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Uncovering Trade Secrets - An Empirical Assessment of Economic Implications of Protection for Undisclosed Data

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Abstract

UNCOVERING TRADE SECRETS – AN EMPIRICAL ASSESSMENT OF ECONOMIC IMPLICATIONS OF PROTECTION FOR UNDISCLOSED DATA

This paper takes stock of the protection of trade secrets for a sample of 37 countries, provides historical data for the period since 1985, and considers the relationship of the stringency of the protection of trade secrets to relevant economic performance indicators. The paper finds that there has been a notable increase in the stringency of trade secrets protection in a broad sample of countries during the period from 1985 to 2010. The paper also finds a positive association between the stringency of trade secrets protection and key indicators of innovation and international economic flows. Further details of the methodology and additional country data can be found in the background paper provided in phase I of the OECD trade secrets project [OECD Trade Policy Paper No. 162].

***Key words*:** Trade Secrets, Intellectual Property Rights, Trade Secrets Protection Index, Economic Assessment.

***JEL Classification*:** O34, F13.

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Executive summary

This paper takes stock of the protection of trade secrets for a sample of 37 countries, provides historical data for the period since 1985, and considers the relationship of the stringency of the protection of trade secrets to relevant economic performance indicators. The paper is structured around two main approaches: a qualitative assessment of relevant economic performance issues drawing on the literature and a quantitative assessment of the relationship between the Trade Secrets Protection Index and indicators of economic performance. The study employs the methodology for assessment of the stringency of trade secrets protection that was developed in the background paper for the OECD trade secrets project [OECD Trade Policy Paper No. 162].

The assessment of the stringency of trade secrets protection across a broad sample of countries in recent decades found substantial variation between countries at specific points in time and in protection regimes of specific countries over time. The qualitative assessment then considered a number of potential areas where variation in trade secrets protection could influence economic performance. These included economic incentives for innovation, labour mobility, spillover effects and technological diffusion. The empirical assessment found that the stringency of protection in the developed countries rose in particular during the 1990s and then stabilised, while developing countries on average tended to rise throughout the entire study period. The quantitative assessment of the relationship of this increased stringency of protection to indicators of economic performance found a tendency for there to be a positive relationship. This includes indicators of innovation inputs and international economic flows of investment and trade. Through such relationships, trade secrets protection may have implications for developments in domestic innovation, international technology transfer and access to technology-intensive inputs and related products.

These findings represent a first step in the assessment of trade secrets protection. However, it should be noted that the relationships highlighted here reflect association but not necessarily causality. It is also necessary to note that the relationships identified in the empirical assessment apply to a specific sample during a specific time period and a certain range of variation. This does not mean that ever stronger protection, for example, will yield similar results. Nonetheless, the positive and statistically significant relationships identified do provide an indication that provision of adequate protection of trade secrets may be an appropriate element of a policy framework supporting certain key aspects of economic performance. Further research could contribute to confirming these findings and exploring the effects of trade secrets protection at sectoral and firm level.

I. Introduction[1]

This paper takes stock of the protection of trade secrets for a sample of 37 countries, provides historical data for the period since 1985, and considers the relationship of the stringency of the protection of trade secrets to relevant economic performance indicators. The paper is structured around two main approaches: a qualitative assessment of relevant economic performance issues drawing on the literature and a quantitative assessment of the relationship between the *Trade Secrets Protection Index* and indicators of economic performance. The study employs the methodology for assessment of the stringency of trade secrets protection that was developed in the background paper for the trade secrets project (Schultz and Lippoldt, 2014).[2] The paper begins with an overview of the international framework for protection of trade secrets. It then provides sections treating each of the main themes in turn. The conclusions highlight policy relevant findings with respect to the implications of the stringency of protection available for trade secrets.

2. Overview: International Framework for Protection of Trade Secrets

The World Trade Organisation's (WTO) *Agreement on Trade-Related Aspects of Intellectual* Property *Rights* (TRIPS) Agreement was the first multilateral agreement to directly address trade secrets protection (Box 1). The approach laid out in the TRIPS Agreement is based on the notion that protection against unfair competition should include protection for undisclosed information.[3] In presenting this approach, the TRIPS Agreement makes reference to the prior-existing protection against unfair competition as presented in the Paris Convention for the Protection of Industrial Property (1967), a convention that is administered by the World Intellectual Property Organization.[4]

Guided by the provisions of Article 39 of the TRIPS agreement, the definition of trade secrets has tended to converge across the countries considered in this assessment. As noted in the background paper for the project (Schultz and Lippoldt, 2014, pp. 7-8), definitions generally recognise a trade secret as information that is secret, has commercial value as a result, and is subject to reasonable efforts to maintain the secrecy. The concepts tend to be applied as follows:

- *Secrecy*. The information protected must actually be secret. Secrecy need not be absolute. Secrecy requires that the information must not be readily publically accessible and that it is revealed to others only under conditions that maintain secrecy with respect to the broader public.[5] Thus, the trade secret owner may share the information with employees and business partners.
- *Commercial Value*. The information must have economic value as a result of its being secret and must derive some utility from being kept secret.

---

1 This paper was drafted by Douglas C. Lippoldt (OECD) and Mark F. Schultz (Southern Illinois University and George Mason University).

2 The background report is available on OLIS under the code TAD/TC/WP(2013)21/FINAL and as an OECD Trade Policy Paper, No. 162.

3 For descriptive convenience this paper will employ the term "trade secrets" as encompassing "undisclosed information."

4 See the background report of the present project (Schultz and Lippoldt, 2014, section 2) for further details on the international framework for the protection of trade secrets.

5 Moreover, as Pooley (1997) notes, the idea need not be unique to its owner. Several competitors could have developed the same idea via independent innovation and sought to protect it as a trade secret. This possibility is one factor differentiating trade secrets from patents.

- *Reasonable Efforts to Maintain Secrecy*. The information must be the subject of reasonable efforts on the part of the rights holder to maintain its secrecy. By its nature, a trade secret claim arises when measures to protect the secret have failed. Thus, the law tends not to require one who claims a trade secret to be entirely successful at protecting it. In national laws, the necessary effort is often broadly described as "reasonable," in keeping with Article 39 of TRIPS.[6]

Here is it important to note that trade secrecy does not provide an exclusive right to use of the information, provided that the second party obtains the information fairly or it enters the public domain by fair means. Thus, unlike patented inventions or copyright protected content, trade secrets are not protected for a statutory time limit and they can run out in the regular course of competition.

The scope of trade secret protection varies somewhat by country, but broadly concerns three categories of information: (1) technical information; (2) confidential business information; and (3) know-how. Technical information typically includes industrial processes, blueprints, formulae and similar information regarding technology. Confidential business information typically includes customer lists (in cases where they include truly non-public information), financial information, business plans and similar information regarding the operation of a business. Know-how includes information about methods, steps and processes for achieving efficient results. Most countries recognise the first two categories, often without differentiating them. Know-how is a term commonly used both in discussion of proprietary information and in agreements, but it enjoys less formal recognition as a separate, defined category of trade secrets.

As can be seen from Box 1, the TRIPS Agreement does not provide much guidance on the specifics of the national systems to be put in place to protect trade secrets. Consequently, countries employ a broad range of means to provide the TRIPS-mandated protection. In some instances, countries have implemented express legislation. In others, the obligation is met by laws that include misappropriation via such means as breach of contract, inducement of others to breach contracts and acquisition by third parties of information known to be disclosed dishonestly or where it was negligent not to know. This variation in means can affect the ways businesses and workers conduct their affairs and thus there are reasons to believe that the legal protection of trade secrets may have important economic effects.

6 However, some countries impose more specific, additional obligations, which might be characterized as a particular implementation of the broad reasonableness requirement. For example, some common law countries require that the defendant have a contractual or implied obligation to keep the information secret. Other countries require written agreements with recipients and confidentiality notices.

Box 1. The TRIPS Agreement on Undisclosed Information

Protection of undisclosed information is addressed in Article 39 of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) of the World Trade Organization (WTO). This agreement entered into force on 1 January 1995 and established an international standard requiring WTO Members to protect undisclosed information including agricultural and pharmaceutical test data.

Section 7: Protection of Undisclosed Information, Article 39 [of the TRIPS Agreement]

1. In the course of ensuring effective protection against unfair competition as provided in Article 10bis of the Paris Convention (1967), Members shall protect undisclosed information in accordance with paragraph 2 and data submitted to governments or governmental agencies in accordance with paragraph 3.[1]
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[2] so long as such information:
   (a) 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 the kind of information in question;
   (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.
3. 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.

Footnotes:

1. These paragraph references refer to paragraphs 2 and 3 of Article 39 of the TRIPS Agreement.
2. At this point in the original text, there is a footnote, numbered 10, that states:
   For the purpose of this provision, "a manner contrary to honest commercial practices" shall mean 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.

Source: Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), WTO.

3. Qualitative Assessment

This qualitative assessment is based on key themes emerging from the economic and business literature and available statistics on the issue of trade secrets protection. It describes the theoretical and perceived role of trade secrets in economic performance and innovation. Information on firm-level impacts is included, including with respect to small and medium size firms (SMEs) and start-ups. The relationship to national economic development is also considered. The evidence highlights the value of trade secrets, as well as the scope and nature of trade secret theft and misappropriation among competing firms.

Previous theoretical work points to several ways in which trade secret protection may incentivise investment in research and development (R&D) as well as the creation of commercially valuable information. First, such protection may increase the appropriability of the results from investment in the development of technical and confidential business information. It does this by deterring employees, business partners and third parties from misappropriating or misusing specific information meeting the trade secrets criteria. Kitch

(1980) views this benefit in terms of reducing the risk of theft, while Friedman et al. (1991) emphasise that there is a reduction in the cost of protection in cases where the avenues of legal recourse are clear and effective (i.e. in the absence of such legal protection firms may need to invest more heavily in security measures). In either case, there is a potential for increased returns from R&D investment, and thus such innovation may be incentivised.

A further incentivising effect noted in the literature is the role that trade secrets may play in conferring competitive benefits. Lemley (2011) observes that firms may invest in developing trade secrets because the prospect of supra-competitive profits motivates them to do so. In this view, a trade secret may confer a competitive advantage through a production process that reduces cost or delivers a unique product. In addition, incentives may be associated with trade secrets as an alternative or complementary protection to patents. In cases where patents are legally unavailable, too expensive to maintain, or undesirable due to their disclosure requirement, Maskus (2000) and Friedman et al. (1991) argue that trade secrets can substitute for patents and provide incentives to innovate. Trade secrets can also provide protection during the developmental phase leading to a patent (i.e. prior to a formal patent application). In some cases (e.g. due to the immediate availability or potentially low costs), firms may even employ trade secrets as their preferred strategy for protection of their intangible assets (e.g. see Arundel, 2001, or Cohen et al., 2000).

On the other hand, in cases of weak protection for trade secrets, there could be more spillovers of R&D information amongst competitors. Such information may stimulate investment by firms in further internal R&D to complement the incoming information or to gain a first mover advantage. For example, a firm may need to have sufficient internal R&D to make use of external R&D, and vice versa (Lokshin et al., 2006). Weak appropriability could drive firms to pursue R&D in competitive races to develop products, relying on first mover advantage, temporary secrecy, or patents to secure an edge.[7] While this is a theoretical possibility, there are some indications that relatively stringent trade secrets protection may actually deliver an increased sharing of information among potential collaborators, as businesses are reassured that they can enforce their rights in the event of a breach of trust or misappropriation (Lemley, 2011). This potential was highlighted in a recent study commissioned by the European Commission (Baker & McKenzie, 2013), which included a survey of firms' use of trade secrets. The survey found that while 60% of businesses share their trade secrets regularly or occasionally, among those that declined to share such information 40% cited fear of loss of confidentiality as the reason. Moreover, even in countries with relatively stringent trade secrets protection, there are usually exemptions or limitations on the definition and scope of trade secrecy that permit spillovers of general knowledge, skills and experience.

The availability of trade secrets protection may influence firms' size and structure, as well their engagement in the labour market. If trade secrets protection is less stringent, then firms that depend on critical non-public information may be less willing to expand, as secrets are kept within a trusted circle (e.g. some family businesses). In such an environment, firms may be less willing to outsource manufacturing or to engage in joint ventures. Labour market implications are further highlighted via two studies of the United States (Png, 2012a and 2012b). He found that some US states enacting increased trade secret protection may have experienced relatively modest declines in the mobility of postgraduate engineers and scientists (e.g. due to enforcement of contractual requirements concerning non-competition); this in turn might slow the pace of

[7] This example highlights the importance of empirical research in considering the relationship of trade secrets protection to economic performance. For example, such competition could possibly lead to disincentives to invest, to inefficiencies (e.g. due to overlapping research) or to increased innovation building on knowledge spillovers, among other possibilities. The net effects can be difficult to determine in advance and it is necessary to examine the experience in practice.

spillover effects. However, Png (2012b) found that enactment of a trade secret law in US states was associated with a significant increase in R&D spending. Other studies point to implications for spillovers in that less stringent trade secrets protection may cause firms to attempt to retain employees by attempting to prevent employee movement by paying employees wage premia or hiring relatives (Sherwood, 1990). More stringent trade secret protection may also impede employee mobility by: (a) enforcing non-compete provisions[8] or (b) imposing confidentiality obligations on ex-employees that make them less valuable to new employers.[9]

There are some indications that innovative small and medium size enterprises (SMEs) may be particularly reliant on trade secrecy as protection for their intellectual assets (Brant and Lohse, 2013). Subject to reasonable efforts on the part of such firms to maintain the required secrecy, in many jurisdictions trade secrets protection is readily available without burdensome administrative requirements and in some cases may be maintained at comparatively low cost.[10] While patents may be appropriate for protecting some types of intellectual property – as in cases where a new technology is readily discerned by competitors upon the release of a product into the market, they can also be more costly in terms of time and resources.[11] For example, in addition to filing and maintenance fees and administrative requirements, patenting may expose SMEs to risks of litigation (Lanjouw and Schankerman, 2004).[12] Thus, in cases where trade secrets protection is adequate and appropriate, its use may prove advantageous for certain SMEs.

The availability of trade secrets protection may also play a role in international diffusion of technologies and other information via foreign direct investment (FDI) or trade. Firms may be more likely to invest or trade in a country that protects trade secrets, particularly where that investment requires the business to reveal or develop trade secrets (e.g. in cases where tacit knowledge is employed in the implementation of patent-protected processes). In entering a market, firms face a choice of engaging a local partner or starting a subsidiary. The stringency of trade secret protection may affect this choice by making a firm more or less willing to share product information and sales techniques with a local partner (CREATe, 2012). In the literature on intellectual property rights (IPR) protection and FDI, there is some evidence that firms

8 Further discussion of non-compete provisions can be found in the background paper for this project (Schultz and Lippoldt, 2014, p. 19).

9 One important issue for mobility concerns investment by firms in training of employees. Firms cannot generally restrain employee use of general skills and knowledge (e.g. from training that is widely available). However, when a firm invests substantial time and resources in training an employee in its own technical products, courts in some jurisdictions 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 (e.g. Swift, 2007). Where firms face high employee mobility, their incentive to invest in such training in principle could be supported by availability of this protection. Yet, validity of any claims may be difficult for an employer to demonstrate (e.g. Lester, 2001). Thus, some firms may utilise alternative approaches such as contractual requirements for employees to reimburse training costs under certain conditions (Lester, 2001) or payment of wage premia to discourage employee separations (Fosfuri et al., 2001), among other options.

10 Depending on the circumstances, this might be accomplished for example via such means as non-disclosure agreements with employees and commercial partners or basic digital or physical security measures.

11 Certainly, patents can play other important roles for some SMEs, such as cultivation of public recognition of a firm's innovative capacity or mobilisation of new investor capital, among other possibilities.

12 With small patent portfolios, some SMEs may have limited bargaining power to settle with bigger players who confront them. Also, SMEs may tend to be less financially able to withstand an expensive legal challenge to a patent (e.g. from a non-practicing entity).

respond positively to availability of such IPR protection (e.g. Park and Lippoldt, 2008). In addition, firms in different sectors or employing different technologies may respond differently to the availability of particular types of protection. Thus, trade secrets protection may have economy-wide effects as well as sector or technology-specific effects in relation to FDI or trade.

In terms of the interaction with alternative forms of intellectual property rights, there is a clear potential relationship to patent protection. As noted above, firms that depend on patent protection may tend to rely on trade secrets protection during the developmental stage of the technology (Png, 2012a). However, in some specific cases of technological innovation, firms may forgo patent protection entirely and rely exclusively on trade secrets protection. For example, this may be the case with process innovation where the resulting product is difficult to reverse engineer. The effect may depend on practical aspects of protection under each form of protection.[13] As a legal matter, not all inventions or information that can be kept secret are patentable. In terms of release of a product on the market, not all patentable aspects of the innovations that it may embody can be kept secret, which is a requirement for trade secret protection.

Getting a handle empirically on the effects of trade secret protection is challenging due to the very nature of trade secrets as being secret by definition. In addition, firms are reluctant to report trade secret theft. Even where there are legal actions, the civil litigation and criminal prosecution rates could have a variety of meanings. A lack of litigation could mean that the law is effectively deterring abuses or that trade secret owners or prosecutors view the law as ineffective and legal action as futile. Similarly, high rates of litigation could signal widespread disrespect for the law by defendants or confidence on the part of plaintiffs and prosecutors. In order to take a step towards untangling the economic implications of such issues, the quantitative assessment that follows will consider the relationship between the stringency of trade secrets protection and certain key economic indicators.

In light of the costs of continued abuse of trade secrets, a number of OECD Members have initiatives underway to address concerns about uncertainty or gaps in protection. With respect to some dimensions of protection, these initiatives seek to harmonise and develop minimum standards. For some stakeholders, the motivation for such reforms is a goal of reducing the complexity of managing trade secrets protection across international boundaries and promoting market opening effects in cases where businesses are currently precluded entry due to vulnerability of their operations to trade secrets abuse.[14] Two notable efforts currently underway concern the European Union and the United States. In the case of the European Union, the European Commission launched in November 2013 a draft directive intended to help harmonise key aspects of civil law protection across the EU Member countries. The directive would provide for a common definition of trade secrets; means through which victims of trade secret misappropriation could obtain redress (e.g. offering protection of secrecy during court proceedings); and remedies (e.g. damages, recall and destruction of infringing products, and availability of injunctions).[15] In 2013, the United States released the "Administration Strategy on Mitigating the Theft of US Trade Secrets", which included a set of action items for improved

13 This is part of a larger discussion in the literature concerning approaches used by firms and others to appropriate returns on their investments and innovations. For example, see: Denicoló and Franzoni (2004) and Anton and Yao (2004), among others.

14 For example, some observers have expressed concerns on behalf of SMEs. These firms are known as being particularly reliant on trade secrets protection and may find increased opportunities for international expansion under improved conditions of protection for trade secrets.

15 The draft directive and related materials are available on line, here (as of 23 May 2014): http://ec.europa.eu/internal_market/iprenforcement/trade_secrets/index_en.htm#maincontentSec1 .

protection domestically and internationally.[16] Among other actions, the strategy would promote prosecution of abuses[17], development of industry-led best practices, review of laws, diplomatic engagement and public awareness.

4. Trade Secrets Protection Index

4.1 Index Composition

In order to measure the extent of the variation in stringency of available protection for trade secrets, Schultz and Lippoldt (2014) developed the Trade Secrets Protection Index (TSPI). Chart 1 presents the detailed composition of the index and its scoring. The index is structured around five main components:

1. Definitions and coverage
2. Specific duties and misappropriation
3. Remedies and restrictions on liability
4. Enforcement, investigation & 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 for the index of five points. However, as can be seen in Chart 1, the number of elements covered by each of the main components of the index varies widely. For example, the definition and coverage of trade secrets protection comprises 13 elements, whereas the system functioning and related regulation comprises 4 elements. In order to maintain balance across the five components of the index, the scoring for the various elements under each of the five main components was normalized to ensure equal weighting. In other words, the elements for each main component add up to a maximum score of one.[18] Overall, the index is designed to capture information on the stringency of the available protection in a manner that is internationally comparable.[19]

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16 This strategy is available on-line at the following location (as of 3 April 2013): http://www.whitehouse.gov/sites/default/files/omb/IPEC/admin_strategy_on_mitigating_the_theft_of_u.s._trade_secrets.pdf.

17 A recent example of response to espionage and abuse of trade secrets 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 considering the possibility of reinforcing their response in light of such espionage, including potentially freezing assets or using individual sanctions such as visa restrictions, or possibly national-level action at the World Trade Organisation. Source: Wall Street Journal, 2014, "US to Rev Up Hacking Fight", 23 May.

18 For example, component 4 *Enforcement, investigation and discovery; data exclusivity* is comprised of six elements. The value for the Component 4 score can range from 0 to one. In the final calculation of the score for the overall component, the scores for any given element would be no more than 1/6 of one point. This would be the case, for example, for data exclusivity for drugs or data exclusivity for agricultural chemicals (each would contribute no more than 1/6 of one point to the component score).

19 The development of this index is a pioneering effort in the analysis of protection of trade secrets. However, it should be noted that a variety of similar indices exist in the literature covering various types of intellectual property. For example, Ginarte and Park (1997) and 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. Also, the Fraser Institute (2013) and World Economic Forum, among others, have developed substantial sets of relevant systemic indicators for use in economic analyses. Such indicators have been

As Schultz and Lippoldt (2014) noted, the TSPI is designed with several considerations in mind. First, the five components represent key aspects of protection of trade secrets where there is some variation across countries that may influence the stringency of protection. As part of an initial survey, its scope is intentionally very broad. Second, the elements of the TSPI were structured to enable scoring based primarily on objective criteria, supplemented in some cases by qualitative information as necessary (e.g. in certain areas related to system operation). Third, in order to ensure coherence across the components, the index employs an integrated index approach rather than separate indicators. Fourth, the presentation of the index emphasises transparency, with scores supported by a text chart for each country and verifiable references. Fifth, the index is designed to provide an indication of the stringency of available protection; it aims to be neutral in this assessment. In other words, a higher or low score reflects the strength of protection and not an assessment of the appropriate level of protection. While the TSPI measures stringency, it does not provide an indication of what level of stringency is optimal. (Policy makers will need to determine the appropriate level of protection taking into account their local institutions and conditions.[20]) The index's function is descriptive, not normative, and the scores it produces are thus neither grades nor ratings. Rather, the score is strictly a measure of stringency of protection. As a measurement tool, the TSPI simply measures its target subjects.

4.2 TSPI Survey of Countries: Results for an Expanded Sample

For the economic assessment, the TSPI sample has been expanded from the original edition in the background paper to cover sixteen additional countries drawn from around the world, including developed and developing countries.[21] The detailed scoring for each element of the TSPI for all of the countries in the sample can be found in the Annex Table. In addition, a presentation of the framework for trade secrets protection in each of the countries newly added to the sample can be found in the Annex Chart, as can an updated entry for New Zealand.[22] (Charts covering each of the countries in the original sample can be found in Schultz and

utilised in a number of studies conducted by the Working Party of the Trade Committee and other parts of OECD. Several Trade Committee studies considered policies for protection of intellectual property rights in relation to relevant economic performance indicators. OLIS references include: TD/TC/WP(2002)42/FINAL, TD/TC/WP(2004)31/FINAL, TAD/TC/WP(2007)19/FINAL and TAD/TC/WP(2010)12/FINAL. Subsequent OECD *Trade Policy Working Papers* were published as: Park and Lippoldt (2003); Park and Lippoldt (2005); Park and Lippoldt (2008); and Cavazos, Lippoldt and Senft (2010). More information on the construction of composite indicators can be found in OECD-EU (2008).

20 Note that alternative indicators of trade secrets protection could be developed for more specific, targeted policy development purposes; for example, one could focus exclusively on civil law in a future assessment. For readers interested in such exploration, the Annex table has the detailed country scoring information; readers can thus mix, match and recombine the numbers as they see fit. Moreover, additional aspects might be taken into account. For example, the transparency benefits from having a specific trade secrets statute might be noted or, for those not from a common law background, the challenge of understanding the protection afforded based on court precedent.

21 The additional economies covered by this iteration of the TSPI include: Argentina; Canada; Chinese Taipei; Ghana; Hong Kong, China; Indonesia; Ireland; Latvia; Lithuania; Mexico; Netherlands; Philippines; Spain; Thailand; Turkey; and Viet Nam. Also, the scoring for certain of the countries originally covered in the background paper has been updated throughout in light of newly available information and improved precision in the weighting.

22 Annex Table 1 provides the detailed scoring for each element and component of the index for each country. In the event a user would like to consider alternative approaches to constructing indicators, these data will provide the essential building blocks (e.g., for recombining various elements or reweighting the components).

Lippoldt, 2014, Annex.) The sample has also been deepened to include a time dimension. Depending on data availability, each country's situation is measured at five year intervals starting as early as 1985.[23] As of 2010, the countries in the sample are all members of the WTO and subject to the provisions of the TRIPS Agreement.

For the year 2010, the expanded sample has a profile that is similar to the original sample as described in Schultz and Lippoldt (2014). The scores in the expanded sample range from 2.5 to 4.5 points, with a median of 3.6 (Table 1).[24] Despite the significant gap between the high and low scores, the overall dispersion of the scores is fairly modest. The sample was also tested for the impact of two alternative weighting schemes, one giving double weighting to *enforcement, investigation, discovery and data exclusivity*, and another giving double weighting to *remedies and restrictions on liabilities*. These alternate weighting schemes did not alter the country rankings significantly as can be seen from the Spearman Rank Correlation coefficients. Thus, by this standard, the TSPI with equal weights appears to be a robust indicator for the relative underlying trade secret protection.

