Not all companies hold patents, trademarks, copyrights, and other forms of intellectual property, but virtually every company has trade secrets. So, it is beneficial for both valuation and damages experts to develop a working knowledge of what constitutes a trade secret and how it can be valued. This article provides a brief history of trade secret law, discusses the legal characteristics of trade secrets, and explains how to determine the economic value of trade secrets in litigation.

A (Trade) Secret History

An early precursor to Western trade secret law can be traced back to the Roman empire. By the Renaissance, most European nation-states had laws that protected business secrets of the guilds. More modern concepts of trade secret protection grew from English common law courts and spread to the U.S. in the mid-1800s.1

By the middle of the 20th century, a “patchwork of confused common law doctrines” and “a deepening maze of conflict and confusion” of state and federal law highlighted the need for a statutory solution.2 In 1968, the American Bar Association established a special committee to explore the drafting of a uniform trade secret act to harmonize state law. This effort resulted in the Uniform Trade Secrets Act (UTSA) in 1979.3

Some form of the UTSA has been adopted by 48 states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. As of the end of 2020, New York has legislation pending to adopt the UTSA. North Carolina remains the sole holdout.4 Note that many courts in states that adopted the UTSA have indicated that they consider out-of-state UTSA decisions, which is consistent with the uniformity goals of Section 8 of the UTSA.5

In addition to state protection of trade secrets, in 2016, trade secrets also came under federal protection with Public Law 114-153, known as the Defend Trade Secrets Act of 2016 (DTSA).6 While the DTSA allows an owner of a trade secret to bring civil suit in federal district court for misappropriation if “the trade secret is related to a product or service used in, or intended for use in, interstate or foreign commerce,”7 the law expressly does not preempt or displace state-law remedies.8 This means that the owner of a misappropriated trade secret can include both DTSA and UTSA claims in a federal lawsuit.

One of the main intended benefits of the DTSA was to provide a “single, national standard” with “clear rules” and “predictability” for trade secret litigation. Nevertheless, there is evidence that when both DTSA and state trade secret misappropriation claims are at issue, federal district courts will apply state law to DTSA claims.9 District courts also rely on state law precedent when only DTSA claims are asserted. One reason for relying on state UTSA-based case law is that the DTSA mirrors the UTSA and there is limited DTSA-based case law.10

Trade Secret Defined

To be considered a trade secret under the UTSA or DTSA, information must be of the type that is classified as a trade secret under the law. Both the UTSA and the DTSA list

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3 Menell et al., 43.
4 “Trade Secrets Act,” Uniform Law Commission (website), https://www.uniformlaws.org/committees/community-home?CommunityKey=3a2538b-e030-4ec2d-a9e2-90373dc05792. While North Carolina has not adopted the UTSA, its trade secret law borrows heavily from it. See also Menell et al., 47.
10 Ibid., 2.
information that may be classified as a trade secret, but the DTSA’s list is more expansive. Under the DTSA, information that may be classified as a trade secret includes “all forms and types of financial, business, scientific, technical, economic, or engineering information, including patterns, plans, compilations, program devices, formulas, designs, prototypes, methods, techniques, processes, procedures, programs, or codes, whether tangible or intangible, and whether or how stored, compiled, or memorized physically, electronically, graphically, photographically, or in writing.”

Under the UTSA, information can be considered a trade secret only if it also:

- “Derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use, and
- Is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.”

The DTSA contains similar language. These characteristics can be represented graphically as shown in Figure 1.

**Figure 1: Trade Secret Requirements**

While the specific language of these requirements is not identical under the DTSA, there is no indication that the meaning is different. For example, under the DTSA, the owner of a trade secret must take “reasonable measures” to keep it a secret. Under the UTSA, the owner of a trade secret must undertake “efforts that are reasonable under the circumstances” to keep it secret.

