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STRENGTHENING THE GLOBAL TRADE SYSTEM



Trade Secrets, Innovation and the WTO

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ABSTRACT

The intersection of trade secrets, innovation, and the World Trade Organization forms a topic that is increasingly debated as part of the public discourse on intangible capital and intellectual property rights. Pointing out that the international framework governing trade secrets should be improved, the authors of this think piece propose six principles to flesh out approaches to harmonize certain dimensions of trade secret protection that are not currently specified in multilateral agreements at WTO. They can be structured to include flexibility, such as transition periods for developing countries and an exemption for least developed countries. The objective is to improve the ease of doing business internationally with respect to trade secrets, while reinforcing the incentives for further innovation and the diffusion of knowledge. The recommendations also seek to ensure labour market flexibility and employee mobility. Reforms in the area of trade secrets may include the institution of effective protection in countries that lack it now; the harmonization of key aspects across countries that now have divergent approaches; and the establishment of minimum norms for protection. While uniformity in legal systems is not feasible for the protection of trade secrets, some alignment among WTO Members may be achieved, with benefits to a broad range of stakeholders.

CONTENTS

Introduction	1
Overview of this Topic and Why it is Important	1
What Is a Trade Secret?	1
Economic Importance	2
Trade Secrets Protection Index - Taxonomy of Elements of Protection	3
Key Issues and Challenges	4
Ways Forward: Lessons and Options	5
Definition of Trade Secret	5
Sanctioning Violations	6
Preliminary Injunctions	7
Varying Legal Procedures	7
Sufficient Safeguards	8
Employee Mobility	9
Conclusions	9
References	10

INTRODUCTION

As intangible assets have become central to the world economy (OECD 2011), trade secrets have become more important. In many advanced economies, investment in intangible assets routinely amounts to 5 or 10 percent of gross domestic product (GDP). In some countries, such as the United States (US), investment in intangible assets now exceeds investment in tangible assets. The increased importance of intangible assets has been accompanied by an accelerating pace of innovation; a growth in the share of services in overall economic activity; and an expansion of trade and foreign direct investment. Trade secrets have played an important role in these developments. Governments and businesses increasingly herald their importance. They are key to securing returns on research and development (R&D); improving industrial and business processes; and developing business information.

This paper reflects on trade secrets, innovation, and the World Trade Organization (WTO), a topic that is increasingly debated as part of the public discourse on intangible capital and intellectual property rights (IPRs). The authors propose several ways to improve the existing international framework governing trade secrets.

OVERVIEW OF THE TOPIC AND WHY IT IS IMPORTANT

Businesses, policymakers, and scholars have increasingly focused on trade secrets in recent years, recognizing that they hold substantial economic value; contribute significantly to innovation; and influence knowledge diffusion. Trade secret protection plays an essential role in an intellectual property (IP) system, complementing or substituting for other formal means of IP protection, such as patents, plant variety protection, or copyrights.

WHAT IS A TRADE SECRET?

The WTO Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) was the first multilateral agreement to explicitly require member countries to provide protection for "undisclosed information," or, as they are more commonly called, trade secrets.¹ Article 39.2 of TRIPS defines a trade secret as information that (1) is secret; (2) has commercial value because it is secret; and (3) has been subject to reasonable steps to keep it secret. Following TRIPS, this definition has been widely adopted into national laws, and thus is the definition used in this paper.

Trade secrets cover three broad categories of information — (1) technical information; (2) confidential business information; and (3) know-how. Technical information concerns such matters as industrial processes, blueprints, and formulas, among other possibilities. Confidential business information typically includes customer lists (provided that they include truly non-public information), financial information, business plans, and similar types of non-public information on the operation of a business. Know-how includes information about methods, steps, and processes

¹ In making the link to protection against unfair competition, the WTO TRIPS Agreement Article 39 references Article 10bis of the Paris Convention for the Protection of Industrial Property, a convention that is administered by the World Intellectual Property Organization (WIPO). The application of the TRIPS Agreement is subject to some transitional arrangements for developing countries and least developed countries (LDCs), which are discussed in Part VI of the agreement. Subsequent decisions by the TRIPS Council and Ministerial Council extended the transition period for LDCs through 1 July 2021 (http://www.wto.org/english/tratop_e/trips_e/ldc_e.htm).

for achieving efficient results. In addition, Article 39.3 of TRIPS requires protection of non-public test and regulatory data disclosed to governments to obtain approval for pharmaceutical or agricultural chemical products that use new chemical entities. Although TRIPS does not explicitly mention “data exclusivity” as such (that is, granting a data originator exclusive rights to rely directly or indirectly on the originator’s data for regulatory approval during a designated period of exclusivity), a number of countries have extended this type of protection.

While the TRIPS Agreement defines the characteristics of a trade secret and lists the types of abuses where misappropriation might occur, it does not provide much specific guidance on the details of laws protecting trade secrets.² Consequently, there is great diversity in how WTO Members provide TRIPS-mandated protection. In some instances, countries have implemented legislation expressly addressing trade secrets protection, or have well-established common law protection. Other countries meet their TRIPS obligation via laws of more general application against unfair competition or breach of duty. The variation among these approaches can affect the ways businesses and workers conduct their affairs.

