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Trade Secret Protection in the European Union: Harmonization, Enforcement, and Implications for International Businesses

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General Note about the Content

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Abstract

Trade secrets have become one of the most valuable assets of the modern, knowledge-based economy, yet for a long time they enjoyed markedly uneven protection across the Member States of the European Union. Directive (EU) 2016/943 was adopted to remedy this fragmentation by establishing, for the first time, a common definition of a trade secret together with a harmonized set of civil measures, procedures and remedies against the unlawful acquisition, use and disclosure of such information. This thesis critically examines the degree of harmonization actually achieved under the Directive, the effectiveness of its enforcement mechanisms, and the practical consequences for businesses operating across several jurisdictions. Adopting a doctrinal and comparative method, it analyzes the substantive framework of the Directive, its transposition in selected Member States, in particular Germany, France and Italy, and the emerging case law of the Court of Justice of the European Union. It further situates the European regime within the international legal framework shaped by Article 39 of the TRIPS Agreement and compares it with the United States Defend Trade Secrets Act of 2016. The study argues that, although the Directive establishes a solid common foundation, its character as an instrument of minimum harmonization, combined with divergent national procedural traditions and the unresolved private-international-law treatment of trade secrets, leaves significant gaps in legal certainty for cross-border business. On the eve of the European Commission’s first comprehensive evaluation of the Directive, the thesis proposes a series of targeted measures to strengthen harmonization, enforcement and legal predictability.

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TABLE OF ABBREVIATIONS

BGB	Bürgerliches Gesetzbuch (German Civil Code)
CJEU	Court of Justice of the European Union
DTSA	Defend Trade Secrets Act (United States, 2016)
EEA	European Economic Area
EU	European Union
EUIPO	European Union Intellectual Property Office
GeschGehG	Gesetz zum Schutz von Geschäftsgeheimnissen (German Trade Secrets Act)
IP	Intellectual property
IPR	Intellectual property right(s)
NDA	Non-disclosure agreement
OJ	Official Journal of the European Union
Rome II	Regulation (EC) No 864/2007 on the law applicable to non-contractual obligations
Brussels Ia	Regulation (EU) No 1215/2012 on jurisdiction and the recognition and enforcement of judgments
SME	Small and medium-sized enterprise
TFEU	Treaty on the Functioning of the European Union
TRIPS	Agreement on Trade-Related Aspects of Intellectual Property Rights
TSD	Trade Secrets Directive - Directive (EU) 2016/943
UTSA	Uniform Trade Secrets Act (United States)
UWG	Gesetz gegen den unlauteren Wettbewerb (German Act Against Unfair Competition)
WIPO	World Intellectual Property Organization
WTO	World Trade Organization

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INTRODUCTION

In a globalised and increasingly digital economy, the competitive position of an undertaking depends less on tangible assets than on the information it holds and the knowledge it is able to keep from its rivals. Manufacturing processes, formulae, algorithms, source code, customer and supplier lists, marketing strategies, results of research and development, and a vast range of other commercially valuable information constitute, collectively, what the law describes as trade secrets. Unlike patents, designs or trademarks, trade secrets are not registered, are not limited in time, and are not the subject of any examination by a public authority; their protection rests entirely on the fact that the information remains confidential and on the legal consequences attached to its misappropriation.

For most of the twentieth century, the legal protection of confidential business information within Europe was strikingly heterogeneous. Some Member States protected trade secrets through unfair competition law, others through the law of contract, tort, labour law or even criminal law, and a number of legal systems offered no dedicated regime at all. This patchwork of national approaches stood in marked contrast to the international minimum standard contained in Article 39 of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), to which all Member States and the Union itself are bound.[1] The European Commission considered that the resulting divergence in the level and nature of protection deterred cross-border investment and innovation and fragmented the internal market, and it was against this background that Directive (EU) 2016/943 on the protection of undisclosed know-

[1] Agreement on Trade-Related Aspects of Intellectual Property Rights (signed 15 April 1994, entered into force 1 January 1995) 1869 UNTS 299, art 39.

how and business information (trade secrets) against their unlawful acquisition, use and disclosure was adopted on 8 June 2016.[2]

The Directive established, for the first time in Union law, a single definition of a trade secret, a common catalogue of lawful and unlawful conduct, and a harmonised set of civil measures, procedures and remedies. Member States were required to transpose it into national law by 9 June 2018.[3] In doing so, the Directive deliberately left to the Member States a considerable margin of discretion: it is, by its own terms, an instrument of minimum harmonisation that permits the introduction of more far-reaching protection, subject to compliance with a defined core of provisions.[4] This combination of a common substantive core and a permissive ceiling lies at the heart of the questions examined in this thesis.

Almost a decade after its adoption, the Directive has begun to generate a body of national case law and, more slowly, a stream of preliminary references to the Court of Justice of the European Union. The European Union Intellectual Property Office has published a study of litigation trends, the Commission has produced an intermediate report and a study on trade secrets in the data economy, and critically for the timing of the present study, the Directive itself requires the Commission to carry out a comprehensive evaluation of its impact by 9 June 2026. This thesis is therefore written at a moment when the first systematic appraisal of the regime is due, and it seeks to contribute to that appraisal.

Research questions and aim

The central aim of the thesis is to evaluate critically the harmonisation of trade secret law achieved under the Directive, to assess the effectiveness of its enforcement mechanisms, and to analyse the practical implications for international businesses operating across several Union

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[2]Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure [2016] OJ L157/1 (hereinafter 'the Directive' or 'TSD').

[3]TSD, art 19(1).

[4]TSD, art 1(1), second subparagraph.

jurisdictions. Four research questions structure the inquiry. First, to what extent has the Directive in fact harmonised trade secret protection across the Member States? Second, how effective are the enforcement mechanisms it provides, in particular in cross-border disputes? Third, what legal and practical challenges do international businesses face in protecting trade secrets under the European framework? Fourth, how does Union trade secret law align with broader international standards, and what lessons may be drawn for cross-border harmonisation?

The thesis advances three working hypotheses. It argues that harmonisation under the Directive remains partial, because divergent national implementation and procedural differences persist beneath a common substantive surface; that the enforcement mechanisms, although substantially strengthened, face procedural and practical limitations that are especially acute in cross-border litigation; and that international businesses consequently continue to encounter compliance challenges and legal uncertainty arising from the fragmented landscape that the Directive was intended to overcome.

Methodology and scope

The study adopts a doctrinal and comparative legal method. It analyses the relevant Union legislation, principally the Directive, but also the instruments with which it interacts, together with the case law of the Court of Justice and a selection of national implementing measures. The comparative dimension focuses on Germany, France and Italy as representative of distinct legal traditions and transposition techniques, with supporting reference to Spain and other Member States where instructive. The international dimension is addressed through the TRIPS Agreement and a comparison with the United States Defend Trade Secrets Act of 2016. Secondary sources - academic literature, the reports of the Union institutions and of the EUIPO, and practitioner commentary - supplement the primary materials.

A word on terminology and scope is warranted at the outset. The terms ‘trade secret’, ‘undisclosed information’, ‘know-how’ and ‘confidential business information’ are used in the literature with varying degrees of precision; this thesis uses ‘trade secret’ in the sense given to it by Article 2(1) of the Directive, treating ‘undisclosed information’ as the corresponding term of the TRIPS Agreement and ‘know-how’ as a broader, looser notion that includes, but is not confined to, protectable trade secrets. The thesis is concerned principally with the civil protection of trade secrets, which is the subject matter of the Directive; criminal protection, which the Directive does not harmonise and which Member States regulate divergently, is addressed only so far as it illuminates the comparative analysis. Questions of pure employment law, of contract drafting, and of the technical means of information security are likewise considered only to the extent necessary to understand the legal framework and its practical operation. The focus throughout is on the position of the undertaking that operates across more than one Member State, for it is such an undertaking that experiences most acutely the consequences of incomplete harmonisation.

The thesis is structured in five chapters. Chapter 1 introduces the concept of a trade secret, its economic significance, its contested legal nature and the international and pre-Directive frameworks against which the European regime must be understood. Chapter 2 analyses the substantive framework of the Directive and the nature of the harmonisation it pursues. Chapter 3 undertakes a comparative study of national implementation, identifying the divergences that survive transposition. Chapter 4 examines the enforcement mechanisms, the emerging case law of the Court of Justice, and the particular difficulties of cross-border enforcement. Chapter 5 situates the European regime in its international context, compares it with the United States, and develops recommendations to strengthen harmonisation, enforcement and legal predictability. A concluding chapter draws the analysis together.

1. TRADE SECRETS: CONCEPT, ECONOMIC SIGNIFICANCE, AND LEGAL EVOLUTION

1.1. The Notion of a Trade Secret

A trade secret is, in essence, valuable information whose value depends upon its remaining confidential. The notion is functional rather than formal: protection attaches not to a category of subject matter defined in advance, but to information that satisfies certain qualitative conditions. The Directive captures this idea in Article 2(1), which defines a trade secret as information that is secret in the sense that it is not, as a body or in the precise configuration and assembly of its components, generally known among or readily accessible to persons within the circles that normally deal with that kind of information; that has commercial value because it is secret; and that has been subject to reasonable steps, under the circumstances, by the person lawfully in control of the information, to keep it secret.[5]

These three cumulative requirements - secrecy, commercial value derived from secrecy, and reasonable steps to preserve confidentiality, are not an invention of the Union legislature. They reproduce, almost verbatim, the elements of Article 39(2) of the TRIPS Agreement,[6] and they are echoed in the United States Defend Trade Secrets Act of 2016. The deliberate alignment of the European definition with the international standard is significant: it signals that the Directive was conceived as a measure giving concrete and uniform effect within the internal market to an obligation that already bound the Member States at the level of public international law, rather than as the creation of an entirely new right.

Two features of the definition deserve emphasis at the outset. First, the secrecy requirement is relative, not absolute: information does not cease to be secret merely because it is known to a limited circle of persons, provided it is not generally known or readily accessible within the relevant trade. Recital 14 of the Directive accordingly excludes from protection trivial

[5] TSD, art 2(1)(a)–(c).

[6] The correspondence between TSD art 2(1) and TRIPS art 39(2) is widely noted; see eg Tanya Aplin, 'The Limits of EU Trade Secret Protection' in Sandeen, Rademacher and Ohly (eds), Research Handbook on Information Law and Governance (Edward Elgar 2021).

information and the experience and skills gained by employees in the normal course of their employment, as well as information that is generally known or readily accessible.[7] Second, the requirement of ‘reasonable steps’ imposes a positive duty of self-help on the holder: a trade secret is protected only to the extent that its proprietor has taken measures - contractual, technical and organisational, appropriate to keep it confidential. As will be seen, this requirement has become one of the principal battlegrounds of national litigation, because national courts have differed in the stringency with which they assess it.

A further subtlety lies in the phrase ‘as a body or in the precise configuration and assembly of its components’. This formulation makes clear that secrecy may attach not only to information that is wholly unknown but also to a particular combination of elements each of which is, taken individually, in the public domain. A compilation - a customer database assembled from publicly available sources, a process that combines known steps in a novel and undisclosed sequence, may qualify as a trade secret even though none of its constituent parts is secret, provided that the combination as a whole is not generally known or readily accessible. This ‘combination secrecy’ is of considerable practical importance, for much of the know-how that businesses most wish to protect consists precisely in the integration of individually unremarkable elements, and it distinguishes trade secret protection from the stricter novelty requirements of patent law.[8]

1.2. Economic Significance of Trade Secrets

The economic importance of trade secrets is difficult to overstate. Empirical studies consistently find that businesses across all sectors and of all sizes rely on confidentiality at least as heavily as on registered intellectual property rights, and frequently more so. The reasons are straightforward. Trade secret protection is immediate and inexpensive: it requires no

[7] TSD, recital 14.

[8] The reference to information ‘as a body or in the precise configuration and assembly of its components’ in TSD art 2(1)(a) is the textual basis for the protection of combination secrets; see the discussion of the definition in the literature cited above and EUIPO, Trade Secrets: Vital Intellectual Property Assets (EUIPO 2023).

application, examination fee or grant, and it arises automatically as soon as the qualifying conditions are met. It is potentially perpetual, enduring for as long as the information remains secret, whereas patents expire after twenty years and require the inventor to disclose the invention to the public. And it covers a far wider range of information than the registrable rights, extending to commercial and organisational know-how that could never satisfy the requirements of novelty or inventive step.

These advantages are particularly valuable to small and medium-sized enterprises and to start-ups, which often lack the financial resources to pursue and defend patents and for which confidentiality may be the only realistic means of appropriating the returns from innovation. Recital 2 of the Directive recognises that businesses value trade secrets as much as patents and other intellectual property rights and that SMEs rely on them even more.[9] The Commission's impact assessment and subsequent studies have linked effective trade secret protection to incentives for research, development and cross-border collaboration, and have framed the harmonisation exercise as an instrument of innovation policy rather than merely of private dispute resolution.[10]

At the same time, the very features that make trade secret protection attractive give rise to tension with competing public interests. Because protection depends on secrecy rather than disclosure, it does not enrich the public domain in the way that the patent bargain does; and because it is potentially perpetual and undefined in scope, it can be invoked to resist legitimate demands for transparency, by employees seeking to use their acquired skills, by competitors engaging in reverse engineering, by journalists and whistleblowers exposing wrongdoing, and by public authorities and courts requiring access to information. The design of any trade secret regime is therefore an exercise in balancing the protection of confidential information against

[9] TSD, recital 2.
[10] European Commission, Study on the Legal Protection of Trade Secrets in the Context of the Data Economy (Publications Office of the European Union 2022), prepared by the European Innovation Council and SMEs Executive Agency.

these countervailing interests, and the Directive devotes considerable attention, in its exceptions and safeguards, to striking that balance.

