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University of Twente (UT), Drienerlolaan 5, 7522 NB Enschede, NL/ Universität Münster (WWU), Schlossplatz 2, 48149 Münster, GER Bachelor circle: Global Migration Governance and Policy

1st supervisor: Dr. Ola El-Taliawi (UT), (Le Anh Long, UT)
2nd supervisor: Dr. phil. Hendrik Meyer (WWU)

Capturing "the crimmigrant":

Empirical evidence of crimmigration in the digitalization of EU migration management

Lillie C. Hafner

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Abstract

Literature suggests the growing intertwinement of migration control and crime control, which is described by the term crimmigration. However, studies analyzing the policy design of digital tools for empirical evidence of crimmigration are still lacking. To answer the research question "To what extent is digitalization amplifying crimmigration in EU migration management?", the thesis conducts a single case study of the EURODAC database, a central digital tool in EU migration management. Using content analysis, the initial EURODAC policy, its current regulation, the 2016 proposal as well as the 2020 proposal are analyzed for empirical evidence of crimmigration along the lines of five policy elements. The findings reveal an increase of elements of crimmigration in the policy. Here, crimmigration is both cause and consequence of the changes to EURODAC. On the one hand, the continuous extension of purpose shows the connection of migration management to objectives of crime control, and security and risk assessment. On the other hand, agents connecting migration control and crime control are increasingly present in the maintenance and usage of the database. Sanctions and force are employed to ensure the collection of data. Thus, digitalization leads to an increasingly seamless merge of crime control and migration control.

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List of abbreviations

BMS biometric matching service

CEAS Common European Asylum System

CIR common identity repository

EU European Union

Eu-LISA European Union Agency for the Operational Management of Large-

Scale IT Systems in the Area of Freedom, Security, and Justice

EURODAC European Dactyloscopy System

ESP European Search Portal

ETIAS European Travel Information and Authorization System

FRONTEX European Border and Coast Guard Agency

NGO Non-governmental organizations

TCN third-country national

VIS Visa Information System

1. Introduction

The digital landscape of European Union (EU) data systems has grown rapidly in the last two decades. This development is also observable in the digitalization of migration management. A variety of different systems are used at different points of the migration process at different levels within the EU (Kolodziejczyk, 2015). A central component of this digital infrastructure in EU migration management is the database EURODAC (short for European Dactyloscopy System). The digital tool is the first entry point for irregularly entering migrants in the EU and as such the first registration of their existence in the EU administrative system.

On June 8th of 2023, the Council of the European Union reached an agreement, setting the terms for the EU's "New Pact on Migration and Asylum". The pact was introduced by the European Commission in 2020 and is to be adopted in 2024 (Council of the EU, 2023). It aims to reform European migration management in its structure and procedures of the organization of irregular migration and asylum. Within the planned reform, the usage and improvement of digital systems are central. EURODAC is thought to fill a vital role within the new system(European Commission, n.d.). While the Council in its statement highlights the support of the database for member states to efficiently manage migration flows (Council of the EU, 2023), a range of organizations criticize the planned changes. In a joint letter, an alliance of NGOs denounces the planned setup among other things to reinforce "the idea that all migrants registered on EURO-DAC are security threats" (Fundamental Rights Concerns about the EURODAC Reform, 2021). This line of argumentation taking issue with the connection of migrants to threat is not singular to the political sphere but can also be found in academia.

The complexes of crime and migration have historically been linked in societal discourses as well as policy practices (De Koster & Reinke, 2017). In the early 2000s, a scholarly debate in law emerged which connected the areas of migration control and crime control in research. In this context, Stumpf introduced the theoretical perspective of crimmigration to describe the "convergence of immigration law and criminal law" (2006: 1). Since then, the term has been broadened in definition and was adopted in various fields of research. What has emerged is a multi- and interdisciplinary field of research that applies the theoretical perspective of crimmigration in different contexts (Stumpf, 2013a). It must be highlighted that the application of the term varies greatly in literature, as well as its terminology as a concept, process, or phenomenon.

With the different contexts of research in mind, Van Der Leun and Van Der Woude define crimmigration as the "intertwinement of crime control and migration control" (2013: 43). This definition is adopted for the purposes of this thesis. Althoff & Graebsch (2022) see in crimmigration simultaneous cause and consequence of societal discourse which connects "otherness" with threat and crime (see also Den Boer, 2008). The result is the development of a new type of regime in the intersection of the two complexes of migration control and crime control. In an attempt to characterize these regimes, Bowling introduces the term 'crimmigration control system' (Bowling, 2013) which encompasses "its own tailored institutions, organized schema, working methods and underlying principles" (Bowling & Westenra, 2020: 164) and revolves around exclusion, efficiency, and control while subordinating justice. Moreover, modes of policing and punishment become central to managing migration (Bowling & Westenra, 2020). While developments of crimmigration are justified by public administration as means of a more effective form of organization, its day-to-day implementation is experienced by affected migrants as "punitive as well as intrusive, coercive, and exclusionary" (Bowling, 2013: 300).

Being initially studied in the US context, there is a growing body of research investigating crimmigration in the European context in general and the EU more specifically. For instance, van der Woude and van der Leun (2017) find that space for discretion of control authorities at EU internal borders drives crimmigration in their practices of inclusion and exclusion. Majcher (2021) uncovers the growing convergence of criminal and immigration law in the Common European Asylum System (CEAS) enabling the detention of migrants and the restriction of their movement. Given the central role of the EURODAC database in EU migration management, it seems important to take the growing crimmigration research and apply it to the case of EURODAC to search for possible evidence of crimmigration in the policy. Concerning the state of research, there is a substantial number of studies of crimmigration in a law context and general reflections on the term. Moreover, some studies have focused attention on the connection between digitalization and crimmigration (see for example Dekkers et al., 2019; Vrăbiescu, 2022). However, studies producing empirical research on concrete expressions of crimmigration in this field connected to the policy design of digital tools are still lacking.

Research question and sub-questions

These aspects lead to the following research question: To what extent is digitalization amplifying crimmigration in EU migration management? The question will be answered with a

single case study of the EURODAC policy through content analysis. Policy design elements developed by Ingram and Schneider (1988) will be adopted and connected to crimmigration literature. The analysis along the elements of (1) goals or purposes, (2) target populations, (3) agents, (4) rules, and (5) tools of influence, will provide the basis to uncover structures and dynamics of crimmigration in the policies at hand. The data consist of the initial EURODAC regulation, its current regulation, the 2016 reform proposal, and its recast version within the framework of the New Pact on Migration and Asylum. Firstly, the question "Is there evidence of crimmigration in the EURODAC policy?" will be answered. Further, it will be analyzed to what extent and in what ways crimmigration is found in policy design elements in every stage of the EURODAC policy. This provides a simultaneous answer to the question of to what extent and how the policy has changed from a crimmigration perspective. Building onto the gained insights it will be discussed how digitalization has factored in the observed changes (see also Figure 1).

Figure 1.

Overview of research question and sub-questions

RQ :	To what extent is digitalization amplifying crimmigration in EU migration
	management?

SQ1: Is there evidence of crimmigration in the EURODAC policy?

SQ2: In which ways and to what extent is crimmigration detectable in the policy design elements within each stage of the EURODAC policy?

SQ3: To what extent and how has the policy changed from a crimmigration perspec-

tive?

SQ4: How does digitalization factor into these overall changes?

