

**The Potential Economic Benefits of Recent Reductions
in Discretionary Denial of *Inter Partes* Review Based on
Criteria such as the *NHK-Fintiv Rules***

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Executive Summary

- In recent years, there has been an increase in discretionary denial of institution of *inter partes* review (IPR) based on the criteria set forth in the *Apple, Inc. v Fintiv, Inc.* (*Fintiv*) matter. These guidelines made it difficult for claims to be fully considered even in cases where there was a substantial probability of success for the petitioner, resulting in a reduction in IPR proceedings and related economic efficiency benefits. Subsequent guidance from the US Patent and Trademark Office (USPTO) clarified the appropriate application of *Fintiv* rules, resulting in a reduction of discretionary denials and positive implications for efficiency and the economy.
- The Perryman Group estimates that, over the next 10 years, reducing discretionary denials of IPR associated with *Fintiv* in line with recent clarification leads to cost savings which generate a **net increase in US business activity of \$482.1 million in gross product, \$230.4 million in personal income, and approximately 2,000 job-years of employment** (including multiplier effects).
- The industry group experiencing the largest gains was manufacturing, with an estimated increase of **\$230.1 million** in gross product and 758 job-years of employment (including multiplier effects); all industry groups are positively affected.
- Economic performance in the United States over the long term is critically tied to the rate of innovation. The *inter partes* review process under AIA and PTAB enhances the efficiency of the innovation process, thus fostering future prosperity.

Introduction

Innovation has long been recognized as the key factor supporting US economic growth and competitiveness. A critical element of the infrastructure facilitating product development and commercialization is the system that protects intellectual property and encourages its widespread adoption and implementation. The current framework that facilitates this process includes the Leahy-Smith America Invents Act (AIA) and the Patent Trial and Appeal Board

An important aspect of the framework for protecting intellectual property is *inter partes* review, which reduces litigation costs and generates **substantial economic benefits**.

(PTAB). The AIA and PTAB reduce the need for and cost of patent litigation, reducing transaction costs,

increasing efficiency, and generating substantial economic benefits. An important aspect of this framework is *inter partes* review (IPR).

In recent years, there has been an increase in discretionary denial of institution of IPR matters based on the criteria set forth in the *Apple, Inc. v Fintiv, Inc.* (*Fintiv*) matter. These guidelines made it difficult for claims to be fully considered even in cases where there was a substantial probability of success for the petitioner. The result was a reduction in IPR proceedings even for cases that were otherwise meritorious. As a consequence, the economic efficiency benefits associated with the IPR process were substantially diminished. In June, however, guidance from the US Patent and Trademark Office (USPTO) clarified the appropriate application of *Fintiv* rules, resulting in a reduction of discretionary denials and positive implications for efficiency and the economy. Reform legislation currently pending in Congress would codify the basic premises of the new guidelines.¹

The Perryman Group (TPG) recently analyzed the benefits of the reduction in *Fintiv*-related denials of *inter partes* review on US economic activity as indicated in the recent memorandum by USPTO Director Katherine K. Vidal (which is described below). This process involves first estimating the direct cost

¹ See, for example, Kass, Diana, “PTAB Permanently Altered by Fintiv, Even as Denials Plummet,” law360.com, November 9, 2022 and Alcaiti, Cook, “PTAB Year in Review: Five Developments that Shaped the Future of the Board,” ipwatchdog.com, December 28, 2022.

savings associated with reduced litigation costs related to the *inter partes* review process and then computing the total economic benefits of the associated efficiency gains as they ripple through the economy. It should be noted that codification of earlier *Fintiv* practice (pre-memorandum) or an increase in *Fintiv*-denials would reduce or potentially even eliminate these effects. This report presents the results of TPG’s analysis.

Inter Partes Review and *Fintiv* Rules

The AIA was enacted into law on September 16, 2011. It was the culmination of a decade of Congressional consideration on how to improve patent quality and represented the most significant reforms to the US patent system in almost 60 years.

