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"Designing a European Gambling Self-Exclusion Registry"

Master Thesis

Supervisor: Regina Erlenheim

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"Euroopa hasartmängude enesevälistuse registri loomine"

Magistritöö

Juhendaja: Regina Erlenheim
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Author's declaration of originality

I hereby certify that I am the sole author of this thesis. All the used materials, references to the literature and the work of others have been referred to. This thesis has not been presented for examination anywhere else.

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Abstract

The Gambling Self-Exclusion Registries are one of the e-Services offered from the state level where an individual can ban himself/herself from any land-based or online-based gambling activity within a jurisdiction such as the cases of Spelaus in Sweden and the Hampi list of Estonia. Developing an EU-wide self-exclusion register for online gambling was proposed in 2013 by the European Parliament but the European Commission did not include it in its 2014 recommendation on the issue. The purpose of the given master's thesis is to understand the concept behind a Gambling Self-Exclusion Registry, overviewing the requirements and limitations for the implementation of such a tool from a European perspective and to set the recommendations for achieving an interoperable system of data exchange between the different EU National Self-Exclusion Registries. To answer these research questions, it has been overviewed the existing literature in the field, conducted interviews with stakeholders and experts from Sweden, Estonia, and European level, and made a discussion of the obtained results. Through the analysis of the results, it can be concluded that the European Commission has to take proactive actions towards an EU Gambling Directive regulation to force the creation of a licensing system in the 27 EU countries that include the implementation of National Self-Exclusion Registries in each of them.

This thesis is written in English and is 91 pages long, including 9 chapters, 17 figures and 13 tables.

Annotatsioon

"Euroopa hasartmängude enesevälistuse registri loomine"

Hasartmängude enesevälistuse register on üks riigi poolt pakutavatest e-teenusest, kus indiviidil on võimalik end riigi jurisdiktsiooni piires eemaldada ükskõik millisest hasartmänguga seonduvast tegevusest – näiteks on Spelausi kaasus Rootsis ning Hampi list Eestis. 2013.aastal pakkus Euroopa Parlament välja üle-euroopalise online enesevälistuse registri loomise, kuid 2014.aastal ei pidanud Euroopa Komisjon direktiivi loomist vajalikuks. Magistritöö eesmärgiks on hasartmängude enesevälistuse registri kontseptsiooni mõistmine, ülevaade võimalikest nõuetest ja piirangutest, mis on vajalikud euroopa perspektiivist antud instrumendi loomiseks ning soovituste andmine koostalitusvõimelise andmevahetussüsteemi loomiseks liikmesriikide hasartmängude enesevälistusregistrite vahel. Uurimistöö küsimustele vastamiseks on loodud teoreetiline raamistik, mis koosneb olemasolevast teaduslikust kirjandusest; tehtud intervjuud erinevate osapoolte ja ekspertidega Rootsist, Eestist ja Euroopa tasandilt ning diskussiooni osa hõlmab järeldusi. Analüüsi tulemusena on saab järeldada, et Euroopa Komisjon peab vastu võtma Euroopa Hasartmängude Direktiivi, et jõustada litsentsisüsteemide loomist Euroopa liikmesriikides ja et igal liikmesriigil oleks kohustus võtta kasutusele riiklik hasartmängude enesevälistusregister.

Lõputöö on kirjutatud Inglise keeles ning sisaldab teksti 91 leheküljel, 9 peatükki, 17 joonist, 13 tabelit.

List of abbreviations and terms

BOS	Swedish Trade Association for Online Gambling
ECA	European Casino Association
EGBA	Department of Computer Systems
EGOA	Estonian Gaming Operator Association
EMTA	Estonian Tax and Custom Board
EU	European Union
GDPR	General Data Protection Regulation
IP	Internet Protocol
IT	Information Technologies

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1 Introduction

The gambling industry has experienced a considerable increase in the recent years, where in 2013 it was valued at €6.1 billion, the expected annual growth in 2018 was of 10.1% [1]. This industry has significantly changed in the past 15 years since its environment has been expanded to the Internet; it offers high level of accessibility, immersive interface and ease at which money can be spent [1], [2]. The rise of the online gambling has been followed by an interest in its effect and consequences [2] - [5], and in addition to that, the study and discussion of measures to tackle the problem gambling through responsible gaming policies [4], [6], [7]. It is a common activity among adolescents and it has a combination of biological, psychological and social factors that contributes towards a gambling behaviour; people gamble as a pastime, to have fun, to share time and compete with others, to improve their abilities, to mitigate repetitive thoughts or to relieve poor moods [3], [8]. Since it is an activity that can be perceived as morally objectionable and socially harmful, this topic creates a motivation for the author to understand the role that the European Union (EU) has considering the political, moral and social dimensions of gambling.

1.1 Purpose and importance

In this master thesis, the topic about the gambling self-exclusion will be presented. This is a term that escapes from the knowledge of many, since it is not a topic discussed on a daily basis. gambling has societal effects such as financial or psychological disorders, what makes important to have a responsible gaming policy implemented; this is something that is becoming more and more common in the industry. Responsible gaming refers to the offer of tools such as deposit limits, loss limits, login session time limit or even self-exclusion. The idea behind is to reduce the incidence of some gambling-related harms, assisting gamblers to maintain their gambling expenditure within affordable limits [6]. This is a field that the author has professional experience as well. At the same time, this is part of the e-services provided by the state in some European countries; the self-exclusion registry takes part in the scope of the ones available in the respective

governmental websites, such as the examples considered in this dissertation of Estonia and Sweden. The approach followed by these two countries is now considered by other EU member states as an example of how the national system of gambling self-exclusion work. For this reason, this master thesis links the fields of E-Governance and the responsible gaming policies, through the gambling self-exclusion registry.

The aim of this research is to look into how to design a European-based Gambling Self-Exclusion registry. Within the EU countries, there are differences in the approach regarding the responsible gaming and the obligations imposed on licenses vary from State to State [9]. During the last four decades, the gambling industry has been experiencing a continuous legalization, but there are still many countries that are in the process of creating a national gambling policy [10]. There are national measures introduced to tackle problem gambling issues and gambling-related harms; at the same time, there have been initiatives from the European Commission to address the regulation of online gambling [10]. In the early proposals from the European Parliament of 2013 [11] was considered the creation of a European Gambling Self-Exclusion registry, but in the final recommendations that were presented by the European Commission of 2014 [12], the self-exclusion register was not considered. The different cultural norms, social, policy and moral considerations from a country determines how these regulate their jurisdictions [9], but also due to the lack of cooperation and mutual recognition principle with regards to gambling licensing frameworks [13] and the data protection legislation [14] are some of the reasons why the European Commission did not have further plans to facilitate interoperability between self-exclusion registers [9].

In the following chapters presented in this dissertation, the necessary aspects around the self-exclusion system will be introduced, including gambling regulation and jurisdiction legislation, as well as identification process, where the digital identity is something crucial for the effective and safe delivery of services to the citizens [15]. When it comes to gambling self-exclusion, it is offered in some countries from a national level such as Estonia with the "Hampi list" or from the Operator level (referring to the Casinos); from the 27 Member States of the EU, 14 countries have national self-exclusion registers established and that are operational [9].

Online gambling is a service that crosses national borders and it is very difficult for any State to provide effective safeguards for the players on an individual basis [9]. For

example, an Estonian citizen that has self-excluded itself from gambling (he/she had filled in the application and he/she is part of the Hampi list), so he/she cannot register any account from any casino licensed in Estonia. But this person can travel to any other European country, and his/her desire will not be guaranteed, since he/she will be able to register an account from those other countries. This dissertation will look into how to design an effective Gambling Self-Exclusion Registry that incorporates all the different gambling providers licensed in any EU country, so the desire of an individual who has self-excluded itself, will be preserved among all of them.

The outline of the dissertation is as follows. The dissertation is comprised of eight sections. In the current, the introduction and motivation for the current research were given in the field of gambling self-exclusion.

The second section on related work presents the literature review connected to the research topic, such as Responsible Gaming and the Gambling Self-Exclusion, Social implications of Gambling, Gambling Regulation and EU Jurisdictions, Identification in EU Gaming Operator sites and Technical Implications.

The third section is focused on the theoretical background, such as service design methodologies, socio-technical systems, e-governance, e-services and registries.

The fourth section is focused on the research methodology, where the research questions, objectives of the research, data sources and data collection methodology, limitations of the case study methodology are brought out among other issues. This section provides the reader with an overview of aspects that need to be considered when judging the dissertation's research rigor.

The fifth section is devoted to the case studies. For the analysis of this dissertation two main case studies were analysed. Examples were chosen from the author's consideration since it is part of his professional background and there is a limited number of countries that offer a national self-exclusion registry such as Sweden or Estonia.

The sixth section focuses on results obtained from the interviews conducted by the author to the respective experts, where these are presented following thematical questions.

The seventh section focuses on the discussion and contribution of the dissertation. In the first part of the section main conclusions from the research are presented, the research

questions are answered, and main theoretical concepts of socio-technical systems and service design methodologies are analysed. The second part of the section is divided into the main contributions that are the result of the case study analysis, theoretical reviews, and the section on discussion.

The dissertation ends with concluding remarks and directions and potential for future research together with appendices.

2 Literature review

In this chapter, the literature of the different aspects and concepts that are around the self-exclusion registry will be reviewed, including those that connects the topic with the e-Governance and the Responsible Gaming policies.

First, the concept of responsible gaming and the self-exclusion is introduced, providing an explanation what they are about, their relevance and the role of the European Union. Secondly, the social implications that gambling has in society and the role of the responsible gaming policies are presented, including the gambling self-exclusion registry.

Thirdly, the jurisdiction aspects, the lack of standardization among the European countries and the need for a harmonisation of policies are explained. This will be followed by the identification of individuals, which is a key aspect in the process of a gambling self-exclusion registry. And lastly, the technical implications such as the interoperable systems and registries such as X-Road in Estonia or the European registry of severe allergic reactions will be reviewed.

2.1 Responsible Gaming and the Gambling Self-Exclusion

The Responsible Gaming policies intend to minimize the negative consequences of excessive gambling, varying in the aims, focus and content [4], [6], [7]. Different tools can be provided, such as limits in deposit, loss and login time [6], [16], as well as Self-Exclusion registries [5], [6], [16], [17]. Since the Internet, gambling has been growing rapidly, providing an increase in the types of games, gambling opportunities, number of sites, owners and jurisdictions, this has made necessary to adopt appropriate responsible gambling strategies [4]. The European member States could completely prohibit gambling, to allow a very limited supply or to have an active channelling policy; since many of them generate revenue from gambling activities, there is no political space to get any form of European coordination or harmonisation [13]. The vast majority of European countries have opted to legalize, regulate and tax all forms of online gambling subject to

a local licensing regime with more or less stringent operational restrictions and against cross-border activities [18]; gambling activities are explicitly excluded from horizontal EU Acts such as the Service Directive [19] or the E-commerce Directive [20], and therefore remain under the sovereignty of the 27 member states [18].

As presented by Håkansson and Widinghoff [21], the voluntary self-exclusion is a well-known harm reduction intervention in problem gambling; in Sweden, a nationwide self-exclusion system called Spelpaus was introduced in 2019 for all licensed gambling [21]. Prior to this last one, it was something offered from the operator-specific or venue-based system, where the individual had to self-exclude physically one by one in every one of them. A group of people may decide to self-exclude temporarily to stop gambling as a means of protection in a proactive stance, but also due to reason not related to responsible gambling practices [5]; the motivations might vary in financial, relational, career, legal and health-related concerns [6]. The self-exclusion offers to the individuals who consider themselves having a problem with their gambling, to enter voluntarily into an agreement and ban themselves from one or multiple gaming venues [17]. The key here is that the individual accepts to have some degree of gambling issue, where this one considers to be gambling excessively and that it is causing him/her some harm, and recognizes the need to take personal responsibility to address the issue [17]. Blaszczynski and others [17] presented the three principles that a self-exclusion programme in the gambling industry must have:

- The recognition from the gaming industry of having a proportion of its customers that have difficulty for controlling their gambling behaviours

- The companies present in the gaming industry have the responsibility for providing an environment that minimizes the negative impact on individuals displaying problem gambling behaviours

- Individuals must accept the personal responsibility for limiting their gambling behaviours to affordable levels

Online gambling presents particular challenges to gamblers who want to self-exclude from a problematic gambling behaviour, since there are numerous gambling operators, and the self-exclusion from one site may be followed by the registration on another site to continue gambling [21]. Before, the self-exclusion was applied individually in every

gambling operator, and the individual had to request the self-exclusion one by one. From the introduction of the Spelpaus on the 1st of January of 2019, an individual can register voluntarily using an official online identification service without the need of any registration or visiting any gambling operator site [21], and be self-excluded from any licensed operator in the country. As part of the e-governance, the intention behind is to exploit the processes, the structure and technology from the administration level to provide a more efficient and effective service [22]. It is clear that the Internet and mobile computing, as it happens with the gambling industry, have transformed the relations between the government and the citizens and businesses [23]. In this respect, the e-ID has become an important back-office enabler for launching e-services and transforming government, minimizing barriers and creating online opportunities [24], but also becoming the block building for the provision of secure electronic cross-border transactions and services [24]. This dissertation considers the design of a European-based gambling self-exclusion registry, where the aspects that have been mentioned in this chapter, will be presented in detail in the following chapters; something that can be advanced is the remaining lack of interoperability, challenges among public administrators, businesses and citizens for interconnecting and interpreting the sources of information [25].

2.2 Social implications of Gambling

Gambling issues can have an impact with very different effects, in terms of personal and societal problems, such as financial, legal, employment, medical and psychological disorders, bankruptcy, or crime [4], [16]. The responsible gaming and the tools related to this try to minimize the negative consequences of excessive gambling [7]. It remains unclear whether the increase of gambling websites have created an increase of the number of problem gamblers among the population since online casinos can be "merely" a further opportunity to satisfy their gambling needs [5]. Responsible gaming policies have been studied for suggesting fundamental responsible gambling principles, their impact and efficacy [6], [7]. As it is presented in the article by Blaszczynski and others [17], the emphasis on self-exclusion is not in just to constitute a formal treatment intervention, it is more about imposing a barrier to direct access to gambling venues [17]. The different

cultural norms, social, policy and moral considerations from a country, and this will depend how these regulate their jurisdictions; that is one of the reasons why the online gambling at the EU level has escaped from a harmonisation attempt [9].

There are age differences between gambler groups; in the online casino business, the younger players are most likely to self-exclude than older ones [6]. The self-excluded gamblers experience greater losses than the ones who did not self-exclude, where the financial problems are one of the main reasons why these decide to self-exclude themselves from gambling [6]. Something shared by most of the gamblers is the experience of loss in the track of time, or even the feeling of being another person, a feeling of being "outside" of oneself [4], where their attention narrows and they become absorbed in the gambling activity, forgetting other life issues; this last situation increases while it increases the severity of gambling pathology [4]. This gambling problem significantly affects relationships, like family disturbances, including arguments or breakdowns, even domestic violence; an environment that can develop gambling problems amongst children of problem gamblers [4]. It can also happen that some gamblers chose to self-exclude to temporarily stop gambling as a means of protection in a proactive stance, or maybe even for reasons not related to responsible gambling practices [5].

The lack of social pressure is a key aspect regarding online gambling. An individual is at his/her own place, probably laying on the coach, and playing to some casino game from the phone. There is no social control, it offers a permanent availability and easy access, with a broad range of games, and it is based on cashless payment transactions [5]. For this reason, responsible gaming policies are very important considering the online gambling. In the report by Carran [9], the need for a cooperation between the different European countries and their jurisdictions to foster a cross-border convergence is presented, so it can possibly have an effective minimization of the potential externalities that online gambling may cause [9]. The lack of common standards can lead the gambling players to have difficulties to differentiate between legitimate and illegitimate sites [9]. Some would assume that the solution to stop the gambling problems is to simply ban it, but actually in practice is not 100% possible to prevent individuals from accessing illegal gambling sites.

2.3 Gambling Regulation and EU Jurisdictions

The EU does not regulate the online gambling, but gambling services are subject to a number of rules within the EU secondary legislation, which are non-industry-specific relevance [18]; these are the Unfair Commercial Practice Directive [26], the Distance Selling Directive [27], and the Anti-Money Laundering Directive [28]. In addition to this, gambling services are included into the Article 56 of the Treaty on the Functioning of the European Union [29] covering the general EU rules on the freedoms to provide services on a permanent basis [18]. As presented by Häberling [18], most of the jurisdictions require of a domestic license incorporation; in addition to this, it can be required of hosting the main servers in the country, such as the case of Belgium, Gibraltar, Isle of Man, Liechtenstein and Malta [18]. At the same time, in Denmark is necessary to have a local representative in the country [18]. France requires the operator to keep French bank accounts and the installation of technical infrastructure allowing the monitor and audit of all players transactions [18].

There is one big concern associated to unregulated offshore sites, where governments are failing to monitor, so these do not contribute through taxation to the local economy, and at the same time that makes difficult to control the anti-money laundering practices [30]. There are well-established commercial relationships between jurisdictions, but there is little harmonisation in regulatory approaches toward Internet gambling [30]. Offshore sites are undesirable from the regulator perspective, since these compete with domestic licensed sites, with an unfair competitive advantage, since they do not obey to legal compliance in terms of marketing and promotional regulations; offering greater consumer choice and benefits; and not offering adequate consumer protection standards such as responsible gambling practices and protection from fraud [30]. Nevertheless, as presented by Nikkinen [10], the European Union has defined five priority areas in its gambling polices:

1. Compliance of national regulatory frameworks with EU law;

2. Enhancing administrative cooperation and efficient enforcement;

3. Protecting consumers and citizens, minors and vulnerable groups;

4. Preventing fraud and money laundering;

5. Safeguarding the integrity of sports and preventing match-fixing.

The European Parliament encouraged the EU states to create national self-exclusion registers and to facilitate the access to such gambling operators [11]. The lack of availability of national self-exclusion registries in every member state and the lack of interoperability between those are the main difficulties for implementing a unified solution across the EU countries in terms of Gambling Self-Exclusion [9]. The countries that have a national self-exclusion registers are Belgium, Denmark, Estonia, France, Germany, Italy, Latvia, Lithuania, Portugal, Slovakia, Spain, Sweden and UK [9]. In all these countries, the access for the list of citizens self-excluded from gambling is shared between the licensed operators (Casinos) from the respective jurisdiction, but this is not shared between other Member States [9]. As presented by Carran [9], the main two reasons for the lack of this cooperation are the lack of mutual recognition principle with regards to gambling licensing frameworks [13] and the data protection legislation [14]. The European Commission does not have further plans to facilitate interoperability between self-exclusion registers due to difficulties that present the data protection regulations and the lack of uniform standards [9]. Despite this, many regulators keep regular bilateral contacts, exchanging information, sharing experiences and discussing regulatory initiatives; in general, for networking and advisory purposes [9].

In addition to the aspects already presented, IP blocking measures are taken against gambling websites without domestic licenses; in some countries, there is a legislation allowing the IP blocking measures, examples that include Belgium, Denmark or Estonia for example. In the case of this last one, the Tax and Customs Board has a list of IP addresses that have been blocked; in addition to this, service providers are obliged to freeze relevant accounts [18]. In addition to this, there is the possibility of financial blocking obligations on financial service providers, such is the case of Germany, Denmark and the Netherlands; for Belgium, Estonia, France and Norway there is a general obligation of banks and other financial service to block transfers between players and operators without domestic license [18].

