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An updated analysis of the economic and fiscal contributions of the Indianapolis Motor Speedway

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EXECUTIVE SUMMARY

The Indianapolis Motor Speedway (IMS) is an internationally recognized motorsports icon. Established in 1909, it is the epicenter of Indiana’s motorsports cluster and the world’s largest stadium in terms of its overall capacity of more than 350,000 INDYCAR fans, including a seating capacity of 235,000.¹ The race-related events that take place throughout the year have a sizable impact on the Indiana economy.

To determine the economic value of its activities from June 2022 to May 2023, the IMS engaged the Indiana University Public Policy Institute (PPI) to conduct an economic impact analysis. The resulting study uses operations expenditures and visitor spending data for events during the Month of May 2023, events during August 2022, and for other activities during the remaining months of the year. While much of the economic impact and contribution generated likely accrues within the Indianapolis metropolitan area, these estimates cover its impact on Indiana.

IMS provided PPI with the data used for the analysis, including IMS, INDYCAR, and NASCAR expenditure data and the results of surveys of the spending patterns for ticketholders. Operations spending includes expenditures on facility maintenance, the Brickyard Crossing golf course, the IMS Museum, and IMS management. IMPLAN was used to derive spin-off spending associated with IMS expenditures, INDYCAR and NASCAR team spending, and in-state and out-of-state visitor spending.

TOTAL ECONOMIC CONTRIBUTION AND ECONOMIC IMPACT

The economic contribution derived from operations, events, employee wages, and all visitor spending between June 2022 and May 2023 was more than \$1 billion (Figure 1). The economic impact during the same period, which excludes the direct and spin-off spending associated with in-state visitors, was \$972 million. The economic impact includes the generation of 8,440 direct and indirect jobs (in full-time equivalents (FTE)) and \$360 million in labor income. The direct and spin-off spending by in-state visitors—\$86 million—is included as a component of economic contribution and reported separately from economic impact.

The economic impact of Month of May 2023 events was \$480 million and almost half of the annual impact (Figure 2). The economic impact for races and other activities in August 2022 was \$117 million. The economic impact for activities during the remaining 10 months was \$375 million. The total economic impact of IMS for the 2022–23 year also includes \$393 million generated by the construction of the INDYCAR Headquarters, a one-time expenditure (not shown in Figure 2).

¹ Guinness World Records. (2023). *Largest stadium (overall capacity)*. <https://www.guinnessworldrecords.com/world-records/69197-largest-stadium-overall-capacity#:~:text=The%20Indianapolis%20Motor%20Speedway%2C%20in,accommodate%20more%20than%20350%2C000%20fans>

Figure 1. Total economic contribution—June 2022 to May 2023

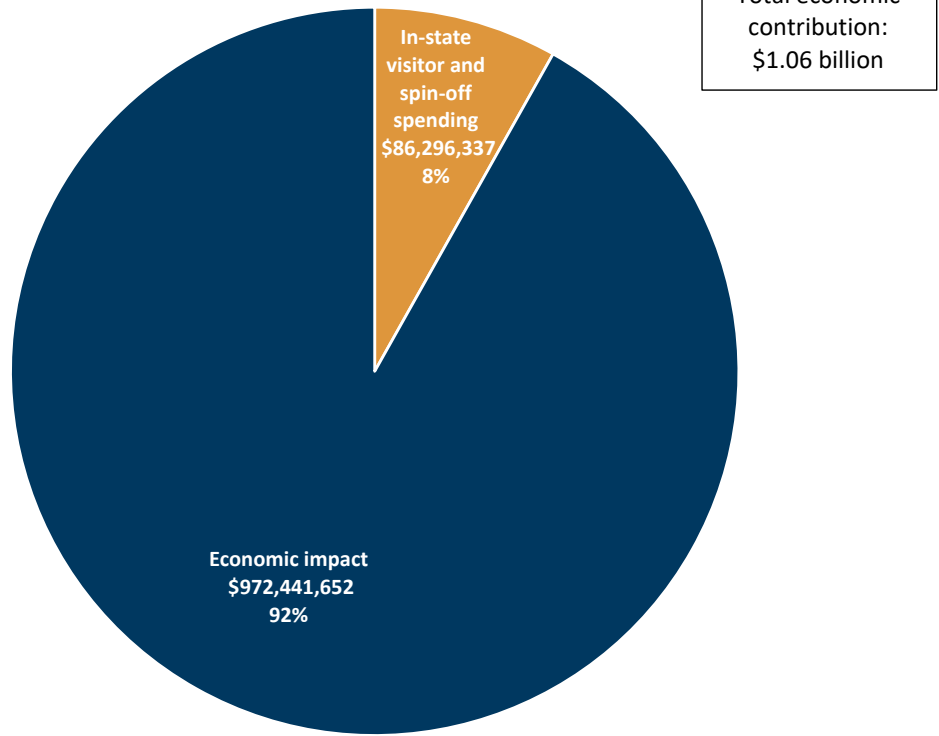
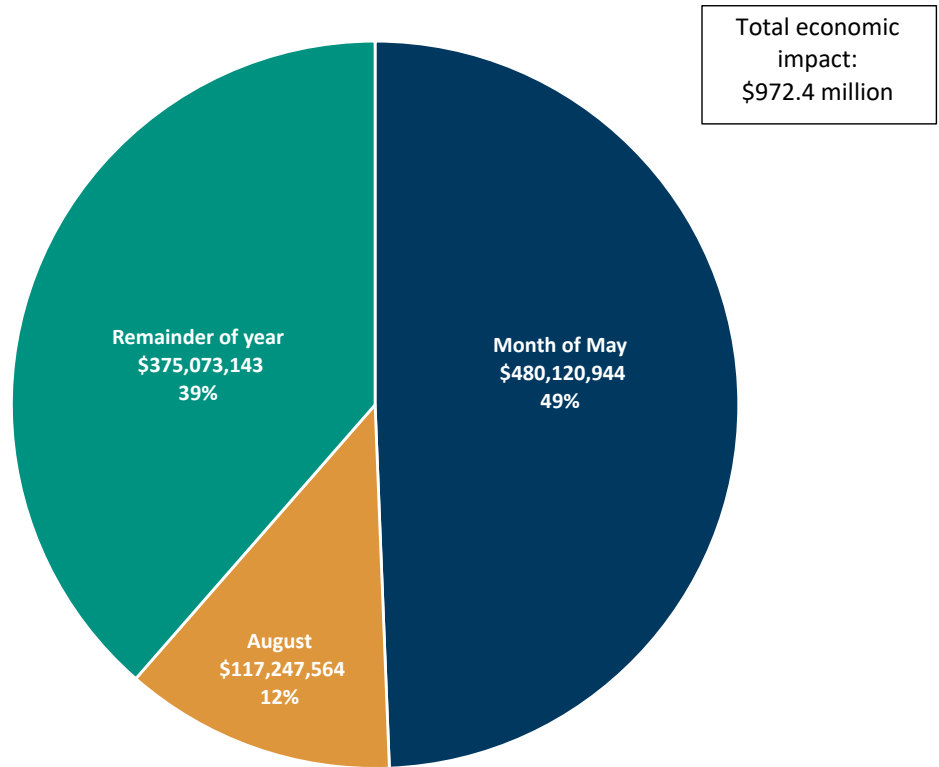


