engagement of all stakeholders is in their best interests. Henrik Tjärnström, CEO of Kindred, emphasized at the conference that all stakeholders in the industry should "pull in the same direction" and work “towards the common goal.”

Operators and regulators should work together. This was pointed out by Camilla Rosenberg, The Director General of Swedish Gambling Authority Spelinspektionen, who explained that this is necessary in order to understand the market and future possibilities. Isabelle Falque-Pierrotin, President L’Autorité Nationale des Jeux (ANJ), France, added that regulators in Europe and worldwide need to “more collaborate in order to fight against illegal offers.” Regulators promised to support shift of the value from illegal to legal markets.

“Collaboration between actors is the path forward,” Sandoff believes, especially in terms of responding to unfair competition or the grey market. The collective setting “is also a way for the gambling industry to gain legitimacy when it comes to taking an active part in the development of the society,” said Anders Sandoff.

The company respondent stated that there is a lot of cooperation in different areas among operators in Sweden, mostly through the branch organization SPER, and BOS, the Swedish Trade Association for Online Gambling, adding that in some cases there is collaboration with financial police or Interpol. Cooperation is done in working groups, depending on the area, e.g., responsible gambling, match-fixing, which includes national and international organizations, then horse betting, and it gives results, “but there are secrets among operators that we do not reveal to each other, e.g., innovations,” the company respondent concluded. Kajsa Nylander, Head of Sustainability at Svenska Spel, stated that the strength of the industry is in sharing as much information as possible that can be helpful to everyone.

However, Alexander Blaszczynski thinks that there is no real cooperation in the industry:

> The operators, very sinister operators are fighting for a limited market, It’s not in their interest to share commercially sensitive data among each other. They don’t want to provide data to researchers, because then they identify number of factors like problem gambling, particular sample. They don’t want to draw attention to what they should or shouldn’t be doing, so any reason they’re providing some information to researchers is to provide a good image. There are some companies that do provide data, which are in

different forms, and it is hard to compare one company to another, but again they are not ready to provide any information.

Blaszczynski concluded that "more information they release about their practice, more likely they come under scrutiny and then they have to respond to any weaknesses in the system."

There is a need for extended cooperation with researchers as well. Learning and evidence-based approach in data collection, research, and share of the knowledge is necessary. Patrik Hofbauer, CEO and president of Svenska Spel, said they had formed an independent team of researchers to come up with facts based on evidence of problem gambling, so the company can better protect its customers. They are willing to share data with researchers. Sara Lindholm President of the Board of Svenska Spel Independent Research Council pointed out that there is a lot of knowledge about prevalence and health effects, but there is still a lack of knowledge about problem gambling prevention, how to evaluate existing responsible gambling tools and also how to develop new tools, as well as to understand the environment that surrounds gamblers and develop better treatment for them. She thinks that the collaboration of researchers with industry provides more data that can be transferred to knowledge, and knowledge to policies, from which everyone can benefit. Dr David Forsström, a researcher in the Department of Psychology at Stockholm University, said the opportunity to work on gambling data and responsible gambling data is a major befit in working with the industry. Kajsa Nylander said at the webinar that presenting information in the form of a report on responsible gambling is proof that Svenska Spel understands that knowledge on this topic can be useful not only for their customers but also for others, so the company wants to give contributing to the reduction of gambling problems in society. Maris Catania, Head of Responsible Gambling and Research at Kindred, explained that their approach is not only to share research, but also to use it in their work. They collaborate with many researchers, but also sponsor PhD students.

Anders Håkansson, Consultant Physician, Professor of Addiction Medicine, Lund University, stressed that working with company data is extremely important, because this data contains the actual product and behaviour in a non-clinical environment. Yanica Sant explained that they as regulators support the exchange of data between operators and researchers, but only in accordance with the law, referring mainly to the GDPR.

On the other hand, Dylan Evans pointed out that there is a question of validity, if the industry itself sponsors researchers. However, the supplier respondent stressed out that some valid research results which may be important for the field can be produced even if the research is funded by an operator. "There is some truth in it", said the supplier respondent, clarifying that usually this type of research is conducted on the data of a certain operator, like in the case

of Paf and the researcher Ekatarina Ivanova, then some research was done on Svenska Spel data, and Mark Griffiths on international level who is very active and collaborates with Norsk Tipping, Kindred, and so on.

It is interesting that operators collaborate with ex-gamblers too. Catania explained that the best support is provided by people with experience or people who have been addicted. Gamblers not only share their stories but come to Kindred's office and help them find the best approach to solving the problem. Svenska Spel has a similar support, and the former handball player Rickard Lönn, who was also an addict, helps them with that, which was pointed out on the webinar.

4.8 Sustainability

The observed participants at the conference and online seminar pointed out that sustainable gambling is in their focus, and that technology is to be used for customers. Companies want to meet customer satisfaction and build a brand loyalty. Safety measures on websites and fraud protection is also the important issue. In that sense customized solutions based on innovations will be introduced. CEOs of Svenska Spel and Kindred said that they want to create a better industry, more enjoyable and entertaining gambling market, gambling that is not harmful. They will continue to build strong values and organizational culture and expressed their commitments to create more transparent and sustainable gambling industry.

As someone whose research interest is focused on the long-term business and business responsibility of actors, with a business purpose taking long-term societal investments, including sustainability, Anders Sandoff explained the meaning of sustainability: "Starting point is always the Brundtland Report and the definition there of where you need to act today, so that you don't limit the possibilities of future generations not only to flourish, but to make their own decisions," without them being restrained too much by our decisions today. Sandoff believes that having only an economic framework as one of the three pillars of sustainability is simplified and somewhat naïve approach to the long-term basis of business.

The supplier respondent commented on sustainability in practice on the example of Kindred's challenging sustainability goal, zero revenue from harmful gambling. "This is of course nonsense, and they will never target it," was categorical the supplier respondent, adding doubts to the way they measure it.

As part of their sustainability practice, the company respondent said that they want to have customers who feel and do well, and build loyalty, because they want them to be their

customers for long time. This means that customers should play controlled, instead excessively. “We do not want to have churn. We want that they play little for a long time,” the company respondent stated.

“Speaking as an idealist, I think that protecting a consumer would be at the top of everyone’s agenda, not just some people in the company,” emphasized Maris Catania.

Kajsa Nylander believes that the goal of the industry should be a safe product, in every sense, that users use in a controlled way, without developing addiction.

Gambling operators do not operate in an isolated space and there is not only an agreement between them and the gambler, but also between them and the wider community, Anders Sandoff emphasized. The sustainability of corporations and the gambling industry can be achieved if the activity is completely transparent, on voluntary basis and players are well informed. Play should be done in a controlled manner, meaning that players do not develop addictive behaviour, and gambling is done for fun. Then gambling “can be a very good part of a sustainable society,” Sandoff concluded.

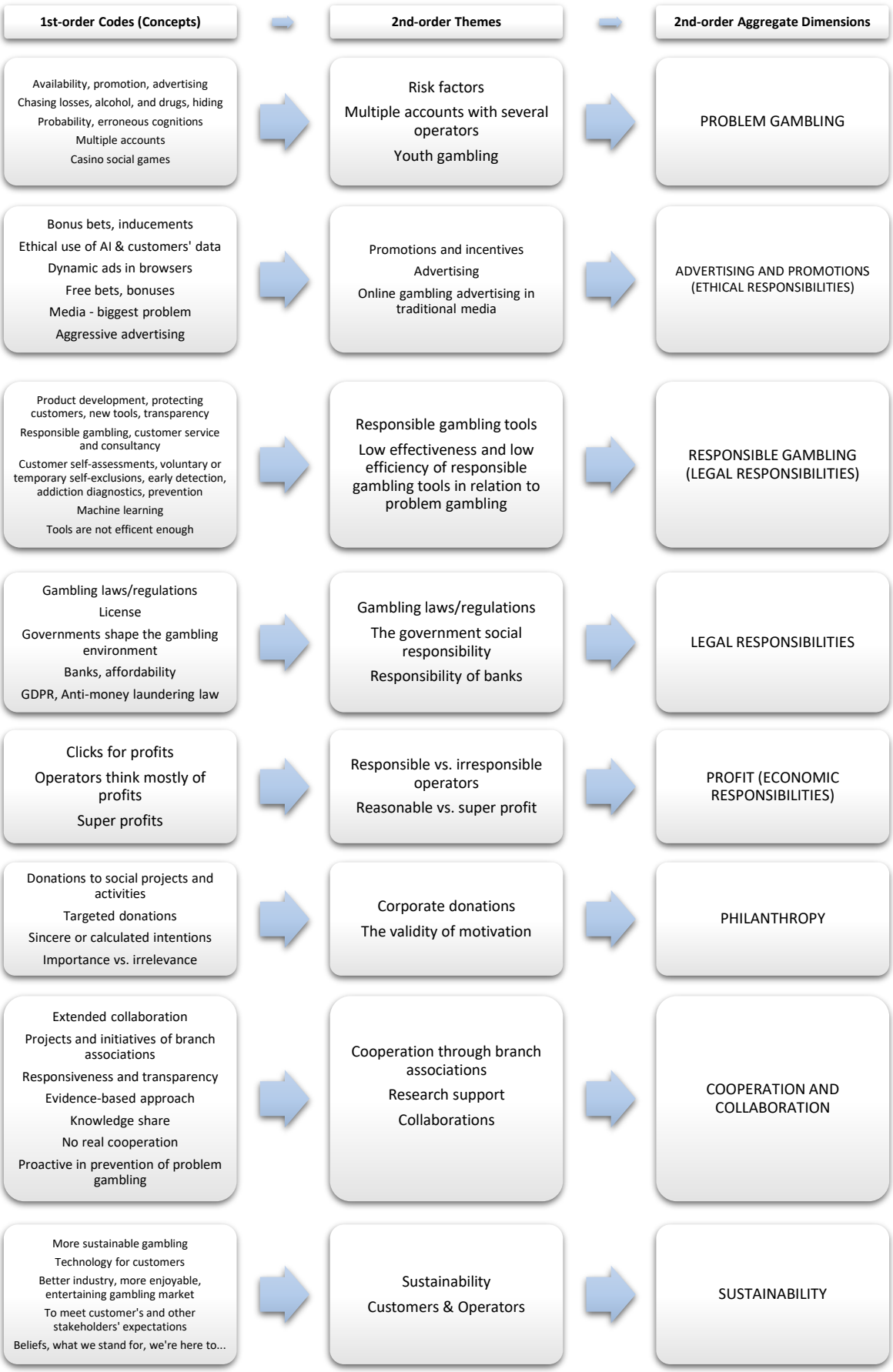

Figure 8 – Theoretical construct of the research (Source: developed by the researcher)

5. ANALYSIS

The chapter includes a review and analysis of empirical data obtained in participant observations and interviews, and their comparison with theory and secondary data. The analysis will help to understand the current situation in online gambling in terms of different concepts and phenomena and will serve as a basis for drawing conclusions.