In Figure 1, the country rankings for the TSPI can be seen as of 2010, ranging from a high score in the United States to a low score for the Philippines. The OECD countries tend to have higher rankings in the table than the partner countries. In 2010, all of the countries have TSPI scores of 3 or above, with the exception of Bulgaria, India, China, Indonesia, Russia and the Philippines. Table 2 and Figure 1 present the composition of the TSPI scores for each country in the sample as of 2010. The area of *duties and misappropriation* has the highest average scores and shows a fairly high degree of alignment. The areas of *enforcement, investigation and discovery; data exclusivity* and *system functioning and related regulation* have the lowest average scores, with wide variation in the scores and particular weakness in a few developing and transition economies.

The evolution of the TSPI over time is presented in Figure 2 and Table 3. As can be seen from the Table, the overall average score increased incrementally in each period. The Figure highlights an important perspective on the composition of these changes. There is a significant gap between the scores of the OECD and the trade partner countries in the sample. Over time this gap has closed somewhat, but remains significant. The OECD scores gradually rose before stabilising during 2005 and 2010. Figure 2 reflects substantial increases in the average partner country scores in the period following the entry into force of the TRIPS Agreement. Figure 3 presents the evolution over time, by economy and year. From this visual perspective, notable strengthening – here defined as sustained changes of greater than one point from 1990 to 2010 – can be readily seen for economies such as Brazil, China, Chinese Taipei, Korea, Mexico, Spain and Thailand. In addition, certain transition economies demonstrated notable increases in their scores during the period since 1995 including Lithuania and the Russian Federation. In the cases of China and Russia, their accession to the WTO may have played a role in promoting availability of more stringent protection for trade secrets over the past decade. Analytically, the availability of the multiple observations for each economy permits assessment of the relationship of increased stringency of trade secrets protection to relevant indicators of economic performance over time, an issue discussed in the next section of the paper.

Figure 4 presents two illustrative scatter plots for the full pooled sample to highlight the basic relationship of the TSPI to two key variables for economic performance. The first is real R&D per capita (Panel A) and the second is real foreign technological services (Panel B, shown

23 For some transition countries, the observations start in 1990 (China) or 1995 (Bulgaria, Latvia, Lithuania and Russia).

24 The sample ranges are broader for earlier years, as can be seen below in Table 3.

with the variables as natural logarithms). For each economy and time period, each point in the charts represents the TSPI score and the level for the variable of interest. As indicated by the upward sloping trend lines, the patterns in each panel provide an indication of a simple positive correlation between TSPI stringency and the variables of interest. The trendline in Panel A accounts for about a quarter of the variation in the plot and the trend line in Panel B accounts for about one-fifth of the variation in the plot. However, a more rigorous examination of the data, controlling for other factors, is required to obtain a robust assessment. This is the object of the next section.

5. Quantitative Assessment

Maskus (2000), Primo Braga (1990) and others have noted that economic theory is inconclusive on the expected outcomes from a strengthening of intellectual property rights; empirical analysis is required to complement the theoretical perspectives. A strengthening of rights may promote market expansion effects as rights holders are better able to leverage their intellectual property. Thus, such reforms may motivate stakeholders to increase innovation and access to innovation in a manner that tends to benefit users as well as producers of intellectual property. However, reforms could in theory increase the market power of rights holders such that they have an incentive to constrain access and exploit their existing stock of innovation, possibly with little economic benefit to society as a whole.

Similarly with respect to trade secrets, one might expect improved protection of trade secrets to improve the ability of the owners to appropriate economic benefits from their secrets. However, the incentives for further innovation, exploitation and diffusion of new trade secrets could in theory be diminished somewhat by a strengthened availability of protection for existing trade secrets (despite their fragility). Consequently, empirical analysis can play an important role in assessment of trade secrets reforms. It is needed in order to test the hypothesis that greater stringency of protection contributes to increased innovation and diffusion of trade secrets. Due to lack of data availability, the quantitative empirical assessment presented below does not look at these market effects directly, but rather it considers the associated net changes in economic indicators at an aggregate level while controlling for other factors.

Thus, building on the expanded TSPI sample, the following quantitative assessment considers variation in trade secret protection in relation to an illustrative set of relevant economic performance indicators. The modelling is based on standard regression analysis, using an approach similar to that employed in previous OECD studies on economic implications of the strengthening of IPR protection.[25] The selection of economic indicators emphasises types of activity where effective protection of trade secrets may be reasonably hypothesised to play a role in promoting expanded activity. Where regression analysis is pursued, particular attention is focused on issues of auto-correlation and of endogeneity.[26]

5.1 Methodological approach

The quantitative assessment explores empirically the potential relationships identified in the qualitative assessment. It considers these in a dynamic fashion using pooled regression analysis for the period from 1990 to 2010, though a number of assessments cover shorter time periods due to data limitations. The sample is an unbalanced panel in that the sample does not cover every country for every year. Due to indications of autocorrelation in the residuals (low Durbin-

[25] See footnote 19, above.

[26] With respect to endogeneity, there are a few technical options available to address these issues, if necessary. One option (used below in one model specification) is to lag time series by one or more periods.

Watson test scores), the regressions were run using country fixed effects.[27] As feasible, all variables were entered as natural logarithms, with the result that the coefficients indicate the relationships in approximate percentage terms.

The regressions were set up using a standard linear regression model[28]:

$$\ln(\text{economic performance indicator}_{n,t}) = \alpha_0 + \alpha_1 \ln(\text{TSPI}_{n,t}) + \alpha_2 \ln(Z_{n,t}) + \text{Error term}$$

where n is country, t is time (year), and Z represents the control variables.

In all cases, the independent variable of interest is the TSPI. The dependent economic performance indicators of interest covered innovation inputs (R&D expenditure, researchers in R&D) and innovation-related international economic performance (real FDI inflows, total services imports, real technological services imports, and real merchandise imports). The control variables were selected based on indications of potential competing influences *vis-à-vis* trade secrets protection and include indicators of market openness and regulation, market size, income level, and human capital development. The protection of patent rights was considered as measured by the Park-Ginarte Patent Rights Index. The patent rights index is constructed in a manner similar to that of the TSPI[29]; details of its composition are presented in Chart 3. Chart 4 provides an overview of the underlying data sources for the variables.

In order to illustrate various relationships, the regression runs presented employ fairly diverse approaches. In the first run, the TSPI variable was lagged in order to test for endogeneity. In the second run, it was interacted with the Patent Rights Index to observe whether the combined indicator also exhibited a significant association with an indicator of economic performance. In the area of services, the two runs were implemented using first differences approaches. This was done to provide an indication as to whether change in the TSPI stringency over time affected the pace of change in imports in the sector.

5.2 Results

The results of the quantitative economic assessment are shown in Table 4 and Figure 5. The assessment begins with consideration of the relationship of trade secrets protection to R&D activity and then turns to international economic flows.

Table 4, parts (1) and (2), consider two aspects of the relationship of stringency of trade secrets protection to real economy-wide R&D expenditure (government and business) per capita[30] and R&D intensity as measured by R&D personnel as a share of the labour force. A positive and statistically significant relationship is found between trade secrets protection

27 In part, the choice of correction approach was made taking into account the sample sizes (e.g. see Clark and Linzer, 2012) and Hausman test results.

28 The regression analyses were run using Eviews software and a least squares method.

29 The Patent Rights Index is comprised of five components including: membership in international treaties, coverage by subject matter, restrictions on patent rights, enforcement provisions, and duration of protection. Scores for each component range from zero to one and the index total is calculated as the sum of the scores for the five components, which are equally weighted.

30 Ideally, the regression specified in part (1) would be run separately to consider Business Expenditure on R&D (BERD) instead of economy-wide R&D. However, this could not be done here due to lack of data (only 24 observations were available for the countries and time period covered here). The use of economy-wide R&D could lead to lower statistical significance or introduce a downward bias in the TSPI coefficient in comparison to use of BERD. This is because economy-wide R&D may include public sector and academic institutions where trade secrets might be expected to play less of a role as compared to businesses.

(lagged one period) and the indicator for R&D expenditure.[31] A similar – though slightly larger – association is found between the combined TSPI-patent rights indicator and R&D personnel as a share of the labour force. Among the control variables, GDP and GDP per capita, respectively, are statistically highly significant in each of the runs. Table 4, part (3), examines the relationship of real FDI inflows to TSPI, finding a particularly strong and positive association. A one percent change in the stringency of protection for trade secrets is associated with a nearly 1.5% change in Real FDI inflows (Figure 5). Several control variables proved to be significant as well in this run, including GDP (market size), market regulation, and the share of the labour force with tertiary education.

Table 4, parts (4), (5) and (6), considers the relationship of trade flows to the stringency of trade secret protection. In all three cases the relationships were positive. For total services imports and foreign technological services, the relationship was stronger with respect to the change in pace (first differences) than to the simple flows. In other words, an increase in the stringency of trade secrets protection was associated with an increase in the rate of growth of services imports for the sample economies during this time period. This effect was particularly evident with respect to imports of foreign technological services. Among the control variables, GDP per capita and GDP, respectively, were positive and significant. Table 4, part (6) considers the relationship of TSPI stringency to real merchandise import flows. Here as well a positive and statistically significant relationship was found.

Overall, this initial round of exploration of the economic implications found a positive and statistically significant relationship between the increased stringency of trade secrets protection and indicators for innovation inputs and international economic flows. FDI inflows and real foreign technological services imports appear to be particularly sensitive to the stringency of trade secrets protection. The strength and consistency of the results across the various analytical approaches lends support to the hypothesis of a positive and fairly robust relationship of the TSPI to the types of economic performance considered here, at least with respect to the sampled economies and timeframe.[32]

6. Conclusions

This assessment of the stringency of trade secrets protection across a broad sample of countries in recent decades found substantial variation between countries at specific points in time and in protection regimes of specific countries over time. The qualitative assessment then considered a number of potential areas where variation in trade secrets protection could influence economic performance. These included economic incentives for innovation, labour mobility, spillover effects and technological diffusion. The empirical assessment found that the stringency of protection in the developed countries rose in particular during the 1990s and then stabilised, while developing countries on average tended to rise throughout the entire study period. The quantitative assessment of the relationship of this increased stringency of protection to indicators of economic performance found a tendency for there to be a positive relationship.

31 In this specification, the association between the TSPI and R&D expenditure appears robust to the lagging of the TSPI variable by one period. Further research could consider additional aspects of potential endogeneity. For example, it may be that accumulation of intellectual assets could fuel demand for further protection of intellectual property (here, taken as including trade secrets) such that there is a feedback effect (e.g. Lippoldt, 2011, p 188). Moreover, the relationships between the variables as dependent or independent (falling on the left or right hand of the models, as specified) could be explored, along with implications for policy formation.

32 In a future analysis, it could be useful to consider developments from an evolutionary perspective to determine whether the relationship of changes in stringency to economic indicators may be non-monotonic for different degrees of stringency.

This includes indicators of innovation inputs and international economic flows of investment and trade. Through such relationships, trade secrets protection may have positive implications for developments in domestic innovation, international technology transfer and access to technology-intensive inputs and related products.

These findings represent a first step in the assessment of trade secrets protection. However, it should be noted that the relationships highlighted here reflect association but not necessarily causality. It is also necessary to note that the relationships identified in the empirical assessment apply to a specific sample during a specific time period and a certain range of variation. This does not mean that ever stronger protection, for example, will yield similar results. Thus, care is required in the interpretation of the results. Nonetheless, the positive and statistically significant relationships identified do provide an indication that provision of adequate protection of trade secrets may be an appropriate element of a policy framework supporting certain key aspects of economic performance. Further research could contribute to confirming these findings and exploring the effects of trade secrets protection at sectoral and firm level.[33]

[33] For example, in relation to the stringency of trade secret protection, it could be useful to consider inter-industry variation in strategies for appropriating benefits from innovation and investment.

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CHARTS, TABLES AND FIGURES

Chart 1. Trade Secrets Protection Index

Components and scoring	Score range	Normalised score
1. Definition and Coverage	**0-13**	**0-1**
a) Scope		
• If scope covers all confidential business information, subject to: 1) deriving value from secrecy and 2) the owner's reasonable efforts to maintain secrecy, score = 1; If scope also subject to requirement that information is imparted to the recipient in confidence, score = ½	0, 1	
b) Additional Elements of Definition		
• Inventory of trade secrets required (requirement=0; no requirement=1)	0, 1	
• Must be reduced to writing (requirement=0; no requirement=1)	0, 1	
• Must be identified as a trade secret to recipient (requirement=0; no requirement=1)	0, 1	
• Written notice to recipient required (requirement=0; no requirement=1)	0, 1	
c) Acts covered as civil infringement:		
• Breach of duty (not covered=0, partially covered=½[34], covered=1)	0, 1	
• Wrongful acquisition or misappropriation (not covered=0, covered=1)	0, 1	
• Third party liability for acquisition with knowledge or reason to know (not available=0, available=1)	0, 1	
• Third party liability for acquisition without knowledge - enjoin "innocent parties" (not available=0, available=1)	0, 1	
d) Acts covered by criminal law		
• Breach of duty (not covered=0, partially covered=½, covered=1)	0, 1	
• Wrongful acquisition or misappropriation (not covered=0, covered=1)	0, 1	
• Third party liability for acquisition with knowledge or reason to know (not available=0, available=1)	0, 1	
• Third party liability for acquisition without knowledge, enjoin "innocent parties" (not available=0, available=1)	0, 1	

34 E.g. the duty of confidentiality might be imposed on employees, fiduciaries and third parties with access to information. Partial coverage might arise if under a country's legal regime licensees cannot be covered.

Chart 1. Trade Secrets Protection Index (continued)

Components and scoring	Score range	Normalised score
2. Specific duties and misappropriation[35]	**0-5**	**0-1**
• Commercial relationship (covered if arising from: express agreement ½ + implied duty ½)	0, 1	
• Current employment relationship (covered if arising from: express agreement ½ + implied duty ½)	0, 1	
• Past employment relationship (covered if arising from: express agreement ½ + implied duty ½)	0, 1	
• Restrictions on post-relationship duty of confidentiality (if any restrictions on matters beyond general skills and knowledge, by relationship: commercial ½ + employment ½)	0, 1	
• Validity of contractual restrictions on competition (if unenforceable=0, significant limitations=½ (e.g., limited by time or place for either commercial or post-employment situations), generally enforceable=1)	0, 1	
3. Remedies and Restrictions on liability	**0-11**	**0-1**
a) Restrictions on liability		
• Additional elements of proof in infringement claims (if none: civil=½ + criminal=½, criminal ½ point; score 1 if there no criminal law and civil score is ½)	0, 1	
b) Civil remedies		
• Preliminary injunction (if available = 1, if not = 0)	0, 1	
• Ex parte action available under preliminary injunction (if available = 1, if not = 0)	0, 1	
• Permanent injunction (if available = 1, if not = 0)	0, 1	
• Injunction to eliminate wrongful head start (if available = 1, if not = 0)	0, 1	
• Delivery or destruction of infringing materials (if available = 1, if not = 0)	0, 1	
• Compensatory damages (direct or out of pocket damages or consideration of profits or other damages= 1)	0, 1	
• Yielding of defendant's profits (if available = 1, if not = 0)	0, 1	
• Availability of punitive or statutory damages (if available = 1, if not = 0)	0, 1	
c) Criminal remedies		
• Fines, damages or loss of assets (if not available = 0, if minimal per expert opinion= ½, if substantial = 1)	0, 1	
• Jail sentence (if available = 1, if not = 0)	0, 1	

35 The treatment of duties is split within this framework. General coverage of duties is scored under index component 1 (Definitions & Coverage). Component 2 responds to the availability of recourse for specific duties. This permits a detailed assessment, ensuring the indicator responds to variation in key elements.

Chart 1. Trade Secrets Protection Index (continued)

Components and scoring	Score range	Normalised score
4. Enforcement, investigation and discovery; data exclusivity	**0-6**	**0-1**
a) Enforcement, investigation and discovery		
• Emergency search to preserve and obtain proof (unavailable=0, available but with significant restrictions= ½ (e.g., conducted solely by an official or 3rd party expert), readily available=1)	0, 1	
• Ex parte emergency search availability (unavailable=0, available but with significant restrictions=½, readily available=1)	0, 1	
• Pre-trial discovery (unavailable=0, documentary only or strict limitations = ½, ready availability of documentary and interrogatories = 1)	0, 1	
• Protection of confidentiality of trade secrets in litigation (none=0, partial= ½, fully available=1)	0, 1	
b) Data exclusivity		
• Drugs (years: 0=0; 0.1-3=1/3; 3.1-7.9=2/3; >8=1)	0, 1	
• Agricultural chemicals (years: 0=0, 0.1-4.9=1/3, 5-8=2/3; > 8=1)	0, 1	
5. System functioning and related regulation	**0-4**	**0-1**
• Technology transfer: registration requirement (none=1; one or more = 0)	0, 1	
• Technology transfer: substantive review or regulation (none=1; one or more = 0)	0, 1	
• Fraser Institute score for *Legal System and Security of Property* Rights (score ranging from 0 to 10, divided by 10)[36]	0, 1	
• Expert characterisation of the operation of the protection in practice (NB, based on internationally recognised or peer-reviewed sources; see country charts for details) (Negative = 0; none = ½; positive = 1)	0, 1	
		======
Index Total		**0-5**

[36] The Fraser Institute (2012, pp. 3 and 273-5) score for *Legal System and Security of Property Rights* is a composite indicator produced annually. Scores can range from 0 to 10. Based on objective indicators and expert assessments, it takes into account judicial independence, impartiality of courts, protection of property rights, military interference in the rule of law and politics, integrity of the legal system, legal enforcement of contracts, regulatory restrictions on the sale of real property, reliability of the police and business costs of crime. For details see Annex 1 of the present report and http://www.freetheworld.com/reports.html.

Chart 2. Trade Secrets Protection Index Coverage, Expanded Sample, 1985-2010

Trade Partner Economies (20)	OECD Countries (17)
Argentina	Australia
Brazil	Canada
Bulgaria	France
China	Germany
Chinese Taipei	Ireland
Colombia	Israel*
Ghana	Italy
Hong Kong, China	Japan
India	Korea
Indonesia	Mexico
Latvia	Netherlands
Lithuania	New Zealand
Malaysia	Spain
Peru	Sweden
Philippines	Turkey
Russia	United Kingdom
Singapore	United States
South Africa	
Thailand	
Viet Nam	

Notes:

The sample is an unbalanced panel. Not all countries are covered in every year.

* The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Chart 3. Composition of the Patent Rights Index

1)	Membership in International Treaties	Signatory	Not signatory
	-- Paris Convention and Revisions	1/5	0
	-- Patent Cooperation Treaty	1/5	0
	-- Protection of New Varieties (UPOV78 or 91)	1/5	0
	-- Budapest Treaty (Microorganism Deposits)	1/5	0
	-- Trade-Related Intellectual Property Rights (TRIPS)	1/5	0
2)	Coverage	Available	Not Available
	-- Patentability of pharmaceuticals	1/8	0
	-- Patentability of chemicals	1/8	0
	-- Patentability of food	1/8	0
	-- Patentability of surgical products	1/8	0
	-- Patentability of microorganisms	1/8	0
	-- Patentability of utility models	1/8	0
	-- Patentability of software	1/8	0
	-- Patentability of plant & animal varieties	1/8	0
3)	Restrictions on Patent Rights	Does Not Exist	Exists
	-- “Working” Requirements	1/3	0
	-- Compulsory Licensing	1/3	0
	-- Revocation of Patents	1/3	0
4)	Enforcement	Available	Not Available
	-- Preliminary Injunctions	1/3	0
	-- Contributory Infringement	1/3	0
	-- Burden-of-Proof Reversal	1/3	0
5)	Duration of Protection	Full	Partial
		1	0 < f < 1
			-- where f is the duration of protection as a *fraction* of 20 years from the date of application or 17 years from the date of grant (for grant-based patent systems).
Overall score for Patent Rights Index: sum of points under (1) – (5).			

Note: The index was developed by Walter Park and colleagues at American University (Ginarte and Park, 1997; Park, 2008).

Source: Park and Lippoldt (2008).

Chart 4. Data Sources

1. OECD (2013 and 2014), *OECD.Stat*, (database); doi: 10.1787/data-00285-en.

- GDP real in USD (2005) converted at purchasing power parity exchange rates

2. World Bank (2013 and 2014)

a. *World Governance Indicators*, on-line edition: http://info.worldbank.org/governance/wgi/index.aspx#home

- Government effectiveness

b. *World Development Indicators*, on-line edition, http://data.worldbank.org/data-catalog/world-development-indicators

- GDP deflator (for use in calculations of constant value)
- Population (for per capita calculations)
- Researchers in R&D, per million people (NB: 1996 data assumed constant, used for 1995)
- Resident and non-resident patent application data
- R&D as a percent of GDP
- Share of the labour force with tertiary education

3. Park (2008) and correspondence with the author, Walter Park, American University

- Patent rights index

4. UNCTAD http://unctadstat.unctad.org/ReportFolders/reportFolders.aspx?sRF_ActivePath=P,5,27&sRF_Expanded=,P,5,27

- Foreign direct investment data

5. International Monetary Fund, Balance of Payments Statistics http://elibrary-data.imf.org/finddatareports.aspx?d=33061&e=170784

- Services imports, by sector

6. UN Comtrade Database http://comtrade.un.org/

- Merchandise trade data

7. Fraser Institute, *Economic Freedom of the World* dataset, 2013, http://www.freetheworld.com/release.html

- Chain-linked indices: Market regulation (area 5)

Table 1. Trade Secret Protection Index: Statistics Scoring Using Alternative Weights, 2010

	Total Scores, by Weighting Scheme		
	Equal weights: 20% for each component	40% for enforcement, investigation, discovery and data exclusivity; 60% divided equally among the other components	40% for Remedies and restrictions on liability; 60% divided equally among the other components
Argentina	3.12	2.45	3.14
Australia	3.99	4.07	3.79
Brazil	3.31	3.42	3.56
Bulgaria	2.96	3.37	2.68
Canada	4.48	4.61	4.38
China	2.71	2.72	2.71
Chinese Taipei	3.12	2.72	3.36
Colombia	3.15	2.84	3.04
France	3.76	3.75	3.61
Germany	3.76	3.55	3.73
Ghana	3.43	3.20	3.25
Hong Kong, China	4.03	4.06	3.93
India	2.92	2.99	3.10
Indonesia	2.52	2.00	2.69
Ireland	4.15	4.15	4.02
Israel	4.08	4.13	3.85
Italy	3.85	3.93	3.85
Japan	4.27	4.04	4.22
Korea	3.81	3.41	3.88
Latvia	3.64	3.46	3.64
Lithuania	4.44	4.47	4.35
Malaysia	3.48	3.48	3.46
Mexico	3.32	2.97	3.40
Netherlands	4.22	4.31	4.31
New Zealand	4.04	4.04	4.00
Peru	3.06	3.06	3.09
Philippines	2.45	2.46	2.69
Russia	2.47	2.48	2.87
Singapore	4.00	4.01	3.86
South Africa	3.14	2.98	3.27
Spain	4.42	4.36	4.34
Sweden	3.56	3.40	3.58
Thailand	3.42	2.77	3.76
Turkey	3.41	2.83	3.47
United Kingdom	3.97	4.12	3.71
United States	4.49	4.55	4.62
Viet Nam	3.01	3.16	3.17
Overall Average	3.57	3.47	3.58
Max	4.49	4.61	4.62
Median	3.56	3.42	3.61
Min	2.45	2.00	2.68
Standard Deviation	0.59	0.69	0.52
Coefficient of Variation	0.17	0.20	0.15
Correlation Coefficient (equal weight scores versus alternate schemes)		0.94	0.96
Spearman Rank Correlation (equal weight scores versus alternate schemes)		0.92	0.96

