

Indiana Motorsports Industry

Economic Contributions and Future Directions



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KELLEY SCHOOL OF BUSINESS

INDIANA UNIVERSITY

Indiana Business Research Center

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Executive Summary

As the home of “The Greatest Spectacle in Racing”, motorsports have long been one of the most recognizable symbols of the Hoosier state. There is more to Indiana motorsports than a handful of marquee events and iconic venues, however. The state’s motorsports industry is made up of hundreds of employers spread across a diverse array of industries that as a group serve as an important economic driver. And while Indiana motorsports has a rich and storied history, it is also an industry that regularly renews itself through innovation and the adoption of new technologies.

Those last two points are the focus of this report. The first section presents the motorsports industry’s economic impact on the state and shows how the ripple effects generated by this industry create economic opportunities for other Hoosier workers and businesses. The second section features the findings from a survey of the key players in Indiana motorsports that gathers their views on the current state of the industry as well as their insights into the opportunities and challenges that lay ahead.

Key Findings

- For this report, the research team combed through a variety of sources and identified a list of more than 300 employers in the state that it used to define the Indiana motorsports industry. This collection of businesses combined to employ nearly 4,900 workers in Indiana.
- The relatively high wages offered by this industry is one of its defining characteristics. In 2020, the average compensation per job in Indiana motorsports was estimated at \$77,850, which is nearly 20 percent higher than the average compensation for all jobs in the state.
- Supply chain spending by Indiana’s motorsports businesses—along the household spending by workers in the industry—generate additional economic ripple effects throughout the state. All told, combining both the direct effects and ripple effects brings the motorsport industry’s full economic footprint in the state to an estimated 9,790 jobs and a \$1.2 billion contribution to Indiana’s GDP
- The ratio of the motorsports industry’s direct employment to its total jobs impact yields a multiplier of 2.0, which means that every direct job in motorsports creates one additional job at other businesses in the state. The GDP multiplier of 1.60 suggests that every dollar of GDP directly produced by the state’s motorsports employers generates an additional \$0.60 in economic activity for other Hoosier businesses.
- Most survey respondents have a positive outlook for their business. Nearly 95 percent of those surveyed said they expect revenue growth over the next few years, while 62 percent of respondents expect an expansion to their business that will require major new capital investment and/or new hiring.
- When asked to identify the greatest opportunities open to Indiana motorsports, the most common responses focused either on the shift towards electric-powered vehicles specifically or racing’s ability to showcase and advance new technologies in general. That said, not all respondents welcome the rise of electric powertrains, as nearly 30 percent of respondents view this shift as a threat to their business.
- Difficulty finding and retaining qualified workers stood out as a problem for the motorsports industry as a full 100 percent of respondents identified this issue as a concern for their business. Rising costs and attracting younger fans were other frequently mentioned challenges.
- When asked to suggest ways the State of Indiana could help grow the industry, tax incentives and continued support for the grassroots of the sport were the most common recommendations. Some respondents urged the state to help make connections between the motorsports industry and the rapid technology shifts in the consumer auto market. Other respondents stressed the need for a stronger workforce development pipeline to motorsports.

The Economic Impact of Indiana Motorsports

The first challenge in measuring the economic impact of motorsports is defining the industry. Unlike an analysis of other key sectors such as agriculture or the life sciences, there is no clearly defined set of industries that comprise motorsports. Racing teams and racetracks form the core of this industry, but these players rely on variety of manufacturers, research and development firms and other service providers to help bring the sport to life and drive innovations in technology, performance and safety.

The Indiana Economic Development Corporation worked with the Indiana Business Research Center at IU’s Kelley School of Business to identify the employers that form the Indiana motorsports industry. The research team utilized a variety of sources to construct its list and settled on a collection of more than 300 businesses in the state that employ an estimated 4,880 workers.

As **Table 1** shows, more than 200 of these businesses are involved in motorsports competition—meaning they are either a race team, a venue or a sanctioning body—while the remaining establishments are split almost evenly between manufacturers and service providers.

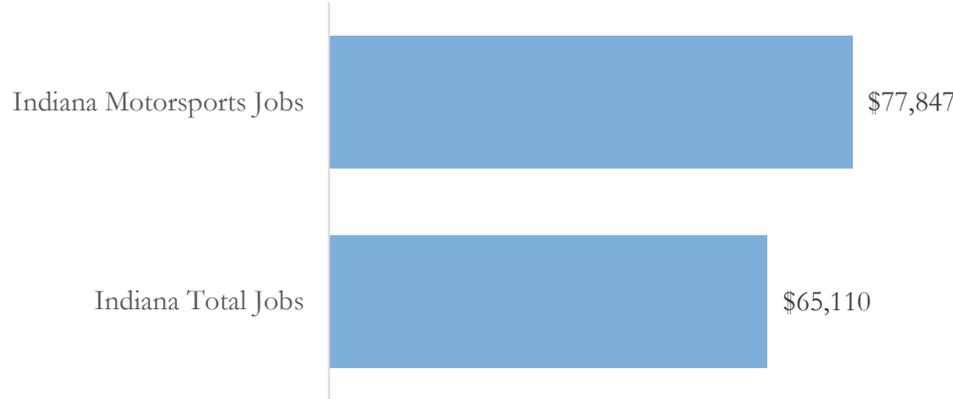
Table 1: Overview of Indiana Motorsports Employers, 2020