A brief overview of new discoveries in empirical data

Empirical data brought many new insights. In addition to more or less expected categories, such as problem gambling, advertising and promotions, responsible gambling, and CSR dimensions, two new main categories have emerged: *cooperation and collaboration, and sustainability*. Also, some new subcategories or themes have been created:

1. In *problem gambling*, there is a discovery that gamblers are multiple account holders, which they open with several operators in order to avoid restrictions and limitations. An interesting explanation was given by one of the respondents about the poor understanding and assessment of risk and probability.
2. In the *ethical responsibilities* a new theme in *advertising and promotions* emerged, and this is the aggressive advertising of online gambling in traditional media.
3. In the concept of *responsible gambling*, which is the *legal responsibility* category, all respondents point to the inefficiency of current tools, especially towards medium and high-risk groups of gamblers.
4. *Legal responsibilities* in general hide some surprises regarding the necessary systemic solutions in online gambling that would help operators and industry, such as the social responsibility of governments and financial institutions.
5. The category of *economic responsibilities* reveals different management styles and invisible conflicts of socially responsible and irresponsible companies, i.e., those whose profits are jeopardized because they care about ethics and social responsibility. There is an interesting question of reasonable-ethical and bad-unethical profits.
6. The category of *philanthropy* brought interesting reflections on the validity and credibility of the motivations for which companies are involved in philanthropic activities, as well as a discussion of the importance of philanthropy in general.

7. Furthermore, there is a completely new category of *cooperation and collaboration* between stakeholders, and their proactive projects through associations and branch organizations.
8. Finally, the category of *sustainability* comes to the top of the summary of new knowledge in relation to the literature review as a constantly expressed aspiration of all operators for a new less harmful industry that is necessary for the long-term survival of the industry.

In other themes and categories, the researcher found that the data confirmed many previous studies cited in the literature review, especially concerning the use of artificial intelligence in advertising and promotions, as well as responsible gambling. The analysis follows.

5.1 Problem gambling

5.1.1 Risk factors

Previous research on gambling risk factors has been confirmed through the data collected. When it comes to risk factors, there is no dilemma. As indicated by almost all respondents, advertising and promotions, and especially AI used for this purpose, are the biggest systemic risk for players, which coincides with theory (Griffiths & Parke, 2002; Cemiloglu et al. 2020, Hing et al., 2014; Kshetri, 2014). Other risks that are standard are a combination of availability/accessibility, speed of play, and ease of payment (Gainsbury, 2015; Binde, 2011). In addition, there is comorbidity with alcohol or other substances, which impair cognitive reasoning abilities (Gainsbury, 2015). Finally, a sense of privacy and a deep focus on play, both Binde (2011) and respondents highlighted as a risk.

An interesting explanation was given by one of the respondents about the poor understanding and assessment of risk and probability, regarding the chances of winning / losing during typical gambling, mentioned also in the literature review of this research (Beresford & Blaszczynski, 2020; Collins et al., 2014; Percy et al., 2021). Games with a small variance are best for players who do not want to spend a lot of money or want to play for a long time. “Players of more volatile games can see large deviations from that average RTP (Turner, 2011, as cited in Persy et al., 2021, p. 2). The UK Gambling Commission also provides a good explanation for RTP (Gambling Commission, n.d.-a). Precisely because of ignorance and misunderstanding of risk, players often lose control and chase losses, which is an additional

risk factor, in addition to all the above. An overview and basic characteristics of risk factors collected by the researcher through empirical data and theory are shown in Table 2.

Risk factor	Basic characteristics
Advertising and promotions algorithms and internet tactics	Systemic risk number one
Availability	Quick access via mobile, tablet, laptop, or desktop
Speed of play	Time interval between two consecutive repetitions of gambling / betting
Easy payment	Card payment
Comorbidities	Alcohol, drugs, etc.
Misunderstanding of risks-volatility/RTP	Ignorance of probability and risk
Low economic status	A bad economic situation encourages gambling
Environment – privacy	Immersing of players in the game and forgetting about the real environment
Game design risks	Motivation through the emphasis on gains as a psychological stimulus to feelings of happiness
Long and successful hiding of gambling problems	The environment does not know that the person has a problem until it is too late

Table 2 – Overview and basics characteristics of risk factors (Binde, 2011; Gainsbury, 2015; Collins et al. 2014; Percy et al., 2021; Empirical data)

5.1.2 Multiple accounts with several operators

"On average gamblers had 4 online accounts with gambling companies in 2017, a slight increase from the 3 reported in 2016" (Gambling Commission, 2018). The empirical data showed that having an account with several operators is a way for gamblers to avoid restrictions and thus consciously or unconsciously create an uncontrollable problem first for themselves, and then for industry and society. Due to the lack of a single register, the possibility of unlimited gambling, despite individual operator limitations, can be considered as a huge additional risk.

The problem is not the indisputable right of every player to play with multiple operators, but the lack of real control over excessive gambling. Namely, operators do not know how much a gambler played earlier in the day, after logging on to the website. Thus, a player can gamble with three or four different operators during the day without the machine learning algorithms or anyone noticing this addictive behaviour, and in this sense the operators cannot react. This type of distribution of gambling time and money through accounts with several operators is a major systemic risk for which there currently appears to be no solution.

5.1.3 Youth gambling

Youth gambling is increasingly raising. According to UK Gambling Commission "1.7% of young people classified as problem gamblers equates to approximately 55,000 11-16 year olds in England, Scotland and Wales" (Gambling Commission, 2019). Press referred to it as a "child gambler epidemic", announcing "worrying new figures reveal 55,000 under-17s have 'a problem' with another 70,000 at risk - as experts blame explosion in TV adverts" (Witherow, 2018). He also explained that a report by the UK Gambling Commission (2019) stated:

> Children are being inundated with gambling advertising, with two in three saying they have seen it on TV; Close to a million youngsters have been exposed to gambling through 'loot boxes' in computer games or on smartphone apps; More children say they have placed bets in the past week than drunk alcohol, smoked or taken drugs.

The Essau and Delfabbro study (2020) mentioned the risk of so-called "loot boxes," and this is in line with a previous quote and official report from the UK Gambling Commission (Gambling Commission, 2019). Loot boxes are linked to problem gambling confirmed a new study by researchers from the University of Plymouth and Wolverhampton, who "found that loot boxes are structurally and psychologically akin to gambling" (BBC News, 2021b).

Respondents also state potential risks for young people through interviews. All data in this research confirm the increased risk for children, the exposure of adolescents and young people to advertising campaigns and the growing problem of gambling among youth.

5.1.4 Social cost of gambling

The social cost of gambling that was researched and presented by Hofmarcher et al. (2020) and Effertz et al. (2018) is not a topic on which respondents have many statistics, although they are aware of the high costs for the society through therapy programs and help to addicts. As pointed out in the literature review, the social costs of gambling are partly related to the health care system. But there is something else.

Sometimes addicted gamblers hurt themselves after losses, and even commit suicide, leaving their families in shock, disbelief, and despair. After battling gambling addiction for many years that began in adolescence, 24-year-old Jack Ritchie and 25-year-old Chris Bruney, both from Sheffield in the UK, took their own lives in 2017 (Cumber, 2019; Ritchie L. & Ritchie C., 2018; Witherow, 2020). Costs for society are therefore not only linked to public health expenditure or the consequences of criminal acts that finance gambling, economic fraud or

violence (Hofmarcher et al., 2020; James, 1999, as cited in Fong, 2005). This is about irreversible losses in human lives.

5.2 Advertising and promotions

5.2.1 Incentives and tactics for advertising and promotions

Theory, respondents, and secondary sources have confirmed that advertising and promotions is the biggest cause of problem gambling and the area where CSR need to be applied more strongly. Digital marketing strategies are one of the two most common modes of using AI in online gambling in relation to problem gambling. Customer data is used to segment the market and create promotional strategies tailored to each segment. Conventional marketing programs would not be problematic if some companies did not target customers who are high-risk gamblers, through dynamic re-targeting as part of a customer reactivation strategy, even after self-exclusion. Unscrupulous marketing strategies, especially by nudging and various internet tactics, are considered by many to be unethical in acquiring new customers.

Great attention is paid to retention strategies, because, as the empirical data confirmed, it is cheaper and easier to return the old one than to create a new customer. Some companies do not act socially responsibly in this regard, and as said, they reactivate addicts. Moreover, if these customers often lose large sums of money, and as part of a company membership program, they can even get VIP status (Davies, 2020a). The granting of VIP customer status is also confirmed by empirical data. Moreover, through retention strategies addicts are targeted through incentives such as free bets and bonuses. This practice most often brings them back into a vicious circle from which they can hardly get out voluntarily. The £ 400 cash bonus, which Chris Bruney received in 2017, just hours before he took his own life, was his last. Chris "lost a total of £ 119,000 in the five days before his death, but instead of shutting his account Winner.co.uk plied him with cash bonuses and free bets" (Witherow, 2020).

Furthermore, some operators unscrupulously use various tactics of nudging and persuading through churn remediation programs applying the psychological and persuasive power of these algorithms (Cemiloglu et al., 2020; Effertz et al., 2018). Campaigns are automated and activated through user browsers. Search engine word embeddings, pop-ups, circle jerks, and then when the player agrees to play, website stickiness tactics are used to make users play longer and spend more (Griffiths & Parke, 2002; Effertz et al., 2018). Young men are especially vulnerable to big data hyper nudging strategies, e.g., betting inducement ads

(Victorian Responsible Gambling Foundation, 2018). In addition to all this, one should not neglect the innovative elements of attractiveness and risk that are integrated into the design of games of chance, confirmed by empirical data. The algorithms track consumption patterns of customers combining big data analytics, including social media analytics (Kshetri, 2014). So-called “sniper targeting” is used “to flood a Facebook user’s feed with relevant content to essentially manipulate them into a certain activity” (O’Connor, 2019).

To further reduce promotion costs, some operators use betting affiliates, or “companies that refer customers to online bookmakers for a fee” (Busby, 2017). In addition to cost-effectiveness, the researcher speculates that some operators may have outsourced some of direct marketing activities to these affiliates to partially absolve themselves of responsibility if something goes wrong due to dynamic retargeting of risk groups. The researcher speculates that in this way they can probably avoid legal sanctions in the form of fines or revocation of licenses, but these are just speculations that need further investigation. Furthermore, Busby emphasized that betting affiliates perform marketing strategies on behalf of their clients, and often under suspicious circumstances, i.e., by purchasing data from third parties, or from the so-called "data houses", where they obtain detailed personal data of gamblers. The data is then "inserted into the system", in which the algorithms profile, classify and segment customers. A specially tailored promotional strategy is made for each segment. Here it is important to emphasize that for marketing agencies, information on the problem of gambling, i.e., the pathology of individual customers, is not so relevant, empirical data confirms. They see the most active gamblers as the best customers and as such as the best target. In the campaign, algorithms and ads target all planned segments, and as has been found, one of the most lucrative is the segment of abstinent addicts and those with lower economic status. Finally, betting affiliate programmes is well developed in the field of social media. Agents find new customers on social media, recommend bets that are likely to lose, share a sign-up link associated with their affiliate identification code, so the operator knows exactly to whom to pay part of the future losses that the reactivated player makes (Busby, 2017).

