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U.S. International Trade Commission's Trade Secrets Roundtable: Discussion Summary

Dan Kim, Katherine Linton, and Mitchell Semanik

Abstract

On June 1, 2016, the U.S. International Trade Commission (Commission or USITC) moderated a roundtable discussion on the importance of trade secret protection and enforcement, and the challenges of trade secret misappropriation, particularly overseas. Participants, including representatives from government, industry, trade associations, think tanks, and academia, shared their viewpoints and knowledge about the subject.[1]

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 Please direct all correspondence to Dan Kim, Office of Industries, U.S. International Trade Commission, 500 E Street, SW, Washington, DC 20436, or by email to dan.kim@usitc.gov.

[1] See appendix A for a complete list of participants. This article makes references to individual participants in the roundtable per the guidelines set forth before the event.

Introduction

There is a growing recognition among professionals in firms, government, academia, and other settings on the importance of trade secrets.[2] This recognition has given rise to new language in trade agreements and to new laws focused on trade secret protections. For example, the United States has enacted new legislation to bolster trade secret protections and to combat misappropriation (Defend Trade Secrets Act of 2016).[3] The European Union also recently adopted a directive requiring the harmonization of trade secret protections within the bloc.[4] New trade secret protections are also included in the pending Trans-Pacific Partnership Agreement (TPP). As with most intellectual property (IP) issues, effective implementation and enforcement of new legal commitments will likely determine their success. In many countries, substantial barriers to the protection of trade secrets remain.

U.S. firms report that trade secrets are important to innovation and competition. According to surveys conducted by the Commission and other government agencies, U.S. firms in many industry sectors are likely to identify trade secrets as "very important" to their operations more so than other forms of IP.[5] While the U.S. Chamber of Commerce estimates the value of trade secrets owned by U.S. firms to be $5 trillion, there remain significant challenges in quantifying their value for the U.S. economy or at an individual firm level.[6] Indeed, framing trade secrets simply as a form of IP protection may understate their true value to businesses.[7] Trade secrets can form the backbone of a firm's intangible assets and be a critical tool for training and developing employees, attracting financing, establishing joint ventures, and supporting business relationships.

In light of this background, the Commission presented four topics for discussion during its trade secrets roundtable: the importance of trade secret protection to U.S. firms; the size, scope, and nature of trade secret misappropriation; the laws and practices regarding trade secrets in foreign countries; and needs for more research, data, and capacity-building to better understand trade secrets going forward.

[2] See Linton, "The Importance of Trade Secrets," 2016, for an overview.
[3] Defend Trade Secrets Act of 2016, S.1890, 114th Cong (2016).
[4] The European Council approved the directive on trade secrets on May 27, 2016. Upon official publication of the directive, European Union countries will have two years to implement it in their national legislation. European Commission, "Trade Secrets" (accessed July 12, 2016).
[5] NSF and NCSES, *Business R&D and Innovation Survey (BRDIS): 2012*, October 2015, tables 53–57; USITC, *China: Effects of Intellectual Property Infringement*, 2011, 3–21; USITC, *Trade, Investment, and Industrial Policies in India*, 2014, 140, 145.
[6] U.S. Chamber of Commerce, "The Case for Enhanced Protection of Trade Secrets," 2014, 10.
[7] Risch, "Empirical Methods in Trade Secrets Research," 2016 (describing difficulties inherent in measuring the value of trade secrets).

Discussion

The Importance of Trade Secret Protection to U.S. Firms

Most of the participants stated that trade secret protections are of high importance to U.S. firms. Participants' comments focused on two overarching themes: the similarities and differences between trade secrets and other forms of IP in terms of function and importance, and the challenges unique to small and medium-sized enterprises (SMEs) in comparison to large corporations.

Trade Secrets and Patents Compared

Roundtable participants compared and contrasted trade secrets with other forms of IP, particularly patents. One noted that most patented ideas started as trade secrets. While many firms do not own any patents, most own trade secrets, as many ideas are not patentable or are easier to protect in this way. Compared to patents, firms are able to use trade secrets to protect a wider range of sensitive information and can do so without government registration or approval. The choices firms make in deciding how to use trade secrets or other forms of IP often depend on firms' sense of whether they can derive more value from their IP as a secret or as a patent, which makes information available to the public.