Table 2. Trade Secrets Protection Index, by economy and component, 2010

Components and scoring	1. Definition and coverage	2. Duties and misappropriation	3. Remedies and restrictions on liability	4. Enforcement, investigation and discovery; data exclusivity	5. System functioning and related regulation	Totals
Normalised range	0-1	0-1	0-1	0-1	0-1	0-5
Argentina	0.81	1.00	0.64	0.08	0.60	3.12
Australia	0.65	1.00	0.64	0.86	0.84	3.99
Brazil	0.77	0.80	0.86	0.75	0.13	3.31
Bulgaria	0.46	0.60	0.36	0.92	0.62	2.96
Canada	0.69	1.00	0.82	1.00	0.97	4.48
China	0.62	0.60	0.55	0.55	0.40	2.71
Chinese Taipei	0.85	0.60	0.82	0.30	0.55	3.12
Colombia	0.85	0.90	0.55	0.39	0.47	3.15
France	0.77	0.90	0.64	0.75	0.70	3.76
Germany	0.85	0.90	0.73	0.58	0.71	3.76
Ghana	0.62	1.00	0.55	0.50	0.77	3.43
Hong Kong, China	0.62	0.90	0.73	0.83	0.95	4.03
India	0.50	0.90	0.73	0.64	0.16	2.92
Indonesia	0.69	1.00	0.64	0.08	0.11	2.52
Ireland	0.62	1.00	0.73	0.83	0.97	4.15
Israel	0.65	1.00	0.64	0.86	0.93	4.08
Italy	0.69	0.90	0.77	0.83	0.65	3.85
Japan	0.85	1.00	0.82	0.67	0.94	4.27
Korea	0.77	1.00	0.82	0.44	0.78	3.81
Latvia	0.85	0.70	0.73	0.58	0.79	3.64
Lithuania	0.92	1.00	0.82	0.92	0.78	4.44
Malaysia	0.50	0.80	0.68	0.69	0.80	3.48
Mexico	0.77	0.70	0.73	0.39	0.74	3.32
Netherlands	0.85	0.70	0.91	0.92	0.85	4.22
New Zealand	0.62	1.00	0.77	0.80	0.85	4.04
Peru	0.77	0.80	0.64	0.61	0.25	3.06
Philippines	0.35	0.70	0.68	0.50	0.22	2.45
Russia	0.54	0.50	0.82	0.50	0.11	2.47
Singapore	0.69	1.00	0.68	0.80	0.83	4.00
South Africa	0.62	1.00	0.73	0.50	0.30	3.14
Spain	0.85	1.00	0.82	0.83	0.92	4.42
Sweden	0.69	0.70	0.73	0.58	0.86	3.56
Thailand	0.85	0.70	0.95	0.17	0.75	3.42
Turkey	0.85	1.00	0.73	0.22	0.62	3.41
United Kingdom	0.62	1.00	0.59	0.92	0.84	3.97
United States	0.85	0.90	1.00	0.94	0.80	4.49
Viet Nam	0.62	0.30	0.73	0.72	0.65	3.01
Overall Average	0.70	0.85	0.72	0.63	0.65	3.57

Table 3. Trade Secrets Protection Index, by economy and year, 1985-2010

	1985	1990	1995	2000	2005	2010
Argentina	2.16	2.19	2.18	3.16	3.12	3.12
Australia	3.81	3.81	4.00	4.01	4.00	3.99
Brazil	2.27	2.28	2.27	3.15	3.30	3.31
Bulgaria			2.65	2.64	2.63	2.96
Canada	4.12	4.14	4.43	4.44	4.42	4.48
China		0.90	1.78	2.22	2.69	2.71
Chinese Taipei	2.10	2.10	2.57	2.88	3.00	3.12
Colombia	2.84	2.84	2.83	2.92	3.15	3.15
France	3.40	3.71	3.70	3.72	3.71	3.76
Germany	3.26	3.77	3.78	3.78	3.78	3.76
Ghana	3.24	3.32	3.33	3.29	3.41	3.43
Hong Kong, China	3.87	3.86	4.03	4.01	4.03	4.03
India	2.83	2.82	2.86	2.86	2.89	2.92
Indonesia	1.77	1.78	1.75	2.50	2.52	2.52
Ireland	3.76	4.01	4.04	4.04	4.15	4.15
Israel	3.59	3.53	3.59	3.82	4.08	4.08
Italy	3.54	3.56	3.53	3.56	3.85	3.85
Japan	4.06	4.07	4.17	4.17	4.17	4.27
Korea	2.16	2.19	3.08	3.69	3.82	3.81
Latvia			2.70	3.32	3.65	3.64
Lithuania			3.22	4.11	4.44	4.44
Malaysia	3.46	3.46	3.47	3.44	3.48	3.48
Mexico	1.67	1.95	3.34	3.32	3.33	3.32
Netherlands	3.87	4.21	4.22	4.24	4.23	4.22
New Zealand	3.59	3.60	3.62	3.62	4.04	4.04
Peru	2.64	2.66	2.93	2.98	2.99	3.06
Philippines	2.75	2.41	2.48	2.47	2.46	2.45
Russia			1.19	1.63	2.47	2.47
Singapore	3.76	3.76	3.79	3.79	4.01	4.00
South Africa	3.08	3.04	3.12	3.13	3.15	3.14
Spain	2.61	2.85	4.32	4.32	4.42	4.42
Sweden	2.28	3.54	3.55	3.55	3.55	3.56
Thailand	2.28	2.29	2.27	2.28	3.44	3.42
Turkey	3.22	3.19	3.20	3.21	3.43	3.41
United Kingdom	3.47	3.83	3.85	3.98	3.98	3.97
United States	4.11	4.11	4.12	4.54	4.50	4.49
Viet Nam					3.01	3.01
Overall Average	3.08	3.12	3.22	3.41	3.55	3.57

Table 4. Illustrative Modelling of Relationship of TSPI to Selected Economic Performance Indicators (All variables entered as natural logarithms)

	(1) Real R&D, per capita (constant USD, 2005)	(2) R&D personnel, as % of the labour force	(3) Real FDI inflows (constant USD, 2005)	(4) Change in real services imports, per capita (constant USD, 2005); **all variables entered as first differences**	(5) Change in real foreign technological services imports (e.g., licencing & royalty payments for intangibles), constant USD (2005); **all variables entered as first differences**	(6) Real merchandise imports (constant USD, 2005)
TSPI			1.494783 **	0.551834 **	1.380278 **	0.664822 **
			0.608775	*0.228515*	*0.568653*	*0.258105*
TSPI lagged 1 period	0.469547 **					
	0.195527					
Interact (TSPI x Patent Rights Index)		0.583355 **				
		0.248242				
GDP per capita (real, USD 2005)		0.782631 ***		2.047991 ***		1.231150 ***
		0.293873		*0.313472*		*0.097923*
GDP (real, USD 2005 ppp)	1.170749 ***		2.472000 ***		1.419025 **	
	0.128488		*0.279946*		*0.697704*	
Market Regulation (Fraser Institute)	-0.174773		1.412879 **		0.857275	0.426688
	0.304992		*0.664468*		*0.682397*	*0.285595*
Share of labour force with tertiary education			0.778480 ***			
			0.219858			
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Periods included	4	5	5	5	5	5
Years	1995-2010	1990-2010	1990-2010	1990-2010	1990-2010	1990-2010
Adjusted R2	0.987531	0.902006	0.953125	0.421721	0.407905	0.971826
Countries Covered (see note)	24	20	23	23	23	24
N	80	82	64	109	93	110

Note: Statistical significance is shown as follows: * p< 0.05, ** p< 0.01, *** p< 0.01. Standard errors are shown in italics. For each regression run (1 to 6), the country coverage is: (1) Australia, Canada, China, Colombia, France, Germany, India, Indonesia, Ireland, Israel, Italy, Japan, Korea, Mexico, Netherlands, New Zealand, Russia, Singapore, South Africa, Spain, Sweden, Turkey, United Kingdom, United States; (2) Australia, Canada, China, France, Germany, Ireland, Israel, Italy, Japan, Korea, Mexico, Netherlands, New Zealand, Russia, Singapore, South Africa, Spain, Sweden, Turkey, United Kingdom; (3) Australia, Canada, China, Colombia, France, Germany, Indonesia, Ireland, Israel, Italy, Japan, Korea, Mexico, Netherlands, New Zealand, Russia, Singapore, South Africa, Spain, Sweden, Turkey, United Kingdom and United States; (4) Same as (3) above; (5) Same as (3) above; (6) Same as (1) above.

Figure 1. Trade Secrets Protection Index, By Economy and Component, 2010

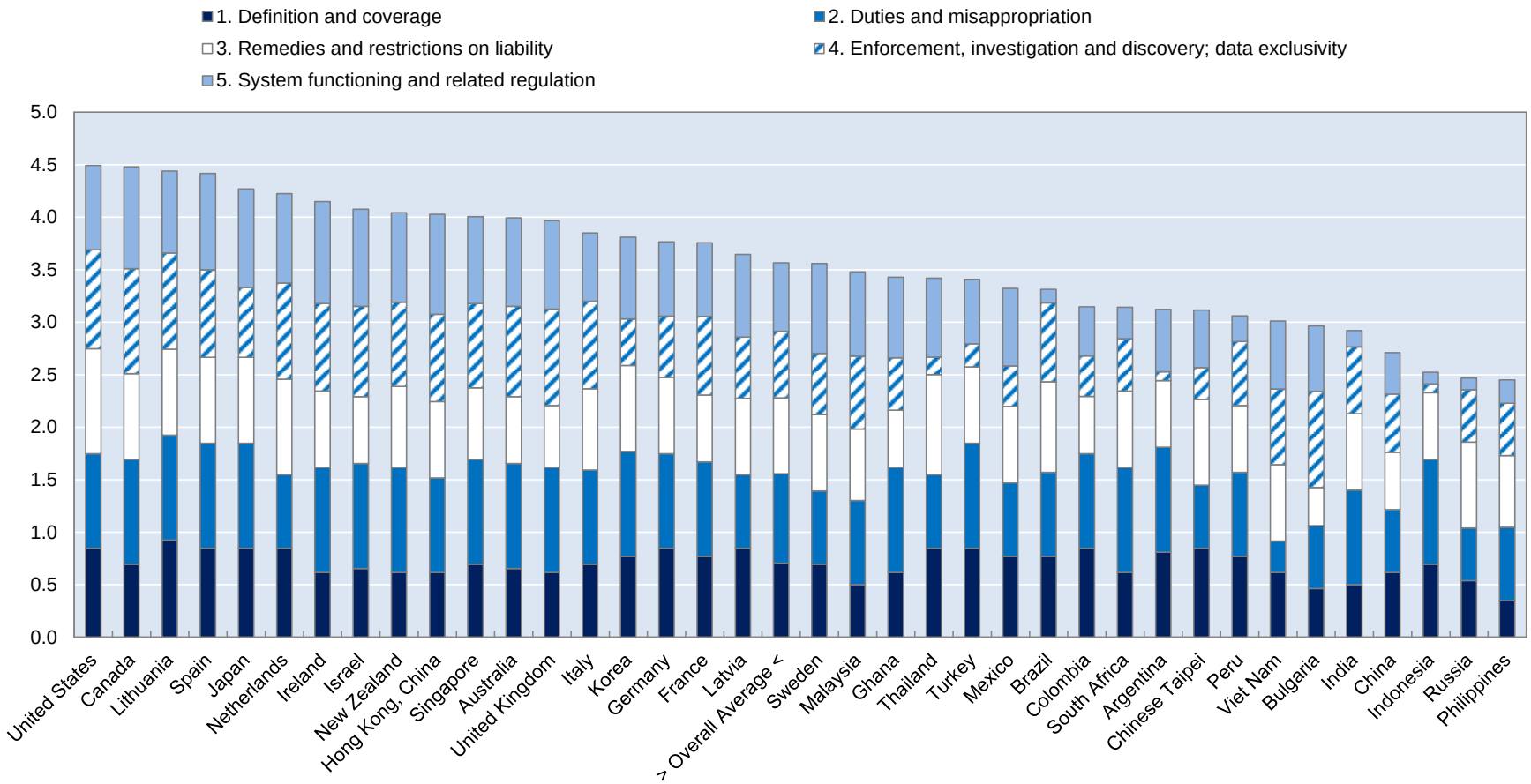
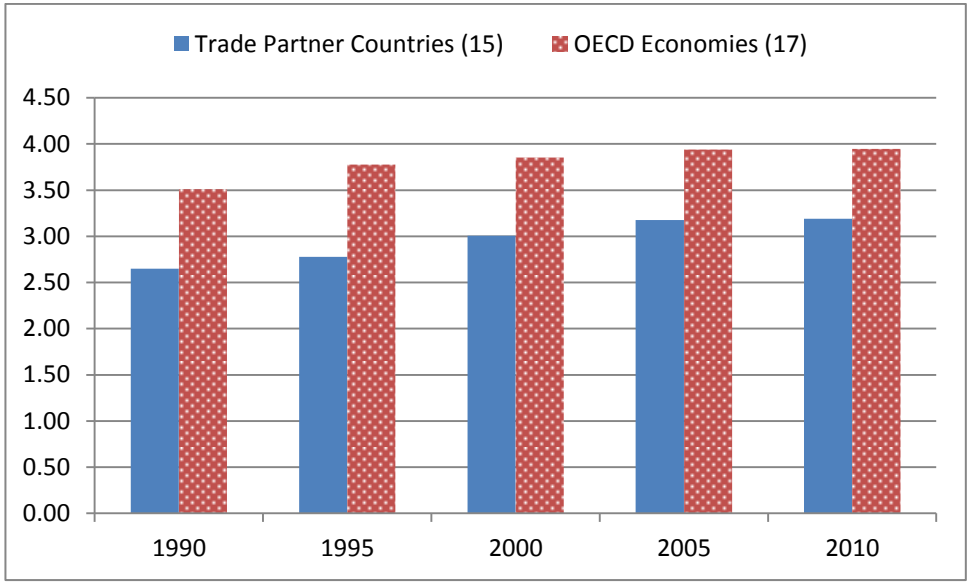


Figure 2. Trade Secrets Protection Index, average score by country group and year



Note: This chart presents a balanced panel of economies in each group for which data were available in each of the years shown. Inclusion in the OECD group is based on each country's membership status as of 2010. Country coverage is as follows:

Trade partner economies: Argentina; Brazil; China; Chinese Taipei; Colombia; Ghana; Hong Kong, China; India; Indonesia; Malaysia; Peru; Philippines; Singapore; South Africa; Thailand;

OECD countries: Australia; Canada; France; Germany; Ireland; Israel; Italy; Japan; Korea; Mexico; Netherlands; New Zealand; Spain; Sweden; Turkey; United Kingdom; United States.

Figure 3. Trade Secrets Protection Index, by country and year

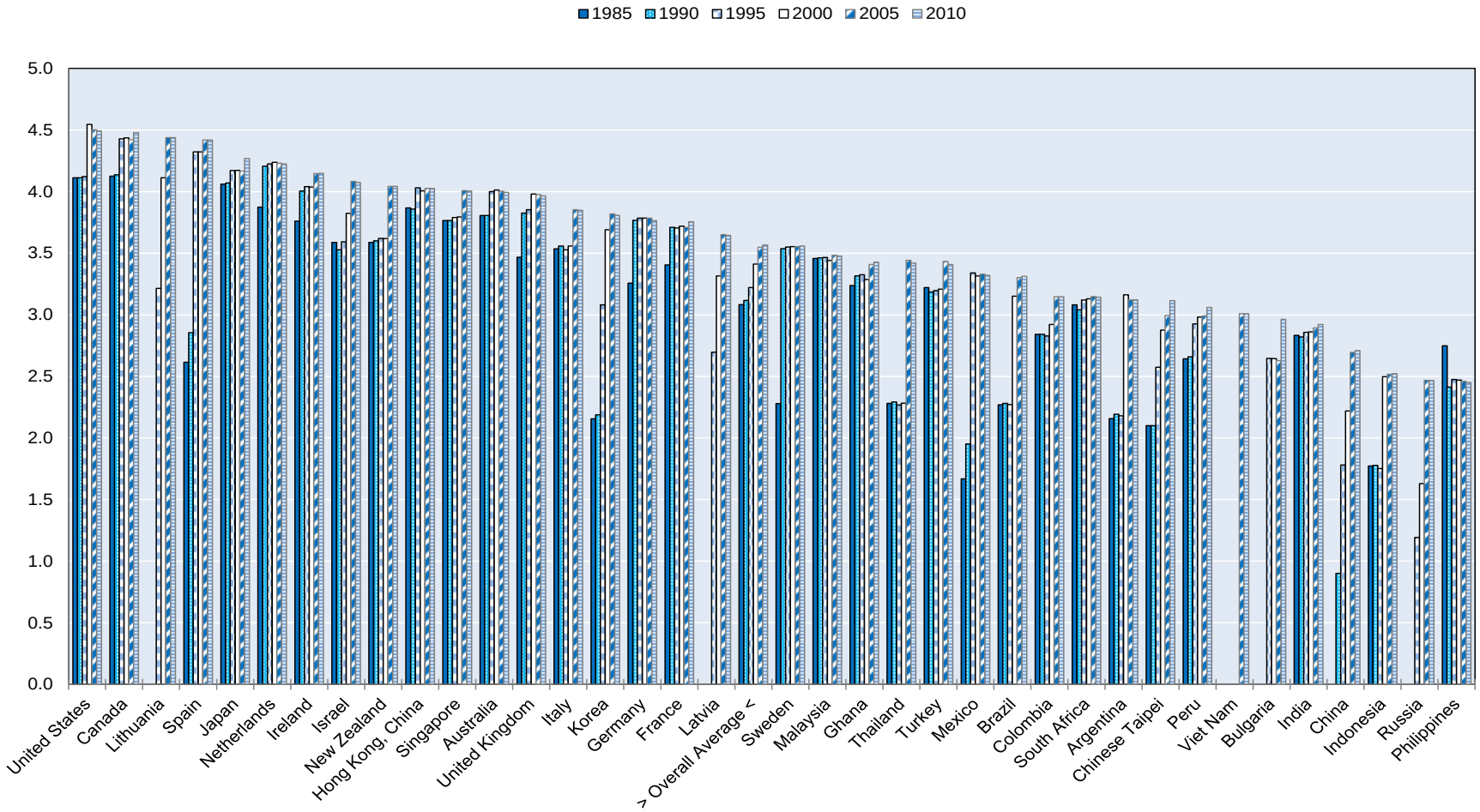
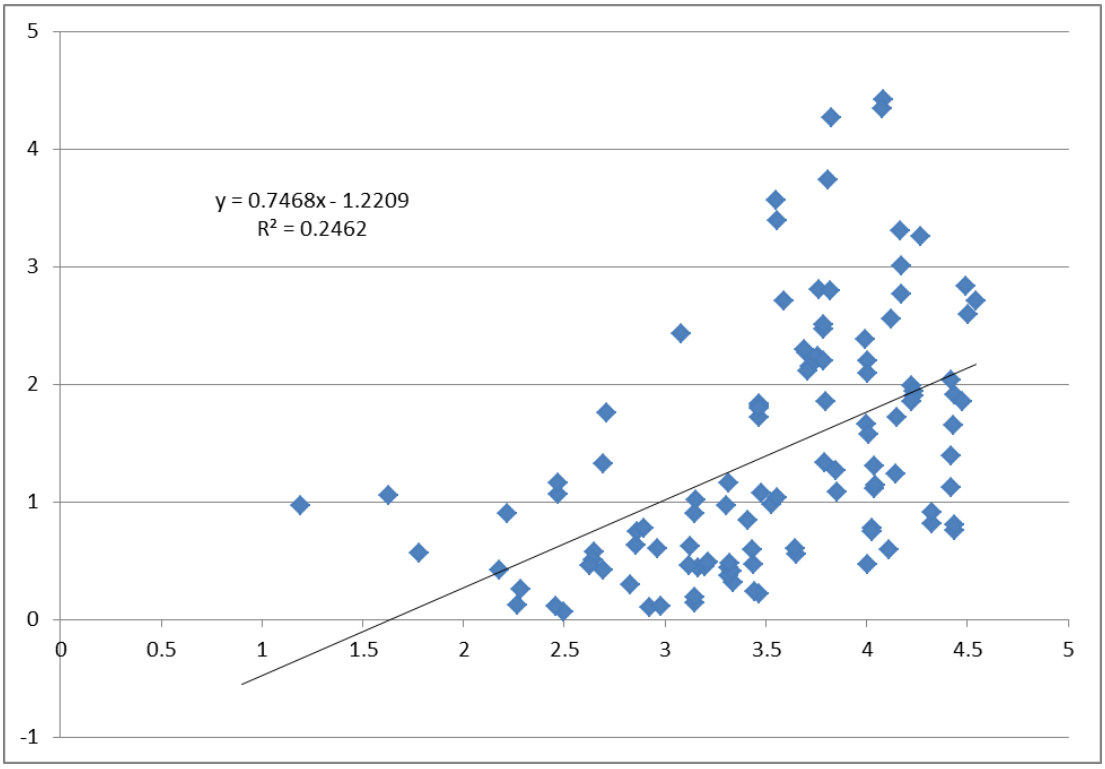


Figure 4. Illustrative Scatter Plots

Panel A. R&D as % GDP (vertical axis) and Trade Secrets Protection Index (horizontal axis)



Panel B. Real Foreign Technological Services Imports (log, vertical axis) and Trade Secrets Protection Index (horizontal axis)

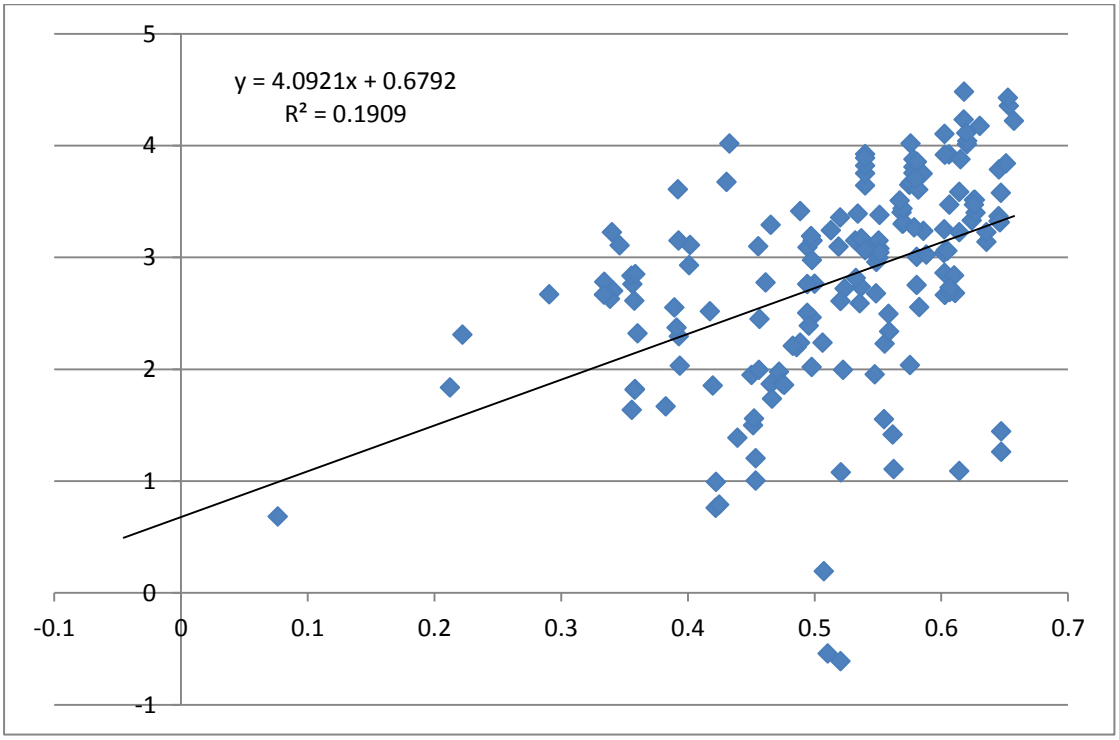
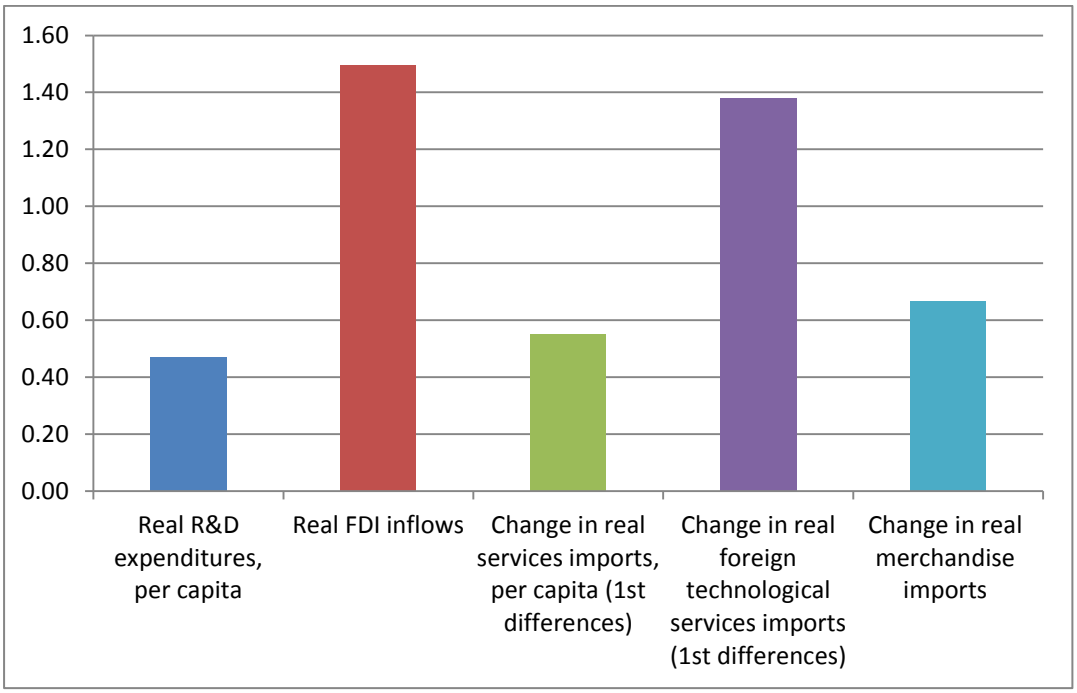


Figure 5. TSPI & Econ Performance, 1990 – 2010
(1% change in TSPI = x % change in…)



Note: The bars represent the coefficients from regression of various indicators of economic performance on the TSPI controlling for other factors. All variables entered as natural logarithms. For the iteration with real R&D expenditures per capita the TSPI was lagged one period. For the services runs the regression was calculated using first differences.