There are many aspects of collaboration in the field of marketing in the online gambling industry. Marketing agencies that offer their services can be found online. Some of the most famous are Digital Fuel Marketing, Mustard Digital, Natalis, etc. (Influencer Marketing Hub, 2021). The researcher will cite a few examples that caught his eye and whose aspects of collaboration are interesting to explore more, perhaps in some other research in the future. Marin Software is an online advertising company or marketing software platform from San Francisco whose services are used by advertisers and agencies, as well as online gambling

operators themselves. The agency has offices in the UK and the EU. They develop marketing strategies and software for advertising and promotions for online operators. As part of marketing strategies, one of the tools of retention is Dynamics Ads (DAs). It is explained to be the part of the retargeting phase of the Online Gambling Strategy, where the Facebook DAs are used "on different games to automate retargeting, and to show the most relevant game to your engaged users, driving them to convert" (Christoviciute, 2016). *The researcher wonders, to what extent do marketing agencies actually pay attention to whether they approach a high-risk gambler, when they use automated re-targeting algorithms as part of player reactivation strategy?* Furthermore, there is information that shows how minors are targeted via Facebook (O'Connor, 2019). Marin Software and LeoVegas cooperate in the field of social media advertising. LeoVegas is using a Facebook Video Carousel Ads, which is „Marin's bulk creation and editing tool for carousel ad formats that allowed LeoVegas to save significant time when setting up and previewing campaigns" (Marin Software, 2021). *Researcher wonders how minors who do not know how to hide ads are protected from Facebook Video Carousel Ads with gambling content that can affect them and arouse interest in gambling in early childhood?* If it is known that the minimum age for opening an account in accordance with the Facebook Terms of Use is 13, then adolescents may see these ads, become attracted to gambling, and find ways to participate in it (Facebook, n.d.; Gambling commission, 2019). Recently, 740,000 minors accounts in Europe were flagged because of their interest in gambling (O'Connor, 2019). Gambling Commission (n.d.-e) gave instructions how to control the gambling-related ads on Facebook. Finally, there are also companies that are specialised in customers retention, such as Enteractive (Enteractive, n.d.). They offer reactivation services to many companies, and one of them is Betsson Group. Enteractive CEO Mikael Hansson explained the success of their (re)activation cloud lies in "real personal customer relationship conversation", adding that "CRM managers can simply sit back and watch churn rates drop and active players come back, driving bottom line results with no risk." (Knutsson, 2018). *The researcher wonders how much call centre employees are trained in a responsible gambling approach especially towards high-risk groups of gamblers and what types of incentives to reduce customer churn are used by these organizations?* The researcher believes that all these questions are legitimate.

It should also be noted that empirical data show that there are operators who claim to approach marketing strategies responsibly, do not want to harm customers and work to the satisfaction of other stakeholders in the industry. What they emphasized is that they know their customers and do not target risk categories of players with direct marketing, as well as those who are voluntarily self-excluded.

Some of the most common marketing persuasion tactics and incentives used in online gambling are shown in Table 3.

Internet persuasion tactics	Big Data hypernudging; Website stickiness; Online customer tracking (used not as a responsible gambling tool, but for free bets), Search engines word embeddings, Pop-ups, Circle jerks; Dynamic Ads (DAs), "sniper targeting".
Incentives	Registration process welcome bonuses, free games/bets, and giveaways; Retention sign-up bonuses, referral bonuses, random draws; Reward systems (e.g., for making the largest deposit of the day, deposit credits, loyalty programmes, happy hour events); rebates on betting.

Table 3 – Persuasion tactics and incentives (Christoviciute, 2016; Effertz et al., 2018; Griffiths & Parke, 2002; Hing et al., 2014; Kshetri, 2014; O'Connor, 2019; *Yeung, 2017)*

5.2.2 Online gambling advertising in traditional media

In addition to digital strategies, advertising and promotion of online gambling is done through traditional channels, such as TV and radio. Many respondents described this as a serious problem, especially the aggressiveness and frequency of ads, almost to unbearable limits. The number of commercials can be counted in dozens during one hour of broadcasting on these media. The theory also stands on the same conclusion. "Traditional advertising through television, radio and print, event or team sponsorships and creative guerilla marketing tactics" are common in online gambling (Weibe, 2008, as cited in Hing et al., 2014, p. 396). TV and radio advertising are mostly done in the function of acquisition and if new customers try their luck and win in the first few rounds, there is a good chance that they will return to gambling in the hope of new wins. A vulnerable category to which TV and radio commercials have strong effects are adolescents. In the UK, it has been reported that as many as 2/3 of adolescents have seen gambling ads on television (Gambling Commission, 2019). The power of TV and radio commercials has been recognized, and the responsible decision was that UK betting and gambling companies stop advertising on TV and radio during Covid-19 lockdown in 2020 (Sweney & Davies, 2020).

5.2.3 Italy and Spain have banned / strictly regulated gambling advertising and promotion

The Italian advertising and communications regulator (AGCOM) banned all forms of gambling advertising with the "Dignity Decree" from January 1, 2019, while the ban on sports sponsorship, including operator branding, came into force on July 14, 2019 (iGaming Business,

2019). The first penalties were handed down soon, in 2020. “AGCOM, Italy’s federal communications and media agency, has fined ‘Google Ireland Limited’ €100,000 for violating the advertising conditions and responsibilities of Italy’s ‘Dignity Decree’” (Menmuir, 2020).

The Royal Decree 958/2020, of 3 November 2020, on commercial communications of the gambling activities, approved and published in Spanish Official Gazette (BOE), regulated the advertising and betting activities (ECIJA, 2020). The Decree restricted many unscrupulous practices used in gambling marketing. New regulations include among many things that broadcasting of commercials through audio-visual media and during live sport events is limited to 1 a.m. to 5 a.m., use of famous persons in gambling marketing is prohibited, no welcome bonuses or any other kind of promotion for the acquisition of new customers, no sports sponsorships (sport teams, t-shirts, equipment) is allowed, and so on (ECIJA, 2020).

5.3 Responsible gambling

5.3.1 Responsible gambling tools

Responsible gambling tools are a legal requirement, and therefore a legal responsibility for CSR. Operators should have them as part of their online gambling platforms. Responsible gambling tools such as self-exclusion and behavioural tracking use different kind of machine learning techniques, such as logistic regression, linear regression, neural networks, Bayesian networks and random forest (Percy et al., 2016). These are very sophisticated algorithms that find patterns of pathological disorders through the patterns of player behaviour and comparison with the patterns entered in the classifier. These findings result in further actions by the operator, via automated messaging or telephone conversations. One of the tools is self-testing, which has proven to be good, especially in the early stages of addiction. Messaging has been found to be inefficient and upset and distract players. In addition, responsible gambling tools can be used in a variety of company statistics. There is also a behavioural analysis tool called Playscan that is used to detect and communicate risky gambling. It helps players monitor their gambling habits by assessing “potential risks associated with their gambling” (Playscan, n.d.).

In terms of higher social consciousness, the fact that operators have the legally required tools for responsible gambling in their offer does not confirm that companies understand social responsibility, i.e., that responsible behaviour is a product of their deep convictions, organizational culture, and their business style. Some companies do not provide strict control over the application of responsible tools, as was the case in the UK, where it was "found that

due to technical failures more than 7,000 customers who had chosen to ‘self-exclude’ were still able to get into their accounts" (Marsh, 2017). There are companies that preoccupied with the economic dimension within the framework of legality, often solve harms "on the fly" or “along the way". Empirical data revealed that after the introduction of the first online poker in Sweden 15 years ago and the first revision of the gambling damage rate of around 20%, the company reacted along with the system quite late. Therefore, it seems that a proactive approach and thinking about possible harm, for example, by installing a player protection solution at the product design stage, or additional risk information, has been completely neglected. Nevertheless, responsible gambling can be developed, but also the company's awareness of social responsibility, so that companies can better prepare for similar situations in the future.

Empirical data suggest that companies comply with the GDPR and carry out player identification at additional stages of verification. Machine learning algorithms do not include personal data such as users’ names. First, classifier algorithms treat customers as nameless players, so the identity of customers is protected during data processing. When algorithms detect that a customer has unhealthy gambling behaviour, customer is offered to do a self-test or contacted by phone. Gambler gets more information about better protection or help, e.g., gambling addiction advice or treatment. Socially responsible companies have developed additional mechanisms by which they come to the aid of customers through counselling phone calls, thus showing a sphere of more ethics and fair treatment than the minimum required by law. These companies can be the bearers of change, the researcher believes.

5.3.2 Low effectiveness and low efficiency of responsible gambling tools for problem gamblers

The theory is somewhat more positive when it comes to the efficiency and effectiveness of responsible gambling tools, but empirical data show the opposite. It has generally been found that machine algorithms for responsible gambling only delay the onset of addiction, more than they are useful in proactively solving gambling problems. They cannot prevent addiction and are partially efficient in the initial stage of addiction. They are low effective when it comes to more than medium and high-risk gamblers. This was confirmed by the interviewed gamblers, but also by other respondents. Some tools have passive characteristics, which means that gamblers who have the disorder are expected to initiate a solution to their problem on their own, which is hard to expect to happen. Given that new tools are slowly evolving, the researcher is concerned whether and to what extent different operators consciously neglect the development

and innovations in responsible gambling tools. Metaphorically speaking, malnourished, slow-growing algorithms and tools of responsible gambling can hardly help to improve the aggravated situation with gambling problems in the industry. They are therefore guaranteed to take on the role of a less successful child in the family, compared to robust algorithms, software and online advertising and promotion tactics.

Based on data from interviews and theory, the researcher explained the following tools in terms of type, depending on whether the system works independently, imposes restriction on the gambler, and then the tool is active, or if the gambler is required to take an action, set a limit, respond the message, and so on, and then the tool is passive. The effects that these tools produce on gamblers with different levels of addiction based on the collected data and theory are assessed. Types of tools and effects on gamblers are shown in Table 4.

Responsible gambling tools	**Type**	**Estimated effects depending on different levels of gambling addiction**
Age limit 18+	Active	High, only for gamblers under the age of 18
Self-limitation / Game limits by operator (time, deposit, etc.)	Passive/ Active	Minimal (gamblers find it difficult to control themselves or if the operator sets a limit, gamblers can easily bypass them due to multiple accounts with different operators)
Self-exclusion / Game break	Passive	Medium/High to high-risk gamblers (only if systemic self-exclusion occurs through the national self-exclusion register (e.g., spelpaus in Sweden) / the risk of targeting from unlicensed operators still exists)
Messaging (warning pop-ups) as structural game design	Passive	Minimal (moderate-risk and high-risk players do not pay attention)
Behavioural tracking	Active	Medium/High (only if the operator reacts quickly enough with measures, after unhealthy gambling behaviour is detected)
Self-test (information offerings)	Passive	Medium (may help low-risk and moderate-risk gamblers more, after excessive gambling or an addictive pattern is noticed, but only if a test is conducted)
Motivational telephone intervention (information offerings)	Active/ Passive	Medium (encouragement may come late for high-risk gamblers, a phone call to moderate -risk gamblers for counselling or therapy can be helpful in the early stages of pathology)
Other information offerings (awareness material, advice, or similar assistance)	Active/ Passive	Medium (may help low-risk and moderate-risk gamblers more)

Table 4 - Types of responsible tools and effects on gamblers (Source: developed by the researcher based on Deng et al., 2019; Haefeli et al., 2011; Håkansson et al., 2020; Empirical data)

5.4 Legal responsibilities

5.4.1 Gambling laws/regulations

It is evident that all licensed operators adhere to the laws/regulations. Their license depends on it. Furthermore, they undertake to comply with the anti-money laundering law, the GDPR data privacy law, and other legal regulations.