Industry Type	# of Establishments	# of Employees	Average Compensation per Job
Competition	214	2,510	\$77,320
Manufacturing	43	1,620	\$83,120
Services	46	750	\$69,250
Motorsports Total	303	4,880	\$77,850

Source: Indiana Business Research Center, using data from Data Axle and the IMPLAN economic modeling software

One important characteristic of the state’s motorsports employers is the relatively high wages offered in this industry. The average compensation per job in 2020 was an approximately \$77,850, which is roughly 20 percent higher than the average compensation for all jobs in the state (see **Figure 1**)

Figure 1: Average Compensation per Job, Indiana Motorsports and Indiana Total, 2020



Note: compensation is a measure of income that includes both wages and benefits
 Source: Indiana Business Research Center, using data from the U.S. Bureau of Economic Analysis and IMPLAN

The Economic Ripple Effects of Indiana Motorsports

In the terminology of economic impact analysis, the details provided in the previous section describe the “direct effects” of the Indiana motorsports industry on the state’s economy. The economic activity generated by these direct effects—the purchase of goods and services from other businesses in the state along with the household spending of workers—cascade throughout Indiana’s economy. To estimate these so-called economic ripple effects, the research team used the IMPLAN economic modeling software to conduct an input-output analysis of Indiana motorsports employers.

The IMPLAN model draws from a variety of secondary data sources to provide a detailed account of the Indiana economy. For instance, the model estimates that 74 percent of the goods and services required by Indiana’s racetrack operators are purchased from other businesses in the state. Additionally, the employees of Indiana’s motorsports companies—as well as workers throughout the motorsports supply chain—spend their earnings on food, clothing, health care, entertainment, etc. Nearly all this spending will occur in the state. The contributions from these spending streams—the supply chain purchases and the household spending of workers—are referred to as the economic ripple effects of the Indiana motorsports industry in the following text and tables.

As referenced in the previous section of this report, the more than 300 Hoosier businesses involved in the motorsports industry combine to create nearly 5,000 direct jobs. The ripple effects generated by these firms support an estimated 4,910 additional jobs at other businesses in the state (see **Table 2**). Add these ripple effects to the direct employment, and the total employment footprint of Indiana motorsports rises to 9,790 jobs.

A useful way to interpret these employment ripple effects is to look at the multipliers. For the entire motorsports industry, the ratio of direct employment to total jobs yields a multiplier of 2.0, meaning that every job tied directly to the industry supports one additional job with other employers in the state. The magnitude of these multipliers differs by the type of business. Employment multipliers for the competition side of motorsports, for instance, is estimated at 1.7 (i.e., every ten direct jobs with these businesses support seven additional ripple effect jobs in the state). Motorsports manufacturers, by contrast, have longer supply chains and offer somewhat higher pay which result in a larger employment multiplier.

Table 2: Indiana Motorsports Employment Impact, 2020

Industry Type	Direct Jobs	Ripple Effect Jobs	Total Jobs	Multipliers
Motorsports Total	4,880	4,910	9,790	2.0
Competition	2,510	1,650	4,160	1.7
Manufacturing	1,620	2,470	4,090	2.5
Services	750	790	1,540	2.1

Source: Indiana Business Research Center, using data from Data Axle and the IMPLAN economic modeling software

In terms of broader economic activity, the total effects of Indiana motorsports combine to contribute an estimated \$1.2 billion to the state’s annual Gross Domestic Product (GDP). Indiana’s motorsports manufacturers account for nearly half of the total GDP generated by this industry (see **Table 3**). The multiplier of 1.60 indicates that every dollar of GDP directly generated by Indiana motorsports spurs an additional \$0.60 in economic activity in Indiana.

