

**PRECEDENTIAL**

UNITED STATES COURT OF APPEALS  
FOR THE THIRD CIRCUIT

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No. 21-2288

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PPG INDUSTRIES INC, a Pennsylvania corporation

v.

JIANGSU TIE MAO GLASS CO. LTD, a Chinese company;  
BENHUA WU, an individual;  
MEI ZHANG, an individual,  
Appellants

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On Appeal from the United States District Court  
For the Western District of Pennsylvania  
(D.C. No. 2-15-cv-00965)  
District Judge: Honorable Mark R. Hornak

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Argued  
June 28, 2022

Before: JORDAN, PORTER, and PHIPPS, *Circuit Judges*

(Filed: August 30, 2022)

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OPINION OF THE COURT

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JORDAN, *Circuit Judge*

It's been said that 80 percent of success is showing up.<sup>1</sup> One can quibble about the percentage, but it's a good bet that refusing to show up, especially when you're being sued, is a recipe for failure. That's a lesson that Jiangsu Tie Mao Glass Co. Ltd. ("TMG") should have taken to heart. By its failure to appear in this lawsuit until practically the end, TMG effectively conceded the allegations of the complaint that PPG Industries, Inc. ("PPG") had served on it. And those allegations – now accepted as fact – are damning. As recounted herein, TMG got a former PPG employee to turn over valuable trade secrets belonging to PPG. Then, with those misappropriated trade secrets, TMG took steps to compete with PPG in a particular product line. When the misappropriation came to light and PPG sued TMG, the latter watched from overseas rather than litigate. As a consequence, PPG asked the District Court to enter default judgment and award damages in the amount that TMG was unjustly enriched. Only then did TMG decide it was worth coming to court, but its protestations were and are too little and much too late. We will affirm.

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<sup>1</sup> The adage is most often attributed to Woody Allen. *Showing Up Is 80 Percent of Life*, Quote Investigator (June 10, 2013), <https://quoteinvestigator.com/2013/06/10/showing-up/>.

## I. BACKGROUND

### A. Factual Background<sup>2</sup>

PPG is a Pittsburgh-based company that manufactures coatings, specialty materials, glass, and fiberglass products. In one of its lines of business, it makes specialized windows, windshields, and “transparent armor” for uses in automobiles, trains, and aircraft. (App. at 114.) Like many manufacturers, PPG invests in research and development (“R&D”), and it takes steps to ensure that its confidential R&D information does not fall into competitors’ hands. One of those competitors is TMG, a China-based manufacturer of like products for the same or similar customers.

Of special relevance here, PPG invested heavily in the development of a new kind of plastic for airplane windows. It called that new technology “Opticor™.” (App. at 155.) TMG evidently wanted the Opticor technology and set about getting it. In March 2013, it asked a former PPG employee, Thomas Rukavina, about his ability and willingness to turn over Opticor trade secrets. Rukavina had spent thirty-five years at PPG, during which he played an active role in several R&D projects, including the development of Opticor. He had signed a number of nondisclosure agreements with PPG over the years, and one was in place when his employment ended in 2012. Nevertheless, he agreed in early 2014 to share PPG’s

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<sup>2</sup> The following rendition of facts derives from undisputed facts and the allegations in PPG’s complaint, allegations taken as true because of the default judgment. *DIRECTV, Inc. v. Pepe*, 431 F.3d 162, 165 n.6 (3d Cir. 2005).

proprietary information with TMG, in exchange for employment and a signing bonus. He was retained, and that summer he met with TMG leaders, among whom were the company's chairman and CEO, Benhua Wu, and an engineering and purchasing agent named Mei Zhang. They discussed the materials and equipment needed to manufacture new products, like Opticor plastic, and Rukavina later emailed Wu and Zhang a treasure trove of trade secrets: a proprietary PPG report detailing the Opticor technology (the "Proprietary Report"). Soon after, he sent another email summarizing additional trade secrets he could deliver to TMG.

Using the Proprietary Report, TMG began making plans to produce Opticor quality windows. In February 2015, Zhang took the surprisingly bold step of sending an email to the PPG subcontractor that made molds for Opticor windows, asking it to manufacture for TMG "the same molds" that it did for PPG. (App. at 120.) Attached to the email were photographs and drawings that came straight out of the Proprietary Report, the only change being the removal of PPG's logo and a "PPG Proprietary" header. (App. at 122.) Understandably suspicious, the subcontractor requested more details about the origin of the drawings. Rukavina, rather than Zhang, responded. He falsely stated that he was a "Senior Research Associate" and "project leader" at PPG and that PPG was transferring the Opticor technology to TMG. (App. at 121.) He asked the subcontractor to fabricate the same products it had previously "shipped to us" (i.e., to PPG), which TMG would use in a new production facility in China that he said was under construction. (App. at 121.)