The EU, which does not have specific EU legislation in the field of online gambling, allows each member state to independently regulate the online gambling market, respecting certain treaties, as interpreted by the EU Court of Justice (European Commission, n.d.). National regulators are important in online gambling to ensure legality, safety and reliability of gambling and gambling markets. Spelinspektionen is Swedish Gambling Authority (Spelinspektionen n.d.). In the UK it is the Gambling Commission, while the Malta Gaming Authority is the regulator in Malta, and so on by countries (Gambling Commission, n.d.-b; Malta Gaming Authority, n.d.).

It is very important what the laws contain and how much they can protect regularity and boost the sustainability and needs of the industry. Empirical data confirm that, in addition to gambling laws, operators apply the guidelines and routines of some gambling associations regarding industry standards, such as those from the European Lotteries and the World Lottery Association (The European lotteries, n.d.; The World Lottery Association, n.d.). Some companies have realized the importance of responsible marketing and through different associations have adopted a Code of Conduct on Responsible Advertising for Online Gambling (European Gaming & Betting Association [EGBA], 2020a).

Observed regulators emphasized how customer data can be misused to harm users and how important it is that every operator comply with GDPR, as well as other regulations, which are the legal requirement that regulators insist on and operators must obey, e.g., Gambling Act in Sweden (Spelinspektionen, 2018). In addition, it is interesting that GDPR under certain conditions applies even outside Europe to non-EU-based organizations that handle data of EU citizens and residents (European Union, n.d.).

Finally, unlicensed companies are known for malicious marketing targeting of customers and irresponsible actions and they have not yet been completely prevented from operating in the wider EU or UK area. This is a serious regulatory issue. However, recently the Swedish Gambling Authority - Spelinspektionen ordered three unlicensed operators to cease activity and leave the market, which is a good sign (Omoigui, 2021).

5.4.2 Government social responsibility

The newly discovered category that emerged from the empirical data is the social responsibility of the government. Governments are in the conflict of interest. They have a monetary interest through taxation, while also regulating industry. Due to the economic interest, governments often try to come up with solutions that favour economical or politics over social responsibility. In addition, it has been found that even governments can be shareholders. Svenska Spel is, for example, a limited company owned by the Swedish state (Svenska Spel, n.d.). Therefore, stakeholders can sometimes doubt the confidence in the impartiality of the state as a regulator. In the theory has found that that there is a high social cost of gambling, and some researchers even claim that it is higher than the income generated by taxing the operator profits (Hofmarcher et al., 2020). In addition, there are indications of insufficient transparency when it comes to the actual numbers of addicts, as empirical data show. So far, governments and the gambling community have not set acceptable levels of problem gambling in the industry, nor have they agreed or established common international measurement system.

There are actions that point to the social responsibility of government agencies, for example those introduced during the Covid-19 pandemic. Fear of escalating gambling problems has created high pressure on regulators to impose certain restrictions during a pandemic that do not match the wishes of the operators. This was seen when the Swedish Gambling Authority introduced restrictions for online casinos that include a maximum weekly deposit limit of 5,000 SEK for users during a pandemic (Flanders, 2020).

5.4.3 Social responsibility of financial institutions

Many examples have shown that banks and other financial institutions can be an important factor in the implementation of many laws, and states encourage them to do so through their decisions. They have a responsibility within the system to support the fight against illegal money flows and crime. In online gambling, banks can be institutions that can confirm whether players can afford gambling.

Furthermore, banks may impose restrictions on the use of credit cards if governments so choose. Germany is one of the countries that has banned the use of credit cards for online gambling and even PayPal, other than sports betting, in 2020, while the Spanish government is still considering this possibility (Rowley, 2021). EU countries are encouraged by the decisions of the UK, where “the Gambling Commission has announced a ban on gambling businesses

allowing consumers in Great Britain to use credit cards to gamble," which came into effect on 14 April 2020 (Gambling Commission, n.d.-c). In addition, "many banks now offer the ability to limit spending on gambling", and gamblers in the UK have an option of blocking gambling payments with their bank, if they feel they spend too much (Gambling Commission, n.d.-d). Yet here again it is a matter of the players making the decision themselves, which is hard to expect, at least not on a larger scale.

Finally, banks can help by blocking the financial transactions of unlicensed operators, which can be considered a possible option if supported by regulations. An additional aspect that financial institutions need to pay more attention to is the granting of loans to gamblers, as indicated by empirical data.

5.5 Economic responsibilities

The public in the UK was greeted with disbelief by the news that bet365 boss Denise Coates has earned a staggering £ 469 million in the past 12 months, and this "chief executive's annual pay packet is likely to be the biggest in UK history" (BBC News, 2021a). The generally accepted opinion of respondents is that operators specifically develop this dimension of CSR, whether operators want to admit it or not. However, some respondents think that problem is essentially super profit, which usually hide unscrupulous marketing activities that affect uncontrolled and harmful consumption, and thus increase problem gambling. Also, it was found that "financial interests reduce the effectiveness of CSR", as Fiedler et al. (2020, p. 1) discovered in their gambling research. AI is used for purposes of customer profiling and to predict customer behaviour, to keep gamblers hooked, where "every click is scrutinised in order to optimise profit, not to enhance a user's experience" (Busby, 2018).

Based on all the data and theory, it was concluded that there are two approaches to profitability that could be viewed from the perspective of CSR. One is totalitarian, advocating a position that profit within the legal framework is only social responsibility that company should have (Friedman, 1970). The other approach involves profits that are in line with social responsibility, ethics, and morals, which are mentioned in stakeholder theory and Carroll's Pyramid of CSR (Carroll, 1991; Freeman, 1984; Jones, 1995; Phillips, 1995). Shareholder approach to profitability is currently the most common among online gambling operators, the researcher believes. These companies subordinate each business practice to a huge profit, with a margin of several hundred percent of the invested capital.

Many pieces of information from various sources indicate that much of this profit is based on unscrupulous and malicious marketing, and various forms of unethical behaviour. According to the respondents, this approach brings great harm to both customers and society, which has consequences in the high social cost of gambling, for which evidence has been found in theory (Effertz et al., 2018; Hofmarcher et al., 2020). Empirical data have confirmed that there are competent management bodies that decide on strategy and profit.

5.6 Philanthropy

With regard to philanthropy, there are no evidence of the use of artificial intelligence for this purpose, which may not be the case in the future. There are probably ways to link artificial intelligence to philanthropic activities, but that should be explored. Through some research related to the gambling industry, philanthropy has come to life in part, mainly through corporate donations, with no participation of employees or owners in community projects through volunteering (Tetervova & Patak, 2019).

According to the respondents, at this moment, philanthropy includes donations to foundations, which then allocate funds depending on the applicants' projects in different social areas, such as, e.g., sport activities. There are also direct donations to various humanitarian organizations. It was pointed out that support for educational or research work can be a form of philanthropy. Empirical data suggest different opinions about philanthropy. Some consider it important and good, and some completely unimportant. The respondents also doubted that various interests, even of a marketing, economic or political nature, could be hidden behind philanthropy, or that philanthropy could be used as an alibi for harmful activities and used to divert public attention from the real problem.

Positive contributions to society can be found on the Internet. William Hill is one of the biggest online gambling corporations and they are involved in community programmes. They developed a “Lockdown Heroes” awards to celebrate their employees’ community engagements during Covid-19 lockdown (William Hill, n.d.). In addition, through their Foundation, they support mental health and well-being, the needs of colleagues, and employability, as well as Alzheimer’s Society. Swedish ATG has its Drömfond, and they support different associations and commitments that promote community and health since 2017 (Drömfond, n.d.). “Total amount of money received by GambleAware in 2020/21 (April 2020 to March 2021) as voluntary donations from the gambling industry (excluding regulatory settlements and additional donations): £19.14 million” (BeGambleAware, n.d.).

5.7 Cooperation and collaboration

Operators are showing a growing interest in cooperatives and collaborations. This was noted in public appearances. Furthermore, they share fact-based research and the exchange ideas, knowledge, and information about progress in research. Svenska Spel 2020 responsible gambling report is an example of presenting new research on this specific topic (Svenska Spel, 2020). Some operators such Kindred cooperate also externally and host meetings on technology, which can be useful to the entire industry. Such was the OpenInfra meetup event "Sharing is caring", held in Stockholm in January 2021, where scientist and experts presented and exchanged ideas, information and knowledge about open source cloud-related technology (Kindred Group, 2020a).

Operators start associations to support their goals, where they address various industry issues, and respond to new sustainability challenges. The European Gaming & Betting Association (EGBA) is one of the non-profit organisations founded by "the leading online gaming and betting operators established, licenced and regulated within the EU" (European Gaming & Betting Association [EGBA], n.d.-b). Furthermore, there are other international association, such as the European Lotteries and the World Lottery Association (The European Lotteries, n.d.; The World Lottery Association, n.d.). companies also associate nationally, e.g., the Swedish Gambling Association - Sper (Spelbranschens Riksorganisation, n.d.). There is also a Swedish Trade Association for Online Gambling - Bos where companies discuss issues related to gambling regulation, the gambling industry, online gambling, gambling taxation, responsible gambling, sports integrity, and many other issues that are important to them (Branschföreningen för Onlinespel, n.d.).

In general, the respondents assessed the cooperation and collaboration as extremely positive and that it will help solve the problems and issues of sustainability in the industry. However, the data revealed some opposing considerations, and there are those who think that there is no real cooperation between the operators and that it is all a show for the public, while behind the scenes, less honourable actions take place.

5.8 Sustainability

To be sustainable means "causing little or no damage to the environment and therefore able to continue for a long time" (Dictionary Cambridge, 2021b). "Sustainable development is development that meets the needs of the present without compromising the ability of future

generations to meet their own needs" (World Commission on Environment and Development, 1987). The environment in online gambling is digital, and if pollution of electricity consumption is excluded, there are no major negative effects on the planet. However, online gambling has a huge impact on people and society.

Sustainability has become a hot topic in gambling, that has imposed itself and grown into an indisputable aspiration of operators to create and deliver safe and sustainable products and create stable profits for themselves and value for customers. They are increasingly aware that problem gambling is a growing problem and can have far-reaching negative consequences for the sustainability of the entire industry.

Through interviews and observations of conference and webinars participants it was noted that companies develop a range of policies and practices that lead to employee awareness about problem gambling and responsible gambling, as well as sustainability. Operators first form structures within the parent company that would be bearers of social responsibility and sustainability, and then spread these initiatives within associations and working groups. In addition, they include sustainability already in the conceptual and development phase of the product, integrating new elements of responsible gambling into game design.

Annual sustainability reports talk about the benefits of business models and changes based on sustainability, and currently Kindred is on their "journey towards zero per cent revenue from harmful gambling by 2023." (Kindred Group, 2020b, p. 5). Other operators also want to reduce the problem gambling to a much lower percentage than it is now. Empirical data revealed that they see relationship with their customers, as a long-term relationship between the company and green gamblers, who gamble for fun, and in a controlled manner. They explained that they want a sustainable and long-term customer base, players who will gamble moderately and will not become addicted. The researcher believes that it is encouraging that respondents know exactly what sustainability is. Additionally, if online gambling companies need sustainability assistance, they can turn to companies that offer seminars and advice on this topic. One of the examples the researcher found on the Internet is Sustainable Interaction Sweden AB (Sustainable Interaction, n.d.).