2.4 Personal identification in EU Gaming Operator sites

Depending on the respective jurisdictions and licences, the gambling operators have a certain process to verify the customers. This divergence in the process makes difficult the creation of European Gambling Self-Exclusion Registry. In some countries the licensed operator can verify their customers by reference to a nationally standardised electronic identification scheme [12]. In others, the licensed operators (Casinos) have access to national registers, such as databases or other official electronic documents against operators that can verify the players, but were not created with that purpose [9]; these can be electoral registers, census and others. There are also countries where there are no specific electronic verification requirements and the gambling operators do not have access to such electronic register, so these have to create their own procedures or to rely on manual identification [9]. The European Commission adopted the eIDAS regulation in June 2014 [31]; that is a regulation for the electronic identification and trust services for electronic transactions in the internal market. It is an initiative towards an EU-wide eID interoperability, offering a granted access to online public service to citizens and businesses on an electronic identification scheme that recognises the notified eIDs from other member states by 29 September of 2018 [32]. There are some challenges that needs to be handled in order to accomplish this common approach, such as compliance issues, interpretation problems, different practices in member states, cooperation and collaboration barriers, and representation of legal persons [31].

In Denmark, Lithuania, Portugal and Spain there are established national standardised electronic verification systems [9]. Most of the countries rely the operators to rely on the available electronic databases, but there are few exceptions, like France, Germany, Greece, Luxembourg, Romania and Slovenia that still proceed with manual check of original and copies of the identity documents [9]. In Cyprus, Poland and Slovakia, the operators are the ones who decide the method in how they verify the players [9]. The regulation in terms of identification is key, especially if we pretend to decrease the possibilities for vulnerable groups of people to gamble, such as under aged or problem gamblers [14]. The eID enables a mutual recognition of national electronic identification schemes across borders, offering the European citizens to use their national eIDs for accessing to online services from other European countries [33]; this is a key aspect for the consideration of the design of a European Gambling Self-Exclusion Registry, ensuring an interoperability in four fronts such as legal, organisational, semantic and

technical [33]. The concerns regarding the personal data processing and the privacy of the data from the individuals, is what makes a European common approach difficult. Nevertheless, as it is presented in the article by Pavlovic [14], a general processing of gamblers data should be available in order to protect the online gamblers. This is the main challenge, to balance the protection of privacy from the individuals that gamble and at the same time, the prevention of gambling-related problems [14].

Another common objective includes the development of eID means, apart from the introduction of a national eID card, it is important to consider new and secure versions of eID versions, such as the SmartID [34] in Estonia or the BankID [35] in Sweden. The SmartID is a free personal identification that can be downloaded as an App for Android and iOS; this is used for accessing to e-Services to make easier the authentication process [34]. A similar approach follows the Swedish BankID as a digital identification for signing transactions and documents provided by the government, municipality, banks and companies [35]. This last one is the most common method available in Gambling websites for the users to login into their accounts. Usually, at the moment of registration, this is the method of registration available; at the same time, something that is being offered nowadays at the registration moment, is the option known as "Pay N Play". This last one is offered by a certain payments provider as it is Trustly, where the players make a deposit from their bank account and Trustly passes the important data for the verification of details from the user to the operator, and then the account of the player is created in the background [36]. Regarding the self-exclusion, the checks between the National Registries of Spelpaus (Sweden) and Hampi List (Estonia) and the licensed operators is done every single time at the moment of registration and login attempts; the system will check the personal number belongs to an individual that is self-excluded or not.

2.5 Technical Implications

Digital government applications are providing more and more electronic services online, for citizens and businesses [37], and the design of a European Gambling Self-Exclusion registry requires of engineering. Considering interoperability registries, this could transform how the services are provided to citizens and businesses from manual to electronic; the first necessary step is to include formal ways of describing and restructuring the governmental processes [37]. Worm and others [38] presented the example of a European registry of severe allergic reactions that should be a centralized European Register connecting EU Member State Allergic Reaction Registries [38]. Among the EU Member States, the cross-border administrative cooperation is still based on ad hoc contacts between their regulators [13]. From a European level, it currently exists the European Interoperability Framework [39]; this last one was launched in order to support the data exchange for pan-European eGovernment services [37]. One example of e-Government infrastructure is the Estonian X-Road [40] which has become one of the main components in the organization of interoperability in the country; this one provides a unified, secure platform for organizations, with the purpose of exchanging data and communicating on different levels, such as public-public, private-private and public-private [41]. In other countries, similar interoperability and data exchange framework are being adopted as part of their e-governance solution [42], [43]. All data exchanged through X-road is secure, since it serves as data exchange bus between many databases implementing set of common features [43]. Melin and others [24] presents the e-ID as an important back-office enabler for launching e-services and transforming government [44], for tracking and tracing, but also for building blocks to provide secure electronic cross-border transactions and services. Estonia is a model of example [24], where its model is very centralized and standardized, providing a unique identification number combined with a central single point of access to public services [45]. In terms of Gambling Self-Exclusion Registry, the example of the Estonian Hampi List operates through the data exchange layer of the X-Road [46], [47]; in order to check the existence of restriction via the X-Road data communication services, the operator has to integrate the information system into the X-Road data exchange layer [47]. The integration is accompanied by the installation, setting, and certification of the software and hardware described on Estonian Information System Authority webpage [47]. From the example presented by Worm and others [38] regarding the European registry of severe allergic

reactions, one important aspect in the context of the European Union is to be multi-language and multi-operating system [38]. In this one, once the application has been submitted in the National register, a copy should be simultaneously be sent to the centralized European Register, providing a backup of the National Register and the EU overview [38]. In order to achieve the vision of a one-stop service provision, most governmental administrations need to perform some transformation in the services [37]; in terms of interoperability registry, as presented by Charalabidis and others [37], it extends the following the contents:

1. Core registry elements such as services, documents, system definitions and legal rules.

2. Common code lists including predefined values mutually understood among information systems.

3. Common data structures harmonizing governmental documents and promoting reuse of existing libraries and internationally accepted standards.

In the context of interoperability, there are some principles that have to be accomplished. Kouroubali and Katehakis [48]:

1. Subsidiarity and proportionality principle: the decisions have to be taken as closely as possible to the citizen, and the actions have to be limited to what is necessary.

2. Openness: all public data should be freely available for use and reuse by others, unless restrictions apply.

3. Transparency: to enable visibility to help stakeholders to understand administrative rules, processes, data services and decision-making.

4. Reusability: organizations have to be open sharing its interoperable solutions, concepts, frameworks and specifications with others.

5. Technological neutrality and data portability: to enable organization to adapt to the rapidly evolving technological environment.

6. User centricity: to consider the services that are designed to address user needs.

7. Inclusion and accessibility: to enable everyone to take full advantage of the opportunities offered by new technologies.

8. Security and privacy: to ensure citizens privacy and confidentiality, authenticity and integrity of information provided by citizens and other users is guaranteed.

9. Multilingualism: when information exchange system has to occur across language boundaries.

10. Administrative simplification: processes and services need to be simplified or eliminated based on whether they offer public value.

11. Preservation of information: to guarantee the long-term preservation of electronic records and information.

12. Assessment of effectiveness and efficiency: the interoperability solutions need to be evaluated for their effectiveness and efficiency considering user needs, proportionality and balance between costs and benefits.

The GDPR aims to meet the current challenges related to personal data protection, strengthening online privacy rights; the legislation has been evolving with the development of personal data collection and processing technologies [49]. Kouroubali and Katehakis [48] presented the case of health information sharing, where it is widely accepted that secure sharing of this kind of information will enable citizens to become more active in managing their personal health data, improve their health and illness experiences [49]. Nevertheless, interoperability implementation falls within boundaries of a complex problem that requires the understanding of local conditions [48]. The main key aspects for a successful interoperability are to have adequate semantic standards, an abundant web-oriented architecture, the reuse of public sector information by private partners [25]. The aspects mentioned in this chapter are the necessary ones for the design of a European Gambling Self-Exclusion Registry. For this reason, it is important to understand that National registries are databases intended to collect data [50]; usually for better planning and regulation, but the purpose of these may differ depending on the field they are implemented for. In most of the cases, as it is presented by Morsy and others [50], National registries are considered for healthcare purposes, where these helps to provide a better planning and regulation of the healthcare delivery; they provide help to

government officials, health practitioners and clinical researches to answer critical questions [50]. Several countries have set up national or large regional registries with the aims of quality improvement and demonstration of surgical efficacy [51]. The creation of health registries is considered as challenging, but these are fundamentally needed tools that are necessary for accurate and effective regulation [50]; national registries are databases intended to collect and aggregate valuable data [50]. This dissertation explores the field of registries, considering the gambling self-exclusion, scoping a European level approach that will be covered in the following chapters.

3 Theoretical background

This chapter describes the main concepts that form the framework of this dissertation to provide a more detailed understanding of the domain. Divided into sub-sections, it relates distinct areas of prior work and a range of approaches such as service design, socio-technical systems, e-governance, and e-services.

3.1 Service design methodologies

The Service Design is known as the process where designers create sustainable solutions, breaking services into sections and adapting solutions that suit users' needs. Design is about formulating service concepts and generating ideas, integrating across multiple disciplines and functional areas in an organization, focusing on the customer value [52], [53]. There are 3 main questions that are necessary to be stated in the early stages of a project, which are related to defining what the service does, how it will be provided and for whom is designed; it is a balance of Viability, Feasibility and Desirability [53]. The Service design sets the customer at the centre of the design process, where the designers contribute to change the system by motivating actors and improving the user experience [54]; this goes beyond merely describing the statistical descriptions and empirical analyses of their needs. There is a preference for qualitative means in design work, even though service designers use both quantitative and qualitative means; the understanding of contextual and customer insights are required, more than what can be given by quantitative data alone [53]. Service design scopes many different approaches, such as service innovation, experience-centred approaches to innovation, human-centred design, emotional design, design thinking and contextual design [52]. For example, service innovation refers to the innovation that takes place in various contexts of services, including the introduction of new services or those improved existing services [55]. Human-centred service design represents the creation of service experiences for the users whose behaviour is at the centre of the design process, understanding what creates value for them [52]. The experience-centred approach uses users' personal contexts and experiences as a basis for envisioning and developing superior service experiences and

systems [56]. In a highly collaborative way with human-centred approach, service design methodology designs from a problem-solving perspective, experimenting innovative solutions for the users and ensuring that these are feasible and strategically viable [56].

The design of user-centric e-government services continue to be a challenging task while citizens have demands and needs that change [57]. The sequence of activities such as planning, organising people, communication, organising material components of the infrastructure of a service is what defines the service design. For this reason, in the context of this dissertation, particular interest is in the service innovation and service experience methodologies; this research will touch different aspects such as technical and social, regarding a e-Service that is already implemented in some countries as it is the National Self-Exclusion Registries. The purpose of this dissertation is to include the expertise from a number of interviewees from the countries studied and the European level associations to promote an interoperable system, that can be based in some existing solution as it can be the platform of X-Road, but incorporating those aspects that current national systems are missing.

3.2 Socio-technical systems

The dissertation touches on different aspects, such as technical and social, considering something that would affect to all the different online casinos across Europe. For this reason, the theoretical model considered is the Socio-technical approach, due to the interrelation of social and technical aspects of an organization and the society as a whole [58]. The understanding of human, social and organizational factors affect in how the work is done and the technical systems used, contributes to the design of business process, the organizational structure or a technical system [58]. Gambling has an effect not only from an individual perspective, it is also a matter that affects society and public health, among other aspects [4], [16]. The designing of a European Gambling Self-Exclusion Registry would have an impact on different groups of people, especially those who recognize themselves with some gambling problem and have self-excluded themselves from Gambling.

As presented by Mumford [59], there are some questions that have to be posed at the beginning of any project, such us:

- How difficult will the system be to design and implement?

- What organizational and human changes will result from its use?

- How serious are the consequences likely to be if the system does not work as expected?

In brief, the socio-technical approach has to be seen as a good doctor, showing what is required in the design and the strategy developed [59]. This also includes the problems that can be identified, understood and managed, as well as the groups that have to cooperate in order to provide a solution [59]. Socio-technical design requires of decisions that are influenced by groups, and these most likely will affect them [59]. In order to have a successful system design and more acceptable to end user, it is required a great deal of coordination with different groups working effectively together [58], [59].

Aspects such as technological, social, political, regulatory and cultural for the deployment of a technology and managing the related infrastructure are the ones that encompass the term Socio-technical [15], [60]. The article from Liginlal and others [15] considers the example of Qatar regarding the adoption of digital identity; this last is an aspect

mentioned previously in the dissertation regarding the identification, a crucial aspect for the gambling self-exclusion registries. There are three key groups of stakeholders whose needs must be accommodated for the identity management, which are: the individuals (in regards of the dissertation, problem gamblers are the considered ones), who need to control the access to their personal data (and preserve their desire); second, the businesses that need to identify and authenticate users (the licensed operators, that need to be compliant); finally, the governments that have to regulate the use of information among businesses and supply the critical types of e-services to their citizens (the government must ensure the well running of the self-exclusion registry). There are some categories of barriers [61], such as:

1) Social barriers: culture of distrust, disregard for privacy.

2) Economic barriers: implementation and transaction costs.

3) Technical barriers: standards and issues related to interoperability.

4) Organizational barriers: capacity of some corporations, aversion to change.

5) Legal barriers: legal complexities and corporate ID policies.

In the field of e-Government, these are important because it must provide an effective delivery and safe services to citizens; for this, it is necessary to set boundaries around the deployment, management entails critical technological, political, social, and policy issues [15] The cultural and socio-political processes and government policies determine the nature extent and structure of gambling within a jurisdiction [7]. To contribute to the knowledge from an organizational, social and political point of view, the case study is the research methodology applied for this dissertation.

3.3 E-Governance

The use of IT to improve the ability of a government to address the needs of its society refers to E-Governance. As presented by Kumar and Kant [62], the E-Governance is more about governance than running a government electronically; it offers opportunities to transform the mechanics of government and the nature of governance itself, involving the re-engineering of processes and government procedures [62]. The E-Governance is beyond the scope of e-government, since this one is directly related to concepts such as E-Democracy, E-voting and participating political activities online [23]; it involves the technology for the provision of administration, where the services provided are efficient and effective, open, democratic and politically manageable [22]. As presented in a previous chapter, digital government applications are providing more and more electronic services online, for citizens and businesses [37]; the design of a European Gambling Self-Exclusion registry would provide the extension of an existing e-service in some countries considered in this dissertation such as Sweden and Estonia. The voluntary self-exclusion is a well-known harm reduction intervention in problem gambling, where an individual can fill in an application and self-exclude from gambling from a land-based or online based operator [21]; the personal ID number of the individual is a key aspect in this self-exclusion process. The dissertation topic connects with the e-governance to exploit the processes, the structure and technology from the administration level to provide a more efficient and effective service [22]. The example of the Estonian Hampi List operates through the data exchange layer of the X-Road [46], [47]; in order to check the existence of restriction via the X-Road data communication services, the operator has to integrate the information system into the X-Road data exchange layer [47]. In Sweden, before the introduction of the Spelpaus, the individuals who wanted to self-exclude themselves has to visit physically one by one the operator venues [21]. The European Commission did not have further plans to facilitate interoperability between self-exclusion registers due to difficulties that presented the data protection regulations and the lack of uniform standards [9]. For this reason, with this dissertation it is aimed to contribute in the understanding of the Self-Exclusion Registry as an e-Service that can be provided from a European level, or at least, that its range could apply along the European Union countries through an interoperable system between the self-exclusion registers.

3.4 E-Services

The services are those contrasted goods that share a set of similar characteristics, such as intangibility, inseparability and heterogeneity [63]. As presented by Zeithaml and others [64], in order to ensure the quality of the services provided, a supplier has to research the customers' expectations, specify the service according to these expectations, ensure that the employees follow these service specifications and the communication of information about the service to the customers [64]. At the end, the understanding of service is the representation of value creation by the inclusion of one or more than one action that involves a user or customer [65].

The sequence of digital interactions between a service provider and service receiver is generally understood as e-services [65]; in the public e-services context, it is something different than just a public service mediates electronically [66]. In this context, the e-services typically deal will with intangible goods such as exchange information systems, to fulfil service needs from Internet-based applications in a cost-efficient, flexible and convenient provision [66], [67]. As presented by Venkatesh and others [57], the e-government services have four key attributes, which are the usability, the computer resource requirement, the technical support provision, and the security provision; these can be broadly categorized into informational and transactional services [57]. The first one refers to the delivery of government information via web pages, and the second one involves a two-way transaction between government and citizens [57].

The use of Internet and mobile computing have the ability to transform relations with citizens, businesses and the different arms of government [23]; thanks to the use of these technologies, the management of government can become more efficient, by serving better delivery government services, improved interactions with business and empowering citizens through the access to information [23].

4 Research methodology

This chapter will explain the methodologies and approaches considered throughout this thesis. The focus of this research is to explore the possibility and conditions for designing and implementing a European Gambling Self-Exclusion Registry.

This dissertation has four aims. The first one is to contribute to the understanding of how the existing National Gambling Self-Exclusion Registries work. Secondly, providing an overview of the requirements for such a system, considering the possibility of extending the range of it among the EU countries. Thirdly, presenting limitations for extending the range of the National Gambling Self-Exclusion Registries among the EU countries. And lastly, providing a set of recommendations that are necessary to be followed from the e-Government perspective in the field of gambling and the responsible gaming policies along the EU.

Case study research methodologies were used in the current dissertation to present a comprehensive research strategy that relies on multiple sources of evidence; as presented by Yin [68], a case study investigates a contemporary phenomenon within its real-life context, in which there are more variables of interest than data points [68]. The purpose of case studies is to expand theory, to make an analytical generalization; not a statistical generalization [68]. This dissertation has followed an exploratory case study research methodology focusing on the insights from two countries, Sweden and Estonia; these are considered as an example for other EU member states of how the national gambling self-exclusion systems work. Since the literature review and the information regarding the gambling industry are limited, the author considered this research methodology approach to be the most appropriate, over the multiple case study or comparative case study, especially considering a matter at the European level. The limitation of a case study methodology research is that is difficult to generalize; this is one of the reasons why the author has considered two case studies, to increase the likelihood of a generalization. The data collected in a case study is often qualitative, and it may include words, interpretations, descriptions and explanations [69].

4.1 Research questions

This research touches a wide range of disciplines, such as sociology, political science and software engineering, considering the design of a European gambling self-exclusion registry. It integrates an interdisciplinary research approach, analysing concepts of socio-technical systems, the requirements and limitations for such a system. For this research, the author has counted with the contribution of different interviewees, providing an academic review in the field of e-governance, national registries and responsible gaming policies, and finally, presenting a wider understanding of the gambling self-exclusion registries, followed by the set of necessary recommendations that are necessary for the implementation of a European gambling self-exclusion registry.

Based on the aims of the dissertation, the following research question will be developed. The main research question is:

RQ: How to design a European Gambling Self-Exclusion Registry?