The subcontractor did not fulfill the order. Instead, it alerted PPG, which in turn notified the FBI of the apparent theft

of its proprietary information. The FBI then obtained and executed warrants to search Rukavina's email account and residence. Rukavina was arrested and charged with criminal theft of trade secrets.<sup>3</sup>

## **B. Procedural History**

PPG filed this civil action against TMG, Wu, and Zhang in July of 2015.<sup>4</sup> It brought claims for violations of the federal Racketeering Influenced and Corrupt Organizations Act, 18 U.S.C. § 1962(c)-(d); Pennsylvania's Uniform Trade Secrets Act, 12 Pa. Cons. Stat. §§ 5301-5308; and Pennsylvania common law.

Despite being served with process, TMG did not make any effort to participate in the litigation. It did not file an answer or any other response to the complaint, nor did it answer the requests for admissions that PPG served. Eventually, well over a year after TMG should have appeared but failed to, the District Court's clerk entered a default.

PPG later moved for default judgment on its claim under Pennsylvania's version of the Uniform Trade Secrets Act. It asked for a permanent injunction; exemplary damages for TMG's "willful and malicious" misappropriation, 12 Pa. Cons. Stat. § 5304(b); and attorneys' fees. PPG's calculation

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<sup>3</sup> He committed suicide shortly thereafter, while he was released on bond.

<sup>4</sup> For convenience, we refer hereafter to TMG, Wu, and Zhang collectively and in the singular as "TMG."

of its actual damages was “at least \$9,909,687.31 ... , which include[d] the cost of creation as well as research and development costs” for the Opticor technology.<sup>5</sup> (App. at 159.) That calculation was supported by a declaration from PPG’s global director of engineering and technology. An exhibit to his declaration included a table tallying the Opticor development costs, with some terms and costs left unexplained. PPG also presented evidence showing TMG’s planning of a production facility “for [Rukavina’s] new plastic[,]” including plans to hire other ex-PPG employees to help design the facility’s layout. (App. at 227.)

Four months later, TMG finally appeared in the case. With the Court’s permission, it moved to set aside the entry of default, and it filed an opposition to PPG’s motion for default judgment.<sup>6</sup> After receiving further briefing and hearing oral argument, the District Court declined to set aside the default.<sup>7</sup>

As to the motion for default judgment, the Court granted it in part and deferred ruling in part. It held that PPG had alleged facts sufficient to establish TMG’s liability under the Uniform Trade Secrets Act, and it reasoned that the test we laid out in *Chamberlain v. Giampapa*, 210 F.3d 154, 164 (3d Cir.

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<sup>5</sup> That put the requested damages, once trebled as a function of the request for exemplary damages, at \$29,729,061.93.

<sup>6</sup> Although the basis TMG asserted for setting aside the default was that the District Court lacked personal jurisdiction, TMG did not file a motion to dismiss.

<sup>7</sup> TMG has not challenged that decision on appeal.

2000), pointed in favor of granting the default judgment.<sup>8</sup> It further held that PPG was entitled to treble damages; a permanent injunction preventing TMG from any further misappropriation of PPG's trade secrets; an order that TMG return all such trade secrets; and attorneys' fees, costs, and expenses. Concerning damages, the Court held that evidence of PPG's R&D costs "provide[d] an appropriate measure of [TMG's] unjust enrichment, and therefore [of] PPG's damages," but the evidence furnished by PPG was not specific enough. (App. at 32.) The Court was concerned, in particular, by certain cost and man-hour estimates made by PPG's director of engineering and technology, as well as some of the unexplained terms in the table of costs. It sent the parties to mediation to resolve those outstanding issues before coming back to the Court for approval of a final damages calculation.<sup>9</sup>

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<sup>8</sup> That test asks district courts to consider three factors: "(1) prejudice to the plaintiff if default is denied, (2) whether the defendant appears to have a litigable defense, and (3) whether defendant's delay is due to culpable conduct." *Chamberlain*, 210 F.3d at 164.

<sup>9</sup> The District Court also thought the request for attorneys' fees, costs, and expenses was vague in certain respects – in particular, the descriptions of individual attorneys' tasks, costs, and expenses – so it ordered a supplemental petition and accepted the parties' briefing on those points. While this appeal was being briefed, the District Court issued an order resolving some issues but allowing further briefing on others. That order is not at issue in this appeal.