The final word would be that operators are slowly beginning to understand the bigger picture and their role in global society. It seems they start to align their missions and corporate culture with the UN Sustainable Development Goals, realizing that they do not operate in an isolated system, but their business has global social and environmental consequences (United Nations, n.d.). Sustainability is an important part of their mission statements and reports. However, companies must prove by their actions that statements are not just a "social washing".

5.9 Recapitulation of the relationship between the theoretical construction of research and different theoretical perspectives of CSR

Based on everything presented in the analysis chapter, it is clear that most online gambling operators based their management models, use of AI and CSR, heavily on profit as a business purpose. The damage associated with gambling has been treated by rather delayed reactive interventions in the form of responsible gambling measures. CSR is currently nuanced and ranges from the legal minimum, as explained in shareholder model and thoughts of Friedman (1970), to socially responsible business practices with a foothold in corresponding organizational culture, ethical norms, and fair treatment, more than regulation requires (Freeman, 1984; Carroll, 1991). However, the latter companies can be compromised, due to the higher profits of the former, and come under attack, criticism, and pressure from shareholders. Faced with a desire to build a corporate culture based on social responsibility and the demands of capital owners to maximize profits, CEOs can very easily confront the agency problem, and it is on this that Friedman based his defence of social responsibility as unnecessary and fundamentally inconsistent with interests of shareholders. Retrospective of dimensional focus of CSR theoretical perspectives is shown in Figure 9.

It seems that current circumstances of domination of 'shareholders theory' approach in the online gambling industry make socially responsible corporations insufficiently capable of gaining the upper hand in the market and start initiating the necessary change, for the benefit of customers and industry sustainability. Thus, action must come from socially responsible corporations, government, and financial institutions together, which will then create an advantage over less socially responsible and irresponsible organisations, in order to achieve systemic structural changes to reduce and prevent gambling-related harm, and to create a sustainable gambling industry.

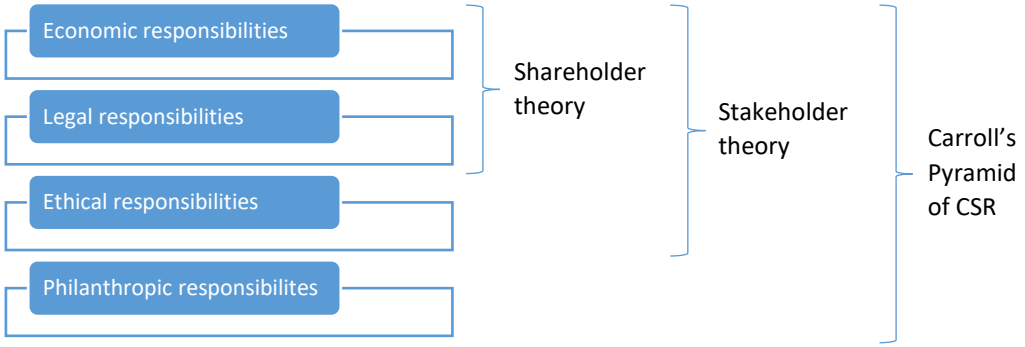

Figure 9 – Retrospective of dimensional focus of CSR theoretical perspectives (Source: developed by the researcher)

6. CONCLUSIONS

This chapter will draw conclusions about how CSR and AI can ensure reduction and prevention of gambling-related harm in the context of sustainable online gambling industry. In this regard, conclusions will first be drawn about the theoretical perspectives of CSR that are currently present in online gambling in terms of answering the research question. This is followed by presentations of the new CSR framework. In addition, some limitations of this research will be explained. Finally, recommendations for future research will be proposed.

6.1 Two types of addictions, challenges, and a possible scenario

Through research, sufficient empirical data have been collected, and analysed with previous relevant and reliable studies and secondary sources, so that the researcher can draw a conclusion that is believed to contain plausible truth. History has shown that the problem becomes visible due to delays in timely actions, which are the result of a lack of information about the existence of the problem, conscious neglect, intentional omission, or lack of appropriate strategy to effectively address the causes of the problem. Problem gambling does not differ in this respect, and most likely the combination of all the above elements is the reason for the increase in the number of gambling addicts. But what exactly is the crux of the problem?

At the heart of the problem is gambling addiction and huge profit addiction, which in many cases contains a significant portion of bad profits. However, this type of addiction is more often described in the media as the most successful entrepreneurship (Porterfield, 2019). But success, as dazzling as it may seem, has the other side of the coin. These are tens of thousands of untold and unheard stories, difficult and sad for both gamblers and their families (GamCare, n.d.). Moreover, there are testimonies of families of gamblers who took their own lives after a long struggle with addiction (Gambling with Lives, n.d.).

Problem gambling is a serious social problem, which should not be ignored. So far, governments and the gambling community have not set acceptable levels of problem gambling in the industry, nor have they agreed and established common international measurement system. Many believe that even harder times are coming, as the number of adolescents with gambling disorder in the UK has quadrupled (Gambling Commission, 2019). In addition, several studies provide alarming figures for the growing problem of gambling among adolescents and young people across the continent, in Italy, Spain, Cyprus, Finland (Bozzato et al., 2020; Canale et al., 2016; Chóliz, 2016; Floros et al., 2015; Gómez et al., 2019; Oksanen et

al., 2019). These studies show that many children are already struggling with addiction. It is not difficult to conclude that by the age of 18 many gambling addicts will be formed, and with such a disorder they will play legally for money.

The situation is further aggravated by highly effective marketing strategies, dynamic ads combined with unscrupulous internet tactics and incentives used to retain addicted players. If the current unethical practice of using artificial intelligence in advertising and promotions, reinforced by ads via social networks and traditional TV and radio channels, does not stop, as has been done in Italy and Spain, the problem will worsen. On the other hand, responsible gambling tools are low effective for gambling addicts. Non-existence of a common customer database with information on how much time / money gamblers spend online is the major systemic issue that undermines the whole concept of responsible gambling. Figuratively speaking, machine learning algorithms and big data analytics in advertising and promotions do more harm in 10 months than all responsible gambling tools together could help in 10 years. They are more efficient in their field, and this is no coincidence, the researcher is convinced.

A good sign is that certain socially responsible initiatives exist and indicate that there is a desire among some organisations for greater application of ethical norms. Some of them cooperate in this regard and share the knowledge and experiences. As empirical data show, it has been found that there are companies that have expressed a willingness to make long-term profits and to have many green players who gamble in a controlled manner. As they claim, some types of marketing have been rejected because of the harmfulness. These companies have developed additional mechanisms by which they come to the aid of customers through personal conversation and counselling, thus showing a sphere of more ethics and fair treatment than the minimum required by law. They seem to need the support of socially responsible governments and financial institutions to move forward more resolutely, which includes effectively disabling the operations of unlicensed operators through systemic measures. But not only do companies need them. Customers too value the security of a regulated system because they share private data, use means of payment, and prefer safety. Therefore, the role of government and financial institutions is important as guarantors of the regularity, security, and stability of the system. Regulators are aware of this, as empirical data confirms, but they obviously need to work harder on it.

Many primary and secondary sources and theories generally show that on internal organisational level online gambling companies and their cultures are profit-oriented. This means that their business is based on financial indicators, budgets, accounting metrics, sales, and profit, so companies may easily succumb to pressure and be seduced by bad profits

(Reichheld, 2011). But all that glitters is not gold and in accepting bad profits lies the biggest trap for companies. To achieve a greater degree of social responsibility, some companies must first understand that high-risk gamblers are not VIP customers and accept that customer satisfaction, customer value and brand loyalty must not be built on incentives, bonuses, free bets, or rebates, randomly, without any control. It would be the same as offering a cake to diabetics while you are aware of their illness. The researcher had this situation with his late father, who could hardly resist sweets, so the only way was not to offer him that "pleasure", for his own good. The anger was short-lived, but gratitude came later in the awareness of the love received. After a while, he managed to control his addiction on his own. This approach can be part of the solution for problem gambling. Some decisions, socially responsible companies and governments simply must make on behalf of vulnerable customers, because not everything gamblers perceive as value is good for them. What they love and what they addicted to can harm them in the long run, as well as companies and society. Some people may say that this violates the freedom of choice, the right to use one's own money as one wishes, and that these decisions encroach upon the sphere of human rights. Well, maybe, partially true. However, there is something called the moral obligation of a community to prevent danger to its own members, when members are unaware of it, and even if they are, but due to lack of knowledge, misconception, or delusion, they do nothing to save themselves.

The researcher also noted that the industry actors mentioned the importance of moving in the same direction, toward the same goal, but it is not clear whether they agreed on what that common goal actually is, whether they clearly established it, and whether they promoted it enough. Therefore, the researcher firmly believes and advises that the common goal for the industry should be gambling-related harm reduction and prevention (G-HARP). In order to achieve this goal, a continuous campaign should be conducted about it, which would constantly remind us of problem gambling and the importance of solving it. G-HARP can produce a beneficial psychological effect on stakeholders and the gambling community, who would then come together around one sustainable goal and work for the same noble cause. The gambling-related harm reduction and prevention logo is shown in Figure 1 of Appendix 3.

Given the above, there is a very possible scenario in the industry if organizational and systemic changes are not adopted. First, CSR only added to a company’s profit-oriented cultures can hardly bring about fundamental change. Companies that have not experienced a real transformation can be easily seduced by bad profits. They need to redefine their CSR, in a way that will be discussed later. Although some more socially responsible companies are making progress in understanding and implementing social responsibility and sustainability,

they cannot bring about systemic change on their own. That is the co-responsibility of the government. Empirical data show that regulators generally know what to do. Data also shows that some governments are currently preoccupied with local, national interests to keep as much revenue as possible locally and cannot, or do not want to see the bigger picture that the global character of Internet gambling imposes. This makes it difficult for them to understand and devise global solutions to protect players. Moreover, governments are preoccupied with high tax revenues from gambling that is easy to measure and tempting to collect, as opposed to social costs that are more difficult to measure and still not alarming, which slows down decision making. But not for long, the researcher believes. The turning point will be when the gambling social cost becomes significantly higher than the gambling tax revenue, and problem becomes more noticeable to the wider community. Pressed then by various stakeholders to react, governments will impose laws and restrictions. Such legislation will lead to dissatisfaction of companies, which will lead to further discord in the industry. A system in which relationships are disrupted has a turbulent and uncertain future. Then it is just hard to believe that such an industry can be sustainable at all. So, what can be done?

6.2 In search of a proper and sustainable CSR

The researcher believes that organizational and systemic changes must occur. First at the organizational level, companies that will be the foundation of change must experience real moral cleansing from within and reject bad profits. This requires readiness, and the right tool, a proper and sustainable CSR, which the researcher wants to develop. Current CSR models should be reviewed first.