The overall research question throughout this master thesis is focusing on the essence of gambling self-exclusion registries from a higher level than the national perspective, as it is EU. In order to answer the main research question, this dissertation considers the examples of Sweden and Estonia and their respective National Gambling Self-Exclusion Registries, such as the Spelpaus or the Hampi list. It will cover the requirements and limitations for designing and implementing a secure interoperable system of data exchange regarding gambling self-excluded people from any country of EU countries, providing the set of recommendations for the creation of such a system. For this research, the author has conducted interviews with most of the respective gambling authorities of each country:

- The gambling regulatory authorities:

    The Spelinspektionen (the Swedish Gambling Authority);

    EMTA (the Estonian Tax and Custom Board).

- The agencies related to the Gambling industry:

    The European Gaming and Betting Association (EGBA);

The European Casino Association (ECA);

The Swedish Trade Association for Online Gambling (BOS);

The Swedish Gambling Association (Sper);

The Estonian Gaming Operator Association (EGOA).

- The gambling addict associations from each country:

The Gambling Addiction Counselling Center (Estonia);

The Gambling Addict's National Association (Sweden).

For a detailed analysis, the research question will be divided into concrete sub-questions.

SQ1: What is a national gambling self-exclusion registry?

The purpose of this sub-question is to understand the electronic public service offered from the State level that involves all the Online Casinos licensed in a country and prevents from gambling the individuals whose desire is to set that self-banning. Sweden and Estonia are the examples considered in this dissertation; both have their own national self-exclusion registry.

SQ2: What are the requirements for designing a European Gambling Self-Exclusion Registry?

The purpose of this sub-question is to overview the necessary aspects to offer a common approach for the whole EU in terms of gambling self-exclusion. Some aspects have been briefly mentioned in previous chapters, and these will be developed further in the following ones; the role of the e-ID's, the gaming legislation among the European Union countries, and the necessary technical and social aspects for such an international registry.

SQ3: What are the limitations for providing a European Gambling Self-Exclusion Registry?

The purpose of this sub-question is to overview the aspects discussed in the different interviews conducted by the author to the gambling authorities, combined with the literature review, and describing the difficulties that this common approach for the

European Union has, such as multi-licensing vs European gaming license, interoperable national gambling self-exclusion registries vs centralized European gambling self-exclusion registry, and last, user verification processes.

4.2 Objectives of the Research

This exploratory case study, designing a European gambling self-exclusion registry, was chosen for some different reasons, but one of them is that it is not a common topic for a big number of people. The online gambling presents some particular challenges to gamblers who want to self-exclude from a problematic gambling behaviour, and the self-exclusion from one site may be followed by the registration on another gambling site to continue the gambling [21]. Internet is providing a mean for gambling to grow rapidly, and it is offering more gambling opportunities, number of sites and jurisdictions [4]; the lack of social pressure is a key aspect regarding online gambling. An individual is at his/her own place, probably laying on the couch, and playing to some casino game from the phone. There is no social control, it offers a permanent availability and easy access, with a broad range of games, and it is based on cashless payment transactions [5]. There are age differences between gambler groups; in the online casino business, the younger players are most likely to self-exclude than older ones [6]. The self-excluded gamblers experience greater losses than the ones who did not self-exclude, where the financial problems are one of the main reasons why these decide to self-exclude themselves from gambling [6]. This gambling problem significantly affects relationships, like family disturbances, including arguments or breakdowns, even domestic violence; an environment that can develop gambling problems amongst children of problem gamblers [4]. The EU member states could completely prohibit gambling, to allow a very limited supply or to have an active channelling policy; since many of them generate revenue from gambling activities, there is no political space to get any form of European coordination or harmonisation [13].

At the same time, digital government applications are providing more and more electronic services online, for citizens and businesses [37], and the design of a European Gambling Self-Exclusion registry requires of engineering. Considering interoperability registries, this could transform how the services are provided to citizens and businesses from manual

to electronic; the first necessary step is to include formal ways of describing and restructuring the governmental processes [37]. The lack of availability of national self-exclusion registries in every member state and the lack of interoperability between those are the main difficulties for implementing a unified solution across the EU countries in terms of Gambling Self-Exclusion [9]. For this reason, the European Commission does not have further plans to facilitate interoperability between self-exclusion registers due to difficulties that present the data protection regulations and the lack of uniform standards [9]. Nevertheless, the European Parliament encouraged the EU states to create national self-exclusion registers and to facilitate the access to such gambling operators [11]. From a Socio-technical perspective, the understanding of human, social and organization factors affect in how the work is done and the technical systems used, contributes to the design of business process, the organizational structure or a technical system [58]. For this reason, the designing of a European Gambling Self-Exclusion Registry would have an impact on different groups of people, especially those who recognize themselves with some gambling problem and have self-excluded themselves from Gambling.

To address the apparent gap in knowledge, an exploratory case study research methodology was conducted focusing on the insights from two countries such as Sweden and Estonia; they are considered as an example for other European member states of how the national gambling self-exclusion systems work.

Although the focus on the above-mentioned case studies is mainly based on the examples of National Gambling Self-Exclusion Registries from Estonia and Sweden, the outcomes of this dissertation will help policy makers from the different European Union countries to design and develop a European Gambling Self-Exclusion Registry. Through the dissertation the readers will be able to understand the requirements, limitations and the set of recommendations for implementing such service.

The main objectives of this research are the following:

- To provide an understanding of how National gambling self-exclusion Registry work (corresponds with SQ1);

- To identify the requirements for designing a European gambling self-exclusion registry (corresponds with SQ2);

- To identify the limitations for providing a European gambling self-exclusion registry (corresponds with SQ3);

- To provide the set of recommendations for designing a European gambling self-exclusion registry (corresponds with main research question).

To achieve the objectives of this research, the study was divided into a number of phases:

- Case selection: The case studies were chosen according to the interest of the author;

- Data collection: Evidence was collected through interviews and the questions from these. From the interviews, the answers derived will help answer the dissertation's main research question and sub-research questions.

- Data analysis: Evidence was collated, and analysis was conducted in order to identify the themes for a Gambling Self-Exclusion Registry;

- Conclusion: The organised results were generalised and analysed accordingly;

- Contributions: Finally, the research contributions were developed to contribute to provide the set of recommendations for the design of a European Gambling Self-Exclusion Registry.

4.3 Data sources and data collection methodology

This master thesis follows an exploratory case research methodology based on qualitative information. Empirical data for the case study was gathered through document analysis and expert interviews. For describing the concepts around the gambling industry, responsible gaming and self-exclusion registries, legal documents, reports, written expert opinions, news articles and academic articles were used. For a more comprehensive overview, seven semi-structured expert interviews were carried out. The possible refusal of an interview was taken into account, so 9 experts in the field of gambling from the Swedish, Estonian and European level were contacted through e-mail. Two interviewees refused conducting the interviews; from these 2, one of them replied the interview questionnaire via e-mail. One interviewee did not reply to any of the e-mails, and for this reason, the final number of interviews conducted were 6 and 1 providing written answers (see Appendix 2). These six interviewees represented the main stakeholder viewpoints from the Gambling sector, from the Private and Public sector and Swedish-Estonian vs European level, seven interviews were estimated to be sufficient, and additional experts were not contacted. The interviews aimed to contribute to the understanding of the gambling self-exclusion registries, the gaming legislation, the European Union role in the gambling industry, especially in terms of Responsible Gaming and Self-Exclusion. Lists of core themes (see Appendix 2) were worked out, but more specific questions were asked based on the expertise of the interviewees. As presented by Runeson and others [69], the interviews can be considered as the most suitable method for collecting qualitative data as it allows different types of data together with exploring thoughts and feelings of the interviewees [69].

The analysis procedure for the current dissertation consisted of the following stages. Firstly, the case studies were collated and central themes for each case study specified. Secondly, the research questions proposed in the dissertation were answered based on the results of the case studies. Thirdly, the theoretical approaches brought out in the related works section were opposed to the results of the two previous stages. The evaluation of the results is done by the combination of the sources of evidence, which include interviews, published documents and literature.

4.4 Limitations of the case study methodology

A case study research provides an understanding of a complex issue or object and it extends the experience, adding strength to what is already known through previous research [70]. As presented by Yin [68], a case study investigates a contemporary phenomenon within its real-life context, in which there are more variables of interest than data points [68]. The purpose of case studies is to expand theory, to make an analytical generalisation; not a statistical generalisation [68]. Nevertheless, the study of a small number of cases can offer no grounds for establishing reliability or generality of findings [70]; there are critics that consider a case study research useful only as an exploratory tool [70]. One of the dangers that can be fallen with a case study is to focus only on descriptions and therefore not amounting to analysis [71], [72]. In a case study there is usually much data for an easy analysis, and this can be difficult to represent in a simple way; it is time consuming to collect data and has a lack for generalisability, where the cross-check information is difficult for researchers [73]. It is argued that it is not possible to test hypothesis or create a theory on the basis of a single case, but in reality, analysing single cases can give researchers a variety of valuable information and can be argued to be more credible than analysing a large set of cases [73]. Additionally, it is discussed the objectivity of the case result, so during the research particular effort has to be made in order to keep objective view of the results obtained [74]; researchers cannot reproduce the experiment in a lab. Yin [68] proposed three remedies that counteracts this last, such as the use of multiple sources of evidence, establishing a chain of evidence and having draft the case study report reviewed by key informants [68]. Expert interviews have substantial impact, it is important to monitor that the structure of questions would enable the interviewee to give as informative and concrete answers as possible, focusing on obtaining the information that is not available through document analysis [75]. This dissertation has as the main limitation the source of data collection, where empirical data was gathered through document analysis and expert interviews. Not much research has been done in this area, which also depicts the lack of interest and the limited literature in the field. The interpretation of the interviews is carried by the author alone and might be subjected to researcher bias. However, the answer from the interviewees shares similarities, that ensures the reliability and validity of the findings.

5 Case studies

The following sections describe the rationale behind choosing the case studies. After that, the results of the interviews will be presented.

5.1 Motivation for the case study

This exploratory case study, designing a European gambling self-exclusion registry, was chosen for the following reasons. Firstly, it is not a common topic for a big number of people, and the author is familiar with the field. Secondly, it has been a matter over the table for the European Commission; in 2013 the European Parliament proposed the idea of an EU-wide self-exclusion register for online gambling [11] but the European Commission did not include it in its 2014 recommendation on the issue [12]. The different cultural norms, social, policy and moral considerations from a country determines how these regulate their jurisdictions [9], but also due to the lack of cooperation and mutual recognition principle with regards to gambling licensing frameworks [13] and the data protection legislation [14] are some of the reasons why the European Commission did not have further plans to facilitate interoperability between self-exclusion registers [9].

To have the big picture, in 2019, the total European gambling market was worth €98.6 bn with online gambling accounting for €24.5bn and land-based gambling accounting for €74.1bn in gross gaming revenue [76]. In 2020, the total gross gaming revenue was expected to drop by 23% to €75.9bn because of the impact of COVID related closures on land-based gambling, while online gambling revenue is expected to increase by 7% to €26.3bn gross gaming revenue [76]. From the total share (%) of gross gaming revenue (in € bn) the 30,1 % is for UK, followed by Germany (11.4%), France (9.2%), Italy (8.7%) and Sweden (6.2%) [76]. Estonia does not appear in this statistic from the EGBA; since the data related to the gambling industry is limited, it becomes difficult to evaluate the exact weight of gambling in Estonia. Nevertheless, it is worth to mention that Estonia has become a gaming industry hotspot, where between 2014 to 2018 the number of companies

related to the gaming industry grow from 15 to 83 companies [77]. In terms of Self-Exclusion, the number of people Self-Excluded in March in the Spelpaus were 62.833 [78] and in the Hampi list are 6149 people for the games of chance, 3435 in sports betting and 1710 in lottery [79].

The general view of gambling is that it undermines core community values; it encourages a culture of wanting something for nothing, weakening the association between reward and effort [80]. As it is presented by Collins and others [80], it can be considered similar to alcohol, where the concept of responsible engagement seeks a consummatory behaviour in regard to individuals and governments, distinguishing acceptable practices and policies from those that are not [80]. The voluntary self-exclusion is a harm reduction intervention in problem gambling; it has been primarily from a casino operator level [21], even though it is becoming a nationwide approach by some countries, as it is the case of Sweden and Estonia. For this reason, the author had the motivation to enter into this matter and research the work done by these two countries and the possible common European approach.

Following what Yu and Sangiorgi [52] presented, a way to contribute with the connection between organizations managerial practices and value cocreation is through multiple case studies on Service Design projects [52]. Among the different benefits that this one provides; it is worthy to remark the following:

1) Value creation can be facilitated by helping users better apply their own resources thanks to the codesign with creative supporting tools.

2) A better support for users in value creation by aligning system actors to the user experience

3) A user-cantered approach and methods can help organizational staff to build long-term capability for supporting users value creation.

The case study is used in many situations, to contribute to the knowledge of an individual, group organization, among others [81]. It is a common research method in psychology, sociology or political science, for example. Since the research question is about how to design a European Gambling Self-Exclusion Registry, to conduct a multiply case research methodology is appropriate. The author in this dissertation has conducted interviews to

agents of interest, such as national gambling authorities, European and national gambling agencies, and the respective Gambling addict associations, as presented previously. The literature review has been crucial aspect to determine the answer about what is known on this topic [81]. In the dissertation the final findings from the interviews conducted, and the data analysis of the results will be presented.

6 Results

Through this chapter, it will be overviewed and described the findings derived from the interviews conducted by the author. In the different interviews, the author has followed a questionnaire according to the authority interviewed, giving hand to an exchange of knowledge. From the information provided in these interviews, the author will present in the later chapters the discussion and contribution of this dissertation. The aspects discussed during the interviews had the mission to review the research questions and provide a detailed information to answer them. The respondents interviewed by the author are from the following organizations:

Interviewee 1 (I1): European Casino Association (ECA)

Interviewee 2 (I2): European Gambling and Betting Association (EGBA)

Interviewee 3 (I3): Swedish Gambling Authority ("Spelinspektionen")

Interviewee 4 (I4): Swedish Trade Association for Online Gambling (BOS)

Interviewee 5 (I5): Swedish Gambling Association (Sper)

Interviewee 6 (I6): Swedish Gambling addict's national association ("Spelberoendes")

Interviewee 7 (I7): Estonian Tax and Custom Board (EMTA)

The questionnaires were prepared according to the interviewees contacted, considering their scope of action, from a national level or European level. After the literature review, it was possible to scope the kind of aspects that should be discussed in order to contribute in the gap of knowledge regarding the gambling self-exclusion registries, as well as the relevance of the gambling regulation and responsible gaming policies among the EU and in especial focus on the examples from Sweden and Estonia.

Following these aspects mentioned, the questions from these questionnaires were divided into thematic blocks. In the first place, the national gaming authorities had four different blocks, and their content was: the current state of the gambling self-exclusion registry; the challenges and benefits from the design of the gambling self-exclusion; important prerequisites for the designing of the gambling self-exclusion registry; and the interest in expanding the range of the gambling self-exclusion registry.

Regarding the gambling addict associations that the author could contact, the thematic blocks were: knowledge regarding the self-exclusion registries; personal experience; and personal opinion. For this interview, since the topic could be sensitive, the questions considered were opened for the interviewee to share their own knowledge. In the end, the questions covered were related to the previous gaming authorities' interviewees.

For the national casino associations, the thematic blocks were: the role of the organization regarding the national self-exclusion registry; the evaluation of the national gambling self-exclusion registry; and the steps that will be taken. Regarding this last thematic block, aspects from the European level were discussed.

Last, the thematic blocks considered for the associations that have a role in the European level were: role of the organization regarding the national gambling self-exclusion registries; the evaluation of the national gambling self-exclusion registries; and the European common approach.

1. What is the background behind the concept of Self-Exclusion in Gambling?

This was not a question done to the interviewees, but **interviewee 1 (I1)** from the European Casino Association (ECA) brought it up and it is a good introductory part for the concept of Self-Exclusion:

"*It starts in the roots of Gambling in Europe. Casinos were run as entertainment facilities, in touristic areas predominantly; with the development of technology in the 90's, the Online Gaming came up. At the same time, the European Union was being developed and the number of members was increasing. During this time, the freedoms were defined, and one of them were the freedom for Services. In this last one, Gambling was excluded. This creates an environment for a no cross-border recognition of Gambling licenses, and the national license is commonly necessary to run a certain Gambling facility*" **(I1)**.

I1 continues with the role of the Internet and the impact that it has had in the field of gambling such as in many others, expanding the range of gambling possibilities:

"*Now, with the development of Internet, there are no borders; online products can be offered outside Europe even. Back then, the developments were far away from legislation, even though nowadays still we see countries that does not have a national gambling regulation, such as the cases of Germany or the Netherlands for example. People living in the Netherlands, that want to gamble, they will be able to do so, they will find the way, although strictly by the law they should not be able to do that. To play with licensed operators means that the player has customer protection regulation and taxes are paid. A license is a privilege for operating in a certain market, and at the same time, it has obligations*" **(I1)**.

According to **I1**, the licensing system presents a regulation for the gambling industry in which self-exclusion can be part of it:

"*Talking about a system that an operator has to have a license in the country where this one wants to operate; this can be considered a legal offer. At this point, is when the self-exclusion is introduced. It is important to consider that in the past, the exclusion was considered a solution for the gambling problem, which is not; this is a tool for the problem gambler, not the solution. The self-exclusion gives the possibility to say "I do not want to gamble"; for this, an application is filled in and the self-banning is set with its submission.*

In Europe, the situation was that an individual could self-exclude itself from the operator level, strictly to the Casino operator that the individual frequently visited" **(I1)**.

I1 extended the explanation about how the individual check used to be from a land-based perspective:

"Whenever the individual visits the operator facility, at the entrance will be requested to show a passports or ID and it will be checked in their exclusion list to give the ok to enter or not. The aspect goes beyond this; the first is understand that someone has a gambling problem. First, the individual has to be self-aware of his/her gambling problem. Secondly, the individual has to have the will to ban itself from gambling in that operator facility, setting the period of time of 1, 3, 6 months or even an unlimited period of time while this individual will not be allowed to enter the place. Regulations are necessary to set what is necessary to lift this ban; what proves that the problem gambler has overcome its previous situation. This is the tricky aspect" **(I1).**

Table 1. Results insights 1

Matter	Insight
1. Roots of Gambling in Europe	Gambling was excluded from the freedom of Services, creating a no cross-border recognition of Gambling licenses. Casinos were run as entertainment facilities, in touristic areas predominantly **(I1)**.
2. Internet has expanded range of gambling options	A licensing system means to give a privilege to operate in a market, where an operator is subject to regulation **(I1)**.
3. Self-exclusion appearance	With this regulation, self-exclusion could be included. In Europe, it was done from an operator level. Individuals could fill in the applications in place and self-exclude for a period of time of 1,3,6 months or unlimited period of time **(I1)**.
4. Identification process	Individuals were requested to show their ID or passport at the moment of entering into a Casino **(I1)**.

This introductory part provided the main insights to understand the background of gambling in Europe, how the historical aspects marked the treatment given to gambling as not a part of the context of the services creating the current multi-licensing framework in the EU, as well as the process of self-exclusion and the identification process of individuals from the land-based operators.

2. What aspects can be considered key regarding the Self-exclusion?

A common understanding by the different stakeholders involved with the design of the Self-Exclusion register is one of the aspects that different interviewees agreed on. For example, **interviewee 2 (I2)** from the European Gambling and Betting Association (EGBA) mentioned the following:

"First, it is important to have a common understanding why a Gambling Self-Exclusion Registry is important. The stakeholders play a big role for the right implementation of this service from a National level" **(I2)**.