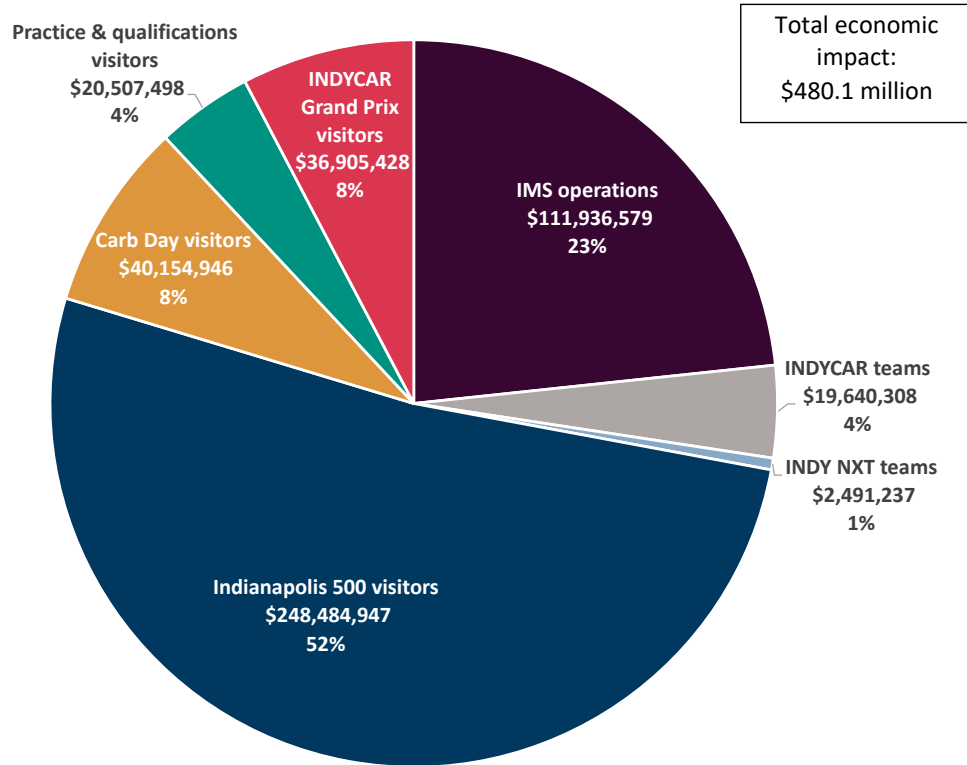
Figure 2. Economic impact generated by month—June 2022 to May 2023



ECONOMIC IMPACT—MONTH OF MAY

The total economic impact associated with operations, events, employee wages, and out-of-state visitor spending in May 2023 was \$480 million. This includes the generation of 3,783 direct and indirect jobs (FTEs) and \$155 million in employee compensation. Figure 3 shows the elements that comprise the total economic impact from the Month of May events, including IMS corporate spending, team spending, and out-of-state visitor spending.

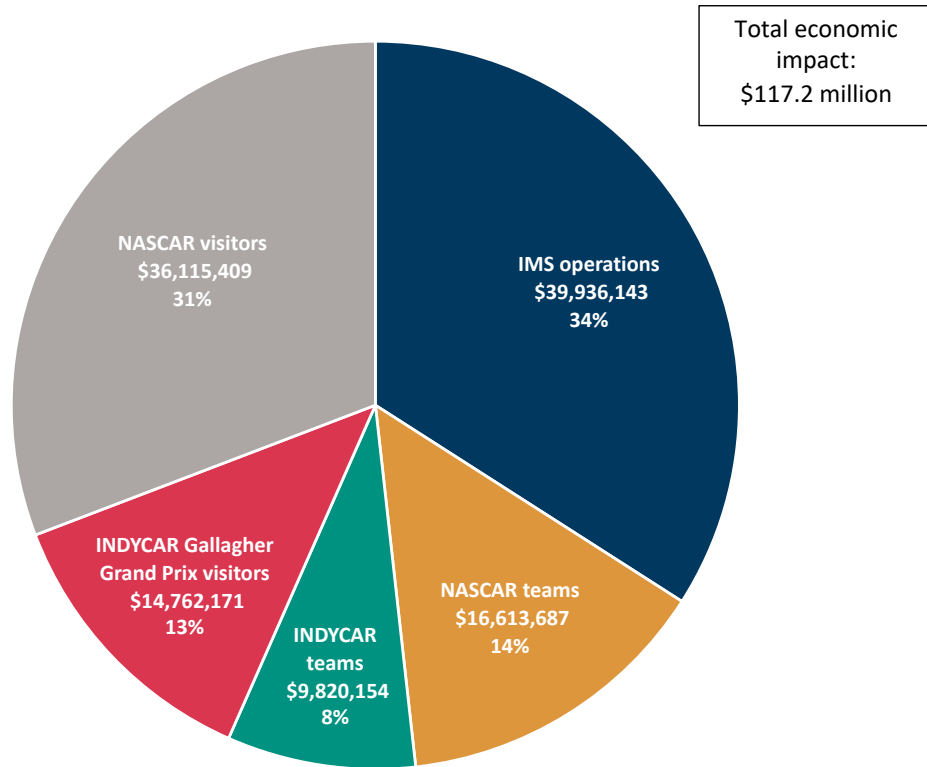
Figure 3. Economic impact generated by activity—Month of May 2023



ECONOMIC IMPACT—AUGUST

The total economic impact associated with operations, events, employee wages, and out-of-state visitor spending during the NASCAR and the INDYCAR Gallagher Grand Prix races in August 2022 was \$117 million. This includes generation of 1,275 direct and indirect jobs (FTEs) and \$46 million in employee compensation. Figure 4 shows the elements that comprise the total economic impact from the August events, including IMS corporate spending, racing team spending, and out-of-state visitor spending.

Figure 4. Economic impact generated by activity—August 2022



INTRODUCTION

The Indianapolis Motor Speedway (IMS) is an internationally recognized motorsports icon and the world's largest sports stadium.² IMS hosts many motorsports races and other events each year. As a result, IMS has a substantial impact on the Indiana economy.

The Indianapolis Motor Speedway (IMS) contracted with the IU Public Policy Institute (PPI) to document the economic value of its activities from June 2022 to May 2023. This report presents the result of this work, including the analytical methodology; estimates of the overall economic contribution and economic impact; the economic impact of activities between June 1, 2022 and May 31, 2023, with special attention to August 2022 and May 2023; and in-state visitor and spin-off spending.

METHODOLOGY

The analysis documented here utilized input/output modeling, which is a common method for estimating the economic contributions of a corporation. Input/output modeling estimates the indirect and induced benefits (also known as spin-off benefits) attributable to the initial or direct expenditures from the construction and operational spending of a company or industry. PPI used the 2022 IMPLAN software to estimate these additional benefits.

Typically, an input/output model is based on average spending patterns for a specific industry. IMPLAN uses U.S. Bureau of Labor Statistics data to model both the business-to-business spending patterns of the firms within the industry and employment patterns and wages. Because of its size relative to other venues, IMS is an outlier and is not comparable to other Indiana racetracks. As a result, estimating the economic contributions for IMS events and activities is particularly challenging, especially for estimating indirect or spin-off contributions. PPI researchers determined that using a single industry-specific

² Guinness World Records, 2023.

multiplier for racetracks—with average business-to-business, employee, and visitor spending patterns—to estimate the economic contributions of IMS events and activities would grossly misrepresent their economic contributions to Indiana.

In order to create a realistic and consistent estimate of the annual economic contributions of IMS events and activities, PPI researchers deconstructed them into more precise input/output modeling categories. For both the operations and visitor analyses, specific sub-analyses were constructed. The input-output model was run multiple times using varied inputs including IMS operating revenues; the Indiana portion of INDYCAR, NASCAR, and INDY NXT team spending (attributable to headquarters in Indiana and race spending); IMS Museum operating revenue; Brickyard Crossing golf course operating revenue; and visitor spending. For both the operations and visitor analyses, specific sub-analyses were constructed. For example, the IMS operations analysis was broken down into four main categories: construction and maintenance, concessions, merchandise, and IMS productions (TV and radio). The spending or revenue in each of these categories was used as an input in the IMPLAN model. In each subsequent operations input analysis, deductions were made as appropriate to avoid double counting direct and indirect spending.

Data used for the various elements of IMS and race team operations, event attendance, and the value of the INDYCAR Headquarters construction was provided by IMS. The operations and event attendance data covers activity at IMS from June 2022 to May 2023. However, the estimates for Month of May events are a combination of budgeted operational spending from May 2022 and visitor spending data for May 2023. The construction of the INDYCAR Headquarters was a one time event.