Mediation proved unsuccessful, so the Court ordered new briefing on the issue of damages. In its supplemental briefing, PPG claimed actual damages of \$9,866,637.30, a bit less than its prior calculation. That number was supported by a new declaration from the same global director of engineering and technology, with a new exhibit containing more detailed data. After thoroughly scrutinizing the new PPG figures, the District Court found that \$8,805,929 of the claimed actual damages were supported by sufficient evidence. Trebling that, as had previously been found appropriate, the Court entered judgment in favor of PPG for \$26,417,787. TMG timely appealed.

## II. DISCUSSION<sup>10</sup>

The question before us is relatively narrow. TMG does not dispute its liability or challenge the District Court's denial of its motion to set aside the entry of default. Nor does it contest the District Court's entry of default judgment in some amount. It does, however, dispute the amount the Court arrived at. TMG argues that PPG's evidence was insufficient to establish actual damages of \$8,805,929.

When a district court enters a default judgment, “the factual allegations of the complaint, except those relating to the

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<sup>10</sup> The District Court had jurisdiction under 28 U.S.C. §§ 1331, 1332, and 1367. We have jurisdiction pursuant to 28 U.S.C. § 1291. We review for abuse of discretion a district court's entry of a default judgment. *Farzetta v. Turner & Newall, Ltd.*, 797 F.2d 151, 153 (3d Cir. 1986); *Hritz v. Woma Corp.*, 732 F.2d 1178, 1180-81 (3d Cir. 1984).

amount of damages, will be taken as true.” *Comdyne I, Inc. v. Corbin*, 908 F.2d 1142, 1149 (3d Cir. 1990); 10A Charles Alan Wright, Arthur R. Miller & Mary Kay Kane, *Federal Practice and Procedure* § 2688.1 (4th ed. 2016) (footnotes omitted). As for damages, the district court must determine the amount if it is not for “a sum certain or a sum that can be made certain by computation[.]” Fed. R. Civ. P. 55(b); *accord Comdyne I*, 908 F.2d at 1149. Under Pennsylvania law, the plaintiff bears the burden of proving damages, even when “the defendant by his own wrong has precluded a more precise computation of damages.” *Witherspoon v. McDowell-Wright*, 241 A.3d 1182, 1188 (Pa. Super. Ct. 2020) (quoting *Penn Elec. Supply Co. v. Billows Elec. Supply Co.*, 528 A.2d 643, 645 (Pa. Super. Ct. 1987)). Those “damages need not be proved with mathematical certainty, but only with reasonable certainty, and evidence of damages may consist of probabilities and inferences.” *Bailets v. Pa. Tpk. Comm’n*, 181 A.3d 324, 336 (Pa. 2018). The damages award is entitled to significant deference; it “will not be upset on appeal unless it is so excessive as to shock the conscience of the court or it is clearly based on partiality, prejudice or passion.” *Id.*

The District Court determined the amount of damages by starting, quite appropriately, with the statute under which PPG obtained default judgment: Pennsylvania’s Uniform Trade Secrets Act. Under that Act, “[d]amages can include both the actual loss caused by misappropriation and the unjust enrichment caused by misappropriation that is not taken into account in computing actual loss.” 12 Pa. Cons. Stat. § 5304(a). The parties agree that PPG did not demonstrate actual loss from TMG’s misappropriation. It did not, for example, come forward with evidence that TMG had won a contract to supply products containing the Opticor technology.

*Cf. Advanced Fluid Sys., Inc. v. Huber*, 295 F. Supp. 3d 467, 491-92 (M.D. Pa. 2018) (crediting evidence of how much plaintiff would have profited had it been awarded contracts that instead went to a competitor that misappropriated trade secrets). Rather, PPG’s focus was on proving that TMG was unjustly enriched.

PPG argues that TMG’s unjust enrichment can be measured by the costs TMG would have incurred to develop its own version of the Opticor technology without guidance from the Proprietary Report and other misappropriated trade secrets. One way to estimate those development costs, the argument goes, is to look at what PPG itself had to spend to develop the Opticor technology. The District Court agreed with that reasoning and held that “PPG’s research and development costs provide an appropriate measure of [TMG’s] unjust enrichment, and therefore [of] PPG’s damages[.]” (App. at 32.) TMG disputes that logic, but none of its arguments has merit.