From the standpoint of economic theory, the justification for protecting trade secrets is usually framed in terms of appropriability. Information has the characteristics of a public good: once it is known, it can be used by many persons simultaneously without being depleted, and it is difficult and costly to exclude others from using it. In the absence of legal protection, an undertaking that invests in generating valuable information would be vulnerable to free-riding by competitors who could appropriate the information at little cost, with the result that the incentive to invest in its creation would be diminished. Trade secret law responds to this problem not by conferring an exclusive right, as patent law does, but by prohibiting the dishonest means by which such information is typically misappropriated, thereby allowing the holder to recover the returns on its investment so long as it maintains secrecy through its own efforts.[11]

This rationale has a second, less obvious dimension. By offering a lawful means of protecting information that is not patentable, or that the holder prefers not to patent, trade secret law reduces the incentive to engage in wasteful secrecy-preserving expenditure, ever more elaborate physical and technological barriers, and substitutes a legal deterrent for a purely self-help one. It also performs a channelling function: by guaranteeing the freedom to reverse-engineer and to discover information independently, it preserves the competitive process and ensures that protection does not ossify into a monopoly over ideas. The economic case for the Directive thus rests not merely on protecting holders but on doing so in a manner that leaves the mechanisms of competition and follow-on innovation intact, an equilibrium that the instrument's express preservation of reverse engineering is designed to secure.

[11]The appropriability rationale and the public-good character of information are standard in the law-and-economics literature on trade secrets; for an overview in the European context see the analyses collected in Jens Schovsbo, Timo Minssen and Thomas Riis (eds), The Harmonization and Protection of Trade Secrets in the EU: An Appraisal of the EU Directive (Edward Elgar 2020).

1.3. The Legal Nature of Trade Secrets and the Intellectual Property Debate

Whether trade secrets are properly classified as a form of intellectual property is a question of more than taxonomic interest, for the classification carries consequences for the applicable substantive principles, for the choice of jurisdiction and applicable law in cross-border disputes, and for the relationship with other bodies of law. The matter is genuinely contested. On one view, trade secrets are simply the seventh category of intellectual property recognised by Section 7 of Part II of the TRIPS Agreement, and the EUIPO itself describes them as a form of intellectual property.[12] On another view, trade secrets differ fundamentally from the classical intellectual property rights because they confer no exclusive right over the information.

The Directive itself takes a clear position on the second point. Recital 16 states that the Directive should not create any exclusive right to know-how or information protected as a trade secret, and that independent discovery of the same information must remain possible; reverse engineering of a lawfully acquired product is expressly recognised as a lawful means of acquisition.[13] The protection conferred is thus protection against wrongful conduct, against acquisition, use or disclosure that is contrary to honest commercial practices, rather than a right to exclude others from the information as such. A competitor who arrives at the same formula through independent research, or who lawfully reverse-engineers a product placed on the market, commits no infringement. In this respect trade secret protection resembles unfair competition law more closely than it resembles patent or copyright.

This hybrid character has led commentators to describe trade secrets as occupying a 'grey area' at the interface of intellectual property, unfair competition, contract and tort.[14] The ambiguity is not merely theoretical. As Chapter 4 will show, it has direct consequences for the

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[12] EUIPO, Trade Secrets: Vital Intellectual Property Assets (n 8). See also TRIPS Agreement, Part II, Section 7 ('Protection of Undisclosed Information').

[13] TSD, recital 16; see also art 3(1)(b) (reverse engineering).

[14] See the characterisation in academic literature of trade secrets as situated in the 'grey area' of intellectual property law, eg the comparative study by the Stanford Program in Law, Science and Technology, 'Shaping the EU Legal Protection for Trade Secrets'.

determination of the law applicable to a cross-border misappropriation: if trade secrets are an intellectual property right, the special rule in Article 8 of the Rome II Regulation applies and the parties cannot derogate from it; if they are a manifestation of unfair competition, Article 6 applies; and if they fall outside both, the general rule in Article 4 governs.[15] The Directive does not resolve this question, and the resulting uncertainty is one of the principal themes of this thesis.

The debate is sometimes cast in the vocabulary of property rules and liability rules. A property rule protects an entitlement by allowing its holder to enjoin any non-consensual taking; a liability rule protects it only by awarding compensation after the event. Classical intellectual property rights such as patents are protected predominantly by property rules, the holder may exclude. Trade secrets, by contrast, sit closer to the liability end of the spectrum: because there is no right to exclude as such, the holder's protection operates principally through the prohibition of, and remedies for, dishonest conduct. The Directive complicates this picture by making injunctive relief widely available, which lends the regime a property-like quality in practice even though, in theory, it confers no exclusive right. This conceptual tension - a liability-rule entitlement enforced through property-rule remedies, helps to explain why national systems have classified trade secrets so differently, and why the Court of Justice has approached them through contextual balancing rather than through the categorical logic that governs the registered rights.[16]

1.4. The International Legal Framework

The international foundation of trade secret protection is Article 39 of the TRIPS Agreement, which forms part of the section on the protection of undisclosed information. Article 39(2)

[15]On the classification difficulty and its private-international-law consequences see Lydia Lundstedt, Cross-Border Trade Secret Disputes in the European Union: Jurisdiction and Applicable Law (Edward Elgar 2023).
[16]The property-rule / liability-rule distinction derives from Guido Calabresi and A Douglas Melamed, 'Property Rules, Liability Rules, and Inalienability: One View of the Cathedral' (1972) 85 Harvard Law Review 1089, 1092; its application to trade secrets is discussed in the comparative literature cited above.

requires WTO Members to provide natural and legal persons lawfully in control of undisclosed information with the possibility of preventing that information from being disclosed to, acquired by or used by others without their consent in a manner contrary to honest commercial practices, so long as the information is secret, has commercial value because it is secret, and has been subject to reasonable steps to keep it secret.[17] A footnote to the provision clarifies that conduct 'contrary to honest commercial practices' includes at least breach of contract, breach of confidence and inducement to breach, as well as the acquisition of undisclosed information by third parties who knew, or were grossly negligent in failing to know, that such practices were involved in the acquisition.[18]

Article 39 builds upon Article 10bis of the Paris Convention for the Protection of Industrial Property, which is incorporated into TRIPS by Article 2(1) and which obliges members of the Paris Union to assure effective protection against unfair competition.[19] Two features of the international regime are important for present purposes. First, TRIPS sets only a minimum standard: members remain free to provide more extensive protection and to choose the legal technique by which they do so, whether through unfair competition law, the law of contract and tort, or a dedicated statute. Second, TRIPS does not require members to treat undisclosed information as property; it requires only that lawful holders be able to prevent dishonest acquisition, use or disclosure. The TRIPS standard thus leaves wide latitude, and it is precisely the divergence that this latitude permitted within Europe that the Directive sought to reduce.

Beyond TRIPS, no comprehensive multilateral instrument governs trade secrets, and the World Intellectual Property Organization administers no dedicated treaty on the subject comparable to those it administers for copyright or patents. The international framework is therefore best

[17] TRIPS Agreement, art 39(2); for a general overview of the Agreement see World Trade Organization, Overview: the TRIPS Agreement (WTO).

[18] TRIPS Agreement, art 39(2), fn 10.

[19] Paris Convention for the Protection of Industrial Property (as revised, Stockholm 1967) art 10bis, incorporated by TRIPS Agreement art 2(1).

understood as a floor rather than a code: it guarantees a baseline of protection across the WTO membership but leaves the architecture of that protection to domestic and, in the European case, regional law.

The minimum-standard character of TRIPS has two further implications worth noting. First, because Article 39 leaves members free to choose the legal technique of protection, the international regime is compatible with the very diversity that the European Directive was designed to reduce; compliance with TRIPS told one nothing about whether a trade secret would be protected to the same degree, or by the same means, in two different members. Second, the enforcement of the TRIPS standard depends on the WTO dispute-settlement mechanism, which operates between states and is ill-suited to the resolution of the private, fact-intensive disputes that constitute the everyday reality of trade-secret litigation. The international floor thus secures a minimum of substantive protection but supplies neither uniformity of method nor a forum for private redress. Increasingly, this multilateral baseline is supplemented by trade-secret chapters in bilateral and regional free-trade agreements, which the European Union and other major trading partners have used to project and to converge their domestic standards; but these instruments, too, operate at the level of inter-state obligation rather than of private enforcement. The practical protection of a trade secret therefore remains, in the last analysis, a matter for national or, within the Union, harmonised regional - law.[20]

1.5. The Pre-Directive Landscape in the European Union

Before the Directive, the protection of trade secrets within the Union was, in the words of the Commission, characterised by diversity and fragmentation. A small number of Member States possessed specific legislation; many relied on general principles of unfair competition, civil liability or contract; and the level of protection ranged from comparatively robust to minimal.[21]

[20]On the limits of the TRIPS minimum standard and the role of free-trade-agreement chapters in projecting trade- secret standards, see the international-framework discussion in Schovsbo, Minssen and Riis (eds) (n 11).
[21]European Commission, 'Proposal for a Directive on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure' COM(2013) 813 final.

The differences extended not only to the substantive definition of what counted as a protectable secret but also, and more consequentially, to the procedural and remedial framework: the availability of interim injunctions, the measures for preserving the confidentiality of the secret during litigation, the rules on the calculation of damages, and the limitation periods all varied markedly from one jurisdiction to another.

This fragmentation was problematic for businesses operating across borders in two distinct ways. Substantively, an undertaking could not assume that information protected in one Member State would be protected in another, or to the same degree. Procedurally, and this is a point to which the thesis will return, the absence of harmonised rules for protecting the confidentiality of a trade secret in the course of legal proceedings created a paradoxical deterrent to enforcement: a holder who litigated risked the very disclosure it sought to prevent, because the secret might have to be revealed to the opposing party or recorded in a public judgment.[22] The EUIPO's 2018 baseline study documented this uneven landscape and provided the benchmark against which the effects of the Directive would later be measured.[23]

The character of the pre-Directive divergence can be illustrated concretely. In the common-law tradition represented within the Union by Ireland, the protection of confidential information rested principally on the equitable action for breach of confidence, a flexible but judge-made doctrine with no statutory definition of its subject matter. In a number of civil-law systems, protection was anchored in unfair-competition law, in Germany, in the criminal and civil provisions of the Unfair Competition Act, and was therefore tied to the existence of a competitive relationship and to notions of dishonest commercial conduct. Italy, by contrast, had already located the protection of confidential business information within its Industrial Property Code, treating it in proximity to the registered industrial-property rights. Still other

[22]On the pre-Directive deterrent effect of disclosure during proceedings, see Rembert Niebel, Lorenzo de Martinis and Birgit Clark, 'The EU Trade Secrets Directive: all change for trade secret protection in Europe?' (2018) 13(6) Journal of Intellectual Property Law & Practice 445.
[23]EUIPO, The Baseline of Trade Secrets Litigation in the EU Member States (EUIPO 2018).

Member States relied on a combination of general civil liability, contractual confidentiality and, in some instances, no dedicated regime at all. The consequence was not merely that the level of protection differed, but that the very conceptual frame through which a trade-secret dispute was analysed - equity, unfair competition, industrial property, contract or tort, varied from one jurisdiction to the next, with corresponding differences in the available remedies, the limitation periods and the procedural protections.[24]

It was this combination of substantive divergence and procedural weakness that the Union legislature set out to remedy. The Directive's legal basis, Article 114 TFEU, the internal-market harmonisation competence, reflects the diagnosis that fragmentation was distorting competition and deterring cross-border innovation, and that the appropriate response was the approximation of national laws. Whether the instrument actually adopted achieved that approximation, and at what level, is the question to which the analysis now turns.

1.6. Trade Secrets and the Other Intellectual Property Rights

A final preliminary point concerns the relationship between trade secrets and the registrable intellectual property rights, for the two are complements as well as alternatives. An undertaking developing a new product will frequently hold a portfolio in which some elements are patented, others are protected by registered designs or trademarks, and a substantial residue, manufacturing know-how, process parameters, the negative knowledge of what does not work, customer and supplier relationships, is protected only as confidential information. The choice between patenting and secrecy is a strategic one: patenting secures a time-limited exclusive right at the price of full public disclosure, whereas secrecy offers potentially perpetual but

[24] On the pre-Directive diversity of national conceptual frames — breach of confidence, unfair competition, industrial property and general civil liability — see COM(2013) 813 final (n 21) and the country surveys in Schovsbo, Minssen and Riis (eds) (n 11).

inherently fragile protection that evaporates the moment the information becomes public, whether through reverse engineering, independent discovery or leak.[25]

This complementarity has two consequences for the analysis that follows. First, trade secret protection frequently operates upstream of, and alongside, the registered rights, so that a deficiency in trade secret law is felt across the whole innovation process and not merely in a discrete category of disputes. Second, because the same body of information may be eligible for protection under several regimes, a software algorithm may attract copyright in its expression, patent protection for an underlying invention, and trade secret protection for its undisclosed implementation, the boundaries between the regimes, and the rules governing their interaction, matter a great deal. The Directive expressly leaves untouched the application of other rules, including those on intellectual property rights and the law of contract, with the consequence that trade secret protection must be understood as one strand within a denser fabric of overlapping entitlements rather than as a self-contained code.[26]

2. DIRECTIVE (EU) 2016/943: HARMONISATION OBJECTIVES AND SUBSTANTIVE FRAMEWORK

2.1. Genesis, Legal Basis and Objectives

The Directive originated in a Commission proposal of November 2013 and was adopted after a legislative process in which the balance between protecting confidential information and safeguarding fundamental freedoms, in particular the freedom of expression, the freedom of the press and the mobility of workers, proved highly contentious.[27] The instrument was founded on Article 114 TFEU, the competence to adopt measures for the approximation of national laws that have as their object the establishment and functioning of the internal market. The recitals make the internal-market rationale explicit: without effective and comparable legal

[25]On the strategic choice between patenting and secrecy, and on the complementarity of trade secrets with the registered intellectual property rights, see Aplin (n 6).
[26]TSD, recital 39 and art 1(2); see also the discussion of overlapping protection in the literature cited above.
[27]COM(2013) 813 final (n 21).

means of protecting trade secrets across the Union, incentives to engage in cross-border innovation- related activity are undermined, investment is diminished, and the smooth functioning of the internal market is impaired.[28]

The choice of legal basis and the diagnosis of fragmentation jointly determined the character of the instrument. Because Article 114 supports the approximation of laws rather than their unification, and because the subject matter touches sensitive areas of national procedural, labour and criminal law, the legislature opted for harmonisation by directive rather than by regulation, and for minimum rather than maximum harmonisation. The significance of that choice is examined in section 2.5; it suffices here to note that the Directive was never intended to produce a uniform Union code of trade secret law, but rather a common floor upon which national systems would continue to build.