Participants also discussed the relationships between trade secrets and patents in license agreements. When a firm licenses technology, the license often encompasses an array of IP related to that technology, without necessarily identifying the particular patents, trade secrets, or other forms of IP involved. This practice can make it difficult to understand and estimate the relative contributions of trade secrets to a particular licensed technology.

Participants further noted that patents, unlike trade secrets, are granted by the government after thorough analysis and examination. As part of this process, essential aspects of the invention are disclosed to the public, thereby protecting rights holders from infringement, both willful and accidental. Moreover, because there is a public record of a patented technology, enforcement can be relatively straightforward. Patents can also provide a societal benefit by increasing the wealth of public information, building shared knowledge, and spurring future innovations. On the other hand, trade secrets, as the name implies, are secret and not made available to the public. Trade secrets are also not subject to government regulation and oversight before a claim of misappropriation is made; firms need only put in place reasonable protections to ensure secrecy.

According to participants, the broad definition of trade secrets covers all types of commercially valuable information, meaning that trade secrets can protect more information than patents can. Patents must satisfy stricter eligibility standards. Depending on the type of proprietary information at issue, however, trade secrets and patents can have differing levels of effectiveness. One participant provided as an example information that might ultimately be licensed to competitors, such as that related to a new technological standard. According to the participant, such information may be better protected by patents because the information would

need to be shared, and its contribution to the standard would need to be evaluated rather than kept secret. Similarly, inventions that are easily reverse-engineered also may be better protected by patents, as the information is in a form which is easily discoverable. Alternatively, sensitive information that is not readily discernable may be more effectively protected by a trade secret.

Small and Large Firms Compared

Trade secrets are an important tool used by firms of all sizes, according to roundtable participants. Firms choose the most efficient and effective forms of IP protection depending on the type of information at issue, as well as industry and firm characteristics. For example, smaller firms, which often have fewer resources, may rely more heavily on trade secrets due to the substantial upfront costs associated with patents. Patents, as opposed to trade secrets, require lawyers, time, and financial resources before any protection is established. By contrast, trade secrets simply require firms to take appropriate measures to keep proprietary information secret.

While trade secrets reportedly offer a form of IP protection with lower upfront costs, they may be more costly in cases of misappropriation. Participants noted that trade secrets may be more difficult to define and prove in litigation than patents. Moreover, some firms are reluctant to bring suit in case they are unsuccessful or for fear that the stolen trade secrets could be revealed as part of the litigation. Unlike patent cases, where the information is already public, trade secret litigation may be damaging if sensitive information is further exposed. So, while smaller companies may prefer trade secrets for their lower upfront costs, firms of all sizes may choose patents due to the perception that they can be more effectively enforced.

Participants further noted that the threat of trade secret misappropriation is not limited to large firms or firms operating in high-tech sectors like the semiconductor industry. Firms of all sizes and in a variety of sectors, from electronics to manufacturing industries, may rely on trade secrets. In fact, one participant noted that smaller manufacturing firms supplying products to larger firms may face greater risks of trade secret misappropriation due to pressure from other supply chain participants to share information. Furthermore, while larger firms may have the resources to recoup their losses in cases of trade secret misappropriation, smaller firms may have more difficulty bringing suit or recovering from the loss of trade secrets.

The Size, Scope, and Nature of Trade Secret Misappropriation

Roundtable participants generally agreed about the widespread use of trade secrets and the inherent value that trade secret protections provide to firms. The participants were also in broad agreement that the increasing reliance on trade secrets has been accompanied by a rise in trade secret misappropriation. The nonpublic nature of trade secrets, however, makes it difficult to measure the size, scope, and nature of trade secret misappropriation.