For the purposes of this study, in-state visitors were those who lived 100 miles or less from IMS (Figure 5). Out-of-state visitors were those who lived more than 100 miles from IMS. The use of a 100-mile distance to define out-of-state visitors was chosen based on the response options for survey questions about distance from IMS. Admittedly, it is an imperfect measure because some areas of Illinois and Ohio are within the 100-mile radius and some parts of Indiana are not. Despite this limitation, PPI researchers use the in-state and out-of-state distinctions based on the 100-mile radius from IMS as a rough measure visitor spending that was local and out-of-state.

Estimates of average spending for in-state and out-of-state visitors were developed, in part, using surveys collected by IMS from ticketholders for selected races who lived at least 50 miles from IMS. The survey covered ticketholders for the Indy 500, the INDYCAR Grand Prix, Carburetion (Carb) Day, Indy 500 practices, and the NASCAR and INDYCAR Gallagher Grand Prix races. The survey collected information on length of stay in Indiana, spending at the race events, and additional spending outside IMS. Visitor spending outside of IMS included purchases for entertainment, food and beverages, local transportation and gasoline, lodging, merchandise, and other expenses. For in-state and out-of-state patrons who were not covered by the survey including ticketholders for other races, researchers estimated average spending using a 2023 study commissioned by Indiana Destination Development Corporation.³

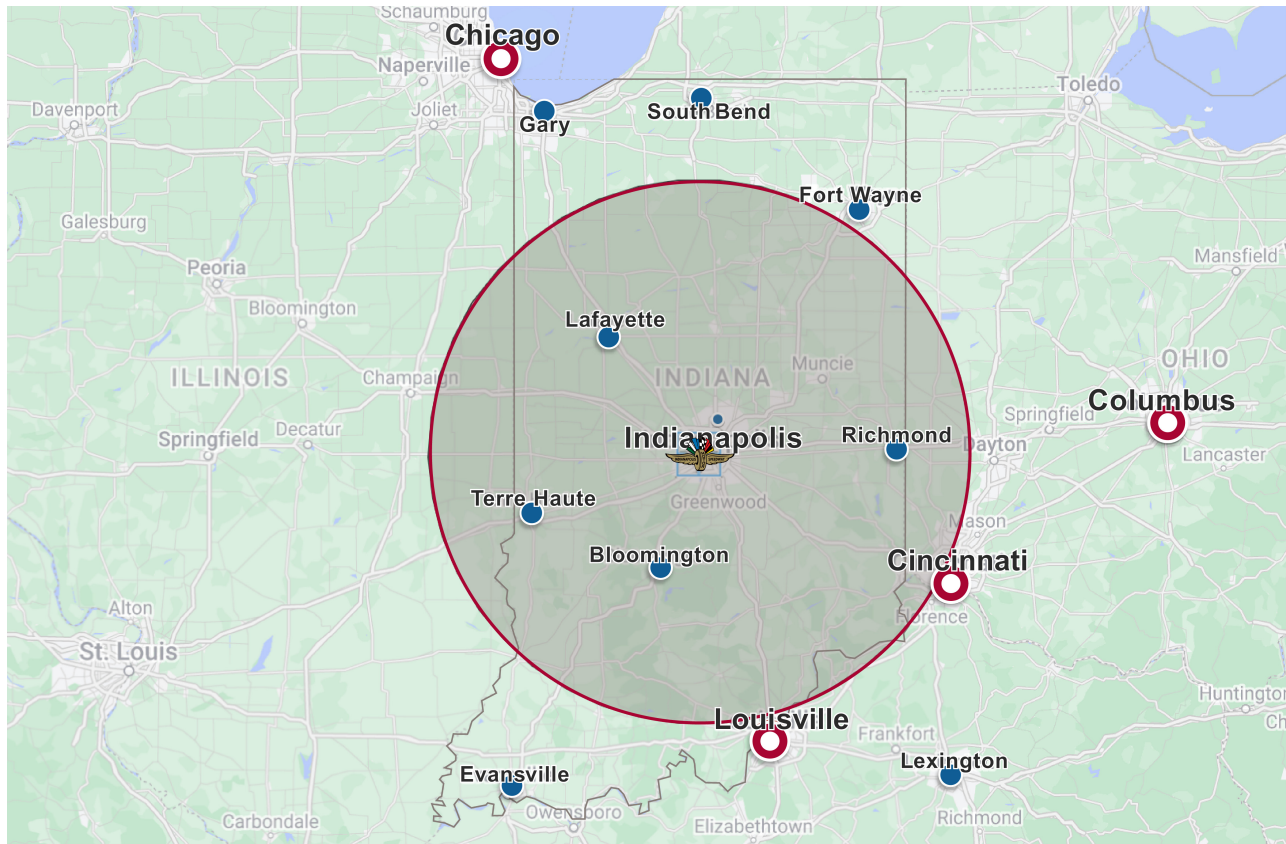
Using aggregated spending based on these estimates, the IMPLAN input/output model was utilized to estimate six expenditure patterns for each race: entertainment, food and beverage, local transportation and gasoline, lodging, merchandise (excluding IMS-sold merchandise), and other expenditures. The “other expenditures” category was estimated using an average of the multipliers from the other five categories.

Spending by in-state and out-of-state visitors were modelled separately. Out-of-state visitor and spin-off spending is included in economic impact. In-state visitor and spin-off spending is reported separately because if these residents choose not to attend an IMS event it is likely they would attend other entertainment-related events in Indiana (e.g., dining out a few extra

³ Rockport Analytics, LLC. (2023, February). The 2021 contribution of travel & tourism to the Indiana economy. https://assets.simpleviewinc.com/simpleview/image/upload/v1/clients/indiana/Indiana_EIS_2021_FINAL_2_24_23_d33b25dd-addb-4f58-84c7-52ec10ed0bac.pdf

times a year or attending a Indianapolis Colts, Indiana Pacers, Purdue University, or Indiana University sporting event). Thus, while the spending may be new to Indianapolis, it is not new to Indiana.

Figure 5. 100-mile radius from IMS



TOTAL ECONOMIC CONTRIBUTION AND ECONOMIC IMPACT

The impact of IMS events and operations is based on all revenue associated with the Indianapolis 500, INDYCAR Grand Prix, NASCAR, and INDYCAR Gallagher Grand Prix races; Carb Day, practices, and qualifications; racing teams operations; and INDY NXT, IMS Museum, and Brickyard Crossing golf course. These revenues include those from broadcasting rights, tickets and suites, concessions, merchandise sales, sponsorships, and parking. Taken together, these elements contributed \$1.06 billion to the economy in Indiana.

ECONOMIC CONTRIBUTION AND ECONOMIC IMPACT

The total annual economic contribution of IMS operations, events, and visitor spending was more than \$1 billion consisting of the total economic impact of \$972 million and local visitor spending of \$86 million (Figure 6). IMS events and operations during May 2023 accounted for almost half of the total economic impact at \$480 million. August 2022 events accounted for \$117 million, and IMS operations during the remainder of the 2022–23 year accounted for \$375 million (Figure 7). The total economic impact also includes \$393 million generated by the construction of the INDYCAR Headquarters, a one-time event.