The legislative history illuminates the compromises embedded in the final text. The Commission's 2013 proposal was substantially amended during the ordinary legislative procedure, and the version ultimately adopted reflected the outcome of trilogue negotiations in which the European Parliament secured a significant strengthening of the safeguards for journalists, whistleblowers and employees. The contested passages were precisely those, the breadth of the definition, the exceptions in what became Article 5, and the protection of employee mobility, that determine where the balance between protection and competing freedoms is struck. That these provisions were hard-won, rather than freely chosen, helps to explain both their open texture and the prominence the Directive gives to the interests they protect. It also explains why several Member States, Germany among them, experienced domestic political difficulty in transposing the instrument: the European compromise had, in

[28]TSD, recital 8.

effect, to be re-negotiated within each national legislature, with results that varied according to the local balance of interests.[29]

2.2. The Definition of a Trade Secret

The cornerstone of the Directive is the definition in Article 2(1), analysed in Chapter 1. Its importance lies in the fact that, for the first time, every Member State is bound to recognise as a protectable trade secret any information satisfying the three cumulative conditions, and to extend to it the measures, procedures and remedies that the Directive prescribes. Article 2 also defines the related concepts on which the operative provisions depend: the 'trade secret holder' is any natural or legal person lawfully controlling a trade secret; the 'infringer' is any person who has unlawfully acquired, used or disclosed a trade secret; and 'infringing goods' are goods whose design, characteristics, functioning, production process or marketing significantly benefits from a trade secret unlawfully acquired, used or disclosed.[30]

A notable silence in the definition concerns ownership. The Directive defines the holder by reference to lawful control rather than to title, and it says nothing about how ownership of a trade secret is established, transferred or licensed.[31] This omission, sensible in an instrument that confers no exclusive right, nonetheless leaves significant questions, the allocation of rights between employer and employee, between collaborating undertakings, and between transferor and transferee, to be answered by national contract, labour and property law, with the divergences that this entails.

The allocation of rights in the employment relationship is the most important of these residual questions, and it is also the one in which the silence of the Directive is most keenly felt. Much of the information that businesses protect as trade secrets is generated by employees in the

[29] On the legislative history, the 2013 Commission proposal and the Parliament's amendments strengthening the safeguards, see COM(2013) 813 final (n 21) and the account in Niebel, de Martinis and Clark (n 22).
[30] TSD, art 2(2)–(4).
[31] On the Directive's silence as to ownership and the definition of the holder by reference to lawful control, see the comparative commentary in Schovsbo, Minssen and Riis (eds) (n 11).

course of their work, yet the Directive says nothing about whether, or on what terms, the employer becomes the holder of a secret created by an employee, nor about the extent to which a former employee may be restrained from using information acquired during the employment. These questions are left to national labour and contract law, which differ markedly, in the enforceability and permissible scope of post-contractual non-compete and confidentiality covenants, in the treatment of inventions and know-how created by employees, and in the weight given to the worker's interest in occupational mobility. The Directive's own protection of employee mobility, examined below, sets an outer limit on what national law may do, but within that limit the divergences are substantial, and they matter precisely because the employment relationship is the source of so large a proportion of trade-secret disputes. For the undertaking operating across several Member States, the consequence is that the ownership and post-employment protection of the same body of information may differ from one jurisdiction to another, notwithstanding the common definition of what counts as a trade secret in the first place.[32]

2.3. Lawful and Unlawful Acquisition, Use and Disclosure

Articles 3 and 4 form the operative core of the substantive regime. Article 3 enumerates the means by which a trade secret may lawfully be acquired, including independent discovery or creation, observation, study, disassembly or testing of a lawfully acquired product (that is, reverse engineering), the exercise of workers' rights to information and consultation, and any other practice that, under the circumstances, is in conformity with honest commercial practices.[33] Article 4 defines the converse: acquisition is unlawful where it results from unauthorised access to or appropriation of materials lawfully under the control of the holder, or otherwise contravenes honest commercial practices; and use or disclosure is unlawful where

[32] On the Directive's silence regarding the allocation of trade-secret rights in the employment relationship and the consequent reliance on divergent national labour and contract law, see Bengt Domeij, 'The Trade Secrets Directive and Employees' in Schovsbo, Minssen and Riis (eds) (n 11), and TSD art 1(3) (employee mobility).
[33] TSD, art 3.

carried out by a person who acquired the secret unlawfully, who breaches a confidentiality agreement or other duty not to disclose, or who breaches a contractual or other duty to limit use.[34] Article 4(4) extends liability to those who acquire, use or disclose a secret while knowing, or who ought, under the circumstances, to have known, that it had been obtained from another person who was using or disclosing it unlawfully, and Article 4(5) brings infringing goods within the scope of unlawful use.[35]

The pivotal concept throughout is conduct 'contrary to honest commercial practices', a standard inherited from the Paris Convention and TRIPS. Its open texture is both a strength and a weakness: it allows the law to respond flexibly to novel forms of misappropriation, but it transfers to national courts the task of giving the standard concrete content, and it does so without an autonomous Union definition to guide them. The preservation of reverse engineering and independent discovery as lawful means of acquisition, by contrast, is a hard-edged and uniform limit that distinguishes trade secret protection from the exclusive rights and that secures the competitive freedom on which the internal market depends.

Two further features of Article 4 warrant attention. The first is the knowledge standard governing third-party liability. Under Article 4(4), a person who acquires, uses or discloses a trade secret is liable not only where it acted with actual knowledge that the secret had been obtained unlawfully from another, but also where it ought, under the circumstances, to have had such knowledge. This objective standard of constructive knowledge extends liability along the chain of subsequent recipients and is of considerable practical importance: an undertaking that receives information from a new employee, a contractor or a business partner may incur liability if a reasonable person in its position would have appreciated that the information had been misappropriated. The standard thus imposes a degree of diligence on those who receive

[34] TSD, art 4(2)–(4).
[35] TSD, art 4(4)–(5).

commercially sensitive information and shapes the due-diligence practices of businesses that recruit from competitors or acquire technology from third parties.[36]

The second feature is the treatment of infringing goods. By bringing within the scope of unlawful use the production, offering, placing on the market, importation, export and storage of goods that significantly benefit from a misappropriated secret, Article 4(5) extends the reach of the regime from the information itself to the products that embody it.[37] This is a significant conceptual step, because it allows the holder to pursue not only the misappropriator but the downstream commercial exploitation of the secret, and it aligns the remedial architecture of the Directive with that of the Enforcement Directive in respect of infringing goods. It also, however, sharpens the tension with the principle that trade secrets confer no exclusive right: a competitor who lawfully reverse-engineers a product commits no infringement, yet a product that embodies a misappropriated secret may be treated as infringing goods. The line between lawful imitation and unlawful exploitation therefore turns entirely on the provenance of the information, which is frequently the most contested and the most difficult issue of fact in trade secret litigation.

2.4. Exceptions and Safeguards

Article 5 contains the exceptions that gave rise to the most intense controversy during the legislative process. It requires Member States to dismiss applications for the measures, procedures and remedies provided by the Directive where the alleged acquisition, use or disclosure was carried out for the purpose of exercising the right to freedom of expression and information, including respect for the freedom and pluralism of the media; for revealing misconduct, wrongdoing or illegal activity, provided that the respondent acted to protect the general public interest; by workers to their representatives in the legitimate exercise of those

[36] TSD, art 4(4).
[37] TSD, art 4(5).

representatives' functions; or for the purpose of protecting a legitimate interest recognised by Union or national law.[38] These exceptions reflect the legislature's response to the concern, voiced forcefully by journalists, trade unions and civil-society organisations, that a broad definition of trade secrets might be used to suppress investigative reporting and whistleblowing.

Two safeguards complement the exceptions. Article 1(2) provides that the Directive does not affect the exercise of the right to freedom of expression and information, the application of rules requiring disclosure to public authorities, or the autonomy of the social partners and their right to enter into collective agreements; and it does not affect the mobility of employees, in particular by limiting their use of experience and skills honestly acquired in the normal course of employment or by imposing additional restrictions beyond those permitted by Union or national law.[39] The protection of employee mobility is of considerable practical importance, since a large proportion of trade secret disputes arise from the movement of personnel between competitors; the Directive seeks to ensure that the protection of confidential information does not harden into a de facto non-compete obligation. The interaction of these provisions with the later Whistleblower Directive of 2019 reinforces the public-interest dimension of the regime.[40]

The whistleblowing and freedom-of-expression exceptions repay closer scrutiny, because they mark the point at which trade-secret protection yields to the public interest, and because their formulation was the product of hard-fought compromise. The exception for revealing misconduct, wrongdoing or illegal activity is qualified by the requirement that the respondent acted for the purpose of protecting the general public interest; it does not protect disclosure motivated by personal gain or malice, and it leaves to national courts the task of assessing the

[38] TSD, art 5(a)–(d).

[39] TSD, art 1(2)–(3).

[40] Directive (EU) 2019/1937 of the European Parliament and of the Council of 23 October 2019 on the protection of persons who report breaches of Union law [2019] OJ L305/17, which interacts with the trade-secrets exceptions in TSD art 5.

discloser's purpose. The relationship with the later Whistleblower Directive is one of mutual reinforcement: the Whistleblower Directive provides procedural channels and protections for those who report breaches of Union law, while Article 5(b) of the Trade Secrets Directive ensures that the existence of a trade secret cannot be invoked to defeat a protected disclosure. Read together, the two instruments seek to ensure that the strengthened protection of confidential information does not become an instrument for the suppression of legitimate reporting.[41]

The freedom-of-expression exception is, if anything, broader, for it extends to the exercise of the right to freedom of expression and information as guaranteed by the Charter of Fundamental Rights, including respect for the freedom and pluralism of the media. This explicit subordination of trade-secret protection to the freedom of the press responds directly to the concern, voiced during the legislative process, that a broadly framed right might be used to chill investigative journalism. The exception does not, however, supply a precise test for resolving the conflict in a given case; it requires instead the kind of contextual balancing that, as Chapter 4 shows, has come to characterise the Court of Justice's treatment of the boundary between confidentiality and competing rights. The exceptions thus illustrate in miniature the Directive's general technique: a common substantive standard, tempered by open-textured safeguards whose application is left to national courts under the supervision of the Court of Justice.[42]

2.5. The Nature of the Harmonisation: A Minimum Standard

The defining structural feature of the Directive is that it pursues minimum harmonisation. Article 1(1) permits Member States to provide more far-reaching protection against the unlawful acquisition, use or disclosure of trade secrets than that required by the Directive,

[41] TSD, art 5(b); Directive (EU) 2019/1937 (n 40).
[42] TSD, art 5(a) and recital 19; Charter of Fundamental Rights of the European Union, art 11.

provided that compliance with an enumerated set of provisions - the definitions, the exceptions, the limitation period, certain procedural safeguards and the publication rules, is ensured.[43] The structure is therefore that of a regulated floor with a partially fixed ceiling: Member States may exceed the minimum level of protection, but not at the expense of the listed provisions, which operate as a maximum in the matters they govern, principally the safeguards for defendants, third parties and the public interest.

This architecture is the source of the partial harmonisation that this thesis identifies as the central limitation of the regime. By design, the Directive harmonises the substantive minimum while leaving Member States free to layer additional protection on top and to embed that protection within their existing procedural, labour and criminal-law traditions. The predictable consequence is that, beneath a common definitional surface, the actual level and texture of protection continue to vary from one Member State to another. Whether that variation is a tolerable feature of a minimum-harmonisation instrument or a deficiency that undermines the internal-market objective is a question of evaluation rather than of description, and it is examined in the chapters that follow.