The interviewees from Sweden confirmed how important the reference group meetings were during the design of the Spelpaus. **Interviewee 5 (I5)** from the Swedish Gambling Association (Sper) explained that the people involved had different backgrounds, but mainly IT professionals:

"Reference groups meetings are an important aspect, this the approach that was followed in the case of Sweden. These meetings included different kind of people and backgrounds, mainly IT professionals were involved, but at the same time counted with the participation of gambling operators' associations and gambling addict association representatives, among others(**I5**).

In these meetings, different aspects were discussed, such as legal aspects, technical details and matters related to the check process, as it is presented by **interviewee 3 (I3)** from Swedish Gambling Authority ("Spelinspektionen"):

"The new Swedish Gaming law was officially introduced the 1ˢᵗ of January of 2019. During the period time of 2 years, the reference group meetings were conducted, where many aspects were discussed, regarding the safety of the system; how was going to be the check process; what are the legal aspects new in the legislation; and last, the technical details that needed to be cleared up" **(I3)**.

Nevertheless, the technical capabilities of the European countries might determine their adoption of e-Service solutions such as a National Gambling Self-Exclusion registry, as presented by **I1**:

"The examples of Estonia and Sweden are far ahead regarding the possibilities that these two countries can provide with their electronic systems. It can be considered with the current pandemic situation, this might have helped to boost the improvement of the electronic services provided by the different European countries, but certainly, many countries are far ahead from this" **(I1)**.

For these National Gambling Self-Exclusion registers, the e-ID's play a big role in the process, and for this reason it can be expected that in the incoming years this will boost the adoption of Gambling Self-Exclusion registries among the European Union, as presented by **I2**:

"The European Commission might come up in the next few months with a proposal regarding the e-ID's. This last plays a big part of the puzzle, not only resolves the difficulties related to the Self-Exclusion, it can facilitate the consideration of an interoperable system within jurisdictions, as well as making a difference in the debate about digital solutions, anti-money laundering purposes, identity theft and minor protection" **(I2)**.

I3 from Sweden explained how their registry works and **interviewee 7 (I7)** from the Estonian Tax and Custom Board (EMTA) explained the similarity that the Hampi list has with the Spelpaus:

"In Sweden, the introduction of the New Swedish Gaming law made necessary the verification of the person through the e-ID at the moment or registration, while the check process of self-exclusion is done" **(I3)**.

"The Hampi list was built in 2009, and follows a similar approach; from the mobile ID or the ID card, while in Sweden is known as Bank ID, it is possible to identify the individual, even foreign people can self-exclude themselves in the Hampi list" **(I7)**.

Table 2. Results insights 2

Matter	Insight
1. To have a common understanding by the different stakeholders	The Swedish example of Spelpaus counted with reference groups meetings where aspects such as legal, technical details and matters related to the check process were discussed. In these meetings, people with different backgrounds participated **(I3)**.
2. The technical capabilities of a country are determinant	The examples of Estonia and Sweden are far ahead in comparison to other member states **(I1)**.
3. The big role that e-ID's play in the process of self-exclusion	The e-ID can become a big part of the puzzle, and not only facilitating an interoperable system of self-exclusion within the jurisdictions, it can also serve other purposes **(I2)**.
4. Similarities in the processes	The Estonian and Swedish examples share similarities, such as the identification means, while in Estonia are the mobile ID and ID card, in Sweden the Bank ID is used **(I7)**.

This section provided the key aspects for implementing a self-exclusion registry, such as the role that stakeholders have in the design of the system and the regulations that will back them, the consideration for the technical capabilities among the EU countries, including the use of e-ID's and similar identification means of individuals.

3. What are the concerns in play regarding a self-exclusion registry?

There have been different kinds of concerns raised by the interviewees. Some were related to the individuals' data management **(I2, I3, I4)**, as well as the limitations of the self-exclusion register **(I1)**:

"This kind of system just saves the personal number of the individual and the period of time of self-exclusion" **(I3)**.

I4 from the Swedish Trade Association for Online Gambling (BOS) explained the advantage that the Self-Exclusion registry is run from a state level: "*The fact that is a state run can be a good thing; from the Swedish experience, there was a discussion about the integrity and private life. Not only this, it is also from a competitive perspective, it is good that the state runs the self-exclusion registry, so it can not favour any particular operator*" **(I4)**.

The fact that exists a self-exclusion registry in a jurisdiction does not prevent individuals finding gambling opportunities, as presented by **I1**:

"The real question that has to be made is how good it is to run in a National level a centralized self-exclusion registry. Are there opportunities for the individual to gamble somewhere else? Certainly yes, and the use of self-exclusion registers has limitations; the individuals at the end have to deal with their situation, and the gambling addict association play a big role. The society demands the Operators to take responsibility, and to identify the indicators of problem gamblers. In a land-based facility, frequency of visit is certainly an indicator. This gives hand to question the amount that the individual is able to afford; what kind of machines does this one play; these transactional aspects from an online perspective, might provide a more detailed information, but the personal contact is missing. How is the person really doing?" **(I1)**.

The data management is an important aspect to take into account for such a system, especially considering a European perspective; **I2** makes the comparison that operators have compared to big online platforms through Internet:

"The responsibility that operators in this sector take is bigger compared to others, such it could be the e-Shopping through platforms such as Amazon. Considering a European database, who would take the responsibility of the information and make sure that the

information is accurate? This last is an extremely difficult approach, while we would be considering either a unique database or the link between national databases; the first option is more unlikely compared to the second one. GDPR would apply in any of the forms, and an agreement between the different jurisdictions is necessary; an interoperable system is an easier way whereby the database remains within the jurisdiction. To have a cross border data is a sensitive aspect. The logic that can be applied is that an information is sent out from one point to the rest 26 states and the check is done" **(I2)**.

Table 3. Results insights 3

Matter	Insight
1. Data management as a big concern	The fact that is the state the one that runs a self-exclusion registry is a good thing **(I4)**. At the end, this is a system that has a list of individuals with their personal number that have self-excluded (yes/no) and for determined periods of time **(I3)**.
2. Limitations of a self-exclusion registry	The main one is that it cannot fully prevent an individual from gambling, since there are illegal gambling operators through the internet and one can find the way to reach them **(I1)**.
3. Possibilities for an interoperable system	To have a cross-border database system for the self-exclusion is unlikely to happen. GDPR would apply in any of the forms, but the logic that could be followed is an interoperable system between national self-exclusion databases; to reproduce the check from one point to the rest 26 EU member states **(I2)**.

This section has overviewed the main concerns that can appear for the design of a European gambling self-exclusion registry, providing the short logic that this common approach should follow, and also considering the limitations of this one.

4. What is the role that legislation plays?

As presented by **I1,** the legislation sets the basis and rules that the operators have to follow within a jurisdiction; even though Gambling might not be regulated, it still occurs:

"The fact that Gambling is not regulated, it does not prevent this one from occurring. It is important to have it regulated, to have as healthy system as possible for the issues that the problem gambling can cause, but also for the reputation of a whole industry. A

licensed system provides the list of legal operators within a market, the ones that are controlled by an authority and pay taxes in the country. This path is the one that will be followed in the future, where Europe will become a more regulated market. Nevertheless, Gambling will continue not being part of the Service directive of the European Union; it has an historic tradition behind that comes from the 90's, and created this variety of gambling legislation among EU" **(I1)**.

According to **I2**, one of the main reasons why it does not exist a European Self-Exclusion Register is due to the lack of gaming regulation from a national level in each European member state:

"There are many reasons why it does not exist a European Self-Exclusion Register, even in the past when it was considered to be something good; the main issue is that the gaming regulation is on the national level. There is some horizontal European regulation that applies to gambling, but there is no market or sector-specific. At the same time, self-exclusion does not exist in many jurisdictions, and how these markets operate differs. It would be welcomed and supported the creation of Gambling Self-Exclusion registers" **(I2)**.

I7 explained that a gambling license system sets the operators that are compliant with their respective legislation are the ones that can operate in that certain market:

"According to the Estonian Gambling Act only companies who have gambling activity licenses in Estonia can be allowed to offer gambling services in Estonia" **(I7)**.

Even though a market can be regulated, this does not necessarily mean that the legislation covers all the necessary aspects that affect the different stakeholders. **I6** from the Swedish Gambling addict's national association ("Spelberoendes") explained that gaming legislation should go further than considering self-exclusion registries and to consider ways to prevent the transfer of funds to unlicensed websites:

"Operators are 7 steps ahead and regulators are 3 steps behind. From the Swedish example, it has been discussed with the banks for the individuals who gamble in unlicensed casino websites, if the banks could not let them transfer money to this kind of website. It is not an easy task, since there are ways to avoid this connection of

information, through e-Wallets or Paycards; this last can be purchased in any store and can be used in almost any Casino site" **(I6)**.

As suggested by **I2**, considering a unique European gaming license is not feasible at the moment, but it could set a basis of regulation for safer gambling and responsible gaming policies:

"There is no need for a unique license in the whole of Europe, but it would be easier if there was some European regulation around safer gambling and responsible gambling; politically speaking, a European gaming license is something that sounds to be too far away. Once there is an agreement for a European safer gambling regulation, that could come from the hand of a directive which could include Self-exclusion registers, this could be the basis for the creation of an interoperable system between the different self-exclusion registries" **(I2)**.

As part of the gaming license, this includes the rules regarding the self-exclusion, and one of the main aspects, is the periods of self-exclusion that the individuals can ban themselves from gambling. **I5** explained how it was for the case of Sweden:

"An aspect that was discussed during the reference group meetings was about the time period of self-exclusion. Nowadays, for an individual, it is not possible to self-exclude for life; the maximum period of time is 1 year. The reason of this is not clear, but a guess is that the system could not provide such. This aspect was something that the Gambling Addict Association had stressed a lot" **(I5)**.

According to **I2**, the lack of a common approach from the European level makes difficult a possible standardization among the member states in terms of online gambling regulation:

"Since the European Commission is not proposing anything, the countries are looking to each other; either for the jurisdiction's legislation or regarding the self-exclusion registers. There are some clear aspects of why it has a logic to regulate online gambling; it is tax-related, but also anti-money laundering purposes. So, the objectives are common, the measures taken are the ones that differ between countries, and for this, it would be good to cooperate and have a standardization between countries" **(I2)**.

Table 4. Results insights 4

Matter	Insight
1. Gambling regulation guarantees a list of legal operators within a jurisdiction	To have a regulated market is important, especially for having a healthy system as much as possible, considering consumer protection measures. In this situation, there is an authority that controls the operators, and these pay their taxes in the country **(I1)**.
2. The lack of gaming regulation among EU member states	This is one of the main reasons why it does not exist a European Self-Exclusion registry **(I1)**.
3. Legislation should go further and prevent individuals to transfer funds to undesirable websites	There are many different payment methods to transfer money into unlicensed websites. This should be an aspect covered too **(I6)**.
4. Moving towards a common regulation in terms of safer gambling and responsible gaming policies	An EU Directive in the matter would be the desirable, setting Self-Exclusion registries as a requirement for the different EU jurisdictions. That would be the basis for an interoperable system between the different national registries **(I2)**.

This section overviewed the important role that regulation plays in the context of Gambling and the measures that can be taken. The regulation is a crucial aspect, especially considering the creation of a European Self-Exclusion registry, but also for the possible further measures to tackle problem gambling and providing effective consumer protection from unlicensed operators.

5. What aspects represent a gain from having a self-exclusion registry?

I7 scoped the change in the process of self-exclusion from gambling, whereas before it was done in each operator facility and now it is centralize covering all the licensed operators at once:

"Before every operator had its own self –exclusion register, so a problem gambler to restrict itself from every operator separately. Now with national self-exclusion list the problem gambler must only put a restriction once and it will be valid in every licensed operator. It makes easier to keep away problem gamblers from playing" **(I7)**.

The measurement if a self-exclusion registry has an effect in the society is something that requires of further research. It was agreed by the interviewees that the self-exclusion is an essential tool to tackle the gambling problem of an individual, but it is not the final solution. **I2** covered this matter in more detail:

"The essence of the question should be whether it is good to have a large number of people self-excluded or actually is not good exactly; it can be considered that the individuals who self-exclude, they simply end up into a black whole of the self-exclusion and that is it. It is not possible to know how these people are doing and if they could have been potentially helped in a different way. Nevertheless, having a self-exclusion register is essential, since it gives the chance to every individual to self-exclude itself from gambling. The question is more about structural solutions to problem gambling" **(I2)**.

Considering the case of Sweden, **I3** explained that is not possible to see how the Swedish state has benefited from the implementation of the Spelpaus:

"For men is common to self-exclude; it is about 75% are men self-excluded, and the common age is around the 30 years old. We expect to obtain different kind of data from the system of the new supplier, since the current one basically provides the number of people self-excluded in real time. It is not possible to see how the Swedish state benefited from the creation of Spelpaus, since the only information received is the personal number of the individual and whether this one has self-exclude or not" **(I3)**.

As explained by **I1,** the online gambling presents a main disadvantage, which is the lack of visual contact with the individual who is behind of an account, in how this person is acting or feeling. In other words, it makes more necessary to act responsible from the Operator level:

"The request from the general public is that Operators act responsible. For this, there must be measures that the industry must take and the Government/Regulator has to require the Operator; an example of this is the Self-exclusion registry. For somebody who does not understand how everything is connected, might look at it as something good. But if this one looks closer, who is banning and using the system, and what are they doing? Do they have alternatives? Are they taking alternatives? One has to be aware of its limitations. The interesting thing, comparing the online and land-based industry, is that in the Online industry every transaction is log, so you can have a log of the history of the

individual. The disadvantage is that you do not know the person who sitting behind the screen. In a live game, the track is different, you cannot know exactly the amount of money that the person has spent. In a land-based Casino, you know the customer, you can see him; from an online Casino, you do not know in what mental state is the person on the other side of the screen. It is disappointing if we try to simplify all to the limits or self-exclusion, because this does not fix the person's situation. This is an entertainment industry, so we have to get this right, to have the certain tools that help us, but we have to constantly negotiate with decision makers and stakeholders how to minimize harm" **(I1)**.

For **I5,** the discussion should go further and consider awareness campaigns through the different educational levels:

"The Spelpaus is just one of the tools required for the Consumer protection towards the Gambling industry, but certainly is necessary information campaigns about gambling, what it should be something for fun and entertainment; this is missing in the schools nowadays. There are people who had an addiction for many years and are not gamblers today, but they excluded themselves as a statement for something they had been waiting for many years. In order to know the reason of the self-exclusion, it would be interesting to ask for it after the process is finished, it would be very helpful" **(I5)**.

The number of people self-excluded within a jurisdiction might give some signal of the situation in a certain country, but it does not represent whether is good or not **(I4, I5)**. An additional disadvantage of a Self-Exclusion registry, is the existing leakage towards the unlicensed operators, as shared by **I4**:

"The Swedish government and the Swedish parliament took a wise decision to operate a national self-exclusion registry in the new license regime. It has been a success story, even though it can be discussed whether having 40.000 or 50.000 people self-excluded is good or not; these people shall probably not gamble at all, and it is good that they are self-excluded, at least from the licensed offers. The bad side is the high leakage we have to the unlicensed operators, but nevertheless, this has been very beneficial for the Swedish society" **(I4)**.

"Nowadays, the people self-excluded are just numbers, how can it be considered a success or not? How are these people exactly doing? That is the part for not being

satisfied, as well as the role that information plays in all this and the communication given to the public; there are things that as a problem gambler and the family members of this individual should be aware of within the system and once this one is self-excluded. At the beginning, there was no information regarding the steps to follow after self-exclusion, like the possible help assistance to manage to get over the gambling problems. The site should provide a better information regarding this last, as well as providing communication in terms of gambling problems and having a more user-friendly approach" (**I5**).

In order to obtain at least some data regarding the profile of individuals who self-exclude, **I6** proposed to show a questionnaire with few short questions right after the self-exclusion process has been completed:

"In the association we receive a lot of stories, where for example people that are around gambling addicts or they are their relatives, show to them how Spelpaus works. Having a questionnaire after the self-exclusion process could provide the background of the individual and this would help to adapt the necessary policies to be taken. There are people who self-exclude in order to not receive any kind of commercial to their e-mail or phone. Our main task is to work helping gambling addict, and perhaps in the future they become gambling free. A lot of them used Spelpaus as a crutch, that could solve their problem; the truth is that Europe is a big place, with a lot of gambling sites and the Swedish market covers the 3% of it. A gambling addict might use Spelpaus, but they do not search for help groups. Before Spelpaus came along, the average of calls was 10 per day; people needed help, others were curious to know if they have developed some gambling problem, and last situation are those difficult ones that threaten to suicide. Nowadays the number might go around 50.000 of people self-excluded, from what can be said that 90% of them works fine, but for the other 10% it does not work. If one tries to google "Spelberoende" (Gambling addiction in Swedish), the first results in the page are unlicensed casino sites. That is the big problem we have now, where maybe we receive one call a day, but it is always an individual self-excluded in Spelpaus but who has continued playing on an unlicensed Casino site" (**I6**).

One last aspect to consider in this section, is the vulnerability present in the Spelpaus system regarding the renewal of the self-exclusion period, as it was presented by **I6**:

"And one additional aspect, is the process to renew the self-exclusion. For example, supposing the self-exclusion of one year, once the time is up, in order to renew the self-exclusion, the individual has to unsuspend itself and suspend again for a year" **(I6)**.

Table 5. Results insights 5

Matter	Insight
1. Self-exclusion can be set from one same spot for all licensed operators	Before it was done one by one in every operator facility **(I1)**.
2. Lack of data to evaluate the impact of a self-exclusion registry	It is not possible to measure whether the implementation of a self-exclusion has been good or not **(I2)**. Neither, to have profile of the individual that decides to self-exclude **(I6)**. Currently, it is possible to know the number of people self-excluded in a jurisdiction **(I3)**.
3. Online gambling makes more necessary responsible actions from the Operator level	The online gambling operators cannot see the situation of the individual behind an account. This creates the need for a more responsible action and this includes responsible gaming policies such as the self-exclusion **(I1)**.
4. Possible improvements to consider	First of all, the renewal of a self-exclusion, should be allowed the extension of this one without requesting the lifting of the existing one **(I6)**. Second, to raise the awareness among the different educational levels regarding gambling and the available options for gambling responsibly **(I5)**.

This section presented one of the main limitations in the existing self-exclusion registries such as the lack of accurate data for evaluating the implementation of a self-exclusion registry; lack of information about the profile of individuals that decide to self-exclude, what brought them to reach that situation, and how are they doing during their self-exclusion period of time. In addition to this, it provides one of the improvements that should be attended to regarding the renewal of a self-exclusion.

6. What can be done from the European level?

The interviewees discussed with the author during the interviews the different possibilities, such as implementing a unique European Gaming license which was agreed

to not be realistic, and the harmonisation of a set of measures that should be implemented along with the EU member states in terms of responsible gaming:

"It would be very hard to harmonize legislation among the EU since it would make taxation and supervision very difficult. Every country has its own tradition and problems what makes the finding of common ground harder" **(I7)**.

"It would be good to harmonize the legislation among EU, since the regulation differs in each country and the kind of help offered in terms of responsible gaming is also different. From the Swedish perspective, the casino operators that the system considers are the licensed in the country; here it already exists the e-ID and that is something that differs from other EU countries. There are EU countries that the identification process is something done manually at the moment of registration" **(I3)**.