FIGURE 6. Total economic contribution—June 2022 to May 2023

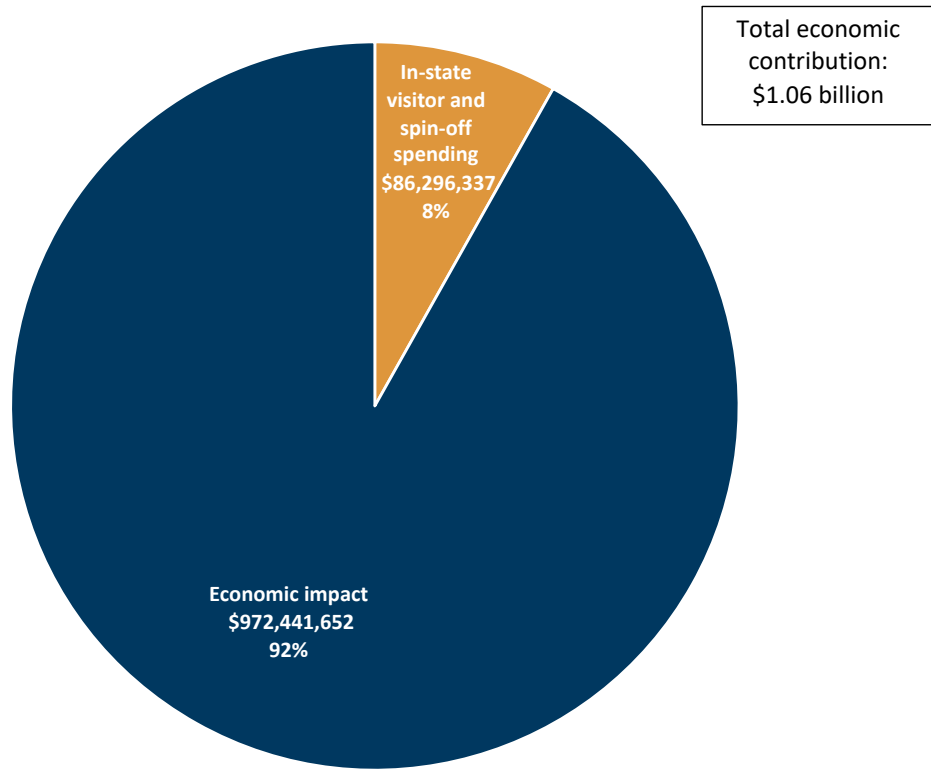
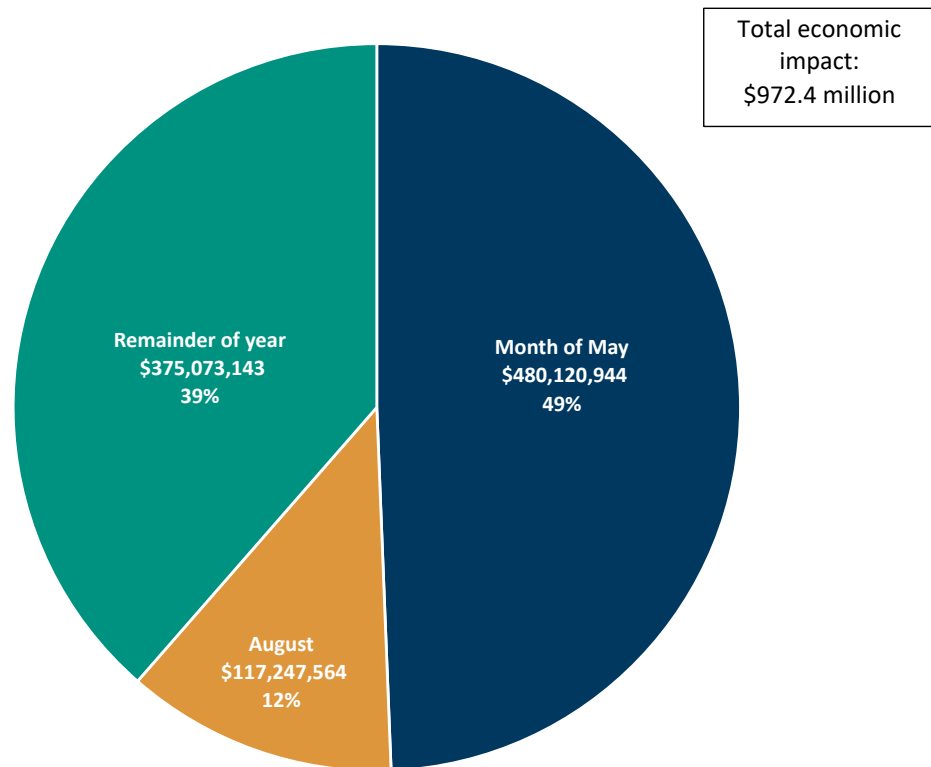


FIGURE 7. Economic impact generated by month—June 2022 to May 2023



EMPLOYMENT AND LABOR INCOME

Operations and events at IMS added 8,440 jobs (full-time equivalents (FTEs)), with an average income per job of \$42,651 (Figure 8). Month of May 2023 operations, events, and out-of-state visitor spending result in 3,783 FTE jobs; August 2022 operations, events, and out-of-state visitor spending added 1,275 jobs (FTEs); and IMS operations during the remainder of the 2022–23 year generated 3,382 jobs (FTEs).

The labor income (or wages) income associated with the economic impact of the races, other events, and operations at the track was \$360 million, with an average income of \$42,651 per job (Figure 9). The total includes wages resulting from out-of-state visitor spending in the area in the form of hotels, food, travel, and other expenditures while visiting the areas. Month of May operations, events, and out-of-state visitor spending generated \$155 million in wages; August’s NASCAR and INDYCAR Gallagher Grand Prix races and IMS operations, events, and out-of-state visitor spending added \$46 million; and total IMS operations for the remainder of the year resulted in \$158 million.

Figure 8. Employment (FTEs) generated by month—June 2022 to May 2023

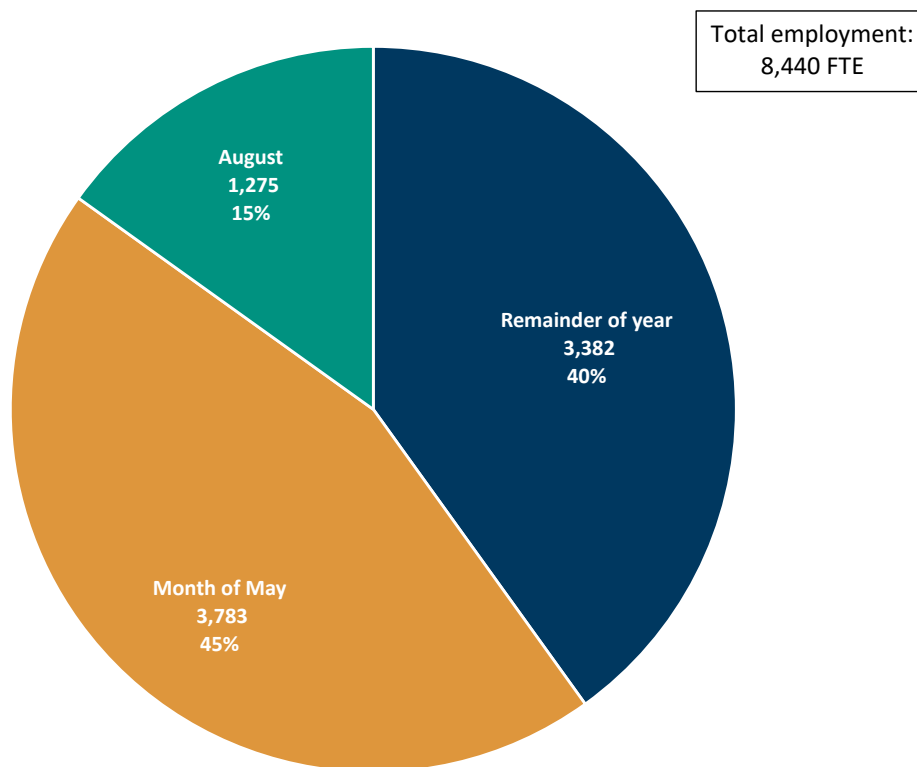
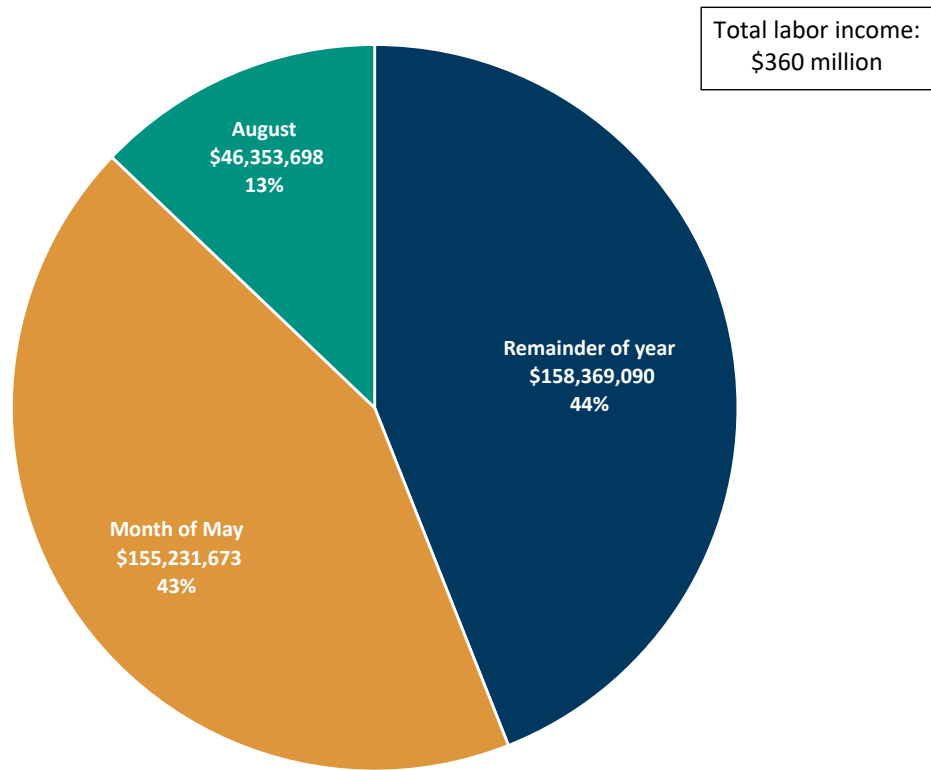