Annex Overview

This annex provides data for an additional 12 countries in a format consistent with the earlier sample of 21 provided in Phase I of the project.[1] For each of the 12 countries in the sample, the annex presents: (1) a chart with descriptive text for each element and (2) a table with the detailed scoring for those elements retained in the preliminary index.

A standard template was utilised for the **Annex Chart**. The elements concerning the legal framework for trade secret protection were formulated in a manner conducive to giving a status report in an objective and verifiable fashion. In addition, the chart includes two further items concerning the operation of the system in practise: (1) a legal complements rating and (2) expert characterisation. As part of the assessment of system functioning and related regulation, one indicator taken into account is drawn from the Fraser Institute's *Index of Economic Freedom*. The component is entitled "*Legal System and Security of Property Rights*." This component takes into account judicial independence, impartiality of courts, protection of property rights, military interference in the rule of law and politics, integrity of the legal system, legal enforcement of contracts, regulatory restrictions on the sale of real property, reliability of the police and business costs of crime.[2] The expert characterisation element for each country is presented at the end of each country's chart. The entries provide qualitative information on the operation of the legal system with respect to the available protection for trade secrets. They are based on expert commentary from recognised, published sources by governments, professional associations, attorneys and legal scholars.

The **Annex Table** provides the detailed scoring of the preliminary Trade Secrets Protection Index for each country. The index consists of five components, each with a maximum score of 1; the maximum score for the index is 5. The score for each component is the sum of the scores obtained for the relevant elements divided by the total number of individual elements for the component. In other words, each component score is normalised to fall on a scale of zero to one.

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1 Detailed country descriptions for the 21 original sample countries can be found in Schultz and Lippoldt, 2014.

2 In developing its index, the Fraser Institute describes its approach as follows, "First, objective components are always preferred to those that involve surveys or value judgments. Given the multidimensional nature of economic freedom and the importance of legal and regulatory elements, it is sometimes necessary to use data based on surveys, expert panels, and generic case studies. To the fullest extent possible, however, the index uses objective components. Second, the data used to construct the index ratings are from external sources such as the International Monetary Fund, World Bank, and World Economic Forum that provide data for a large number of countries. Data provided directly from a source within a country are rarely used, and only when the data are unavailable from international sources. Importantly, the value judgments of the authors or others in the Economic Freedom Network are never used to alter the raw data or the rating of any country. Third, transparency is present throughout." See pp. 3 and 273-5, Gwartney, J., R. Lawson and J. Hall (2012), *Economic Freedom of the World: 2012 Annual Report*, The Fraser Institute, available on-line at: http://www.freetheworld.com/.

Annex Chart

ARGENTINA

Source of Law, Definition and Scope

Statutory or Other Protection		**Definition**			**Additional Elements of Definition**					**Scope**	
Civil	Criminal	All confidential business information	Common Definition: Confidential business information, **subject to:** deriving value from secrecy; reasonable and making reasonable efforts to maintain secrecy	Common definition **plus condition that** it be imparted to recipient in confidence	Use must be shown	Inventory of trade secrets required	Must be reduced to writing	Must be identified as a trade secret to recipient	Written notice to recipient required	Confidential Business Information	Technical Information
Yes.	Yes.	No.	Yes.	No.	No	No.	No.	No.	No.	Yes.	Yes.

ARGENTINA

Covered Acts

Acts Covered as Civil Infringement		**Acts Covered as Crimes**		**Third Parties: Liable for Acquisition? Liable Even if Innocent (Without Knowledge)?**	
Breach of Duty?	Wrongful Acquisition/ Misappropriation	Breach of Duty?	Wrongful Acquisition/ Misappropriation	Civil	Criminal
Yes. Breach of contract by employees or other contracting parties. Disclosure by employees or managers in breach of implied duty.	Yes.	Yes. Covers employees, business partners, professionals and service providers.	Limited coverage under Art. 159 of Criminal Code, applicable to unfair competition law. Only covers industrial and commercial activity not services. Requires diversion of customers. Only covers competing businesses in the same market.	Yes. No. Knowledge or gross negligence required.	Yes No. Knowledge required.

ARGENTINA

Defining Duties and Misappropriation

Defining Duty of Confidentiality			**Restrictions on Duty of confidentiality**		**Defining Wrongful Acquisition - Misappropriation**	
Commercial Relationship	Current Employment Relationship	Past Employment Relationship	Commercial Relationship	Employment Relationship	Civil	Criminal
Duty can be based on express agreement in commercial contract or implied.	Duty can be based on express agreement and implied duty.	Duty can be based on express contract. Duty is also implied. Implied duty narrower after employment – only trade secrets.	None.	Express agreements and implied post-employment duties to keep information confidential likely unenforceable with respect to general skills and knowledge.	Inducement of breach of duty. Acts contrary to honest commercial practice.	Limited coverage under Art. 159 of Criminal Code, applicable to unfair competition law. Only covers industrial and commercial activity not services. Requires diversion of customers. Only covers competing businesses in the same market.

ARGENTINA

Restrictions on Liability

Additional Elements of Proof in Infringement Claim		**Contractual Restrictions on Competition - Validity**		**Defences**	
Civil	Criminal	Commercial Relationship	Post-Employment	Civil	Criminal
None.	None.	Commercial agreements not to compete generally enforceable subject to competition law.	Enforceable, but must be reasonable as to need, time and geographic scope.	Independent creation. Reverse engineering.	Independent creation. Reverse engineering.

ARGENTINA

Remedies

Civil Remedies								**Criminal Remedies**		
Preliminary injunction	Permanent injunction	Injunction to eliminate wrongful head start	Delivery up and/or destruction of infringing materials	Compensatory Damages – Availability and Type	Defendant's Profits	Punitive damages available?	Statutory or Pre-established damages	Fines	Jail Sentence	Other
Yes. Ex parte - yes.	Yes. (For so long as remains secret).	No.	No.	Out of pocket. Lost Profits. Consequential.	No.	No.	No.	Yes. Unspecified.	Six months to six years, depending on specific offence.	None.

ARGENTINA

Enforcement, investigation and discovery & related regulations

Enforcement, investigation and discovery			**Data Exclusivity**		**Technology Transfer**	**Legal Complements**
Emergency Search to preserve and obtain proof	Pre-trial discovery	Protection of confidentiality of trade secrets in litigation	Drugs	Agricultural Chemicals	Civil	Fraser Score
None.	None.	Limited. Documents may be protected from public disclosure. Trials are normally public.	None. Protection against disclosure only.	None. Protection against disclosure only.	Effectively none. Registration of inbound tech transfer agreements is required but only for the purpose of receiving a particular tax benefit.	On the 2010 Fraser Institute Index of Economic Freedom's component index for Legal System and Security of Property Rights, Argentina receives a score of 3.76 out of 10, which ranks it 105th in the world.

ARGENTINA

Additional Comments

Expert characterisation of the operation of the protection of trade secrets in practice
Commentators note that the law is underdeveloped: It should again be pointed out that unfair competition law in Argentina is, for practical purposes, relatively underdeveloped, both in terms of statutory detail and judicial enforcement. MacLaren, Trade Secrets Throughout the Work § 1:7 (2012). Commentators observe that criminal enforcement is rare and ineffective: Criminal litigation in Argentina with regard to trade secrets is extremely rare. The record of the courts in this field is poor. The evidence requirements are frequently such that it is impossible, under normal circumstances, to prosecute misappropriators. MacLaren, Trade Secrets Throughout the Work § 1:14 (2012).

SOURCES:
MacLaren, Trade Secrets Throughout the Work § 1 (2012).
Norma S. Felix, Protection of Trade Secrets Through IP and Unfair Competition Law, AIPPI Report Q215, Argentina (2010).

CANADA

Source of Law, Definition and Scope

Statutory or Other Protection		**Definition**			**Additional Elements of Definition**					**Scope**	
Civil	Criminal	All confi-dential business informa-tion	Common definition: confidential business information, **subject to:** deriving value from secrecy; making reasonable efforts to maintain secrecy	Common definition **plus condition that** it be imparted to recipient in confidence	Use must be shown	Inventory of trade secrets required	Must be reduced to writing	Must be identified as a trade secret to recipient	Written notice to recipient required	Confidential Business Information	Technical Information
Comprehensive civil protection by means of common law in each province, except Quebec, where protection is pursuant to civil law.	No cases to date. (Note: S. 19 of the Security of Information Act contains a criminal offence aiming to protect trade secrets against economic espionage; the fraud offence under S. 380 of the Criminal Code may also apply. See "additional comments" section, below.)	No.	Yes.	No. (Note: A condition that it be imparted to the recipient in confidence is not part of the definition, but it must be established in a breach of confidence action.)	No.	No.	No.	No.	No.	Yes.	Yes.

CANADA

Covered Acts

Acts Covered as Civil Infringement		**Acts Covered as Crimes**		**Third Parties: Liable for Acquisition? Liable Even if Innocent (Without Knowledge)?**	
Breach of Duty?	Wrongful Acquisition/ Misappropriation	Breach of Duty?	Wrongful Acquisition/ Misappropriation	Civil	Criminal
Use in Breach of Duty. Disclosure in Breach of Duty.	Yes, against acquisition by improper means and unlawful use or disclosure.	No cases to date.	No cases to date. (Note: Under the Security of Information Act: Fraudulent communication of a trade secret to a person, group or organization, at the direction or for the benefit of or in association with a foreign economic entity, to the determinant of Canada's economic or security interests. Fraudulently obtaining, retaining, altering or destroying a trade secret to a person, group or organization, at the direction or for the benefit of or in association with a foreign economic entity, to the determinant of Canada's economic or security interests.[3])	Yes. (In limited circumstances, innocent recipients who acquire knowledge of a trade secret will owe a duty of confidence and may become liable for use after they acquire the knowledge. This will depend on the facts of each case.)	Not applicable.

CANADA

Defining Duties and Misappropriation

Defining Duty of Confidentiality			**Restrictions on Duty of confidentiality**		**Defining Wrongful Acquisition - Misappropriation**	
Commercial Relationship	Current Employment Relationship	Past Employment Relationship	Commercial Relationship	Employment Relationship	Civil	Criminal
Duty can be based on express agreement in commercial contract. Duty can be implied in the context of a business relationship.	Duty can be based on express agreement and implied duty. Implied duty broad during employment – covers information beyond strict trade secret definition.	Duty can be based on express contract. Duty is also implied. Implied duty narrower after employment – only trade secrets. No inevitable disclosure doctrine.	None.	Express agreements may cover general skills and knowledge. Implied post-employment duties to keep information confidential unenforceable with respect to general skills and knowledge.	Yes. Unauthorised use of a trade secret.	No cases to date. (Note: Definitions could include: fraudulently obtaining or retaining a trade secret under the *Security of Information Act* or possibly by deceit, falsehood or other fraudulent means, defrauds the public or any person of any property, money or valuable security or any service under the *Criminal Code*.)

[3] The fraud offence under S. 380 of the Criminal Code may also apply with respect to wrongful acquisition and misappropriation via deceit, falsehood or other fraudulent means to defraud the public or any person of any property, money or valuable security or any service.

CANADA

Restrictions on Liability

Additional Elements of Proof in Infringement Claim		**Contractual Restrictions on Competition - Validity**		**Defences**	
Civil	Criminal	Commercial Relationship	Post-Employment	Civil	Criminal
None.	Not applicable.	Commercial agreements not to compete generally enforceable, subject to competition law.	Post-employment agreements not to compete enforceable if reasonable with respect to time and geographic scope.	Independent creation. Reverse engineering. Contrary to public interest (e.g., in cases where a non-competition clause is over protective of the employer's interests, or overly restrains the employee's mobility or ability to work. Limitation periods, latches, and acquiescence.	No cases to date. (In the event of a possible prosecution under S. 19 of the Security of Information Act, theoretical defences would include independent creation and reverse engineering.)

CANADA

Remedies

Civil Remedies								**Criminal Remedies**		
Preliminary injunction	Permanent injunction	Injunction to eliminate wrongful head start	Delivery up and/or destruction of infringing materials	Compensatory Damages – Availability and Type	Defendant's Profits	Punitive damages available?	Statutory or Pre-established damages	Fines	Jail Sentence	Other
Yes. Ex parte "Anton Piller" – yes.	Yes. (For so long as remains secret).	Yes, even where information has since become public.	Yes.	Out of pocket Lost Profits Consequential Lost royalties Lost value based on hypothetical market transaction	Yes.	Yes.	No.	Not applicable.	No cases to date. (Note: In the event that S. 19 of the Security of Information Act were to be applied, potential imprisonment of up to 10 years could be foreseen.)	Not applicable.

CANADA

Enforcement, investigation and discovery & related regulations

Enforcement, investigation and discovery			**Data Exclusivity**		**Technology Transfer**	**Legal Complements**
Emergency Search to preserve and obtain proof	Pre-trial discovery	Protection of confidentiality of trade secrets in litigation	Drugs	Agricultural Chemicals		Fraser Score
Ex parte available. A neutral officer of the court, the Independent Supervising Solicitor, conducts search.	Documentary. Duty to disclose documents. Limited oral examination available. Interrogatories and requests for admission available. At initiative of party.	Full protection with respect to hearings and the record (in camera hearings available). Protection from other party is available (protective orders, measures limiting viewing to counsel or other professionals).	New chemical entities only. Drugs: 8 years, with an additional 6 months available for paediatric drugs.	10 years.	None.	On the Fraser Institute 2010 Index of Economic Freedom's component index for Legal System and Security of Property Rights, Canada receives a score of 8.74 out of 10, which ranks it 12th in the world.

CANADA

Additional Comments

Expert characterisation of the operation of the protection of trade secrets in practice
Criticism of Canadian trade secret law is minimal. An AIPPI group observed "A codified trade secret statute may be beneficial for certainty. However, it may also be advantageous to keep the protection of trade secrets governed by common law and equity so as to allow maximum flexibility for the courts to address trade secrets on a case-by-case basis." S. Fred Barbieri, et al., Protection of Trade Secrets Through IP and Unfair Competition Law, AIPPI Report Q215, Canada 10 (2010). Note: The prohibition against trade secret misappropriation in Section 19 of the *Security of Information Act* (SOIA) applies where the misappropriation is "to the detriment of Canada's economic interests, international relations or national defence or national security." It has been argued that "Canada's economic interests" could be read broadly to apply to ordinary cases where any Canadian company is injured, and thus SOIA could be applied to trade secret theft. However, in 12 years, there has not been any reported use of its provisions in "ordinary" economic espionage cases. The Canadian Supreme Court recently said in *Merck Frosst Canada Ltd. v. Canada (Health)*, 2012 SCC 3 that the definition of "trade secret" in SOIA did not apply to regulatory disclosure issues under the Access to Information Act because SOIA's purpose is to protect national security and thus its definitions could not be imported into a more ordinary, regulatory disclosure context.

SOURCES:
MacLaren, Trade Secrets Throughout the World § 6 (2012).
Correspondence of the Canadian authorities with the OECD Secretariat.
S. Fred Barbieri, et al., Protection of Trade Secrets Through IP and Unfair Competition Law, AIPPI Report Q215, Canada (2010).

CHINESE TAIPEI

Source of Law, Definition and Scope

Statutory or Other Protection		**Definition**			**Additional Elements of Definition**					**Scope**	
Civil	Criminal	All confidential business information	Common Definition: Confidential business information, **subject to:** deriving value from secrecy; reasonable and making reasonable efforts to maintain secrecy	Common definition **plus condition that** it be imparted to recipient in confidence	Use must be shown	Inventory of trade secrets required	Must be reduced to writing	Must be identified as a trade secret to recipient	Written notice to recipient required	Confidential Business Information	Technical Information
Statutory protection.	Statutory protection.	No.	Yes.	No.	No.	No.	No.	No.	No.	Yes.	Yes.

CHINESE TAIPEI

Covered Acts

Acts Covered as Civil Infringement		**Acts Covered as Crimes**		**Third Parties:** **Liable for Acquisition?** **Liable Even if Innocent (Without Knowledge)?**	
Breach of Duty?	Wrongful Acquisition/ Misappropriation	Breach of Duty?	Wrongful Acquisition/ Misappropriation	Civil	Criminal
Use in Breach of Duty Disclosure in Breach of Duty	Yes.	Yes.	Yes.	Yes No. Third parties must have knowledge or reason to know. But will be restrained after notice.	Yes. No. Third parties must have knowledge or reason to know.

CHINESE TAIPEI

Defining Duties and Misappropriation

Defining Duty of Confidentiality			**Restrictions on Duty of confidentiality**		**Defining Wrongful Acquisition - Misappropriation**	
Commercial Relationship	Current Employment Relationship	Past Employment Relationship	Commercial Relationship	Employment Relationship	Civil	Criminal
Duty can be based on express agreement in commercial contract.	Duty can be based on express agreement. Existence of implied duty is in doubt and has not been imposed by a court.	Duty can be based on express contract. Existence of implied duty is in doubt and has not been imposed by a court.	Generally valid.	Generally valid.	"inducement, coercion, or other improper means." (Please note the 2013 update under the additional comments section below.)	"inducement, coercion, or other improper means." (Please note the 2013 update under the additional comments section below.)

CHINESE TAIPEI

Restrictions on Liability

Additional Elements of Proof in Infringement Claim		**Contractual Restrictions on Competition - Validity**		**Defences**	
Civil	Criminal	Commercial Relationship	Post-Employment	Civil	Criminal
None.	None.	Must be reasonably necessary; reasonable in subject matter, geographic scope, duration.	Must be reasonably necessary; reasonable in subject matter, geographic scope, duration. Two years appears to be limit.	Independent creation. Reverse engineering.	Independent creation. Reverse engineering.

CHINESE TAIPEI

Remedies

Civil Remedies								**Criminal Remedies**		
Preliminary injunction	Permanent injunction	Injunction to eliminate wrongful head start	Delivery up and/or destruction of infringing materials	Compensatory Damages – Availability and Type	Defendant's Profits	Punitive damages available?	Statutory or Pre-established damages	Fines	Jail Sentence	Other
Yes. Ex parte does not appear to be available.	Yes (For so long as remains secret).	No.	Yes	Out of pocket. Lost Profits. Consequential. Defendant's profits.	Yes	Yes	No	Up to 30 000 New Taiwan Dollars. (Please note the 2013 update under the additional comments section below.)	Up to a year. (Please note the 2013 update under the additional comments section below.)	None

CHINESE TAIPEI

Enforcement, investigation and discovery & related regulations

Enforcement, investigation and discovery			**Data Exclusivity**		**Technology Transfer**	**Legal Complements**
Emergency Search to preserve and obtain proof	Pre-trial discovery	Protection of confidentiality of trade secrets in litigation	Drugs	Agricultural Chemicals		Fraser Score
No.	No.	Yes. Hearing may be closed to the public. Court orders to protect documents are available, but other party may access them for purposes of the trial.	Three years of data protection, with an additional two years of data exclusivity. (A total of 5 years).	Eight years of data exclusivity for new plant protection products.	Foreign investments and joint ventures must be approved.	Per the 2010 Fraser Institute *Index of Economic Freedom* component index for "Legal System and Security of Property Rights", Chinese Taipei received a score of 6.86 out of 10 (chain-linked). It ranked 41st in the world. (The data are available here: http://www.freetheworld.com/release.html.)

CHINESE TAIPEI

Additional Comments

Expert characterisation of the operation of the protection of trade secrets in practice
One expert observed that "Prior to the recent amendments, there was only civil liability for trade secret theft in Chinese Taipei, and the damages awarded were often too low to deter the misconduct."[4] ---------- Update: In February 2013, an amended Trade Secrets Act entered into force. Under this act, under civil law, wrongful acquisition was defined to include such actions as "theft, fraud, coercion, bribery, unauthorised reproduction, breach of an obligation to maintain secrecy, inducement or other improper means." The act introduced criminal liability for trade secrets misappropriation. This was defined to include such actions as "1. Acquiring a trade secret by an act of theft, embezzlement, fraud, threat, unauthorized reproduction, or other wrongful means, or using or disclosing a trade secret so acquired; 2. Committing an unauthorized reproduction, usage, or disclosure of a trade secret known or possessed; 3. Failing to delete or destroy a possessed trade secret as the trade secret holder orders, or disguising it; 4. [Cases where a]ny person knowingly acquires, uses or discloses a trade secret known or possessed by others under the preceding 3 circumstances." Criminal remedies include fines (1.Trade secrets theft: 1 million -10 million New Taiwan Dollars or 2. Using trade secrets in a foreign jurisdiction: 3 million - 50 million New Taiwan Dollars) and jail terms (1.Trade secrets theft: up to 5 years, or 2.Using trade secrets in foreign jurisdiction: 1 to 10 years). Source: Secretariat correspondence with government authorities.

SOURCES:

MacLaren, Trade Secrets Throughout the World § 37 (2012).
Correspondence of the Chinese Taipei authorities with the OECD Secretariat.

[4] Covington and Burling, LLP. The Case for Enhanced Protection of Trade Secrets In The Trans-Pacific Partnership Agreement. U.S. Chamber of Commerce. 20.

GHANA

Source of Law, Definition and Scope

Statutory or Other Protection		**Definition**			**Additional Elements of Definition**					**Scope**	
Civil	Criminal	All confidential business information	Common Definition: Confidential business information, **subject to:** deriving value from secrecy; reasonable and making reasonable efforts to maintain secrecy	Common definition **plus condition that** it be imparted to recipient in confidence	Use must be shown	Inventory of trade secrets required	Must be reduced to writing	Must be identified as a trade secret to recipient	Written notice to recipient required	Confidential Business Information	Technical Information
Civil protection by means of Protection of Unfair Competition Act, 2000 and common law, but limited case law and use. May follow English law for guidance.	No.	No.	Yes.	No.	No.	No.	No.	No.	No.	Yes.	Yes.

GHANA

Covered Acts

Acts Covered as Civil Infringement		**Acts Covered as Crimes**		**Third Parties: Liable for Acquisition? Liable Even if Innocent (Without Knowledge)?**	
Breach of Duty?	Wrongful Acquisition/ Misappropriation	Breach of Duty?	Wrongful Acquisition / Misappropriation	Civil	Criminal
Use in Breach of Duty. Disclosure in Breach of Duty.	Yes.	No.	No.	Yes. No. Knowledge required, or at least gross negligence/reason to know.	Not applicable.

GHANA

Defining Duties and Misappropriation

Defining Duty of Confidentiality			**Restrictions on Duty of confidentiality**		**Defining Wrongful Acquisition - Misappropriation**	
Commercial Relationship	Current Employment Relationship	Past Employment Relationship	Commercial Relationship	Employment Relationship	Civil	Criminal
Duty can be based on express agreement in commercial contract. Duty can be implied in the context of a business relationship – must be imparted under confidential circumstances.	Duty can be based on express agreement. Duty can be implied in the context of an employment relationship – must be imparted under confidential circumstances.	Duty can be based on express contract. Implied duty can continue after employment terminates. No inevitable disclosure doctrine.	Generally valid.	Generally valid, but neither express nor implied post-employment duties to keep information confidential may cover general skills and knowledge.	Not applicable.	Not applicable.

GHANA

Restrictions on Liability

Additional Elements of Proof in Infringement Claim		**Contractual Restrictions on Competition - Validity**		**Defences**	
Civil	Criminal	Commercial Relationship	Post-Employment	Civil	Criminal
None.	Not applicable.	Valid, subject to competition law regulation.	Courts reluctant to enforce if negatively affects the ability to earn a living. Post-employment agreements not to compete enforceable if reasonable with respect to competitive need, time and geographic scope.	Independent creation. Reverse engineering.	Not applicable.

GHANA

Remedies

Civil Remedies								**Criminal Remedies**		
Preliminary injunction	Permanent injunction	Injunction to eliminate wrongful head start	Delivery up and/or destruction of infringing materials	Compensatory Damages – Availability and Type	Defendant's Profits	Punitive damages available?	Statutory or Pre-established damages	Fines	Jail Sentence	Other
Yes. Ex parte available.	Yes. (For so long as remains secret).	No.	No.	Direct damages.	Yes.	No.	No.	None.	None.	None.

GHANA

Enforcement, investigation and discovery & related regulations

Enforcement, investigation and discovery			**Data Exclusivity**		**Technology Transfer**	**Legal Complements**
Emergency Search to preserve and obtain proof	Pre-trial discovery	Protection of confidentiality of trade secrets in litigation	Drugs	Agricultural Chemicals		Fraser Score
Yes, but the details are unspecified. Ex parte emergency search is available.	Documentary under supervision of court.	None, except at discretion of court.	No data exclusivity.	No data exclusivity.	No.	On the 2010 Fraser Institute Index of Economic Freedom's component index for Legal System and Security of Property Rights, Ghana receives a score of 5.74 out of 10, which ranks it 68th in the world.

GHANA

Additional Comments

Expert characterisation of the operation of the protection of trade secrets in practice
While Ghana appears to have enacted the Protection of Unfair Competition Act, 2000 to comply with TRIPS, there appears to be little use of or awareness of the law, judged based on a lack of commentary on or references to its use in news reports or expert commentary.

SOURCES:
Protection of Unfair Competition Act, 2000.