The Nature and Scope of Trade Secret Misappropriation

Roundtable participants provided examples of both obvious and less-obvious objectives of trade secret infringement. One obvious aim is to use stolen trade secrets to gain a competitive

advantage in the marketplace over a competitor. Perpetrators use trade secret theft to compete with an already-established brand by stealing not just technical trade secrets, but also client lists, marketing strategies, and any other information to illegally "level the playing field." Reportedly, there are fewer incentives to simply harm the name-brand value of a successful company than there are to create a competing and successful company.

Participants also noted that when trade secret misappropriation occurs, firms must consider the potential negative consequences of publicly combating the misappropriation. There is a market risk in openly acknowledging that one's trade secrets have been stolen. A firm's stock value and reputation in the marketplace may be damaged. Moreover, advocating for stronger protections may undermine a company's image, as companies do not want to be perceived as "bullies."

Participants noted that this negative stigma was less likely to occur when trade secret cases involved current or former employees. One participant noted, however, that not everything is a trade secret, and there is a potential risk of firms overasserting claims against former employees who are using their knowledge and skills rather than company secrets. Another anecdotally noted that it seemed more prevalent for companies to take legal action against insider leaks than outside attacks. This is possibly due to the extra effort, cost, and uncertainty in bringing an infringement case against a third party.

The rise of the Internet and, more recently, of cloud computing were both identified by roundtable participants as reasons that trade secret misappropriation has become a more prevalent threat. As businesses evolve and increasingly rely on these technologies for daily operations, their data and trade secrets become more exposed to misappropriation risks. Photographing and stealing hard copies of confidential documents have largely been replaced by the easier-to-execute crimes of computer-aided theft and of downloading large troves of information.

Trade secret theft also may be exacerbated by the rise of globalization and global value chains. According to participants, high-tech manufacturing relies on global supply chains that can make misappropriation more difficult to detect, even as they expose firms to greater risks. For example, one participant noted the difficulty of appropriately monitoring a factory on the other side of the globe. Another pointed out that the U.S. semiconductor industry uses a deeply rooted supply chain that passes through China, Taiwan, South Korea, and other countries with different laws and norms governing trade secrets.

Requirements that companies transfer key technologies to local companies ("localization requirements") may be even more problematic. While disclosing trade secrets to supply chain members can provide competitive advantages, localization requirements undermine trade secrets and the efficiency of global supply chains. One participant cited Indonesia and Nigeria as two examples of countries with explicit policies of nurturing and developing information communications technology industries through localization requirements. According to participants, many localization requirements are established to jump-start or nurture domestic

industries that otherwise would not be able to compete. However, they asserted that a secondary effect of these initiatives may be a tolerance for theft as a means to gain competitiveness. Industry observers stated that localization regulations place trade secrets and other IP at increased risk, highlighting the need for effective IP enforcement.

Given the international risk of trade secret misappropriation, participants also noted that border protection agencies are becoming more involved in trade secret cases by preventing the physical trade of products that rely on stolen trade secrets. Ensuring that law enforcement agents have the necessary tools to investigate and mitigate damages from misappropriation overseas is increasingly important.

Size of Trade Secret Misappropriation

Participants noted that one of the virtues of trade secrets is the broad range of information, processes, and technology that can be protected. However, this broad coverage, coupled with the inherently clandestine nature of trade secret misappropriation, makes measuring the monetary value of trade secrets—as well as estimating losses—extremely difficult. Further complicating the issue are the differing levels of trade secret protection in different countries.

Participants agreed that research and development (R&D) expenditures are not a useful proxy for measuring the value of trade secrets because R&D expenditures include a variety of outlays, such as spending information that is intended to be made public, other forms of IP, training costs, and additional items that do not fit within the definition of trade secrets. Furthermore, R&D expenditures are an input, whereas trade secrets and other types of IP are outputs. Even if the direct percentage of R&D responsible for a given trade secret can be identified, the market value of that trade secret may well exceed that of the given input or vice versa. Trade secrets are also more difficult to value because market value may become apparent only after infringement has occurred. The incentive and capacity of firms to appropriately value trade secrets before misappropriation are limited.