"A European common approach in terms of gambling regulation full stop is desirable, irrespective of whether it is for self-exclusion or not. There is no need to reinvent the wheel 27 times. There is no need for a European database since the individuals will play within their own environment, their country of residence. If these end up somewhere outside of their environment, they would end up on some unlicensed website outside of the European Union. This is the gaping hole that leaks nowadays" **(I2)**.

"The European Union should consider the gambling market as one EU market; to have a handover of the regulation among the European Union would be very much welcome. Nevertheless, the chance for this is very small, since there are many jurisdictions that have their self-interest in the gambling market. An example of this is the Swedish state, which is the largest operator in the country, where this one is not just the legislator and regulator, it is also an aggressive operator. The EU countries protect their rights to regulate the gambling industry, but in terms of consumer protection, that could be something where there is a chance to have a single regulation for gambling. To be compliant with all the different jurisdictions is something costly" **(I4)**.

Interviewee 5 said: *"To have a common approach sounds impossible at this point nowadays, since many countries have created their national gaming license system. There are networks between the countries that work with those countries that do not have a licensing system yet, but nothing further than that. It is better to work from a local market*

and have some cooperation between the countries, even though a common approach would be the most desirable" **(I5)**.

Nevertheless, as presented by **I2**, this matter will be handled from the European level sooner or later, following the current trend of licensing model among the EU member states:

"It is something inevitable, sooner or later something will be done from the European level because most of the jurisdictions with the exception of Finland, have a licensing model. This last is the only country that does not have any online license. Regarding a self-exclusion register for the whole Europe, is something that sounds nice but it will not happen anytime soon. Every country should have a self-exclusion register and an independent gambling authority; this kind of regulation can be done from a European level. The self-exclusion registers can be the starting point in the bottom-up approach that could lead to a European interoperable system. The European Commission has to take the lead of this, and if not, the European Parliament should push the European Commission to take action and propose a common understanding between regulators" **(I2)**.

For **I6**, the approach to follow should go further and to consider an international agreement that can include the banking sector:

"There should be some European Union approach, something international that could count with the banks. Honestly, would rather be preferable to have the situation previous to the new Swedish gaming law, because since then we have received those trickier cases of people playing in unlicensed websites; for the Swedish state, the gaming law means to receive 18% in taxes, what is better than nothing" **(I6)**.

Table 6. Results insights 6

Matter	Insight
1.European Gaming License vs harmonisation of common measures	The approach that should be followed from the European level is to set the measures that should be implemented in terms of Responsible Gaming **(I2)**.
2. The licensing model for the EU member states	The possible European common approach should come by the hand of the implementation of a licensing model in each of the jurisdictions from the different EU member states, including the National Self-Exclusion registries **(I2)**.
3. The international approach should include banking institutions	Any additional measures, either from a national perspective or European, should tackle the problematic of transferring money to unlicensed websites in a jurisdiction **(I6)**.

This section provided the need for a common regulatory framework regarding gambling among the EU, a set of minimum aspects that should be standard. The trend that should follow the EU has already started in many different countries with their licensing models, but in order to implement an EU self-exclusion system, all the jurisdictions should count on national self-exclusion registries.

7. **What kind of concern did you raise regarding the implementation of a self-exclusion registry?**

The experience from the Spelpaus in Sweden shows that its implementation was satisfactory **(I4, I5)** but at the same time, there are aspects that need to be improved such as the information posted on the webpage and the self-exclusion renewal logic **(I6)**. Nevertheless, **I2** raised the important role that the identification process plays in regards to the self-exclusion:

"Honestly, it presented a big advantage, especially for online operators. The identification process requires a good system, which is something that not all countries have developed yet. Maybe something that was considered was the process behind the check system for the self-exclusion, but this is more technical" **(I2).**

"The time before the implementation was narrow, and this caused some concern. Two operators breached the regulation and received a fine since their system was no compliant with the self-exclusion system by the 1ˢᵗ of January of 2019. From a commercial perspective, in case of a technical failure, it was another concern that was raised" **(I4)**.

"It was surprising that the Swedish regulator managed to have the system ready on time for the new law and there were no technical problems in its launch" **(I5)**.

"The information posted on the webpage should be better and an extension of the suspension periods of time, as well renewal of those, they should be easier without the need to unsuspend one itself and then suspend again" **(I6)**.

From the Estonian Hampi List**, I7** confirmed that it was a smooth implementation: *"No issues, just some IT problems from time to time from both sides, but not big difficulties or worth mentioning"* **(I7)**.

Table 7. Results insights 7

Matter	Insight
1.Self-exclusion renewal process	The Swedish example provides an important aspect to take into account in the design of a self-exclusion registry. The renewal of a self-exclusion must not require lifting an existing ban **(I6)**.
2. The identification process plays a big role	Both examples considered (Estonia and Sweden) already count with advanced ID means. This is not something shared with the other EU member states **(I2)**.

This section reviewed a couple of the topics previously mentioned regarding the renewal of a self-exclusion and the logic behind that should be improved, and the different ID means that are present among the EU differs from one country to another.

8. What kind of statistical information can we use to evaluate the implementation of the Self-exclusion?

This aspect has been raised previously, which is about the limited data available for the right evaluation from the implementation of self-exclusion registries. The different interviewees agreed that this is an aspect that should be improved in order to have a better

picture about the situation of problem gamblers and the effect that self-exclusion have in the respective jurisdictions:

"There is data that can be relevant, but not concretely in terms of self-exclusion. The question here is how to interpret the data? Is it good that the number of individuals self-excluded increases or should actually less? Considering the Swedish market, where the number of people self-excluded is considerable, why are these self-excluded? We cannot know exactly the reason behind. Most certainly are people that know themselves and to prevent the temptation of gambling, they decided to self-exclude themselves. So, there are many things that are not possible to evaluate without this kind of details" **(I2)**.

"That is something that is not available, but in any case, the important is to prevent problem gamblers from gambling. There are possibilities to expand the information around Spelpaus, so the scientists could extract data, but at the moment it is a simple check whether is self-excluded or not" **(I4)**.

"*This is a topic that has been discussed many times with the regulator, whether it can be considered a success when a lot of people is self-excluded or not. It would be good to have the information why these people decided to self-exclude, so that is something that is missing from the current system, more detailed data. Some people might be tired of receiving commercials and advertising, and they have self-excluded themselves to not receive them"* **(I5)**.

"This actually an aspect that should be improved, since the statistics basically show the number of people who have self-excluded, but there is no knowledge about the reason. The people that contact the association are individuals who have self-excluded in Spelpaus, but it has not worked, since they migrated to unlicensed casinos. For example, the people that self-excluded, how many of them renew their exclusion? Does the system count every time that oneself-excluded? There might be some of them that have self-excluded themselves in Spelpaus since 2019 yearly. In the association, there was the case of one person who used to suspend himself for 30 days, and one day the suspension finished on the same day this person received his salary and spent it all. Luckily that person changed the approach and self-excluded for one year and the association could provide the necessary help" **(I6)**.

Table 8. Results insights 8

Matter	Insight
1. Data evaluation from Self-Exclusion registry implementation	This is an aspect that has to be improved in order to know the real effects from the implementation of such system in a country. At the moment, it can be obtained the number of people self-excluded, but not their background and neither their level of problem gambling **(I2), (I4), (I5), (I6)**.

This last section overviewed the answers from the interviewees regarding the lack of available data to evaluate the social and economic implications that the implementation of self-exclusion registry can have. As it was mentioned in a previous section from this chapter, there is a lack of information about the profile of individuals that decide to self-exclude, what brought them to reach that situation, and how are they doing during their self-exclusion period of time.

7 Discussion and contribution

This dissertation, as presented in previous chapters, has four aims. The first one is to contribute to the understanding of how the existing National Gambling Self-Exclusion Registries work. Secondly, it provides an overview of the requirements for such a system, considering the possibility of extending the range of it among the European Union countries. Thirdly, it presents limitations for extending the range of the National Gambling Self-Exclusion Registries among the European Union countries. And lastly, this research aims to provide the set of recommendations that are necessary to be followed from the e-Government perspective in the field of gambling and the responsible gaming policies along the European Union. To address the apparent gap in knowledge, an exploratory case study was conducted focusing on the insights from two countries such as Sweden and Estonia; an overview of their operating national self-exclusion registry that provide this e-Service by their respective Governmental websites. The research, both literature overview and interview results indicate that is necessary a better coordination and harmonisation in the policies applied to the Gambling Industry [4], [9], [13], [16] from the European level; with especial attention, towards Responsible Gaming [5] - [7], [9], and regulation standardization [4], [10], [16].

Providing a European Gambling Self-Exclusion Registry does not necessarily guarantee that people will make use of this tool, and even in the case they do, problem gamblers are not prevented from continue gambling in unlicensed operator sites. For this reason, the discussion should go further than the consideration of the provision of such system, considering additional aspects such IP blocking and transfer payment blocking to unregulated websites. The research also suggests, based on the aspects reviewed with the different interviewees and the literature review, that there is insufficient self-awareness of the necessary information regarding gambling and responsible gaming, the tools offered from the state level, their specific use and meaning.

7.1 Discussion

Based on research and to address the gap of knowledge of the existence gambling self-exclusion registries, what do they represent and to know what can be done from a European level, the research questions can be answered as follows:

SQ1: What is a national gambling self-exclusion registry?

Since the Internet gambling has been rapidly growing, providing an increase in the types of games, gambling opportunities, number of sites, owners and jurisdictions, this has made necessary to adopt appropriate responsible gambling strategies [4]. The self-exclusion gives the possibility to say "I do not want to gamble"; for this, an application is filled in and the self-banning is set with its submission (I1). In Europe, the situation was that an individual could self-exclude himself/herself from the operator level, strictly to the Casino operator that the individual frequently visited (I1). Before every operator had its own self –exclusion register, so a problem gambler to restrict itself from every operator separately (I7). Now with national self-exclusion list the problem gambler must only put a restriction once and it will be valid in every licensed operator (I7). It makes easier to keep away problem gamblers from playing (I7). Whenever the individual visits the operator facility, at the entrance will be requested to show a passports or ID and it will be checked in their exclusion list to give the ok to enter or not (I1).

From the introduction of the Spelpaus on the 1st of January of 2019, an individual can register voluntarily using an official online identification service without the need of any registration or to visit any gambling operator site [21], and be self-excluded from any licensed operator in the country. As part of the e-governance, the intention behind is to exploit the processes, the structure and technology from the administration level to provide a more efficient and effective service [22], and so do the National Self-Exclusion registries of Spelpaus and Hampi list. First, the individual has to be self-aware of his/her gambling problem (I1). Secondly, the individual has to have the will to ban itself from gambling in that operator facility, setting the period of time of 1, 3, 6 months or even an unlimited period of time while this individual will not be allowed to enter the place (I1). The fact that is a state run can be a good thing; from the Swedish experience, there was a discussion about the integrity and private life (I4). Not only this, it is also from a competitive perspective, it is good that the state runs the self-exclusion registry, so it can

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not favour any particular operator (I4). The Self-Exclusion offers to the individuals who consider themselves having a problem with their gambling, to enter voluntarily into an agreement and ban themselves from one or multiple gaming venues [17].

As presented by Häberling [18], most of the jurisdictions require of a domestic license to be incorporated in their market. The fact that Gambling is not regulated, it does not prevent this one from occurring (I1). It is important to have it regulated, to have as healthy system as possible for the issues that the problem gambling can cause, but also for the reputation of a whole industry (I1). A licensed system provides the list of legal operators within a market, the ones that are controlled by an authority and pay taxes in the country (I1). Regulations are necessary to set what is necessary to lift this ban; what proves that the problem gambler has overcome its previous situation (I1). The European Parliament encouraged the EU states to create national self-exclusion registers and to facilitate the access to such gambling operators [11]. The countries that have a national self-exclusion registers are Belgium, Denmark, Estonia, France, Germany, Italy, Latvia, Lithuania, Portugal, Slovakia, Spain, Sweden and UK [9]. In all these countries, the access for the list of citizens self-excluded from gambling is shared between the licensed operators (Casinos) from the respective jurisdiction, but this is not shared between other Member States [9].

Following the examples of Spelpaus and Hampi list, the processes are very similar. The first step is to search for the governmental website of the government where the e-Services are offered; in the case of Estonia, the registration for the Hampi list is from the emta.ee website (Figures 1 and 2).
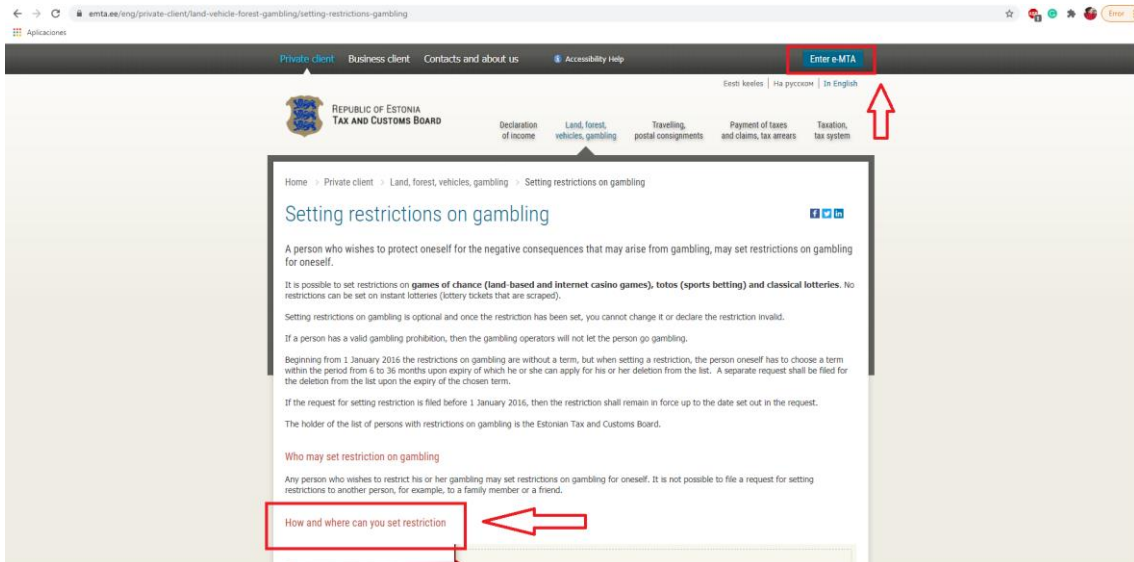
Figure 1. Screenshot from the page emta.ee with the description of the Hampi list.
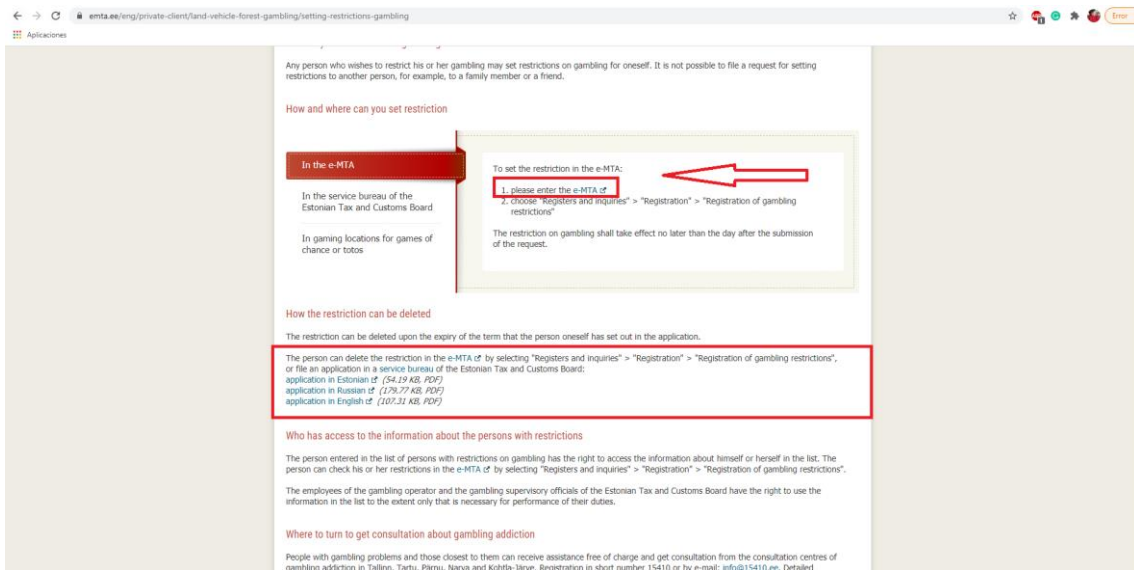
Figure 2. Screenshot from the page emta.ee with the description of the Hampi list. Second part, showing the applications that can be printed in the three main languages, such as English, Russian and Estonian.

In case of Sweden, it is offered directly from the spelpaus.se website (Figure 3).
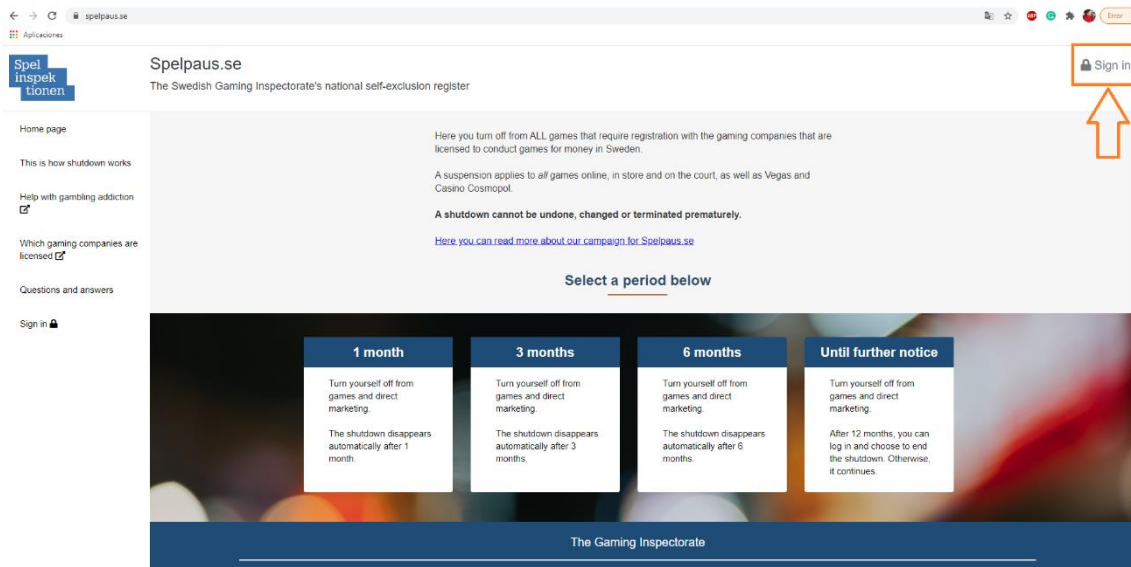

Figure 3. Screenshot from the login page of spelpaus.se.