First, it says that it “obtained no commercial benefit from any use of PPG’s trade secrets,” so there was no unjust enrichment. (Opening Br. at 20.) True enough, there was no evidence that TMG sold products containing the Opticor technology, but that does not mean TMG was not unjustly enriched. Under Pennsylvania law, unjust enrichment “requires that the defendant pay to plaintiff the value of the benefit conferred.” *Schenck v. K.E. David, Ltd.*, 666 A.2d 327, 328-29 (Pa. Super. Ct. 1995). And, as authorities elsewhere establish, that benefit need not be a profit that was realized; it can be a cost that was avoided. *See Bohnsack v. Varco, L.P.*, 668 F.3d 262, 280 (5th Cir. 2012) (“Damages in misappropriation cases can take several forms[, including] ...

the development costs the defendant avoided incurring through misappropriation[.]”); Restatement (Third) of Restitution and Unjust Enrichment § 42 cmt. f, illus. 5 (2011) (“The value of the use [of intellectual property] may be measured ... by the costs that Competitor would have incurred to acquire or create equivalent materials by legitimate means.”). The District Court was thus on firm ground in considering costs that TMG would have incurred to develop its own version of the Opticor technology but which it avoided because it had the Proprietary Report and other confidential PPG material.<sup>11</sup>

But, protests TMG, there is no evidence here of a “nexus between the amount of damages and the value of the misappropriated material.” (Opening Br. at 24.) Relying on an excerpt from *Deltak, Inc. v. Advanced Systems, Inc.*, 767 F.2d 357 (7th Cir. 1985), TMG insists that it “merely possess[ed]” PPG’s trade secrets without putting them to any use. (Opening Br. at 26.) In *Deltak*, a copyright infringement case, the Seventh Circuit saw no reason to tie the damages calculation to “the number of copies the infringer *produced*, at least where that number differs from the number of copies *used* by the infringer.” 767 F.2d at 361 (emphasis added).

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<sup>11</sup> The District Court did not, as TMG argues, hold PPG to a “lower evidentiary standard.” (Opening Br. at 14.) The District Court’s observation that the lack of evidence was largely attributable to TMG’s refusal to participate in litigation – and its concern that crediting TMG’s late-arriving arguments would incentivize such problematic litigation behavior – was entirely appropriate. The District Court could still rely, as it did, on the costs that TMG avoided, even without evidence of a profit.

The problem for TMG is that there is ample support for the conclusion that it did use the misappropriated trade secrets, so *Deltak* is wholly inapposite. TMG just stripped PPG’s name and logo from drawings in the Proprietary Report and then asked PPG’s subcontractor to use those drawings and related specifications to manufacture “the same molds” that it did for PPG. (App. at 120.) Rukavina also told the subcontractor that TMG was already building a production facility for the products, an assertion corroborated by evidence that TMG had specific plans for such a facility. In other words, TMG was able to skip the R&D process completely and begin preparing for production without developing anything like the Opticor technology on its own. That amounts to use of the trade secrets. See *Oakwood Lab’ys LLC v. Thanoo*, 999 F.3d 892, 909 (3d Cir. 2021) (agreeing with the Fifth Circuit that “relying on [a] trade secret to assist or accelerate research or development ... constitute[s] ‘use’” under the federal Defend Trade Secrets Act).<sup>12</sup>

To figure out how much money TMG saved by skipping the R&D process, the District Court looked to what PPG had spent on developing the Opticor technology. TMG argues that

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<sup>12</sup> This case is thus factually distinguishable from cases on which TMG relies, where courts found a paucity of evidence that the defendants had avoided costs or otherwise benefited from the misappropriated trade secrets. *DF Inst., LLC v. Dalton Educ., LLC*, No. 19-CV-452-JDP, 2020 WL 4597122, at \*6-8 (W.D. Wis. Aug. 11, 2020); *Inteum Co., LLC v. Nat’l Univ. of Sing.*, 371 F. Supp. 3d 864, 885 (W.D. Wash. 2019).

was error too. It says that the Uniform Trade Secrets Act does not allow PPG to recover “its own cost of developing the Opticor product.” (Opening Br. at 20.) Unjust enrichment damages are indeed a measure of “the benefit conferred” upon the defendant, *Schenck*, 666 A.2d at 328-29, so “any costs the plaintiff may have incurred are generally irrelevant” to unjust enrichment damages, *Epic Sys. Corp. v. Tata Consultancy Servs. Ltd.*, 980 F.3d 1117, 1129 (7th Cir. 2020) (internal quotation marks omitted), *cert. denied*, 142 S. Ct. 1400 (2022). But that is beside the point.

