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Trade secrets law

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Trade secrets law

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Abstract. The standardisation of trade secret protection was one of the goals of the TRIPs Agreement of 1998. Nevertheless, substantial differences in this protection remain across jurisdictions. When defining the optimal scope of trade secrets law, lawmakers should be aware that strong trade secret protection is likely to promote inventiveness, but it is also likely to hinder the diffusion of knowledge and prevent competition.

JEL Classification: K0, L1

Keywords: Trade Secrets Law, Intellectual Property

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Definition. Trade secrets law protects firms from the unauthorised disclosure of valuable information. The misappropriation of trade secrets generally constitutes an act of unfair competition that incurs civil liability and possibly criminal penalties. Standard examples of trade secret misappropriation include espionage, the breach of non-disclosure agreements, and the unauthorised revelation of information to third parties.

1. Background

Trade secrets law has its roots in the preindustrial age, when craft guilds jealously protected the "mysteries" of the arts. Within guilds, as well as within master-apprentice relationships, secrecy was the standard, and the violation of this secrecy could be penalized by capital punishment (see Epstein 1998). In modern times, the violation of secrecy is regarded as an act of unfair competition that contrasts with the honest practices that should prevail in the business community. Unfair competition was mentioned in the *Paris Convention for the Protection of Industrial Property* of 1883 (art. 10bis), although no direct reference was made to the misappropriation of trade secrets. Despite the attempt of the Convention to create a level playing field, major differences remain in the laws governing unfair competition among countries (see De Very 2006 and Henning-Bodewig 2013).

2. Trade secrets law

Commercial and technological information can leak out of firms in many ways. It can be stolen by employees or third parties (in the case of information contained in documents, files or technological items); it can be obtained through subtle espionage techniques (tapping, dumpster diving, etc.); it can be disclosed to third parties by unfaithful employees; it can be memorized and taken away by former employees who start their own business or take a job elsewhere; it can be indirectly deduced by competitors through reverse engineering; it can be obtained by scrutinizing the

documents submitted to regulatory agencies; and it can be obtained by rivals via communication with parties who are related to the information owner (e.g., buyers and suppliers). Given the multitude of ways in which commercial and technological information can be transferred out of firms and into the hands of others, in most countries, provisions against the misappropriation of trade secrets are scattered across several branches of the law, including tort law, contract law, intellectual property law, labour law, and criminal law. Substantial variations in trade secrets protection exist across legal systems (see European Commission 2013, Schultz and Lippoldt 2014).

At the international level, an important definition of the subject matter of trade secrets law is provided by the TRIPs Agreement (art. 39.2), which postulates that lawfully acquired business information qualifies as a trade secret only if (a) it is secret, (b) it has commercial value because it is secret, and (c) it has been subject to reasonable steps to ensure its secrecy. From this definition, we learn that publicly available information and everyday knowledge are not eligible for legal protection; additionally, valueless information and information not subject to reasonable protections do not qualify as trade secrets. All the countries that belong to the WTO should ensure that trade secrets are granted legal protection against acts of misappropriation that include "breach of contract, breach of confidence and inducement to breach" (TRIPS, footnote 10). The task of defining the precise set of activities that fall into the category of "misappropriation" lies with individual countries, which might be more or less strict on this topic. In turn, these protections against misappropriation lead to legal remedies in cases of misappropriation that usually include injunctive relief and damage awards. The latter are typically commensurate with the actual loss that a trade secret owner has suffered or the unjust enrichment of a party that has misappropriated a secret. In most countries, courts can also set a reasonable royalty for the use of a misappropriated secret (for a limited time span).

3. Trade secrets policy

From a policy perspective, one of the main issues raised by trade secrets law is the scope of the protection that should be granted to the owners of undisclosed information (i.e., the conduct that should be forbidden and the conduct that should not be forbidden) (see Franzoni and Kaushik 2016). Some types of conduct tend to be easily categorized: for example, the theft of documents is undoubtedly unlawful, while reverse engineering tends to be universally lawful. Regarding other types of conduct, courts and lawmakers take a variety of positions. For example, courts and lawmakers can be more or less lenient in cases where key employees leave their company to work for a competitor. In some jurisdictions, this conduct can lead to an unfair competition suit under the doctrine of inevitable disclosure. In some other jurisdictions, e.g., in California, workers' mobility is rarely hindered by trade secrets law (see Gilson 1999). When deciding the strength of trade secret protection, lawmakers need to keep in mind that strong protection comes at the cost of reduced labour mobility and less diffusion of technological knowledge (see Fosfuri and Rønde 2004, Contigiani et al. 2018).

Generally, trade secrets law has been credited with the following beneficial effects (see Lemley 2011). First, by preventing the unwarranted diffusion of information, trade secrets law provides a competitive edge to the original producer of valuable information. Regarding innovative knowledge, for instance, most companies regard the advantage of the head start provided by secrecy to be important (see Cohen et al. 2000, NSF 2018). In turn, this advantage is likely to encourage innovation, as documented by Png (2017). Second, trade secrets law allows firms to reduce their self-protection expenditure: thanks to the legal protections against unwanted disclosure, firms can more freely organize their units and share information among their members. In the absence of legal protection, costly measures would have to be taken to reduce the probability of an information leak. In fact, the reduction of self-protection expenditure is the main benefit that Landes and Posner (2003) credit to intellectual property law. Facilitated information sharing can also involve contracting parties outside the firm.

The effective enforcement of non-disclosure agreements facilitates the transmission and sale of information from the producer of the information to third parties. In this sense, non-disclosure agreements represent a partial solution to Arrow's information paradox (Arrow 1962), which postulates the unavailability of restitutory remedies for unwarranted information disclosure (i.e., once it is shared, information cannot be returned).

