The Potential Economic Costs to the US Government of Discretionary Denial of *Inter Partes* Review Based on Criteria such as the *NHK-Fintiv Rules*

August 2023

THE PERRYMAN GROUP
254.751.9595 ◆ info@perrymangroup.com ◆ www.PerrymanGroup.com

Contents

Executive Summary

- Recently proposed rulemaking and legislation would increase discretionary denial of institution of *inter partes* review (IPR) matters based on the criteria set forth in the *Apple, Inc. v Fintiv, Inc.* (*Fintiv*) matter and similar provisions. The *Fintiv* guidelines and related restrictions can make it difficult for claims to be fully considered even in cases where there is a substantial probability of success for the petitioner. If the proposed guidelines were implemented, the result would be a reduction in IPR proceedings even for cases that are otherwise meritorious. As a consequence, the economic efficiency benefits associated with the IPR process would be substantially diminished.

- The Perryman Group estimates that, over the next 10 years, discretionary denials of IPR associated with the proposed rule would lead to foregone cost savings which generate a **net decrease 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). Note that these losses likely understate the aggregate losses in that the proposed rules and legislation have provisions with the potential to reduce IPR filings beyond the effects of the *Fintiv* criteria.

- Business activity generates tax receipts, and this reduction will lead to estimated losses in tax receipts to the federal government of **-$96.4 million** over the next 10 years. These results reflect simulation of a fiscal model linked directly to the impacts described above.

- An additional issue with reducing IPR is that it will lead to higher costs of procurement for the US government. The Perryman Group estimates that the direct increased costs to the federal government associated with federal spending over the 2023-32 period would be **-$106.4 million**.

- When summed with the estimated tax effects previously described, the total cost to the federal government was found to be almost **-$202.9 million**.

- 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. The proposed rules and legislation would not only reduce these benefits of IPR, but also involve substantial reductions in economic activity and tax receipts. Over time, it would likely also have the effect of curtailing investment in research and development by reducing returns, thus imposing consequences for long-term growth and 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 (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).

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

Recently proposed rulemaking and legislation would increase discretionary denial of institution of IPR matters based on the criteria set forth in the *Apple, Inc. v Fintiv, Inc.* (*Fintiv*) matter and similar provisions. The *Fintiv* guidelines and related restrictions can make it difficult for claims to be fully considered even in cases where there is a substantial probability of success for the petitioner. If the proposed guidelines were implemented, the result would be a reduction in IPR proceedings even for cases that are otherwise meritorious. As a consequence, the economic efficiency benefits associated with the IPR process would be substantially diminished. The approach would represent a reversal of June 2022 guidance from the US Patent and Trademark Office (USPTO) which clarified the appropriate application of *Fintiv* rules and resulted in a reduction of discretionary denials and positive implications for efficiency and the economy. Reducing IPR would not only involve substantial economic costs, but would decrease federal tax receipts.

Beyond these negative fiscal implications, costs of procurement would also rise. As an outcome of reducing IPR, litigation costs to affected petitioners would increase. It is widely recognized that prices firms charge to the US government are inelastic, meaning that incremental costs would typically be passed to the federal government.

The Perryman Group (TPG) recently analyzed both of these aspects of reducing IPR on the US government. 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.[1]

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 challenge an issued patent on grounds of anticipation or obviousness. These petitions often identify prior art patents and publications that might not have been considered by the original examiner.

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

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

[1] 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.

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.[2]

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."[3] 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.

After the memorandum was issued, the numbers of discretionary denials of IPR fell significantly, leading to higher direct cost savings. However, the currently proposed rule would reverse these savings by reducing the number of IPR proceedings, and other aspects of the rule could have additional negative effects.

---

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

[3] 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.

Direct Cost Increases and Total Economic Costs

In prior studies, The Perryman Group examined the total economic benefits of the PTAB process as well as IPR.[4] Earlier work also focused on the costs of increasing *Fintiv*-related discretionary denials of IPR and thereby reducing the associated numbers of cases achieving the benefits available through IPR.[5] The direct costs associated with reducing the numbers of matters undergoing the *inter partes* review process established in the AIA stem from both increases in legal fees incurred and the lower probability of a settlement or early-stage resolution.

Cost increases 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 analyses by The Perryman Group have found substantial direct cost savings due to *inter partes* review, and reducing the number of cases in the IPR process would reduce potential savings in the future.

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. If the currently proposed rule moves forward, these potential benefits would be foregone, leading to substantial economic costs. To estimate overall effects, the direct savings were allocated across industrial categories in a manner consistent with the volume of patent cases filed[6] 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).

---

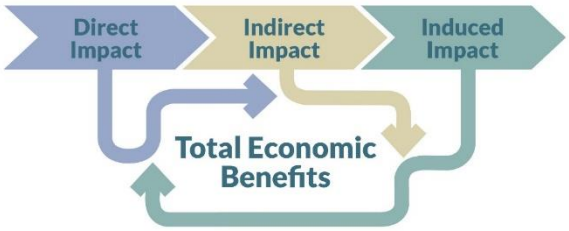
[4] "An Assessment of the Impact of the America Invents Act and the Patent Trial and Appeal Board on the US Economy," The Perryman Group, June 2020; "An Assessment of the Impact of the *Inter Partes* Review Process under the Patent Trial and Appeal Board on the US Economy," The Perryman Group, January 2021; and "The Potential Economic Benefits of Recent Reductions in Discretionary Denial of *Inter Partes* Review Based on Criteria such as the NHK-Fintiv Rules," The Perryman Group, March 2023.