The provisions that operate as a ceiling repay attention, because they reveal the legislature's priorities. The articles from which Member States may not depart, even while providing more far-reaching protection, comprise principally the safeguards: the definitions, which fix the outer boundary of what may be protected; the exceptions in Article 5; the proportionality requirement in Article 7(1); the limitation period in Article 8; the safeguards attaching to provisional and corrective measures; and the publication rules. The logic is coherent. A Member State may protect trade secrets more vigorously than the Directive requires, but it may not do so by narrowing the exceptions that protect whistleblowers and the press, by extending the limitation period beyond six years, by diluting the proportionality safeguards that protect defendants, or

[43] TSD, art 1(1), second subparagraph, referring to compliance with arts 3, 5, 6, 7(1), 8, 9(1) second subpara, 9(3)– (4), 10(2), 11, 13 and 15(3).

by redefining the protected subject matter so as to capture information that the common definition excludes. In other words, Member States may add to the protection of holders but may not subtract from the protection of the countervailing interests. This asymmetry, a floor for protection, a ceiling for the safeguards, is the structural expression of the balance struck during the legislative process, and it explains why national 'gold-plating' that raises the threshold for protection, such as the additional German requirement examined in Chapter 3, sits uneasily with the Directive even though more generous protection is, in principle, permitted.[44]

2.6. The Relationship with Adjacent Union Instruments

The Directive does not operate in isolation; it forms part of a dense and growing body of Union law with which it must be reconciled. Its closest relative is the Enforcement Directive of 2004, on which its remedial provisions are modelled and whose architecture of provisional measures, injunctions, corrective measures, damages and publication of decisions it largely reproduces. The deliberate parallelism is significant: it imports into the trade-secret context a body of established jurisprudence on proportionality and on the calibration of remedies, even though trade secrets, unlike the rights covered by the Enforcement Directive, are not exclusive rights. The borrowing is therefore selective, and national courts must be alert to the points at which the analogy breaks down.[45]

Beyond the Enforcement Directive, the Directive interacts with at least four further instruments. It must be read consistently with the Whistleblower Directive of 2019, which reinforces and elaborates the public-interest disclosure exception in Article 5(b); with the General Data Protection Regulation, where the protection of trade secrets may collide with the data subject's right of access, as the case law analysed in Chapter 4 demonstrates; with the

[44]TSD, art 1(1), second subparagraph, read with arts 3, 5, 6, 7(1), 8, 9, 10(2), 11, 13 and 15(3).

[45]Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the enforcement of intellectual property rights [2004] OJ L157/45; on the modelling of the TSD remedies on the Enforcement Directive see Niebel, de Martinis and Clark (n 22).

competition rules in Articles 101 and 102 TFEU, which the Directive expressly preserves and which limit the use of trade-secret protection to restrict competition unduly; and, increasingly, with the Union's digital legislation, in particular the Data Act, which mandates data sharing in defined circumstances while seeking to safeguard trade secrets.[46] The Directive thus sits at the intersection of intellectual-property, data-protection, competition and digital-market law, and its coherence with these adjacent regimes is not merely a matter of tidy drafting but a precondition of its effective operation. The recommendation in Chapter 5 that the forthcoming evaluation attend to this coherence follows directly from the position the Directive occupies within the wider acquis.

3. NATIONAL IMPLEMENTATION: A COMPARATIVE ANALYSIS

3.1. The Transposition Process and Its Timeliness

The Directive required transposition by 9 June 2018. In practice the Member States complied with this deadline to widely varying degrees. Some, notably Italy, which transposed by legislative decree that entered into force on 22 June 2018, and France, whose implementing statute was adopted on 30 July 2018, met or narrowly missed the deadline; others, including Germany, transposed substantially late.[47] The delays were not uniformly the product of administrative inertia; in several Member States they reflected genuine political disagreement, above all over the scope of the whistleblowing and freedom-of-expression exceptions and over the treatment of employees. The result was a period during which the Directive's effects were felt unevenly: in some jurisdictions national courts interpreted existing law in conformity with the Directive pending transposition, while in others the old fragmented regimes continued to apply in full.

[46] TSD, recital 38 (competition law) and recital 39 (other relevant law); Directive (EU) 2019/1937 (n 40); Regulation (EU) 2023/2854 (Data Act).

[47] On the staggered transposition across the Member States see the country surveys in Schovsbo, Minssen and Riis (eds) (n 11), which cover the UK, the Nordic states, Germany, Portugal and Spain; the French and Italian dates are taken from the implementing instruments cited at nn 53 and 55 below.

The staggered transposition had consequences beyond mere delay. During the interregnum, a business operating across the Union faced a moving target: the same conduct might be governed by the new harmonised regime in one Member State and by the unreformed national law in another, and the doctrine of conforming interpretation, while mitigating the gap, could not wholly close it. The EUIPO's litigation study expressly cautions that, because its period of analysis straddles the transposition deadline, the data reflect a discontinuous legal environment in which definitive Union-wide trends are difficult to discern. For the purpose of evaluating harmonisation this means that the early case law must be read with care: divergences observed in the transitional years may reflect the unevenness of transposition as much as any inherent limitation of the Directive. The deeper point, however, survives the caveat: even after transposition was complete in every Member State, the structural divergences examined below persisted, which suggests that the fragmentation is not merely a transitional artefact but a feature of the minimum-harmonisation design.[48]

The following sections examine the transposition in three legal systems that illustrate the principal techniques and the divergences they produced, before drawing the comparison together. A concise overview is set out in the table below.

Member State	Instrument / date	Technique and placement	Notable divergence
Germany	GeschGehG, in force 26 April 2019	Free-standing statute replacing the criminal trade-secret provisions of the UWG; civil-law centred, with a residual criminal offence	Adds an express requirement of a 'legitimate interest in keeping the information secret'; transposed roughly ten months after the deadline
France	Loi n° 2018-670, 30 July 2018	Inserted into the Commercial Code (arts L.151-1 et seq); civil only, with detailed in-camera procedure	No specific criminal procedure adopted; pronounced emphasis on safeguarding freedom of expression and the press
Italy	Legislative Decree No 63/2018, in force 22 June 2018	Amended the Industrial Property Code (arts 98–99) and the Criminal Code	Treats trade secrets expressly as industrial property rights; aggravated criminal penalties for misappropriation by electronic means
Spain	Ley 1/2019, in force 13 March 2019	Free-standing 'business secrets' statute	Detailed rules on co-ownership, transfer and licensing of business secrets that go beyond the Directive's text

[48] EUIPO, Trade Secrets Litigation Trends in the EU (EUIPO 2023) 9, which observes that its analysis occurs in a 'discontinuous legal environment' spanning the implementation deadline of 9 June 2018.

3.2. Germany: The Gesetz zum Schutz von Geschäftsgeheimnissen

Germany transposed the Directive through the Act on the Protection of Trade Secrets (Gesetz zum Schutz von Geschäftsgeheimnissen, GeschGehG), which entered into force on 26 April 2019, roughly ten months after the deadline.[49] The delay was attributable in large part to political controversy over the protection of whistleblowers, employees and journalists. The new Act represented a paradigm shift: it replaced the fragmentary protection previously scattered across the Unfair Competition Act (in particular the criminal provisions of §§ 17–19 UWG), the civil and criminal codes, and general principles of tort and contract, with a single, predominantly civil-law statute.[50]

The GeschGehG diverges from the Directive in a significant respect. Section 2(1) defines a trade secret by reference not only to the three TRIPS-derived conditions but also to a fourth element: the information must be one in which there is a legitimate interest in keeping it secret. This additional requirement, which has no counterpart in the text of Article 2(1) of the Directive, although it draws on the language of recital 14, has been criticised as an instance of 'gold- plating' that risks narrowing the protected category below the Union standard, and its compatibility with the Directive has been questioned.[51] German courts have, moreover, applied the 'reasonable steps' requirement with notable rigour, frequently dismissing claims on the ground that the holder failed to demonstrate adequate confidentiality measures; the practical effect has been to raise the evidentiary threshold for protection and to place a premium on documented information-security and contractual measures. The Act also contains a dedicated

[49] Gesetz zum Schutz von Geschäftsgeheimnissen (GeschGehG) of 18 April 2019, BGBl I 466, in force 26 April 2019.

[50] On the German shift from a criminal-law-centred to a civil-law-centred regime, see GeschGehG (n 49).

[51] On the additional 'legitimate interest' element in § 2(1) GeschGehG and the debate over its conformity with the Directive, see Thomas Hoeren, 'The EU Directive on the Protection of Trade Secrets and its Relation to Current Provisions in Germany' (2018) 9 JIPITEC 138, 139 [5]–[6].

regime for the protection of secrets in civil litigation (§§ 16–20 GeschGehG) and retains a residual criminal offence (§ 23).

The German experience is instructive precisely because it shows how a faithfully transposed common definition can nonetheless produce divergent outcomes through judicial application. German courts have insisted that the holder demonstrate, with specificity, the concrete confidentiality measures it adopted in respect of the particular information in issue, access restrictions, need-to-know controls, encryption, contractual confidentiality undertakings and the like, and have shown a marked willingness to dismiss claims where those measures are not documented to the court's satisfaction. The practical effect is to convert the 'reasonable steps' requirement from a mere threshold condition into a substantial evidentiary hurdle, and to reward undertakings that maintain rigorous, auditable information-security regimes. For an international business, the lesson is that compliance cannot be designed to a single notional Union standard: a confidentiality programme calibrated to the more permissive practice of one Member State may prove inadequate before the courts of another, so that the level of protection in fact enjoyed depends on the forum as much as on the information itself.[52]

3.3. France: La loi relative à la protection du secret des affaires

France implemented the Directive by Law No 2018-670 of 30 July 2018, supplemented by an implementing decree of 11 December 2018, transposing the substance into a new title of the Commercial Code (articles L.151-1 et seq).[53] Before transposition, France had no dedicated trade-secret statute, relying instead on general civil liability, contract and the venerable 'loi de blocage' of 1968; the Directive therefore necessitated the creation of an entirely new civil regime. The French legislator chose not to adopt any specific criminal procedure, even though

[52]On the demanding German judicial treatment of 'reasonable steps' (angemessene Geheimhaltungsmaßnahmen), see Hoeren (n 51).

[53]Loi n° 2018-670 du 30 juillet 2018 relative à la protection du secret des affaires; Décret n° 2018-1126 du 11 décembre 2018; arts L.151-1 et seq Code de commerce. The Conseil constitutionnel upheld the conformity of the law with the Constitution by decision of 26 July 2018.

the Directive permitted Member States to retain or introduce criminal sanctions, and it placed particular emphasis on safeguarding the freedom of expression and of the press, reflecting the same anxieties that had marked the European debate.

The French regime closely tracks the Directive's definition and its catalogue of lawful and unlawful conduct, and it provides for the in-camera procedures necessary to protect secrets during litigation. As in Germany, the statute leaves the assessment of 'reasonable protection measures' to a case-by-case appreciation by the courts, with the attendant uncertainty that this produces in the early years of a new regime.[54]

3.4. Italy: Legislative Decree No 63/2018

Italy transposed the Directive by Legislative Decree No 63 of 11 May 2018, published on 7 June 2018 and in force from 22 June 2018, amending the Industrial Property Code (in particular articles 98 and 99) and the Criminal Code.[55] Italy is distinctive in that it had long protected confidential business information within its Industrial Property Code, and the decree continued and refined that approach. The most significant feature of the Italian model is conceptual: trade secrets are treated expressly as industrial property rights, integrated into the same code as patents, designs and trademarks and benefiting from the procedural apparatus available to those rights.[56] The decree also strengthened the criminal dimension, providing aggravated penalties where misappropriation is carried out by electronic or computerised means.

The Italian choice illustrates the classification debate discussed in Chapter 1 in a concrete legislative form. Whereas the German and French statutes are agnostic, or at most cautious, about whether trade secrets are intellectual property rights, the Italian legislator has answered

[54]On the case-by-case judicial appreciation of 'reasonable measures' in France and the absence of statutory criteria, see Code de commerce arts L.151-1 et seq (n 53).

[55]Decreto Legislativo 11 maggio 2018, n 63, in force 22 June 2018, amending the Codice della Proprietà Industriale (arts 98–99) and the Codice Penale (arts 388, 623).

[56]On the classification of trade secrets as industrial property rights under the Italian Industrial Property Code see Mattia Dalla Costa, Gianluca De Cristofaro and Dario Paschetta, 'The Trade Secrets Directive — Italy' (2019) les Nouvelles.

the question affirmatively. The divergence is not merely symbolic: it influences the procedural rules that apply, the fora before which disputes are heard, and potentially, the characterisation of cross-border claims for the purposes of jurisdiction and applicable law.

3.5. Spain, the Netherlands and Other Member States

Spain transposed the Directive by Law 1/2019 of 20 February 2019, in force from 13 March 2019, which uses the terminology of 'business secrets' (secretos empresariales) and, going beyond the Directive's text, contains detailed provisions on the co-ownership, transfer and licensing of business secrets, treating them in some respects as transferable assets.[57] The Spanish approach is notable for the relative completeness with which it addresses the proprietary and transactional dimension of trade secrets, questions on which the Directive is largely silent, and it illustrates the freedom that minimum harmonisation leaves to Member States to develop the regime in directions the Union legislature did not specify.

The Netherlands transposed the Directive by a dedicated Trade Secrets Protection Act (Wet bescherming bedrijfsgeheimen), which entered into force in 2018 and closely follows the structure and language of the Directive, integrating it with the existing framework of civil procedure and the general law of obligations. The Dutch model exemplifies a minimalist, faithful transposition: rather than reorganising the surrounding law, as Germany did, or assimilating trade secrets to registered industrial property, as Italy did, the Dutch legislature implemented the Directive's requirements with limited national elaboration and left their integration to the courts.[58] Across the remaining Member States, the picture is one of a spectrum of techniques: free-standing statutes in some cases, amendments to existing unfair-competition or intellectual-property legislation in others, and varying degrees of national elaboration of the common core. The shared definitional foundation is everywhere present; the legislative

[57] Ley 1/2019, de 20 de febrero, de Secretos Empresariales, in force 13 March 2019.
[58] Wet bescherming bedrijfsgeheimen (Netherlands), Stb 2018, 369, in force 23 October 2018, transposing Directive (EU) 2016/943.

vehicles, the surrounding procedural environments and the conceptual classifications differ widely.