Scientific and societal relevance

The issue carries relevance as the current EURODAC proposal is part of the EU's general set of policy changes to reform migration policy altogether. In light of this currency, it is important to investigate the policy developments up until the proposal and their underlying approach. Especially analyzing the role of digitalization bears importance given its general trend in EU public administration. Gathering evidence of crimmigration and the role of digitalization within the intersection of technology, migration control, and crime control, promises a more holistic understanding of the concept, its expression in policies, and affiliated dynamics. From a Public Administration perspective, it is necessary to closely monitor the policy dimension of

EURODAC, a database that originated as an exclusively administrative instrument for the organization of asylum claims, and its further development within the growing digitalization of EU migration management. The analysis further promises to produce insights into how policy design can feature crimmigration, including implicit biases in policy which bureaucrats are potentially not even aware of. Using the case of EURODAC to approach the diverse character of crimmigration empirically can contribute to better grasping the ways crimmigration presents itself. It allows to advance the understanding of the term's character and thus, further refine its use in academia. The findings further promise to shed light on the EU migration control apparatus and how it affects immigrants in their everyday contact with the system. Uncovering biases in the complex setup of EU policies is both relevant for EU citizens and affected immigrants. For the latter, as they are a particularly vulnerable population, it is vital to better understand what kind of regime they are confronted with as well as how and with which assumptions their data is used. This is particularly relevant since the workings and consequences of the collection, analysis, and usage of data remain inaccessible and in-transparent to the affected individuals for the most part (Witteborn, 2022). EU citizens on the contrary are unlikely to encounter crimmigration and thus, should be informed about the policies adopted in their name.

2. Conceptual and Theoretical Framework

2.1. Crimmigration

Building onto the reflections of Strumpf (2006), van der Leun and van der Woude (2013) name three defining dimensions of crimmigration from a law perspective: Firstly, they observe an increasing overlap of criminal and immigration law. Secondly, procedural elements involved in prosecuting violations of immigration laws have adopted numerous characteristics of criminal proceedings. Lastly, the enforcement of immigration laws has become increasingly similar to the enforcement of criminal laws. However, they argue for including the social factor in the research of crimmigration, developing its notion from *crimmigration law* to *crimmigration control*, and preparing the ground for the concept to find entry in academia outside of legal studies. In this dimension, Gerard and Pickering observe an "increased reliance on criminal justice imagery and practices, and their application to certain groups of classed, racialized and gendered refugees and migrants" (2013: 587). Guia describes the construction of the migrant as a "potential enemy whose presence requires a preventive reinforcement of security measures" (2013:

18) and indicates an increase in approaches that criminalize irregularity of migration movements.

In the case of the EU, spill-over effects from policies in the area of security to the area of migration are observable. This goes along with an increasing reorientation of law enforcement from a reactive to a proactive paradigm featuring more intelligence measures, particularly in the area of risk assessment (Den Boer, 2008). The justification of security measures, through connecting migrants with potential crime, ultimately allows the implementation of stricter migration control regimes (Franko Aas, 2011; Gerard & Pickering, 2013), or what Van der Woude calls "super-size enforcement regimes" (2022: 39). The previously discussed patterns of justification and practices are observable in European integration where the securitization of migration is especially driven through the development of the notion of "illegal migration" (Green & Grewcock, 2002). The management of this illegalized migration is increasingly supported by the use of digital tools which in their demands increase everyday police cooperation (Franko Aas, 2011).

2.2. Digitalization in EU migration management

Digitalization can be defined as the "transformation of operational processes into computational formats" (Witteborn, 2022: 158). In the public administration setting, digitalization processes have transformed all areas from the interaction between public actors and citizens, the creation, processing, and usage of knowledge as well as the implementation processes of policy. With this transformation a range of new possibilities arise, central aspect being the gain in efficiency (Witteborn, 2022), but also challenges, as issues of accountability (Agostino et al., 2022). In migration management, digitalization, or even "datafication of society" (Cukier & Mayer-Schoenberger, 2013), has led to increased use of technologies in all stages of migration management, from border control to overseeing asylum processes to the monitoring and stimulation of integration. The digitalization of EU migration management is characterized by the rise of biometrics and information exchange between authorities of different areas and levels. Here, Kolodziejczyk (2015) describes that the technological progress and the development of the EU's increasingly strict approach to migration management have been deeply intertwined. In this context, the rise of a broad range of databases is observable, establishing a digital border infrastructure that enables increasing surveillance (Broeders, 2007; Metcalfe & Dencik, 2019). After Guia (2013), the deployment of said technology in this field effects an increase in the categorization and stereotyping of certain groups.

Observing these general developments, Franko Aas (2011) discusses the distinction between "bona fide" travelers, those viewed as safe and legitimate, and "crimmigrant bodies", who are associated with threats to security, evoking different notions of citizenship¹. She argues that transnational surveillance networks evolve along new perceptions of risk and exclusion which go beyond physical separation. Exclusion in the symbiosis of migration and crime is increasingly based on social factors, creating an "illegalized global underclass" (Franko Aas, 2011: 337) which states see the need to control. Technology-wise, biometrics have become the dominating practice in enforcing these dynamics promising seemingly infallible identification.

In the context of the EU, Franko Aas (2011) discusses the transnational border and surveillance regime as both reactive, meaning its purpose of external exclusion, as well as productive, as a motor of European integration especially in the area of justice and home affairs.

Technology in these settings can be seen as a 'force enabler' acting as a tool to extend the capacities for social control (Bowling et al., 2008). Dekkers et al. find that "function creep", the "expansion of a process or system, where data collected for specific purposes subsequently used for another unintended or unauthorized purpose" (Mordini & Massari, 2008), stimulates crimmigration when it occurs in digital tools of migration management. The authors argue that the interconnection of crimmigration and technology is "a complex process of back-and-forth between demands and opportunities that eventually lead to human behavior changing technology and technology changing human behaviour" (2019: 1861).

2.3. Policy design

To enable the systematic analysis of policies for evidence of crimmigration, elements of Anne Schneider and Helen Ingram's theory of Social Construction in Policy Design are leveraged. Part of their theory aims to identify common elements which are similar to all policies and to establish their linkages to enable an assessment of the policies' intrinsic structural logic. This knowledge, the authors argue, improves the ability to compare policies with each other in a cross-policy or cross-area manner. The analysis of policy designs allows ultimately to uncover underlying biases and thus, improve policymaking (Ingram & Schneider, 1988).

Building upon other scholars' work, policies are defined as "goal-oriented, purposive instruments that reflect values and that seek to influence the allocation of values for the society, or

¹ Balibar (2010) discusses this phenomenon with the term "cosmopolitical difficulty" relating to the existence of both internal and external otherness in Europe.

that seek to ameliorate problems" (Schneider & Ingram, 1988: 68). This is done via directing authority to agencies, defining rules for the implementation and setting tools to influence the way affected units of the population act. To analyze policies in a more systematic way, the authors collapse their basic structure into core elements and linkages (Schneider & Ingram, 1988, 2005).

Here, five elements from the policy design literature are relevant for crimmigration research: (1) Goals and Purposes, (2) Agents, (3) Target Populations, (4) Rules, and (5) Tools of Influence.

2.4. Crimmigration in Policy Design

2.4.1. Goals and purposes

The goals and purposes of a policy can appear both of explicit or implicit nature, contradictory, and can require weighing competing interests and values. Additionally, some goals are of hortatory purpose in which case a certain moral orientation is established (Schneider & Ingram, 1988).

Crimmigration literature asserts that governments increasingly stress issues of security and risk management as goals or purposes of policy measures, especially in the context of crime prevention when setting up migration management regimes (Bowling, 2013). Characteristically, constructions of criminality and deviance as well as insecurity are framed by the issue of migration, and conversely, criminality serves as a framing for constructions of strangers and flight. The result is a recategorization of migration as a phenomenon of uncertainty that portrays the relationship between migrants and mainstream society as an issue of security (Althoff & Graebsch, 2022). Following this, there is a shift from declaring migration as an issue of administration towards one of criminality (Marin & Spena, 2016). These presented purposes of new policies implicitly also facilitate the construction of more restrictive migration policies which limit specific areas of migration significantly (Franko Aas, 2011; Gerard & Pickering, 2013). The crimmigration perspective would thus expect migration regulating policies to highlight more and more security and risk management and more specifically prevention of crime in their goals and purposes.