Participants suggested several alternative methods of estimating trade secret values:

- One helpful indicator may be investors' estimates of the value of a given product or technology, as reflected in the total value of the firm minus its tangible assets and/or its ability to raise venture capital. Participants noted, however, that these estimates may be biased.

- A firm's estimates of the total amount of money used to protect a trade secret may also hint at its underlying value. In theory, the more valuable the trade secret, the more a company will be willing to spend to protect it. However, discovering the amount of money used to protect a given trade secret presents its own challenges. Additionally, this approach relies on companies' valuing their own trade secret measures, so there could be incentives to inflate values in order to attract more investors.

- Comparisons of the value of similar products or technologies, where one is subject to trade secret protection and the other is available for free and open use, may provide useful information. Assuming that the value of the product with trade secret protection is greater, the difference could be used to estimate the value of that trade secret. The downside of this approach is that it requires a labor-intensive estimation of trade secrets' value on a product-by-product basis.

- Calculating the damages from trade secret loss by aggregating damages awarded in civil court cases and evidence from criminal cases, particularly those involving international actors, could provide a minimum estimate. However, participants noted that trade secret theft not only leads to a direct loss in value for the affected company from an investor's point of view, but potentially further damages the company, as competitors now have access to leaked secrets. The playing field is effectively leveled even if the companies benefiting from the theft are not the misappropriating parties. Calculating this effect on the competitive landscape would be extremely difficult.

- Published statistics of the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce also provide insights into the size and characteristics of international trade in trade secrets, according to roundtable participants. Information on IP transactions is collected on BEA's quarterly survey of trade in services.[8] Trade secrets are specifically included in the definition of "rights related to industrial processes and products" in the category of "charges for the use of intellectual property n.i.e. [not included elsewhere]." They also may be embodied in other types of IP, such as computer software, or in other professional services for which BEA currently collects data. For example, a management consultant may use his or her own proprietary methods when working with a client. BEA is working to expand the geographic scope and depth of its statistics on IP, R&D, and other innovation-related services.

Laws and Practices in Other Countries

The effectiveness of trade secret protections goes hand in hand with the effectiveness of the legal system overseeing misappropriation litigation. Protections and the effectiveness of responses to misappropriation rely on legal systems which vary from country to country. While the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) makes reference to trade secrets under the phrase "undisclosed information," it does not establish particular standards or approaches for protecting this information.[9] It is left to individual countries to enact laws to protect trade secrets and punish misappropriation.

Effective judicial protection is essential to the effective protection of trade secrets, according to participants. By way of illustration, trade secrets may be defined similarly in two countries, but if one lacks an effective legal system to deal with misappropriation, trade secrets in that country

[8] BEA, "U.S. International Trade in Services," (accessed November 3, 2016).
[9] WTO, "Agreement on Trade-Related Aspects of Intellectual Property Rights" (accessed November 3, 2016).

will essentially be worthless. By contrast, a trade secret in a country where one can immediately seek an injunction against an offending party is worth more than the same trade secret in a country where the thief can continue to benefit from the stolen information after the misappropriation has been detected. Similarly, the existence of reliable mechanisms for protecting confidential information in litigation often determines whether it is feasible to bring suit.

Examples of Trade Secret Protection Problems

Participants stated that a common problem in trade secret protection is the lack of a stand-alone statute that defines trade secrets and the acts that constitute misappropriation. In India, for example, courts look to employee contracts and the common law to determine if there has been a misappropriation. This creates substantial uncertainty about whether relief will be available when the trade secret theft benefits a person without a contract, such as a competitor that has obtained the trade secret from a former employee.

Participants also stated that protecting trade secrets is particularly difficult in China and India because multiple government agencies have jurisdiction over different aspects of trade secret misappropriation. Efficacy suffers when it is unclear which agency is in charge. The involvement of multiple employees in multiple agencies also increases the likelihood of trade secret disclosure. More broadly, high rates of employee turnover and localization requirements, including local certification and testing mandates, also reportedly undermine trade secret protections in emerging markets.