HONG KONG, CHINA

Source of Law, Definition and Scope

Statutory or Other Protection		**Definition**			**Additional Elements of Definition**					**Scope**	
Civil	Criminal	All confidential business information	Common Definition: Confidential business information, **subject to:** deriving value from secrecy; reasonable and making reasonable efforts to maintain secrecy	Common definition **plus condition that** it be imparted to recipient in confidence	Use must be shown	Inventory of trade secrets required	Must be reduced to writing	Must be identified as a trade secret to recipient	Written notice to recipient required	Confidential Business Information	Technical Information
No statutory protection. Civil protection by means of common law.	No.	No.	Yes.	No.	No.	No.	No.	No.	No.	Yes.	Yes.

HONG KONG, CHINA

Covered Acts

Acts Covered as Civil Infringement		**Acts Covered as Crimes**		**Third Parties:** **Liable for Acquisition?** **Liable Even if Innocent (Without Knowledge)?**	
Breach of Duty?	Wrongful Acquisition/ Misappropriation	Breach of Duty?	Wrongful Acquisition/ Misappropriation	Civil	Criminal
Use in Breach of Duty Disclosure in Breach of Duty	Yes.	Not applicable.	Not applicable.	Yes No. Knowledge required, or at least reason to know. But will be restrained after notice.	Not applicable.

HONG KONG, CHINA

Defining Duties and Misappropriation

Defining Duty of Confidentiality			**Restrictions on Duty of confidentiality**		**Defining Wrongful Acquisition - Misappropriation**	
Commercial Relationship	Current Employment Relationship	Past Employment Relationship	Commercial Relationship	Employment Relationship	Civil	Criminal
Duty can be based on express agreement in commercial contract Duty can be implied in the context of a business relationship.	Duty can be based on express agreement. Duty can be implied in the context of an employment relationship. Broad during employment relationship.	Duty can be based on express contract. Implied duty continues after employment terminates, but limited specifically to trade secrets.	None.	Neither express nor implied post-employment duties to keep information confidential may cover general skills and knowledge.	Trade secrets can be property. Any use, including self-use by the wrongdoer, following any misappropriation – whether by force, menaces, trickery or stealth – is, in general, misuse which is liable to be restrained.[5]	Not applicable.

[5] Linda Chih Ling Koo and John Ho Hung Chiu v. Lam Tai Hing, [1992] 1 HKC 1993: 1 HKLR 329 (1994) (holding that trade secrets are property rights and rejecting relationship-based view of trade secret duty).

HONG KONG, CHINA

Restrictions on Liability

Additional Elements of Proof in Infringement Claim		**Contractual Restrictions on Competition - Validity**		**Defences**	
Civil	Criminal	Commercial Relationship	Post-Employment	Civil	Criminal
None.	Not applicable.	At common law, restraints of trade are void and unenforceable unless being reasonable in reference to the interests of the parties concerned and in reference to the interests of the public.[6]	Must be reasonable in reference to the interests of the parties concerned and in reference to the interests of the public; reasonable in subject matter, geographic scope, duration	Independent creation Reverse engineering	Not applicable.

[6] In June 2012, Hong Kong passed the Competition Ordinance, Cap. 619. However, most of the provisions in the Competition Ordinance (including section 6 – Prohibition of anti-competitive agreements, concerted practices and decisions) are not yet in operation.

HONG KONG, CHINA

Remedies

Civil Remedies								**Criminal Remedies**		
Preliminary injunction	Permanent injunction	Injunction to eliminate wrongful head start	Delivery up and/or destruction of infringing materials	Compensatory Damages – Availability and Type	Defendant's Profits	Punitive damages available?	Statutory or Pre-established damages	Fines	Jail Sentence	Other
Yes. Ex parte available.	Yes (For so long as remains secret).	Yes.	Yes.	Out of pocket. Lost Profits. Consequential. Defendant's profits.	Yes.	Yes; however, only awarded as a last resort: awarded only if the compensatory damages or the restitutionary award was inadequate to punish and deter the defendant.	No.	Not applicable.	Not applicable.	Not applicable.

HONG KONG, CHINA

Enforcement, investigation and discovery & related regulations

Enforcement, investigation and discovery			**Data Exclusivity**		**Technology Transfer**	**Legal Complements**
Emergency Search to preserve and obtain proof	Pre-trial discovery	Protection of confidentiality of trade secrets in litigation	Drugs	Agricultural Chemicals		Fraser Score
Yes. "Anton Piller" Orders are available. Ex parte available. Plaintiff's lawyers conduct search, under supervision of an independent attorney.	Yes. Documentary. At initiative of party.	Limited. Although Hong Kong courts have some discretion in these matters, there appear to be no standard practices or procedures protecting trade secrets in litigation. Courts have discretion to restrict the access of the other party to documents. Closed court hearings appear to be exceptional.	Data kept confidential unless originator releases or gives permission.[7]	Data kept confidential unless originator releases or gives permission.	None.	Per the 2010 Fraser Institute *Index of Economic Freedom* component index for "Legal System and Security of Property Rights", Hong Kong, China received a score of 7.97 out of 10 (chain-linked). It ranked 23rd in the world. (The data are available here: http://www.freetheworld.com/release.html.)

[7] After 1 Oct 2012, generic drugs are exempted from submitting "[c]linical and scientific documentation substantiating the safety and efficacy of the product" if the "originator products have been registered in Hong Kong for over 8 years." Hong Kong Department Of Health Drug Office, Drug Registration And Import/Export Control Division, *Guidance Notes on Registration of Pharmaceutical Products/Substances*, https://www.drugoffice.gov.hk/eps/do/en/doc/guidelines_forms/guid.pdf (March 2014).

HONG KONG, CHINA

Additional Comments

Expert characterisation of the operation of the protection of trade secrets in practice
Some have criticised Hong Kong's lack of a comprehensive statute.[8] However, others have recognised that Hong Kong's common law system can be effective. As one law firm put it, "foreign companies oriented toward choosing Hong Kong law for commercial reasons can feel comfortable that Hong Kong law will provide protection for their confidential information." [9]

SOURCES:

MacLaren, Trade Secrets Throughout the World § 17 (2012).
Correspondence of the Hong Kong, China, authorities with the OECD Secretariat.

8 Savitz, Eric, *Trade Secret Theft: Businesses Need to Beware and Prepare*, Forbes Magazine, 24 May 2012, retrieved on 29 January 2014 from: http://www.forbes.com/sites/ciocentral/2012/05/24/trade-secret-theft-businesses-need-to-beware-and-prepare/ .

9 James C. Chapman, Song Lin, Alex Y. Nie, *Trade Secret Protection in China: A Perspective From China and Hong Kong*, Martindale.com, 3 January 2013, retrieved on 29 January 2014 from: http://www.martindale.com/intellectual-property-law/article_Foley-Lardner-LLP_1654722.htm .

INDONESIA

Source of Law, Definition and Scope

Statutory or Other Protection		**Definition**			**Additional Elements of Definition**					**Scope**	
Civil	Criminal	All confidential business information	Common Definition: Confidential business information, **subject to:** deriving value from secrecy; reasonable and making reasonable efforts to maintain secrecy	Common definition **plus condition that** it be imparted to recipient in confidence	Use must be shown	Inventory of trade secrets required	Must be reduced to writing	Must be identified as a trade secret to recipient	Written notice to recipient required	Confidential Business Information	Technical Information
Yes.	Yes.	No.	Yes.	No.	No.	No.	No.	No.	No.	Yes.	Yes.

INDONESIA

Covered Acts

Acts Covered as Civil Infringement		**Acts Covered as Crimes**		**Third Parties: Liable for Acquisition? Liable Even if Innocent (Without Knowledge)?**	
Breach of Duty?	Wrongful Acquisition/ Misappropriation	Breach of Duty?	Wrongful Acquisition/ Misappropriation	Civil	Criminal
Use in Breach of Duty. Disclosure in Breach of Duty.	Yes, but only for fraud and not for corporate espionage.	Use in Breach of Duty. Disclosure in Breach of Duty.	Yes, but only for fraud and not for corporate espionage.	Yes. No. Requires knowledge or gross negligence.	Yes. No. Requires knowledge or gross negligence.

INDONESIA

Defining Duties and Misappropriation

Defining Duty of Confidentiality			**Restrictions on Duty of confidentiality**		**Defining Wrongful Acquisition - Misappropriation**	
Commercial Relationship	Current Employment Relationship	Past Employment Relationship	Commercial Relationship	Employment Relationship	Civil	Criminal
Duty can be based on express agreement in commercial contract. Duty can be implied in the context of a business relationship.	Duty can be based on express agreement and implied duty.	Duty can be based on express contract. Duty is also implied. Inevitable disclosure doctrine is applicable.	None.	None.	Fraud. Not espionage.	Fraud. Not espionage.

INDONESIA

Restrictions on Liability

Additional Elements of Proof in Infringement Claim		**Contractual Restrictions on Competition - Validity**		**Defences**	
Civil	Criminal	Commercial Relationship	Post-Employment	Civil	Criminal
None.	None.	Generally enforceable.	Generally enforceable.	Independent creation. Reverse engineering.	Independent creation. Reverse engineering.

INDONESIA

Remedies

Civil Remedies								**Criminal Remedies**		
Preliminary injunction	Permanent injunction	Injunction to eliminate wrongful head start	Delivery up and/or destruction of infringing materials	Compensatory Damages – Availability and Type	Defendant's Profits	Punitive damages available?	Statutory or Pre-established damages	Fines	Jail Sentence	Other
Yes. Ex parte – not available, in practise.	Yes. (For so long as remains secret).	No.	Yes.	Direct Damages. Lost Profits. Consequential.	No.	No.	No.	Up to 300 million Rupiahs.	Up to two years.	Not applicable.

INDONESIA

Enforcement, investigation and discovery & related regulations

Enforcement, investigation and discovery			**Data Exclusivity**		**Technology Transfer**	**Legal Complements**
Emergency Search to preserve and obtain proof	Pre-trial discovery	Protection of confidentiality of trade secrets in litigation	Drugs	Agricultural Chemicals	Civil	Fraser Score
None.	None.	Limited protection – the judge may, at a party's request, hold the proceeding in private.	None. Non-disclosure only.	None. Non-disclosure only.	Yes. All trade secret licenses and assignments must be registered or they will not be valid. License agreements must not contain provisions detrimental to the Indonesian economy or which restrict the Indonesian ability to possess and develop a technology, in principle. The Directorate General of Intellectual Property Rights shall reject any agreement with such provisions.[10]	On the 2010 Fraser Institute Index of Economic Freedom's component index for Legal System and Security of Property Rights, Israel receives a score of 4.38 out of 10, which ranks it 93rd in the world.

[10] Ali Budiardjo, Nugroho, Reksodiputro, Guide to Doing Business in Indonesia, 27 (2005) http://www.prac.org/newsletters/Ali_2005.pdf.

INDONESIA

Additional Comments

Expert characterisation of the operation of the protection of trade secrets in practice
Commentators complain that the law is not specific enough: The recommended "[t]he elaboration of specific acts violating trade secret." They also noted that the law is vague and not fully applied: The current problem in our jurisdiction is that the regulation of trade secret protection in Law No. 30 of 2000 is very simple, not comprehensively provide rules for trade secret protection (only 19 Articles), therefore can cause uncertainty in business society, for IP protection. The legal system not fully applied and implemented as where are some factors such as legal culture, structure and substance influencing the law enforcement. Cita Citrawinda Noerhadi, Protection of Trade Secrets Through IP and Unfair Competition Law, AIPPI Report Q215, Indonesia 8 (2010). The law is not fully implemented or used. As of 2010, only one case had been brought under the Trade Secret Law. Cita Citrawinda Noerhadi, Protection of Trade Secrets Through IP and Unfair Competition Law, AIPPI Report Q215, Indonesia 6-7 (2010).

SOURCES:
Cita Citrawinda Noerhadi, Protection of Trade Secrets Through IP and Unfair Competition Law, AIPPI Report Q215, Indonesia (2010).

IRELAND

Source of Law, Definition and Scope

Statutory or Other Protection		**Definition**			**Additional Elements of Definition**					**Scope**	
Civil	Criminal	All confidential business information	Common Definition: Confidential business information, **subject to:** deriving value from secrecy; reasonable and making reasonable efforts to maintain secrecy	Common definition **plus condition that** it be imparted to recipient in confidence	Use must be shown	Inventory of trade secrets required	Must be reduced to writing	Must be identified as a trade secret to recipient	Written notice to recipient required	Confidential Business Information	Technical Information
Comprehensive civil protection by means of common law.	No.	No.	Yes.	No.	No.	No.	No.	No.	No.	Yes.	Yes.

IRELAND

Covered Acts

Acts Covered as Civil Infringement		**Acts Covered as Crimes**		**Third Parties: Liable for Acquisition? Liable Even if Innocent (Without Knowledge)?**	
Breach of Duty?	Wrongful Acquisition/ Misappropriation	Breach of Duty?	Wrongful Acquisition/ Misappropriation	Civil	Criminal
Use in Breach of Duty. Disclosure in Breach of Duty.	Perhaps. Since Ireland follows common law, it likely would sanction misappropriation as the UK and other common law countries have based on duty implied from the circumstances. Court will imply a duty of confidentiality where the party acquiring the information knows or should know that the information is intended to be kept private.	Not applicable.	Not applicable.	Yes. No. Only liable if third party has knowledge. However, liability does apply where the third party later comes to know that the information was disclosed in breach of duty.	Not applicable.

IRELAND

Defining Duties and Misappropriation

Defining Duty of Confidentiality			**Restrictions on Duty of confidentiality**		**Defining Wrongful Acquisition - Misappropriation**	
Commercial Relationship	Current Employment Relationship	Past Employment Relationship	Commercial Relationship	Employment Relationship	Civil	Criminal
Duty can be based on express agreement in commercial contract. Duty can be implied in the context of a business relationship.	Duty can be based on express agreement and implied duty. Implied duty broad during employment – covers information beyond strict trade secret definition.	Duty can be based on express contract. Duty is also implied. Implied duty narrower after employment – only trade secrets. No inevitable disclosure doctrine.	None.	Express agreements may cover general skills and knowledge. Implied post-employment duties to keep information confidential likely unenforceable with respect to general skills and knowledge.	Based on duty implied from the circumstances. Court will imply a duty of confidentiality where the party acquiring the information knows or should know that the information is intended to be kept private.	Not applicable.

IRELAND

Restrictions on Liability

Additional Elements of Proof in Infringement Claim		**Contractual Restrictions on Competition - Validity**		**Defences**	
Civil	Criminal	Commercial Relationship	Post-Employment	Civil	Criminal
Detriment must be shown.	Not applicable.	Commercial agreements not to compete generally enforceable.	Courts reluctant to enforce if negatively affect ability to earn a living. Post-employment agreements not to compete enforceable if reasonable with respect to competitive need, time and geographic scope.	Independent creation. Reverse engineering.	Not applicable.

IRELAND

Remedies

Civil Remedies								**Criminal Remedies**		
Preliminary injunction	Permanent injunction	Injunction to eliminate wrongful head start	Delivery up and/or destruction of infringing materials	Compensatory Damages – Availability and Type	Defendant's Profits	Punitive damages available?	Statutory or Pre-established damages	Fines	Jail Sentence	Other
Yes. Ex parte – yes.	Yes. (For so long as remains secret).	Yes, even where information has since become public.	No.	Out of pocket. Lost Profits. Consequential. Defendant's profits.	Yes.	Yes.	No.	Not applicable.	Not applicable.	Not applicable.

IRELAND

Enforcement, investigation and discovery & related regulations

Enforcement, investigation and discovery			**Data Exclusivity**		**Technology Transfer**	**Legal Complements**
Emergency Search to preserve and obtain proof	Pre-trial discovery	Protection of confidentiality of trade secrets in litigation	Drugs	Agricultural Chemicals	Civil	Fraser Score
Yes. "Anton Piller" Order. Ex parte available. Plaintiff may conduct search. Level of proof greater than for preliminary injunction.	Documentary. At initiative of party.	Full protection with respect to hearings (in camera hearings available). Protection from other party available (protective orders, measures limiting viewing to counsel or other professionals).	"8 + 2 + 1 year approach." Pharmaceutical test data submitted to government for new medicinal products and new indications or uses is protected from disclosure or use for 8 years. Once the 8 year period ends, the data can be used by generic manufacturers to prepare and apply for regulatory approval, but not market a product. This period of market exclusivity lasts 2 years. The initial applicant may receive another 1 year for new indications.	"8 + 2 + 1 year approach." Test data submitted to government for new products and new indications or uses is protected from disclosure or use for 8 years. Once the 8 year period ends, the data can be used by generic manufacturers to prepare and apply for regulatory approval, but not market a product. This period of market exclusivity lasts 2 years. The initial applicant may receive another 1 year for new indications.	None.	On the 2010 Fraser Institute Index of Economic Freedom's component index for Legal System and Security of Property Rights, Ireland receives a score of 8.85 out of 10, which ranks it 8th in the world.

IRELAND

Additional Comments

Expert characterisation of the operation of the protection of trade secrets in practice
While the legal system is well-regarded and the protections that exist are considered effective for the subject matter covered, the lack of criminal protection, uncertainties with respect to some issues raises doubt as to the effectiveness of Irish trade secret law. As one commentator noted: "Case law in Ireland relating to what constitutes a trade secret or protectable confidential information is sparse." MacLaren, Trade Secrets Throughout the Work § 20:19 (2012).

SOURCES:
MacLaren, Trade Secrets Throughout the Work § 20 (2012).
Hogan Lovells Report, Appendix 3 at 63 (2012).

LATVIA

Source of Law, Definition and Scope

Statutory or Other Protection		**Definition**			**Additional Elements of Definition**					**Scope**	
Civil	Criminal	All confidential business information	Common Definition: Confidential business information, **subject to:** deriving value from secrecy; reasonable and making reasonable efforts to maintain secrecy	Common definition **plus condition that** it be imparted to recipient in confidence	Use must be shown	Inventory of trade secrets required	Must be reduced to writing	Must be identified as a trade secret to recipient	Written notice to recipient required	Confidential Business Information	Technical Information
Yes.	Yes.	No.	Yes.	No.	No.	No.	No.	No.	No.	Yes.	Yes.

LATVIA

Covered Acts

Acts Covered as Civil Infringement		**Acts Covered as Crimes**		**Third Parties: Liable for Acquisition? Liable Even if Innocent (Without Knowledge)?**	
Breach of Duty?	Wrongful Acquisition/ Misappropriation	Breach of Duty?	Wrongful Acquisition/ Misappropriation	Civil	Criminal
Yes.	Yes.	Yes.	Yes.	Yes. No. Only liable if third party has knowledge or reason to know. Innocent third party exempt if received in good faith and for consideration.	Yes. No. Only liable if third party has knowledge or reason to know. Innocent third party exempt if received in good faith and for consideration.

LATVIA

Defining Duties and Misappropriation

Defining Duty of Confidentiality			**Restrictions on Duty of confidentiality**		**Defining Wrongful Acquisition - Misappropriation**	
Commercial Relationship	Current Employment Relationship	Past Employment Relationship	Commercial Relationship	Employment Relationship	Civil	Criminal
By express contract only.	By express contract. Implied by statute, but limited because owner must identify secrets in writing.	No implied duty. Express.	None.	None.	Acts contrary to honest commercial practices including fraud and economic espionage.	Acts contrary to honest commercial practices including fraud and economic espionage.

LATVIA

Restrictions on Liability

Additional Elements of Proof in Infringement Claim		**Contractual Restrictions on Competition - Validity**		**Defences**	
Civil	Criminal	Commercial Relationship	Post-Employment	Civil	Criminal
None.	None.	Commercial agreements not to compete generally enforceable, subject to competition regulations.	Non-competition clauses enforceable but must be reasonable.	Independent creation.	Not applicable.

LATVIA

Remedies

Civil Remedies								**Criminal Remedies**		
Preliminary injunction	Permanent injunction	Injunction to eliminate wrongful head start	Delivery up and/or destruction of infringing materials	Compensatory Damages – Availability and Type	Defendant's Profits	Punitive damages available?	Statutory or Pre-established damages	Fines	Jail Sentence	Other
Yes. Ex parte available.	Yes.	No.	Yes.	Actual Damages. Lost Profits.	No.	No.	No.	Up to 150 times the monthly minimum wage.	Up to 8 years.	None.

LATVIA

Enforcement, investigation and discovery & related regulations

Enforcement, investigation and discovery			**Data Exclusivity**		**Technology Transfer**	**Legal Complements**
Emergency Search to preserve and obtain proof	Pre-trial discovery	Protection of confidentiality of trade secrets in litigation	Drugs	Agricultural Chemicals		Fraser Score
Yes, but limited to cases of imminent risk. Ex parte search is not available.	None.	Hearings may be closed. No protection from other party.	"8 + 2 + 1 year approach." Pharmaceutical test data submitted to government for new medicinal products and new indications or uses is protected from disclosure or use for 8 years. Once the 8 year period ends, the data can be used by generic manufacturers to prepare and apply for regulatory approval, but not market a product. This period of market exclusivity lasts 2 years. The initial applicant may receive another 1 year for new indications.	"8 + 2 + 1 year approach." Test data submitted to government for new products and new indications or uses is protected from disclosure or use for 8 years. Once the 8 year period ends, the data can be used by generic manufacturers to prepare and apply for regulatory approval, but not market a product. This period of market exclusivity lasts 2 years. The initial applicant may receive another 1 year for new indications.	None.	On the 2010 Fraser Institute Index of Economic Freedom's component index for Legal System and Security of Property Rights, Latvia receives a score of 6.46 out of 10, which ranks it 50th in the world.

LATVIA

Additional Comments

Expert characterisation of the operation of the protection of trade secrets in practice
A recent commentator noted that case law and trade secret litigation is very limited in Latvia. Ineta Krodere - Imsa, Protection of Trade Secrets Through IP and Unfair Competition Law, AIPPI Report Q215, Latvia 6 (2010).

SOURCES:
Baker & McKenzie Report (2013).
Hogan Lovells Report (2012).
Ineta Krodere - Imsa, Protection of Trade Secrets Through IP and Unfair Competition Law, AIPPI Report Q215, Latvia (2010).

LITHUANIA

Source of Law, Definition and Scope

Statutory or Other Protection		**Definition**			**Additional Elements of Definition**					**Scope**	
Civil	Criminal	All confidential business information	Common Definition: Confidential business information, **subject to:** deriving value from secrecy; reasonable and making reasonable efforts to maintain secrecy	Common definition **plus condition that** it be imparted to recipient in confidence	Use must be shown	Inventory of trade secrets required	Must be reduced to writing	Must be identified as a trade secret to recipient	Written notice to recipient required	Confidential Business Information	Technical Information
Yes.	Yes.	No.	Yes.	No.	No.	No.	No.	No.	No.	Yes.	Yes.

LITHUANIA

Covered Acts

Acts Covered as Civil Infringement		**Acts Covered as Crimes**		**Third Parties: Liable for Acquisition? Liable Even if Innocent (Without Knowledge)?**	
Breach of Duty?	Wrongful Acquisition/ Misappropriation	Breach of Duty?	Wrongful Acquisition/ Misappropriation	Civil	Criminal
Use in Breach of Duty. Disclosure in Breach of Duty.	Yes.	Use in Breach of Duty. Disclosure in Breach of Duty.	Wrongful acquisition is broadly understood as both wrongful acts and commercial espionage.	Yes. Yes.	Yes. No.

LITHUANIA

Defining Duties and Misappropriation

Defining Duty of Confidentiality			**Restrictions on Duty of confidentiality**		**Defining Wrongful Acquisition - Misappropriation**	
Commercial Relationship	Current Employment Relationship	Past Employment Relationship	Commercial Relationship	Employment Relationship	Civil	Criminal
Duty can be based on express agreement in commercial contract. Duty can be implied in the context of a business relationship.	Duty can be based on express agreement. Duty can be implied in the context of an employment relationship.	Duty can be based on express contract. Implied duty can continue after employment terminates. No inevitable disclosure doctrine.	Generally valid.	Generally valid, but neither express nor implied post-employment duties to keep information confidential may cover general skills and knowledge.	Wrongful acquisition, including espionage.	Wrongful acquisition, including espionage.

LITHUANIA

Restrictions on Liability

Additional Elements of Proof in Infringement Claim		**Contractual Restrictions on Competition - Validity**		**Defences**	
Civil	Criminal	Commercial Relationship	Post-Employment	Civil	Criminal
None.	None.	During the term of a contractual relationship, such agreements are valid, subject to competition law regulation. Post-termination, commercial agreements not to compete generally enforceable subject to reasonable limits on duration and geography.	During the term of an employment relationship, such agreements are valid, subject to competition law regulation. Post-termination, agreements not to compete generally enforceable subject to reasonable limits on duration and geography and the requirement that the employee be compensated.	Independent creation. Reverse engineering.	Independent creation. Reverse engineering.

LITHUANIA

Remedies

Civil Remedies								**Criminal Remedies**		
Preliminary injunction	Permanent injunction	Injunction to eliminate wrongful head start	Delivery up and/or destruction of infringing materials	Compensatory Damages – Availability and Type	Defendant's Profits	Punitive damages available?	Statutory or Pre-established damages	Fines	Jail Sentence	Other
Yes. Ex parte available.	Yes. (For so long as remains secret).	No.	Yes.	Direct Damages. Consequential. Defendant's profits.	Yes.	No.	No.	Monetary fine up to EUR 18 825.	Imprisonment up to two years.	Loss of liberty Community service.