2.4.2. Target populations

Secondly, the authors name the element of a policy's target populations. They are defined as "groups or individuals whose decisions and behavior are related to policy goals directly or indirectly" (Schneider & Ingram, 1988: 70). Again, they can be explicitly mentioned or need to be derived out of the context and content of the analyzed policy. The identification of target populations allows to detect the principles guiding the choice of who is targeted (and who is not). The authors highlight the possibility of the mentioned target population not being directly linked with the substantive policy goals but with for example political agendas, thus stressing the analysis of the connection between goals and each target population. Moreover, the amount of room for self-determination of the target population can vary. In the case of rules staying vague this may open up room for lower-level agents to act along their interests (Ingram & Schneider, 1988).

Regarding target populations in crimmigration, central unit are migrants. However, the category of migrants, in general, is a broad one as there exists many types of migrants differing in their reasons for migration, their migration parcours, and challenges along the way as well as at their destination. Especially the increasing pattern of a binary logic of categorizing these different groups into "regular" and "irregular" or even "legal" and "illegal" allows for differential treatment by governments as for example in context of law enforcement (Gerard & Pickering, 2013). Relating to surveillance, Franko Aas argues that surveilling "socially privileged populations seems to be driven by a different set of objectives and consequences than the surveillance of those on the bottom of the social hierarchy" (2011: 337). Therefore, analyzing the type of target population is important to properly investigate policy design from a crimmigration perspective as different types of migrants may be subject to crimmigration in varying degrees.

2.4.3. Agents

Agents are defined by Ingram and Schneider as "officials assigned responsibilities by policy documents as well as others who may have assumed responsibilities in relation to the policy" (1988: 71). This component includes the circumstances and location of control on the one hand and its extent on the other. The authors also clarify that agents do not necessarily have to be public actors but can also be found in the private sector. Further, Ingram and Schneider argue for the importance of recognizing context in the analysis of agents, since their choice can have a range of possible reasons (1988).

Crimmigration academia uniformly agrees on the development of overlap in agents of crime control and migration control (see for example Franko Aas, 2011; Bowling, 2013, Van der Woude, 2022). Pickering and Weber (2013) observe this phenomenon in the growing immigration regime in Australia. Here, they detect that immigration agencies have adopted areas of authority and practices that were traditionally found in the responsibilities of criminal authorities and that police authorities are increasingly involved in the immigration process. Bowling and Westenra (2020) find similar evidence in the United Kingdom. They further see the creation of specialized units with authority which are unique to the crimmigration control system. In the EU context, Den Boer (2008) finds an increasing dominance of the "Area of Freedom, Security and Justice" (AFSJ) connecting the policy areas of migration, security, and crime. The emerging transnational systems of surveillance in the EU facilitate and thus, accelerate this intertwinement of authorities (Franko Aas, 2011). This is especially the case for the European Border and Coast Guard Agency (FRONTEX) (Franko Aas & Gundhus, 2015). In the approach of FRON-TEX, the border becomes vulnerable while the people who cross it are handled as threats (Gundhus, 2021). Van der Woude (2022) highlights that the existence and degree of discretion for the implementing authorities is a crucial driver for practices of crimmigration. Central in the creation of justice or injustice, is the way the room of discretion is used.

2.4.4. Rules and Tools of Influence

Other than the three previously discussed core elements of policy design, Ingram and Schneider point out different types of linkages. Policymakers leverage different tools of influence to increase the policy according behavior of target populations and agents. The authors collapse different strategies into five tools, namely tools of (1) authority, (2) incentive, (3) capacity, (4) symbolic, and (5) hortatory tools. Firstly, tools of authority are based on the acceptance of legitimate authority of governments. They are usually used in the context of managing agents in a hierarchical system but in some cases extend to the target populations. Secondly, incentive-based tools aim at invoking the wanted behavior by including inducements, charges, sanctions, or force into the policy. Ingram and Schneider argue that the kind of incentive which is included may depend more on the social construction and power of the target population than on its behavior. Thirdly, capacity tools function on providing resources to the target populations to enable the self-determined decision-making of actors. Similar to this, learning tools draw from leaving to agents or target populations to freely select and test policy approaches to an issue, especially in cases in which ways to evoke a certain behavior are unknown. Finally,

governments may choose to leverage symbolic and hortatory tools which reference values and beliefs to appeal to a certain target group and thus, this way ensure their appropriate behavior. Further, the presence of rules in every policy is named, determining matters of timing and setting procedures for handling the policy's functioning (Schneider & Ingram, 1990).

While rules de- and prescribe the specific procedures and timings, incentives aim at the way these rules ought to be enforced. Following the rationale of the aforementioned policy elements, crimmigration establishes itself in the procedures laid out in the policy connecting crime and migration-related authorities in processes. In addition, procedures originally rooted in either field are adapted within the other. An example here is the adaptation of risk management in migration policies (Bosworth, 2008). Further, Stumpf (2013) argues that crimmigration has led to an increased duration of government processes for the targeted individuals in addition to the expansion of their contact with law enforcement.

Concerning used tools of influence, crimmigration control features the adaption of detention for migration control purposes (e.g., Majcher, 2021). Following the rationale of migration policy adapting traditional modes and practices of crime control, crimmigration employs incentives of sanction and force to evoke the intended behavior (see for example Althoff & Graebsch, 2022; Bowling, 2013; Sanchez et al., 2022; Stumpf, 2013a).

3. Methods

3.1. The case of EURODAC

The database EURODAC is a central component of the previously discussed digital migration management infrastructure of the EU. The system became operational in 2003 with the purpose of organizing applications for asylum of migrants entering the EU territory irregularly. More specifically it helps determine the member state of first entry which is responsible for processing asylum claims under the Dublin regulation². To reach these ends, the database operates with biometric data. In the "Hit/Non-hit"-procedure, national migration management agencies can enter fingerprints of migrants who applied for international protection, third-country nationals (TCN) who enter a state irregularly, or TCNs who are found irregularly on member state

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² In June 2023 participating countries were all member states of the EU as well as Switzerland, Lichtenstein, Iceland and Norway.

territory. The system will then show a "hit" if the migrant has been previously registered by another member state (Bredström et al., 2022; Vavoula, 2023). In 2015, a recast regulation was adopted which expanded the possibilities of the database significantly and as one consequence developed it into a "quasi-identification tool" (Vavoula, 2022: 327). One year later, in 2016, the European Commission released a proposal to further reform the database. The release was followed by negotiations, in which, in 2018, a vague political agreement was reached (Council of the European Union, 2018). This, however, did not lead to the policy being passed. In the context of the New Pact on Migration and Asylum, which was announced in 2020 by the European Commission, the EURODAC proposal was re-entered into negotiations in a recast version. Up to this date, it is still in deliberation between the different actors of the EU legislative process with the objective of being passed in 2024 (European Parliament, 2023).

The proposal adds the objective of controlling irregular immigration with a focus on the return of rejected migrants and features several key changes to the database (Strąk, 2018) Within the policy package, a more digitalized process is promoted. Central here, is the objective of interoperability of a range of EU databases into one big integrated system (See figure 2). The according regulation was adopted in 2019 integrating several databases in the area of borders, visas, police, judicial cooperation, migration, and asylum. The inclusion of EURODAC is explicitly planned once the database is fit for interoperability.

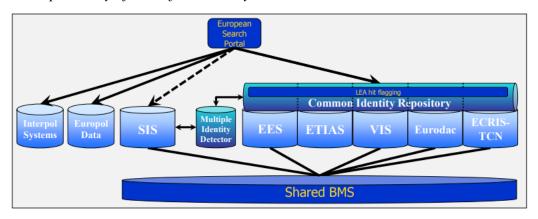
The interoperability structure features several tools for accessing recorded data. Among them are the European Search Portal (ESP), enabling the simultaneous query of all integrated databases, as well as a biometric matching service (BMS) allowing to search and compare biometric data. Further, a common identity repository (CIR) is introduced which records biographic and biometric information of individuals in one data sequence shared in several of the integrated databases (European Parliament, 2019). The main actor responsible for the operational management of the system of interoperability is the "European Union Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security, and Justice (eu-LISA). The agency holds responsibility for the administration and operation of large-scale IT systems in the areas of border security, law enforcement, and migration management and since 2011 also for EURODAC (Glouftsios, 2021).