The AIA changed the way patent litigation is conducted, allowing for faster and less costly mechanisms. Trials under the AIA are overseen by the PTAB and are intended to be an alternative to district court litigation with several key differences. One difference is that AIA trials are conducted before a panel of three technically trained administrative patent judges, while district court cases often involve a jury. Although discovery is available in both forums, discovery before the PTAB is more limited in scope which lowers the cost to litigate. Another key difference is that PTAB trials typically are resolved within 12 months from institution, whereas district court litigation may take several years to conclude.²

One important type of trial under the AIA is *inter partes* review. Under *inter partes* review, a member of the public can challenge the patentability of claims in an issued patent in a petition to the PTAB. For example, a petition may

The AIA changed the way patent litigation is conducted, allowing for faster and less costly mechanisms.

challenge an issued patent on grounds of anticipation or obviousness. These petitions

² Gongola, Janet, “The Patent Trial and Appeal Board: Who are they and what do they do?,” Patent Trial and Appeal Board, United States Patents and Trademark Office, Summer 2019, <https://www.uspto.gov/learning-and-resources/newsletter/inventors-eye/patent-trial-and-appeal-board-who-are-they-and-what>.

often identify prior art patents and publications that might not have been considered by the original examiner.

However, IPR proceedings involving the same parties and invalidity challenges can increase, rather than limit, litigation costs. In *NHK Spring Co. v. Intri-Plex Techs., Inc. (NHK)*, the PTAB denied institution using the rationale that it would be an inefficient use of the PTAB time and resources if the district court trial concluded before the PTAB issued its final written decision. This analysis was subsequently used to deny institution in other instances where district court trial dates were set, even though it is common for such trial dates to be delayed. Subsequently, the USPTO cited this matter in designating as precedential the *Apple Inc. v. Fintiv, Inc.* decision.³

This decision enumerated factors (the *Fintiv* factors) that the PTAB should consider in determining whether to institute an IPR post-grant proceeding where there is parallel district court litigation. However, it became clear that the *Fintiv* factors could be resulting in excessive reductions in IPR, as a discretionary weighing of the factors tended to favor the denial of institution even in otherwise valid cases. In June 2022, Katherine K. Vidal, Under Secretary of Commerce for Intellectual Property and Director of the USPTO issued a memorandum clarifying procedures for discretionary denials in AIA post-grant proceedings with parallel district court litigation.

Key points of the clarification include instructing PTAB not to deny “institution of an IPR or PGR under *Fintiv* (i) when a petition presents compelling evidence of unpatentability; (ii) when a request for denial under *Fintiv* is based on a parallel ITC proceeding; or (iii) where a petitioner stipulates not to pursue in a parallel district court proceeding the same grounds as in the petition or any grounds that could have reasonably been raised in the petition.”⁴ The memorandum goes on to indicate that when the PTAB is applying *Fintiv* factor two, it should consider the speed with which the district court case may come to trial and be resolved.

³ *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PT AB Mar. 20, 2020) designated precedential May 5, 2020.

⁴ Memorandum to Members of the Patent Trial and Appeal Board from Katherine K. Vidal Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office, “INTERIM PROCEDURE FOR DISCRETIONARY DENIALS IN AIA POSTGRANT PROCEEDINGS WITH PARALLEL DISTRICT COURT LITIGATION,” June 21, 2022, https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf.

Since the memorandum was issued, the numbers of discretionary denials of IPR have fallen significantly, leading to higher direct cost savings as described in the following section.

Direct Cost Savings

In prior studies, The Perryman Group examined the total economic benefits of the PTAB process as well as IPR.⁵ In the present analysis, attention is focused on the benefits of reducing *Fintiv*-related discretionary denials of IPR and the associated numbers of cases achieving the benefits available through IPR. The direct cost savings associated with the *inter partes* review process established in the AIA stem from both reductions in legal fees incurred and the greater probability of a settlement or early-stage resolution.