LITHUANIA

Enforcement, investigation and discovery & related regulations

Enforcement, investigation and discovery			**Data Exclusivity**		**Technology Transfer**	**Legal Complements**
Emergency Search to preserve and obtain proof	Pre-trial discovery	Protection of confidentiality of trade secrets in litigation	Drugs	Agricultural Chemicals		Fraser Score
Yes. Ex parte available.	Limited documentary discovery. Effectively very little.	In civil cases: In camera hearings available. Courts will restrict access to documents.	"8 + 2 + 1 year approach." Pharmaceutical test data submitted to government for new medicinal products and new indications or uses is protected from disclosure or use for 8 years. Once the 8 year period ends, the data can be used by generic manufacturers to prepare and apply for regulatory approval, but not market a product. This period of market exclusivity lasts 2 years. The initial applicant may receive another 1 year for new indications.	"8 + 2 + 1 year approach." Pharmaceutical test data submitted to government for new medicinal products and new indications or uses is protected from disclosure or use for 8 years. Once the 8 year period ends, the data can be used by generic manufacturers to prepare and apply for regulatory approval, but not market a product. This period of market exclusivity lasts 2 years. The initial applicant may receive another 1 year for new indications.	None.	On the 2010 Fraser Institute Index of Economic Freedom's component index for Legal System and Security of Property Rights, Lithuania receives a score of 6.24 out of 10, which ranks it 52nd in the world.

LITHUANIA

Additional Comments

Expert characterisation of the operation of the protection of trade secrets in practice
One commentator noted the following: The main inadequacies of Lithuanian laws can be found in the lack of special enforcement measures applicable during or before legal proceedings to secure evidence in case of breach of confidentiality obligations. Furthermore, the relevant provisions on trade secrets protection are scattered all over different laws and trade secrets as an object of protection seem to fall into a grey area, being related to intellectual property but not explicitly recognised as such. Baker & McKenzie Report, App. 2 at 76 – 77 (2013).

SOURCES:
Baker & McKenzie Report (2013).
Hogan Lovells Report (2012).

MEXICO

Source of Law, Definition and Scope

Statutory or Other Protection		**Definition**			**Additional Elements of Definition**					**Scope**	
Civil	Criminal	All confidential business information	Common Definition: Confidential business information, **subject to:** deriving value from secrecy; reasonable and making reasonable efforts to maintain secrecy	Common definition **plus condition that** it be imparted to recipient in confidence	Use must be shown	Inventory of trade secrets required	Must be reduced to writing	Must be identified as a trade secret to recipient	Written notice to recipient required	Confidential Business Information	Technical Information
Yes.	Yes.	No.	Yes.	No.	No.	No.	Yes, or other tangible form pursuant to Art. 83 of the IP Law.	No.	No.	Yes.	Yes.

MEXICO

Covered Acts

Acts Covered as Civil Infringement		**Acts Covered as Crimes**		**Third Parties:** **Liable for Acquisition?** **Liable Even if Innocent (Without Knowledge)?**	
Breach of Duty?	Wrongful Acquisition/ Misappropriation	Breach of Duty?	Wrongful Acquisition/ Misappropriation	Civil	Criminal
Yes.	Yes.	Yes.	Yes.	Yes. No. Only liable if third party has knowledge or reason to know (gross negligence). Innocent third party not liable.	Yes. No. Must have knowledge.

MEXICO

Defining Duties and Misappropriation

Defining Duty of Confidentiality			**Restrictions on Duty of confidentiality**		**Defining Wrongful Acquisition - Misappropriation**	
Commercial Relationship	Current Employment Relationship	Past Employment Relationship	Commercial Relationship	Employment Relationship	Civil	Criminal
Express agreement gives rise to duty. There is not an implied duty of confidentiality in commercial relationships.	Express agreement gives rise to duty. Implied duty from statute.	An express agreement upon termination is necessary, since the employee originally had lawful access.	None.	An express agreement upon termination is necessary, since the employee originally had lawful access.	Act against "good customs."	Knowingly acquiring, using, or disclosing a trade secret for personal gain or to do damage to the owner.

MEXICO

Restrictions on Liability

Additional Elements of Proof in Infringement Claim		**Contractual Restrictions on Competition - Validity**		**Defences**	
Civil	Criminal	Commercial Relationship	Post-Employment	Civil	Criminal
None.	None.	Commercial agreements not to compete generally enforceable, subject to competition regulations.	Generally invalid.	Independent creation. Reverse engineering.	Independent creation. Reverse engineering.

MEXICO

Remedies

Civil Remedies								**Criminal Remedies**		
Preliminary injunction	Permanent injunction	Injunction to eliminate wrongful head start	Delivery up and/or destruction of infringing materials	Compensatory Damages – Availability and Type	Defendant's Profits	Punitive damages available?	Statutory or Pre-established damages	Fines	Jail Sentence	Other
Limited. Not available per se, but can get specific orders to not commercialise goods and to seize them. Also, must pay a bond, and then defendant can pay a counter-bond to prevent remedies. Ex parte – yes, in practise	Limited. Not available per se, but can get specific orders to not commercialise goods and to seize them. Also, must pay a bond, and then defendant can pay a counter-bond to prevent remedies.	No.	Yes.	Limited. Can only recover damages if they are at least 40% of the value of the product or service in contention.	No.	No.	No.	10 to 10 000 days minimum wage.	2 to 6 years.	None.

MEXICO

Enforcement, investigation and discovery & related regulations

Enforcement, investigation and discovery			**Data Exclusivity**		**Technology Transfer**	**Legal Complements**
Emergency Search to preserve and obtain proof	Pre-trial discovery	Protection of confidentiality of trade secrets in litigation	Drugs	Agricultural Chemicals		Fraser Score
None.	Effectively none.	Closed hearings. Protection from other party.	Five years of data exclusivity from the date of marketing approval for new pharmaceuticals.	Five years of data exclusivity from the date of marketing approval for new pharmaceuticals.	None.	On the 2010 Fraser Institute Index of Economic Freedom's component index for Legal System and Security of Property Rights, Mexico receives a score of 4.49 out of 10, which ranks it 91st in the world.

MEXICO

Additional Comments

Expert characterisation of the operation of the protection of trade secrets in practice
"[W]hile Mexico has the same basic criteria for liability for trade secret infringement as the United States and Canada, it is through criminal remedies that trade secrets are best enforced." Damon L. Boyd, *Trade Secret Doctrines of the Nafta Countries: The Sources of Law, the Remedies Available, and Suggestions for Improvement*, 14 Ariz. J. Int'l & Comp. L. 879, 901-02 (1997).

SOURCES:

MacLaren, Trade Secrets Throughout the World § 26 (2012).

Mike Margaín, et al., Protection of Trade Secrets Through IP and Unfair Competition Law, AIPPI Report Q215, Mexico (2010).

NETHERLANDS

Source of Law, Definition and Scope

Statutory or Other Protection		**Definition**			**Additional Elements of Definition**					**Scope**	
Civil	Criminal	All confidential business information	Common Definition: Confidential business information, **subject to:** deriving value from secrecy; reasonable and making reasonable efforts to maintain secrecy	Common definition **plus condition that** it be imparted to recipient in confidence	Use must be shown	Inventory of trade secrets required	Must be reduced to writing	Must be identified as a trade secret to recipient	Written notice to recipient required	Confidential Business Information	Technical Information
Yes.	Yes.	No.	Yes.	No.	No.	No.	No.	No.	No.	Yes.	Yes.

NETHERLANDS

Covered Acts

Acts Covered as Civil Infringement		**Acts Covered as Crimes**		**Third Parties: Liable for Acquisition? Liable Even if Innocent (Without Knowledge)?**	
Breach of Duty?	Wrongful Acquisition/ Misappropriation	Breach of Duty?	Wrongful Acquisition/ Misappropriation	Civil	Criminal
Use in Breach of Duty. Disclosure in Breach of Duty.	Yes.	Yes.	Yes.	Yes. No. Knowledge required, or at least reason to know. But will be restrained after notice.	Yes. No. Knowledge is required.

NETHERLANDS

Defining Duties and Misappropriation

Defining Duty of Confidentiality			**Restrictions on Duty of confidentiality**		**Defining Wrongful Acquisition - Misappropriation**	
Commercial Relationship	Current Employment Relationship	Past Employment Relationship	Commercial Relationship	Employment Relationship	Civil	Criminal
Based on express agreements only.	Duty is not implied. Must be expressly imposed via contract, or the circumstances must make the need for secrecy to avoid damage to employer clear.	Duty is not implied. Must be expressly imposed via contract, or the circumstances must make the need for secrecy to avoid damage to employer clear.	Must be by way of express agreement.	Must be by way of express agreement. Employee has right to exercise general skills and knowledge.	Acquiring in a way that is not in accord with normal standards of decency (i.e. espionage, theft, bribery, etc.).	Acquiring in a way that is not in accord with normal standards of decency (i.e. espionage, theft, bribery, etc.).

NETHERLANDS

Restrictions on Liability

Additional Elements of Proof in Infringement Claim		**Contractual Restrictions on Competition - Validity**		**Defences**	
Civil	Criminal	Commercial Relationship	Post-Employment	Civil	Criminal
None.	None.	Permissible subject to competition law.	Enforceable if reasonable and adequately compensated. Likely limited to one year.	Independent creation. Reverse engineering.	Independent creation. Reverse engineering.

NETHERLANDS

Remedies

Civil Remedies								Criminal Remedies		
Preliminary injunction	Permanent injunction	Injunction to eliminate wrongful head start	Delivery up and/or destruction of infringing materials	Compensatory Damages – Availability and Type	Defendant's Profits	Punitive damages available?	Statutory or Pre-establishe d damages	Fines	Jail Sentence	Other
Yes. Ex parte available.	Yes, but rarely granted.	Yes, but rare.	Yes, but rare.	Direct damages. Lost Profits Consequential Defendant's profits.	Maybe.	No.	No.	Up to EUR 11 250.	6 months to a year.	None.

NETHERLANDS

Enforcement, investigation and discovery & related regulations

Enforcement, investigation and discovery			**Data Exclusivity**		**Technology Transfer**	**Legal Complements**
Emergency Search to preserve and obtain proof	Pre-trial discovery	Protection of confidentiality of trade secrets in litigation	Drugs	Agricultural Chemicals		Fraser Score
Yes. Ex parte available. Plaintiff's lawyers conduct search.	Limited documentary under supervision of court.	Court proceedings are public, but a party may obtain non-disclosure of the hearing upon significant proof of a need.	"8 + 2 + 1 year approach." Pharmaceutical test data submitted to government for new medicinal products and new indications or uses is protected from disclosure or use for 8 years. Once the 8 year period ends, the data can be used by generic manufacturers to prepare and apply for regulatory approval, but not market a product. This period of market exclusivity lasts 2 years. The initial applicant may receive another 1 year for new indications.	"8 + 2 + 1 year approach." Pharmaceutical test data submitted to government for new medicinal products and new indications or uses is protected from disclosure or use for 8 years. Once the 8 year period ends, the data can be used by generic manufacturers to prepare and apply for regulatory approval, but not market a product. This period of market exclusivity lasts 2 years. The initial applicant may receive another 1 year for new indications.	None.	On the 2010 Fraser Institute Index of Economic Freedom's component index for Legal System and Security of Property Rights, the Netherlands receives a score of 9.08 out of 10, which ranks it 5h in the world.

NETHERLANDS

Additional Comments

Expert characterisation of the operation of the protection of trade secrets in practice
Dutch trade secret law is subject to only limited criticism, which applies mostly to investigatory and enforcement procedures. One commentator noted this: Although the IP Enforcement Directive, which aims to ensure a better and effective enforcement of intellectual property rights, invites the EU Member States to extend the provisions of the Directive to acts involving unfair competition, the Dutch implementation of the IP Enforcement Directive does not apply to trade secrets. In our view it could be (re)considered whether these Dutch provisions on the measures, procedures and remedies for the effective enforcement of IP Rights in civil proceedings should also be made applicable to the misappropriation of trade secrets. The (partial) applicability of these provisions to trade secrets, would allow the holders of trade secrets to use, amongst others, the available provisional and precautionary measures, the measures for preserving evidence, as well as the right of information, in proceedings regarding the misappropriation of trade secrets. Jan Willem van Dijk, et al., Protection of Trade Secrets Through IP and Unfair Competition Law, AIPPI Report Q215, Netherlands 15 (2010).

SOURCES:

MacLaren, Trade Secrets Throughout the World § 28 (2012).
Jan Willem van Dijk, et al., Protection of Trade Secrets Through IP and Unfair Competition Law, AIPPI Report Q215, Netherlands 15 (2010).

NEW ZEALAND

Source of Law, Definition and Scope

Statutory or Other Protection		**Definition**			**Additional Elements of Definition**					**Scope**	
Civil	Criminal	All confidential business information	Common Definition: Confidential business information, **subject to:** deriving value from secrecy; reasonable and making reasonable efforts to maintain secrecy	Common definition **plus condition that** it be imparted to recipient in confidence	Use must be shown	Inventory of trade secrets required	Must be reduced to writing	Must be identified as a trade secret to recipient	Written notice to recipient required	Confidential Business Information	Technical Information
Comprehen-sive civil protection by means of common law.	Yes. Section 230(2) of the Crimes Act 1961.	No.	No.	Yes.	No.	No.	No.	No.	No.	Yes.	Yes.

NEW ZEALAND

Covered Acts

Acts Covered as Civil Infringement		**Acts Covered as Crimes**		**Third Parties: Liable for Acquisition? Liable Even if Innocent (Without Knowledge)?**	
Breach of Duty?	Wrongful Acquisition/ Misappropriation	Breach of Duty?	Wrongful Acquisition/ Misappropriation	Civil	Criminal
Use in Breach of Duty. Disclosure in Breach of Duty.	No.[11]	No.	Yes. But limited to misappropriating (by taking, obtaining, or copying) a physical document, model or depiction.	Yes. No. Knowledge required, or at least reason to know.	Yes. No. Requires misappropriation (by taking, obtaining, or copying) of a physical document, model or depiction of a trade secret with knowledge that it contains a trade secret.

[11] See the "additional comments" section (below) for an update with further clarifications and references.

NEW ZEALAND

Defining Duties and Misappropriation

Defining Duty of Confidentiality			**Restrictions on Duty of confidentiality**		**Defining Wrongful Acquisition - Misappropriation**	
Commercial Relationship	Current Employment Relationship	Past Employment Relationship	Commercial Relationship	Employment Relationship	Civil	Criminal
Duty can be based on express agreement in commercial contract. Duty can be implied in the context of a business relationship.	Duty can be based on express agreement and implied duty. Implied duty broad during employment – covers information beyond strict trade secret definition.	Duty can be based on express contract. Duty is also implied. Implied duty narrower after employment – only trade secrets. No inevitable disclosure doctrine.	None.	Express agreements may cover general skills and knowledge. Implied post-employment duties to keep information confidential likely unenforceable with respect to general skills and knowledge.	No.	Taking, obtaining, or copying without claim of right a physical document, model or depiction of trade secret. Under Section 230(1) of the Crimes Act 1961, culpability is based on the "intent to obtain any pecuniary advantage or to cause loss to any other person."

NEW ZEALAND

Restrictions on Liability

Additional Elements of Proof in Infringement Claim		**Contractual Restrictions on Competition - Validity**		**Defences**	
Civil	Criminal	Commercial Relationship	Post-Employment	Civil	Criminal
Detriment must be shown.	None.	Commercial agreements not to compete generally enforceable.	Courts reluctant to enforce if negatively affect ability to earn a living. Post-employment agreements not to compete enforceable if reasonable with respect to competitive need, time and geographic scope.	Independent creation. Reverse engineering.	No express statutory defences and there appears to be no case law interpreting them. Since the definition excludes "claim of right" and covers only taking trade secrets, independent creation and reverse engineering are likely defences.

NEW ZEALAND

Remedies

Civil Remedies								**Criminal Remedies**		
Preliminary injunction	Permanent injunction	Injunction to eliminate wrongful head start	Delivery up and/or destruction of infringing materials	Compensatory Damages – Availability and Type	Defendant's Profits	Punitive damages available?	Statutory or Pre-established damages	Fines	Jail Sentence	Other
Yes.	Yes. (For so long as remains secret).	Yes, even where information has since become public.	Yes.	Out of pocket. Lost Profits. Consequential. Defendant's profits.	Yes.	Yes.	No.	None.	5 years imprisonment.	None.

NEW ZEALAND

Enforcement, investigation and discovery & related regulations

Enforcement, investigation and discovery			**Data Exclusivity**		**Technology Transfer**	**Legal Complements**
Emergency Search to preserve and obtain proof	Pre-trial discovery	Protection of confidentiality of trade secrets in litigation	Drugs	Agricultural Chemicals	Civil	Fraser Score
Yes. "Anton Piller" Order. Ex parte available. Plaintiff may conduct search. Level of proof greater than for preliminary injunction.	Documentary. At initiative of party.	Full protection with respect to hearings (in camera hearings available). Protection from other party available (protective orders, measures limiting viewing to counsel or other professionals).	New chemical entities only. 5 years.[12] Begins on the date of registration. No other party may receive the registrant's data nor may they rely on it for an application to register an equivalent product. There is no data exclusivity period for data relating to new uses or formulations of old active ingredients.	New chemical entities only. 5 years. Begins on the date of registration. No other party may receive the registrant's data nor may they rely on it for an application to register an equivalent product. There is no data exclusivity period for data relating to new uses or formulations of old active ingredients.	None.	On the Fraser Institute Index of Economic Freedom's component index for Legal System and Security of Property Rights, New Zealand receives a score of 9.03 out of 10, which ranks it 6th in the world.

12 In correspondence with the OECD Secretariat (October, 2013), the New Zealand authorities note that a further three years of protection will be provided in cases of new uses of known compounds.

NEW ZEALAND

Additional Comments

Expert characterisation of the operation of the protection of trade secrets in practice
Criticism of New Zealand's trade secret law is minimal. However, one commentator noted that it is not as developed as in some jurisdictions: By comparison with other larger common law jurisdictions, there has been limited case law on trade secrets and confidential information in New Zealand. Fact situations that have given rise to finer legal issues in other jurisdictions have not, as yet, been litigated in New Zealand. This means that some of the finer points of law have yet to be decided by a New Zealand court. MacLaren Trade Secrets Throughout the World § 29:1 (2012). Of course, as a common law country, New Zealand courts have resort to the decisions of other jurisdictions for guidance, particularly England, Australia, and Canada. Two authorities note that there appears to be no case law concerning the criminal statute, Section 230.[13] Additional information provided via Secretariat correspondence with the New Zealand authorities (June 2014): Exemplary damages are available for a breach of confidence action and have been awarded in New Zealand (e.g. see the decision of the Court of Appeal in *Skids Programme Management, Ltd* v *McNeill* [2013] 1 NZLR 1(CA). In New Zealand, confidential information and trade secrets are enforced as a result of the confidence that arises from the special nature of information or of a relationship between parties, and from the limited or special purpose for which a person has received information which can be categorised as secret or confidential. It is not the relationship that dictates the obligation: rather, the facts may give rise to and impose on the confidant an obligation of confidence (see *AB Consolidated Ltd v Europe Strength Food Co Pty Ltd* [1978] 2 NZLR 515 (CA) at 520-521; *Aquaculture Corporation Ltd v New Zealand Green Mussel Co Ltd* (1985) 5 IPR 353 (HC); *Skids Programme Management Ltd v McNeill* [2013] 1 NZLR 1 (CA)). In most cases, the parties to a cause of action for breach of confidence are or have been in a special relationship, often contractual, and the information will have been imparted in confidence. There are, however, New Zealand cases where there is no special relationship, such as: a. where a third party acquired the information by accident: *Citicorp New Zealand Ltd v Blomkamp* HC Auckland CP 1017/92, 4 September 1992; or b. where the police obtained information in the course of executing a search warrant: *Stepping Stones Nursery Ltd v Attorney-General* [2002] 3 NZLR 414 (HC).

SOURCES: MacLaren, Trade Secrets Throughout the Word § 29 (2012). Correspondence of the New Zealand authorities with the OECD Secretariat.

[13] Terrence MacLaren, Trade Secrets Throughout the World, § 29:4 (2012); Paul Sumpter, Intellectual Property Law: Principles in Practice 326 (2006).

PHILIPPINES

Source of Law, Definition and Scope

Statutory or Other Protection		**Definition**			**Additional Elements of Definition**					**Scope**	
Civil	Criminal	All confidential business information	Common Definition: Confidential business information, **subject to:** deriving value from secrecy; reasonable and making reasonable efforts to maintain secrecy	Common definition **plus condition that** it be imparted to recipient in confidence	Use must be shown	Inventory of trade secrets required	Must be reduced to writing	Must be identified as a trade secret to recipient	Written notice to recipient required	Confidential Business Information	Technical Information
Very limited protection via statute, effectively requiring contractual obligation.	Limited duties for employees and certain professions.	No.	Yes.	No.	No.	No.	Yes, inasmuch as limited protection necessitates use of contracts.	No.	Yes, inasmuch as limited protection necessitates use of contracts.	Yes.	Yes.

PHILIPPINES

Covered Acts

Acts Covered as Civil Infringement		**Acts Covered as Crimes**		**Third Parties: Liable for Acquisition? Liable Even if Innocent (Without Knowledge)?**	
Breach of Duty?	Wrongful Acquisition/ Misappropriation	Breach of Duty?	Wrongful Acquisition/ Misappropriation	Civil	Criminal
Effectively, only via express contract.	No.	Yes, for employees and managers. (Rev. Penal Code, Art. 292).	No, except with respect to a very specific provision addressing interception of documents.	No.	No.

PHILIPPINES

Defining Duties and Misappropriation

Defining Duty of Confidentiality			**Restrictions on Duty of confidentiality**		**Defining Wrongful Acquisition - Misappropriation**	
Commercial Relationship	Current Employment Relationship	Past Employment Relationship	Commercial Relationship	Employment Relationship	Civil	Criminal
Duty can be based on express agreement in commercial contract.	Duty can be based on express agreement. No implied duty.	Duty can be based on express contract. No implied duty.	Generally valid.	Generally valid.	Not applicable.	Not applicable, except with respect to unauthorized interception of documents.

PHILIPPINES

Restrictions on Liability

Additional Elements of Proof in Infringement Claim		**Contractual Restrictions on Competition - Validity**		**Defences**	
Civil	Criminal	Commercial Relationship	Post-Employment	Civil	Criminal
None.	None.	Generally valid, subject to reasonableness requirements.	Generally valid, subject to reasonableness requirements.	Not applicable.	Not applicable.

PHILIPPINES

Remedies

Civil Remedies								**Criminal Remedies**		
Preliminary injunction	Permanent injunction	Injunction to eliminate wrongful head start	Delivery up and/or destruction of infringing materials	Compensatory Damages – Availability and Type	Defendant's Profits	Punitive damages available?	Statutory or Pre-established damages	Fines	Jail Sentence	Other
Yes. Ex parte is available.	Yes. (For so long as remains secret).	No.	Yes.	Yes, compensatory only.	No.	No.	No	Article 292 imposes fines of up to P500.[14]	Sentences under Article 292 and 290 ranging from imprisonment from 6 months and a day to 4 years and two months.[15]	None.

[14] 3 Trade Secrets Throughout The World § 31:4 (approximately USD 11.00 at current exchange rates).

[15] 3 Trade Secrets Throughout The World § 31:4.

PHILIPPINES

Enforcement, investigation and discovery & related regulations

Enforcement, investigation and discovery			**Data Exclusivity**		**Technology Transfer**	**Legal Complements**
Emergency Search to preserve and obtain proof	Pre-trial discovery	Protection of confidentiality of trade secrets in litigation	Drugs	Agricultural Chemicals		Fraser Score
No.	Yes. Documentary discovery, depositions, and physical discovery.	Yes. Hearing may be closed to the public. Court orders to protect documents are available, but other party may access them for purposes of the trial, but with protective orders available.	None.	7 years from approval date (+ 3 years for new data submitted upon re-registration)	Foreign investments and joint ventures must be registered and are reviewed for approval. Restrictions on use of technology from foreign license may not run past end of agreement.	Per the 2010 Fraser Institute *Index of Economic Freedom* component index for "Legal System and Security of Property Rights", the Philippines received a score of 3.85 out of 10 (chain-linked). It ranked 103rd in the world. (The data are available here: http://www.freetheworld.com/release.html.)

PHILIPPINES

Additional Comments

Expert characterisation of the operation of the protection of trade secrets in practice
There is no comprehensive statutory protection of trade secrets, and the existing provisions are specific and isolated to specific circumstances (e.g., duties of employees and professionals or interception of documents). Moreover, the existing statutes do not appear to be used according to expert commentary. Although notable court cases have addressed and defined trade secrets, they have done so in tangential contexts, where trade secrets were protected in discovery or in a corporate control dispute. Thus, experts discount the limited statutory protection that exists, and encourage parties to enter written agreements. One expert states: > Records of enforcement of the foregoing laws are not readily available. Studies and statistics on law enforcements are confined to common crimes and offenses. However, if cases decided by the Supreme Court are any indication, the prosecution of crimes and offenses relating to trade secrets is infrequent.[16] A European Commission guide to trade secret protection for SMEs doing business in Asia describes the situation thus: > There are laws that prohibit revelation of trade secrets (such as the Article 40 (e) of RA 7394 of the Consumer Protection act and Article 292 of the Revised Penal Code), however, these laws are rarely cited for enforcement. SMEs should take internal steps to protect any trade secrets by inserting confidentiality clauses into employee contracts, internally restricting access to sensitive information, and ensuring that confidential information is only revealed on a need-to-know basis. Given that laws on trade secrets are rarely brought to court in the Philippines, in the event that a criminal case is filed for violation of these laws, the Regional Trial Courts (RTC) – the highest trial courts in the Philippines – are unlikely to be familiar with this issue. In practice, parties tend to stipulate contractual obligations on trade secrets and, in the case of violations, resort to civil action for breach of contract and damages.[17] Finally, the 1987 Constitution increased regulation of FDI, including technology transfer. Several commentators describe the situation as protectionist, and not conducive to FDI.[18]

SOURCE: MacLaren, Trade Secrets Throughout the World § 31 (2012).