The login process in both examples can be done with several kind of ID means of identification (Figures 4 and 5); in the Estonian example, it can be done using the Estonian ID-card, Mobile-ID, Smart-ID, Internet bank and EU eID. In the Swedish case, the option available are Mobile BankID, BankID, Freja eID +, Telia eID and Foreign eID.
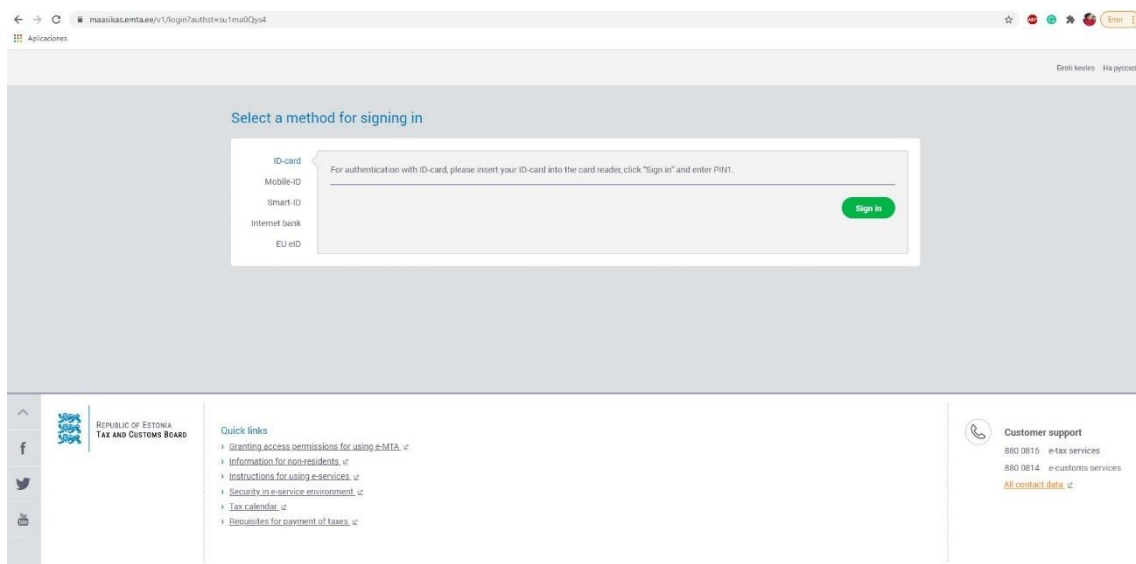
Figure 4. Screenshot from the login page of emta.ee showing the different identification methods available.
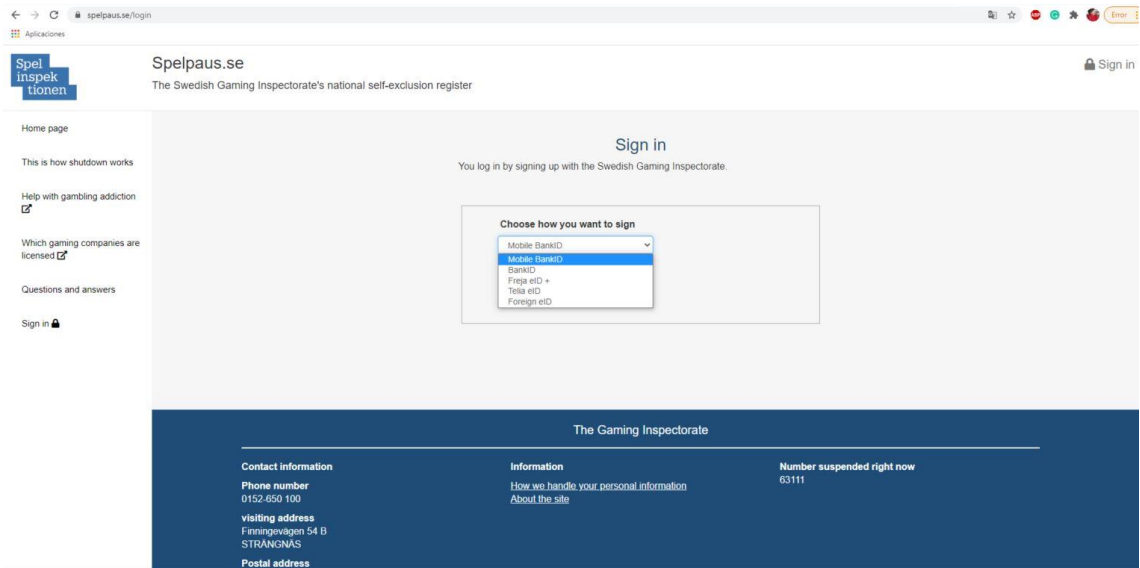
Figure 5. Screenshot from the login page of spelpaus.se showing the different identification methods available.

An interesting aspect is this last one, the possible use of a foreign eID (see Appendix 3). This refers to the use of the eIDs system; it enables a mutual recognition of national electronic identification schemes across borders, offering the European citizens to use their national eIDs for accessing to online services from other European countries [33]. The European Commission might come up in the next few months with a proposal regarding the e-ID's (I2). This last plays a big part of the puzzle, not only resolves the difficulties related to the self-exclusion, it can facilitate the consideration of an interoperable system within jurisdictions, as well as making a difference in the debate about digital solutions, anti-money laundering purposes, identity theft and minor protection (I2).

Once the individual is logged in either the emta.ee or spelpaus.se websites (Figure 6), following the example of the Hampi list since it was the one that the author had access to, under "Registers and inquiries", the option of for "Registration of gambling restrictions" appears. From there, it is offered the different products in which the individual wants to be self-excluded and the period of time of self-exclusion (Figure 7).
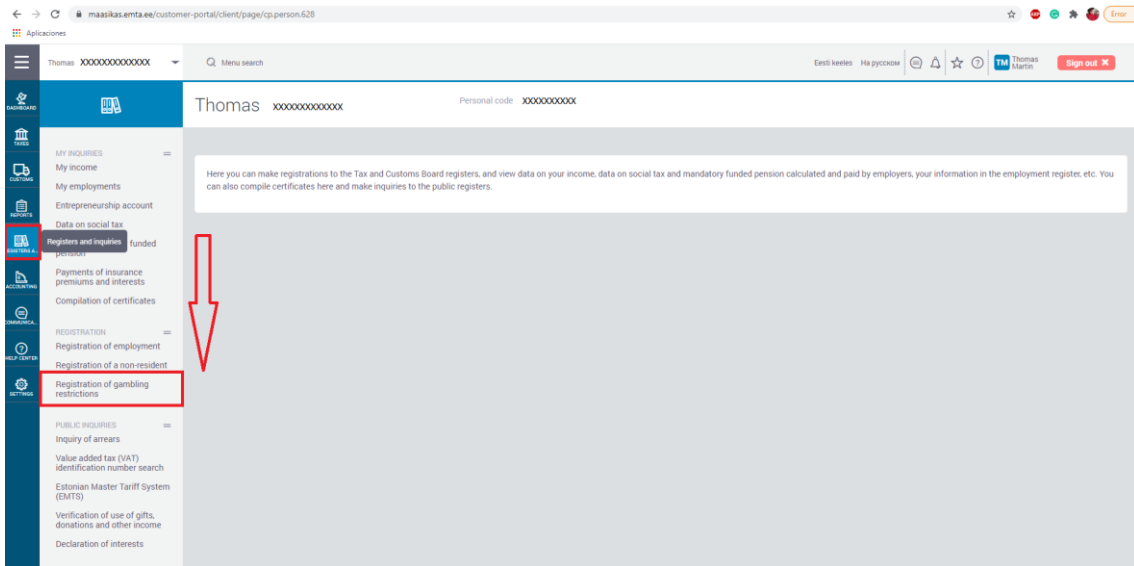
Figure 6. Screenshot from the emta.ee website once logged in. Under "Registries and inquiries", it shows the option "Registration of gambling restrictions".
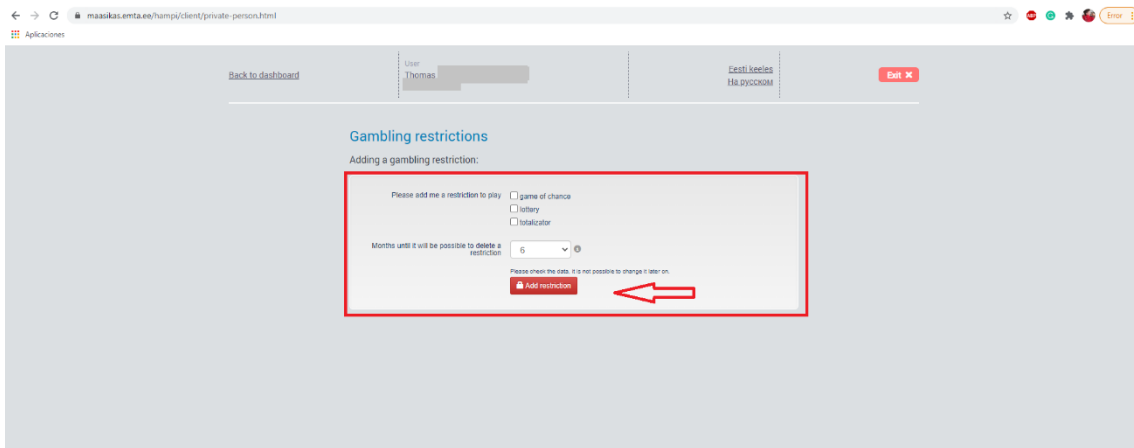

Figure 7. Screenshot from the "Registration of gambling restriction" in emta.ee. It can be chosen the period of time and products to be self-excluded.

Table 9. Discussion overview 1

Literature	Interviewees
1. Responsible gambling strategies are necessary to face the rapid grow of gambling opportunities through the internet [4].	1. The fact that Gambling is not regulated, it does not prevent this one from occurring. It is important to have it regulated, to have as healthy system as possible for the issues that the problem gambling can cause **(I1).**
2. Spelpaus provides a service in which an individual can register voluntarily through an online identification the self-exclusion from any licensed operator in the country [21].	2. Before every operator had its own self –exclusion register, so a problem gambler to restrict itself from every operator separately. Now with national self-exclusion list the problem gambler must only put a restriction once and it will be valid in every licensed operator. It makes easier to keep away problem gamblers from playing **(I7).**
3. The European Parliament encouraged the EU states to create national self-exclusion registers and to facilitate the access to such gambling operators [11].	3. An EU Directive in the matter would be the desirable, setting Self-Exclusion registries as a requirement for the different EU jurisdictions. That would be the basis for an interoperable system between the different national registries **(I2)**.

This section has been provided an understanding of the self-exclusion, the relevant tool for a responsible gaming strategy that nowadays is offered as an e-Service from the governmental websites of certain countries. In addition, it has been covered the registration process for the Hampi list, having a graphic overview of how is the system delivered from the end-user perspective, and the different identification means available.

SQ2: What are the requirements for designing a European Gambling Self-Exclusion Registry?

Firstly, it is crucial to have a common understanding of why a Gambling Self-Exclusion Registry is important (I2). The stakeholders play a big role for the right implementation of this service from a National level (I2). The understanding of human, social and organization factors affect in how the work is done and the technical systems used, contributes to the design of business process, the organizational structure or a technical system [58]. Gambling has an effect not only from an individual perspective, it is also a matter that affects society and public health, among other aspects [4], [16]. The designing of a European Gambling Self-Exclusion Registry would have an impact on different groups of people, especially those who recognize themselves with some gambling problem and have self-excluded themselves from Gambling. Liginlal and others [15] considered the example of Qatar regarding the adoption of digital identity; in this last one, considered that there are three key groups of stakeholders whose needs must be accommodated for the identity management, which are: the individuals (these are the problem gamblers considering the dissertation topic), who need to control the access to their personal data (and preserve their desire); second, the businesses that need to identify and authenticate users (the licensed operators, that need to be compliant); finally, the governments that have to regulate the use of information among businesses and supply the critical types of e-services to their citizens (the government must ensure the well running of the self-exclusion registry) [15]. For this reason, reference group meetings are an important aspect, this is the approach that was followed in the case of Sweden. These meetings included different kind of people and backgrounds, mainly IT professionals were involved, but at the same time counted with the participation of gambling operators' associations and gambling addict association representatives, among others (I5). During the period time of 2 years, the reference group meetings were conducted, where many aspects were discussed, regarding the safety of the system; how was going to be the check process; what are the legal aspects new in the legislation; and last, the technical details that needed to be cleared up (I3).

Secondly, it is important to have a common regulatory basis for the Gambling sector among the EU countries. There are many reasons why it does not exist a European Self-Exclusion Register, even in the past when it was considered to be something good (I2); the main issue is that the gaming regulation is on the national level (I2). There is some

horizontal European regulation that applies to gambling, but there is no market or sector-specific. At the same time, self-exclusion does not exist in many jurisdictions, and how these markets operate differs (I2). The EU Member States could completely prohibit gambling, to allow a very limited supply or to have an active channelling policy; since many of them generate revenue from gambling activities, there is no political space to get any form of European coordination or harmonisation [13]. The vast majority of EU countries have opted to legalize, regulate and tax all forms of online gambling subject to a local licensing regime with more or less stringent operational restrictions and against cross-border activities [18]; Gambling activities are explicitly excluded from horizontal EU Acts such as the Service Directive [19] or the E-commerce Directive [20], and therefore remain under the sovereignty of the 27 member states [18]. Carran [9] presented the main two reasons for the lack of this cooperation are the lack of mutual recognition principle with regards to gambling licensing frameworks [13] and the data protection legislation [14]. The European Commission does not have further plans to facilitate interoperability between self-exclusion registers due to difficulties that present the data protection regulations and the lack of uniform standards [9]. Since the European Commission is not proposing anything, the countries are looking to each other; either for the jurisdiction's legislation or regarding the self-exclusion registers (I2). There are some clear aspects of why it has a logic to regulate online gambling; it is tax-related, but also anti-money laundering purposes (I2). So, the objectives are common, the measures taken are the ones that differ between countries, and for this, it would be good to cooperate and have a standardization between countries (I2). There is no need for a unique license in the whole of Europe, but it would be easier if there was some European regulation around safer gambling and responsible gambling; politically speaking, a European gaming license is something that sounds to be far away (I2).

Thirdly, it is important to have a common identification process for managing the users. The e-ID has become an important back-office enabler for launching e-services and transforming government, minimizing barriers and creating online opportunities [24], but also becoming the block building for the provision of secure electronic cross-border transactions and services [24]. Following the example of Sweden, the introduction of the New Swedish Gaming law made necessary the verification of the person through the e-ID at the moment or registration, while the check process of self-exclusion is done (I3); that is something that differs from other EU countries (I3). There are EU countries that

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the identification process is something done manually at the moment of registration (I3). Depending on the respective jurisdictions and licences, the gambling operators have a certain process to verify the customers. In some countries the licensed operator can verify their customers by reference to a nationally standardised electronic identification scheme [12]. In others, the licensed operators (Casinos) have access to national registers, such as databases or other official electronic documents against operators that can verify the players, but were not created with that purpose [9]; these can be electoral registers, census and others. There are also countries where there are no specific electronic verification requirements and the gambling operators do not have access to such electronic register, so these have to create their own procedures or to rely on manual identification [9]. In Denmark, Lithuania, Portugal and Spain there are established national standardised electronic verification systems [9]. Most of the countries rely the operators to rely on the available electronic databases, but there are few exceptions, like France, Germany, Greece, Luxembourg, Romania and Slovenia that still proceed with manual check of original and copies of the identity documents [9]. In Cyprus, Poland and Slovakia, the operators are the ones who decide the method in how they verify the players [9]. The regulation in terms of identification is key, especially if we pretend to decrease the possibilities for vulnerable groups of people to gamble, such as under aged or problem gamblers [14]. The European Commission might come up in the next few months with a proposal regarding the e-ID's (I2). This last plays a big part of the puzzle, not only resolves the difficulties related to the Self-Exclusion, it can facilitate the consideration of an interoperable system within jurisdictions, as well as making a difference in the debate about digital solutions, anti-money laundering purposes, identity theft and minor protection (I2). The European Commission adopted the eIDAS regulation in June 2014 [31]; that is a regulation for the electronic identification and trust services for electronic transactions in the internal market. It is an initiative towards an EU-wide eID interoperability, offering a granted access to online public service to citizens and businesses on an electronic identification scheme that recognises the notified eIDs from other member states by 29 September of 2018 [32]. The Estonian example with the Hampi list was built in 2009, and follows a similar approach; from the mobile ID or the ID card, while in Sweden is known as Bank ID, it is possible to identify the individual, even foreign people can self-exclude themselves in the Hampi list (I7). The eID enables a mutual recognition of national electronic identification schemes across borders, offering the European citizens to use their national eIDs for accessing to online services from other

European countries [33]; this is a key aspect for the consideration of the design of a European Gambling Self-Exclusion Registry, ensuring an interoperability in four fronts such as legal, organisational, semantic and technical [33].

Table 10. Discussion overview 2

Literature	Interviewees
1. The understanding of human, social and organization factors affect in how the work is done and the technical systems used, contributes to the design of business process, the organizational structure or a technical system [58].	1. Reference group meetings are an important aspect; this is the approach that was followed in the case of Sweden. These meetings included different kind of people and backgrounds, mainly IT professionals were involved, but at the same time counted with the participation of gambling operators' associations and gambling addict association representatives, among others (**I5**).
2. Gambling activities are explicitly excluded from horizontal EU Acts such as the Service Directive [19] or the E-commerce Directive [20], and therefore remain under the sovereignty of the 27 member states [18].	2. Since the European Commission is not proposing anything, the countries are looking to each other; either for the jurisdiction's legislation or regarding the self-exclusion registers. the objectives are common, the measures taken are the ones that differ between countries, and for this, it would be good to cooperate and have a standardization between countries (**I2**).
3. The e-ID has become an important back-office enabler for launching e-services and transforming government, minimizing barriers and creating online opportunities, but also becoming the block building for the provision of secure electronic cross-border transactions and services [24].	3. The New Swedish Gaming law made necessary the verification of the person through the e-ID at the moment or registration, while the check process of self-exclusion is done; that is something that differs from other EU countries (**I3**). There are EU countries that the identification process is something done manually at the moment of registration (**I3**).

This section has provided the requirements for the design of a European gambling self-exclusion registry. It can be concluded that further efforts are necessary for the design of such an interoperable system that can connect different national registries among the EU member states, starting with a harmonisation of the gambling regulation and followed by the right implementation of the eID's system within the EU. For the implementation of this innovative service among the EU countries, it is important to count with a sequence

of reference group meetings where aspects such as planning, organising people, communication, organization of components and infrastructure of the service are defined.

SQ3: What are the limitations for providing a European Gambling Self-Exclusion Registry?

Firstly, the lack of willingness for a common approach from the European institutions towards the gambling sector. As it was presented previously, the EU does not regulate the online gambling, but gambling services are subject to a number of rules within the EU secondary legislation, which are non-industry-specific relevance [18]; these are the Unfair Commercial Practice Directive [26], the Distance Selling Directive [27], and the Anti-Money Laundering Directive [28]. This non-regulation comes from the roots of Gambling in Europe (I1). Casinos were run as entertainment facilities, in touristic areas predominantly (I1); with the development of technology in the 90's, the Online Gaming came up (I1). At the same time, the EU was being developed and the number of members was increasing (I1). During this time, the freedoms were defined, and one of them were the freedom for Services. In this last one, gambling was excluded (I1). This creates an environment for a no cross-border recognition of gambling licenses, and the national license is commonly necessary to run a certain gambling facility (I1). As presented by Carran [9], the main two reasons for the lack of this cooperation are the lack of mutual recognition principle with regards to gambling licensing frameworks [13] and the data protection legislation [14]. The European Commission does not have further plans to facilitate interoperability between self-exclusion registers due to difficulties that present the data protection regulations and the lack of uniform standards [9]. Since the European Commission is not proposing anything, the countries are looking to each other; either for the jurisdiction's legislation or regarding the self-exclusion registers (I2). There are some clear aspects of why it has a logic to regulate online gambling; it is tax-related, but also anti-money laundering purposes (I2). So, the objectives are common, the measures taken are the ones that differ between countries (I2).