The pact also introduces screenings at EU external borders. Here, arriving migrants are to be detained in arrival centers until they are processed. Among other things, procedures are carried out during which migrants are examined for a variety of characteristics such as health and potential threat to security. In this context, a security flagging of individuals identified as potential

threats can be introduced, subsequently visible in their data sequence in the CIR and therefore also EURODAC (Bredström 2022, Vavoula 2022).

Figure 2.

Interoperability of EU information systems



Note. COM/2017/0793, (2017) (European Commission)

http://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetailDoc&id=32600&no=1.

3.2. Research Design and Data Collection

Given its centrality in EU migration management and its planned transformation, the analysis of EURODAC is suitable for answering the research question. Hence, a case study of the EU-RODAC policy is conducted. Case studies can be defined as an "intensive study of a single unit for the purpose of understanding a larger class of (similar) units" (Gerring, 2004: 342, parentheses in original). In this sense, case studies are suited for research of a case that bears the potential to give insights into a problem. This paper employs a single case study where only one case is analyzed in depth (Creswell et al., 2007). A longitudinal comparative element to the case study will allow to investigate the potential change in the policy at hand (Gerring, 2004). For uncovering potential evidence of crimmigration and possible changes in the policy design, qualitative textual analysis is beneficial as it allows to identify the meaning of a certain text. Here, the researcher takes into account the "codes, conventions, and genre of the text and its social, cultural, historical, and ideological context" (Lockyer, 2008). To link the longitudinal element and textual inquiry, the analysis of the policy document itself is appropriate. Since this type of document's structure and content elements do not vary, an identification of changes is facilitated. As the research question revolves around the policy content itself and less about its making or implementation, taking the policy document itself as source of data is sufficient or even favorable. Further, the policy document is the expression of the constructions and visions of its issuers and thus, gives insight herein.

The data basis of the analysis encompasses qualitative secondary data collected in desk research. The dataset includes:

- (1) the original EURODAC regulation from its initial establishment,
- (2) the current regulation in force since 2015,
- (3) the 2016 reform proposal of the European Commission and
- (4) its recast version from 2020 currently in negotiation within the framework of the New Pact on Migration and Asylum (see also Appendix A: List of coded documents).

The proposal of 2020 presents a modified version and thus, the replacement of the 2016 proposal. Nonetheless, it was decided for the inclusion of the 2016 version to be able to map the overall development of the policy in more detail. However, the preliminary political agreement of 2018 was not included since it does not contain an according regulation proposal and thus is not supported by the methodological design. In the documents, the regulation itself was coded as well as the preamble. Concerning the recast proposal of 2020, only adjusted parts are listed. Here, crossed-out parts were not coded since they are not part of the proposal anymore (for an example of the document structure see Appendix 8.2). The policy documents are publicly available in the online archive "EUR-Lex" of the EU and can be freely downloaded.

The combination of the elements of textual analysis, longitudinal design, and policy documents as sources of data enables a replication of the analysis for each stage of the policy. This way, it allows for a systematic mapping of the potential change of the policy.

3.3. Method of analysis

For analyzing the policy documents, qualitative content analysis is used. Content analysis enables the systematic identification of themes and patterns in the text under scrutiny. The method is particularly suitable for the reductive and surface-oriented analysis of large amounts of text (Flick et al., 1995). This is done by creating categories and codes and searching the text for their appearance (or absence). Since this kind of analysis is highly unstandardized its design is closely connected to the particular case at hand. The category system is developed in an

interrelationship between theory and the concrete material, defined by rules of construction and assignment, and revised and reviewed during the analytical process. Finally, the results are interpreted in the direction of the main question and the significance of the analysis is assessed (Mayring, 1990).

In this study, categories are derived from policy design theory to structure the policies in a meaningful way. Hence, categories are goals or purposes, target populations, and agents, rules, and tools of influence. Each category is coded for elements of crimmigration. These codes were derived deductively from literature on crimmigration and insights from an initial reading of the policy documents (Table 1). Since the crimmigration perspective is very diffuse in academia as it encompasses a range of focuses and crimmigration in technologies is rather little conceptualized, codes were held broad to be able to detect all kinds of evidence of crimmigration.

In the dimension of *purposes or goals*, crimmigration is found in any policy goal or purpose relating to law enforcement, risk, and security matters. For the element of *target populations*, it must be noted that coding does not automatically indicate crimmigration. The coding analyzes more who is target of crimmigration in this context and what type of data is recorded in the system. For *agents*, any type of overlap of migration and crime control agents (e.g., in specialized units) is coded. Concerning *rules*, the coding encompasses any rules connecting migration control and crime control elements. Lastly, within the category of *tools of influence*, incentive tools featuring sanctions and force in relation to the targeted data subjects are explored.

Limitation of the selected method comes in the shape of its vulnerability to subjectivity. To mitigate this weakness of the chosen method a peer coding of one document was carried out with a student of the same program. After the process, coding was compared and adjusted according to the gained insights.

To manage the analysis more effectively, the software package Atlas.ti was used as an analytical tool. The program facilitates the sighting of larger amount of text, the systematic and coherent coding of themes, and the storage of findings.

Table 1.

Coding scheme

	Category	Code		
Element of Policy Design	Definition by Schneider & Ingram (1988)	Element of crimmigration		
Purposes /Goals	-	Policy goals & purpose relating to law enforcement, risk, and security matters		
Target populations	"[] groups or individuals whose decisions and behavior are related to policy goals directly or indirectly" (p.70)	(1) Type of individuals(2) Type of data registered		
Agents	"[] officials assigned responsibilities by policy documents as well as others who may have assumed responsibilities in relation to the policy" (p.71)	Overlap of migration and crime control authorities		
Rules	"[] prescribe actions of targets and agents" (p.72)	Rules connecting migration control and crime control elements		
Tools of influence	"[] explicit and implicit incentives and other means imbedded in the policy that increase the probability of agents and targets taking actions in concert with policy objectives" (p.72)	Incentive tools directed to target population featuring: (1) Sanctions (2) force		

4. Findings

4.1. General evidence of crimmigration in the EURODAC policy

As previously discussed, literature suggests the existence of crimmigration in the EU context. The analysis of the regulations and proposals produced evidence of crimmigration in each stage of the policy. A Code-Document Analysis (Table 2) provides the code frequency for each document. Crimmigration is found in the categories of goal or purpose, agents, rules, and tools of influence. As previously discussed, codes in the category of target populations do not necessarily indicate crimmigration in this dimension.

In the initial EURODAC regulation of the year 2000, crimmigration is found only in the category of agents. The policy reform of 2013 shows crimmigration in goals or purposes, agents,

and rules. However, no tools of influence relating to crimmigration are found. The 2016 proposal entails elements of crimmigration in all relevant categories. Regarding the 2020 proposal, it must be noted that the document only lists articles that were modified or added in relation to the 2016 proposal. This means that elements of crimmigration found in the 2016 proposal are potentially also included in the 2020 proposal. In this case, the quantitative information does not provide precise information regarding the appearance of crimmigration in the policy proposal.

Table 2.

Code-Document Analysis. Color scheme indicates values > 0.

	2000	2013	2016	2020	Totals
Goals/Purposes	0	4	14	8	26
Target populations	11	11	14	23	59
Agents	1	10	16	8	35
Rules	0	7	5	14	26
Tools of influence	0	0	3	0	3
Totals	12	32	52	53	149

A first look at the findings can thus, provide an answer to sub-question one "Is there evidence of crimmigration in the EURODAC policy?". Indeed, crimmigration is present in the EURODAC policy. This insight establishes the basis for the analysis of sub-questions two and three, namely "In which ways and to what extent is crimmigration detectable in the policy design elements within each stage of the EURODAC policy?" and "To what extent and how has the policy changed from a crimmigration perspective?". To answer the sub-questions, the analysis is structured along the previously introduced elements of policy design. Each subsection analyses the existence of crimmigration elements in the four policy documents or three policy stages, respectively, and investigates their development. Concerning linkages, the element of rules are discussed in relation to the respective policy design element while tools of influence are highlighted in a separate subsection. This way, sub-questions two and three are answered simultaneously. Further, the development of all policy design elements is connected in mapping the overall development of the policy and discussed concerning the role of digitalization in the changes. This, finally, allows to answer sub-question four.