The decrease in the number of cases denied IPR due to the recent clarification was estimated based on patterns since the memorandum was issued relative to the prior period since the *Fintiv* criteria were implemented. Cost savings per case were derived through a multi-stage process involving compilation of a database of patent matters and their resolution by stage and size of risk over approximately 20 years, analysis of the numbers reaching discovery or trial phases, and estimation of costs with and without *inter partes* review under the AIA/PTAB. (See the Appendix for additional detail.)

Prior analysis by The Perryman Group indicates estimated direct cost savings due to *inter partes* review over the 2014-19 period included \$1.676 billion from instances where *inter partes* review resulted in a stay in litigation and \$121.231 million where an *inter partes* review was conducted in parallel with district court proceedings. Clearly, reducing the number of cases in the IPR process would reduce potential savings in the future.

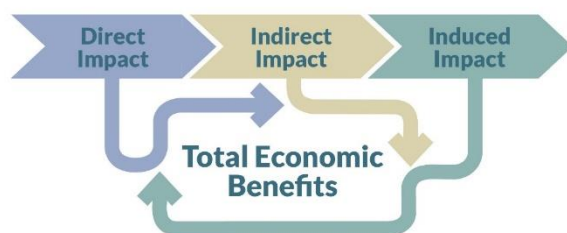
⁵ “An Assessment of the Impact of the America Invents Act and the Patent Trial and Appeal Board on the US Economy,” The Perryman Group, June 2020 and “An Assessment of the Impact of the *Inter Partes* Review Process under the Patent Trial and Appeal Board on the US Economy,” The Perryman Group, January 2021.

Economic Benefits

Because direct savings associated with IPR represent a net gain in efficiency (reduction in cost with no corresponding loss of output), it is appropriate to consider the secondary (or "multiplier" effects) as these funds circulate through the economy. To estimate overall benefits, the direct savings were allocated across industrial categories in a manner consistent with the volume of patent cases filed⁶ and simulated using the Input-Output Model of the United States and related industrial data maintained by the Bureau of Economic Analysis of the US Department of Commerce (BEA).

Any economic stimulus, whether positive or negative, generates multiplier effects throughout the economy. In this case, the economic stimulus is gains in efficiency associated with cost reductions. The public input-output model of the United States was used to calculate total economic benefits.

The input-output process uses a variety of data (from surveys, industry



information, and other sources) to describe the various goods and services (known as resources or inputs) required to produce another good/service. This process allows for estimation

of total economic impacts (including multiplier effects). Total economic effects are quantified for key measures of business activity:

- Total expenditures (or total spending) measure the dollars changing hands as a result of the economic stimulus.
- Gross product (or output) is production of goods and services that will come about in each area as a result of the activity. This measure is parallel to the gross domestic product numbers commonly reported by various media outlets and is a subset of total expenditures.
- Personal income is dollars that end up in the hands of people in the area; the vast majority of this aggregate derives from the earnings of employees, but payments such as interest and rents are also included.

⁶ "2018 Patent Litigation Study," PwC, May 2018, <https://www.pwc.com/us/en/services/forensics/library/patent-litigation-study.html>.

- Job gains are expressed as job-years of employment for cumulative measures. A job-year is one person working for one year, though it could be multiple persons working partial years.

Monetary values were quantified on a constant (2022) basis to eliminate the effects of inflation. Additional detail regarding the methods used is provided in the Appendix.

The Perryman Group estimates that, over the next 10 years, reducing discretionary denials of IPR associated with *Fintiv* in line with recent clarification leads to cost savings which generate a **net increase in US business activity of \$482.1 million in gross product, \$230.4 million in personal income, and approximately 2,000 job-years of employment** (including multiplier effects).

The industry group experiencing the largest gains was manufacturing, with an estimated increase of **\$230.1 million** in gross product and 758 job-years of employment (including multiplier effects); all industry groups are positively affected.