Determination of the actual or potential economic value of a secret not being generally known or readily ascertainable by proper means is an essential factor in both trade secret valuation and damages. Understanding and quantifying these economic benefits is the expert’s main focus. Benefits of trade secrets can include, but are not limited to, greater dollar and unit sales due to product features, such as the use of novel materials; greater or more profitable sales due to market or customer data; more sales wins due to certain financial or contract bidding data; production or manufacturing processes that result in better product attributes or lower production costs (reduced material inputs or less scrap); and knowing which processes do not work (often referred to as “negative knowledge”).

**Tapping the Client’s Expertise**

Because trade secrets are not generally known and are not readily ascertainable by proper means, client personnel or technical experts often provide their expertise to assist a damages or valuation expert in enumerating and quantifying the economic benefits of the subject trade secrets. When damages experts rely heavily on this expertise, it is paramount that the opinions of such client personnel or technical experts become part of the record. Otherwise, there is a risk that a portion of the damages expert’s testimony will be disallowed because it was based on the expertise and opinions of witnesses who were never deposed and who did not testify at trial.

**Establishing Trade Secret Damages**

Monetary remedies under the UTSA and DTSA are generally the same. They include damages for actual loss caused by the misappropriation of trade secrets; disgorgement of profits from unjust enrichment obtained by misappropriation of trade secrets (provided it does not duplicate damages for actual loss); and, in lieu of damages measured by actual loss or unjust enrichment, damages

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11 See 18 U.S.C. § 1839(3). UTSA § 1(4) lists "information, including a formula, pattern, compilation, program, device, method, technique, or process."

12 UTSA §1(4)(i) and (ii).

13 18 U.S.C. § 1839(3)(A) and (B).
based on the imposition of a reasonable royalty for the unauthorized disclosure or use of the trade secrets.\textsuperscript{16} In addition, if the misappropriation was willful and malicious, the court may award exemplary damages of not more than twice the amount of the unadjusted award.\textsuperscript{17}

Before determining the value of trade secrets in litigation, the information constituting those secrets must be identified. Identifying trade secrets is less straightforward than one might think. It is not uncommon, at the outset of a case, for the trade secret owner not to know the extent of the information taken or whether specific information can be classified as a trade secret under the law.\textsuperscript{18} Often, specific trade secrets are first expressly identified only when asserted in litigation.\textsuperscript{19} Currently, only California and Massachusetts require disclosure of trade secrets with “reasonable particularity” before discovery begins.\textsuperscript{20} Federal district courts in those states may or may not follow state law regarding early disclosure of trade secrets.\textsuperscript{21}

Assuming a trade secret case is not in California or Massachusetts, one of the first tasks confronting the expert is to identify the misappropriated trade secrets that are being asserted. This is not a task left to the expert’s discretion, but the expert cannot begin his or her analysis until the trade secrets have been defined and grouped—a process that can have a significant impact on damages. For example, the cumulative harm resulting from misappropriation of many trade secrets could lead to lost sales or even the loss of long-term contracts, diminishing business value, while the value of individual trade secrets, considered in isolation, may be far less significant.

If damages are based only on the cumulative harm resulting from the misappropriation of several trade secrets, the expert needs to consider the impact to damages if the trier of fact decides that some of the alleged trade secrets do not meet the legal definition. The outcome of this decision can determine whether the plaintiff recovers lost profits damages, disgorgement of the defendant’s profits, or a reasonable royalty.

Typically, legal counsel determines whether the expert should present alternative disaggregated damages, but the expert should make sure counsel is aware that damages could be affected if some trade secrets are dropped after the expert’s report is filed. Given the potential need to disaggregate, the damages expert should consider the economic value of each secret separately even when developing an aggregate damages number based on the misappropriation of multiple trade secrets.

\textsuperscript{16} UTSA § 3(a); 18 U.S.C. § 1836(b)(3)(B).
\textsuperscript{17} UTSA § 3(b); 18 U.S.C. § 1836(b)(3)(C).
\textsuperscript{19} Ibid., 234.
\textsuperscript{21} Ibid.
Unlike a patent, which has a finite statutory life, the life of a trade secret has no definite term. A trade secret can remain a trade secret for as long as it has economic value and is kept secret.

