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The optimal scope of trade secrets law

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ABSTRACT

The paper investigates the optimal scope of trade secrets law. In the model, one innovative firm invests resources first to produce knowledge, and then to protect it from unwanted disclosure. A rival firm invests to ferret out this knowledge. Trade secrets law affects this "secrecy contest" by reducing the probability of unwanted disclosure given the efforts of the parties. We show how optimal trade secrets policy depends on structural market features and cost parameters. In the final section, we consider the limit case in which the innovation lies on the face of the product, and derive the optimal scope of legal provisions preventing copycat imitation of products (unfair competition, passing off).

1. Introduction

In modern economies, the competitive advantage that firms enjoy on the market depends increasingly on their specific expertise and knowledge, rather than on manufacturing costs differentials. To protect this knowledge, firms can rely on different legal tools, including patents (for non-obvious inventions) and copyright (for novel pieces of creative work). Yet, most companies tend to rely on the oldest, and most likely the cheapest, form of protection: secrecy.[1]

The desire of companies to keep their competitive knowledge secret is not discouraged by the law. To the contrary, the law supports the secret conservation of knowledge, by sanctioning conducts aimed at the violation of confidential business information, such as unauthorized disclosure and espionage. In this respect, however, the law is called upon to strike a difficult balance between the right of the knowledge holder to preserve secrecy and the need of society to promote the dissemination of valuable information. In fact, the diffusion of innovative knowledge encourages imitation and fosters competition in the market. Excessive secrecy protection, by retarding the dissemination of the information in the economy, might not serve the interests of consumers well.[2]

In this paper, we investigate the optimal scope of trade secrets (TS) law and highlight the basic trade-offs that policy it called upon to address. In particular, we develop a simple model in which a firm can create innovative knowledge that provides a head-start advantage in the market. Once the knowledge is created, a rival firm invests resources to ferret out this knowledge, whereas the innovator invests resources to protect it. TS law affects this secrecy contest by reducing the probability of knowledge leakage, given the efforts of the parties. So, TS law affects the investments of the parties in the secrecy contest and the final market structure.

Before illustrating the model, it is important to clarify the multifaceted nature of TS law. As opposed to patent law, which shares the same basic features in most jurisdictions, TS law varies substantially across countries. In most jurisdictions, provisions regulating the protection of confidential know-how are scattered in several bodies of the law, including tort law, contract law, employment law, criminal law, and – occasionally – intellectual property (IP) law. The country that has made the greatest effort to provide a unified framework for TS protection is most likely the US, where the

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[1] Recent empirical work by Hall et al. (2013) shows that in the UK only 4% of innovating companies patent. In the US, approximately 5.5% of all manufacturing firms engage in patenting activity (Balasubramanian and Sivadasan, 2011). Arundel (2001) finds that European manufacturers investing in R&D rate secrecy as more important than patents for the protection of their innovations.

[2] As aptly remarked by the US Supreme Court in In *Bonito Boats v. Thunder Craft Boats* – 489 U.S. 141 (1989): "[. . .] imitation and refinement through imitation are both necessary to invention itself, and the very lifeblood of a competitive economy." In this case, the US Supreme Court invalidated a Florida statute prohibiting plug moulding of vessel designs.

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Uniform Trade Secrets Act (UTSA) of 1979, amended 1985, has been adopted by most states.

Provisions close to those of the UTSA have been included in the international Trade-Related Aspects of Intellectual Property Rights (TRIPs) agreement of 1994, which requires WTO member countries to provide legal protection to undisclosed information (art. 39, see below). In spite of the TRIPs agreement, significant variations with respect to substantial TS law persist across the world and across EU countries (Backer-McKenzie, 2013; Lippoldt and Schultz, 2014).[3] This has prompted an initiative of the European Commission aimed at imposing uniform legislation across the Union (Proposal 2013/0402). The proposed directive provides for a common definition of protectable knowledge and stipulates the remedies available in case of misappropriation.[4]

To frame our analysis, we will follow the definition of TS provided by the TRIPs agreement, which stipulates that (Art 39.2):

Natural and legal persons shall have the possibility of preventing information lawfully within their control from being disclosed to, acquired by, or used by others without their consent in a manner contrary to honest commercial practices so long as such information: (a) is secret [. . .]; (b) has commercial value because it is secret; and (c) has been subject to reasonable steps under the circumstances, by the person lawfully in control of the information, to keep it secret.

From this definition, we learn that publicly available information and everyday knowledge are not eligible for legal protection; valueless information and information not subject to reasonable protection do not qualify as trade secrets.

Remedies for misappropriation usually include injunctive relief and damage awards.

Compared with patents and other types of intellectual property, trade secrecy is characterized by several distinguishing features.

First, it does not require any form of registration. This does not mean, however, that it can be protected at no cost. In fact, TS protection can be extremely expensive, depending on the type of information concerned. Expenses usually relate to the installation of safety devices, the organisational efforts to avoid the leakage of the information, and the costs related to the imposition of confidentiality restrictions in contractual relationships.