The Estimated Cumulative Ten-Year Impact (2023-2032) Associated with the Continuation of Recent Patterns in Instituting Proceedings with Pending Litigation Relative to Permanent Adoption of the *Fintiv* Criteria on US Business Activity

| Industry | Total Expenditures (in Millions) | Gross Product (in Millions) | Personal Income (in Millions) | Job-Years |
|--|-------------------------------------|--------------------------------|----------------------------------|--------------|
| Agriculture | \$5.01 | \$1.82 | \$0.65 | 13 |
| Mining | \$19.48 | \$11.08 | \$2.69 | 13 |
| Utilities | \$18.89 | \$12.87 | \$3.37 | 11 |
| Construction | \$3.95 | \$2.06 | \$1.36 | 12 |
| Manufacturing | \$613.40 | \$230.08 | \$109.53 | 758 |
| Wholesale Trade | \$44.76 | \$29.99 | \$13.48 | 101 |
| Retail Trade | \$35.78 | \$24.57 | \$13.68 | 171 |
| Transportation & Warehousing | \$25.79 | \$13.66 | \$7.84 | 81 |
| Information | \$65.15 | \$38.74 | \$13.67 | 104 |
| Finance & Insurance | \$20.31 | \$12.60 | \$2.86 | 48 |
| Real Estate | \$43.94 | \$27.26 | \$6.18 | 14 |
| Professional Services | \$27.59 | \$17.48 | \$12.61 | 90 |
| Management Services | \$24.40 | \$15.46 | \$11.15 | 74 |
| Administrative Services | \$16.53 | \$10.47 | \$7.55 | 117 |
| Education Services | \$0.30 | \$0.18 | \$0.15 | 2 |
| Health & Social Services | \$7.66 | \$4.76 | \$3.83 | 46 |
| Amusement & Recreation Services | \$3.44 | \$2.09 | \$1.25 | 15 |
| Accommodation & Food Services | \$17.89 | \$10.86 | \$6.50 | 150 |
| Other Services | \$19.20 | \$11.56 | \$8.48 | 138 |
| Government | \$7.11 | \$4.53 | \$3.58 | 42 |
| Total, All Industries | \$1,020.56 | \$482.13 | \$230.42 | 2,001 |

Source: The Perryman Group

Note: This scenario uses a conservative estimate of projected denials of institution of IPR using the discretionary standard set forth in *Apple v. Fintiv* relative to the situation using recent guidance and legislation. The projections are based on patterns observed in the period in which the discretionary standards were invoked relative to patterns in recent quarters. Direct savings were determined on a per-case basis based on prior studies by The Perryman Group updated to reflect recent cost patterns and converted to constant (2022) dollars. A job-year is one person working for one year, though it could be multiple individuals working for partial years. Components may not sum to total due to rounding.

Conclusion

The *inter partes* review process under the AIA/PTAB leads to substantial cost savings in patent litigation. These savings and the related increase in efficiency generate economic benefits across the economy. *Fintiv* rules led to a large number of discretionary denials of IPR which worked to reduce these savings. More recently, however, guidance from the USPTO clarified the application of *Fintiv* rules. The result has been a reduction in discretionary denial of IPR.

Cost savings associated with the *inter partes* review process under AIA/PTAB lead to significant increases in US business activity.

The Perryman Group estimates that over the next 10 years, the total economic benefits of reducing the discretionary denials of IPR related to *Fintiv* rules will lead to an increase in US business activity of **\$482.1 million** in gross product and approximately **2,000** job-years of employment when multiplier effects are considered. These benefits are concentrated in the manufacturing sector.

Economic performance in the United States over the long term is critically tied to the rate of innovation. The *inter partes* review process under AIA and PTAB enhances the efficiency of the innovation process, thus fostering future prosperity.

Appendix: Methods Used

The basic modeling technique employed in this study is known as dynamic input-output analysis, which essentially uses extensive survey data, industry information, and a variety of corroborative source materials to create a matrix describing the various goods and services (known as resources or inputs) required to produce one unit (a dollar's worth) of output for a given sector. Once the base information is compiled, it can be mathematically simulated to generate evaluations of the magnitude of successive rounds of activity involved in the overall production process.

There are two essential steps in conducting an input-output analysis once the system is operational. The first major endeavor is to accurately define the levels of direct activity to be evaluated. Second, the resulting inputs are used in a simulation of an input-output system, in this case the Input-Output Model of the United States maintained by the US Department of Commerce.