The plaintiff’s burden is to establish that the loss of its trade secrets caused it economic harm or conferred an economic benefit on the misappropriator. It can be difficult to establish a causal connection between the misappropriation of trade secrets and economic harm to the plaintiff or economic gain to the defendant. Unlike patent damages, where the expert explicitly assumes that the patent is not only valid, but infringed, the trade secret damages expert can assume trade secrets were misappropriated, but “the plaintiff must establish that they have been put to use in the misappropriator’s business.”22 The degree of certainty with which causation must be proved varies among the courts.23

Trade Secret Longevity
Unlike a patent, which has a finite statutory life, the life of a trade secret has no definite term. A trade secret can remain a trade secret for as long as it has economic value and is kept secret. A classic example of trade secret longevity is the formula for Coca-Cola, which has been a protected secret since 1886.24 The comment to UTSA Section 3 (on damages) provides a good working description of the damages period. The comment states that “a monetary recovery for trade secret misappropriation is appropriate only for the period in which information is entitled to protection as a trade secret, plus the additional period, if any, in which a misappropriator retains an advantage over good faith competitors because of misappropriation.”25 Under this description, it is unlikely that the damage period would run from the date of misappropriation though the date of trial.

Trade secret damages begin no sooner than the date of misappropriation and run though the date when the secret would have become generally known by proper means or the defendant could have independently developed the trade secret or reverse-engineered the trade secret from products in the market.26 The period of time between the date the misappropriator started to benefit from the trade secret and the date when knowledge of the trade secret hypothetically could have been obtained through legitimate means is referred to as the “head start” period.27 The misappropriator often tries to limit the duration of damages to just this head start period. However, damages can extend beyond these dates if the misappropriator continues to derive benefits from the head start gained through misappropriation. Potential benefits include profits related to long-term contracts that were won using misappropriated trade secrets or market share.

23 Ibid., 9-29–30.
25 UTSA § 3, cmt.
26 The times to independently develop or reverse-engineer trade secrets are hotly debated between the parties and can have a significant impact on damages.
gained by early entry into a market that would have been closed or restricted but for misappropriation of the plaintiff’s trade secrets.

**Measuring Damages**

**Actual Losses**

Trade secret damages can include actual losses caused by the misappropriation,\(^\text{28}\) which may take the form of lost profits on lost sales, lost profits from price erosion, and increased selling and marketing costs related to competing against the misappropriator. Damages for lost profits on lost sales are those incremental profits that the trade secret owner would have realized absent misappropriation of the trade secrets. In determining incremental profits, the damages expert should consider how important the trade secrets are in generating sales. In other words, how much consumer demand is related to the trade secrets? If other factors account for sales, then the expert may need to adjust his or her estimate of lost sales or consider whether unjust enrichment may be a more appropriate remedy.\(^\text{29}\) If the trade secret owner was forced to sell at a reduced price due to competition from the misappropriator (who competed based on use of the misappropriated trade secrets), the damages expert could also quantify lost profits due to price erosion. This analysis needs to consider product demand elasticities and whether the owner would have sold fewer units at higher prices.

**Unjust Enrichment**

The plaintiff may be able to recover the misappropriator’s unjust enrichment, either in place of actual damages (if they cannot be determined) or in addition to actual damages (if unjust enrichment damages would not be duplicative of actual damages).\(^\text{30}\) Technically, unjust enrichment is an equitable remedy and is decided by a judge.\(^\text{31}\) While the U.S. Court of Appeals for the Federal Circuit supports this view, other courts have let juries decide the issue.\(^\text{32}\) Whether decided by the judge or the jury, the damages expert must still quantify the extent of the misappropriator’s economic gain from the illegal misappropriation of trade secrets. This benefit might take the form of ill-gotten sales and accompanying profits, the avoidance of costs, such as R&D costs avoided by misappropriating the plaintiff’s protected research, or benefits related to early market entry.