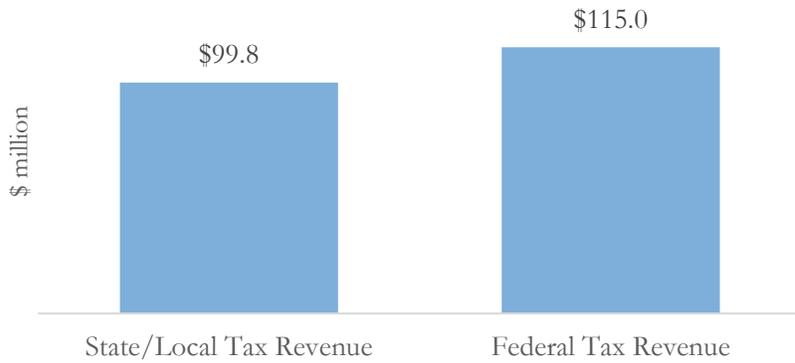
Table 3: Indiana Motorsports GDP Impact, 2020

Industry Type	Direct GDP (\$ millions)	Ripple Effect GDP (\$ millions)	Total GDP (\$ millions)	Multipliers
Motorsports Total	\$751.3	\$451.0	\$1,202.2	1.60
Competition	\$308.2	\$128.0	\$436.1	1.42
Manufacturing	\$338.0	\$241.9	\$579.8	1.72
Services	\$105.1	\$81.2	\$186.3	1.77

Source: Indiana Business Research Center, using data from Data Axle and the IMPLAN economic modeling software

In addition to the various contributions to employment and GDP, the economic activity initiated by Indiana motorsports also generates local, state and federal government revenues. The economic activity initiated by the industry produced nearly \$100 million in estimated state and local government revenues in Indiana, as well as another \$115 million in federal revenues (see **Figure 2**).

Figure 2: The Indiana Motorsports Industry’s Impact on Government Revenues, 2020



Source: Indiana Business Research Center, using data from Data Axle and the IMPLAN economic modeling software

The State of the Indiana Motorsports Industry

The numbers presented in the previous section show that the motorsports industry is an economic force in the state. However, these data do not shed any light on where the industry is headed. To learn more about the important opportunities and challenges that lay ahead for motorsports, the research team conducted a survey of many of the key stakeholders in the industry. The rest of this report will focus on the findings from this survey.

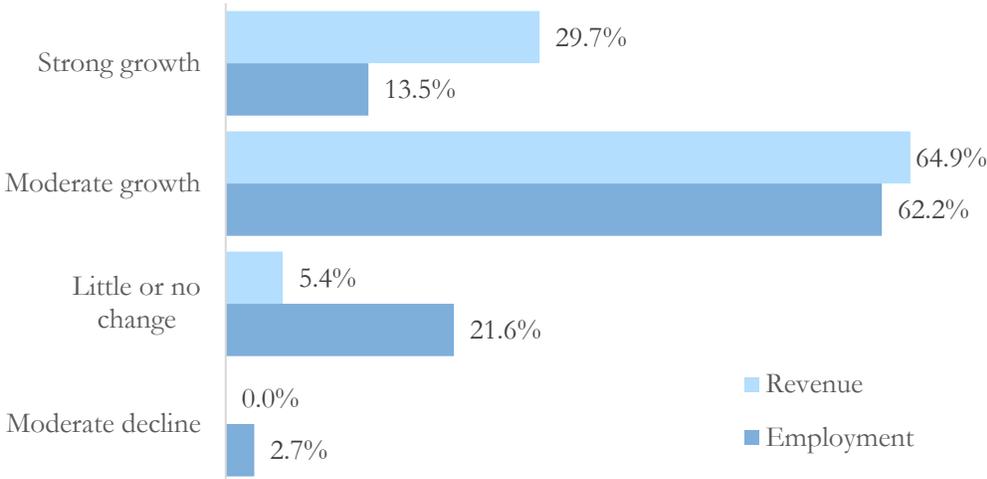
Motorsports Industry Outlook

Despite unprecedented economic uncertainty since the beginning of the Covid 19 pandemic, most respondents who participated in the motorsports industry survey report that their businesses have weathered the storm well and that they have a positive outlook for the next few years. Some survey highlights on the current business climate include:

- 79 percent of survey respondents stated that business was either very strong or moderately strong in 2021 based on revenue or other key performance indicators.
- 64 percent of respondents reported that their business revenues so far in 2021 were stronger than in 2019 (the last full year before the pandemic). Only 15 percent of respondents stated that revenues were down from 2019.
- 30 percent of respondents said that their number of employees in 2021 have increased from pre-pandemic levels, while 58 percent reported that their number of employees was about the same.

Survey respondents were also optimistic about the outlook for their businesses. Nearly 95 percent of those who took the survey say they expect revenue growth for their business over the next few years, with 30 percent of these respondents looking forward to “strong” revenue growth (see **Figure 3**). More than 75 percent of those surveyed also expect to hire more workers over this period.