Like other rights in intangibles, trade secret law secures the investment of the developer, but differs from other intangible rights in important ways. Unlike IPRs that offer protection for specific time periods (for example, 20 years for patents), trade secrets may last indefinitely, but in fact are relatively fragile. As Maskus (2000) points out, they “are not protected against learning by fair means, such as independent creation, reverse engineering or reading public documents.” Trade secret law thus secures the fruits of the labour of the developer by providing an exclusive right to use the information it has developed. However, it does not confer the right to exclude those who labor independently to develop the same information, so long as the second party obtains the information fairly, or it enters the public domain by fair means.

ECONOMIC IMPORTANCE

Because trade secrets are, in fact, secret, the full scope of their economic importance is somewhat obscured. However, existing evidence indicates that their importance is great, and businesses and policymakers are increasingly aware of this.³ For example, a recent European Commission (EC)-sponsored survey of 537 businesses in Europe found that 75 percent ranked trade secrets as “strategically important to their company’s growth, competitiveness and innovative performance” (EC 2013). One study for the US in the past

decade put the annual cost of trade secret theft to US firms as high as USD 300 billion (Almeling et al. 2010). Interviews with members of the European Chemical Industry Council indicate that misappropriation of a trade secret or confidential business information could entail a loss of revenue for a firm of up to 30 percent and sometimes much more (CEFIC 2012).

Trade secrets appear to be especially important to small and medium-size enterprises (SMEs). For many SMEs, trade secrets have several advantages over patents—particularly lower cost and the lack of a registration requirement — making them the default mode of protection for intellectual capital (Brant and Lohse 2013).

The economic literature points to important economic incentives that trade secret law may provide.

- **Invention and commercialisation:** It encourages firms to invent and invest in the development of commercially valuable information by securing their ability to appropriate returns on their efforts.
- **Efficient protection and acquisition of knowledge:** By deterring theft and providing recourse, trade secret law reduces the need of the owner to resort to more extreme, inefficient, and costly protective measures where more moderate measures may suffice. As Risch (2007) points out, trade secret protection can channel both trade secret owners and competitors into more efficient behaviour. The owner optimizes, rather than maximizes, security, while the competitor is less likely to engage in inefficient and undesirable activities, such as bribery and espionage, in attempting to appropriate the secret (Friedman et al. 1991).
- **Knowledge spillovers:** By reducing risk, trade secret law promotes the sharing of trade secrets with a broader circle of contacts, which may lead to follow on innovation and greater development of human capital—what are often called knowledge spillovers. For example, Friedman et al. (1991) observe that the availability of trade secret protection discourages use of less efficient and more restrictive alternative approaches to protection, such as hiring only family members or paying wage premiums to prevent employee movement. Effective trade secret regimes may thus actually lead to greater knowledge diffusion (Lemley 2011).

Through such incentives, an appropriate level of trade secret protection may motivate increased investment in innovation (Lemley 2011). For some types of innovation, trade secrets may even afford protection—and thereby provide incentives — in cases when other forms of IP protection such as patents are not available (for example, for formulas or tacit know-how) (Maskus 2000; Friedman et al. 1991).

² See TRIPS, Article 39, including footnote 10, http://www.wto.org/english/res_e/booksp_e/analytic_index_e/trips_03_e.htm.

³ For further details on the importance of trade secrets in many economies, see Schultz and Lippoldt (2014), Box 3.

With governments increasingly recognising the importance of trade secrets, they have undertaken a number of initiatives to address uncertainty, or gaps in protection (Lippoldt and Schultz 2014). The EC launched a draft directive in November 2013 to harmonize key aspects of civil trade secret protection across Member countries. The directive would provide a common definition of trade secrets, or a means through which victims of trade secret misappropriation can obtain redress (for example, offering protection of secrecy during court proceedings), and remedies (for example, damages, recall and destruction of infringing products, and availability of injunctions).⁴ In 2013, the US released the “Administration Strategy on Mitigating the Theft of US Trade Secrets,” which included a set of action items for improved protection domestically and internationally.⁵ Among other actions, the strategy will promote prosecution of abuses; development of industry-led best practices; review of laws; diplomatic engagement; and public awareness.

TRADE SECRETS PROTECTION INDEX – TAXONOMY OF ELEMENTS OF PROTECTION

In previous work, the authors developed an indicator to measure the stringency of trade secret protection across countries, the Trade Secrets Protection Index (TSPI) (Schultz and Lippoldt 2014). The TSPI is structured on five main components.

1. Definitions and coverage
2. Specific duties and misappropriation
3. Remedies and restrictions on liability
4. Enforcement, investigation and discovery; data exclusivity
5. System functioning and related regulation

The approach to scoring provides up to one point for each of the five main components of the index and a maximum total score of five points.⁶

The index captures objective, verifiable information on the stringency of available protection in a manner that is internationally comparable and non-normative (that is, the index measures stringency, but does not specify a preferred level of protection).⁷

Figure 1 presents the index scores of 2010 for a broad sample of 37 economies at various levels of economic development and from locations around the world. With scores ranging from 2.45 to 4.49, it highlights the continued diversity remaining in the sample economies some 15 years after the TRIPS Agreement. Moreover, one can observe the different combinations of components that the various economies

4 The draft directive and related materials are available at http://ec.europa.eu/internal_market/iprenforcement/trade_secrets/index_en.htm#maincontentSec1.