Figure 9. Labor income generated by month—June 2022 to May 2023



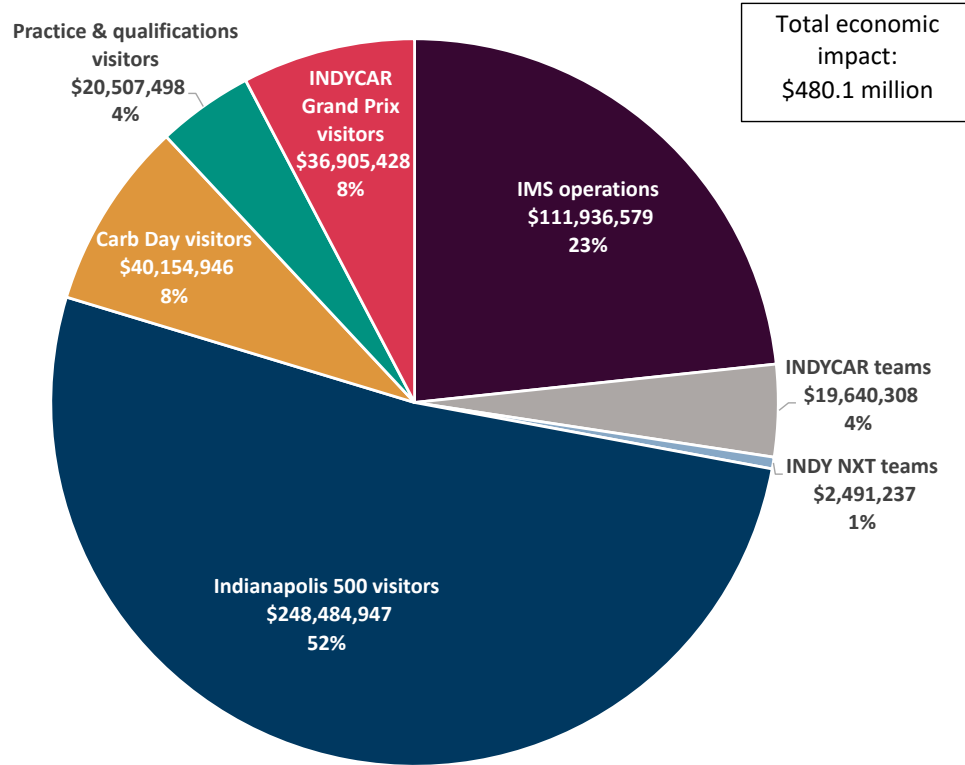
ECONOMIC IMPACT—MONTH OF MAY

The impact of events and operations during the Month of May 2023 includes all revenue associated with the Indianapolis 500, the INDYCAR Grand Prix, the INDY NXT Grand Prix, Carb Day, practices, and qualifications. These revenues included those from broadcasting rights, tickets and suites, concessions, merchandise sales, sponsorships, and parking. Survey data from the 2023 Indianapolis 500, Grand Prix, and Carb Day out-of-state ticket holders was used to estimate the indirect and induced economic impacts of out-of-state visitor spending. These elements comprise a \$480 million economic impact to the Indiana economy. Combining the economic impact with in-state visitor spending, the total economic contribution of the Month of May was \$566 million.

ECONOMIC IMPACT

The economic impact of the Indianapolis 500 and other events in May 2023 was \$480 million (Figure 10). Indianapolis 500 visitors accounted for \$248 million of economic impact, while visitors for INDYCAR Grand Prix, Carb Day, practice, and qualifications generated an \$98 million in economic impact. Indianapolis 500-related IMS operations generated \$112 million of the total economic impact during the month. Overall, 72% of the economic impact for May was generated by out-of-state visitor spending, and 28% was generated by race team and IMS operations spending.

Figure 10. Economic impact generated by activity—Month of May 2023



EMPLOYMENT AND LABOR INCOME

Operations and events during the Month of May added 3,783 jobs (FTEs) to the Indiana economy, with an average income of \$41,038 per job (Figure 11). The employment generated during May is proportionately similar to the total economic impact. Month of May-related team and IMS operations resulted in 1,110 jobs (FTEs), and visitor spending generated 2,672 jobs (FTEs).⁴

Month of May activities generated \$155 million in labor income, with an average income of \$41,038 per job (Figure 12). Indianapolis 500 out-of-state visitor spending generated \$85 million in labor income, while race-related IMS operations generated \$36 million. Total out-of-state visitor spending during the Month of May topped \$119 million.

⁴ The difference in one job between the total number of jobs and operations and visitor spending is the result of rounding error.