Estimation of Direct Savings

The determination of the cost savings for various types of litigation and the number of cases in each representative category involved a multi-stage process. Using data from the widely respected biennial self-reported litigation cost surveys conducted by the American Intellectual Property Law Association (AILPA),⁷ it was possible to develop a database of estimated patent litigation costs by amount at risk and stage at which the case was resolved dating back to 2001. A comparable series was developed for trademark litigation in order to establish a benchmark for trends in other types of intellectual property matters. The patterns in trademark cases were used to estimate the cost of patent matters by risk and size category in the absence of AIA/PTAB. These patterns were compared with overall civil litigation cost estimates and found to be reasonable.

In order to determine aggregate cost savings, it was necessary to determine the number of cases that proceed to the later stages of discovery or trial. The analysis was limited to only matters with more than \$1 million at risk. This assumption may result in a modest understatement of the overall direct benefits. It is likely to be negligible, however, in that (1) the overwhelming majority of smaller matters are resolved early in the process due to cost considerations and (2) the expense of a PTAB proceeding

⁷ "Report of the Economic Survey (various years 2001-2019)," American Intellectual Property Law Association (AIPLA), www.aipla.org.

and other expense relative to the amounts at risk make it unlikely to be a cost-effective investment in many instances.

Although only about 10% of cases reach the late discovery and/or trial phases, the vast majority of these have substantial amounts at risk. Data from the major courts where patent cases are tried provide a valid mechanism to estimate the proportion that progress to the major stages of discovery and trial are associated with higher amounts at risk⁸. Moreover, data related to damage awards in major jurisdictions and by industry provide a basis to estimate a distribution of cases according to categories of risk.⁹ Combining the results of these analysis segments with information regarding (1) the percentage of *inter partes* reviews which are conducted with and without the litigation being stayed, (2) the number of cases resolved through the IPR process, (3) settlement patterns in the relevant matters, and (4) costs incurred at each stage of the process permits computation of estimated direct savings over the 2014-2019 period. Finally, all values are converted to constant 2019 dollars using the Implicit Price Deflator for Professional Services obtained from the Bureau of Economic Analysis of the US Department of Commerce (BEA). This procedure is necessary to eliminate any inflationary effects and allow the savings to be aggregated on a consistent basis.

In a prior analysis, The Perryman Group estimated that **direct savings over the 2014-19 period of \$1.677 billion** in cases where *inter partes* review resulted in a stay in litigation and **\$121.231 million** in cases where the review was conducted parallel to a district court case. For the current analysis, estimated savings on a per-case basis were updated to 2022 and applied to recent patterns in discretionary denial of IPR related to *Fintiv* rules before and after the recent clarification. The most recent AILPA information was also incorporated. Once these direct effects were estimated, total economic impacts were quantified through model simulation as described below.

Model Simulation

Simulations of the Input-Output Model of the United States maintained by the US Department of Commerce were utilized to measure overall economic effects of the direct cost savings estimated during the course of this analysis and described above.

The impact assessment (input-output) process essentially estimates the amounts of all types of goods and services required to produce one unit (a dollar's worth) of a specific type of output. For purposes of illustrating the nature of the system, it is useful to think

⁸ Yoon, James C., "IP Litigation in United States," Wilson Sonsini Goodrich & Rosati, August 2016, <https://law.stanford.edu/wp-content/uploads/2016/07/Revised-Stanford-August-4-2016-Class-Presentation.pdf>.

⁹ "2018 Patent Litigation Study," PwC, May 2018, <https://www.pwc.com/us/en/services/forensics/library/patent-litigation-study.html>.

of inputs and outputs in dollar (rather than physical) terms. As an example, the construction of a new building will require specific dollar amounts of lumber, glass, concrete, hand tools, architectural services, interior design services, paint, plumbing, and numerous other elements. Each of these suppliers must, in turn, purchase additional dollar amounts of inputs. This process continues through multiple rounds of production, thus generating subsequent increments to business activity. The initial process of building the facility is known as the *direct effect*. The ensuing transactions in the output chain constitute the *indirect effect*.