Participants further stated that procedural rules in China, which require written proof of trade secrets and the measures taken to protect them, further make trade secret protection very difficult. Mechanisms to protect the confidentiality of trade secrets during litigation also reportedly need to be improved.

Consequences of Weak Trade Secret Laws

Not only does a lack of trade secret protections harm businesses, it can undermine countries' overall innovation systems as well. According to roundtable participants, academic research shows that countries with greater protection of IP rights often receive more foreign direct investment (FDI) than countries with weaker protections. Strong IP protections have been found to not only foster more FDI overall, but also to attract higher-value FDI involving advanced manufacturing and R&D. Moreover, a participant stated that strong trade secret protections can also provide the environment needed to foster technology hubs similar to Silicon Valley.

Indeed, many countries, inspired by the success of Silicon Valley, are attempting to create their own prosperous innovation centers. But without adequate trade secret laws and protections, innovators reportedly are left with only internal measures to protect secrets and ongoing concerns about misappropriation. Similarly, firms operating in countries without effective trade secret laws lack incentives to grow, as trust—rather than a sense of legal protection—becomes

more important when choosing whom to hire, contract, or form business relationships with, according to participants.

Research, Data, and Capacity-building: What We Need to Know

Participants agreed that many trade secret issues require further research, data, and capacity building. Most importantly, continued education on the importance of trade secrets is needed here and abroad. Participants stressed that the targets of these efforts should include law enforcement personnel to increase their understanding of the growing issue of trade secret misappropriation and the attendant risks. Increased awareness among those involved at the different stages of trade secret enforcement will strengthen the effectiveness of protections and limit potential damages from misappropriation. One participant also stated that robust mechanisms were needed for inter-government cooperation, as well as information sharing among corporations and government agencies.

Ongoing education of governments and companies of all sizes should focus on identifying best practices in trade secret protections, according to participants. Once a set of national best practices has been instituted, countries can compare their relative strengths and weaknesses in terms of trade secret enforcement and protection, and find areas where they can improve. More collaboration between countries to encourage effective global trade secret standards was advised.

Measuring the value of trade secrets, whether the focus is on specific trade secrets or on trade secrets' aggregate contribution to an economy, remains extremely difficult, with no immediate answers in sight. Government research and publications were mentioned as valuable resources in seeking to measure and understand the value of trade secrets. Further discussions involving government officials, experts, and stakeholders may help establish appropriate valuation methods.

Concluding Thoughts

Participants agreed on the growing problem of trade secret misappropriation, as well as on the importance of effective trade secret protections. They also recognized that as important as trade secrets are to U.S. firms, their nonpublic nature makes them difficult to quantify and analyze. Without reliable methodologies to accurately value trade secrets, or comprehensively estimate losses associated with misappropriation, discussions on trade secrets risk relying too heavily on anecdotal evidence. The rise of technology (both the type protected by trade secrets and the type involved in aiding misappropriation) and global value chains further complicate the protection and enforcement of trade secrets.

There are, however, promising avenues for further research and discussions on protection of trade secrets. Transparent dialogues among businesses and government agencies were encouraged in order to address the gaps in protection, enforcement, and valuation of trade

secrets. Participants stressed the need for relevant stakeholders around the world to establish a standard of “best practices” in trade secret protection, enforcement, and data collection. Such practices would offer effective paths for addressing infringement in both particular countries and globally. Governments, industries, and law enforcement agencies in all countries can benefit from a shared understanding on the importance of trade secret protection and concrete policies to protect all forms of IP.

Bibliography

Bureau of Economic Analysis (BEA), "U.S. International Trade in Services," http://www.bea.gov/iTable/iTable.cfm?ReqID=62&step=1#reqid=62&step=6&isuri=1&6210=1&6200=51 (accessed November 3, 2016).

European Commission. Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs. "Trade Secrets," n.d. http://ec.europa.eu/growth/industry/intellectual-property/trade-secrets/index_en.htm (accessed July 12, 2016).