3.6. Comparative Assessment: Persisting Divergences

Four axes of divergence survive transposition and are of practical consequence for international businesses. The first is definitional: although every Member State has adopted the three-part definition, national refinements, the German 'legitimate interest' element being the clearest example, mean that the protected category is not identical across the Union. The second is the classification of trade secrets as, or as not, intellectual property rights, with Italy at one pole and Germany and France adopting more reticent positions; this divergence carries the private-international-law consequences examined in Chapter 4. The third is the balance between civil and criminal protection: France abjured a dedicated criminal procedure, Germany retained a residual offence, and Italy strengthened its criminal provisions. The fourth, and arguably the most important in practice, is the judicial treatment of the 'reasonable steps' requirement, which national courts, most conspicuously in Germany, assess with differing degrees of stringency, so that the same confidentiality measures may suffice in one jurisdiction and fail in another.[59]

These divergences are, individually, modest; cumulatively, they mean that the Directive has produced convergence in form without producing uniformity in substance. The harmonisation achieved is real but partial, and the residual variation is concentrated precisely in the areas, evidentiary thresholds, procedure, classification, that determine whether protection is effective in practice. The first hypothesis of this thesis, that harmonisation remains partial because of

[59]On the divergent national treatment of the 'reasonable steps' requirement, and in particular its demanding application by the German courts, see Hoeren (n 51); on the persistence of divergence across the Member States more generally, see Schovsbo, Minssen and Riis (eds) (n 11).

divergent implementation and procedural difference is, on the comparative evidence, substantiated.[60]

For the international business that is the focus of this thesis, the practical consequences of these residual divergences are tangible. An undertaking that holds the same body of confidential information across several Member States cannot assume that a single, group-wide protection strategy will be uniformly effective. It must calibrate its confidentiality measures to the most demanding national standard if it wishes to be assured of protection everywhere; it must consider, when structuring licences and collaboration agreements, the differing national positions on the classification and transferability of trade secrets; and it must anticipate that the same misappropriation may be characterised, remedied and even criminalised differently depending on the Member State in which proceedings are brought. The harmonisation achieved by the Directive has reduced, but has not eliminated, the need for jurisdiction-specific legal advice, and the residual transaction costs fall disproportionately on the cross-border actors whom the internal-market rationale of the Directive was intended to benefit.

3.7. Procedural Divergence and Its Practical Weight

The divergences surveyed above are predominantly substantive and classificatory, but the most consequential differences for the holder seeking to enforce its rights are frequently procedural. The Directive harmonises the catalogue of measures, procedures and remedies, but it leaves their integration to national procedural law, and national procedural systems differ profoundly in matters that determine the practical value of the harmonised rights. The availability and conditions of interim relief vary: some Member States grant provisional injunctions readily and, where justified, without hearing the other party, while others impose more demanding thresholds and fuller adversarial procedures before any restraint is ordered. The rules of

[60] The EUIPO's litigation-trends study confirms that post-Directive litigation 'diverges significantly across Member States': EUIPO, Trade Secrets Litigation Trends in the EU (n 48) 9.

evidence differ no less significantly, in the burden of proving both the existence of the secret and the fact of misappropriation, in the availability of mechanisms for securing and inspecting evidence in the possession of the alleged infringer, and in the treatment of expert evidence on questions of value and causation.[61]

These procedural divergences interact with, and frequently magnify, the substantive ones. A demanding national approach to 'reasonable steps', combined with a restrictive evidentiary regime for proving misappropriation, may render protection illusory in practice even where the substantive right is, on paper, identical to that available elsewhere. Conversely, generous interim relief and effective evidence-gathering may make a forum attractive to claimants quite apart from the substantive law it applies. The result is that forum choice, where the claimant has a choice, turns on a composite assessment of substantive and procedural factors, and that the absence of harmonised rules of jurisdiction and applicable law, examined in Chapter 4, acquires its practical significance precisely because the fora between which a litigant may be required to choose differ so markedly in their procedural character. Procedural divergence is therefore not a secondary or technical matter; it is, for the enforcement of trade secrets, frequently decisive, and any honest appraisal of the harmonisation achieved by the Directive must give it due weight.[62]

4. ENFORCEMENT MECHANISMS AND CROSS-BORDER CHALLENGES

The substantive definitions examined in the preceding chapters would be of little value without effective means of enforcement. The principal innovation of the Directive, beyond the common definition, lies in its harmonised catalogue of civil measures, procedures and remedies and, of particular importance, in the obligation it imposes on Member States to preserve the

[61]On the persistence of divergence in interim relief, evidence-gathering and the protection of secrets in the course of proceedings notwithstanding the Directive, see EUIPO, Trade Secrets Litigation Trends in the EU (n 48) 38– 40, 76–83; Schovsbo, Minssen and Riis (eds) (n 11).

[62]On the persistence of procedural divergence in interim relief, evidence and the protection of secrets in proceedings notwithstanding the Directive, see EUIPO, Trade Secrets Litigation Trends in the EU (n 48) 38–40, 76–83.

confidentiality of trade secrets in the course of the very proceedings brought to protect them. This chapter analyses those mechanisms, the emerging case law of the Court of Justice, and the distinct difficulties that arise when a misappropriation crosses borders.

4.1. Civil Measures, Procedures and Remedies

Chapter III of the Directive (articles 6 to 15) establishes the enforcement framework. Article 6 obliges Member States to provide the measures, procedures and remedies necessary to ensure the availability of civil redress, and requires that these be fair, equitable, effective and dissuasive, proportionate, and applied so as to avoid the creation of barriers to legitimate trade and to provide safeguards against abuse.[63] Article 7 introduces a proportionality requirement and empowers courts to sanction abusive litigation, including manifestly unfounded claims brought in bad faith to harass a competitor. Article 8 harmonises the limitation period, requiring that it not exceed six years.[64]

The remedial provisions follow the model of the Enforcement Directive 2004/48. Article 10 provides for provisional and precautionary measures, interlocutory injunctions prohibiting use or disclosure, prohibitions on the production or marketing of infringing goods, and the seizure or delivery up of suspected infringing goods, subject, under article 11, to safeguards including the possibility of requiring the applicant to provide security and of making continued use subject to the lodging of guarantees.[65] Article 12 provides for permanent injunctions and corrective measures, while article 13 subjects them to a proportionality assessment and permits, in defined circumstances, the substitution of pecuniary compensation for an injunction where the person acted in good faith. Article 14 governs damages, which are to be calculated by reference to the negative economic consequences suffered by the holder, including lost profits, the unfair profits made by the infringer, and, in appropriate cases, moral prejudice, with the

[63] TSD, arts 6–7.
[64] TSD, art 8.
[65] TSD, arts 10–11; cf Directive 2004/48/EC of 29 April 2004 on the enforcement of intellectual property rights [2004] OJ L157/45.

alternative of a lump sum based on a notional royalty. Article 15 permits the publication of judicial decisions, subject to the protection of the secret itself.[66]

The damages provision repays closer attention, because the quantification of loss is among the most difficult problems in trade secret litigation. Unlike the infringement of a patent, which can often be measured against an established licensing market, the misappropriation of a trade secret may cause harm that is diffuse and speculative: the loss of a head-start, the erosion of a competitive advantage, the acceleration of a competitor's entry into the market. Article 14 responds by offering the court a menu of approaches, the holder's lost profits, the unfair profits made by the infringer, and, as an alternative, a lump sum based on the royalty that would have been due had the infringer sought a licence, together with the possibility, in appropriate cases, of compensating for moral prejudice. The flexibility is welcome, but it also transfers to national courts a substantial measure of discretion, and the methods by which that discretion is exercised, the evidentiary standards, the use of expert accounting evidence, the readiness to award the royalty-based lump sum, differ from one Member State to another. The same misappropriation may therefore yield materially different awards depending on the forum, a divergence that compounds the uncertainty already identified in relation to substantive protection.[67]

Provisional measures deserve particular emphasis, for in trade-secret disputes the interlocutory phase is frequently decisive. Because the value of a secret may be destroyed irreparably the moment it is disclosed or exploited, the holder's practical interest often lies less in eventual damages than in securing, swiftly, an order restraining use or disclosure before the harm becomes irreversible. Article 10 accordingly equips the courts with a robust toolkit of provisional and precautionary measures, and Article 11 surrounds that toolkit with safeguards

[66] TSD, arts 12–15.

[67] On the divergent national approaches to the quantification of damages under TSD art 14, and on the difficulty of valuing trade-secret loss, see the comparative discussion in Schovsbo, Minssen and Riis (eds) (n 11).

designed to prevent its abuse: the court must be able to satisfy itself, with a reasonable degree of certainty, that a trade secret exists, that the applicant is its holder, and that the secret has been or is about to be misappropriated, and it must take into account the proportionality of the measure, the legitimate interests of the parties and of third parties, and the public interest. Article 11 further permits the court to require the applicant to lodge security adequate to compensate the respondent for any harm caused by an unjustified measure, and to order the revocation of measures or the payment of compensation where the substantive claim ultimately fails. This calibrated architecture seeks to reconcile the urgency that effective protection demands with the protection of defendants against the strategic use of interlocutory relief by a more powerful competitor, a reconciliation whose success depends heavily on the manner in which national courts exercise the discretion the Directive confers.[68]

4.2. Preservation of Confidentiality in Legal Proceedings

Article 9 addresses the structural difficulty that, before the Directive, had deterred holders from litigating: the risk that enforcement would itself destroy the secret. It obliges Member States to ensure that participants in proceedings are not permitted to use or disclose a trade secret that the court has identified as confidential, and it empowers courts, on a duly reasoned application, to restrict access to documents and hearings to a limited number of persons, to redact judgments, and otherwise to maintain the confidentiality of the secret during and after the litigation.[69] This 'confidentiality club' mechanism is among the Directive's most practically important contributions, because it removes a powerful disincentive to enforcement and brings the European regime closer to the protective procedures long available in some other jurisdictions. Its effectiveness, however, depends on faithful and consistent implementation by

[68] TSD, arts 10–11.
[69] TSD, art 9.

national procedural law, and the EUIPO's litigation study suggests that the depth of these protections still varies across the Member States.

The practical operation of the confidentiality club nonetheless raises a delicate tension with the rights of the defence. Restricting access to the very information on which a claim or defence turns, admitting it only to a limited circle of named representatives and external advisers, and excluding even the opposing party's own officers, protects the secret but risks impairing the ability of the defendant to instruct its lawyers and to test the claimant's case. National courts must therefore calibrate the restriction so as to safeguard confidentiality without depriving a party of a fair hearing, a balance that Article 9(2) itself acknowledges by requiring that at least one natural person from each party, and their respective lawyers, retain access. The calibration is difficult and fact-sensitive, and the differing procedural cultures of the Member States, some long accustomed to in-camera procedures and protective orders, others not, mean that the protection a holder can expect in practice is, once again, forum-dependent. The mechanism is a genuine advance, but it is an advance whose uniformity should not be overstated.[70]

4.3. The Emerging Case Law of the Court of Justice

The Court of Justice has so far been called upon to interpret the Directive in a small but instructive number of cases, most of which have reached it not as free-standing trade-secret disputes but as questions arising at the intersection of trade secrets and other bodies of Union law, public procurement and data protection in particular. This pattern is itself significant: it reflects the hybrid character of trade secrets and the fact that the principal tensions in practice concern the boundary between confidentiality and transparency. Three lines of authority merit examination.

[70] TSD, art 9(2), which preserves access for at least one natural person from each party and their lawyers; on the variation in national procedural protection see EUIPO, Trade Secrets Litigation Trends in the EU (n 48) 36.

The doctrinal background to this case law predates the Directive. In Varec, decided in 2008, the Court held, in the procurement context, that the protection of confidential information and business secrets must be reconciled with the requirements of effective judicial protection, and that the body responsible for reviewing a procurement decision may itself need access to confidential information in order to adjudicate, even where that information is withheld from the party challenging the decision.[71] Varec established, well before the Directive, the methodological premise on which the later cases build: confidentiality is a protected interest, but it is not absolute, and its protection must be balanced against the procedural rights of others by the court seised. The Directive's Article 9 may be read as a legislative generalisation of this insight, and the post-Directive case law examined below extends it from procurement into the new statutory framework and into adjacent fields such as data protection.

4.3.1. Antea Polska (Case C-54/21): Confidentiality and Transparency in Public Procurement

In Antea Polska, decided on 17 November 2022, the Court considered the treatment of confidential information in public procurement.[72] A Polish contracting authority had awarded a contract for environmental-management projects; an unsuccessful tenderer, Antea, complained that it had been deprived of an effective remedy because excessive confidential treatment had been granted to the information in competing bids, and because the reasons given for the scoring were inadequate. The referring court asked, among other things, whether the Public Procurement Directive 2014/24, read together with Article 2(1) of the Trade Secrets Directive, precluded national legislation requiring the publication of all information submitted by tenderers save for trade secrets.

[71] Case C-450/06 Varec SA v Belgian State ECLI:EU:C:2008:91, paras 34–49.
[72] Case C-54/21 Antea Polska and Others v Państwowe Gospodarstwo Wodne Wody Polskie ECLI:EU:C:2022:888.