5 This strategy is available at http://www.whitehouse.gov/sites/default/files/omb/IPEC/admin_strategy_on_mitigating_the_theft_of_u.s._trade_secrets.pdf.

6 The five index components are scored based on 37 underlying indicators. These are primarily empirical indicators employing objective criteria that can be independently verified. Some dimensions concerning system operation take into account peer-reviewed expert opinion. For details on the scoring and structure, see Schultz and Lippoldt (2014), Chart 1.

7 The development of the TSPI index is a pioneering effort to advance analysis based on international comparisons of a broad range of alternative protections available for trade secrets. A variety of similar indices cover other types of intellectual property and even certain aspects of trade secrets protection. For example, Park (2008) employed laws-on-the-books approaches to examine protection of patents, trademarks, and copyright. Pugatch et al. (2014) developed an empirically based index of the strength of IPR protection, which also incorporated industry perspectives. Png (2012a and b) developed an indicator for use in his analytical work on trade secrets protection in the US. Certain of these indicators have been utilized in related studies conducted by the OECD on patents, trademarks, and copyright; for example, see: Park and Lippoldt (2008); Cavazos and Lippoldt (2010). Lippoldt (2011) presents related material.

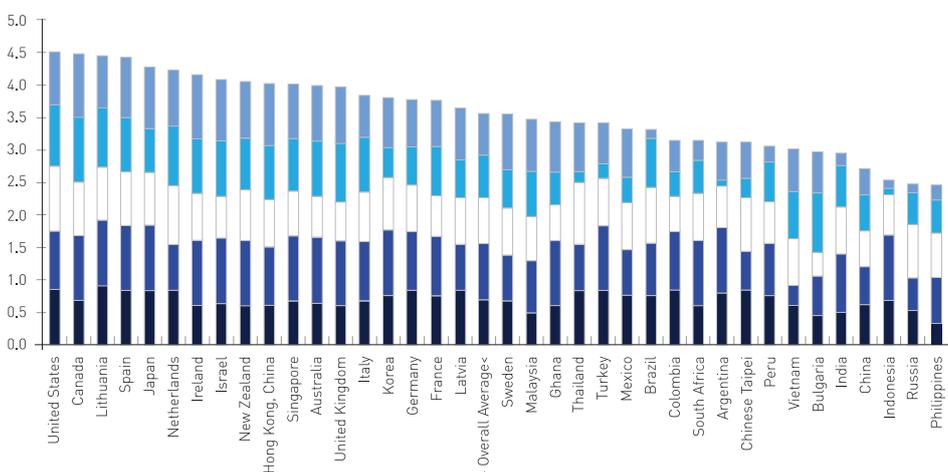


FIGURE 1:
Trade Secrets Protection Index, 2010
(by economy and index component)

- LEGEND:**
- Definition and coverage
 - Remedies and restrictions on liability
 - System functioning and related regulation
 - Duties and misappropriation
 - Enforcement, investigation and discovery, data exclusivity

(Source: Lippoldt and Schultz 2014.)

employ. In some cases, similar scores are attained by divergent combinations of strength in each component of the index. For example, Chinese Taipei and Argentina have similar scores, but different approaches. Argentina has a stronger score for “duties and misappropriation” (for example, covering both express and implied duties in employment and commercial relationships). Chinese Taipei has a stronger score for “enforcement, investigation and discovery; data exclusivity” (for example, offering five years of data exclusivity for pharmaceutical products and eight years for agricultural chemicals). Overall, the international comparisons shown in the figure represent a challenging environment for businesses operating internationally because consistent protection is not available for certain aspects of trade secrets.

KEY ISSUES AND CHALLENGES

The past two decades have witnessed a wave of reform of trade secrets protection catalysed by the TRIPS Agreement, regional accords, and national law revision. The stringency of protection as measured by the TSPI has increased from an average of 3.11 in 1990 to 3.59 in 2010. However, the increased average is not the result of uniform changes to law, but rather a multiplicity of diverse approaches. The resulting complexity poses a challenge for businesses and employees operating internationally. Thus, it is perhaps not surprising that discussions of the topic often suffer from a lack of clarity, conflating a set of distinct (albeit related) concerns into a single problem.

From our review of the literature, case reports, and press reports, we have identified four major challenges that are highlighted in current policy discussions. The term “trade secrets” is often invoked to address three types of abuse, as well as the cross-cutting challenge of ensuring appropriate opportunities for employee mobility.⁸

To align challenges properly with possible solutions, we consider the specifics of each in turn below.

⁸ Yet another category of concerns often invoked in trade secret policy discussions relates to data security and data breaches. In several notable recent instances, hackers have stolen vast numbers of credit card numbers and other personal information from retailers. Strictly speaking, such attacks are not trade secret violations because they target non-proprietary, third-party consumer data. However, corporate security practices and laws protecting computer systems can play a dual role in protecting both trade secrets and consumer data.