4.2. Goals/Purposes

The EURODAC policy in its initial setup was strictly limited to facilitating the administrative purpose of identifying the responsible member state within the framework of the Dublin procedure. Different articles of the initial regulation (Council Regulation (EC) No 2725/2000) state this limitation, also in relation to sanctions mandated by member states if actors use data for other purposes which are not laid out by the regulation³.

The recast regulation from 2013 (Regulation (EC) No 603/2013) introduced a significant extension in purpose as it allows for the comparison of fingerprint data in the context of the "prevention, detection or investigation of terrorist offenses or of other serious criminal offences" in context of an "overriding public security concern" (Regulation (EC) No 603/2013 Article 20 (1) (a)) by national law enforcement authorities and Europol. This constitutes a clear entry of crime control and security-related objectives which were not foreseen in the initial purpose of the policy. However, concerning the rules of this law enforcement access to the recorded data, the policy lays out strict conditions. Law enforcement can only request access in a specific case. Systematic comparisons of data are explicitly not allowed. Further, access can only be granted if the query of other named databases has not led to an establishment of identity and there are reasonable grounds for suspecting that the comparison will help with the laid-out crime control objectives⁴.

The 2026 proposal (COM/2016/0272) kept this law enforcement access. In the preamble, the EURODAC policy is explicitly connected to the objective of internal security as a complementary policy area. Further, the proposal articulates a change of scope in moving away from a database solely dedicated to organizing the Dublin regulation to "a database for wider immigration purposes (COM/2016/0272 Memorandum: 11). This is manifested in the addition of the purpose of the database to "assist with the control of illegal immigration to and secondary movements within the Union and with the identification of illegally staying third-country nationals" (COM/2016/0272 Article 1 (1) (b)). Following this, it is observable that the said immigration purposes are focused on the management of illegality through control.

The recast version, the 2020 proposal (COM/2020/614), paves the way for the inclusion of EURODAC into the interoperability structure. This comprises the integration of the EURODAC system into the Common Identity Repository⁵. Said integration goes along with the

³ See for example Council Regulation (EC) No 2725/2000 articles 9 (1) and 25.

⁴ See Regulation (EC) No 603/2013 articles 20 and 21.

⁵ See COM/2020/614 article 1 (e).

adoption of its purpose, namely the identification of individuals through police authorities⁶. Further adoption of purpose is stated in articles 1 (f) and (g) where the support of the objectives of the European Travel Information and Authorization System (ETIAS) and the Visa Information System (VIS) is declared. While the former lists the assessment of security risks of individuals entering the EU within its set of objectives⁷, the latter names the prevention of threats in this context⁸. Asserting the stages of the policy in light of its purpose, a significant extension within the policy element is observable. Not only goes this contrary to the strict limitation of purpose laid out in the original regulation. The change in purpose is directed towards an emphasis on security and risk management objectives and the control of illegalized movements which present clear goals and purposes of crimmigration.

4.3. Target population

Reviewing Council Regulation (EC) No 2725/2000, the database initially registered data of applicants for asylum⁹ and "aliens apprehended in connection with the irregular crossing of an external border" (Council Regulation (EC) No 2725/2000 Chapter III). The data stored was limited to the fingerprints and sex, in addition to procedural data (e.g., the date on which the fingerprints were taken) of the subject in question¹⁰. Individuals found illegally staying on member state territory were only entered for comparison with recorded data of individuals belonging to both aforementioned categories, but not recorded in the database¹¹. The age limit of the concerned individuals was set to at least 14 years of age¹². Once an individual whose data is recorded in the database, becomes a recognized refugee, said data is blocked¹³ or once they become a citizen the data is erased. This setup did not change with the recast version of the regulation in 2013. The only novelty is that once a recorded individual has gained official recognition of refugee status, the data is not blocked anymore but marked. The data can still be accessed by law enforcement until three years after this recognition¹⁴.

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⁶ See Regulation (EU) 2019/818article 20.

⁷ See Regulation (EU) 2018/1240 article 1 (1).

⁸ See Regulation (EC) No 767/2008 article 2 (g).

⁹ See Council Regulation (EC) No 2725/2000 Chapter II.

¹⁰ See Council Regulation (EC) No 2725/2000 articles 5 and 8.

¹¹ See Council Regulation (EC) No 2725/2000 article 11.

¹² See Council Regulation (EC) No 2725/2000 articles 4, 8 and 11.

¹³ See Council Regulation (EC) No 2725/2000 articles 7 and 10.

¹⁴ See Regulation (EC) No 603/2013 article 18 (2).

COM/2016/0272 extends the set of recorded data significantly. In addition to the already stored data, the collection and storage of facial images, the individual's names, nationalities, place and date of birth, and the type of available identity and travel document is suggested¹⁵.

Further, COM/2016/0272 features the recording of data of TCNs who are found illegally staying in a member state instead of sole comparison¹⁶. Moreover, the period of data storage of both categories of illegally apprehended individuals is extended to five years while those of applicants of asylum stays at ten years¹⁷. Finally, the age threshold is lowered from at least 14 to six years.

COM/2020/614 further extends the range of stored data with the scanned version of previously mentioned documents to the data sequence. More importantly, potential threat to EU internal security determined during the screening procedure is added to the individual's data sequence as a "security flag" 18. The proposal also introduces a new category of TCNs disembarked following a search and rescue operation 19. Through mapping these developments, a continuous extension of categories of recorded migrants as well as a significant increase in the stored data is observable.

4.4. Agents

With regards to Council Regulation (EC) No 2725/2000, only a few agents are explicitly mentioned. The member states are central in the functioning of the system as they are collecting and transmitting data to the system while also being its users. As aforementioned, it falls within the scope of their authority to introduce penalties for any usage of the data outside of the purpose laid out in the policy²⁰.

In terms of potential overlap in crime and migration control-related agents in the initial regulation, the only evidence is found regarding "aliens" who are apprehended by "competent control authorities" (Council Regulation (EC) No 2725/2000 article 8 (1)). The rather vague description allows for the involvement of a variety of different actors. Since the apprehension happens mostly in border areas, these agents are likely to be policing authorities, such as FRONTEX. This establishes a first instance of cooperation of policing and migration authorities in the

¹⁵ See COM/2016/0272 articles 12, 13 and 14.

¹⁶ See COM/2016/0272 article 14.

¹⁷ See COM/2016/0272 article 17.

¹⁸ See for example COM/2020/614article 12.

¹⁹ See COM/2020/614 Chapter IV a.

²⁰ See Council Regulation (EC) No 2725/2000 article 25.

management of migrants in the context of EURODAC which does not change regarding Regulation (EC) No 603/2013 and both proposals.

The introduction of law enforcement access establishes a direct connection between purely crime control-oriented agencies and migration management. It lies within the authority of the member states to designate specific departments or units within national law enforcement agencies which fulfill EURODAC-related tasks. On the one hand, there are "requesting authorities" which handle the requests for law enforcement access including its justifications²¹. On the other hand, the regulation names "verifying authorities" which grant or deny the request²². While these departments or units are to be held separate and independent, they still are subject to, and thus, dependent on the national system. Regarding access of Europol, the division of tasks is equal to national-level authorities, with one requesting unit and one specialized unit for the verification of requests²³. The lawfulness of the processing of data for law enforcement purposes is monitored by the member states²⁴.

Operational management of the database is the responsibility of the "Agency" which became eu-LISA in 2011²⁵. COM/2016/0272 introduces the agency in its new setup. Aside from the operational management eu-LISA is granted the power to draw up comprehensive statistics. These statistics contain information on the procedural processes in connection with EURO-DAC, including for instance the number of hits for each type of data subject. The scope of the statistics expands increasingly from 2013 to 2016 until 2020 when they also become cross-system oriented²⁶. While COM/2016/0272 only mentions the possibility to share these statistics with Justice and Home Affairs agencies, COM/2020/614 lists a range of actors who can access them. Among them, FRONTEX is explicitly mentioned²⁷. Additionally, eu-LISA undertakes considerations for potential technological modifications to the data system²⁸.