Figure 11. Employment (FTEs) generated by activity—Month of May 2023

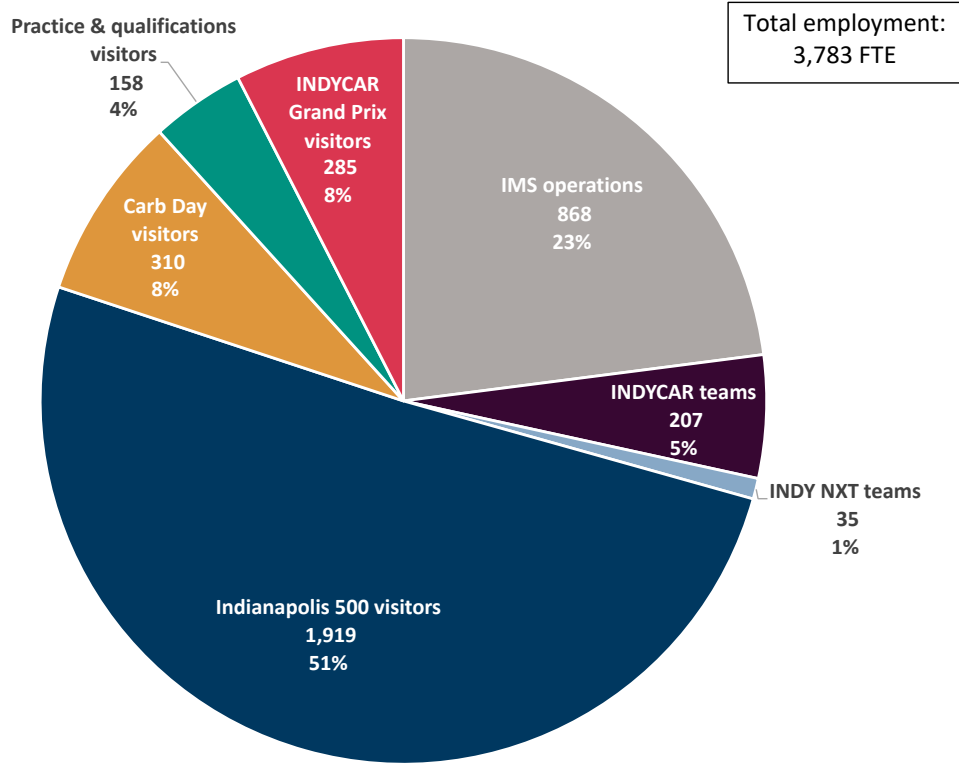
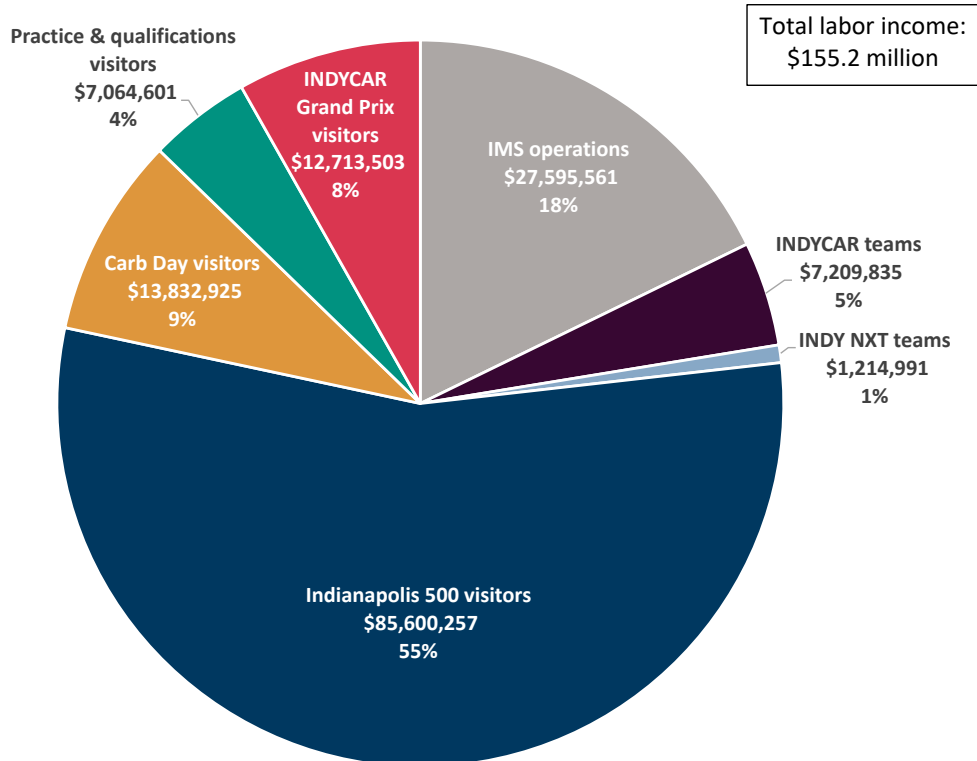


Figure 12. Labor income generated by activity—Month of May 2023



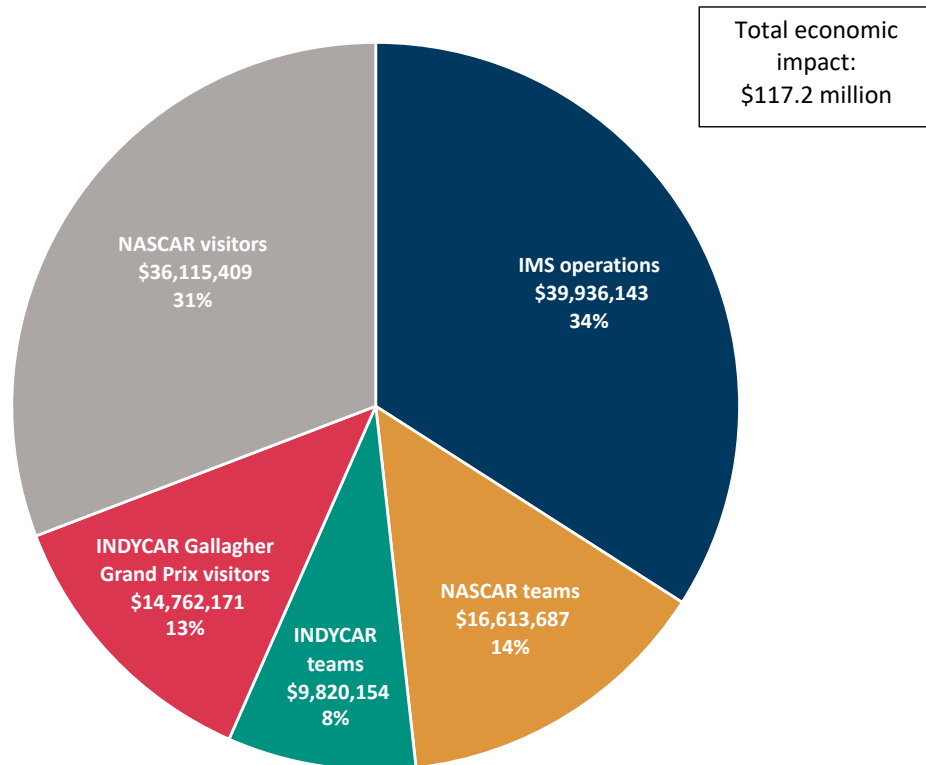
ECONOMIC IMPACT—AUGUST

The impact of events and operations during August 2022 includes all revenue associated with two NASCAR races—Pennzoil 150 at the Brickyard Presented by Advance Auto Parts and Verizon 200 at the Brickyard—and the INDYCAR Gallagher Grand Prix race. These revenues included those from broadcasting rights, tickets and suites, concessions, merchandise sales, sponsorships, and parking. Survey data from the NASCAR and INDYCAR Gallagher Grand Prix out-of-state ticket holders was used to estimate the indirect and induced economic impacts of out-of-state visitor spending. Taken together, the economic impact to the Indiana economy of these elements was \$117 million.

ECONOMIC IMPACT

The economic impact of the NASCAR and Gallagher Grand Prix races and other events at the track during August 2022 was \$117 million (Figure 13). IMS operations generated \$40 million economic impact during the month. NASCAR teams and NASCAR race out-of-state visitor spending generated \$53 million of economic impact, and INDYCAR Gallagher Grand Prix teams and out-of-state visitor spending generated \$25 million. Overall, 56% of the economic impact for August was generated by IMS and teams operations, and 44% was generated by out-of-state visitor spending.

Figure 13. Economic impact generated by activity—August 2022



EMPLOYMENT AND LABOR INCOME

The NASCAR and Gallagher Grand Prix races and other operations and events during August 2022 added 1,275 jobs (FTEs) to the Indiana economy, with an average income of \$36,363 per job (Figure 14). NASCAR teams, INDYCAR Gallagher Grand Prix teams, and IMS operations generated 838 jobs (FTEs), while out-of-state visitor spending resulted in 437 jobs (FTEs).

August 2022 events generated \$46 million in labor income, with an average income of \$36,363 per job (Figure 15). Racing team operations and out-of-state visitors generated the same amount in labor income, at \$18 million in wages each.