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\(^{28}\) UTSA § 3(a); 18 U.S.C. § 1836(b)(3)(B)(i)(I).


\(^{30}\) UTSA § 3(a); 18 U.S.C. § 1836(b)(3)(B)(i)(II).

\(^{31}\) Menell et al., 140–41.

Unjust enrichment may be derived from increased sales or profitability, or through cost savings from not having to undertake expensive research and development. In a claim for unjust enrichment, the plaintiff has the burden of showing the misappropriator’s gross revenues related to the use of misappropriated trade secrets. It is up to the misappropriator to show deductible costs in order to determine profits. The misappropriator will try to show that profits are related to factors other than the use of misappropriated trade secrets, such as other product features, advertising and marketing campaigns, other intellectual property incorporated in the product, or manufacturing processes.  

**Reasonable Royalty**

A reasonable royalty as a measure of damages is also allowed under both the UTSA and DTSA “[i]n lieu of damages measured by any other methods [lost profits or unjust enrichment] ... for a misappropriator’s unauthorized disclosure or use of a trade secret.” Whether reasonable royalty damages can be awarded under the UTSA only if the plaintiff is unable to prove a greater amount of lost profits or disgorgement damages varies by state.

Unlike patents, trademarks, and copyrights, there is a paucity of market data related to the licensing of trade secrets. This is hardly surprising given that the value of trade secrets lies in the fact that they are not generally known or readily ascertainable by proper means. Despite the lack of market data, “[i]n order to justify this alternative measure of damages, there must be competent evidence of the amount of a reasonable royalty.” Because patent law pertaining to reasonable royalties is so evolved, it can be useful to look to it to develop “competent evidence” in determining a reasonable royalty for trade secrets. **Georgia-Pacific Corp. v. U.S. Plywood Corp.** is a seminal patent case that focuses on determining a reasonable royalty. In that case, the court set forth 15 factors to consider in determining a reasonable royalty. Substituting “trade secret(s)” for “patent,” relevant factors to consider in trade secret matters include the following **Georgia-Pacific factors** (factors 3 and 14 are excluded):

- **Factor 1:** “The royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty.” Does the plaintiff license these trade secrets? If so, under what terms?
- **Factor 2:** “The rates paid by the licensee for the use of other patents comparable to the patent in suit.” Does the misappropriator license trade secrets from other parties? If so, under what terms?
- **Factor 4:** “The licensor’s established policy and marketing program to maintain his patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve

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35 Ibid., 687.  
36 Note that being the first significant market entrant does not guarantee that the “first mover advantage” results in sustained economic benefit when a firm’s position as market leader cannot be maintained.  
37 UTSA § 3(a) and 18 U.S.C. § 1836(b)(3)(B)(ii), respectively.  
38 Christopher H. Spadea et al., “Trade Secret Damages,” 9–28. This issue is also not settled under the DTSA.  
39 UTSA § 3, cmt.  
In litigation, the focus is on the value of the subject patent or trade secret to specific parties. This is much more akin to investment value.

that monopoly.” If the plaintiff does not license its trade secrets, then it seeks to maintain their secrecy and it would require a premium to license them to the misappropriator.

- Factor 5: “The commercial relationship between the licensor and licensee, such as, whether they are competitors in the same territory in the same line of business; or whether they are inventor and promoter.” If the plaintiff and misappropriator are competitors, then the plaintiff would seek a premium to license its trade secrets.

- Factor 6: “The effect of selling the patented specialty in promoting sales of other products of the licensee; the existing value of the invention to the licensor as a generator of sales of his non-patented items; and the extent of such derivative or convoyed sales.” If use of the trade secrets results in the sale of additional products that do not incorporate the trade secrets, one would expect a royalty for the use of these trade secrets to be relatively higher.

- Factor 7: “The duration of the patent and the term of the license.” A patent term is for a fixed period. The longer the term remaining, the more value, all other things being equal. A trade secret has an indefinite life. The amount of time it would take to replicate a trade secret through lawful means would impact the royalty paid for its use.