Finally, COM/2016/0272 introduces FRONTEX as an agent of EURODAC, as it introduces the possibility of the collection and transmission of data "by members of the European Border [and Coast] Guard Teams" (e.g., in article 10 (3), brackets in original). This means the active involvement of policing authorities in the workings of the database.

²¹ See Regulation (EC) No 603/2013 article 5.

²² See Regulation (EC) No 603/2013 article 6.

²³ See Regulation (EC) No 603/2013 article 7.

²⁴ See Regulation (EC) No 603/2013 article 33 (2).

²⁵ Regulation (EU) No 1077/2011.

²⁶ See Regulation (EC) No 603/2013 article 8, COM/2016/0272 article 9, COM/2020/614 article 9.

²⁷ See COM/2020/614 article 9 (3).

²⁸ See for example COM/2016/0272 article 42 (4).

Looking at the overall development of agents, an increase in responsibilities, authority, and access to information of law enforcement related agents and the establishment of specialized units in the intersection of the database and crime control, is observable.

4.5. Tools of Influence

To reach the goal of the collection of data of the targeted population, Council Regulation (EC) No 2725/2000 formulates the obligation of the member states to ensure the proper collection and transmission of data and to communicate the obligation of the admission of fingerprint data to the data subjects. The preamble of COM/2016/027 references issues with the refusal of data subjects to provide said data and the problem of damaged fingertips²⁹. Responding to these problems, the proposal names the introduction of facial image data as a way to gather reliable data nonetheless³⁰. Moreover, the proposal makes way for administrative sanctions in case of refusal and detention as means of last resort³¹. This presents a clear entry of tools of sanction and more importantly, tools of force traditionally found in crime control. Moreover, the administrative sanctions are determined through the respective national law³² leaving their design to national authorities and thus, making way for varying degrees of punishment. Furthermore, when talking about tools of influence the implications of the newly introduced screening procedure has to be included. The centralized procedure at the external borders includes the data collection of subjects to be included in EURODAC. Hence, here, the process of collection already takes place in detention-like conditions, in reality presenting traditional detention, conditions.

4.6. Overall development

The analysis has shed light on the extent and ways in which crimmigration is present within each of the policy design elements and thus, answered sub-question two ("In which ways and to what extent is crimmigration detectable in the policy design elements within each stage of the EURODAC policy?"). Concerning sub-question three ("To what extent and how has the policy changed from a crimmigration perspective?"), the previous findings also provide the

²⁹ To cope with the Dublin system and its technological tools, namely EURODAC, it became a practice among some refugees to damage their fingertips, for instance through burning them, to prevent identification and consequently deportation to the country of first entry (Grant & Domokos, 2011).

³⁰ See COM/2020/614 article 16.

³¹ See COM/2020/614 article 2 (3).

³² See COM/2020/614 article 2 (3).

details for each element. A return to the Code-Document Analysis summarizes the findings in this regard. Not only is crimmigration found, but it increases with every stage of the EURODAC policy. The analysis reveals a significant increase in codes of crimmigration elements over the course of the policy stages as well as an increase in categories of migrants and type of recorded data (see Table 3 and Figure 3)³³. It must be considered that the previously stated limitations to the informative value of the quantitative data apply here as well.

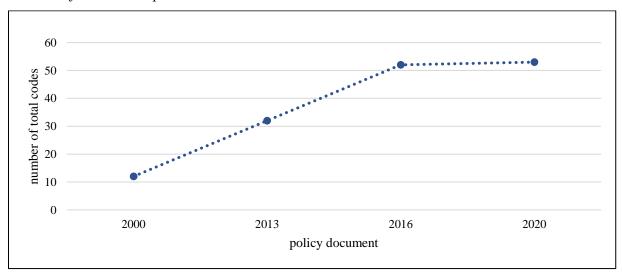
Table 3.

Code-Document Analysis. Color scheme indicates where each value falls within the range of values.

	2000	2013	2016	2020	Totals
Goals/Purposes	0	4	14	8	26
Target populations	11	11	14	23	59
Agents	1	10	16	8	35
Rules	0	7	5	14	26
Tools of influence	0	0	3	0	3
Totals	12	32	52	53	149

Figure 3.

Number of total codes per coded document



To answer the last sub-question of *how digitalization factors into these overall changes*, the next section combines the findings of each policy design element and discusses the role of digitalization in this regard.

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³³ Since the 2020 proposal only lists amended articles, articles that are adopted from the 2016 proposal are not mentioned. This put into perspective the lower number of codes in the 2020 proposal for the elements of "Agent", "Goal/Purpose" and "Tool" in comparison to 2016. Thus, effectively, the number of elements of crimmigration in the 2020 proposal is even higher than the analysis of code frequencies shows.

5. Discussion of findings and answer to SQ4

The combination of policy design elements and aspects of crimmigration allowed to collect evidence of crimmigration in the construction of the EURODAC policy and enabled to systematically map its development. The findings reveal a significant shift in the setup of the database.

With the planned policy laid down in the 2020 proposal, the beginnings of the system as purely dedicated to the administrative organization of the Dublin scheme are long left behind. The series of extensions in purpose has transformed the character of the system, always accompanied by the promise of organizing EU asylum and migration policy more effectively and solidarily³⁴. However, when looking at the actual regulation the only extensions in purpose and goals are dominated by heightened control in connection with an emphasis on return, and security and risk assessment. The system of interoperability, expression of current EU digitalization, accelerates this extension as the purposes of other integrated databases and query tools find entry into the EURODAC policy. It is worth noting that in this context, the purposes and the concomitant possibilities are for the most part not even explicitly listed in the policy but hidden in the reference to some other EU regulation. Thus, as in the case investigated by Dekker et al. (2019), EURODAC also shows evidence of function creep in connection to crimmigration.

The interoperability of systems not only accelerates the extension in purpose but consequently makes demands regarding the setup of EURODAC to be compatible with the interoperability infrastructure. As it is explained in the memorandum of the 2020 proposal, the database in its setup of the 2013 regulation does not support the functioning of the integrated system³⁵. To solve this issue a further extension of data points and the organization of identity data in one sequence is made. This enables the inclusion in the CIR and the integration into the ESP, thus, surpassing the existence of the system as a "quasi-identification tool", observed by Valvoula (2023) in the 2013 policy, and becoming an actual identification tool. The usage of the possibilities of identification through the recorded data is in this context solely used in relation to law enforcement, be it in the light of managing illegality or investigating crime.

These alterations are following the pathway of what started with the introduction of law enforcement access in 2013. The underlying assumption of these processes is the construction of

³⁴ See for example Regulation (EC) No 603/2013, page 2 and COM/2020/614, page 1.

³⁵ See COM/2020/614 Memorandum page 3.

irregular and illegalized migrants as potential threats who require control through risk and security management. The premise is: the more detailed monitoring the better.

While this construction as threat was vaguely present through the emphasis on fighting illegalized migration and only ascertainable to a limited extent in law enforcement access due to its strict limitation to the investigation of specific cases, the introduction of security flagging of individuals made these assumptions explicit. The premise of the security assessment within the screening procedure is not "innocent until proven wrong" but instead "suspect until proven wrong". This contains clear evidence of the general perception of the migrant as "suspect" or even "criminal" which is core to crimmigration (Althoff & Graebsch, 2022; Gerard & Pickering, 2013; Guia, 2013). The digital security flag puts a constant mark on the data of the affected individual. The result of the digital translation of the security assessment is a loss of background information that led to this classification. Information relating to the cause of the flagging is not assigned value. The result, a universal warning, is the only information that is communicated by the system to its clients (e.g., agencies processing asylum claims or law enforcement agencies). Consequently, the reduction of the individual to a source of threat is even more drastic.