- **Breach of trust:** This category of trade secret theft occurs where an employee or business partner breaches trust to disclose or use a trade secret in an unauthorized manner. It occurs most frequently when departing employees take trade secrets and use them to start a competing business or disclose them to benefit their new employer. It also occurs when a commercial partner abuses trust—for example, a competitor misuses information discovered during negotiations to buy a business, or a distributor or service provider uses information to their own advantage.
- **Corporate espionage:** This category of trade secret theft occurs where an unrelated third party uses surreptitious means to acquire trade secrets. In some instances, the behaviour involves simple opportunism, such as trespassing to take photos, sorting through disposed papers or equipment, or buying formulas or blueprints offered by a disloyal employee. In other instances, however, the behaviour is much more systematic and sophisticated, involving such acts as planting false employees or “moles;” bribing one or more employees to become long-term spies; and hacking into computer systems.
- **State-sponsored corporate espionage:** This category of trade secret theft occurs where state-owned companies engage in cross-border corporate espionage or when governments acquire information from foreign businesses for the benefit of their own businesses and industries.⁹
- **Employee mobility:** Unlike the challenges of trade secret theft, employee mobility is positive and important, facilitating economic adjustment, knowledge diffusion, and freedom. The challenge is to find the appropriate balance in protecting trade secrets while avoiding undue constraints on employee mobility.¹⁰

These distinct problems require distinct solutions. Of the three sets of theft-related issues, breach-of-trust problems are most adequately covered by existing laws, although

⁹ A recent example of such activity can be found in a US Federal Government court case launched against five Chinese military officials for allegedly hacking into computers at five US companies. US officials are apparently considering what type of responses might be appropriate in light of such espionage, including freezing assets or individual sanctions such as visa restrictions, or possibly national-level action at the WTO (Source: “US to Rev Up Hacking Fight.” 2014. Wall Street Journal, 23 May.

¹⁰ An important issue concerns investment by firms in training employees. Employee use of general skills and knowledge (for example, from training that is widely available) cannot generally be restrained. However, where a firm invests substantial time and resources in training an employee in its own technical products, courts in some countries may find that the firm has a legitimate business interest that may appropriately be protected via a limited non-compete clause in a labour contract (Swift 2007). In the light of increasing or high employee mobility, a firm’s incentive to invest in such training in principle could be supported by availability of such non-compete protection. Yet, the validity of such claims may be difficult for an employer to demonstrate (Lester 2001). Alternatives to avoid loss of firm-specific knowledge might include contractual requirements for employees to reimburse training costs under certain conditions (Lester 2001), or for firms to pay a wage premium to discourage employee separations (Fosfuri et al. 2001).

this is not universally so. Corporate espionage is a more challenging problem, calling for a broader array of civil and criminal remedies than is often available. State-sponsored corporate espionage is a challenging problem, unlikely to be adequately addressed solely by national laws, and thus calling for solutions at the international level. Employee mobility challenges are addressed by carefully tailoring trade secret laws, and through a mix of civil or administrative law governing labour contracts and practices.

WAYS FORWARD: LESSONS AND OPTIONS

This section details six principles for improving trade secret protection worldwide. Since there are conflicting views in WTO on protection of trade secrets, the authors offer these principles as a starting point for discussion. They could also serve as the basis of a framework to guide implementation among willing WTO Members. This framework could take the form of a non-binding understanding that would not prevent countries from having more stringent protections. It might eventually be employed as a starting point for consideration in a regional or a plurilateral accord in the context of the WTO.

These are the six principles.

1. The definition of trade secrets should, in its broad outlines, be no more restrictive than the three-part definition set forth in TRIPS Article 39, paragraph 2.
2. Trade secret law should effectively sanction both breach of duty and third-party misappropriation.
3. Trade secret law should offer a full array of remedies, including ex parte preliminary injunctions.
4. Trade secret laws should include effective provisions for investigating claims.
5. Trade secrets should be effectively protected during litigation.
6. Trade secret laws and related laws should take a balanced approach to employee mobility in attempting to protect confidential information.

We stress that the six principles offered here are basic, core principles. Implementing these principles would not maximize the level of trade secret protection, and this paper makes no judgment as to whether it would be desirable to do so. Rather, these principles are essential to a trade secret protection regime that simply functions well enough to fulfill its fundamental, intended purposes. If they are not satisfied

reasonably, a trade secret regime likely will not serve much better than no protection at all. In this respect, we note that trade secret law, and the policy discussions surrounding it, are not as advanced as patent law and copyright law, where questions of fine-tuning maximum levels of protection via tools such as subject matter and term have been debated for many years. Trade secret law and the policy discussion surrounding it remain at a far more fundamental level.

The six principles are set forth in broad terms, in recognition of the fact that legal systems and traditions vary widely. They will need to be addressed taking fundamental differences in legal regimes into account. Thus, they aim to achieve greater coherence and effectiveness in the results for trade secrets protection without challenging the fundamentals of each country's legal regime. Rather, the objective is to set standards for availability and levels of protection. What follows are the principles, and a few observations on the need for further dialogue on data exclusivity in pharmaceuticals and agricultural chemicals (Box 1).

DEFINITION OF TRADE SECRET

The definition of trade secret should, in its broad outlines, be no more restrictive than the three-part definition set forth in TRIPS Article 39, paragraph 2.