Secondly, the real range of a gambling self-exclusion registry is limited to the licensed operators within a jurisdiction. Are there opportunities for the individual to gamble somewhere else? Certainly yes, and the use of self-exclusion registers has limitations (I1);

the individuals at the end have to deal with their situation, and the gambling addict associations play a big role (I1). The society demands the Operators to take responsibility, and to identify the indicators of problem gamblers (I1). The concern associated to unregulated offshore sites is big, where governments are failing to monitor, so these do not contribute through taxation to the local economy, and at the same time that makes difficult to control the anti-money laundering practices [30]. There are well-established commercial relationships between jurisdictions, but there is little harmonisation in regulatory approaches toward Internet gambling [30]. Offshore sites are undesirable from the regulator perspective, since these compete with domestic licensed sites, with an unfair competitive advantage, since they do not obey to legal compliance in terms of marketing and promotional regulations; offering greater consumer choice and benefits; and not offering adequate consumer protection standards such as responsible gambling practices and protection from fraud [30]. The discussion should go further and consider additionally IP blocking measures against gambling websites without European domestic licenses; in some countries, there is a legislation allowing the IP blocking measures, examples that include Belgium, Denmark or Estonia for example. In the case of this last one, the Tax and Customs Board has a list of IP address that have been blocked; in addition to this, service providers are obliged to freeze relevant accounts [18]. Operators are 7 steps ahead and regulators are 3 steps behind (I6). From the Swedish example, it has been discussed with the banks for the individuals who gamble in unlicensed casino websites, if the banks could not let them transfer money to this kind of website (I6). It is not an easy task, since there are ways to avoid this connection of information, through e-Wallets or Paycards; this last can be purchased in any store and can be used in almost any Casino site (I6). There are some countries that apply financial blocking obligations on financial service providers, such is the case of Germany, Denmark and the Netherlands; for Belgium, Estonia, France and Norway; in these countries there is general obligation of banks and other financial service to block transfers between players and operators without domestic license [18].

Thirdly, the concern related to privacy. The GDPR aims to meet the current challenges related to personal data protection, strengthening online privacy rights; the legislation has been evolving with the development of personal data collection and processing technologies [49]. As presented by Kouroubali and Katehakis [48] for the case of health information sharing, it is widely accepted that secure sharing of this kind of information

will enable citizens to become more active in managing their personal health data, improve their health and illness experiences [49]. Considering a European database, who would take the responsibility of the information and make sure that the information is accurate? This last is an extremely difficult approach, while we would be considering either a unique database or the link between national databases (I2); the first option is more unlikely compared to the second one (I2). GDPR would apply in any of the forms, and an agreement between the different jurisdictions is necessary; an interoperable system is an easier way whereby the database remains within the jurisdiction (I2). To have a cross border data is a sensitive aspect, so the logic that can be applied is that an information is sent out from one point to the rest 26 states and the check is done (I2). The main key aspects for a successful interoperability are to have adequate semantic standards, an abundant web-oriented architecture, the reuse of public sector information by private partners [25]. As presented by Pavlovic [14], a general processing of gamblers data should be available in order to protect the online gamblers. This is the main challenge, to balance the protection of privacy from the individuals that gamble and at the same time, the prevention of gambling-related problems [14].

Table 11. Discussion overview 3

Literature	Interviewees
1. Two reasons for the lack of this cooperation are the lack of mutual recognition principle with regards to gambling licensing frameworks [13] and the data protection legislation [14]. The European Commission does not have further plans to facilitate interoperability between self-exclusion registers due to difficulties that present the data protection regulations and the lack of uniform standards [9].	1. This non-regulation comes from the roots of Gambling in Europe. This creates an environment for a no cross-border recognition of Gambling licenses, and the national license is commonly necessary to run a certain Gambling facility (**I2**).
2. The concern associated to unregulated offshore sites is big, where governments are failing to monitor, so these do not contribute through taxation to the local economy, and at the same time that makes difficult to control the anti-money laundering practices [30].	2. The use of self-exclusion registers has limitations; the individuals at the end have to deal with their situation, and the gambling addict associations play a big role (**I1**). The discussion should go further and consider additionally IP blocking measures against gambling websites without European domestic licenses; in some countries, there is a legislation allowing the IP blocking measures (**I6**).
3. A general processing of gamblers data should be available in order to protect the online gamblers [14]. This is the main challenge, to balance the protection of privacy from the individuals that gamble and at the same time, the prevention of gambling-related problems [14].	3. Considering either a unique database or the link between national databases; the first option is more unlikely compared to the second one. GDPR would apply in any of the forms, and an agreement between the different jurisdictions is necessary; an interoperable system is an easier way whereby the database remains within the jurisdiction (**I3**).

This section has provided the limitations for the effective implementation of a European gambling self-exclusion registry. A legal basis is necessary to back the running of such an interoperable system among the EU countries, considering additional aspects that contribute to the end goal from the provision of such a service, which is the prevention from problem gamblers to go deeper in their issue.

RQ: How to design a European Gambling Self-Exclusion Registry?

The main research question was addressed as a concluding question. For a detailed analysis, it was divided into concrete sub-questions, the ones that have been already answered. In this part, a set of recommendations for designing a European gambling self-exclusion registry is provided.

Firstly, the European Commission has to promote an EU gambling directive. A directive is a legislative act that sets out a goal that all EU countries must achieve, but it is up the individual countries to devise their own laws on how to reach these goals [82]. At the moment, the EU does not regulate the online gambling, but gambling services are subject to a number of rules within the EU secondary legislation, which are non-industry-specific relevance [18]. There is no need for a unique license in the whole of Europe, but it would be easier if there was some European regulation around safer gambling and responsible gambling (I2). Once there is an agreement for a European safer gambling regulation, that could come from the hand of a directive which could include Self-exclusion registers, this could be the basis for the creation of an interoperable system between the different self-exclusion registries (I2). Countries could set their own additional preferences such as the case of Belgium, Gibraltar, Isle of Man, Liechtenstein and Malta that require the hosting the main servers in the country [18]; or France, that requires the operator to keep French bank accounts and the installation of technical infrastructure allowing the monitor and audit of all players transactions [18]. Every country should have a self-exclusion register and an independent gambling authority; this kind of regulation can be done from a European level (I2). The self-exclusion registers can be the starting point in the bottom-up approach that could lead to a European interoperable system (I2). The European Commission has to take the lead of this, and if not, the European Parliament should push the European Commission to take action and propose a common understanding between regulators (I2). According to the author, this directive should set the basis for all European Union countries to have their own national gambling license, with their respective gambling authority and a national self-exclusion registry. The account registration processes in all EU countries should be based in similar means, where the personal ID numbers are always required. In Denmark, Lithuania, Portugal and Spain there are established national standardised electronic verification systems [9]. At the moment, most of the countries rely the operators to rely on the available electronic databases, but there are few exceptions, like France, Germany, Greece, Luxembourg, Romania and Slovenia

that still proceed with manual check of original and copies of the identity documents [9]. In Cyprus, Poland and Slovakia, the operators are the ones who decide the method in how they verify the players [9].

Secondly, to complete effectively the implementation of the eIDs among the EU countries. The European Commission adopted the eIDAS regulation in June 2014 [31]; that is a regulation for the electronic identification and trust services for electronic transactions in the internal market. It is an initiative towards an EU-wide eID interoperability, offering a granted access to online public service to citizens and businesses on an electronic identification scheme that recognises the notified eIDs from other member states by 29 September of 2018 [32]. There are some challenges that needs to be handled in order to accomplish this common approach, such as compliance issues, interpretation problems, different practices in member states, cooperation and collaboration barriers, and representation of legal persons [31]. With the introduction of the eIDAS regulation of 2019, the European citizens can use national eID schemes from 6 EU countries across borders [83]; the Member States are now obliged to recognise the German National Identity Card and Electronic Residence Permit, the Italian eID means of SPID (Public System of Digital Identity), six Estonian eID means (ID card, RP card, Digi-ID, e-Residency Digi-ID, Mobiil-ID, Diplomatic identity card), the Spanish DNIe, the Luxembourgish National Identity Card and the Croatian Personal Identity Card (eOI) when citizens from other countries want to use their online public services [83]. Currently, the Self-Exclusion checks are between the National Registries and the licensed operators every single time at the moment of registration and login attempts, as it is for the cases of Spelpaus (Sweden) and Hampi List (Estonia). The system should reproduce the check with the 27 different National Self-Exclusion Registries of the European Union.

Table 12. Discussion overview 4

Literature	Interviewees
1. A directive is a legislative act that sets out a goal that all EU countries must achieve, but it is up the individual countries to devise their own laws on how to reach these goals [82].	1. There is no need for a unique license in the whole of Europe, but it would be easier if there was some European regulation around safer gambling and responsible gambling (**I2**).
2. The European Commission adopted the eIDAS regulation in June 2014 [31]; that is a regulation for the electronic identification and trust services for electronic transactions in the internal market. It is an initiative towards an EU-wide eID interoperability, offering a granted access to online public service to citizens and businesses on an electronic identification scheme that recognises the notified eIDs from other member states by 29 September of 2018 [32].	2. The e-ID's can facilitate the consideration of an interoperable system within jurisdictions, as well as making a difference in the debate about digital solutions, anti-money laundering purposes, identity theft and minor protection (**I2**).

This last section had the aim to provide the set of recommendations for the design of a European Gambling Self-Exclusion Registry. The main research question of this dissertation was divided into the previous sub-questions providing a detailed analysis of the necessary aspects for the implementation of such service among the EU countries. There are two key aspects that need to be addressed in order to provide a common approach, such as the effective implementation of the e-ID's system and the gambling regulation among all the EU gambling jurisdictions. The countries can set their own legal preferences according to their stakeholders' demands, but in order to ensure the commitment of a basis in responsible gaming policies, it is important to promote and establish a national gambling regulation in each of the member states. This would follow a multi-licensing model that has been developed in the last few years in some European countries, and an EU directive would ensure the commitment of all member states. This regulation requirement should scope the obligation to set a national self-exclusion registry in the respective jurisdiction, in order to develop the interoperable system that will connect all EU registries, extending the check of an individual between the operator and the national registry, and reproducing this check with the other 26 member states registries.

7.2 Contribution

This dissertation has analysed the aspects that were part of the aims of this research and it has offered a set of contributions, that has been divided into four main offerings. Firstly, it contributed to the understanding of how the existing National Gambling Self-Exclusion Registries work. Secondly, it provided an overview of the requirements for such a system, considering the possibility of extending the range of it among the EU countries. Thirdly, it presented the limitations for extending the range of the National Gambling Self-Exclusion Registries among the EU countries. And lastly, this research provided a set of recommendations that are necessary to be followed from the e-Government perspective in the field of gambling and the responsible gaming policies along the EU.

After the results obtained from the interviews and the discussion generated contrasting with literature review on the field, the author considers that the right approach for a European Gambling Self-Exclusion Registry is actually the consideration of a interoperable system of data exchange between the National Self-Exclusion Registries from the 27 EU countries; the system should reproduce the check between the Gambling Operator from any licensed European jurisdiction with the respective National Self-Exclusion Registries. In case an individual has self-excluded themselves in one of them, the self-exclusion would be applied in any European licensed gambling operator. In order to reach such situation, the author proposes the following recommendations as actions that have to be taken (see Table 13. Stakeholder Actions):

Table 13. Stakeholders Actions

		ACTIONS
STAKEHOLDERS	European Commission	1. To promote an EU Gambling Directive. 2. To monitor the effective implementation of the eIDAS regulation. 3. To implement the system of the interoperable self-exclusion check between National Registries.
	EU governments	1. To implement a National license system. 2. To create a National Gambling Regulator/Authority. 3. To implement the eID e-Services usage. 4. To coordinate with the different local stakeholders for the reference groups in the design of their license system.
	Gambling Operators	1. To adapt their websites to the new licensing regulations. 2. To connect their identification systems with the National Self-Exclusion Registries. 3. To strengthen the internal Responsible Gaming practices.
	Gambling Addict Associations	1. To have an active participation in the design of the new licensing system. 2. To monitor the situation of the problem gamblers that contact them. 3. To report the deficiencies and possible improvements of the system.

8 Conclusions

The purpose of the given dissertation has been to provide an understanding of a concept that escapes from the knowledge of many such as the Gambling Self-Exclusion Registry, since it is not a topic discussed on a daily basis. Gambling has societal effects such as financial or psychological disorders, what makes important to have a Responsible Gaming policy implemented. In order to consider the designing of a European gambling self-exclusion registry, this dissertation has conducted an exploratory case study focusing on the insights from two countries such as Sweden and Estonia. Empirical data for the case study was gathered through document analysis and expert interviews. For describing the concepts around the gambling industry, responsible gaming and self-exclusion registries, legal documents, reports, written expert opinions, news articles and academic articles were used. For a more comprehensive overview, seven semi-structured expert interviews were carried out.

This Master Thesis research showed that EU member states have different approaches towards the Gambling industry, where it differs the kind of regulation that these have, many of them currently do not have gambling self-exclusion registries in their respective jurisdictions and the identification process of the users is not based on any centralized database system through any e-ID mean.

From the limitations point of view, it is not possible to compile the exact technical aspects for the implementation of such interoperable system of data exchange between the National Self-Exclusion Registries from the 27 EU countries, especially based on the experience of just two countries; future research is required in this area including more countries. Additionally, it has offered solutions and recommendations that reflect the knowledge and experience of the experts who participated in the interviews. However, the author is convinced that the results indicate to major shortcomings and practical problems that member states should face during the implementation of a European Gambling Self-Exclusion Registry.

Based on the research results, it is possible to say that the focus of the EU member states (with respect to the implementation of Self-Exclusion Registries and in line with the Gambling regulation) has to be clearly shifted from a national level to a European cross-border perspective. However, before taking this next step in terms of cross-border service integration, it is important to ensure a clear regulatory framework of the gambling industry for all the EU member states in order to standardize the identification of users based on e-ID means and the inclusion of National Self-Exclusion Registry in every one of the respective jurisdictions.

The author has identified the three challenging areas (different practices in member states, different e-Government maturity levels between the EU countries, and interoperability technical difficulties) in the European Gambling Self-Exclusion Registry implementation process.

This new situation requires the proactive action of the European Commission to address the problem gambling matter withing the 27 EU countries. This dissertation provides practical input to the Self-Exclusion Registries among other related topics by identifying the common requirements and limitations and makes the recommendations for the implementation of a European Gambling Self-Exclusion Registry.

9 Summary

In 2013 the European Parliament of 2013 [11] considered the creation of a European Gambling Self-Exclusion registry, but in the final recommendations that were presented by the European Commission of 2014 [12], the self-exclusion register was not finally considered. This was an ambitious proposal considering that the Gambling industry has experienced a considerable increase in the recent years, where in 2013 it was valued at €6.1 billion, the expected annual growth in 2018 was of 10.1% [1]. This one has significantly changed in the past 15 years since its environment has been expanded to the Internet; it offers high level of accessibility, immersive interface and ease at which money can be spent [1], [2]. With the rise of the online gambling, it has been followed an interest of its effect and consequences [2] - [5], and in addition to that, the study and discussion of measures to tackle the problem gambling through Responsible Gaming policies [4], [6], [7]. The lack of Social pressure is a key aspect regarding Online Gambling. An individual is at his/her own place, probably laying on the coach, and playing to some Casino game from the phone. There is no social control, it offers a permanent availability and easy access, with a broad range of games, and it is based on cashless payment transactions [5]. For this reason, Responsible Gaming policies are very important considering the Online Gambling. In the report of Carran [9], it is presented the need for a cooperation between the different European Countries and their jurisdictions, for a cross-border convergence, so it can possibly have an effective minimization of the potential externalities that online gambling may cause [9]. The lack of common standards can lead the gambling players to have difficulties to differentiate between legitimate and illegitimate sites [9]. Some would assume that the solution to stop the Gambling problems is to simply ban it, but actually in practice is not 100% possible to prevent individuals from accessing illegal gambling sites. Due to difficulties that present the data protection regulations and the lack of uniform standards, the European Commission did not have further plans to facilitate interoperability between self-exclusion registers [9]. Nevertheless, the European Parliament encouraged the EU states to create national self-exclusion registers and to facilitate the access to such gambling operators [11]. From a

socio-technical perspective, the understanding of human, social and organization factors affect in how the work is done and the technical systems used, contributes to the design of business process, the organizational structure or a technical system [58]. For this reason, the designing of a European Gambling Self-Exclusion Registry would have an impact on different groups of people, especially those who recognize themselves with some gambling problem and have self-excluded themselves from Gambling.

This dissertation has four aims. The first one is to contribute to the understanding of how the existing National Gambling Self-Exclusion Registries work. Secondly, it provides an overview of the requirements for such a system, considering the possibility of extending the range of it among the European Union countries. Thirdly, it presents limitations for extending the range of the National Gambling Self-Exclusion Registries among the European Union countries. And lastly, this research provides a set of recommendations that are necessary to be followed from the e-Government perspective in the field of gambling and the responsible gaming policies along the European Union.

After the results obtained from the interviews and the discussion generated contrasting with literature review on the field, the author considers that the right approach for a European Gambling Self-Exclusion Registry is actually the consideration of a interoperable system of data exchange between the National Self-Exclusion Registries from the 27 EU countries; the system should reproduce the check between the Gambling Operator from any licensed European jurisdiction with the respective National Self-Exclusion Registries. In case an individual has self-excluded itself in one of them, the self-exclusion would be applied in any European licensed gambling operator. This new situation requires the proactive action of the European Commission to address the problem gambling matter withing the 27 EU countries. This dissertation provides practical input to the Self-Exclusion Registries among other related topics by identifying the common requirements and limitations and makes the recommendations for the implementation of a European Gambling Self-Exclusion Registry.

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Appendix 2 – Interview questionnaires

The gambling regulator authorities as the Spelinspektionen (the Swedish Gambling Authority) and the EMTA (the Estonian Tax and Custom Board).