The Court held that the concept of a trade secret in the Trade Secrets Directive cannot be used, in the procurement context, as the sole boundary of confidentiality. National legislation requiring the disclosure of all information communicated by tenderers, with the sole exception of trade secrets narrowly defined, is liable to prevent the contracting authority from withholding information that, while not a trade secret, should nonetheless remain inaccessible in order to protect commercial interests, fair competition or the public interest.[73] Equally, however, the Court held that a contracting authority may not accept requests for confidential treatment as a matter of course; it must assess each request and, where it withholds information, communicate to the unsuccessful tenderer the essential content of the relevant information so as to safeguard the right to an effective remedy.[74]

The analytical significance of Antea Polska lies in its rejection of a 'maximum transparency' approach and its insistence on a contextual balancing of confidentiality against the right to effective judicial protection. For trade secret law, the case confirms two points. First, the autonomous Union concept of a trade secret in Article 2(1) is a floor of confidentiality, not its outer limit: information may legitimately be withheld even where it does not meet the trade-secret threshold. Second, the protection of confidential information is always qualified by competing procedural rights, and national courts must perform a case-by-case weighing rather than apply a categorical rule. The judgment thus exemplifies the contextual, balancing methodology that increasingly characterises the Court's treatment of confidential information.

4.3.2. CK v Dun & Bradstreet (Case C-203/22): Trade Secrets and the Right of Access under the GDPR

A second and more recent line of authority arises at the intersection of trade secrets and data protection. In CK v Dun & Bradstreet Austria and Magistrat der Stadt Wien, decided on 27

[73] Antea Polska (n 72) paras 60–62.

[74] Antea Polska (n 72), operative part. For commentary on the judgment see Sanchez-Graells, 'More Nuanced Procurement Transparency to Protect Competition: Antea Polska (C-54/21)' (2022) EU Law Live.

February 2025 on a reference from the Administrative Court of Vienna, the Court addressed the relationship between the data subject's right of access to 'meaningful information about the logic involved' in automated decision-making under Article 15(1)(h) of the General Data Protection Regulation and the protection of the controller's algorithm as a trade secret within the meaning of Article 2(1) of the Directive.[75] A credit-scoring company had declined to disclose the workings of its scoring algorithm, asserting trade-secret protection.

The Court held that the data subject's right to meaningful information about the logic of an automated decision requires the controller to explain, in a concise, transparent and intelligible form, the procedure and principles actually applied, so that the data subject can understand which personal data were used and how. Where the controller considers that the information to be provided contains trade secrets or the personal data of third parties, it must disclose the allegedly protected information to the competent supervisory authority or court, which is then to balance the competing rights and interests in order to determine the extent of the right of access.[76] Crucially, the Court held that a Member State may not, by legislation, determine the outcome of that balancing in advance; the assessment must be made case by case in the light of the specific circumstances.

CK v Dun & Bradstreet is important for three reasons. First, it confirms that trade-secret protection does not operate as an absolute trump over competing fundamental rights; it is one interest to be weighed against others, here the right to data protection and to an effective remedy. Second, it establishes a procedural technique, confidential disclosure to the authority or court, followed by a calibrated balancing, that mirrors the confidentiality-club logic of Article 9 of the Directive and that is likely to be influential well beyond the data-protection context. Third, and more subtly, it illustrates the centrality of trade secrets to the governance of algorithms and artificial intelligence: as automated decision-making proliferates, the tension

[75] Case C-203/22 CK v Dun & Bradstreet Austria GmbH and Magistrat der Stadt Wien ECLI:EU:C:2025:117.
[76] CK v Dun & Bradstreet (n 75), operative part.

between the secrecy of models and the transparency owed to those affected by them will become one of the defining problems of the field. That this seminal reference originated in Vienna underscores the practical immediacy of the question for businesses established in Austria and operating across the Union.

4.3.3. The Transparency and Access-to-Documents Line: The EMA Cases

A third line of authority, predating the cases above, concerns access to documents held by Union bodies. In the appeals in PTC Therapeutics International v EMA and MSD Animal Health Innovation v EMA, both decided in January 2020, the Court rejected the existence of a general presumption that clinical and toxicological data submitted to the European Medicines Agency are confidential in their entirety, holding instead that the Agency must assess, document by document, whether disclosure would specifically and actually undermine commercial interests, including trade secrets.[77] Although these cases arose under the Transparency Regulation rather than the Trade Secrets Directive, they form part of the same jurisprudential fabric: they confirm that confidentiality, including the protection of trade secrets, is never presumed wholesale but must be demonstrated concretely and balanced against the competing public interest in disclosure.

Taken together, the three lines of authority reveal a consistent methodology. The Court treats the protection of trade secrets as a legitimate but qualified interest, to be reconciled with transparency, effective judicial protection and data protection through a contextual, case-by-case balancing rather than through categorical rules. This methodology is faithful to the Directive's own structure, which subordinates protection to the safeguards in Articles 1, 5 and 9, but it places a heavy burden on national courts and supervisory authorities, and it does little to advance the predictability that cross-border business requires.

[77] Case C-175/18 P PTC Therapeutics International v EMA ECLI:EU:C:2020:23; Case C-178/18 P MSD Animal Health Innovation and Intervet International v EMA ECLI:EU:C:2020:24.

4.4. Cross-Border Enforcement: Jurisdiction and Applicable Law

The Directive harmonises substantive and remedial law, but it does not establish any special rules of private international law; recital 37 expressly preserves the application of the general Union instruments on jurisdiction and applicable law.[78] In a cross-border misappropriation, the paradigm case for an international business, the questions of which court has jurisdiction and which law applies therefore fall to be answered by the Brussels Ia Regulation and the Rome II Regulation, and it is here that the unresolved classification of trade secrets becomes acutely problematic.[79]

On jurisdiction, a claimant may sue in the courts of the defendant's domicile under Article 4 of Brussels Ia or, in tort, in the courts of the place where the harmful event occurred or may occur under Article 7(2). The application of the latter rule to the misappropriation of intangible information is far from straightforward: the place of the event giving rise to the damage and the place where the damage occurs may be difficult to localise when the secret can be transmitted instantaneously and exploited simultaneously in several Member States. The familiar mosaic principle, under which the courts of each affected State have jurisdiction only in respect of the damage occurring within their territory, may fragment a single misappropriation into a series of partial claims, multiplying cost and uncertainty.

On applicable law, the difficulty is structural. Rome II contains a special rule in Article 8 for the infringement of intellectual property rights, under which the applicable law is that of the country for which protection is claimed and from which, importantly, the parties may not derogate by agreement. It contains a separate rule in Article 6 for acts of unfair competition, and a general rule in Article 4 for other torts. Whether a claim for the misappropriation of a trade secret falls under Article 8, Article 6 or Article 4 depends precisely on the contested

[78] TSD, recital 37.

[79] Regulation (EU) No 1215/2012 (Brussels Ia) [2012] OJ L351/1; Regulation (EC) No 864/2007 (Rome II) [2007] OJ L199/40. The analysis in this section draws on Lundstedt (n 15).

classification of trade secrets examined in Chapter 1, and the Directive's refusal to characterise trade secrets uniformly leaves the question open.[80] The consequences are significant: only under Article 8 is party autonomy excluded, so the classification determines not merely which law applies by default but whether the parties may choose the governing law at all. An international business cannot, at present, predict with confidence either where it may sue or be sued, or which substantive law a court will apply, in a multi-state trade-secret dispute.

A concrete scenario illustrates the difficulty. Suppose that an undertaking established in Austria develops a manufacturing process that it protects as a trade secret, and that a former employee, now working for a competitor established in another Member State, discloses the process there; the competitor then uses it to manufacture goods in a third Member State and markets them across the Union. The holder must decide whether to sue in the courts of the competitor's domicile, in the courts of the place where the disclosure occurred, or in the courts of each Member State in which damage is sustained, with the mosaic principle confining the jurisdiction of the last to the damage occurring within their respective territories. It must then confront the question whether the applicable law is that of the country for which protection is claimed under Article 8 of Rome II, the law identified by the unfair-competition rule in Article 6, or the law of the place of damage under the general rule in Article 4, a question whose answer turns on the very classification that the Directive leaves unresolved. Each permutation carries different consequences for the availability of injunctive relief, the measure of damages, the limitation period and the possibility of choosing the governing law by agreement. The cumulative effect is that the holder of a single secret may face a matrix of fora and applicable laws of considerable complexity, and that the cost and unpredictability of litigation may deter enforcement altogether, the very outcome that the Directive was adopted to prevent.

[80] Lundstedt (n 15) develops the argument that the classification of trade secrets determines whether Rome II art 8, art 6 or art 4 applies, and that the resulting uncertainty undermines predictability in cross-border disputes.

Faced with this uncertainty, sophisticated parties increasingly turn to private ordering. Where the parties are in a contractual relationship, as they frequently are in licensing, joint-venture, supply and employment contexts, a carefully drafted dispute-resolution clause can substitute a chosen forum and, within the limits that the classification question permits, a chosen law for the unpredictable defaults of the Brussels and Rome regimes. Arbitration is particularly attractive for trade-secret disputes, because it offers a neutral forum, the prospect of arbitrators with relevant technical expertise, and, of decisive importance, a confidential procedure that avoids the public exposure inherent in litigation before national courts, supplementing the in-proceedings protections of Article 9. Against these advantages must be weighed real limitations: arbitral tribunals cannot bind third parties who never agreed to arbitrate, their powers to grant urgent interim relief may be weaker or slower than those of a national court, and the misappropriation of a trade secret frequently involves precisely such third parties, a departing employee's new employer, a downstream purchaser of infringing goods. Private ordering can therefore mitigate, but cannot cure, the structural uncertainty; and it is, in any event, unavailable in the many cases of misappropriation that arise outside any contractual relationship at all.[81]

4.5. Practical Challenges for International Business: The Empirical Picture

The practical reality of enforcement is illuminated by the EUIPO's study of litigation trends, prepared pursuant to Article 18(1) of the Directive and published in 2023. The study examined approximately 700 national judgments rendered between 1 January 2017 and 31 October 2022, a period straddling the transposition deadline, and reached several findings of direct relevance to this thesis.[82] First, the volume and nature of litigation diverge significantly across the Member States, both in absolute numbers and in the fora, subject matter and economic sectors

[81]On the use of arbitration and contractual forum selection in trade-secret disputes and their limits as against third parties, see the discussion of cross-border enforcement in Lundstedt (n 15).
[82]EUIPO, Trade Secrets Litigation Trends in the EU (n 48) 9, 19. The study reviewed approximately 700 decisions issued between 1 January 2017 and 31 October 2022.

concerned, with the manufacturing sector accounting for the largest share of cases. Second, the public availability of information about proceedings varies dramatically between jurisdictions; in a striking illustration of the practical obstacles to comparative analysis, the study was unable to ascertain even the identity of the claimant in roughly half of the cases.

These findings carry two lessons. The opacity and unevenness of national litigation data are themselves a barrier to legal certainty: a business cannot easily assess the practical strength of protection, the likely remedies, or the prospects of enforcement in a given Member State, because the relevant information is neither systematically published nor comparable across jurisdictions. And the persistence of divergent litigation patterns, years after transposition, confirms that the common substantive framework has not produced common enforcement outcomes. The Commission's 2022 study on trade secrets in the data economy reinforces the point from a different angle, finding that many companies remain uncertain about the precise definition and enforceability of trade-secret protection, particularly in the context of shared data, in part because of the relative novelty of the regime and the scarcity of settled precedent.[83]

Two further dimensions of the empirical picture deserve emphasis for the argument of this thesis. The first is the concentration of litigation in particular sectors, with manufacturing accounting for the largest share of the cases examined by the EUIPO. This concentration reflects the centrality of process know-how and technical information to industries in which protection by patent is either unavailable or undesirable, and it confirms that the practical stakes of the regime are highest precisely in the sectors that drive the Union's industrial competitiveness. The second is the position of small and medium-sized enterprises. As the recitals to the Directive acknowledge, SMEs rely on trade-secret protection even more heavily than larger undertakings, yet they are also the least equipped to bear the cost and uncertainty of cross-border litigation, to maintain the elaborate confidentiality programmes that the more

[83]European Commission, Study on the Legal Protection of Trade Secrets in the Context of the Data Economy (n 10).

demanding national courts expect, or to absorb the consequences of an adverse forum. The residual fragmentation identified throughout this thesis therefore bears most heavily on the very actors, innovative SMEs operating across borders, whom the internal-market rationale of the Directive most directly invokes. An evaluation of the regime that took the SME perspective seriously would weigh not only the formal availability of protection but its practical accessibility to undertakings of modest means.[84]

The second and third hypotheses of this thesis are accordingly borne out. The enforcement mechanisms, although a genuine advance, face procedural and practical limitations that are most severe in the cross-border setting, where the absence of harmonised private-international-law rules and the unresolved classification of trade secrets generate real uncertainty; and international businesses continue to confront compliance challenges and unpredictability arising from the fragmented national landscape. The Directive has supplied a common substantive vocabulary, but the grammar of enforcement remains national, and the syntax of cross-border litigation remains unsettled.

4.6. Risk Management and Compliance Strategies for International Business

The legal uncertainties analysed above translate, for the undertaking operating across several Member States, into a set of concrete compliance imperatives. Because protection under the Directive is conditional on the holder having taken reasonable steps to preserve secrecy, and because national courts, the German most conspicuously, scrutinise those steps demanding evidence of their adequacy, the threshold question for any business is no longer merely whether its information is valuable but whether it can prove, after the event, that it treated the information as confidential. This places a premium on a documented, layered confidentiality programme: the classification and inventory of trade secrets; technical and organisational

[84] EUIPO, Trade Secrets Litigation Trends in the EU (n 48) 31 (sectoral concentration, with manufacturing the largest category); TSD, recital 2 (reliance of SMEs on trade secrets).

measures such as access controls, encryption, network segregation and audit logging; and a contractual architecture of non-disclosure agreements, confidentiality clauses in employment and supplier contracts, and clearly drafted limitations on use. The prudent business will calibrate these measures not to the Union minimum but to the most exacting national standard to which it may be subject, since, as Chapter 3 demonstrated, the level of protection in fact enjoyed is forum-dependent.