But before further discussing the ends of the data, it is necessary to assess the actors and means deployed in the data collection and processing processes. It was found that the database has always relied on cooperation with control authorities in the access to the target population. Whether they belong to migration or crime control entities is not specified which points to blurred responsibilities between and overlap in authority of the two areas. This supports the general observations and reflections of broad crimmigration literature. While in the beginning this relationship of migration management and crime control fields is better described as intertwinement, the shift of the policy induces a merge of agents of both fields. With the expansion of the system's purpose and recorded data, new actors are introduced which are needed to satisfy the system in its growing demands. This gets clear with the assignment of authority to FRONTEX in the data collection process. Its explicit mention in the policy gives it a vital role in the functioning of the database. This way, as already observed by Pickering and Weber (2013) in the case of Australia, cooperating policing agencies become embedded agents of the policy. Consequently, the contact of migrants with policing agents is increased in their migration process, as described by Stumpf (2013b). But not only do these actors act as agents to feed the database, they also become users of the data. The statistics produced with data in the system become more and more comprehensive. This output is directed back to a range of actors. Among them are potential policing actors such as FRONTEX and Home and Justice agencies which can use the information for their purposes, for instance, to inform future actions. The production of said statistics is not the only task of eu-LISA which goes beyond the maintenance of the database. It also falls into the agency's responsibilities to further explore technological possibilities of the system. As the agency is situated at the intersection of border security, law enforcement, and migration management, its efforts for innovation and the evaluation of potential modifications is likely to further amplify the merge of these areas.

Moreover, law enforcement access establishes procedures which connect traditional law enforcement agencies with migration management. This is accompanied by the creation of specialized departments or units in the intersection of migration control and crime control which complements the findings of Bowling and Westenra (2020).

As highlighted by policy design theory it is further meaningful to look at the room for discretion the regulation is granting assigned agents. This point is especially relevant when looking at crimmigration, as literature identifies discretion as driver of the phenomenon. The high dependency of the setup of law enforcement access to the respective national structures in the specification on organization, usage, and penalties in case of misuse allows for national law enforcement agencies to interpret the basic conditions to their liking, thus leaving space for the exploitation of the database under crime control objectives. The dependency on national structures is also present in the choice of administrative sanctions. Here, migrants are exposed to the national migration regimes of the member states which can decide the severity of the punishment. Further, the use of detention is allowed only "as mean of last resort". However, when this point is reached is decided by the executing agents handling the subject in question. Hence, the target population is exposed to the assessment of the executing agent.

The analysis of the regulation can only hint at this matter. To investigate how discretion is used in relation to EURODAC, and to what extent crimmigration is found in this usage, it needs more research focusing on the executing actors themselves.

Taking a step back to look at the system of agents in its entirety, it becomes evident that the functioning of the system is dependent on an apparatus of control agencies which cannot be clearly assigned to migration or crime control. In this sense, the EURODAC policy both establishes and serves a system where security and risk concerns are becoming dominant factors which are shaping procedures. This system introduces specific agents which are needed to maintain the database and its objectives. At the same time, the introduced agents are shaping

the system in the implementation of their tasks within their given discretion. Taking another step back, the possibilities of EURODAC are more and more used to transform the database into a tool for monitoring within the wider trend of an increasingly strict EU migration and asylum regime.

As the database expands and is responsible for more tasks, the comprehensive collection of data becomes increasingly important for its intended functioning. Returning to the target population and their data, it was found that the tools of influence deployed in their regard only appear in the form of sanction and force. The disclosure of data is not enforced with benefits but is designed as an obligatory requirement. Non-compliance is punished. Not only administrative sanctions are leveraged which can pose challenges to migrants in their obtainment of a residence permit, but detention as a tool traditionally found in crime control is adopted in the domain of migration management. It presents a severe interference in the freedom of the migrant. Nondisclosure of personal information becomes a crime that needs to be punished. As aforementioned, Bowling remarks in this regard that while tools of sanction and force are constructed and justified by policymakers as means of administrative organization, they, in fact, are experienced by the affected subjects as "punitive as well as intrusive, coercive, and exclusionary" (2013: 300). But however negative the process and consequences are perceived by affected migrants, disclosure of data remains the only way to find entry to the asylum procedure and hence, to have the chance of receiving a form of residence permit. However, this is put into perspective by the fact that the EURODAC policy and EU migration management all together are directed towards an emphasis on return. In this light, the collection and processing of data itself becomes a detriment for the affected individuals. One might even argue to use the term punishment in this context.

Drawing inspiration from Schneider and Ingram (1988) it is further important to shed light on who is targeted by the regulation but also consequently who is not. Taking the status presented in the 2020 proposal, the system is targeting applicants of international protection, irregular entering TCNs and TCNs found illegally staying in member state territory. These populations are not only among the most vulnerable migrants but also humans in general. Through the recording of their data, they experience a collection of their data, other societal groups are not exposed to. With EURODAC, what happens simultaneously to its managing functions, is the systematic and thorough recording of data. Personal information of a whole population is collected, enabled by the participation of a large number of countries and the deployment of

coercion. This kind of systematic public data collection from public actors on the European level does not occur regarding European citizens. This underscores the argument of Franko Aas of the different level and type of data collection and usage which is directed to an "illegalized global underclass" in comparison to socially privileged societal groups. The further extension of types of recorded immigrants in the category of irregular migration makes this point evident but also the lowing of the age threshold of data subjects. While the memorandum explains the facilitation of family reunification as the main reason³⁶, the modification also allows for the collection of data of a whole generation of migrants whose data is still recorded and potentially accessible when they grow older.

The crux here is the potential of the recorded data. While still most of the operations processing the data revolve around determining the country responsible, the introduction of law enforcement access shows a recognition by European actors of the value of the data in its usage within other purposes. The purely administrative value of the data is surpassed. This shows for example the fact, that data of officially recognized refugees can still be accessed by law enforcement agencies. Would it be just for the correct allocation of applicants, the workings of the database would end once this status is gained. However, law enforcement objectives prevail and thus, give new meaning to the data. Another evidence of this recognition of the potential of the system for other purposes is found in the preamble of the 2016 proposal, where it is stated that EURODAC presents "the ideal database" (COM/2016/0272 Memorandum: 3) to host information on illegally staying TCNs in addition to its already recorded data. The sheer volume and detail of the data make EURODAC a powerful database which can be potentially used for whatever purpose is in the interest of the European Union and its member states. Digitalization in this context facilitates the increasing collection of data and its versatile and flexible usage as well as it shows opportunities for the further expansion of its application. As such its character as a 'force enabler' (Bowling et al., 2008) can be recognized.

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³⁶ See COM/2016/027 Memorandum page 4.

6. Conclusion

Based on the analysis and the discussion of findings the research question "To what extent is digitalization amplifying crimmigration in EU migration management?" can be answered. Looking at the EURODAC policy in its entirety, the argumentation of Althoff and Graebsch (2022) comes to mind, who sees crimmigration as cause and consequence of societal discourse. This phenomenon can be adopted in the case of Eurodac. Crimmigration here is too both starting point (cause) and product (consequence) of the system. In the light of cause, the continuous repurposing in the analyzed policies shows evidence of the need seen by policymakers to adopt security and risk assessment into the domain of migration. The establishment of this necessity connects migrants with crime. "The crimmigrant" requires identification and close monitoring. The expansion of the database shows crimmigration in its design, hence, crimmigration as a consequence. The relationship of crimmigration and technology is characterized by an interplay of demand and opportunities. New agents which hold crimmigration characteristics are introduced to feed the system while simultaneously being fed with its outcome. Tools of sanctions and force adopted from the crime control domain are deployed to ensure the system is supplied with all the information it needs. In this sense, digitalization is both enabler and user of crimmigration systems. The result is a general increasingly seamless merge of crime control and migration control.

The combination of policy design elements after Ingram and Schneider and crimmigration literature allowed to narrow down the concept to specific elements of policies. This way an approach to conduct systematic empiric analyses for evidence of crimmigration was developed. The findings show the analytical strength of this approach. The addition of a longitudinal element in the analysis enabled the mapping of the development of the policy which proved to be useful to shed light on trends of crimmigration. However, to better grasp the way crimmigration is used in different contexts and by different scholars a thorough systematic literature review of the term is utterly needed.