Since TRIPS, definitions of trade secrecy have converged worldwide. The common definition stems from TRIPS Article 39, paragraph 2, which contains an agreed-upon, three-part definition of trade secrets. In short, as noted above, a trade secret must be (1) secret; (2) derive commercial value from secrecy; and (3) be the subject of reasonable efforts to maintain secrecy. Nevertheless, a few countries have added or maintained additional requirements that significantly narrow trade secret protection. For example, Russia requires a trade secret owner to take several additional steps to qualify information for trade secrecy.¹¹

Among these are that the owner must record trade secrets in an inventory and include a formal notice on all documents. Similarly, English common law once required that information be divulged in confidence--thus only protecting trade secrets from breach of duty, not misappropriation by third parties. While the United Kingdom (UK) has abandoned this view, several countries with English legal origins have apparently maintained it, including New Zealand and India.

Such additional requirements significantly narrow trade secret protection, allowing some infringers to avoid liability on technicalities, while providing little benefit to society.

11 | Article 1462, Federal Law on Commercial Secrecy, No. 98-FZ, Article 10 (29 July 2004) (as amended on 24 July 2007).

They do not play a particularly helpful role in ensuring that trade secrecy is contained within appropriate normative and economic bounds. Nor are they necessary to ensure notice to third parties.

The requirements embodied in TRIPS Article 39 already do the necessary work to establish an appropriate scope for trade secrets. They channel it to ensure that owners only get the benefit of valuable information they actually create and keep secret. They thus give the owner an incentive to perform R&D. Moreover, the requirement of reasonable efforts to maintain secrecy ensures that trade secret owners provide proper notice and take appropriate precautions in the context of a particular type of secret.

SANCTIONING VIOLATIONS

Trade secret law should effectively sanction both breach of duty and third-party misappropriation.

There are two ways that a third party can take a trade secret from its owner without claim of right¹² -- i) by using

or disclosing it in breach of a duty to keep it secret; and ii) by misappropriating it by committing a crime, tort or other wrongful act. Breach of duty is usually the act of an employee or business partners, while misappropriation typically is the act of an unrelated third party.

There are two types of duties to keep secrets--express and implied. The recognition of express duties imposed via contract is almost universal. Enforcement of contracts is the most basic form of trade secret protection, existing even where no other trade secret law applies.¹³ However, many legal systems also impose implied duties, which typically apply to employees and managers. Implied duties may also apply to a commercial partner that is in a position of trust.

Implied duties are essential to effective trade secret protection. A trade secret owner may not be able to reliably anticipate the need for an express agreement. Employment

¹² Trade secrets can also be lost if they become public knowledge because the owner fails to keep secrecy or the passage of time renders them common knowledge. They also can be acquired through independent development or reverse engineering, which appear to be universal defenses to trade secret infringement.

BOX 1:

Data Protection for Pharmaceutical Products and Agricultural Chemicals

In addition to the six core principles, global regimes for protecting confidential information would benefit by clarifying and harmonizing the obligations set forth in TRIPS Article 39.3 on regulatory and test data.

The TRIPS Agreement, Article 39.3 specifies,

Members, when requiring, as a condition of approving the marketing of pharmaceutical or of agricultural chemical products which utilize new chemical entities, the submission of undisclosed test or other data, the origination of which involves a considerable effort, shall protect such data against unfair commercial use. In addition, Members shall protect such data against disclosure, except where necessary to protect the public, or unless steps are taken to ensure that the data are protected against unfair commercial use.

Many developed countries and a number of developing countries have operationalized this obligation via terms of protection against disclosure, plus the provision of a period of data exclusivity, during which the originators of the test data have exclusive reference to the data. The terms vary widely. Some countries also protect data submitted to obtain approval for new uses (as opposed to entirely new products). Moreover, a number of countries differentiate the treatment of data for pharmaceutical products from that for agricultural chemicals, whereby protection for agricultural chemical test data may be more readily available in some cases. As a result of this variation and the lack of a standard minimum duration of protection, innovators in these product areas face an environment where the protection of undisclosed test data and other data is uncertain. This may affect their ability to conduct business in certain markets, complicating their market access terms, and making their activity vulnerable to competition in a manner that varies arbitrarily from country to country.

Thus, to promote market access for the latest generation products and incentives to produce additional products tailored to the needs of specific markets, there may be an advantage from negotiating a minimum international term of data protection and data exclusivity. Such a term of protection might include a transition period, taking into account the level of development of the market concerned.

relationships and other associations are fluid and changing, sometimes quickly, and agreements before the fact may not be feasible in all industries or situations. Typically, such duties are imposed only where the party subject to the duty knows or ought to know that there is a trade secret. A properly understood implied duty is unlikely to go too far or be imposed unfairly on unwitting employees, since a trade secret owner must also establish that it took reasonable precautions to maintain secrecy. Such precautions typically include ensuring that employees are aware that information is confidential and sensitive.

Sanctioning of third-party misappropriation is also an important form of trade secret protection, though not quite as widely available as protection against breach of duty. For example, some common law countries such as New Zealand and India appear to lack such protection in practice. Protection against third-party misappropriation helps to deter and discourage, as well as sanction, acts of industrial espionage. Otherwise, trade secret owners may be vulnerable to eavesdropping and various forms of illicit gathering of information.