Linton, Katherine. "The Importance of Trade Secrets: New Directions in International Trade Policy Making and Empirical Research." *Journal of International Commerce and Economics*. Forthcoming 2016. Published electronically, http://www.usitc.gov/journals.

National Science Foundation (NSF). National Center for Science and Engineering Statistics (NCSES). "Business Research and Development and Innovation: 2012." Arlington, VA: NSF, NCSES, 2015.

Risch, Michael. "Empirical Methods in Trade Secret Research." In Peter Menell and David Schwartz (eds.), *Research Handbook on the Economics of Intellectual Property Law*. Edward Elgar Publishing, 2016. Forthcoming, Villanova Law/Public Policy Research Paper No. 2015-1021.

U.S. Chamber of Commerce. "The Case for Enhanced Protection of Trade Secrets in the Trans-Pacific Partnership Agreement," 2014. https://www.uschamber.com/sites/default/files/legacy/international/files/Final%20TPP%20Trade%20Secrets%208_0.pdf.

U.S. International Trade Commission (USITC). *China: Effects of Intellectual Property Infringement and Indigenous Innovation Policies on the U.S. Economy*. Publication 4226. Washington, DC: USITC, 2011.

U.S. International Trade Commission (USITC). *Trade, Investment, and Industrial Policies in India: Effects on the U.S. Economy*. Publication 4501. Washington, DC: USITC, 2014.

World Trade Organization (WTO). "Agreement on Trade-Related Aspects of Intellectual Property Rights," n.d. https://www.wto.org/english/tratop_e/trips_e/t_agm3d_e.htm (accessed November 3, 2016).

Appendix A: External Participants

Ed Brzytwa, Director of Global Policy, Information Technology Industry Council (ITI)

Aaron Cooper, Vice President, Strategic Policy Initiatives, BSA | The Software Alliance

Nigel Cory, Trade Policy Analyst, Information Technology and Innovation Foundation (ITIF)

Frank Cullen, Executive Director, Global Intellectual Property Center

Jonathan Davis, Global Vice President of Advocacy, Semiconductor Equipment and Materials International (SEMI)

Stephen Ezell, Vice President, Global Innovation Policy, ITIF

Alexis Grimm, Senior Economist, Bureau of Economic Analysis, U.S. Department of Commerce (USDOC)

Conor Harrington, Director for Intellectual Property and Innovation, Office of the U.S. Trade Representative (USTR)

Kristy Howell, Assistant Division Chief for Goods and Services Trade, Balance of Payments Division, Bureau of Economic Analysis, USDOC

David Isaacs, Vice President, Government Affairs, Semiconductor Industry Association (SIA)

Sarah Beth Jansen, Director of Government Affairs and Legislative Counsel, ITI

Roy D. Kamphausen, Senior Vice President for Research and Director of the Washington, DC, office at the National Bureau of Asian Research (NBR)

Matthew Lamberti, Senior Counsel, Computer Crime and Intellectual Property Section, Department of Justice, and Special Assistant U.S. Attorney at the U.S. Attorney's Office for the Eastern District of Virginia

Alan Marco, Chief Economist, U.S. Patent and Trademark Office (USPTO)

Stevan D. Mitchell, Director of the International Trade Administration's Office of Intellectual Property Rights, USDOC

Ryan Ong, Director, International Business Policy, National Association of Manufacturers (NAM)

Kalpana Reddy, Senior Director, GIPC

Michael Risch, Professor of Law, Villanova University

John Robertson, Supervisory Special Agent, Federal Bureau of Investigation

Mark Schultz, Director of Academic Programs and Co-Founder, Center for the Protection of Intellectual Property, George Mason University Antonin Scalia School of Law

Debra Waggoner, Director of Global Government Affairs, Corning Incorporated

Della Williams, President and CEO, WilliamsRDM

Conrad Wong, Attorney-Advisor with the China and Enforcement Teams, USPTO

George York, Deputy Assistant U.S. Trade Representative, USTR Office of Intellectual Property and Innovation