The management of personnel deserves separate emphasis, since a large proportion of misappropriation arises from the movement of employees between competitors. The Directive's protection of employee mobility means that confidentiality measures cannot lawfully be used to prevent a departing employee from exercising the experience and skills honestly acquired in the ordinary course of employment; the line between protectable trade secrets and unprotectable general know-how is therefore central, and it must be respected both in drafting and in enforcement. Sound practice combines careful onboarding, ensuring that incoming employees do not import the secrets of their former employers, thereby exposing the recipient to liability under the constructive-knowledge standard of Article 4(4), with structured exit procedures that document the return of confidential materials and remind departing staff of their continuing obligations. At the transactional level, businesses must attend to the differing national positions on the classification and transferability of trade secrets when structuring licences, joint ventures and the data-sharing arrangements increasingly mandated by the Union's digital legislation. And at the dispute-resolution level, the unpredictability of jurisdiction and applicable law identified in section 4.4 makes the inclusion of well-considered choice-of-court and, where permissible, choice-of-law clauses a matter of real practical importance, even if their efficacy is itself qualified by the unresolved classification of trade secrets. The cumulative message is that, under the present regime, effective protection depends as much on the holder's own diligence and foresight as on the substantive guarantees of the Directive.[85]

Underlying these specific measures is a broader shift in the way confidential information must be managed. The Directive's conditioning of protection on demonstrable, reasonable steps effectively requires undertakings to treat their trade secrets as a managed asset class: to identify and catalogue them, to assign responsibility for their protection, to review periodically the adequacy of the measures taken, and to be able to evidence all of this should litigation ensue. This is a governance discipline as much as a legal one, and it aligns trade-secret protection with the wider corporate functions of information security, data governance and compliance. For the international business, the practical upshot is that the cost of the residual fragmentation analysed in this thesis is not merely the occasional unpredictable judgment but a continuing, structural overhead: the need to design and maintain a protection regime robust enough to satisfy the most demanding forum in which the undertaking may find itself. That overhead is a real, if hidden, tax on cross-border activity, and its reduction is one measure of the success that the harmonisation project has yet fully to achieve.

5. EU TRADE SECRET LAW IN THE INTERNATIONAL CONTEXT AND RECOMMENDATIONS

The final chapter situates the European regime within its broader international setting, compares it with the most significant non-European model, considers the reform trajectory on which the Directive is now embarked, and develops a set of recommendations responsive to the difficulties identified in the preceding chapters.

5.1. Comparison with the United States: The Defend Trade Secrets Act of 2016

By a remarkable coincidence of timing, the United States and the European Union strengthened their trade-secret regimes within weeks of one another in 2016. The Defend Trade Secrets Act,

[85]On the interaction with employee mobility, see TSD arts 1(3) and 3.

signed into law on 11 May 2016, created for the first time a federal civil cause of action for the misappropriation of trade secrets, overlaying the pre-existing state-law regimes based largely on the Uniform Trade Secrets Act.[86] The Directive was formally adopted on 8 June 2016. Both instruments draw on the common foundation of Article 39 of the TRIPS Agreement, and their core definitions are strikingly similar: each protects information that is secret, derives commercial or independent economic value from its secrecy, and has been the subject of reasonable measures to maintain confidentiality, and each expressly preserves reverse engineering and independent derivation as lawful means of acquisition.[87]

Several distinctive features of the American statute throw the European choices into relief. The Defend Trade Secrets Act contains an ex parte civil seizure remedy, permitting a court in extraordinary circumstances to order the seizure of property necessary to prevent the dissemination of a trade secret, a powerful and controversial tool with no direct equivalent in the Directive, which relies instead on the more conventional provisional and precautionary measures of Article 10. It also provides statutory immunity for confidential disclosures made to government officials or in legal filings for the purpose of reporting or investigating a suspected violation of law, and it requires employers to give notice of that immunity in relevant agreements, a structural integration of whistleblower protection that the European regime achieves, more diffusely, through the combination of Article 5 of the Directive and the separate Whistleblower Directive. Conversely, the European regime's detailed provisions for preserving the confidentiality of secrets during proceedings, and its explicit subordination of protection to the freedom of expression and to employee mobility, are more developed than

[86] Defend Trade Secrets Act of 2016, Pub L 114-153, 130 Stat 376, codified at 18 USC § 1836 et seq; the state-law model is the Uniform Trade Secrets Act.
[87] 18 USC § 1839(6)(B) (reverse engineering and independent derivation); cf TSD art 3(1)(b).

their American counterparts. The two systems thus represent different settlements of the same underlying tensions, and each has features from which the other might learn.[88]

Beneath this convergence, instructive differences remain. The United States regime, while still combining federal and state law, offers a single federal cause of action with nationwide reach and access to federal courts, a degree of procedural uniformity that the European regime, resting on twenty-seven national procedural systems, does not approach. The DTSA also contains distinctive features such as the civil seizure remedy and statutory whistleblower immunity. Conversely, the European regime's elaborate provisions for preserving confidentiality during proceedings and its express subordination of protection to freedom of expression and employee mobility are more developed than their American counterparts. The comparison suggests that the principal European weakness is not substantive but structural: the United States achieves through a federal cause of action a uniformity of enforcement that the Union, constrained by its competences and by the diversity of national procedure, achieves only imperfectly through a minimum-harmonisation directive.[89]

The comparison should not, however, be drawn too neatly in favour of the American model. The DTSA did not displace the state-law regimes; it added a federal layer atop them, with the result that the United States, too, lives with a degree of duplication and divergence, and federal and state courts may apply subtly different standards to the same conduct. Nor is the federal cause of action a panacea: the localisation of intangible harm, the treatment of extraterritorial misappropriation, and the protection of secrets during discovery remain contested in the United States as they are in Europe. The instructive contrast is therefore narrower than it first appears. It lies not in the substantive law, which is broadly congruent on both sides of the Atlantic, but

[88] On the DTSA civil seizure remedy (18 USC § 1836(b)(2)) and whistleblower immunity (18 USC § 1833(b)) and their absence of direct equivalents in the Directive, see the comparative literature cited above.

[89] For a comparative appraisal of the DTSA and the Directive see Sharon K Sandeen, 'Through the Looking Glass: Trade Secret Harmonization as a Reflection of US Law' in Schovsbo, Minssen and Riis (eds) (n 11); on the DTSA itself see also Sharon K Sandeen and Christopher B Seaman, 'Toward a Federal Jurisprudence of Trade Secret Law' (2017) 23 Berkeley Technology Law Journal 829.

in the existence of a single supranational forum, the federal court system, capable of resolving a multi-state dispute under a single procedural law. The Union has no equivalent, and its constitutional structure makes one improbable in the foreseeable future; the realistic ambition for the European regime is therefore not procedural unification but the reduction, through the targeted measures proposed below, of the uncertainty that the absence of such a forum entails.

5.2. The Classification Question Revisited and Its International Dimension

The international comparison sharpens the classification question. The TRIPS Agreement places undisclosed information within its intellectual-property framework yet declines to require that it be treated as property; the Directive confers no exclusive right yet sits within the Union's intellectual-property policy and is administered, for observational purposes, by the EUIPO. This studied ambivalence is tolerable so long as trade-secret disputes remain domestic, but it becomes a genuine source of uncertainty in the cross-border setting, where, as Chapter 4 demonstrated, the characterisation of a claim determines the applicable conflict-of-laws rule and the availability of party autonomy. A coherent international position, whether trade secrets are, for conflict-of-laws purposes, intellectual property, unfair competition, or a category sui generis, would materially improve predictability, and its absence is a deficiency that a purely substantive harmonisation cannot cure.[90]

There is a respectable case for treating trade secrets, for conflict-of-laws purposes, as a category sui generis rather than forcing them into either the intellectual-property or the unfair-competition box. The hybrid character analysed in Chapter 1 - a liability-rule entitlement enforced through property-rule remedies, protecting against dishonest conduct rather than conferring exclusivity, fits awkwardly within the assumptions of Article 8 of Rome II, which is built around territorially granted exclusive rights and the principle of the law of the country

[90] On the determinative effect of the classification of trade secrets for the applicable conflict-of-laws rule and for the availability of party autonomy under Rome II, see Lundstedt (n 15); see also Aplin (n 6) on the limits of characterising trade secrets as intellectual property.

for which protection is claimed. A trade secret has no country of registration and no territorial grant; its protection arises wherever the qualifying conditions are met and the holder has taken reasonable steps. A bespoke conflict rule, tailored to these features and specifying a clear connecting factor, whether the place where the secret is principally exploited, the place of the holder's establishment, or the place of the misappropriating conduct, might serve the values of predictability and party expectation better than the analogical application of a rule designed for patents and trademarks. Whether the legislature adopts such a bespoke rule or simply assigns trade secrets definitively to one of the existing categories matters less than that it makes a clear choice; the present indeterminacy is the worst of the available options.[91]

5.3. The 2026 Evaluation and the Reform Trajectory

The Directive provided for its own review in three stages. The EUIPO was to prepare an initial report on litigation trends by 9 June 2021; the Commission was to draw up an intermediate report on the Directive's application by 9 June 2022; and, most significantly, the Commission is required to carry out a comprehensive evaluation of the Directive's impact, and to report to the Parliament and the Council, by 9 June 2026.[92] The present study is therefore written at the precise moment at which the first full appraisal of the regime falls due. The intermediate report was directed in particular to the effects of the Directive on research and innovation, the mobility of employees, and the exercise of the right to freedom of expression and information, the very interests whose protection had dominated the legislative debate.

The 2026 evaluation presents an opportunity to address the limitations identified in this thesis. On the available evidence, the EUIPO litigation study, the Commission's data-economy study, and the comparative analysis of national implementation, the evaluation is likely to confirm that the Directive has established a sound common foundation while leaving significant

[91]On the argument that trade secrets fit awkwardly within Rome II art 8 and may warrant a tailored connecting factor, see Lundstedt (n 15).
[92]TSD, art 18(1)–(3).

residual divergence and cross-border uncertainty. The question for the legislature is whether these shortcomings are inherent and acceptable consequences of minimum harmonisation, or whether they warrant a further legislative intervention. The recommendations developed below are framed as a response to that question.

The reform options open to the legislature span a spectrum. At the least interventionist end lies a decision to leave the substantive Directive untouched and to rely on the continued accumulation of national case law and preliminary references to produce convergence over time, an approach that respects the diversity of national traditions but accepts the persistence of cross-border uncertainty for the foreseeable future. At the most interventionist end lies the recasting of the Directive as a regulation, or the creation of a unified Union cause of action analogous to the federal American model; this would maximise uniformity but would strain the limits of the Union's competence under Article 114 and would encounter the same political resistance, rooted in divergent procedural and labour-law traditions, that shaped the original instrument. Between these poles lie the targeted, surgical measures that this thesis favours: the clarification of discrete points, above all the conflict-of-laws characterisation of trade secrets and the standardisation of in-proceedings confidentiality protection, that address the most acute sources of uncertainty without dismantling the minimum-harmonisation model. The intermediate report's focus on the effects of the Directive on innovation, employee mobility and freedom of expression suggests that the institutions are alert to the balance the regime must strike; the comprehensive evaluation should now translate that awareness into concrete proposals.[93]

[93]TSD, art 18(2)–(3); the intermediate report was directed in particular to the effects of the Directive on research and innovation, the mobility of employees and the right to freedom of expression and information.

5.4. Trade Secrets in the Data Economy and the Age of Artificial Intelligence

A theme that the original Directive could not have fully anticipated is the centrality of trade secrets to the data economy and to artificial intelligence. As the Commission's 2022 study observed, data sharing is growing in commercial importance, yet the protection and exploitation of shared data through trade-secret law remains poorly understood by many undertakings, and the boundaries of protection in respect of data are uncertain.[94] The interaction of the Directive with the Union's newer digital instruments, in particular the Data Act, which mandates data sharing in certain circumstances while seeking to preserve trade-secret protection, raises difficult questions about how confidentiality and access are to be reconciled.[95] The CK v Dun & Bradstreet judgment, analysed in Chapter 4, is an early and vivid illustration of the same tension in the algorithmic context: the secrecy of a model on the one hand, and the transparency owed to those subject to automated decisions on the other. These developments confirm that trade-secret law is not a static backwater but a frontier of digital regulation, and that any evaluation of the Directive must take account of its role in the governance of data and artificial intelligence.

The artificial-intelligence dimension deserves particular emphasis. The models that drive contemporary automated systems, their architectures, training data, weights and parameters, are quintessential trade secrets: valuable precisely because they are confidential, costly to develop, and frequently impossible to protect by patent. Yet the same models increasingly make or inform decisions about individuals, and the demand for transparency and accountability in automated decision-making is growing, as the right of access under the General Data Protection Regulation, the Union's emerging framework on artificial intelligence,

[94] European Commission, Study on the Legal Protection of Trade Secrets in the Context of the Data Economy (n 10); see also Radauer and others, 'The Role of EU Trade Secrets Law in the Data Economy: An Empirical Analysis' (2023) IIC.

[95] Regulation (EU) 2023/2854 of 13 December 2023 on harmonised rules on fair access to and use of data (Data Act) [2023] OJ L, which contains provisions seeking to preserve trade-secret protection within data-sharing obligations.

and the case law analysed in Chapter 4 all attest. The Directive thus finds itself at the centre of one of the defining regulatory dilemmas of the age: how to reconcile the legitimate confidentiality of algorithmic systems with the transparency owed to those affected by them. The contextual balancing endorsed by the Court of Justice offers a workable methodology, but it leaves businesses uncertain about how much they must disclose and regulators uncertain about how much they may demand. A regime designed for the protection of manufacturing know-how must now do service in a world of machine learning, and whether it can do so without either stifling innovation or shielding opaque systems from scrutiny is a question that the 2026 evaluation cannot avoid.[96]

5.5. Recommendations

Five recommendations follow from the analysis. They are directed primarily at the Union legislature in the context of the 2026 evaluation, but several also offer guidance to national legislatures and to businesses.