For some companies, competitors, rather than departing employees, pose the greatest threat to trade secrets. Departing employees may not have the resources to independently compete with their former employer. Competitors most likely do, and if trade secret law contains no provisions to sanction misappropriation by third parties, they will have free reign to conduct espionage.

Similarly, those who acquire trade secrets with knowledge of their wrongful disclosure or appropriation should also be liable. Otherwise, the most likely beneficiary of a disloyal employee--a competitor--may use the secret. This state of affairs surely deters R&D and other investments in developing proprietary information. Therefore, an effective trade secret law should cover both breach of duty and misappropriation, including "innocent" acquisition with knowledge of infringement.

PRELIMINARY INJUNCTIONS

Trade secret law should offer a full array of remedies, including ex parte preliminary injunctions.

While most countries provide a relatively full array of remedies in trade secret cases, there is significant variance on the availability of preliminary injunctions. Preliminary injunctive relief is important to trade secret owners, because trade secrets

¹³ This is the case in some least developed countries (LDCs), for example, Myanmar. Whether contracts are reliably enforced is, of course, a further challenge.

are fragile. A trade secret owner's first goal is likely to preserve its trade secret. It cannot rely on the defendant to guard its secrecy. In any event, a plaintiff will wish to preserve its profits and business relationships from the defendant's intrusion. Therefore, a plaintiff likely will want an injunction as soon as possible and on an ex parte basis if possible.¹⁴

Nevertheless, not all jurisdictions offer preliminary injunctions. In particular, the availability of ex parte injunctions varies. There are a few jurisdictions that do not provide ex parte injunctions at all, notably Japan.¹⁵ In other jurisdictions, injunctions are slow in coming. In some jurisdictions, the law provides for preliminary injunctions, but they are not available for the most part (or at all). Such is the case in China and Russia.¹⁶ Moreover, delay may defeat the purpose of this remedy, as the trade secret may be lost. This is the case in Brazil, where one expert observed, "Although injunctions are rendered, the slowness of our judiciary system is often incompatible with trade secret dynamics."¹⁷

VARYING LEGAL PROCEDURES

Trade secret laws should include effective provisions for investigating claims.

Trade secret owners may find it difficult to obtain evidence to prove their claims. By their nature, trade secrets are capable of concealment. Evidence of infringement is unlikely to be publicly available, and in fact is likely to be in the potential defendant's hands. That potential defendant may also find it possible to conceal or destroy evidence of wrongdoing. Therefore, procedures for investigating trade secret claims play an important role in trade secret enforcement. There are two types of institutions that enable plaintiffs to obtain the proof they need to obtain their claims--i) preliminary measures to preserve proof; and ii) rules and procedures regarding the disclosure and discovery of evidence.

Preliminary measures to preserve evidence that are available before a case commences may help a plaintiff to obtain proof that may later become unavailable. One procedure available

¹⁴ An ex parte legal proceeding can be initiated by one person in the absence of and without representation or notification of the other parties.

¹⁵ Kazuo Ubukata. 2010. "Question 215: Protection of Trade Secrets through IPR and Unfair Competition Law." AIPPI Report on Japan, 8-9.

¹⁶ See Schultz and Lippoldt (2014), Annex 2. One expert observes regarding China: Unlike a patent, trademark, or copyright, a trade secret is not a right granted by a government agency. Whether something constitutes a trade secret is almost always subject to disputes. As such, the likelihood of success on the merits is more difficult to prove for trade secret cases. Moreover, China has not adopted the inevitable disclosure doctrine. Therefore, it is rather unusual to obtain a preliminary injunction for trade secret misappropriation (Kazuo Ubukata 2010, see note 16).

¹⁷ Elisabeth K. Fekete, et al. 2010 "Question 215, Protection of Trade Secrets Through IP and Unfair Competition Law," AIPPI Report on Brazil, 9-10.

in many countries is a preliminary search available before or at the start of litigation that is used to prevent the destruction of evidence.¹⁸ This type of search is particularly effective if ex parte, because surprise deprives the defendant of the opportunity to conceal evidence.¹⁹

The availability of pre-trial discovery also varies. In many countries, the opportunity to conduct discovery is either limited (typically to producing documents) or does not exist. These differences are, for the most part, not specific to trade secret cases, but rather are related to the origin of the legal system. Countries with an English legal origin tend to favour some amount of voluntary pre-trial disclosure of evidence between the parties, outside of the direct supervision and compulsion of the court. By contrast, civil law countries have much more limited, or no, pre-trial discovery. Lack of discovery may leave a plaintiff unable to prove a case and deter it from bringing a case at all. Since trade secret evidence is rarely public, proving a case without recourse to at least the defendant's documentary evidence is often impossible.

Although discovery procedures are typically largely uniform within a country, some countries enhance discovery for certain types of claims. Most notably, the EU's Enforcement Directive provides a model for such discovery options in the case of IP.²⁰ Although the EU Enforcement Directive is largely inapplicable to trade secrets, its existence points to a possibility and a model for more liberal discovery procedures.

SUFFICIENT SAFEGUARDS

Trade secrets should be effectively protected during litigation.