The Machiavellian way was adopted by companies who are representatives of *shareholder theory* and Friedman's thought (Friedman, 1970). They unscrupulously use AI in marketing and target the most vulnerable customers by using incentives to make bad profits at the expense of gamblers and society. Since it takes the view that the only social responsibility is profit for shareholders within the bounds of legality and does not involve corporate social responsibility towards customers, the researcher believes that this theory is fundamentally unsustainable. Furthermore, *stakeholder theory* is based on value creation for all stakeholders, and CEO can hardly define a strategy due to the desire to please everyone (Freeman, 1984). As a result, the focus that should be on customers may be lost. *Carroll's Pyramid of CSR* has another problem. Carroll stated that "all other business responsibilities are predicated upon the economic responsibility of the firm, because without it the others become moot considerations"

(Carroll, 1991, p. 41). That sounds logical at first. If there is no profit, there would be no company, business, and thus, there would be no further discussion on CSR dimensions, right? Well, wrong. The explanation is as follows. If there are no customers at the first place, then there would be no product, profit, company, business. The question was what came first: chicken or egg, company or profit, but the researcher asks the question: what is a necessary prerequisite for creating this value for a shareholder? Undoubtedly, it is the existence of a customer relationship that precedes any profit. By focusing on customers, the company focuses on sustainable business growth, and sustainable profitability. Carroll has indeed fallen into the trap of a value system rooted in a relationship with "inanimate" matter, rather than in the "living" relationship that precedes it. But corporate social responsibility is, as the word itself says, a question of the relationship between corporations and social entities, or primarily the relationship between the owner of the capital and the customer. Thus, the meaning of business should always be seen as the relationship of living beings, shareholders and customers, and the purpose of business is realized in a business transaction to the mutual satisfaction. If the relationship is based primarily between living being and inanimate matter, shareholders and profit, the relationship turns into idolatry, and the customer becomes collateral damage. It is therefore unclear to the researcher how Carroll missed this. By placing the CSR pyramid basically on the economic dimension, he subjected it to a value system that has been proven to forget or miss a customer at some point. No matter how strongly later Carroll emphasized ethic and morality, he clearly defined the CSR on profit as the most important dimension, and what you call the most important sooner or later becomes the purpose.

But profit must never become the purpose of business and must not be made at any cost, or to the detriment of the customer, as in the case of bad profits. The researcher recalled one lecture from the course of Sustainable Management in 2020, during the first year of his master's degree studies, which could be related to this topic, and checked student notes. The guest lecturer, Mr. Göran Carstedt, who has extensive experience from leading positions in international organizations such as Volvo, IKEA, the Clinton Climate Initiative, explained that to say that the purpose of the business is to create value for the shareholders would the same as to say that "the purpose of life is oxygen" (personal communication, May 11, 2020). The researcher is of the same belief. The fact is that profit is one of the main motives for entering a business, and the researcher do not dispute that. But profit is primarily a reward for fair delivered value and a means to future business relationships. Profit is a reasonable portion of the retained value in money for the value created and delivered to the customer in the form of a product or service, without compromising the welfare of the customer by creating additional

risks, to achieve higher consumption, sales or for any other reason. This is a profit that stakeholders should celebrate, and no one has the right to dispute it. Unfortunately, many companies "allow themselves to be seduced by the easy lure of what can only be called bad profits" (Reichheld, 2011, p. 2). The logic of bad profits and caring for people and the environment is hard to reconcile and has proven to be incompatible. As bad profits importance increases, the value and importance of human life declines. Bad profits are earned on the inflicted damage. Conversely, the logic of moral profit and concern for people and the environment can be realized in the long run. Only profit that is not realized through the harm done to human life, which is the fundamental and supreme value inextricably linked to other beings and nature, can be morally and socially justified, and approved in every sense.

Indeed, consumers are the most important stakeholder of corporations (Strenitzerová & Gaňa, 2018). As such, gamblers deserve the most attention. If gambling company does not harm gamblers, and if they provide all necessary information about the product, including AI-based customer protection mechanisms, a relationship of trust, satisfaction, loyalty will be built, which will surely bring healthy and stable, long-term profitability. A sustainable purpose is achieved only if gamblers are not at a disadvantage for personal well-being, nor are their future chances for well-being jeopardized, by the uncontrolled use of products due to their hidden elements, designed for increased consumption. Otherwise, the products create more risks than the standard ones that exist in games by default and to which customers must be warned. Therefore, online gambling companies must lay the foundations for true values, and that is above all the well-being of customers, the adoption of moral standards in the economic dimension and the creation of a system for sustainable business. They need to find a balanced approach between profit and social aspects, and here the researcher agrees with Hing (1999). In this way companies can achieve long-term profitability in a sustainable gambling industry. CSR and AI can help in the process, but CSR needs to be redefined first.

6.3 Customer-oriented moral and systemic proactivity

The profit-oriented nature of companies makes them vulnerable, and they are easily seduced by bad profits. Customer-oriented Moral and Systemic Proactivity (COMSP) is a new conceptual framework for CSR developed by the researcher, which involves shifting the company’s focus from profit to customer. This does not mean that profit is irrelevant. Namely, profit moves into the sphere of moral proactivity, where through standard operating procedures the filtering and acceptance of moral profit and the rejection of bad profit takes place. COMSP

has three elements: a customer-oriented purpose, moral proactivity, and systemic proactivity. COMSP is shown in Figure 10.

Figure 10 – CSR as Customer-oriented Moral and Systemic Proactivity (COMSP) (Source: developed by the researcher)

1) Companies that work in the interest of customers are actually working in their best interest in the long run. Customer-oriented purpose refers to *customer well-being* through the offered structurally minimally harmful product and *gambling-related harm reduction and prevention (G-HARP) programme*, while accepting the dynamics of customer needs. This means continuous value creation for customers in the form of *a structurally minimally harmful product*, offered, advertised, and delivered to customers in a moral way, consumed in a controlled way, through an organised, transparent, informative, and proactive system supervised by AI. Structurally minimally harmful product is a product whose design and properties do not cause the customer greater harm than the known risk of gambling, of which the customer is informed and warned. Educational messages about probability and risk assessment with each product, as well as AI-based customer protection mechanisms should be provided. Because these are high-risk products, the purpose includes 24/7 G-HARP.
2) Moral proactivity is the adoption of moral profit through the "rule of harmlessness of profit", the implementation of corporate ethics through the "rule of good parent to customer" and the transition to the mode of proactivity and future highly effective proactive G-HARP tools.

   The "rule of harmlessness of profit" is acceptance of moral profit, which is socially responsible and reasonable, instead of unsustainable and harmful, bad profit.

   The "rule of good parent to customer" is a new corporate ethic. Companies should look after the customer and be in the role of a good parent. Companies are responsible for providing structurally minimally harmful product in a safe environment, but also for transparency, continuous education, informing, and caring for their customers. “Remember, our job is to prepare the child for the path, not the path for the child”

(Elmore, 2012, p. 52). In order for that to happen, it is necessary to continuously build an organizational culture in that sense and train employees to put into practice the new corporate ethics. If corporations want to extend ethical action to philanthropy, which is considered a positive means of helping communities in various forms, e.g., donations, volunteering, and so on, they can do so at will.

Enforcing moral proactivity means that a corporation must do the transition from the mode of responsibility to *the mode of proactivity*, from the phase of responding, or reacting to gambling problems to the phase of anticipating and preventing them. Inefficient and ineffective responsible gambling tools for high-risk gamblers should be replaced by *proactive G-HARP tools*, which will be a modern and effective tool for this purpose, based on AI and a common global customer database in a regulated proactive system. The use of AI in marketing and the incentives for high-risk players to gamble, including advertising through traditional channels, should be also approached proactively, with the aim of reducing and preventing the damage associated with gambling. Companies should pay special attention to proactive solutions regarding the exposure of children and adolescents to gambling marketing. All forms of advertising and promotion of gambling to which children and adolescents are exposed should be stopped.

3) Systematic proactivity is based on legality, a regulated proactive system, and a future Global Gambling Registry (GGR) fully compliant with data protection and privacy laws.

   Legality is a proactive systemic obligation of the corporation to comply with all applicable laws and regulations, including associations' guidelines and rules, and to go a step further by proposing new legal solutions to combat the perceived dangers within the system. This means that socially responsible companies are continuously working with governments and financial institutions to build such a system that addresses the causes of threats before the problem disrupts their redefined purpose and the harmony of relationships in the industry.

   The initiative to create a sustainable *regulated proactive system* comes from socially responsible governments and corporations, with a support of financial institutions. Governments are primarily accountable to their citizens. Their purpose is to protect and serve them first. Therefore, governments have a great responsibility in establishing a regulated proactive system based on law. If some corporations cannot be cleansed alone of the diseases of bad profit due to internal resistance, then a regulated proactive system

must act and encourage them to change and obey the laws, for the common good. And laws should deal with bad profits. Here the researcher draws a parallel with the Brundtland report, which raises the question of how to persuade or force individuals in the real world to act in the common interest, to which the offered answer was that the solution lies in part in education, institutional development, and law enforcement (World Commission on Environment and Development, 1987). Indeed, the government has agencies through which it can enforce the law.

Regulators have shown a willingness to redirect value toward licensed companies but need to work harder on systemic solutions. It means that unlicensed operators should be systematically reduced to statistical errors in order for the system to achieve complete control over problem gambling and provide market for additional earnings to licensed companies as a motive for adopting change and rejecting bad profits. This is a win-win solution to be achieved, which can bring the necessary agreement.

The existence of multiple accounts with different operators and the lack of interconnection of operators to effectively control the time / money that gamblers spend online is considered a major risk. The researcher believes that the *Cloud-based Global Gambling Registry (CGGR)* should be introduced as a common global customer database, with full compliance with data protection and privacy laws, as well as other applicable laws. The CGGR will record the total time and money spent on gambling from all customers in real time. This will provide complete information about each player, which is currently not possible. As companies are not currently interconnected, no one really knows how long a player has been playing, and that poses a huge risk to players. AI will monitor harmful behaviour to prevent excessive gambling. Ethics committee, independent monitoring organisations, and protection mechanisms within the CGGR will prevent any unethical manipulations related to the privacy of customer data. The CGGR would be a prerequisite for the introduction of new highly sophisticated and efficient G-HARP tools that would be the culmination of the "rule of good parent to the customer".

As there are currently no unified standards in gambling the researcher warmly advises the development of *International Gambling Standards (IGAS)*, modelled on solutions from other industries, e.g., demining, where the researcher has spent more than 10 years, developing, and harmonizing standard operating procedures (SOP) of several companies, including his own, in accordance with National Mine Action Standards (NMAS), which are based on International Mine Action Standards (IMAS) (Geneva

International Centre for Humanitarian Demining, n.d.). Standardization control at the national level would be carried out by national gambling regulators. They would be in charge of drafting national gambling standards (NGAS) according to which all operators in the territory of one country would harmonize their SOPs. This would not be a problem, as NGAS would certainly be harmonized with IGAS, so that operators would adapt their national SOPs to the specifics of a country's market in a very short time. Placing gambling operations under the same umbrella, the same rules, and equal conditions for all operators in the world, would enable greater protection of players, and companies would instead of spending time on regulation compliance, dedicate themselves and their resources to customer protection, better and safer products, research and development, and innovations. Standardization would also encourage investment in industry.

Readiness must be shown by corporations that are determined to reduce the harm associated with gambling. They must work together to achieve the same goal through the CGGR in full compliance with the law and with the strong support of governments. In addition, CGGR can be an extremely powerful tool for detecting money laundering and detecting crime in online gambling in real time.