Trade secrets law also produces social costs. First, by limiting the circulation of information, trade secrets law may delay imitation and prevent technological progress. It has been noted, in fact, that strong technological spill-over characterizes certain rapidly evolving technological districts such as Silicon Valley, where high levels of labour mobility accelerate the diffusion of innovative knowledge (Saxenian 1996, Gilson 1999). Information sharing facilitates the expansion of the stock of public knowledge, producing new forms of collective invention (Allen 1983, von Hippel and von Krogh 2011).

A further cost of trade secrets law concerns the relationship between secrecy and patent protection (explored, more generally, by Hall et al. 2014). If trade secret protection is strong, inventors' incentives to rely on the patent system are weak. Thus, fewer inventions are disclosed through patent applications, and the stock of public knowledge may grow less rapidly. In this situation, the issue is whether patents or trade secrecy provide better protection from a social point of view. Patents have a limited duration (normally 20 years) and require that the invention is disclosed. Trade secrets can potentially last forever and, by definition, are not disclosed. This implies that either no one else has access to the information - thus, the original owner retains market power forever - or that third parties have to waste their resources to re-discover the original invention (either to market it directly or to improve upon it). The comparison between these two forms of protection hinges on the nature of the innovation process (i.e., how many firms have the capacity to create the original invention, the extent of research spill-overs) and the nature of the competition across firms upon duplication (under

trade secrecy) (see Denicolò and Franzoni 2012). Note that, in theory, trade secrecy could lead to an infinite monopoly (if duplicators collude with the first inventor).

The impact of trade secrets law on the propensity to patent, however, should not be overestimated. In fact, the subject matter of trade secrets law is much broader than that of patent law. This is because nearly any type of commercial and technological information is eligible for trade secret protection, while only the inventions that meet the originality and non-obviousness requirements of patent law qualify for patent protection. An empirical investigation by Hall et al. (2013) reveals that only 5% of innovative UK firms rely on the patent system, while all firms, in one way or another, rely on secrecy.

References

Allen, R. C. 1983. Collective invention. *Journal of Economic Behavior & Organization* 4(1), 1-24.

Arrow, K. 1962. Economic welfare and the allocation of resources for invention. In: *The Rate and Direction of Inventive Activity: Economic and Social Factors,* Princeton University Press.

Cohen, W.M., Nelson, R.R. and , J.P. Walsh 2000. Protecting their intellectual assets: Appropriability conditions and why US manufacturing firms patent (or not) (No. w7552), National Bureau of Economic Research.

Contigiani, A., D. Hsu, and I. Barankay 2018. Trade secrets and innovation: Evidence from the "inevitable disclosure" doctrine, *Strategic Management Journal* 39/11, 2921-2942.

Denicolò, V. and L.A. Franzoni 2012. Weak Intellectual Property Rights, Research Spillovers, and the Incentive to Innovate. *American Law and Economics Review*, 14/1, 111-140.

De Vrey, R. 2006, *Towards a European Unfair Competition Law: A Clash Between Legal Families*, Leiden, Martinus Nijhoff Publishers.

European Commission 2013, *Study on Trade Secrets and Confidential Business Information in the Internal Market*, downloadable at http://ec.europa.eu/internal_market/ iprenforcement/trade_secrets/

Epstein, S. R. 1998. Craft guilds, apprenticeship, and technological change in preindustrial Europe. *The Journal of Economic History*, 58(03), 684-713.

Fosfuri, A. and T. Rønde 2004. High-tech clusters, technology spillovers, and trade secret laws. *International Journal of Industrial Organization*, 22(1), 45-65.

Franzoni L. A. and A. Kaushik 2016, The optimal scope of trade secrets law, *International Review of Law and Economics*, 2016, 45, 45-53.

Gilson, R. J. 1999. Legal Infrastructure of High Technology Industrial Districts: Silicon Valley, Route 128, and Covenants Not to Compete, *New York University Law Review*, 74(3), 575-629.

Hall, B., Helmers, C., Rogers, M. and V. Sena 2013, The importance (or not) of patents to UK firms, *Oxford Economic Papers*, 65/3, 603-629.

Hall, B., Helmers, C. Rogers, M., and V. Sena 2014, The Choice between Formal and Informal Intellectual Property: A Review, *Journal of Economic Literature*, 52(2): 375-423.

Henning-Bodewig, F. 2013. Editor, *International Handbook of Unfair Competition*, C.H. Beck - Hart - Nomos.

Landes, W. and R. Posner 2003. *The Economic Structure of Intellectual Property Law*, Harvard, Harvard University Press.

Lemley, M. A. 2011. The Surprising Virtues of Treating Trade Secrets as IP Rights, in *The Law and Theory of Trade Secrecy: A Handbook of Contemporary Research*, edited by R. Dreyfuss and K. Strandburg, Cheltenham, Edward Elgar Publishing.

Png, Ivan 2017. Law and innovation: evidence from state trade secrets laws. *Review of Economics and Statistics* 99/1, 167-179.

Saxenian, A. 1996. *Regional advantage: Culture and competition in Silicon Valley and Route 128*. Harvard, Harvard University Press.

Schultz, M. and D. Lippoldt 2014, Approaches to Protection of Undisclosed Information (Trade Secrets): Background Paper, OECD Trade Policy Papers, No. 162, OECD Publishing, Paris.

Von Hippel, E. and G. von Krogh 2011. Open innovation and the private-collective model for innovation incentives, in *The Law and Theory of Trade Secrecy: A Handbook of Contemporary Research,* edited by R. Dreyfuss and K. Strandburg, Cheltenham, Edward Elgar Publishing.

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