Another pattern that arises in response to any direct economic activity comes from the payroll dollars received by employees at each stage of the production cycle. As workers are compensated, they use some of their income for taxes, savings, and purchases from external markets. A substantial portion, however, is spent locally on food, clothing, health care services, utilities, housing, recreation, and other items.

Impacts were measured in constant 2022 dollars to eliminate the effects of inflation.

Definitions of Terms

The input-output process generates estimates of the effect on several measures of business activity. The most comprehensive measure of economic activity used in this study is **Total Expenditures**. This measure incorporates every dollar that changes hands in any transaction. For example, suppose a farmer sells wheat to a miller for \$0.50; the miller then sells flour to a baker for \$0.75; the baker, in turn, sells bread to a customer for \$1.25. The Total Expenditures recorded in this instance would be \$2.50, that is, $\$0.50 + \$0.75 + \$1.25$. This measure is quite broad but is useful in that (1) it reflects the overall interplay of all industries in the economy, and (2) some key fiscal variables such as sales taxes are linked to aggregate spending.

A second measure of business activity frequently employed in this analysis is that of **Gross Product**. This indicator represents the regional equivalent of Gross Domestic Product, the most commonly reported statistic regarding national economic performance. In other words, the Gross Product of Texas is the amount of US output that is produced in that state; it is defined as the value of all final goods produced in a given region for a specific period of time. Stated differently, it captures the amount of value-added (gross area product) over intermediate goods and services at each stage of the production process, that is, it eliminates the double counting in the Total Expenditures concept. Using the example above, the Gross Product is \$1.25 (the value of the bread) rather than \$2.50. Alternatively, it may be viewed as the sum of the value-added by the farmer, \$0.50; the miller, \$0.25 ($\$0.75 - \0.50); and the baker, \$0.50 ($\$1.25 - \0.75). The total value-added is, therefore, \$1.25, which is equivalent to the

final value of the bread. In many industries, the primary component of value-added is the wage and salary payments to employees.

The third gauge of economic activity used in this evaluation is **Personal Income**. As the name implies, Personal Income is simply the income received by individuals, whether in the form of wages, salaries, interest, dividends, proprietors' profits, or other sources. It may thus be viewed as the segment of overall impacts which flows directly to the citizenry.

The final aggregates used are **Jobs and Job-Years**, which reflect the full-time equivalent jobs generated by an activity. For an economic stimulus expected to endure (such as the ongoing operations of a facility), the Jobs measure is used. It should be noted that, unlike the dollar values described above, Jobs is a "stock" rather than a "flow." In other words, if an area produces \$1 million in output in 2018 and \$1 million in 2019, it is appropriate to say that \$2 million was achieved in the 2018-19 period. If the same area has 100 people working in 2018 and 100 in 2019, it only has 100 Jobs. When a flow of jobs is measured, such as in a construction project or a cumulative assessment over multiple years, it is appropriate to measure employment in Job-Years (a person working for a year, though it could be multiple people working for partial years). This concept is distinct from permanent Jobs, which anticipates that the relevant positions will be maintained on a continuing basis.

About The Perryman Group

The Perryman Group has served the needs of more than 3,000 private-sector clients in numerous industries including

- the 9 largest firms in the US,
- 8 of the 10 largest law firms in the US,
- 3 of the 4 largest domestic foundations,
- the 6 largest energy companies doing business in the US,
- the 12 largest technology companies in the world,
- the 5 largest financial institutions in the US,
- two-thirds of the Global 25, and
- more than one-half of the Fortune 100.

The firm has also completed over 1,000 public policy studies on a variety of issues, and Dr. Perryman has served as advisor and/or consultant to several Presidents, numerous House and Senate Committees, 12 Cabinet departments, numerous foreign governments, and more than 100 other state and federal agencies. He has testified extensively regarding economic, financial, statistical, and damages issues in state and federal courts as well as in more than 100 regulatory proceedings.