Trade secrets are fragile, and protection of them during litigation is important to trade secret owners. A trade secret owner often faces a situation where trade secrets have been misappropriated, but not made public. Litigation may put the secret at further risk of disclosure, to other competitors and the world, unless the court system offers sufficient safeguards. Where safeguards are insufficient, a trade secret owner may face the unattractive choice of letting a single

competitor get away with trade secret infringement, or litigating and losing the trade secret entirely.²¹

The reasons for lack of security are complex and varied. In some jurisdictions, it is a product of design, intended to vindicate other rights. For example, in Japan and Italy, constitutional mandates protect the rights of defendants to publicly accessible evidence, particularly in criminal cases. In still other countries, lack of security is more by default. For example, Swedish courts have discretion at each stage of litigation (trial and appellate) to protect the record from disclosure--or not.²² Nevertheless, many countries provide examples of specific rules and procedures to protect trade secrets during litigation. For example, the US and Germany have specific provisions for the protection of trade secrets during litigation. The Republic of Korea, conscious that its procedures were lacking in this regard, adopted new procedures in 2012.²³

Based on national experience, it appears that an approach to protection of trade secrets during litigation might include, at a minimum, provisions for the opportunity to seal parts of the record from public disclosure; and to protect evidence from disclosure to the opposing party; for protective orders sanctioning the wrongful disclosure and use of evidence obtained in litigation; and for closing court hearings to the public, at least during sensitive testimony.

EMPLOYEE MOBILITY

Trade secret laws and related laws should take a balanced approach to employee mobility in attempting to protect confidential information.

As demonstrated by case reports and surveys, loss of trade secrets often takes place via insiders at enterprises, particularly employees. Employers may seek to reduce such risks by imposing post-employment obligations

¹⁸ These are often called an "Anton Piller Order" in countries with an English legal origin.

¹⁹ An example of a particularly effective preliminary measure is the EU Directive on the Enforcement of Intellectual Property Rights ("EU Enforcement Directive"). Article 7 of the EU Enforcement Directive contains "measures for preserving evidence" that provide a full and effective opportunity to conduct a preliminary search. However, most EU members do not apply the Enforcement Directive to trade secrets, since they do not consider them to be IPRs. The Enforcement Directive nonetheless serves as a good example of the type of subject matter-specific procedure that might be applied to trade secrets (Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the enforcement of IPRs).

²⁰ See Article 6, Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the enforcement of IPRs.

²¹ An EC found that 45 percent of respondents had refrained from pursuing a trade secret claim. A significant numbers of firms reported reasons that appear to relate, at least in part, to concerns about the security of litigation. Respondents cited the following reasons (among others): 30.2 percent reported that "initiating legal action would bring the case to public attention;" 15.9 percent reported "lack of trust of the judicial system of the relevant Member state;" and 14.3 percent reported "fear of losing [the trade secret] in court proceedings" (EC 2013, p. 129).

²² One expert described the result in Sweden: "As a consequence a party submitting its secret information to the Court can never be certain that the Court will indeed classify the information as secret. Also, even if a party requests the Court to take such an action at the same time as the information is submitted, it may take some time before the Court has decided on the question of secrecy and during that time the information is left open for inspection." (Marianne Levin et al. 2012. Protection of Trade Secrets through IP and Unfair Competition Law. AIPPI Report, Q215, <https://www.aippi.org/download/committees/215/GR215sweden.pdf>.)

²³ MaLaren, T. F. 2012. Trade Secrets throughout the World. Para. 24:32.

on employees. These duties typically arise from i) post-employment duties of confidentiality, either imposed by law or via enforcement of contract; and ii) non-competition agreements between employers and employees.

Such obligations may impede employees from seeking employment in the field where their skills are most useful. Thus, the recommendation presented here aims to take into account the need for balance between protection of employer trade secrets and employee interests to freely exploit their own general skills and knowledge in their chosen field of occupation.

In the event of an employee separation, a number of legal principles may prove relevant to the situation on undisclosed information--i) protecting trade secrets; ii) the fiduciary duties of employees; iii) freedom of contract; iv) policies against restraint of trade; v) protecting an employee's ability to earn a living; and vi) policies against wasting human capital. The first three may be invoked in support of post-employment protections for employers, while the second three may be engaged in support of limiting employee obligations to former employers. In practice, these competing principles are balanced through legal doctrines, positive laws, and policies governing the post-employment duties of confidentiality and non-competition agreements.

The starting point for this recommendation recognises that there are sound reasons to protect employees' ability to earn a living through their general skills and knowledge, and that former employees should not be able to earn a living by using a trade secret developed by somebody else. Thus, along with establishment of minimum standards of protection against theft, as discussed above, reasonable criteria should also be introduced on post-employment duties and obligations.

The essence of the standard is that employees should continue to respect the specific trade secrets of former employers until the secrets enter the realm of public knowledge via legitimate means. At the same time, employees should be free to exercise their general skills and knowledge, with the possible exception of reasonable non-compete provisions.²⁴ Where there are circumstances such that an employee cannot help but use a former employer's trade secrets, the recommendation here is that employers be permitted to negotiate non-compete provisions, provided they are narrowly circumscribed so that they are absolutely necessary to protect confidential information; and they are reasonable in duration, subject matter, and geographic scope.