CSR and AI, as shown in Figure 11, can ensure gambling-related harm reduction and prevention in online gambling. The COMSP is a toolbox for customer protection and industry sustainability and an effective problem gambling solution.

It is important to emphasize that the COMSP framework undoubtedly implies a fair treatment of employees and all other stakeholders, such as governments and government agencies, suppliers, partners, associations, and so on. It would be completely inappropriate for a proactive moral-systemic and socially conscientious organization to behave differently.

The COMSP framework can contribute to Achieving the Sustainable Development Goals through Consumer Protection (UNCTAD, 2018). Finally, as living beings and the environment are an inseparable whole the framework may also include the environment that can be added to people (customers), as one purpose. This confirms the adaptability of COMSP to become a framework for sustainability in different industries.

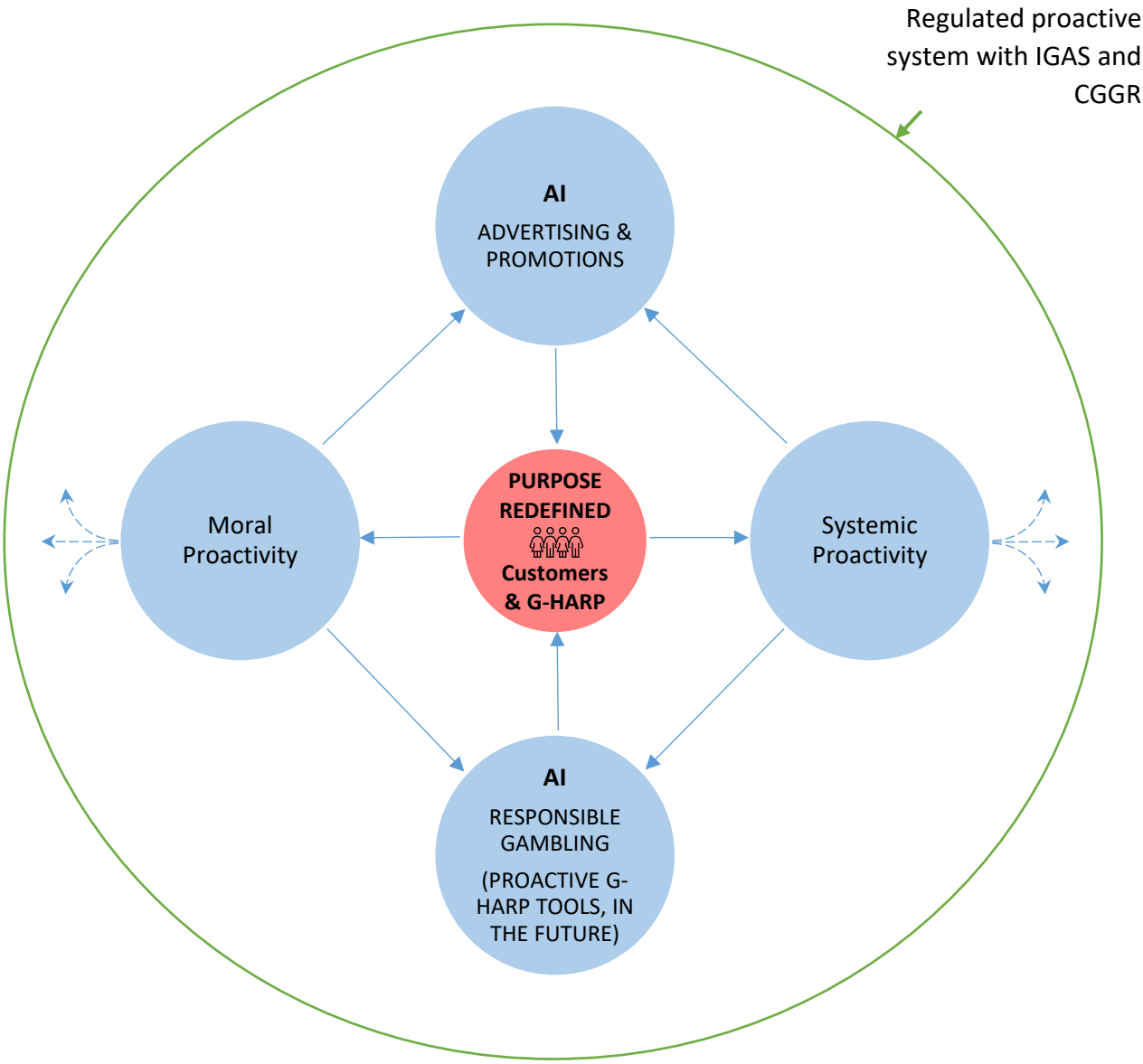

Figure 11 – COMSP and AI in a Regulated Proactive System (Source: developed by the researcher)

6.4 Limitations of the research

There are some limitations to this research that should be considered. First, it is the sample size of the empirical data. Although the researcher believes that data saturation has occurred, additional data could emerge and to a lesser extent influence the conclusions. Some readers may question the quality of the research because of this fact, and therefore a larger sample size would provide greater confidence in the conclusions. Secondly, it is about the structural diversity of empirical data, which are mainly collected from the UK and Sweden, and a small amount of data comes from respondents from Malta and the rest of the EU. A more

precise overview of the current situation in online gambling in the EU would be presented if the observations and interviews included some more participants from other European markets. The limitation may also be that the researcher did not have a personal insight into companies' data. Finally, there are personal beliefs and value systems of the researcher based on a high awareness of the value of human life, which may have influenced some of the conclusions to some extent, as well as decision to give preference to problem gambling. The researcher is aware that there are other aspects of the industry, such as money laundering, crime prevention, match-fixing, etc., which also concerns human lives and need to be addressed in a coordinated manner.

6.5 Recommendations for future research

The researcher hopes that readers found conclusions plausible and defensible, and that the generated theory can find practical business application and serve for further research. During this research, certain topics emerged as possible fields that can be further explored:

i) *Adolescent Gambling, Social Media Casino, Gambling-like activities embedded within video games (e.g., loot boxes).* This is a very important and current topic due to the increase in the number of minors who are addicted to gambling. Researchers predict that the situation will get worse. For this reason, the topic contains timeliness and urgency in gathering new knowledge, understanding the problem better, and offering possible solutions.

ii) *Gambling marketing.* Marketing strategies can serve unscrupulous and malicious companies that want to take advantage of system weaknesses and make bad profits. It contains a wide range of tactics and practices, combined with incentives and big data. The topic provides a great opportunity for inspired researchers to explore socially responsible marketing in online gambling.

iii) *CSR of suppliers and betting affiliates.* During the research, it was found that companies use the services of many suppliers and betting affiliates. It would be good to explore their social responsibility, their role, and activities in the process of reactivating gambling addicts, whether they act as registered companies or as independent affiliate agents. It would be good to understand how familiar they are and whether they comply with laws and regulations concerning the gambling industry, especially if they work in another type of industry such as IT, marketing, and so on. This includes the GDPR, the possible leakage of customer personal data, which the operator submits to them under

agreed conditions for the purpose of reactivating customers or for any other reason. Namely, although the provided data may not contain the identity of the person (e.g., just a phone number), by further use, or phone call to the customer, customer service of affiliates can come to identity through conversation. The gambler may disclose this information, as well as other personal information, consciously or unconsciously, especially if offered a bonus.

Hopefully, some future online gambling research will find a more positive factual situation in a renewed industrial environment, but if not, researchers are the ones who should do their job conscientiously and impartially and participate in solving problems for the benefit of society. They should be agents of human progress and sustainable development.

6.6 The final word (the road to the future)

Allegedly, a journalist once asked Albert Einstein, "what is the most important question facing humanity today?" To which he replied, "I think the most important question facing humanity is, 'Is the universe a friendly place?'" (Phipps, 2016, p. 6). The researcher wonders, is the online gambling industry a friendly place? The decision determines its future.

If affirmatively decided, approaching each other in a friendly place means building bridges, where industry actors accept both their own and the mistakes of others. The researcher wants to believe that companies can improve their state of consciousness and understand their long-term interest in accepting only moral profit, first because it is right, and then because it is profitable. While it sounds contradictory at first, by earning less due to eliminating bad profits, companies can actually earn more, by creating an attractive and friendly climate for investments. Investors avoid controversial and hostile business environments. What gambling companies need is capital for innovative products and development. Thus, change starts from them, but wider systemic structural changes also require the inner transformation of each stakeholder, governments, financial institutions, and even gamblers through product and risk education. By taking a proactive and positive approach stakeholders can change both circumstances and the environment for the better.

Moving together forward is knowing where to go, but it also means to know how to measure progress, which is the next thing to be formulated in some future research. First and foremost, it is necessary to gather around a common sustainable goal, and that is Gambling-related Harm Reduction and Prevention (G-HARP). G-HARP is a joint mission, and people on a mission look to the future, aware of lessons from the past, remembering those who deserve to

be remembered and whose lives and destinies warn and remind that now is the moment for full commitment to protecting gamblers.

Finally, we live in an interconnected world and "we work in a 'butterfly effect' environment, the notion from chaos theory that the flapping of a butterfly's wings in, say, China might cause a hurricane on the other side of the world" (Day & Schoemaker, 2008, p. 44). The researcher hopes that the flapping of the G-HARP butterfly in Sweden might cause a COMSP hurricane somewhere else in the world, or even in Sweden, one never knows. Now "you may say I'm a dreamer, but I'm not the only one" (Lennon, 1971, 4 June 2021).

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

- At the heart of the problem is gambling addiction and huge profit addiction, which in many cases contains a significant portion of bad profits.
- Figuratively speaking, machine learning algorithms combined with big data analytics in advertising and promotions do more damage in 10 months than all the responsible gambling tools combined could help in 10 years. All forms of advertising and promotion of gambling to which children and adolescents are exposed, should be stopped.
- It has been found that there are socially responsible companies, which have expressed their readiness to make money in the long run and have many green players who gamble in a controlled manner. Governments and financial institutions must support them, and effectively, through systematic measures, prevent the operation of unlicensed companies.
- Stakeholders need to come together around a common goal in the gambling industry and that is gambling-related harm reduction and prevention (G-HARP).
- The profit-oriented nature of companies makes them vulnerable, and they are easily seduced by bad profits. Customer-oriented Moral and Systemic Proactivity (COMSP) is a new conceptual framework for CSR developed by the researcher, which involves shifting the operator's focus from profit to customer. This does not mean that profit is irrelevant. Namely, profit moves into the sphere of moral proactivity, where through standard operating procedures the filtering and acceptance of moral profit and the rejection of bad profit takes place. COMSP contains three elements: a customer-oriented purpose, moral proactivity, and systemic proactivity.
- Customer-oriented purpose refers to customer well-being through the structurally minimally harmful product and G-HARP programme.
- Moral proactivity is the adoption of moral profit through the "rule of harmlessness of profit", the implementation of corporate ethics through the "rule of good parent to customer" and the transition to the mode of proactivity and future highly effective proactive G-HARP tools.
- Systematic proactivity is based on legality, a regulated proactive system, a future Cloud-based Global Gambling Registry (CGGR), and International Gambling Standards (IGAS).
- Recommendations for future research are: 1. adolescent gambling, social media casino, gambling-like activities embedded within video games (e.g., loot boxes), 2. gambling marketing, and 3. CSR of suppliers and betting affiliates.