The District Court did not look to PPG’s R&D costs to reimburse PPG. Rather, it looked to those costs as indicative of the costs PPG’s competitor, TMG, avoided by misappropriating the fruits of PPG’s work.<sup>13</sup> As other courts have agreed in similar circumstances, that inference is a

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<sup>13</sup> Accordingly, TMG’s reliance on *HealthCare Advocates v. Affordable Healthcare Options*, Civil No. 09-5839, 2010 WL 4665956, at \*2 (E.D. Pa. Nov. 18, 2010), is misplaced. The court there stated only that the plaintiff’s development costs were irrelevant to the plaintiff’s lost profits. It said nothing about how development costs might be indicative of unjust enrichment.

Also misplaced is TMG’s reliance on *Molex Co., LLC v. Andress*, 887 F. Supp. 2d 1189, 1196 (N.D. Ala. 2012), where the court did not consider a plaintiff’s development costs to be strong evidence of what a “reasonable royalty” might have been. The District Court here did not consider PPG’s R&D costs as indicative of what PPG might have charged TMG in royalties; it considered the costs as indicative of the development costs TMG avoided.

perfectly permissible way to find a damages amount with the requisite “reasonable certainty[.]” *Bailets*, 181 A.3d at 336. In short, “[t]he costs a plaintiff spent in development ... can be a proxy for the costs that the defendant saved.” *GlobeRanger Corp. v. Software AG U.S., Inc.*, 836 F.3d 477, 499 (5th Cir. 2016); *see also Bourns, Inc. v. Raychem Corp.*, 331 F.3d 704, 709-10 (9th Cir. 2003) (affirming district court’s damages award of \$9 million after relying on evidence that the plaintiff’s development cost was \$3 million per year and that the defendant saved at least three years of development costs).

Finally, TMG argues that the District Court erred in awarding damages on top of issuing a permanent injunction prohibiting it from using PPG’s trade secrets. Because the injunction prohibited use of the trade secrets, TMG says, awarding damages for use during that same period of time amounts to a “double recovery.” (Opening Br. at 19.) But, while an award of “injunctive relief ordinarily will preclude a monetary award for a period in which the injunction is effective[.]” 12 Pa. Cons. Stat. § 5304 cmt.; *cf. DSC Commc’ns Corp. v. Next Level Commc’ns*, 107 F.3d 322, 328 (5th Cir. 1997) (district court did not abuse discretion in denying injunctive relief after jury award of damages sufficiently compensated for the misappropriation), that is not what happened here.

The District Court here did not award damages for a period of use that overlapped with the period covered by the injunction. The damages award was for the development costs TMG avoided when, for example, it solicited molds from PPG’s subcontractor and began designing a production facility in China. Those were past uses of the misappropriated trade secrets for which PPG was entitled to damages. The forward-

looking permanent injunction, meanwhile, was issued in March 2020, long after TMG's earlier and unlawful use of PPG's trade secrets. The damages and permanent injunction covered entirely separate periods of past and potential future use of misappropriated trade secrets.<sup>14</sup>

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<sup>14</sup> That remains true notwithstanding the District Court's analogy to the secret recipe of a popular "soda pop manufacturer located in Atlanta, Georgia":

If a competing soda pop manufacturer stole the secret, but never actually produced any soda pop from the world-famous recipe, the thief still obtained an actual benefit – a really big benefit. After all, the recipe, in and of itself, has immense value. And the competing manufacturer would have acquired the ability to use the world-famous and top-secret recipe whenever it wanted, without having to spend a dime of R&D costs, or a moment of R&D time. The competitor plainly would have been enriched in the amount of R&D that it never had to do.

(App. at 36.) TMG leans on that language as indicating that the District Court awarded damages for the same future period covered by the permanent injunction. Yet the District Court's reasoning elsewhere makes clear that its careful damages calculation – focusing on the R&D costs that PPG incurred and that TMG avoided – was for past use, while the injunction covered future use.

Finally, TMG also argues that the award of treble damages should be vacated because it rests on an erroneous calculation of actual damages. The actual damages calculation

### III. CONCLUSION

Under the Uniform Trade Secrets Act, including Pennsylvania's version of that statute, it can be appropriate to measure unjust enrichment from a misappropriated trade secret by looking at development costs that were avoided but would have been incurred if not for the misappropriation. The District Court considered and carefully analyzed such evidence here, and its methodology and conclusion are sound. We will therefore affirm.

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was not erroneous, however, so we see no reason to disturb the award of treble damages.