Figure 14. Employment (FTEs) generated by activity—August 2022

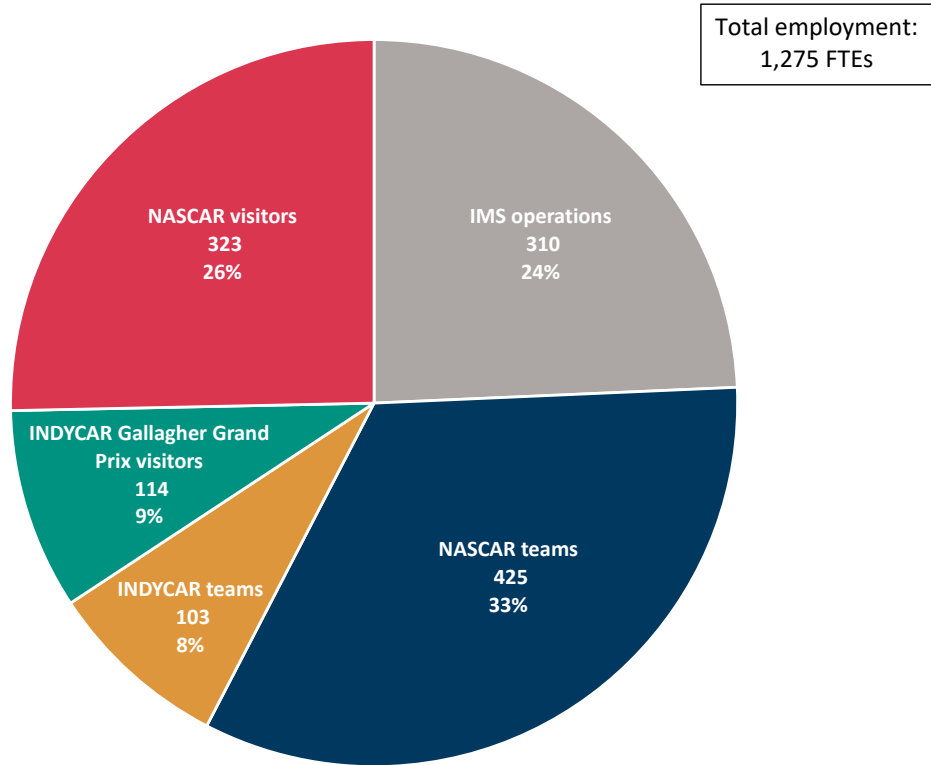
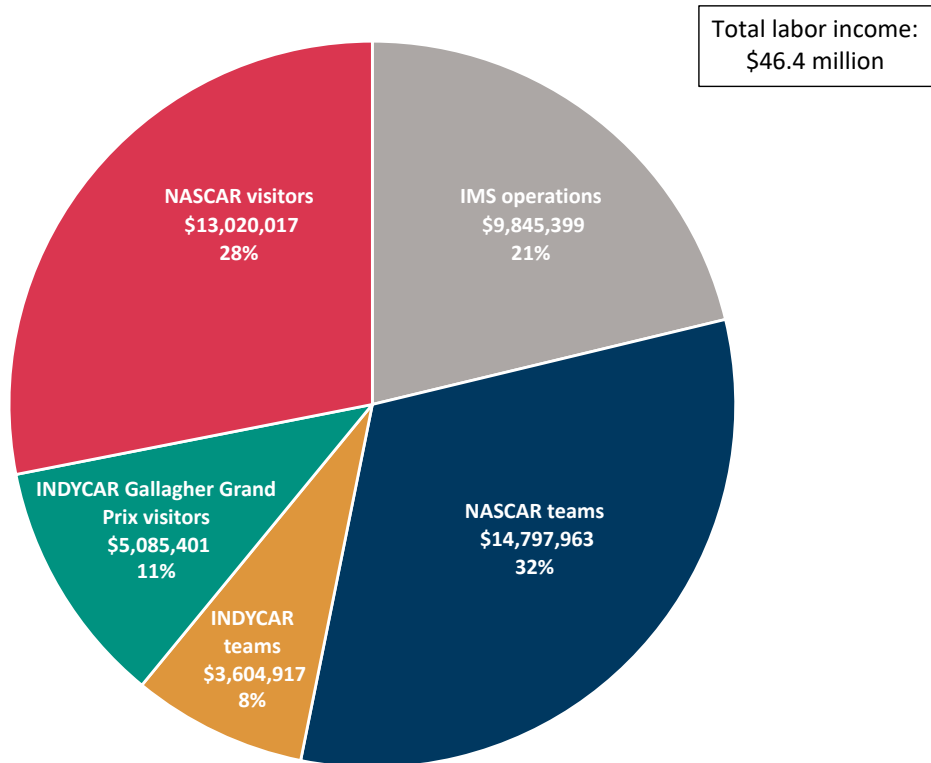


Figure 15. Labor income generated by activity—August 2022



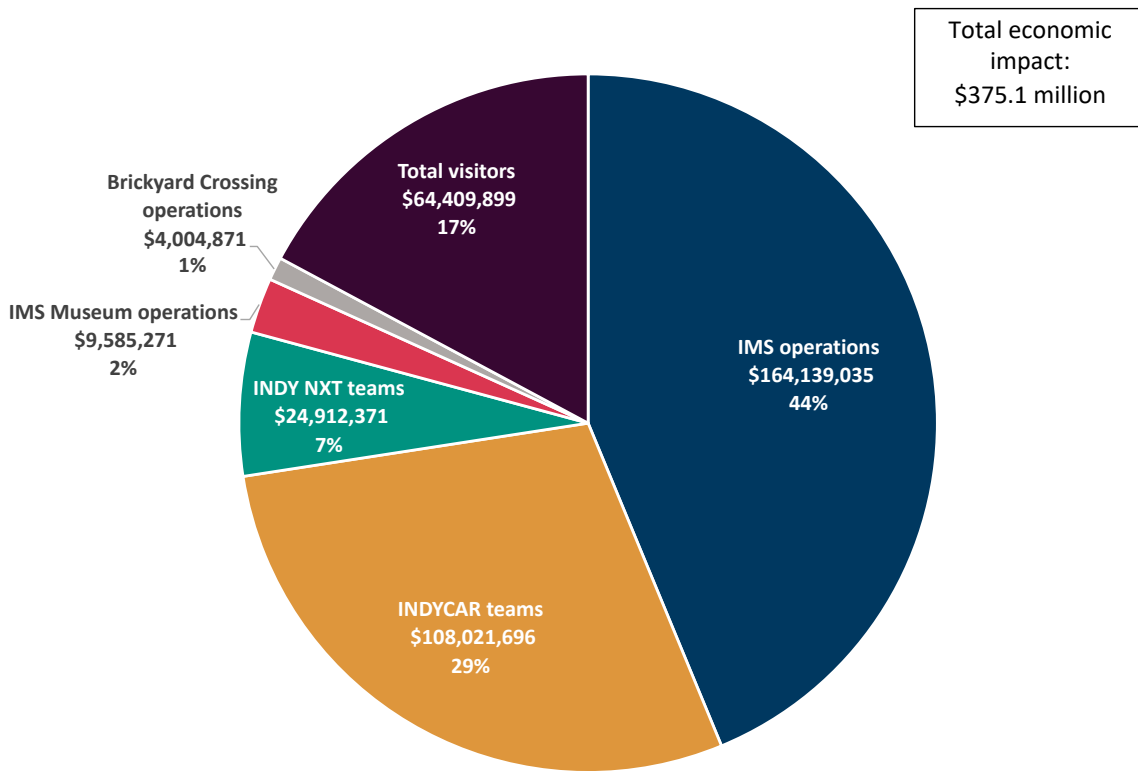
ECONOMIC IMPACT—REMAINDER OF THE YEAR

The impact of events and operations during the remainder of the 2022–23 year includes all revenue associated with INDYCAR and INDY NXT teams outside the two months with INDYCAR and NASCAR races. The full economic impact from the annual spending and revenue for the IMS Museum and the Brickyard Crossing golf course are included here. Average visitor spending data from a report commissioned by the Indiana Destination Development Corporation was used to estimate the indirect and induced economic impacts of out-of-state visitor spending.⁵ Taken together, the economic impact to the Indiana economy of these elements was \$375 million.

ECONOMIC IMPACT

During the remainder of the 2022–23 year, IMS generated an economic impact of \$375 million (Figure 16). For this period, IMS operations comprised the largest segment of total economic impact, generating \$164 million. Overall, 83% of the economic impact was generated by race and other operations during this period, while out-of-state visitor spending generated the remaining 17%.

Figure 16. Economic impact generated by activity—Remainder of the year



EMPLOYMENT AND LABOR INCOME

Operations and events at IMS during the remainder of the 2022–23 year added 3,382 jobs (FTEs) to the Indiana economy, with an average income of \$46,824 per job (Figure 17). IMS operations and INDYCAR teams generate the majority of jobs, adding 2,411 jobs (FTEs). During this period, race-related and general IMS operations generated 85% of the added jobs, while the remaining 15% was generated by visitor spending.