16 MacLaren, Trade Secrets Throughout the World § 31:5 (2012).

17 European Commission, Guide on Trade Secrets: Protecting Your Trade Secrets in Southeast Asia (2013), available at http://www.asean-iprhelpdesk.eu/sites/default/files/publications/Trade-Secret-English.pdf

18 Priscilla Tacujan (2013), Protectionist clauses in the Philippine Constitution restrict foreign direct investment, Journal of Political Risk, 1:1 (quoting several commentators).

SPAIN

Source of Law, Definition and Scope

Statutory or Other Protection		**Definition**			**Additional Elements of Definition**					**Scope**	
Civil	Criminal	All confidential business information	Common Definition: Confidential business information, **subject to:** deriving value from secrecy; reasonable and making reasonable efforts to maintain secrecy	Common definition **plus condition that** it be imparted to recipient in confidence	Use must be shown	Inventory of trade secrets required	Must be reduced to writing	Must be identified as a trade secret to recipient	Written notice to recipient required	Confidential Business Information	Technical Information
Yes.	Yes.	No.	Yes.	No.	No.	No.	No.	No.	No.	Yes.	Yes.

SPAIN

Covered Acts

Acts Covered as Civil Infringement		**Acts Covered as Crimes**		**Third Parties: Liable for Acquisition? Liable Even if Innocent (Without Knowledge)?**	
Breach of Duty?	Wrongful Acquisition/ Misappropriation	Breach of Duty?	Wrongful Acquisition/ Misappropriation	Civil	Criminal
Use in Breach of Duty. Disclosure in Breach of Duty. Unfair Competition Act Art. 13, 14.	Yes. Acquisition through espionage. Unfair Competition Act Art. 13, 14.	Yes. Criminal Code, Arts. 278, 279.	Yes. Criminal Code, Arts. 278, 279.	Yes. No. Knowledge or reason to know required.	Yes. No. Knowledge required. Criminal Code, Art. 280.

SPAIN

Defining Duties and Misappropriation

Defining Duty of Confidentiality			**Restrictions on Duty of confidentiality**		**Defining Wrongful Acquisition - Misappropriation**	
Commercial Relationship	Current Employment Relationship	Past Employment Relationship	Commercial Relationship	Employment Relationship	Civil	Criminal
Duty can be based on express agreement in commercial contract. Duty can be implied in the context of a business relationship.	Duty can be based on express agreement. Duty is statutorily imposed in the context of an employment relationship.	Yes, if contract continues past termination of employment. Post-employment *implied duty* is limited and uncertain enough so as to be unreliable. Employees are permitted to use secrets post-employment if "justifiably required in the customary practice of their trade or profession." Employment Contract Act, Art. 72. No inevitable disclosure doctrine.	Generally valid.	Generally valid during employment. Limited after termination of employment if the employee's use of secrets is "justifiably required in the customary practice of their trade or profession."	Espionage; inducement of breach of contract. Unfair Competition Act, Arts. 13, 14.	Breach of contract; inducement of breach; industrial espionage. Criminal Code Arts/ 278, 279

SPAIN

Restrictions on Liability

Additional Elements of Proof in Infringement Claim		**Contractual Restrictions on Competition - Validity**		**Defences**	
Civil	Criminal	Commercial Relationship	Post-Employment	Civil	Criminal
None.	None.	Enforceable, subject to competition law.	Limited to 2 years at most. Necessity and financial compensation of employee required.	Independent creation. Reverse engineering.	Independent creation. Reverse engineering.

SPAIN

Remedies

Civil Remedies								**Criminal Remedies**		
Preliminary injunction	Permanent injunction	Injunction to eliminate wrongful head start	Delivery up and/or destruction of infringing materials	Compensatory Damages – Availability and Type	Defendant's Profits	Punitive damages available?	Statutory or Pre-established damages	Fines	Jail Sentence	Other
Yes. Ex parte – yes.	Yes.	No.	Yes.	Yes. Direct damages Loss of profit.	Yes.	No.	No.	Up to two years wages.	2 – 4 years for appropriation, use in breach of duty. 3 – 5 years for disclosing to third parties. 1 – 3 years for unlawful receipt.	None.

SPAIN

Enforcement, investigation and discovery & related regulations

Enforcement, investigation and discovery			**Data Exclusivity**		**Technology Transfer**	**Legal Complements**
Emergency Search to preserve and obtain proof	Pre-trial discovery	Protection of confidentiality of trade secrets in litigation	Drugs	Agricultural Chemicals		Fraser Score
Yes. Ex parte available. Officials conduct search; plaintiff does not participate.	Documentary under supervision of court. No sanction for failure to comply, other than adverse inference drawn by court.	Closed hearing available, although open to parties and agents. No protection from other party.	"8 + 2 + 1 year approach." Pharmaceutical test data submitted to government for new medicinal products and new indications or uses is protected from disclosure or use for 8 years. Once the 8 year period ends, the data can be used by generic manufacturers to prepare and apply for regulatory approval, but not market a product. This period of market exclusivity lasts 2 years. The initial applicant may receive another 1 year for new indications.	"8 + 2 + 1 year approach." Test data submitted to government for new products and new indications or uses is protected from disclosure or use for 8 years. Once the 8 year period ends, the data can be used by generic manufacturers to prepare and apply for regulatory approval, but not market a product. This period of market exclusivity lasts 2 years. The initial applicant may receive another 1 year for new indications.	None.	On the 2010 Fraser Institute Index of Economic Freedom's component index for Legal System and Security of Property Rights, Spain receives a score of 6.79 out of 10, which ranks it 44th in the world.

SPAIN

Additional Comments

Expert characterisation of the operation of the protection of trade secrets in practice
The available commentary on Spain's trade secret laws is limited, but generally favourable: Although greater uniformity in the definition of trade secrets would be desirable, the regulatory treatment accorded to the protection of trade secrets under the Spanish legal system is in our view adequate. At the level of the court decisions, in our view it would in some cases be desirable for there to be greater sensitivity regarding the protection of information that does not relate to inventions and is not of an industrial nature but whose control and secret feature are of great value to the company (for example, information of a commercial or financial nature). Jorge Llevet, Protection of Trade Secrets Through IP and Unfair Competition Law, AIPPI Report Q215, Spain 16 (2010).

SOURCES:
Baker & McKenzie Report (2013)
Hogan Lovells Report (2012).
MacLaren, Trade Secrets Throughout the World § 35 (2012).
Jorge Llevet, Protection of Trade Secrets Through IP and Unfair Competition Law, AIPPI Report Q215, Spain (2010).

THAILAND

Source of Law, Definition and Scope

Statutory or Other Protection		**Definition**			**Additional Elements of Definition**					**Scope**	
Civil	Criminal	All confidential business information	Common Definition: Confidential business information, **subject to:** deriving value from secrecy; reasonable and making reasonable efforts to maintain secrecy	Common definition **plus condition that** it be imparted to recipient in confidence	Use must be shown	Inventory of trade secrets required	Must be reduced to writing	Must be identified as a trade secret to recipient	Written notice to recipient required	Confidential Business Information	Technical Information
Compre-hensive civil protection pursuant to the Trade Secrets Act of 2002.	Compre-hensive criminal protection pursuant to the Trade Secrets Act of 2002.	No.	Yes.	No.	No.	No.	No.	No.	No.	Yes.	Yes.

THAILAND

Covered Acts

Acts Covered as Civil Infringement		**Acts Covered as Crimes**		**Third Parties: Liable for Acquisition? Liable Even if Innocent (Without Knowledge)?**	
Breach of Duty?	Wrongful Acquisition/ Misappropriation	Breach of Duty?	Wrongful Acquisition/ Misappropriation	Civil	Criminal
Yes, but the duties are limited as set forth below.	Yes.	Yes, but the duties are limited as set forth below.	Yes.	Yes. No. Only liable if third party has knowledge or reason to know.	Yes. No. Only liable if third party has knowledge or reason to know.

THAILAND

Defining Duties and Misappropriation

Defining Duty of Confidentiality			**Restrictions on Duty of confidentiality**		**Defining Wrongful Acquisition - Misappropriation**	
Commercial Relationship	Current Employment Relationship	Past Employment Relationship	Commercial Relationship	Employment Relationship	Civil	Criminal
Duty effectively must be based on express agreement. Duty not to disclose or use.	Duty effectively must be based on express agreement. No implied duties except for limited classes of professionals or fiduciaries. Duty not to disclose or use.	Duty must be based on express agreement and must be reasonable. Ends with public disclosure.	Agreement must be express. Ends with public disclosure of confidential information.	Agreement must be express and reasonable. Ends with public disclosure of confidential information.	Acquiring a trade secret by illegal or tortious acts, inducement of breach of duty, and espionage, as well as disclosing, using, or allowing others to use a trade secret obtained by illegal or improper means.	Same as civil, but also requires intent to inflict damage on the business of the owner.

THAILAND

Restrictions on Liability

Additional Elements of Proof in Infringement Claim		**Contractual Restrictions on Competition - Validity**		**Defences**	
Civil	Criminal	Commercial Relationship	Post-Employment	Civil	Criminal
No.	Proof of intent to inflict damage on business of owner.	Permissible subject to ordinary competition law.	Permissible if reasonable as to time and place.	Independent creation. Reverse engineering. Public welfare.	Independent creation. Reverse engineering. Public welfare.

THAILAND

Remedies

Civil Remedies								**Criminal Remedies**		
Preliminary injunction	Permanent injunction	Injunction to eliminate wrongful head start	Delivery up and/or destruction of infringing materials	Compensatory Damages – Availability and Type	Defendant's Profits	Punitive damages available?	Statutory or Pre-established damages	Fines	Jail Sentence	Other
Yes. Ex parte – yes.	Yes. (For so long as remains secret).	Uncertain.	Yes.	Actual damages. Lost profits. Consequential damages. Reasonable royalty.	Yes.	Yes.	No.	200 000 to 1 million Baht depending on seriousness.	1 to 10 years.	None.

THAILAND

Enforcement, investigation and discovery & related regulations

Enforcement, investigation and discovery			**Data Exclusivity**		**Technology Transfer**	**Legal Complements**
Emergency Search to preserve and obtain proof	Pre-trial discovery	Protection of confidentiality of trade secrets in litigation	Drugs	Agricultural Chemicals		Fraser Score
No.	Limited documentary disclosure.	In camera hearings. Protection of documents. No protection from other party and its agents. Decision must be published.	No exclusivity. Confidentiality only.	No exclusivity. Confidentiality only.	None.	On the Fraser Institute Index of Economic Freedom's component index for Legal System and Security of Property Rights for 2010, Thailand receives a score of 5.09 out of 10, which ranks it 78th in the world.

THAILAND

Additional Comments

Expert characterisation of the operation of the protection of trade secrets in practice
Commentators note that application of the Trade Secrets Act has been limited in practice and report that as of 2010, there had been no prevailing plaintiffs: "only a few cases have been brought before the courts for the breach of confidentiality obligations. In those few cases, it was determined by the court that the parties who brought the cases had failed in their duty to keep their trade secrets confidential and as a result the subject matter was no longer a trade secret, thus, there was no violation." Say Sujintaya, Protection of Trade Secrets Through IP and Unfair Competition Law, AIPPI Report Q215, Thailand 8 (2010). It may be that the foregoing is due to the fact that the condition that the owner maintain confidentiality is interpreted broadly. One commentator stated: "In our opinion, the only slight problem with regard to the Trade Secret Act is the broad meaning of 'conditions of protectable trade secrets'. Therefore, in practice, it would be somewhat difficult for people who wish to comply with the protection requirements." Say Sujintaya, Protection of Trade Secrets Through IP and Unfair Competition Law, AIPPI Report Q215, Thailand 9 (2010). A commentator observed that "although IP Prosecutions are very high, corruption and cultural climate of leniency can complicate some phases of case administration." Thailand: Country Study Guide. (International Business Publication, USA) 2008 4th ed.

SOURCES:
MacLaren, Trade Secrets Throughout the World § 38 (2012).
Say Sujintaya, Protection of Trade Secrets Through IP and Unfair Competition Law, AIPPI Report Q215, Thailand (2010).

TURKEY

Source of Law, Definition and Scope

Statutory or Other Protection		**Definition**			**Additional Elements of Definition**					**Scope**	
Civil	Criminal	All confidential business information	Common Definition: Confidential business information, **subject to:** deriving value from secrecy; reasonable and making reasonable efforts to maintain secrecy	Common definition **plus condition that** it be imparted to recipient in confidence	Use must be shown	Inventory of trade secrets required	Must be reduced to writing	Must be identified as a trade secret to recipient	Written notice to recipient required	Confidential Business Information	Technical Information
Yes, pursuant to provisions of Turkish Commercial Code.	Yes, pursuant to provisions of Turkish Commercial Code and Penal Code.	No.	Yes.	No.	No.	No.	No.	No.	No.	Yes.	Yes.

TURKEY

Covered Acts

Acts Covered as Civil Infringement		**Acts Covered as Crimes**		**Third Parties: Liable for Acquisition? Liable Even if Innocent (Without Knowledge)?**	
Breach of Duty?	Wrongful Acquisition/ Misappropriation	Breach of Duty?	Wrongful Acquisition/ Misappropriation	Civil	Criminal
Use in Breach of Duty. Disclosure in Breach of Duty.	Yes.	Yes.	Yes, but limited as set forth below.	Yes. No. Knowledge required, good faith is excused.	Yes. No. Knowledge required.

TURKEY

Defining Duties and Misappropriation

Defining Duty of Confidentiality			**Restrictions on Duty of confidentiality**		**Defining Wrongful Acquisition - Misappropriation**	
Commercial Relationship	Current Employment Relationship	Past Employment Relationship	Commercial Relationship	Employment Relationship	Civil	Criminal
Duty can be based on express agreement in commercial contract. Duty can be implied in the context of a business relationship.	Duty can be based on express agreement. Duty is implied in the context of an employment relationship.	Duty continues after employment by way of implied duty and any express agreement.	None.	Professional knowledge, which includes general skills and knowledge but also includes any information easily recalled, is not protected. A post-employment non-disclosure agreement may be considered a non-compete agreement and thus subject to a 2 year limit.	Breaching a duty. Obtaining or using trade secrets contrary to principles of good faith, e.g., fraud or espionage.	Inducing a breach of duty by a trade secret owner's employee. Disclosure of secrets held by virtue of office or employment. Using force or threat to procure disclosure. Apparently, espionage or fraud is not covered.

TURKEY

Restrictions on Liability

Additional Elements of Proof in Infringement Claim		**Contractual Restrictions on Competition - Validity**		**Defences**	
Civil	Criminal	Commercial Relationship	Post-Employment	Civil	Criminal
None.	None.	Enforceable, subject to competition law.	Must be reasonably limited in place, time, and subject. Valid for up to two years.	Independent creation. Reverse engineering.	Independent creation. Reverse engineering.

TURKEY

Remedies

Civil Remedies								**Criminal Remedies**		
Preliminary injunction	Permanent injunction	Injunction to eliminate wrongful head start	Delivery up and/or destruction of infringing materials	Compensatory Damages – Availability and Type	Defendant's Profits	Punitive damages available?	Statutory or Pre-established damages	Fines	Jail Sentence	Other
Yes, but discretionary and commentators note that judges are conservative in granting. Ex parte – yes.	Yes.	No.	No.	Yes. Direct damages. Restitution. Moral damages.	Yes.	No.	No.	Yes. Unspecified.	Yes. Unspecified.	Cessation of violation. Termination of employment.

TURKEY

Enforcement, investigation and discovery & related regulations

Enforcement, investigation and discovery			**Data Exclusivity**		**Technology Transfer**	**Legal Complements**
Emergency Search to preserve and obtain proof	Pre-trial discovery	Protection of confidentiality of trade secrets in litigation	Drugs	Agricultural Chemicals		Fraser Score
No.	None.	None.	Six years from approval for new chemical components, but only while under patent in Turkey. In other words, is redundant of patent protection, and thus gives effectively no additional protection.	Six years from approval for new chemical components, but only while under patent in Turkey. In other words, is redundant of patent protection, and thus gives effectively no additional protection.	None	On the Fraser Institute 2010 Index of Economic Freedom's component index for Legal System and Security of Property Rights, Turkey receives a score of 4.62 out of 10, which ranks it 87th in the world.

TURKEY

Additional Comments

Expert characterisation of the operation of the protection of trade secrets in practice
One commentator complained the injunctions are not granted liberally: the granting of the preliminary injunctions is of the discretionary power of the Judges and Prosecutors and the preliminary injunctions are conservatively applied when violations of unfair competition provisions are concerned influencing negatively the effectiveness of the legal provisions. Therefore, taking into consideration the necessity and importance of a prompt and effective reaction to protect the interest of the secret owner, it is absolutely necessary to foresee in the Draft Law on Trade Secrets detailed provisions which limits the discretionary power of the Judges and Public Prosecutors and order the examination of such matters with priority to increase the efficiency of protection. Selcuk Oztek et al., Protection of Trade Secrets Through IP and Unfair Competition Law, AIPPI Report Q215, Turkey 12 – 13 (2010).

SOURCES:

Şebnem Işık & Yegan Liaje & Selcen Yalçın, Protection of Trade Secrets Under Turkish Law, Mehmet Gun & Partners Website (2011).
Selcuk Oztek et al., Protection of Trade Secrets Through IP and Unfair Competition Law, AIPPI Report Q215, Turkey (2010).

VIET NAM

Source of Law, Definition and Scope

Statutory or Other Protection		**Definition**			**Additional Elements of Definition**					**Scope**	
Civil	Criminal	All confidential business information	Common Definition: Confidential business information, **subject to:** deriving value from secrecy; reasonable and making reasonable efforts to maintain secrecy	Common definition **plus condition that** it be imparted to recipient in confidence	Use must be shown	Inventory of trade secrets required	Must be reduced to writing	Must be identified as a trade secret to recipient	Written notice to recipient required	Confidential Business Information	Technical Information
Civil and administrative protection pursuant to statute.	Effectively, no.[19]	No.	Yes.	No.	No.	No.	No.	No.	No.	Yes.	Yes.

[19] Although Article 212 of IP Law 50/2005 states that "Individuals who have committed acts of infringement of intellectual property rights having factors that constitute a crime shall be liable to the criminal liabilities in accordance with the criminal laws and regulations," there are no provisions defining trade secret infringement as crimes. In any event, experts observe that criminal remedies are not used.

VIET NAM

Covered Acts

Acts Covered as Civil Infringement		**Acts Covered as Crimes**		**Third Parties:** **Liable for Acquisition?** **Liable Even if Innocent (Without Knowledge)?**	
Breach of Duty?	Wrongful Acquisition/ Misappropriation	Breach of Duty?	Wrongful Acquisition/ Misappropriation	Civil	Criminal
Use in Breach of Duty Disclosure in Breach of Duty	Yes.	Not applicable.	Not applicable.	Yes No. Knowledge or reason to know. But will be restrained after notice.	Not applicable.

VIET NAM

Defining Duties and Misappropriation

Defining Duty of Confidentiality			**Restrictions on Duty of confidentiality**		**Defining Wrongful Acquisition - Misappropriation**	
Commercial Relationship	Current Employment Relationship	Past Employment Relationship	Commercial Relationship	Employment Relationship	Civil	Criminal
Yes. Express duty based on breach of contract and implied duty (abuse of trust).	Yes.	Yes. In any case, subject to employee's legal right to work (i.e., may be invalid or unenforceable if restricts future employment).	Generally valid.	Not applicable.	"Accessing or gathering information on business secrets by taking acts against the secret-keeping measures of legitimate owners of such business secrets"	Not applicable.

VIET NAM

Restrictions on Liability

Additional Elements of Proof in Infringement Claim		**Contractual Restrictions on Competition - Validity**		**Defences**	
Civil	Criminal	Commercial Relationship	Post-Employment	Civil	Criminal
None.	None.	Likely in violation of competition law.	Difficult to enforce. Courts are likely to reject due to right of an employee to work for any employer and at any place under Article 16 of the Labor Code.	Independent creation. Reverse engineering.	Independent creation. Reverse engineering.

VIET NAM

Remedies

Civil Remedies								**Criminal Remedies**		
Preliminary injunction	Permanent injunction	Injunction to eliminate wrongful head start	Delivery up and/or destruction of infringing materials	Compensatory Damages – Availability and Type	Defendant's Profits	Punitive damages available?	Statutory or Pre-established damages	Fines	Jail Sentence	Other
Yes. Ex parte appears to be available.	Yes (For so long as remains secret).	No.	Yes.	Out of pocket. Lost Profits. Consequential. Defendant's profits.	Yes.	Yes. ("Spiritual Damages") VND 5 million to VND 50 million.	Yes If damages are impossible to calculate, court may award up to VND 500 million.	Not applicable.	Not applicable.	Administrative remedies: Commonly used. Administrative authority may issue warning, require destruction of goods, business cessation, or issue a fine at least equal to the value of detected infringing goods but which may not exceed five times such value.

VIET NAM

Enforcement, investigation and discovery & related regulations

Enforcement, investigation and discovery			**Data Exclusivity**		**Technology Transfer**	**Legal Complements**
Emergency Search to preserve and obtain proof	Pre-trial discovery	Protection of confidentiality of trade secrets in litigation	Drugs	Agricultural Chemicals		Fraser Score
Yes, ex parte available. Procedure for search is not specified.	No.	Yes. Hearing may be closed to the public, and documents can be protected from other public litigants.	Five years of data exclusivity from the grant of the business license, or permission to circulate pharmaceutical or chemical products.	Five years of data exclusivity from the grant of the business license, or permission to circulate pharmaceutical or chemical products.	Except with respect to a few limited subject matters, since 2005 registration and review of technology transfer agreements is voluntary and serves to grant access to certain preferences.	Per the 2010 Fraser Institute *Index of Economic Freedom* component index for "Legal System and Security of Property Rights", Viet Nam received a score of 5.88 out of 10. It ranked 61st in the world.[20] (The data are available here: http://www.freetheworld.com/release.html.)

[20] The Fraser Institute has not developed a chain-linked score for this indicator for Viet Nam. Thus, unlike other countries in this comparison, the score and international comparison presented here are based on the basic scores for all countries (unadjusted for change in the index composition over time).

VIET NAM

Additional Comments

Expert characterisation of the operation of the protection of trade secrets in practice
Expert opinion observes that authorities lack expertise in intellectual property disputes: Most IP disputes are handled by administrative authorities instead of courts. However, the authorities still lack the expertise to resolve complex disputes. In most cases, it is important to obtain expert opinions to facilitate the resolution of the case by the competent authorities.[21] Expert opinion observes that criminal protection is not in fact practically available: "It is worth noting that, as trade secrets are a relatively new addition to Vietnamese IP law, the Vietnamese authorities have not yet to date dealt with any infringement cases relating to trade secrets." IP infringement can be criminalised. However, due to lack of guidance and the inconsistency in the legal system, criminal action is not usually feasible in practice.[22]

SOURCES:

- Decree No. 54/2000/ND-CP of 3 October 2000 on the protection of industrial property rights to business secrets, geographical indications, trade names and on protection against unfair competition in respect of industrial property.
- Doing Business In Viet Nam: Technology Transfer, Vision Associates, Inc. available at http://www.vision-associates.com/client_resources/8/16/Technology-Transfer
- European Commission, ASEAN IPR SME Helpdesk, IP Country Factsheet: Vietnam 1 (2013).
- Law On Intellectual Property (No. 50/2005/QH11).

[21] European Commission, ASEAN IPR SME Helpdesk, IP Country Factsheet: Vietnam 1 (2013).

[22] Ibid.