Second, the subject matter is extremely broad, as it encompasses any type of undisclosed information able to provide a competitive advantage to its owner.[5]

Finally, the law does not provide an "exclusive right" to the holder of the secret. Rather, the law draws the line between the sets of the lawful and unlawful ways in which information can be obtained and used. For civil remedies to be applicable, the secret must have been acquired in "a manner contrary to honest commercial practices," which means, under the TRIPs agreement: "at least practices such as breach of contract, breach of confidence and inducement to breach, and includes 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." (art. 39, footnote 10). Under the UTSA, improper means of acquisition of a secret include: "theft, bribery, misrepresentation, breach or inducement of a breach of a duty to maintain secrecy, or espionage through electronic or other means." Conversely, independent creation, discovery through reverse engineering, and acquisition from public sources represent traditional forms of legitimate appropriation of the secret.[6] By drawing the line between the lawful and unlawful ways in which information can be acquired, the law defines the *scope* of TS law.

The following examples illustrate the point. Let us consider the case of an employee who leaves her company to work for a competitor. Should the employee be allowed to take with her the knowledge acquired in her first job? In general, former employees are not allowed to disclose this knowledge (e.g., customers data) if it qualifies as a trade secret, whereas they are allowed to do so, if it is part of their "general skill and knowledge." In drawing the line between "trade secrets" and "general skill and knowledge," law makers must balance the opposing goals of encouraging investment in knowledge and protecting job mobility, which is at the base of free competition.[7]

Similar considerations arise with respect to the covenants not to compete after the termination of the employment relationship. Californian courts tend not to enforce them at all, whereas other courts take a more cautious stance (usually based on "reasonableness" criteria). Clearly, where non-competition covenants are enforced, the primary producer of the know-how is protected (she must spend less to retain her employees, and she can share information internally more easily), but diffusion of the knowledge is stymied.[8]

Although outright theft of documents is obviously unlawful, other forms of information acquisition may or may not be lawful depending on circumstances and jurisdictions. In the famous *du Pont vs. Christopher* case, a company hired a pilot to take aerial pictures of a newly built plant, with the purpose of uncovering information about the rival's manufacturing process.[9] The court held that this conduct was an improper method for the acquisition of information of the rival's production technique. While recognising that "for our industrial competition to remain healthy there must be breathing room for observing a competing industrialist," it concluded: "Our tolerance of the espionage game must cease when the protections required to prevent another's spying cost so much that the spirit of inventiveness is dampened. [. . .] To require DuPont to put a roof over the unfinished plant to guard its secret would impose an enormous expense to prevent nothing more than a school boy's trick." In the *Christopher* decision, the main arguments for the prohibition of the conduct relied on the cost of self-protection and the adverse impact of the conduct on

[3] Undisclosed business information is protected under the common law of confidentiality in England, whereas it is protected under unfair competition law (*Unlauterer Wettbewerb*) in Germany. In France, the protection of manufacturing secrets is regulated by the Code of Intellectual Property. See Backer-McKenzie (2013).

[4] A plan to strengthen TS protection in the US has been put forward by the Obama administration at about the same time (see Executive Office, 2013).

[5] The US Economic Espionage Act, which criminalises TS misappropriation, defines the latter as: "all forms and types of financial, business, scientific, technical, economic, or engineering information, including patterns, plans, compilations, program devices, formulas, designs, prototypes, methods, techniques, processes, procedures, programs, or codes, whether tangible or intangible, and whether or how stored, compiled, or memorialized physically, electronically, graphically, photographically, or in writing" (§1839).

[6] See Backer-McKenzie (2013). This feature is explicitly acknowledged by the Directive proposal of the European Commission (Proposal 2013/0402).

[7] In some jurisdictions, courts just assume – under the doctrine of "inevitable disclosure" – that this transfer of proprietary knowledge cannot be avoided under the new duties taken up by the employee. See, for example, *PepsiCo, Inc. v. Redmond*, 54 F. 3d 1262, 1263–64 (7th Circuit 1995). Along the same line, mobility of *groups* of employees is subject to specific restraints. In some jurisdictions, soliciting the departure of employee teams or departments from rival firms (so called "poaching" or "raiding") is explicitly forbidden. In others, e.g., in California, it is not. California's high-tech companies have reacted by agreeing not to solicit each other's employees. This practice, however, has been considered anticompetitive by the antitrust authority. *Complaint, US v. Adobe Systems Inc., et al.*, DOJ, 2010.

[8] California's exceptional labour mobility has been pointed out as a major driving force behind the success of the Silicon Valley's district (see Saxenian, 1994). Gilson (1999) underscores the role served by California's lax trade secrets law with respect to labour mobility.

[9] *E.I du Pont deNemours & Co. v. Christopher*, 431 F.2d 1012 (5th Cir. 1970).