BLOCK 1: Current state of the Gambling Self-Exclusion Registry	1) Can you describe exactly the steps in how the process of Self-Exclusion works? 2) How many people are self-excluded at this moment? 3) What kind of issues have you had regarding the self-exclusion of a citizen? 4) How many people fill in the application to be self-excluded daily? 5) What is the average number of people who cancels their self-exclusion? 6) What are the changes planned in how the system works?
BLOCK 2: Challenges and Benefits of the design the Gambling Self-Exclusion	1) What statistical data do you have to know how the implementation of the Self-Exclusion Registry has contributed to the society of the country? Can it be reviewed? 2) What kind of difficulties in the exchange of data between the casino operators and the National Registry system did you have or you haven been having? 3) What economic and social indicators are relevant to consider in terms of gambling self-exclusion? 4) How much does it cost to develop the National Gambling Self-Exclusion Registry system? 5) What are the operational costs of it? And the ones to implement it? 6) How did the state benefit from creation of that Self-Exclusion Registry?
BLOCK 3: Important prerequisites to consider for designing the Gambling Self-exclusion Registry	1) What are the steps involved in the identification process behind the system of the National Self-Exclusion Registry? 2) What are the key technical aspects for the designing of the Self-Exclusion Registry? 3) How important is the existence of an e-ID? 4) How was the citizen registry created? 5) How important is the identification process for the Self-Exclusion system?
BLOCK 4: Interest in expanding the range of the Gambling Self-Exclusion Registry	1) What are the efforts between the different EU countries in sharing the same Responsible Gaming policies? 2) How important is to harmonize the legislation among the European countries in terms of Online Casino licenses? 3) Would you accept a common European Online Casino License? In the negative case, what are the reasons? 4) How difficult do you see an interoperable system of data exchange between EU countries of citizens self-excluded from Gambling?

The Gambling Addiction Counselling Center (Estonia) and the Gambling Addict's National Association (Sweden).

BLOCK 1: Knowledge regarding Self-Exclusion Registries	1) Do you know what is a Gambling Self-Exclusion Registry? 2) Do you know that in your country this exists? 3) Have you self-excluded from Gambling?
BLOCK 2: Personal Experience	1) What happened to you? 2) Do you consider that Gambling is properly regulated? 3) What things would you change as it is nowadays? 4) If you are self-excluded in your country, in case you travel, do you gamble again?
BLOCK 3: Personal opinion/Feedback	1) Do you think that is correct, if you decided to be self-excluded from Gambling in your country, this applies in any EU country? 2) Do you think the EU society would benefit from the design of a European Gambling Self-Exclusion Registry?

The National Casino associations, as the Swedish Trade Association for Online Gambling (BOS), the Swedish Gambling Association (Sper) and the Estonian Gaming Operator Association (EGOA):

BLOCK 1: Role of the organization regarding the National Gambling Self-Exclusion Registry	1) What are the roles that the organization has regarding the National Gambling Self-Exclusion Registry? 2) How did you collaborate with the Government in the creation of the National Gambling Self-Exclusion Registry? 3) What kind of problems did the Casinos Operators present you for the implementation the National Self-Exclusion Registry? 4) What aspects did you have to negotiate with the Government? Something related to the Self-Exclusion process? 5) What concerns did you raise regarding the implementation of the National Self-Exclusion Registry?
BLOCK 2: Evaluation of the National Gambling Self-Exclusion Registry	1) What statistical data do you have to know how the implementation of the Self-Exclusion Registry has contributed to the society of the country? Can it be reviewed? 2) What kind of concerns do you have regarding the exchange of data between the casino operators and the National Registry? 3) What economic and social indicators are relevant to consider in terms of gambling self-exclusion? 4) What impact did the implementation of the Self-Exclusion registry have in the industry? 5) What are the weak points from having this National Self-Exclusion Registry? 6) How do you think that the state benefited from the creation of that Self-Exclusion Registry?
BLOCK 3: Steps that will be taken next	1) What changes do you want to be made to the existing National Self-Exclusion Registry? 2) Will you oppose to some additional regulation in the Online Casino industry? 3) How could the policies taken by your Government be improved? 4) What are the efforts between the different EU countries in sharing the same Responsible Gaming policies? 5) How important is to harmonize the legislation among the European countries in terms of Online Casino licenses? 6) Would you accept a common European Online Casino License? In the negative case, what are the reasons? 7) How difficult do you see an interoperable system of data exchange between EU countries of citizens self-excluded from Gambling?

The agencies related to the Gambling industry at the European Union level, as the European Gaming and Betting Association (EGBA), the European Casino Association (ECA):

BLOCK 1: Role of the organization regarding National Gambling Self-Exclusion Registries	1) How does the organization influence the decisions taken by the European Governments in term of Responsible Gaming Policies and National Self-Exclusion Registries? 2) Did you collaborate with the respective Governments in the creation of their National Gambling Self-Exclusion Registries? 3) What kind of problems did the Casinos Operators present you for the implementation of National Self-Exclusion Registries? 4) What aspects did you have to negotiate with the Government? Something related to the Self-Exclusion process? 5) What concerns did you raise regarding the implementation of National Self-Exclusion Registries?
BLOCK 2: Evaluation of the National Gambling Self-Exclusion Registries	1) What statistical data do you have to know how the implementation of the Self-Exclusion Registries have contributed to the society of the country? Can it be reviewed? 2) What kind of concerns do you have regarding the exchange of data between the casino operators and the National Registries? 3) What economic and social indicators are relevant to consider in terms of gambling self-exclusion? 4) What impact did the implementation of the Self-Exclusion registry have in the industry? 5) What are the weak points from having this National Self-Exclusion Registries? 6) How do you think that the states benefited from the creation of that Self-Exclusion Registries?
BLOCK 3: A common European approach	1) What changes do you want to be made to the existing National Self-Exclusion Registry? 2) Will you oppose to some additional regulation in the Online Casino industry? 3) How could the policies taken by the different European Governments be improved in terms of Responsible Gaming? 4) What are the efforts between the different EU countries in sharing the same Responsible Gaming policies? 5) How important is to harmonize the legislation among the European countries in terms of Online Casino licenses? 6) Would you accept a common European Online Casino License? In the negative case, what are the reasons? 7) How difficult do you see an interoperable system of data exchange between EU countries of citizens self-excluded from Gambling? 8) What are the necessary steps to implement a European Gambling Self-Exclusion Registry? Could you describe them?

Appendix 3 – Self-Exclusion Processes
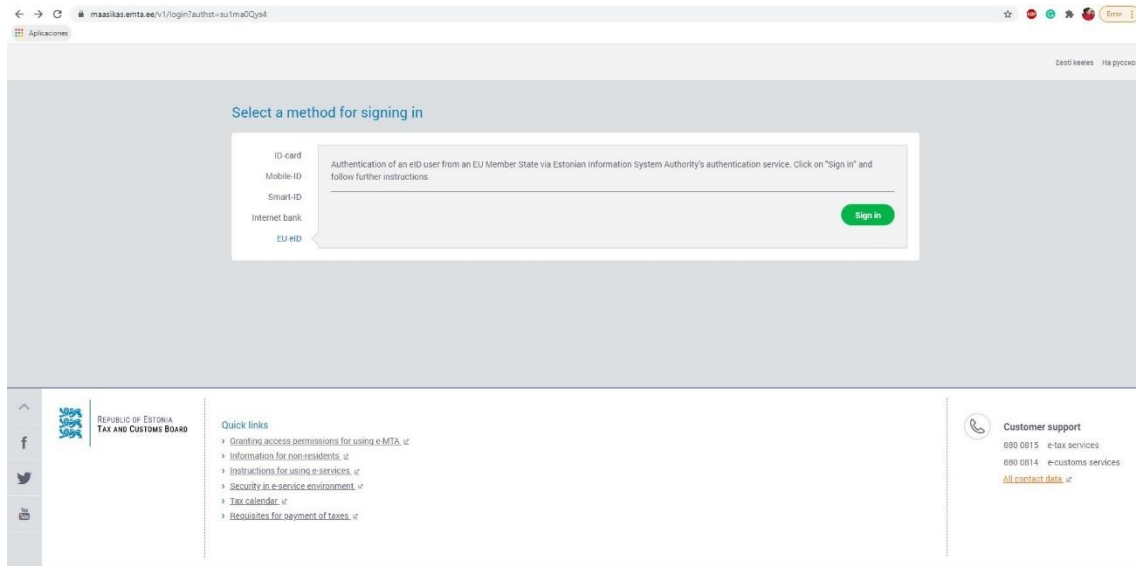
Figure 8. Screenshot from the login page of emta.ee, highlighting the possible use of another EU ID for identification.
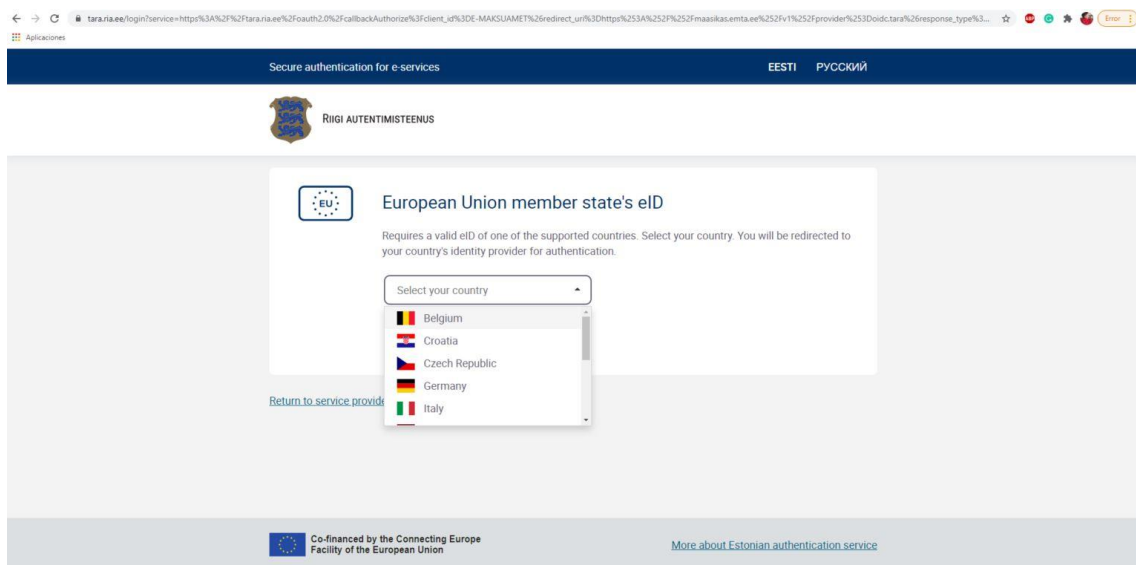

Figure 9. Screenshot from the login page of emta.ee after choosing the EU ID identification method.

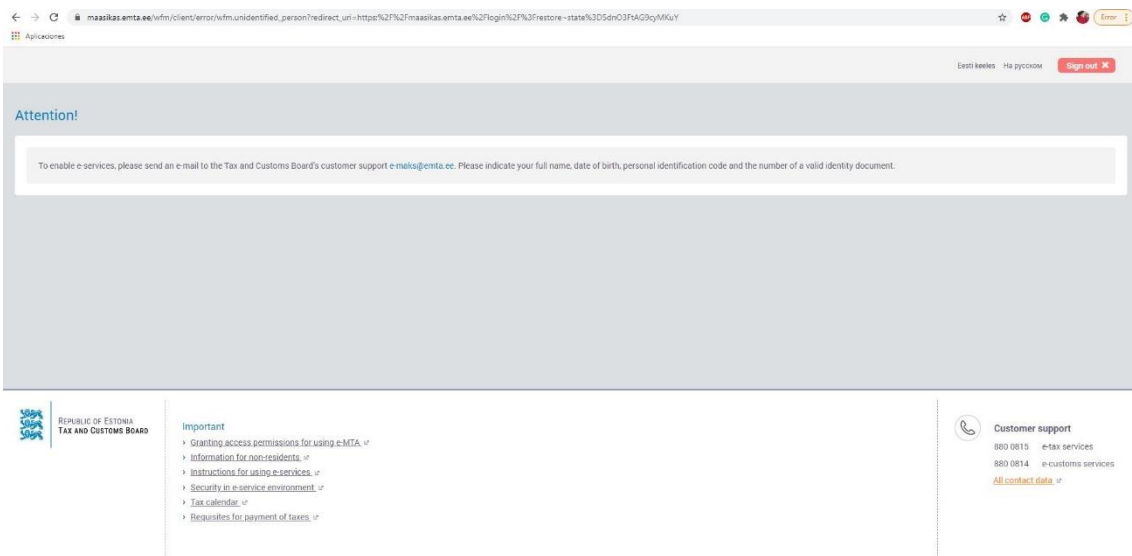Figure 10. Screenshot from the Spanish page of the DNIe (the one connecting to eIDs).

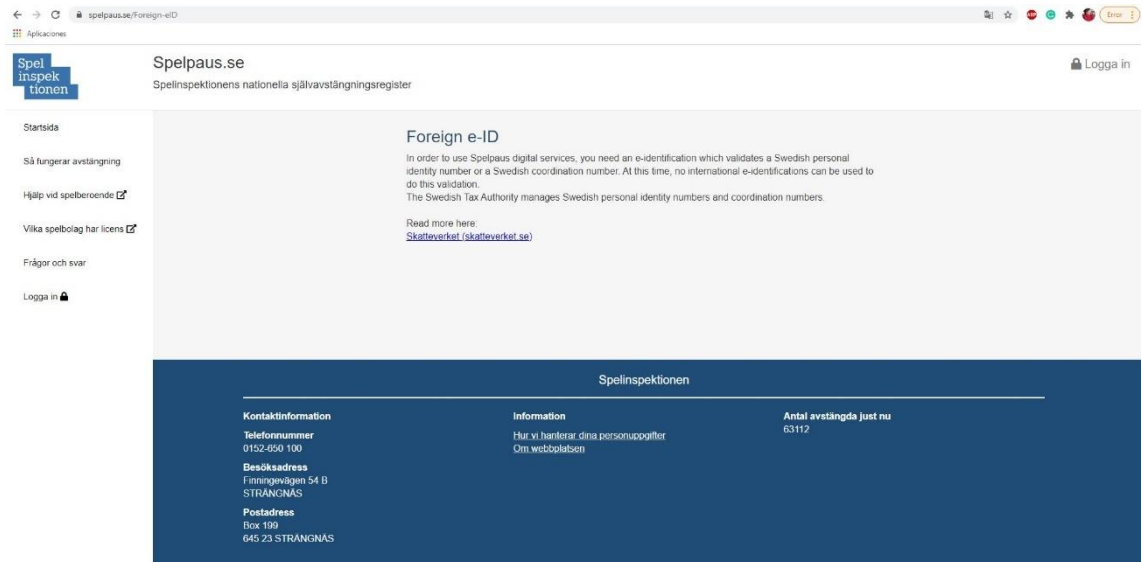Figure 11. Screenshot from the after logged in using the Spanish DNIe website, redirected to emta.ee page.

Figure 12. Screenshot from the login page of spelpaus.se showing the login using another EU ID for identification.

Appendix 4 – Account Registrations

Figure 13. Screenshot from an account registration from an online casino operator. This represents the options in Estonia, via "Pay N Play" or the usual registration process entering details manually.

Figure 14. Screenshot from the second page in an account registration from an online casino operator, where ID number is requested.
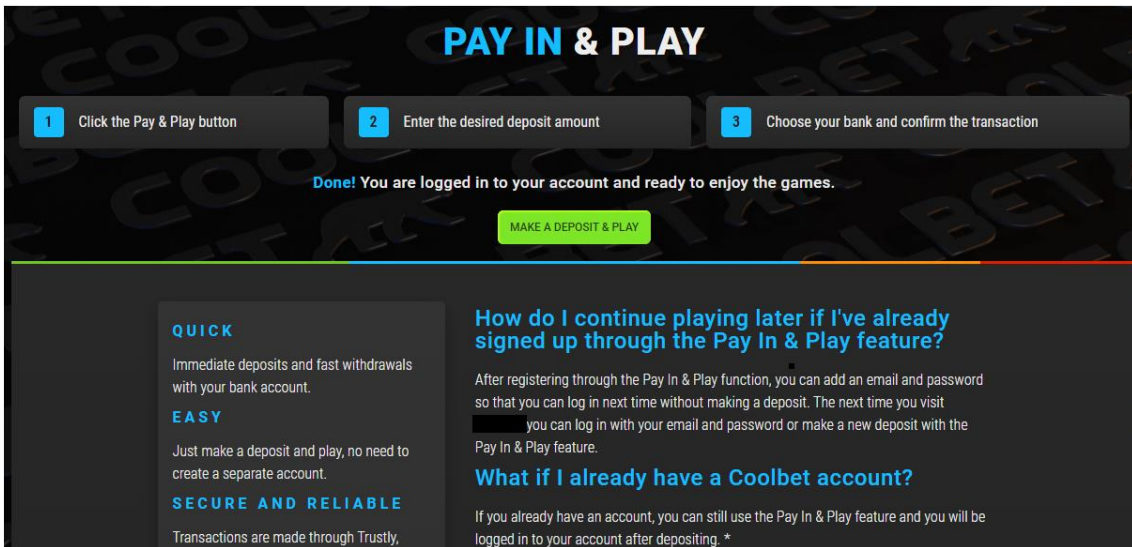
Figure 15. Screenshot from an online casino operator showing the explanation of how does the Pay N Play registration method work.

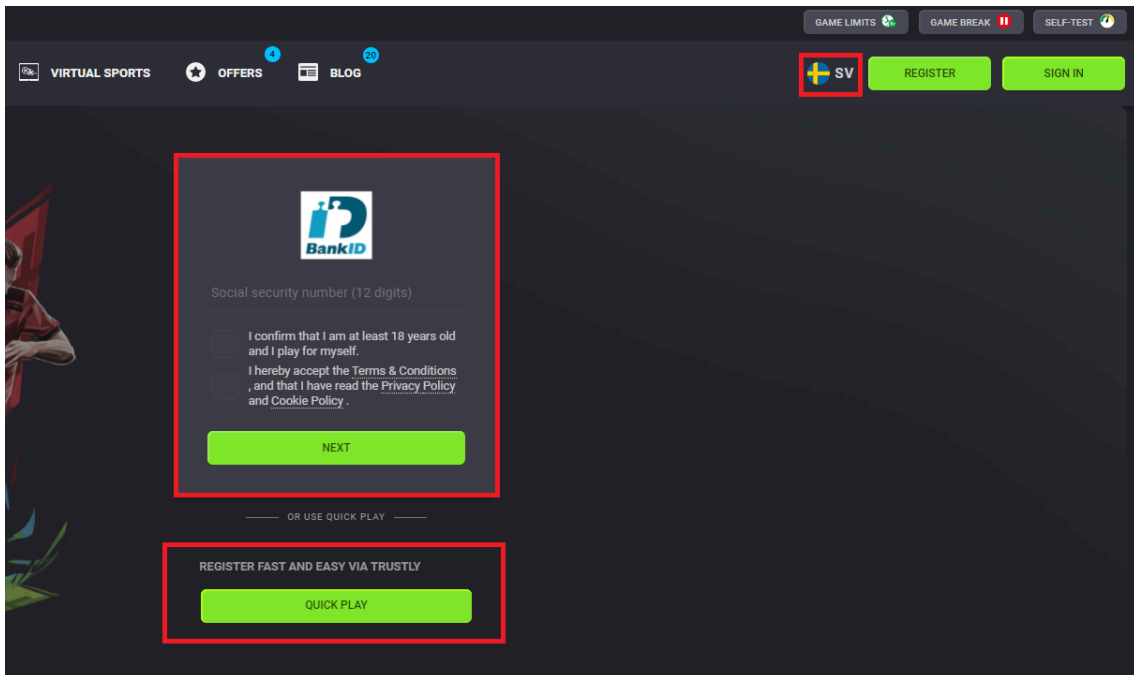Figure 16. Screenshot from the Pay N Play registration page in an online casino operator.

Figure 17. Screenshot from the registration page of an online casino operator for the case of Sweden. There are only two possible options, such as via BankID or Pay N Play.