CONCLUSIONS

The current variability of protection of trade secrets increases the complexity of management of business activities, and may discourage some investment in knowledge development and diffusion. Thus, the six recommendations presented above aim to flesh out approaches to harmonize the key dimensions of trade secret protection that are not currently specified in multilateral agreements at WTO. In addition, they could be structured to include flexibility, such as transition periods for developing countries and an exemption for least developed countries (LDCs). They aim at assuring minimum standards of protection, while maintaining balance. The objective is to improve the ease of doing business internationally with respect to trade secrets, while reinforcing the incentives for further innovation and the diffusion of knowledge embodied in trade secrets. Moreover, in taking these actions, the recommendations seek to ensure labour market flexibility and employee mobility.

In many countries, stakeholders now recognize the need for further reform in the area of trade secrets. Such reforms might include the institution of effective protection in countries that lack it now (with transition periods, perhaps); the harmonization of key aspects across countries that now have divergent approaches; and the establishment of minimum norms for protection. While uniformity in legal systems is not feasible, or even necessary, for the protection of trade secrets, some alignment among WTO Members may be achieved, with benefits to a broad range of stakeholders.

²⁴ With respect to non-compete provisions in labour contracts, the permissible terms of such provisions vary widely by country. Some countries do not recognize such provisions, others impose limitations on their geographic validity or duration, or they may require that the employee be compensated.

REFERENCES

Almeling, D.S. et al. 2010. "A Statistical Analysis of Trade Secret Litigation in State Courts." 46, *Gonzaga Law Review*, 57.

Brant, J. and Lohse, S.2013. "Enhancing IP Management and Appropriation by Innovative SMEs." *International Chamber of Commerce*.

Cavazos Cepeda, R. H., and Lippoldt, D. 2010. "The Strengthening of IPR Protection: Policy Complements." *WIPO Journal*, Vol. 2, Issue 1.

CEFIC.2012.Report on the Importance of Trade Secrets for Chemical Companies. European Chemical Industry Council, 15 Nov.

Dreyfuss, R.C. and Strandburg, K.J. (ed.).2011.The Law and Theory of Trade Secrecy: A Handbook of Contemporary Research, Edward Elgar, Cheltenham, UK.

EC.2013.Study on Trade Secrets and Confidential Business Information in the Internal Market, prepared by Baker and McKenzie, April, http://ec.europa.eu/internal_market/iprenforcement/trade_secrets/index_en.htm#maincontentSec1.

Friedman, D.D., Landes, W.M. and Posner, R.A.1991., "Some Economics of Trade Secret Law." *Journal of Economic Perspectives*, 5 (Winter), pp. 61–72.

Fosfuri, A., Motta, M. and Rønde, T. 2001. "Foreign Direct Investment and Spillovers through Workers' Mobility." *Journal of International Economics*, 53(1), pp. 205–22.

Lemley, M.A. 2011. "The Surprising Virtues of Treating Trade Secrets as IP Rights." In Dreyfuss and Strandburg (ed.) 2011.

Lester, G. 2001. "Restrictive Covenants, Employee Training, and the Limits of Transaction-Cost Analysis." *Indiana Law Journal*, Vol. 76, Issue 1. Lippoldt, D.C. 2011. "Patent Rights, Developing Countries and the Economic Influence of the Multilateral Trading System." *SciencesPo*, Paris, <http://spire.sciences-po.fr/hdl:/2441/f4rshpf3v1umfa09lass9h1s2>.

Lippoldt, D. C. and Schultz, M. F. 2014. "Uncovering Trade Secrets - An Empirical Assessment of Economic Implications of Protection for Undisclosed Data." *OECD Trade Policy Papers*, No. 167, OECD Publishing, doi: 10.1787/5jxzl5w3j3s6-en

Maskus, K. E. 2000. *Intellectual Property Rights in the Global Economy*. Institute for International Economics, Washington, DC.

OECD.2011. "New Sources of Growth: Intangible Assets." *Flyer*, <http://www.oecd.org/sti/inno/46349020.pdf>.

Park, W.G. 2008. "International Patent Protection: 1960–2005." *Research Policy*, No. 37, pp.761–66.

Park, W.G. and Lippoldt, D.C.2008. "Technology Transfer and the Economic Implications of the Strengthening of Intellectual Property Rights in Developing Countries." *Trade Policy Paper*, No.62, OECD, Jan.

Park, W.G., and Lippoldt, D.C.2005. "International Licensing and the Strengthening of Intellectual Property Rights in Developing Countries." *OECD Economic Studies*, Vol. 40.

Risch, M. 2007. "Why Do We Have Trade Secrets?"11, *Marquette Intellectual Property Law Review*, 1.

Schultz, M. F. and Lippoldt, D. C.2014. "Approaches to Protection of Undisclosed Information (Trade Secrets): Background Paper." *OECD Trade Policy Papers*, No. 162, OECD Publishing, doi: 10.1787/5jz9z43w0jnw-en.

Swift, K. R. 2007. "Void Agreements, Knocked-Out Terms, and Blue Pencils: Judicial and Legislative Handling of Unreasonable Terms in Noncompete Agreements." *Hofstra Labour and Employment Law Journal*, Vol. 24, 233–34.

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