The chosen approach for the analysis of the policy documents worked for finding elements of crimmigration in purpose or goals, agents, rules, and tools of influence. Regarding target population, the inclusion of Ingram and Schneider's reflections on the social construction of target populations in terms of their perception and power would have been enriching for the analysis. However, this was not possible within the scope as well as the methodology of this thesis, since

the regulations are of very technical nature and do not offer enough data on this matter. In general, there is a need for further research focusing more on target populations. The analysis was not able to answer the question sufficiently to what extent crimmigration occurs with regards to other types of migrants within the EU, for instance entering with a temporary visa. Further research needs to look at the differences in the occurrence of crimmigration in the EU depending on what kind of migrant is targeted by policy. Moreover, there is the need for anthropological studies which research the experiences of migrants in contact with the technology, for example in understanding the experiences of individuals who received a security flagging. Important for further research on crimmigration in the context of experiences of target populations seems to avoid their sole construction as victims and to highlight their character as self-reliant individuals. The investigation of coping strategies of target populations in their contact with technology entailing crimmigration and modes of resistance could help to establish this idea further.

With the council agreement on the 8th of June on the approval of the New Pact on Migration and Asylum and its consequences, the adoption of the current Eurodac proposal in 2024 the latest is more than likely. This way, crimmigration gets embedded further in EU migration management. The reflections of potential implications of the database become reality, developing EURODAC into a more and more powerful database. A side effect of the ongoing digitalization leads to underlying assumptions and procedures of crimmigration getting even more invisible among the technicalities of the data system. While physical crimmigration measures like detention are at least somehow perceivable and understandable for both the targeted population and external observers, crimmigration processes within the digital sphere are intransparent and complex to understand, and thus, even harder for its subjects to contest.

Looking into the future and acknowledging the observed vulnerability of digital infrastructure in migration management for the entry of crime control objectives and the production of crimmigration systems, it bears importance to closely monitor them to uncover developments in this direction. The data collected now, under the definition of specific conditions and purposes, is not protected from future repurposing. This shows the past of the EURODAC policy, for example with the introduction of law enforcement in 2013 which was not foreseen in the original regulation. There is no guarantee that the planned repurposing of EURODAC will be the last. As digitalization is more and more driven by the introduction of Artificial Intelligence, the potential introduction of these algorithms could add new dynamics to the issue.

Function creep is not a singular event, but a constant possibility in the light of powerful data systems. Public administration needs to cultivate a new understanding of the underlying biases and power asymmetries driving these types of transformations and consequently create control mechanisms which counter the construction of "the crimmigrant" as well as policy producing crimmigration.

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Appendix A

List of coded documents

Table A1.

Year	Title	Reference	Type of document	Pages
2000	Council Regulation (EC) No 2725/2000 of 11 December 2000 concerning the establishment of 'EURODAC' for the comparison of fingerprints for the effective application of the Dublin Convention	Council Regulation (EC) No 2725/2000	Regulation (no longer in force)	10
2013	Regulation (EU) No 603/2013 of the European Parliament and of the Council of 26 June 2013 on the establishment of 'EURODAC' for the comparison of fingerprints for the effective application of Regulation (EU) No 604/2013 establishing the criteria and mechanisms for determining the Member State responsible for examining an application for international protection lodged in one of the Member States by a third-country national or a stateless person and on requests for the comparison with EURODAC data by Member States' law enforcement authorities and Europol for law enforcement purposes, and amending Regulation (EU) No 1077/2011 establishing a European Agency for the operational management of large-scale IT systems in the area of freedom, security and justice (recast)	Regulation (EU) No 603/2013	Regulation (in force)	30
2016	Regulation of the European Parliament and of the Council on the establishment of 'EU-RODAC' for the comparison of fingerprints for the effective application of [Regulation (EU) No 604/2013 establishing the criteria and mechanisms for determining the Member State responsible for examining an application for international protection lodged in one of the Member States by a third-country national or a stateless person], for identifying an illegally staying third-country national or stateless person and on requests for the comparison with EURODAC data by Member States' law enforcement authorities and Europol for law enforcement purposes (recast)	COM/2016/0272 final	Proposal	107
2020	Amended proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the establishment of 'EURODAC' for the comparison of biometric data for the effective application of Regulation (EU) XXX/XXX [Regulation on Asylum and Migration Management] and of Regulation (EU) XXX/XXX [Resettlement Regulation], for identifying an illegally staying third-country national or stateless person and on requests for the comparison with EURODAC data by Member States' law enforcement authorities and Europol for law enforcement purposes and amending Regulations (EU) 2018/1240 and (EU) 2019/81	COM/2020/614 final	Recast proposal	61

Appendix B

Example of the document structure of COM/2020/614

Figure B1. COM/2020/614 final, page 33

Where there is a hit, the Central System shall transmit the data referred to in Article 12(b) to (s) for all the data sets corresponding to the hit. The Central System shall not transmit the mark referred to in paragraph 1 of this Article. Upon the expiry of the period of three years, the Central System shall automatically block such data from being transmitted in the event of a request for comparison for the purposes laid down in Article 1(1)(c), whilst leaving those data available for comparison for the purposes laid down in Article 1(1)(a) until the point of their erasure. Blocked data shall not be transmitted, and the Central System shall return a negative result to the requesting Member State in the event of a hit.

- 3. The Member State of origin shall unmark or unblock data concerning a third-country national or stateless person whose data were previously marked or blocked in accordance with paragraphs 1 or 2 of this Article if his or her status is revoked or ended or the renewal of his or her status is refused under [Articles 14 or 19 of Directive 2011/95/EU] withdrawn under Articles 14 or 20 of Regulation No (EU) XXX/XXX [Qualification Regulation].
- 4. For the purposes laid down in Article 1(1)(a) and (c), the Member State of origin which issued granted a residence document to an illegally staying third-country national or stateless person whose data were previously recorded in the Central System and in the CIR as appropriate pursuant to Article 13 (2) and 14(2) or to a third-country national or stateless person disembarked following a search and rescue operation whose data were previously recorded in the Central System and in the CIR as appropriate pursuant to Article 14a(2) shall mark the relevant data in conformity with the requirements for electronic communication with the Central System established by eu-LISA. That mark shall be stored in the Central System in accordance with Article 17(2), and (3) and (3a) for the purpose of transmission under Article 15 and 16. The Central System shall, as soon as possible and no later than 72-hours, inform all Member States of origin of the marking of data by another Member State of origin having produced a hit with data which they transmitted relating to persons referred to in Articles 10(1), 13(1), or 14a(1). Those Member States of origin shall also mark the corresponding data sets.

Appendix C

Codebook

Table C1.

	Category	Code		
Element of Policy Design Definition by Schneider & Ingram (1988)		Element of crimmigration		
Purposes /Goals	-	Policy goals & purpose relating to law enforcement, risk and security matters		
Target populations	"[] groups or individuals whose decisions and behavior are related to policy goals directly or indirectly" (p.70)	(3) Type of individuals(4) Type of data registered		
Agents	"[] officials assigned responsibilities by policy documents as well as others who may have assumed responsibilities in relation to the policy" (p.71)	Overlap of migration and crime control authorities		
Rules	"[] prescribe actions of targets and agents" (p.72)	Rules connecting migration control and crime control elements		
Tools of influence	"[] explicit and implicit incentives and other means imbedded in the policy that increase the probability of agents and targets taking actions in concert with policy objectives" (p.72)	Incentive tools directed to target population featuring: (3) Sanctions (4) force		

Appendix D Coding of documents: quantitative data

Table D1. Code-Document Analysis.

	2000	2013	2016	2020	Totals
Goals/Purposes	0	4	14	8	26
Target populations	11	11	14	23	59
Agents	1	10	16	8	35
Rules	0	7	5	14	26
Tools of influence	0	0	3	0	3
Totals	12	32	52	53	149