[5] "The Potential Economic Benefits of Recent Reductions in Discretionary Denial of *Inter Partes* Review Based on Criteria such as the NHK-Fintiv Rules," The Perryman Group, March 2023.

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

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.
- 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.

Based on the results from the recent study relating to *Fintiv*-based denials, The Perryman Group estimates that, over the next 10 years, discretionary denials of IPR associated with the proposed rule would lead to foregone cost savings which generate a **net decrease in US business activity of approximately -$482.1 million in gross product, -$230.4 million in personal income, and -2,000 job-years of employment** (including multiplier effects). Note that these losses likely understate the aggregate losses in that the proposed rules and legislation have provisions that would likely reduce IPR filings beyond the effects of the *Fintiv* criteria.

The industry group experiencing the largest losses would be manufacturing, with an estimated decrease of **-$230.1 million** in gross product and **-758** job-years of employment (including multiplier effects); all industry groups are negatively affected.

The Estimated Cumulative Ten-Year (2023-2032) Cost Associated with Reducing *Inter Partes* Review 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***. Higher costs 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.

Business activity generates tax receipts, and this reduction will lead to estimated losses in tax receipts to the federal government of **-$96.4 million** over the next 10 years. These results reflect simulation of a fiscal model linked directly to the impacts described above.

Higher Costs to the US Government

As noted, an additional issue with reducing IPR is that it will lead to higher costs of procurement for the US government. The Perryman Group estimated the nature and volume of federal purchases likely to be affected by higher costs to firms as IPR is reduced utilizing sources maintained by the US Treasury Department.[7] Due to the nature of the procurement process, spending is inelastic,[8] meaning that companies will, at a minimum, pass on the higher costs to the US government. Factors included in this determination include (1) the inelasticity of demand for major components of technology-oriented procurement (such as defense items), (2) the "cost-plus" nature of many federal contracts, and (3) the fact that the government is not constrained by market forces.

The Perryman Group estimates that the direct increased costs to the federal government associated with federal spending over the 2023-32 period would be **-$106.4 million**. When summed with the estimated tax effects previously described, the total cost to the federal government was found to be almost **-$202.9 million**. As noted above, these estimates are conservative in that they are associated with the reduction in the institution of IPR; other aspects of the proposed rule could have additional negative effects on the US government.

The Estimated Cumulative Ten-Year (2023-2032) Cost to the US Government Associated with Reducing *Inter Partes* Review

Tax Impact	-96.426 million
Spending Impact	-106.427 million
Total	**-202.853 million**

Source: The Perryman Group
Note: Tax Impact associated with reductions in US business activity due to projected denials of institution of IPR using the discretionary standard set forth in ***Apple v. Fintiv***. Higher costs 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. Spending impact based on estimated higher costs of procurement due to affected companies passing along increased litigation costs due to reductions in IPR. Components may not sum to total due to rounding.

[7] See, for example, https://fiscaldata.treasury.gov and https://www.usaspending.gov/.
[8] See, for example, "The Zero Elasticity Rule for Pricing a Government Service: A Summary of Findings," Charles F. Manski, The Bell Journal of Economics, Vol. 10, No. 1 (Spring, 1979), pp. 211-223 and "How Elastic is the Government's Demand for Weapons?," Frank R. Lichtenberg, Journal of Public Economics, Volume 40, Issue 1, (October 1989), pp. 57-78.

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. Although guidance from the USPTO had clarified the application of *Fintiv* rules which would have the effect of reducing discretionary denial of IPR, recently proposed rules and legislation would not only restrict IPR by applying *Fintiv*, but also generate additional inefficiencies.

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

Restricting IPR would increase litigation costs to businesses and, therefore, prices to the federal government given the inelastic characteristics of government procurement. In addition, increasing the numbers of discretionary denials of IPR related to *Fintiv* rules will lead to a significant decrease in US business activity, with related losses in fiscal receipts to the federal government. Over the next 10 years, the cost to the federal government is estimated to include nearly **-$202.9 million**.

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. The proposed rules and legislation would not only reduce these benefits of IPR, but also involve substantial reductions in economic activity and tax receipts. Over time, it would likely also have the effect of curtailing investment in research and development by reducing returns, thus imposing consequences for long-term growth and 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 Associated with IPR

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),[9] 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

[9] "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 and are associated with higher amounts at risk.[10] 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.[11] 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.

Past estimates by The Perryman Group of the direct savings associated with *inter partes* review were updated to 2022 and applied to recent patterns in discretionary denial of IPR related to *Fintiv* rules before and after the prior clarification by the USPTO which reduced discretionary denials of IPR; these benefits would be foregone if the currently proposed rule is implemented. 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 of inputs and outputs in dollar (rather than physical) terms. As an example, the

[10] 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.
[11] "2018 Patent Litigation Study," PwC, May 2018, https://www.pwc.com/us/en/services/forensics/library/patent-litigation-study.html.

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.