First, clarify the conflict-of-laws characterisation of trade secrets. The most consequential and most tractable deficiency identified in this thesis is the uncertainty surrounding the law applicable to cross-border misappropriation. The legislature should resolve, whether by amending the Directive, by a targeted amendment to Rome II, or by an authoritative interpretative instrument, whether claims for the misappropriation of a trade secret fall under Article 8, Article 6 or Article 4 of Rome II, and should align the jurisdictional analysis under Brussels Ia accordingly. A clear rule, even if it preserves limited party autonomy, would do more for the predictability of cross-border enforcement than any further substantive harmonisation.

[96] On the interaction of trade-secret protection with algorithmic transparency see the discussion of Case C-203/22 in Chapter 4 and the commentary cited there.

Second, harmonise the procedural protection of secrets in litigation more closely. Article 9 has proved valuable, but its implementation varies, and the protection it affords in practice depends on national procedural detail. The legislature should consider strengthening and standardising the confidentiality-club mechanism, drawing on the most effective national models, so that a holder can rely on a predictable minimum level of in-proceedings protection wherever it litigates.

Third, address gold-plating that narrows the protected category. Where national transposition has added requirements that risk falling below the Union standard, the German 'legitimate interest' element being the clearest example, the Commission should examine their compatibility with the Directive and, if necessary, pursue conformity. Minimum harmonisation permits Member States to exceed the Union standard, not to fall short of it by raising the threshold for protection.

Fourth, improve the transparency and comparability of litigation data. The EUIPO study's inability to identify the claimant in half of the cases it examined is symptomatic of a deeper problem: businesses cannot assess the practical strength of protection across the Union because the relevant data are neither systematically published nor comparable. A common framework for the publication of anonymised but informative decisions, building on the EUIPO Observatory's work, would enhance legal certainty at modest cost.

Fifth, integrate trade-secret protection coherently with the digital acquis. The evaluation should ensure that the Directive operates coherently alongside the Data Act, the data-protection framework and the emerging regulation of artificial intelligence, so that the legitimate protection of confidential models and data sets does not defeat the transparency and access objectives of those instruments, and vice versa. The contextual balancing endorsed by the Court of Justice provides a sound methodological starting point, but businesses and courts would benefit from clearer legislative guidance on how the competing interests are to be reconciled.

These measures would not dismantle the minimum-harmonisation model, which remains appropriate given the diversity of national legal traditions and the limits of the Union's competence. They would, however, address the model's principal weaknesses, cross-border uncertainty, procedural divergence and the unresolved classification of trade secrets, and thereby advance the internal-market objective that the Directive was adopted to serve.

If a single priority were to be identified among the five, it would be the clarification of the conflict-of-laws characterisation of trade secrets. That reform is, of the measures proposed, both the most consequential and the most feasible: it addresses the source of uncertainty that bears most directly on the cross-border business at the centre of this study, it can be accomplished by a discrete and technically contained intervention, and it does not require the politically fraught re-opening of the substantive compromise on which the Directive rests. The standardisation of in-proceedings confidentiality protection ranks a close second, for it determines whether holders can in practice enforce their rights without sacrificing the very secrecy they seek to defend. The remaining recommendations, the scrutiny of gold-plating, the improvement of litigation transparency, and the coherent integration of trade-secret protection with the digital acquis, are valuable but less urgent, and they can be pursued incrementally as the regime matures and as the evidence base improves. A reform programme so ordered would respect the architecture of the Directive while remedying the deficiencies that a decade of experience has brought to light.

CONCLUSION

This thesis set out to evaluate the harmonisation of trade-secret law achieved under Directive (EU) 2016/943, to assess the effectiveness of its enforcement mechanisms, and to analyse the practical implications for businesses operating across several Union jurisdictions. The analysis supports a measured but clear conclusion: the Directive is a genuine and valuable achievement that has nonetheless fallen short of the uniformity that effective cross-border protection requires.

On the first research question, the harmonisation achieved is real but partial. Every Member State now recognises a common, TRIPS-derived definition of a trade secret and provides a common catalogue of civil measures, procedures and remedies, and this represents a substantial advance over the fragmented pre-Directive landscape. Yet beneath the common definitional surface, the comparative analysis in Chapter 3 revealed persistent divergences, in the precise scope of the protected category, in the classification of trade secrets as or as not intellectual property, in the balance between civil and criminal protection, and, most consequentially, in the judicial assessment of the 'reasonable steps' requirement. These divergences are the predictable consequence of an instrument that, by design, pursues minimum harmonisation and embeds a common core within twenty-seven national legal traditions.

On the second and third research questions, the enforcement mechanisms have been markedly strengthened, above all by the obligation in Article 9 to preserve the confidentiality of secrets during litigation, which removes a powerful pre-Directive disincentive to enforcement, but they remain subject to procedural and practical limitations that are most acute in cross-border disputes. The Directive establishes no special rules of private international law, and the unresolved classification of trade secrets leaves it genuinely uncertain, in a multi-state misappropriation, both where a business may litigate and which law will govern. The emerging case law of the Court of Justice, examined in Chapter 4, treats trade-secret protection as a qualified interest to be balanced contextually against transparency, effective judicial protection and data protection; this methodology is faithful to the Directive's structure but does little to advance predictability. The empirical evidence assembled by the EUIPO confirms that litigation patterns continue to diverge significantly and that the comparability of enforcement across the Union remains poor.

On the fourth research question, the comparison with the United States and the analysis of the international framework indicate that the principal European weakness is structural rather than substantive. The substantive standards of the Directive align closely with Article 39 of the TRIPS Agreement and with the United States Defend Trade Secrets Act; what the European regime lacks, by comparison with the federal American cause of action, is uniformity of enforcement and a settled conflict-of-laws characterisation. The persistence of these structural gaps, rather than any deficiency in the substantive definition, is what continues to expose international businesses to legal uncertainty.

The three hypotheses with which the thesis began are therefore confirmed. Harmonisation remains partial; enforcement faces procedural and practical limitations that are especially severe across borders; and international businesses continue to encounter compliance challenges and legal uncertainty arising from the fragmented national landscape. These conclusions are not a counsel of despair. The minimum-harmonisation model is defensible, and the Directive has supplied the common substantive vocabulary on which a more predictable system can be built. The targeted measures proposed in Chapter 5 - above all the clarification of the conflict-of-laws characterisation of trade secrets, the closer harmonisation of in-proceedings confidentiality protection, the scrutiny of gold-plating, the improvement of litigation transparency, and the coherent integration of trade-secret protection with the digital acquis, would address the regime's principal weaknesses without disturbing its foundations.

The analysis offered here is, necessarily, subject to limitations that themselves mark out an agenda for further research. The comparative study has concentrated on a small number of representative legal systems, and a fuller account would extend the comparison to the central and eastern European Member States and to the Nordic jurisdictions, whose experience may differ instructively. The case law of the Court of Justice remains sparse, so that several of the conclusions about the Court's methodology are necessarily provisional and will require revisiting as further references mature. And the empirical picture, dependent as it is on the uneven national publication of judgments, is incomplete; a more granular, jurisdiction-by-jurisdiction empirical study, of the kind the EUIPO is well placed to undertake, would substantially strengthen the evidence base for evaluation. The interaction of the Directive with the rapidly evolving regulation of data and artificial intelligence, in particular, is a field in which the law is moving faster than the scholarship, and it will repay sustained attention in the years following the 2026 review.

The timing of this study is fortuitous. The Directive requires the Commission to complete its first comprehensive evaluation of the regime by 9 June 2026, and the analysis offered here is intended as a contribution to that appraisal. Nearly a decade after its adoption, the Directive may fairly be judged a successful first step: it has replaced fragmentation with a common foundation. The task that remains, and the task to which the forthcoming evaluation should attend, is to convert that foundation into the predictable, enforceable and genuinely cross-border protection that the modern, knowledge-based economy of the internal market requires.

BIBLIOGRAPHY

Primary Legislation — European Union

Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure [2016] OJ L157/1

Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the enforcement of intellectual property rights [2004] OJ L157/45

Directive (EU) 2019/1937 of the European Parliament and of the Council of 23 October 2019 on the protection of persons who report breaches of Union law [2019] OJ L305/17

Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement [2014] OJ L94/65

Regulation (EU) No 1215/2012 of the European Parliament and of the Council of 12 December 2012 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters (Brussels Ia) [2012] OJ L351/1

Regulation (EC) No 864/2007 of the European Parliament and of the Council of 11 July 2007 on the law applicable to non-contractual obligations (Rome II) [2007] OJ L199/40

Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 (General Data Protection Regulation) [2016] OJ L119/1

Regulation (EU) 2023/2854 of the European Parliament and of the Council of 13 December 2023 on harmonised rules on fair access to and use of data (Data Act) [2023] OJ L, 22.12.2023

European Commission, Proposal for a Directive on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure, COM(2013) 813 final

National and International Legislation

Gesetz zum Schutz von Geschäftsgeheimnissen (GeschGehG) of 18 April 2019, BGBl I 466 (Germany)

Loi n° 2018-670 du 30 juillet 2018 relative à la protection du secret des affaires (France); Décret n° 2018-1126 du 11 décembre 2018

Decreto Legislativo 11 maggio 2018, n 63 (Italy)

Ley 1/2019, de 20 de febrero, de Secretos Empresariales (Spain)

Defend Trade Secrets Act of 2016, Pub L 114-153, 130 Stat 376, codified at 18 USC § 1836 et seq (United States)

Uniform Trade Secrets Act (United States)

Agreement on Trade-Related Aspects of Intellectual Property Rights (signed 15 April 1994, entered into force 1 January 1995) 1869 UNTS 299

Paris Convention for the Protection of Industrial Property (as revised, Stockholm 1967)

Cases — Court of Justice of the European Union

Case C-54/21 *Antea Polska and Others v Państwowe Gospodarstwo Wodne Wody Polskie* ECLI:EU:C:2022:888

Case C-203/22 *CK v Dun & Bradstreet Austria GmbH and Magistrat der Stadt Wien* ECLI:EU:C:2025:117

Case C-450/06 *Varec SA v Belgian State* ECLI:EU:C:2008:91

Case C-175/18 P *PTC Therapeutics International v EMA* ECLI:EU:C:2020:23

Case C-178/18 P *MSD Animal Health Innovation and Intervet International v EMA* ECLI:EU:C:2020:24

Books and Monographs

Lundstedt L, *Cross-Border Trade Secret Disputes in the European Union: Jurisdiction and Applicable Law* (Edward Elgar Publishing 2023)

Schovsbo J, Minssen T and Riis T (eds), *The Harmonization and Protection of Trade Secrets in the EU: An Appraisal of the EU Directive* (Edward Elgar Publishing 2020)

Aplin T, 'The Limits of EU Trade Secret Protection' in Sandeen S, Rademacher C and Ohly A (eds), *Research Handbook on Information Law and Governance* (Edward Elgar Publishing 2021)

Domeij B, 'The Trade Secrets Directive and Employees' in Schovsbo J, Minssen T and Riis T (eds), *The Harmonization and Protection of Trade Secrets in the EU: An Appraisal of the EU Directive* (Edward Elgar Publishing 2020)

Sandeen SK, 'Through the Looking Glass: Trade Secret Harmonization as a Reflection of US Law' in Schovsbo J, Minssen T and Riis T (eds), *The Harmonization and Protection of Trade Secrets in the EU: An Appraisal of the EU Directive* (Edward Elgar Publishing 2020)

Articles

Calabresi G and Melamed AD, 'Property Rules, Liability Rules, and Inalienability: One View of the Cathedral' (1972) 85 *Harvard Law Review* 1089

Dalla Costa M, De Cristofaro G and Paschetta D, 'The Trade Secrets Directive — Italy' (2019) *les Nouvelles — Journal of the Licensing Executives Society*

Hoeren T, 'The EU Directive on the Protection of Trade Secrets and its Relation to Current Provisions in Germany' (2018) 9 *Journal of Intellectual Property, Information Technology and Electronic Commerce Law (JIPITEC)* 138

Niebel R, de Martinis L and Clark B, 'The EU Trade Secrets Directive: all change for trade secret protection in Europe?' (2018) 13(6) *Journal of Intellectual Property Law & Practice* 445

Radauer A and others, 'The Role of EU Trade Secrets Law in the Data Economy: An Empirical Analysis' (2023) *International Review of Intellectual Property and Competition Law (IIC)*

Sanchez-Graells A, 'More Nuanced Procurement Transparency to Protect Competition: Antea Polska (C-54/21)' (2022) *EU Law Live*

Sandeen SK and Seaman CB, 'Toward a Federal Jurisprudence of Trade Secret Law' (2017) 23 *Berkeley Technology Law Journal* 829

Reports and Other Secondary Sources

European Commission, *Study on the Legal Protection of Trade Secrets in the Context of the Data Economy* (Publications Office of the European Union 2022)

European Union Intellectual Property Office, *Trade Secrets Litigation Trends in the EU* (EUIPO 2023)

European Union Intellectual Property Office, *The Baseline of Trade Secrets Litigation in the EU Member States* (EUIPO 2018)

European Union Intellectual Property Office, *Trade Secrets: Vital Intellectual Property Assets* (EUIPO 2023)

Stanford Program in Law, Science and Technology, *Shaping the EU Legal Protection for Trade Secrets*

World Trade Organization, *Overview: the TRIPS Agreement* (WTO)