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APPENDICES

Appendix 1 – The interview guide

The researcher sorted the questions according to the aggregate dimensions of the research, in order to make it easier for the reader to cover all aspects.

Problem gambling

1. What factors contribute most to gambling addiction in online gambling?
2. What measures can reduce the damage to addicted players?
3. What about inducements, free bets, bonuses, retargeting ads, pop-up messages that target addicted gamblers? How does this affect problem gambling?
4. How much do social casino games or loot boxes contribute to children becoming addicted to gambling at an early stage in their lives?
5. Who is most responsible for gambling addiction and the development of problem gambling?
6. Have you ever tried to quit gambling on your own?
7. What types of online gambling games do you play the most?
8. Is there a gambling brand or website that you like more than others?
9. Do you gamble on international poker sites?
10. How much time do you spend gambling?
11. Have there been situations where you have completely lost control over your gambling?
12. Can game design make gamblers play more?
13. Did you get information about the gambling-related harm and the risks when opening an account?
14. Are there common measurement systems for harmful gambling levels?

Advertising and promotions

1. How do ads and commercials affect gambling addiction?
2. What do you think about incentives in gambling, such as bonuses and free bets, gifts, extended credit to a player to continue betting, rebates on betting, etc.?
3. Is the advertising industry increasingly important, especially in working with customers in data-driven industries and online digital platforms?
4. Is there a socially irresponsible use of AI in gambling advertising and promotions?

5. What about dynamic re-targeting as part of a retention strategy? How dangerous is it for people who want to stop gambling, abstain, or voluntarily exclude themselves from the system, when they receive an offer or incentive?
6. Could it be that operators do not know when they target a vulnerable customer with promotional incentives?
7. What are the current types of AI used in advertising by your company?
8. How do you work with big data and metadata?
9. Are children or minors exposed to your promotional or advertising campaigns?

Responsible gambling

1. Do you use responsible gambling tools?
2. How do you react to messages, as a tool of responsible gambling?
3. Are current responsible gambling tools effective and efficient enough?
4. Will a gambling card with a centralized database system or similar be introduced?
5. I read about profiling of customers and predictions of customer behaviour. How this happening?
6. Can an operator by using a machine learning algorithm anticipate a problem in gambler behaviour and be proactive in protecting customers??
7. Can CSR be an effective tool for the ethical use of artificial intelligence?
8. What machine learning algorithms does your company use in responsible gambling?
9. Is it true that the machine learning algorithm improves on its own over time or do you need to calibrate it?
10. How does the algorithm detect problematic behaviour?
11. Are neural networks and deep learning are used?
12. Are there biases in algorithms?
13. Can the operator control the algorithm to work in a specific way?
14. How do see the future of responsible gambling?

Legal responsibilities

1. What laws regulate the gambling market?
2. Is it allowed to work without license?
3. How long do you keep player data?
4. Are customers informed about how long their data will be kept and how it will be used, e.g., in the process of opening an account?

5. Who should operators communicate with to check if a player is playing within affordable limits or if he is playing for someone else's money? Which institutions do you contact?
6. How can regulator shift the value from illegal to legal market? Can they prevent them to operate?
7. How does your company protect customer data?
8. Was there any breach in the system, e.g., your customers email lists or similar were stolen?
9. Can data be misused in an unethical way?
10. Which institutions should be included in the system to reduce problematic gambling?
11. Do you read the terms of use when opening an account?
12. Do you think the operator protects the privacy of your personal information?
13. Do you trust the operator, or do you think it may misuse your personal information?
14. What means of payment do you use when gambling?
15. Do you play on unlicensed sites?
16. How do you see the role of government? Do you feel you have the support of the government?
17. Are there international gambling standards?

Economic responsibilities

1. What do you think as a customer, is the company only interested in profit or is there something else?
2. How much profit is enough?
3. How would you currently describe companies from the point of view of economic responsibility?
4. Do you understand what a bad profit contains?
5. How is AI used for stable and long-term operator revenues? How is it used to increase revenue?
6. Is the operator more inclined to earn or to care about customers?
7. Is every click analysed for profit?
8. Profit as purpose?
9. What is the meaning of sufficient economy?
10. How do you make decisions about which profit is good and which is not?

Philanthropy

1. Is philanthropy in gambling a positive thing?
2. Philanthropy trends in industry? Is it just donations, or operators support problem gambling treatments programs?
3. What philanthropic activities is your company involved in?
4. What do you think about the philanthropic activities of companies, donations, and the like?
5. How much does philanthropy affect the brand image of an online casino or bookmaker?

Cooperation and collaboration

1. What do you think about cooperation between operators, government, research community, knowledge exchange, etc.?
2. What kind of cooperation do you have with other operators?
3. How do you audit your suppliers, affiliates, and associates?
4. Do operators share player information with third parties?
5. What kind of cooperation with other operators you have?

Sustainability

1. How would you define sustainability?
2. How can CSR and AI support the sustainable development of the online gambling industry?
3. What kind of CSR and AI do we need today?
4. Can the gambling industry be sustainable as a business?
5. Can CSR influence new technologies to make them more sustainable?
6. Which institutions should help your company be sustainable?
7. What would be the main common goal in the industry?
8. Have you been contacted by superiors to give your opinion on whether something is socially responsible or sustainable?

Appendix 2 - Information on the observed participants and interviewed respondents

This appendix presents detailed information on the observed participants and respondents in the interviews who provided empirical data collected from participant observations and semi-structured interviews. The researcher concluded that there was no reason not to reveal the identities of the observed conference participants and webinar, because information about these events was publicly available. As for the interviewees, they are always named or, if anonymous, listed as respondents, with an explanation of which stakeholder group they belong to, e.g., the company respondent, the supplier respondent, the customer respondent. If there were several anonymous respondents within one group of stakeholders, they were additionally marked with capital letters, A, B, C.

Observations were conducted on three occasions. First, in October 2020, at the Sustainable Gambling Conference organised by Kindred Group (Sustainable Gambling Conference 2020, n.d.). The second time in March 2021 at the Svenska Spel online seminar on research and collaboration (Svenska Spel, 2021). The third observation was made in March 2021, when the customer respondent C was observed while playing online poker and betting. After that, the customer respondent C was also interviewed.

Information on observed participants is shown in Table 1.

Name, Title/Knowledge of the observed person	Company	Event	Date	Duration of observation (approx. total)	Language	Remarks
Henrik Tjärnström, CEO	Kindred Group plc	Conference	21/10/2020	30 min	English	Online
Chris Eade, Founder	Zafty Intelligence	Conference	21/10/2020	20 min	English	Online
Camilla Rosenberg, The Director General	Swedish Gambling Authority - Spelinspektionen	Conference	21/10/2020	15 min	English	Online
Yanica Sant, Head of EU Affairs and Policy	Malta Gaming Authority	Conference	21/10/2020	15 min	English	Online
Isabelle Falque-	L'Autorité Nationale des	Conference	21/10/2020	15 min	English	Online

Pierrotin, President	Jeux (ANJ), France					
Kajsa Nylander, Head of Sustainability	Svenska Spel	Conference	21/10/ 2020	10 min	English	Online
Dr David Forsström, Researcher	Department of Psychology, Stockholm University	Conference	21/10/ 2020	10 min	English	Online
Peter Marcus, Director & Principle Consultant	Rock Consulting / The Marcon Ltd.	Conference	21/10/ 2020	10 min	English	Online
Patrik Hofbauer, CEO and President	Svenska Spel	Webinar	16/3/ 2021	20 min	English	Online
Maris Catania, Head of Responsible Gambling and Research	Kindred Group plc	Webinar	16/3/ 2021	10 min	English	Online
Kajsa Nylander, Head of Sustainability	Svenska Spel	Webinar	16/3/ 2021	10 min	English	Online
Axel Lyckeberg, Responsible gambling specialist and data scientist	Svenska Spel	Webinar	16/3/ 2021	10 min	English	Online
Sara Lindholm, President of the Board	Svenska Spel Independent Research Council	Webinar	16/3/ 2021	10 min	English	Online
Anders Håkansson, Professor of Addiction Medicine	Lund University	Webinar	16/3/ 2021	10 min	English	Online
Rickard Lönn, Advisor Responsible Gambling	n/a	Webinar	16/3/ 2021	10 min	English	Online
The customer respondent C	n/a	n/a	6/4/ 2021	30 min	Swedish	In person

Table 1 – Information on observed participants

Information on interviewed respondents is shown in Table 2.

Interviewee	Company	Title/Knowledge	Date	Duration	Language	Remarks
Anders Sandoff	Gothenburg University	Senior Lecturer / Sustainability researcher	18/3/ 2021	60 min	English	Online
Mattha Busby	The Guardian	A freelance journalist / researched gambling in the UK	29/3/ 2021	35 min	English	Online
Alexander Blaszczynski	Former director of the Gambling Treatment & Research Clinic, University in Sydney	Professor emeritus (Clinical psychologist) / An expert who has done a lot of scientific research in the field of gambling and has written numerous articles/books	29/3/ 2021	60 min	English	Online
The customer respondent A	n/a	Over 35 years of active gambling	31/3/ 2021	40 min	Swedish	Online
Axel Lyckberg	Svenska Spel	Responsible gambling specialist and data scientist / An expert in the field of gambling	31/3/ 2021	45 min	English	Online
The customer respondent B	n/a	Over 15 years of active gambling	5/4/ 2021	30 min	Croatian	Online
The customer respondent C	n/a	Over 20 years of active gambling	6/4/ 2021	30 min	Swedish	In person
The company respondent	n/a	A high-ranking manager of a large gambling company	7/4/ 2021	45 min	English	Online
The supplier respondent	n/a	A long-time expert in the field of gambling	8/4/ 2021	45 min	English	Online
Dylan Evans	CAIS, Hafal, and Adferiad Recovery	Head of development of rehabilitation & recovery Centres	12/4/ 2021	45 min	English	Online
Kajsa Nylander	Svenska Spel	Head of Sustainability	2/6/ 2021	30 min	English	Online
Maris Catania	Kindred Group plc	Head of Responsible Gambling and Research	3/6/ 2021	30 min	English	Online

Table 2 – Information on interviewed respondents

Appendix 3 - Gambling-related harm reduction and prevention

The researcher firmly believes and invites all stakeholders to come together around a common goal in the gambling industry and that is Gambling-related Harm Reduction and Prevention (G-HARP). This is a central issue for problem gambling and sustainable gambling. This should not be the goal of one company or several stakeholders, but a generally accepted, a motivational goal to protect and save lives of gamblers. To achieve it, a continuous campaign on G-HARP needs to be run. Everyone should be well informed about it, especially operators and gamblers. It should be promoted in the media and made clearly visible in places where there are indications of gambling and betting, wherever and whenever people gamble or talk about it. G-HARP should also find its place on organizational websites, at gambling conferences, at webinars, gambling products, and can be used in philanthropic activities and for educational purposes. In this way, it would constantly remind us of the problem gambling and the importance of solving it. Finally, G-HARP would produce a beneficial psychological effect on stakeholders and the gambling community, who would then come together around one sustainable goal and work for the same cause. The Gambling-related Harm Reduction and Prevention logo is shown in Figure 1 of this Appendix.

Figure 1 – The Gambling-related Harm Reduction and Prevention logo (Source: developed by the researcher)