The labor or wages income associated with the economic impact of IMS operations for the remainder of the 2022–23 year was \$158 million, with an average income of \$46,824 per job (Figure 18). IMS Museum operations generated 27% of labor

⁵ Rockport Analytics, LLC, 2023.

income for the period. IMS general operations and INDYCAR teams each generated 25% of labor income. Visitors, INDY NXT teams, and Brickyard Crossing golf course operations taken together generated the remaining 23%.

Figure 17. Employment (FTEs) generated by activity—Remainder of the year

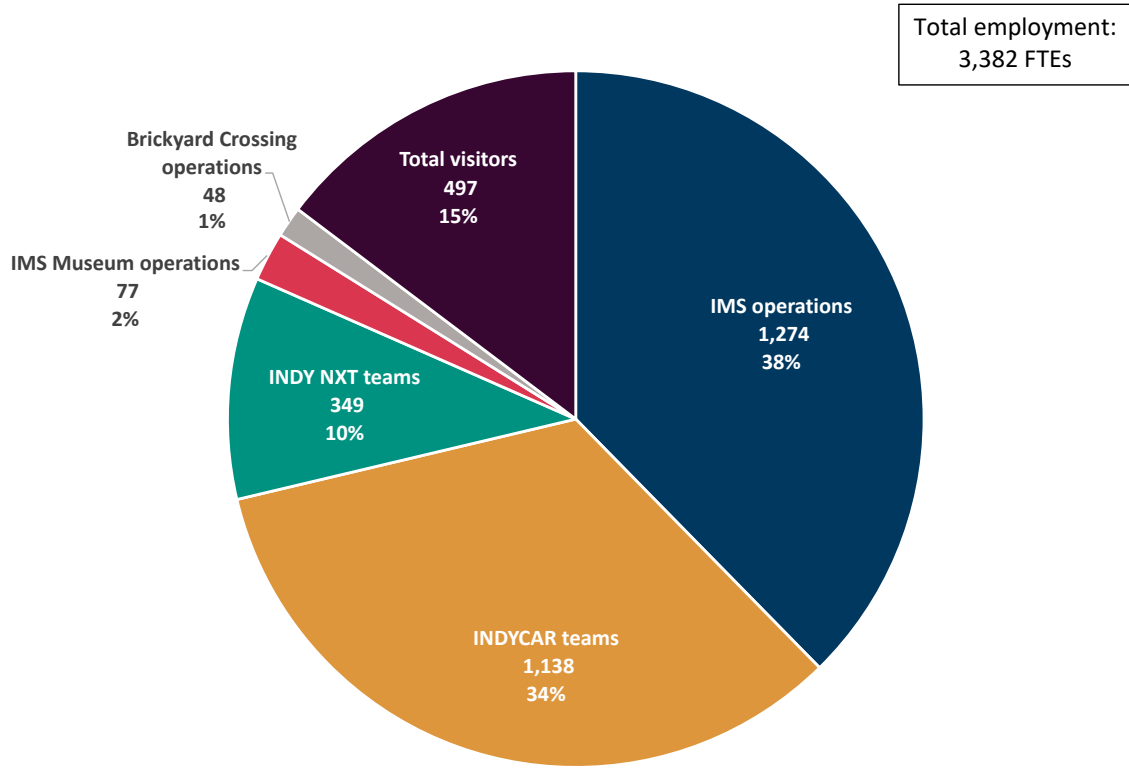
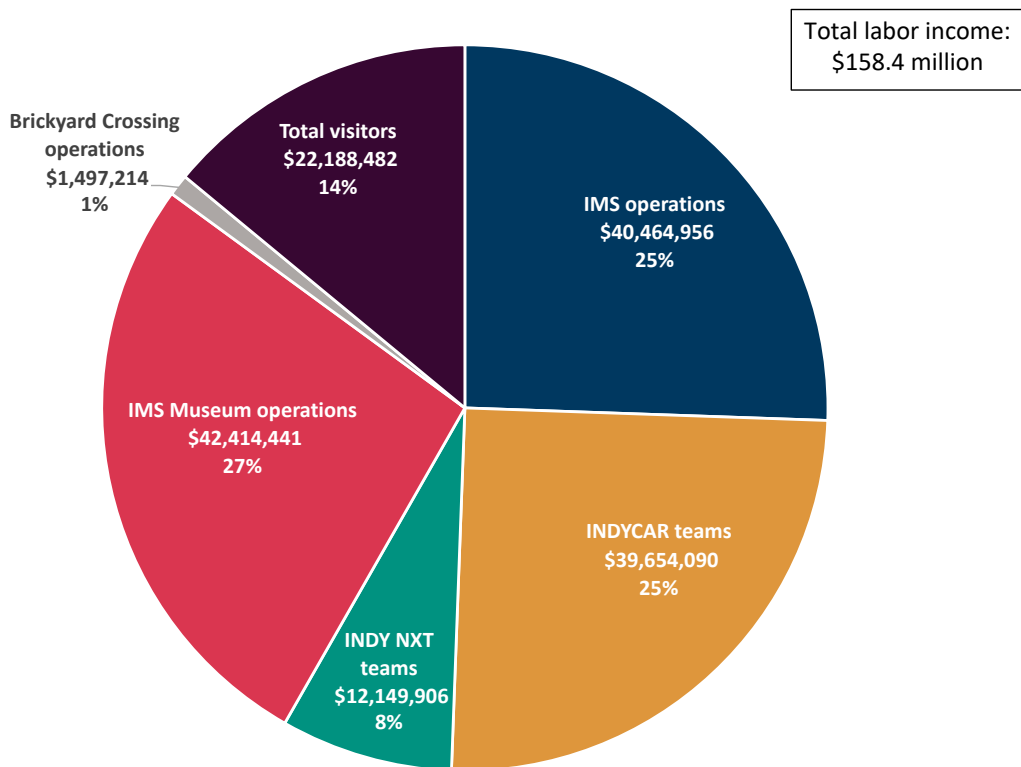


Figure 18. Labor income generated by activity—Remainder of the year



IN-STATE VISITOR AND SPIN-OFF SPENDING

In-state visitor and spin-off spending generated \$86 million in economic impact. Spending from these visitors supported 666 jobs (FTEs) which generated \$30 million in labor income.

As mentioned earlier in this report, in-state visitor and spin-off spending is reported separately because if these residents choose not to attend an IMS event it is likely they would attend other entertainment-related events in Indiana (e.g., dining out a few extra times a year or attending a Indianapolis Colts, Indiana Pacers, Purdue University, or Indiana University sporting event). Thus, while the spending may be new to Indianapolis, it is not new to Indiana.

CONCLUSION

At \$1.06 billion, IMS races and other events make a sizable economic contribution to the Indiana economy and but for the presence of IMS in Indiana, these contributions would not occur. This contribution is much larger than the \$512 million economic impact during 2012, also estimated by PPI.^{6,7} The present-day impact of IMS on the Indiana economy includes the direct effect of spending on inputs and employee wages by IMS, racing teams, INDYCAR Headquarters construction, and visitors, a contribution totaling \$638 million in 2022–23. The total contribution also includes indirect and induced effects. The indirect effects, totaling \$213 million, are a result of IMS, racing teams, INDYCAR, and visitor expenditures—the businesses providing goods and services also make their own expenditures on inputs and employee wages, a ripple effect which impacts the state economy. Finally, the induced effects, totaling \$208 million, result from related household expenditures that also ripple through the Indiana economy, resulting in additional employment and income. IMS and racing team operations and out-of-state visitor spending were directly responsible for the generation of 5,873 FTE jobs during 2022–23 paying a total of \$227 million in wages. The indirect and induced effects generated 2,566 FTE jobs during that same time period, totaling \$133 million in wages.

⁶ Klacik, Drew. (2013, February). Estimating the Annual Economic Contributions of the Indianapolis Motor Speedway. <https://archives.iupui.edu/bitstream/handle/2450/6873/Motorsports%2520Report.pdf?sequence=1&isAllowed=y>

⁷ The 2012 and 2022–23 estimates have not been adjusted for inflation, and are thus not directly comparable. According to the U.S. Bureau of Labor Statistics Consumer Price Index Inflation Calculator, \$1.00 in May 2012 had the same buying power as \$1.32 in May 2023.



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