Annex Table

Annex Table 1. Trade Secrets Protection Index, Detailed Scoring, 2010

Countries A through I, Panel A

Components and scoring - 2010	Score range	Normalised range	Argentina	Australia	Brazil	Bulgaria	Canada	China	Chinese Taipei	Colombia	France	Germany	Ghana	Hong Kong, China	India
1. Definition and coverage	**0-13**	**0-1**	**0.81**	**0.65**	**0.77**	**0.46**	**0.69**	**0.62**	**0.85**	**0.85**	**0.77**	**0.85**	**0.62**	**0.62**	**0.50**
a) Scope															
· If scope covers all confidential business information, subject to: 1) deriving value from secrecy and 2) the owner's reasonable efforts to maintain secrecy, score = 1; If scope also subject to requirement that information is imparted to the recipient in confidence, score = ½	0,1		1	0.5	1	1	1	1	1	1	1	1	1	1	0.5
b) Additional Elements of Definition															
· Inventory of trade secrets required (requirement=0; no requirement=1)	0,1		1	1	1	1	1	1	1	1	1	1	1	1	1
· Must be reduced to writing (requirement=0; no requirement=1)	0,1		1	1	1	1	1	0	1	1	1	1	1	1	1
· Must be identified as a trade secret to recipient (requirement=0; no requirement=1)	0,1		1	1	1	0	1	0	1	1	1	1	1	1	1
· Written notice to recipient required (requirement=0; no requirement=1)	0,1		1	1	1	0	1	0	1	1	1	1	1	1	1
c) Acts covered as civil infringement:															
· Breach of duty (not covered=0, partially covered=½, covered=1)	0,1		1	1	0.5	1	1	1	1	1	1	1	1	1	1
· Wrongful acquisition or misappropriation (not covered=0, partially covered= ½, covered=1)	0,1		1	1	1	1	1	1	1	1	0.5	1	1	1	0
· Third party liability for acquisition with knowledge or reason to know (not available=0, available=1)	0,1		1	1	1	1	1	1	1	1	1	1	1	1	1
· Third party liability for acquisition without knowledge - enjoin "innocent parties" (not available=0, available=1)	0,1		0	1	0	0	1	0	0	0	0	0	0	0	0
d) Acts covered by criminal law															
· Breach of duty (not covered=0, partially covered=½, covered=1)	0,1		1	0	0.5	0	0	1	1	1	1	1	0	0	0
· Wrongful acquisition or misappropriation (not covered=0, partially covered=½, covered=1)	0,1		0.5	0	1	0	0	1	1	1	0.5	1	0	0	0
· Third party liability for acquisition with knowledge or reason to know (not available=0, available=1)	0,1		1	0	1	0	0	1	1	1	1	1	0	0	0
· Third party liability for acquisition without knowledge, enjoin "innocent parties" (not available=0, available=1)	0,1		0	0	0	0	0	0	0	0	0	0	0	0	0
2. Duties and misappropriation	**0-5**	**0-1**	**1**	**1**	**0.8**	**0.6**	**1**	**0.6**	**0.6**	**0.9**	**0.9**	**0.9**	**1**	**0.9**	**0.9**
· Commercial relationship (covered if arising from: express agreement ½ + implied duty ½)	0,1		1	1	1	1	1	0.5	0.5	1	0.5	1	1	1	1
· Current employment relationship (covered if arising from: express agreement ½ + implied duty ½)	0,1		1	1	1	1	1	0.5	0.5	1	1	1	1	1	1
· Past employment relationship (covered if arising from: express agreement ½ + implied duty ½)	0,1		1	1	1	0	1	0.5	0.5	0.5	1	1	1	1	1
· Restrictions on post-relationship duty of confidentiality (score if no restrictions on matters beyond general skills and knowledge, by relationship: commercial ½ + employment ½)	0,1		1	1	0.5	0.5	1	1	1	1	1	1	1	1	1
· Validity of contractual restrictions on competition (if unenforceable=0; significant limitations=½ (e.g., limited by time or place for either commercial or post-employment situations); generally enforceable=1)	0,1		1	1	0.5	0.5	1	0.5	0.5	1	1	0.5	1	0.5	0.5

Annex Table 1. Trade Secrets Protection Index, Detailed Scoring, 2010 (continued)

Countries A through I, Panel B

Components and scoring	Score range	Normalised range	Argentina	Australia	Brazil	Bulgaria	Canada	China	Chinese Taipei	Colombia	France	Germany	Ghana	Hong Kong, China	India
3. Remedies and restrictions on liability	**0-11**	**0-1**	**0.64**	**0.64**	**0.86**	**0.36**	**0.82**	**0.55**	**0.82**	**0.55**	**0.64**	**0.73**	**0.55**	**0.73**	**0.73**
a) Restrictions on liability															
· Additional elements of proof in infringement claims (if none: civil=½ + criminal=½ point; score 1 if there is no criminal law and civil score is ½)	0,1		1	1	1	1	1	0	1	1	1	1	1	1	1
b) Civil remedies															
· Preliminary injunction (if available = 1, if not = 0)	0,1		1	1	1	1	1	0	1	1	1	1	1	1	1
· Ex parte action available under preliminary injunction (if available = 1, if not = 0)	0,1		1	0	1	0	1	0	0	0	0	0	1	1	1
· Permanent injunction (if available = 1, if not = 0)	0,1		1	1	1	1	1	1	1	1	1	1	1	1	1
· Injunction to eliminate wrongful head start (if available = 1, if not = 0)	0,1		0	1	0	0	1	0	0	0	0	0	0	1	1
· Delivery or destruction of infringing materials (if available = 1, if not = 0)	0,1		0	1	1	0	1	1	1	0	1	1	0	1	1
· Compensatory damages (direct or out of pocket damages or consideration of profits or other damages= 1)	0,1		1	1	1	1	1	1	1	1	1	1	1	1	1
· Yielding of defendant's profits (if available = 1, if not = 0)	0,1		0	1	1	0	1	1	1	0	0	1	1	1	1
· Availability of punitive or statutory damages (if available = 1, if not = 0)	0,1		0	0	1	0	1	0	1	0	0	0	0	0	0
c) Criminal remedies															
· Fines, damages or loss of assets (if not available = 0, if minimal per expert opinion= ½, if substantial = 1)	0,1		1	0	0.5	0	0	1	1	1	1	1	0	0	0
· Jail sentence (if available = 1, if not = 0)	0,1		1	0	1	0	0	1	1	1	1	1	0	0	0
4. Enforcement, investigation and discovery; data exclusivity	**0-6**	**0-1**	**0.08**	**0.86**	**0.75**	**0.92**	**1.00**	**0.55**	**0.30**	**0.39**	**0.75**	**0.58**	**0.50**	**0.83**	**0.64**
· Emergency search to preserve and obtain proof (unavailable=0; available but with significant restrictions= ½ (e.g., conducted solely by an official or 3rd party expert); readily available=1)	0,1		0	1	1	1	1	0.5	0	0	0.5	0.5	1	1	0.5
· Ex parte emergency search availability (unavailable=0, available but with significant restrictions=½, readily available=1)	0,1		0	1	1	1	1	1	0	0	1	0	1	1	1
· Pre-trial discovery (unavailable=0, documentary only or strict limitations = ½, ready availability of documentary and interrogatories = 1)	0,1		0	0.5	0.5	0.5	1	0	0	1	0.5	0	0.5	0.5	1
· Protection of confidentiality of trade secrets in litigation (none=0, partial= ½, fully available=1)	0,1		0.5	1	1	1	1	0.5	0.5	0	0.5	1	0.5	0.5	1
b) Data exclusivity															
· Drugs (years: 0=0; 0.1-3=1/3; 3.1-7.9=2/3; >8=1)	0,1		0	0.66	0	1	1	0.66	0.66	0.66	1	1	0	1	0
· Agricultural chemicals (years: 0=0, 0.1-4.9=1/3, 5-8=2/3; > 8=1)	0,1		0	1	1	1	1	0.66	0.66	0.66	1	1	0	1	0.33
5. System functioning and related regulation	**0-4**	**0-1**	**0.60**	**0.84**	**0.13**	**0.62**	**0.97**	**0.40**	**0.55**	**0.47**	**0.70**	**0.71**	**0.77**	**0.95**	**0.16**
· Technology transfer: registration requirement (none=1; one or more = 0)	0,1		1	1	0	1	1	0	1	0	1	1	1	1	0
· Technology transfer: substantive review or regulation (none=1; one or more = 0)	0,1		1	1	0	1	1	1	0	1	1	1	1	1	0
· Fraser Institute score for *Legal System and Security of Property Rights* (score ranging from 0 to 10, divided by 10)	0,1		0.38	0.87	0.52	0.49	0.87	0.58	0.69	0.37	0.8	0.83	0.57	0.8	0.62
· Expert characterisation of the operation of the protection in practice (NB, based on internationally recognised or peer-reviewed sources; see country charts for details) (Generally negative = 0; none = ½; generally positive = 1)	0,1		0	0.5	0	0	1	0	0.5	0.5	0	0	0.5	1	0
Index Total (Sum of the normalised scores for the 5 categories in bold)		**0-5**	3.12	3.99	3.31	2.96	4.48	2.71	3.12	3.15	3.76	3.76	3.43	4.03	2.92

Annex Table 1. Trade Secrets Protection Index, Detailed Scoring, 2010 (continued)

Countries I through P, Panel A

Components and scoring	Score range	Normalised range	Indonesia	Ireland	Israel	Italy	Japan	Korea	Latvia	Lithuania	Malaysia	Mexico	Netherlands	New Zealand	Peru
1. Definition and coverage	**0-13**	**0-1**	**0.69**	**0.62**	**0.65**	**0.69**	**0.85**	**0.77**	**0.85**	**0.92**	**0.50**	**0.77**	**0.85**	**0.62**	**0.77**
a) Scope															
· If scope covers all confidential business information, subject to: 1) deriving value from secrecy and 2) the owner's reasonable efforts to maintain secrecy, score = 1; If scope also subject to requirement that information is imparted to the recipient in confidence, score = ½	0,1		1	1	1	1	1	1	1	1	0.5	1	1	0.5	1
b) Additional Elements of Definition															
· Inventory of trade secrets required (requirement=0; no requirement=1)	0,1		1	1	1	1	1	1	1	1	1	1	1	1	1
· Must be reduced to writing (requirement=0; no requirement=1)	0,1		1	1	1	1	1	1	1	1	1	0	1	1	1
· Must be identified as a trade secret to recipient (requirement=0; no requirement=1)	0,1		1	1	1	1	1	1	1	1	1	1	1	1	1
· Written notice to recipient required (requirement=0; no requirement=1)	0,1		1	1	1	1	1	1	1	1	1	1	1	1	1
c) Acts covered as civil infringement:															
· Breach of duty (not covered=0, partially covered=½, covered=1)	0,1		1	1	1	1	1	1	1	1	1	1	1	1	1
· Wrongful acquisition or misappropriation (not covered=0, partially covered= ½, covered=1)	0,1		0.5	1	1	1	1	1	1	1	0	1	1	0	1
· Third party liability for acquisition with knowledge or reason to know (not available=0, available=1)	0,1		1	1	1	1	1	1	1	1	1	1	1	1	1
· Third party liability for acquisition without knowledge - enjoin "innocent parties" (not available=0, available=1)	0,1		0	0	0	0	0	0	0	1	0	0	0	0	0
d) Acts covered by criminal law															
· Breach of duty (not covered=0, partially covered=½, covered=1)	0,1		1	0	0	1	1	1	1	1	0	1	1	0	1
· Wrongful acquisition or misappropriation (not covered=0, partially covered=½, covered=1)	0,1		0.5	0	0.5	0	1	1	1	1	0	1	1	0.5	0
· Third party liability for acquisition with knowledge or reason to know (not available=0, available=1)	0,1		0	0	0	0	1	0	1	1	0	1	1	1	1
· Third party liability for acquisition without knowledge, enjoin "innocent parties" (not available=0, available=1)	0,1		0	0	0	0	0	0	0	0	0	0	0	0	0
2. Duties and misappropriation	**0-5**	**0-1**	**1**	**1**	**1**	**0.9**	**1**	**1**	**0.7**	**1**	**0.8**	**0.7**	**0.7**	**1**	**0.8**
· Commercial relationship (covered if arising from: express agreement ½ + implied duty ½)	0,1		1	1	1	1	1	1	0.5	1	1	0.5	0.5	1	1
· Current employment relationship (covered if arising from: express agreement ½ + implied duty ½)	0,1		1	1	1	1	1	1	0.5	1	1	1	0.5	1	1
· Past employment relationship (covered if arising from: express agreement ½ + implied duty ½)	0,1		1	1	1	1	1	1	0.5	1	1	0.5	0.5	1	0.5
· Restrictions on post-relationship duty of confidentiality (score if no restrictions on matters beyond general skills and knowledge, by relationship: commercial ½ + employment ½)	0,1		1	1	1	1	1	1	1	1	1	1	1	1	1
· Validity of contractual restrictions on competition (if unenforceable=0; significant limitations=½ (e.g., limited by time or place for either commercial or post-employment situations); generally enforceable=1)	0,1		1	1	1	0.5	1	1	1	1	0	0.5	1	1	0.5

Annex Table 1. Trade Secrets Protection Index, Detailed Scoring, 2010 (continued)

Countries I through P, Panel B

Components and scoring	Score range	Normalised range	Indonesia	Ireland	Israel	Italy	Japan	Korea	Latvia	Lithuania	Malaysia	Mexico	Netherlands	New Zealand	Peru
3. Remedies and restrictions on liability	**0-11**	**0-1**	**0.64**	**0.73**	**0.64**	**0.77**	**0.82**	**0.82**	**0.73**	**0.82**	**0.68**	**0.73**	**0.91**	**0.77**	**0.64**
a) Restrictions on liability															
· Additional elements of proof in infringement claims (if none: civil=½ + criminal=½ point; score 1 if there is no criminal law and civil score is ½)	0,1		1	1	1	1	1	1	1	1	0.5	1	1	0.5	1
b) Civil remedies															
· Preliminary injunction (if available = 1, if not = 0)	0,1		1	1	1	1	1	1	1	1	1	1	1	1	1
· Ex parte action available under preliminary injunction (if available = 1, if not = 0)	0,1		0	1	0	0	0	0	1	1	1	1	1	0	0
· Permanent injunction (if available = 1, if not = 0)	0,1		1	1	1	1	1	1	1	1	1	1	1	1	1
· Injunction to eliminate wrongful head start (if available = 1, if not = 0)	0,1		0	1	1	1	1	1	0	0	1	0	1	1	0
· Delivery or destruction of infringing materials (if available = 1, if not = 0)	0,1		1	0	1	1	1	1	1	1	1	1	1	1	1
· Compensatory damages (direct or out of pocket damages or consideration of profits or other damages= 1)	0,1		1	1	1	1	1	1	1	1	1	1	1	1	1
· Yielding of defendant's profits (if available = 1, if not = 0)	0,1		0	1	1	1	1	1	0	1	1	0	1	1	0
· Availability of punitive or statutory damages (if available = 1, if not = 0)	0,1		0	1	0	0	0	0	0	0	0	0	0	1	0
c) Criminal remedies															
· Fines, damages or loss of assets (if not available = 0, if minimal per expert opinion= ½, if substantial = 1)	0,1		1	0	0	0.5	1	1	1	1	0	1	1	0	1
· Jail sentence (if available = 1, if not = 0)	0,1		1	0	0	1	1	1	1	1	0	1	1	1	1
4. Enforcement, investigation and discovery; data exclusivity	**0-6**	**0-1**	**0.08**	**0.83**	**0.86**	**0.83**	**0.67**	**0.44**	**0.58**	**0.92**	**0.69**	**0.39**	**0.92**	**0.80**	**0.61**
· Emergency search to preserve and obtain proof (unavailable=0; available but with significant restrictions= ½ (e.g., conducted solely by an official or 3rd party expert); readily available=1)	0,1		0	0.5	0.5	1	0.5	0	1	1	1	0	1	1	0
· Ex parte emergency search availability (unavailable=0, available but with significant restrictions=½, readily available=1)	0,1		0	1	1	1	0	0	0	1	1	0	1	1	0
· Pre-trial discovery (unavailable=0, documentary only or strict limitations = ½, ready availability of documentary and interrogatories = 1)	0,1		0	0.5	1	0.5	0.5	0.5	0	0.5	0.5	0	0.5	0.5	1
· Protection of confidentiality of trade secrets in litigation (none=0, partial= ½, fully available=1)	0,1		0.5	1	1	0.5	1	0.5	0.5	1	1	1	1	1	1
b) Data exclusivity															
· Drugs (years: 0=0; 0.1-3=1/3; 3.1-7.9=2/3; >8=1)	0,1		0	1	0.66	1	1	0.66	1	1	0	0.66	1	0.66	0.66
· Agricultural chemicals (years: 0=0, 0.1-4.9=1/3, 5-8=2/3; > 8=1)	0,1		0	1	1	1	1	1	1	1	0.66	0.66	1	0.66	1
5. System functioning and related regulation	**0-4**	**0-1**	**0.11**	**0.97**	**0.93**	**0.65**	**0.94**	**0.78**	**0.79**	**0.78**	**0.80**	**0.74**	**0.85**	**0.85**	**0.25**
· Technology transfer: registration requirement (none=1; one or more = 0)	0,1		0	1	1	1	1	1	1	1	1	1	1	1	0
· Technology transfer: substantive review or regulation (none=1; one or more = 0)	0,1		0	1	1	1	1	1	1	1	1	1	1	1	0
· Fraser Institute score for *Legal System and Security of Property Rights* (score ranging from 0 to 10, divided by 10)	0,1		0.44	0.89	0.7	0.6	0.75	0.61	0.65	0.62	0.71	0.45	0.91	0.9	0.48
· Expert characterisation of the operation of the protection in practice (NB, based on internationally recognised or peer-reviewed sources; see country charts for details) (Generally negative = 0; none = ½; generally positive = 1)	0,1		0	1	1	0	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Index Total (Sum of the normalised scores for the 5 categories in bold)		**0-5**	2.52	4.15	4.08	3.85	4.27	3.81	3.64	4.44	3.48	3.32	4.22	4.04	3.06

Annex Table 1. Trade Secrets Protection Index, Detailed Scoring, 2010 (continued)

Countries P through Z, Panel A

Components and scoring	Score range	Normalised range	Philippines	Russia	Singapore	South Africa	Spain	Sweden	Thailand	Turkey	United Kingdom	United States	Vietnam
1. Definition and coverage	**0-13**	**0-1**	**0.35**	**0.54**	**0.69**	**0.62**	**0.85**	**0.69**	**0.85**	**0.85**	**0.62**	**0.85**	**0.62**
a) Scope													
· If scope covers all confidential business information, subject to: 1) deriving value from secrecy and 2) the owner's reasonable efforts to maintain secrecy, score = 1; If scope also subject to requirement that information is imparted to the recipient in confidence, score = ½	0,1		1	1	1	1	1	1	1	1	1	1	1
b) Additional Elements of Definition													
· Inventory of trade secrets required (requirement=0; no requirement=1)	0,1		1	0	1	1	1	1	1	1	1	1	1
· Must be reduced to writing (requirement=0; no requirement=1)	0,1		0	0	1	1	1	1	1	1	1	1	1
· Must be identified as a trade secret to recipient (requirement=0; no requirement=1)	0,1		1	0	1	1	1	0	1	1	1	1	1
· Written notice to recipient required (requirement=0; no requirement=1)	0,1		0	0	1	1	1	1	1	1	1	1	1
c) Acts covered as civil infringement:													
· Breach of duty (not covered=0, partially covered=½, covered=1)	0,1		0.5	1	1	1	1	1	1	1	1	1	1
· Wrongful acquisition or misappropriation (not covered=0, partially covered= ½, covered=1)	0,1		0	1	1	1	1	1	1	1	1	1	1
· Third party liability for acquisition with knowledge or reason to know (not available=0, available=1)	0,1		0	1	1	1	1	1	1	1	1	1	1
· Third party liability for acquisition without knowledge - enjoin "innocent parties" (not available=0, available=1)	0,1		0	0	1	0	0	0	0	0	0	0	0
d) Acts covered by criminal law													
· Breach of duty (not covered=0, partially covered=½, covered=1)	0,1		1	1	0	0	1	0	1	1	0	1	0
· Wrongful acquisition or misappropriation (not covered=0, partially covered=½, covered=1)	0,1		0	1	0	0	1	1	1	1	0	1	0
· Third party liability for acquisition with knowledge or reason to know (not available=0, available=1)	0,1		0	1	0	0	1	1	1	1	0	1	0
· Third party liability for acquisition without knowledge, enjoin "innocent parties" (not available=0, available=1)	0,1		0	0	0	0	0	0	0	0	0	0	0
2. Duties and misappropriation	**0-5**	**0-1**	**0.7**	**0.5**	**1**	**1**	**1**	**0.7**	**0.7**	**1**	**1**	**0.9**	**0.3**
· Commercial relationship (covered if arising from: express agreement ½ + implied duty ½)	0,1		0.5	0.5	1	1	1	0.5	0.5	1	1	1	1
· Current employment relationship (covered if arising from: express agreement ½ + implied duty ½)	0,1		0.5	0.5	1	1	1	0.5	0.5	1	1	1	0
· Past employment relationship (covered if arising from: express agreement ½ + implied duty ½)	0,1		0.5	0.5	1	1	1	0.5	0.5	1	1	1	0
· Restrictions on post-relationship duty of confidentiality (score if no restrictions on matters beyond general skills and knowledge, by relationship: commercial ½ + employment ½)	0,1		1	0	1	1	1	1	1	1	1	1	0.5
· Validity of contractual restrictions on competition (if unenforceable=0; significant limitations=½ (e.g., limited by time or place for either commercial or post-employment situations); generally enforceable=1)	0,1		1	1	1	1	1	1	1	1	1	0.5	0

Annex Table 1. Trade Secrets Protection Index, Detailed Scoring, 2010 (continued)

Countries P through Z, Panel B

Components and scoring	Score range	Normalised range	Philippines	Russia	Singapore	South Africa	Spain	Sweden	Thailand	Turkey	United Kingdom	United States	Vietnam
3. Remedies and restrictions on liability	**0-11**	**0-1**	**0.68**	**0.82**	**0.68**	**0.73**	**0.82**	**0.73**	**0.95**	**0.73**	**0.59**	**1.00**	**0.73**
a) Restrictions on liability													
· Additional elements of proof in infringement claims (if none: civil=½ + criminal=½ point; score 1 if there is no criminal law and civil score is ½)	0,1		1	0	0.5	1	1	1	0.5	1	0.5	1	1
b) Civil remedies													
· Preliminary injunction (if available = 1, if not = 0)	0,1		1	1	1	1	1	1	1	1	1	1	1
· Ex parte action available under preliminary injunction (if available = 1, if not = 0)	0,1		1	0	1	1	1	0	1	1	0	1	1
· Permanent injunction (if available = 1, if not = 0)	0,1		1	1	1	1	1	1	1	1	1	1	1
· Injunction to eliminate wrongful head start (if available = 1, if not = 0)	0,1		0	1	1	1	0	1	1	0	1	1	0
· Delivery or destruction of infringing materials (if available = 1, if not = 0)	0,1		1	1	1	1	1	1	1	0	1	1	1
· Compensatory damages (direct or out of pocket damages or consideration of profits or other damages= 1)	0,1		1	1	1	1	1	1	1	1	1	1	1
· Yielding of defendant's profits (if available = 1, if not = 0)	0,1		0	1	1	1	1	1	1	1	1	1	1
· Availability of punitive or statutory damages (if available = 1, if not = 0)	0,1		0	1	0	0	0	0	1	0	0	1	1
c) Criminal remedies													
· Fines, damages or loss of assets (if not available = 0, if minimal per expert opinion= ½, if substantial = 1)	0,1		0.5	1	0	0	1	0	1	1	0	1	0
· Jail sentence (if available = 1, if not = 0)	0,1		1	1	0	0	1	1	1	1	0	1	0
4. Enforcement, investigation and discovery; data exclusivity	**0-6**	**0-1**	**0.50**	**0.50**	**0.80**	**0.50**	**0.83**	**0.58**	**0.17**	**0.22**	**0.92**	**0.94**	**0.72**
· Emergency search to preserve and obtain proof (unavailable=0; available but with significant restrictions= ½ (e.g., conducted solely by an official or 3rd party expert); readily available=1)	0,1		0	1	1	1	1	0.5	0	0	1	1	1
· Ex parte emergency search availability (unavailable=0, available but with significant restrictions=½, readily available=1)	0,1		0	1	1	1	1	0	0	0	1	1	1
· Pre-trial discovery (unavailable=0, documentary only or strict limitations = ½, ready availability of documentary and interrogatories = 1)	0,1		1	0	0.5	0.5	0.5	0.5	0.5	0	0.5	1	0
· Protection of confidentiality of trade secrets in litigation (none=0, partial= ½, fully available=1)	0,1		1	1	1	0.5	0.5	0.5	0.5	0	1	1	1
b) Data exclusivity													
· Drugs (years: 0=0; 0.1-3=1/3; 3.1-7.9=2/3; >8=1)	0,1		0	0	0.66	0	1	1	0	0.66	1	0.66	0.66
· Agricultural chemicals (years: 0=0, 0.1-4.9=1/3, 5-8=2/3; > 8=1)	0,1		1	0	0.66	0	1	1	0	0.66	1	1	0.66
5. System functioning and related regulation	**0-4**	**0-1**	**0.22**	**0.11**	**0.83**	**0.30**	**0.92**	**0.86**	**0.75**	**0.62**	**0.84**	**0.80**	**0.65**
· Technology transfer: registration requirement (none=1; one or more = 0)	0,1		0	0	1	0	1	1	1	1	1	1	1
· Technology transfer: substantive review or regulation (none=1; one or more = 0)	0,1		0	0	1	0	1	1	1	1	1	1	1
· Fraser Institute score for *Legal System and Security of Property Rights* (score ranging from 0 to 10, divided by 10)	0,1		0.39	0.44	0.81	0.7	0.68	0.92	0.51	0.46	0.87	0.71	0.59
· Expert characterisation of the operation of the protection in practice (NB, based on internationally recognised or peer-reviewed sources; see country charts for details) (Generally negative = 0; none = ½; generally positive = 1)	0,1		0.5	0	0.5	0.5	1	0.5	0.5	0	0.5	0.5	0
Index Total (Sum of the normalised scores for the 5 categories in bold)		**0-5**	2.45	2.47	4.00	3.14	4.42	3.56	3.42	3.41	3.97	4.49	3.01