- Factor 8: “The established profitability of the product made under the patent; its commercial success; and its current popularity.” The greater the profitability and commercial success of products made with the trade secrets, the higher the royalty one would pay to access them.

- Factor 9: “The utility and advantages of the patent property over the old modes or devices, if any, that had been used for working out similar results.” The greater the advantages of using the trade secrets, the higher the royalty one would pay.

- Factor 10: “The nature of the patented invention; the character of the commercial embodiment of it as owned and produced by the licensor; and the benefits to those who have used the invention.” This is closely tied to Factor 9. In patent cases they are often considered together.

- Factor 11: “The extent to which the infringer has made use of the invention; and any evidence probative of the value of that use.” To what extent did the misappropriator use the trade secrets and how important were they in its business?

- Factor 12: “The portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions.” This may have limited applicability to trade secret royalties given the lack of industry data.

- Factor 13: “The portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer.” This factor recognizes that the value of trade secrets should be separated from other factors that may impact the misappropriator’s profitability.

- Factor 15: “The amount that a licensor…and licensee…would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee…would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee who was willing to grant a license.” This factor recognizes that the parties must agree on a royalty rate in this hypothetical negotiation, even when there would not have been any such negotiation over the trade secrets in the real world.

Note that the hypothetical negotiation in Factor 15 is between parties that “would have agreed upon” a license. Unlike the standard definition of fair market value, where the hypothetical parties are not “under compulsion to buy or sell,” the parties in Factor 15 are not free to walk away. In litigation, the focus is on the value of the subject patent or trade secret to specific parties. This is much more akin to investment value—“the value to a particular investor based on individual investment requirements and expectations.”

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42 Ibid.
Because there is essentially no public data on market transactions involving trade secrets, trade secret valuations focus on income and development costs (including negative knowledge).

rather than the intellectual property’s possibly broader fair market value. Arguably, the actual “market” for many patents and trade secrets can be quite limited. So limited that even outside of litigation, the standard of value for most intellectual property is also investment value.

In addition to Georgia Pacific, the Federal Circuit’s opinion in Grain Processing Corp. v. American Maize-Products Co.\(^{43}\) can also be instructive. In that case, the court called for an analysis of next-best, commercially acceptable, noninfringing alternatives to the patented technology. The cost of this alternative would serve as a cap on what an infringer would pay as a royalty.\(^{44}\) In the context of a trade secret matter, the cost to develop a trade secret through proper means would be considered a cap on what the misappropriator would pay as a royalty.

Trade Secret Valuation Outside of Litigation

The valuation of trade secrets relies essentially on the same information used to determine lost profits, unjust enrichment, and reasonable royalty in litigation. Value is tied to the economic benefits derived from the fact that trade secrets are not generally known or readily ascertainable by proper means. Because there is essentially no public data on market transactions involving trade secrets, trade secret valuations focus on income and development costs (including negative knowledge). Economic benefits from trade secrets may include related cash flows (through actual sales, increased profitability, or reduced product costs). Benefits may include avoided R&D costs, cost savings from avoided mistakes, or simply costs to replicate the protected information.

A full discussion of the valuation of stand-alone patent and trade secret assets outside of litigation will be the topic for a follow-up article.

Conclusion

Unlike other forms of intellectual property, virtually every company has trade secrets. Determining the economic value of trade secrets in litigation presents unique challenges. Because of the potential monetary remedies available, the damages expert must often assess the value of the misappropriated trade secrets to both the owner and the misappropriator. In addition, the expert must consider whether the value of multiple trade secrets together is greater than the sum of the individual trade secrets. The expert’s task is further complicated by the paucity of market data on trade secret transactions or value.

Value is determined by systematically analyzing how the trade secrets are used and isolating the corresponding economic benefits. These benefits can take the form of increased revenues or lower or avoided costs—all related to the many things impacted by the use or knowledge of trade secrets.

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