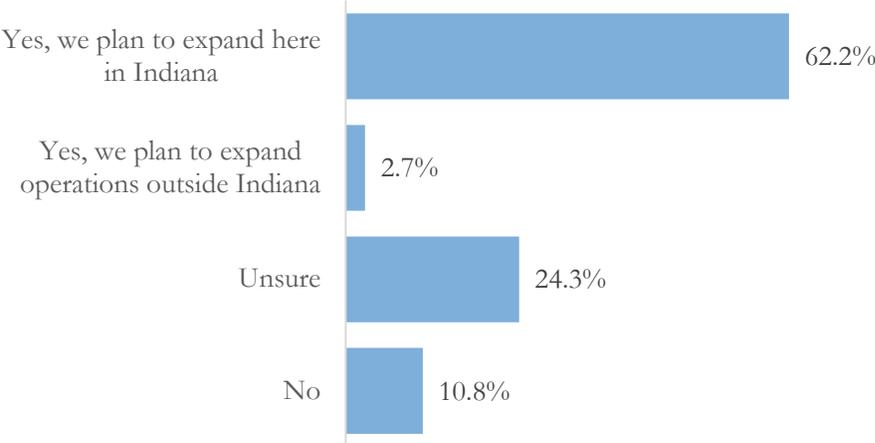
Figure 3: Survey Findings—Over the next 3 to 5 years, what are your expectations for your company’s revenue/employment growth?



Note: Findings based on 37 survey responses
Source: Indiana Business Research Center, findings from Indiana motorsports industry survey conducted October/November 2021

This generally positive outlook means that many of Indiana’s motorsports employers have plans for a major expansion to their business. As **Figure 4** shows, 62 percent of respondents expect an expansion to their business that will require major new capital investment and/or new hiring in Indiana. Only 11 percent of those surveyed indicate that they will definitely not be expanding their business in the near term.

Figure 4: Survey Findings—Over the next 3 to 5 years, do you plan any expansions to your business that will result in major new capital investment and/or hiring?

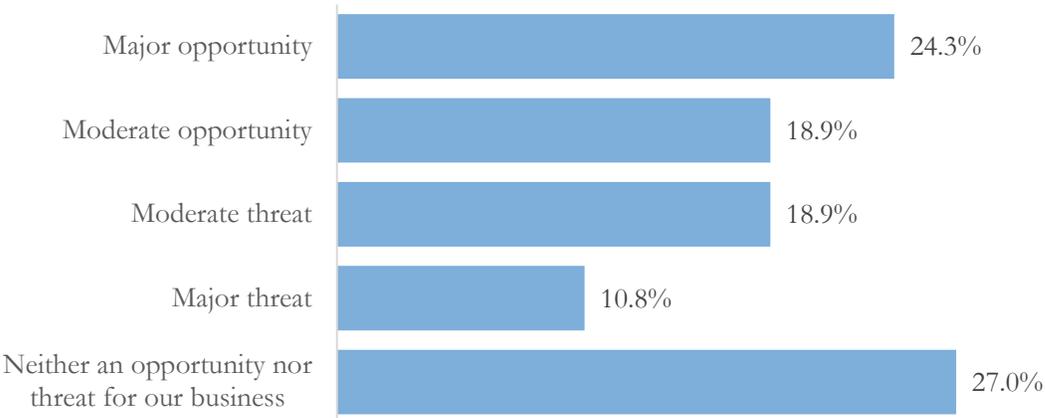


Note: Findings based on 37 survey responses
 Source: Indiana Business Research Center, findings from Indiana motorsports industry survey conducted October/November 2021

Views on the Shift to Hybrid and Electric Vehicles

When looking at changes that lay ahead for the motorsports industry, nothing looms larger than the nearly certain growth of hybrid or electric-powered vehicles both in the consumer market and on the racetrack. Survey respondents were split on what this shift will mean for their business, with 43 percent of respondents saying that they view this change as an opportunity, while nearly 30 percent see it as a threat (see **Figure 5**).

Figure 5: Survey Findings— Do you view the likely growth of hybrid-powered and electric-powered vehicles in motorsports to be an opportunity or a threat for your business?



Note: Findings based on 37 survey responses
 Source: Indiana Business Research Center, findings from Indiana motorsports industry survey conducted October/November 2021

It is worth noting that when survey respondents were asked open-ended questions on what they view as the greatest opportunities and challenges that face motorsports, the rise electric-powered vehicles was one of the most frequently listed opportunities for the industry, while hardly rating any mentions among the list of challenges. In fact, most comments on the greatest opportunities open to motorsports focused on showcasing and embracing new technologies to advance the on-track product, connect with and cultivate the fan base, or help finance the sport (see **Table 4**).

Table 4: Survey Findings— Topics mentioned as the greatest opportunities open to motorsports over the next 3 to 5 years.

Opportunity	Number of Comments
Electric-powered vehicles	7
Showcase new technology	7
Online streaming of races and other content / social media	4
More entertainment at races	3
E Sports	2
Growing youth fan base	2
Cryptocurrency/blockchain technology	2
Sports betting	2

Note: Findings based on 22 comments from survey respondents
 Source: Indiana Business Research Center, findings from Indiana motorsports industry survey conducted October/November 2021

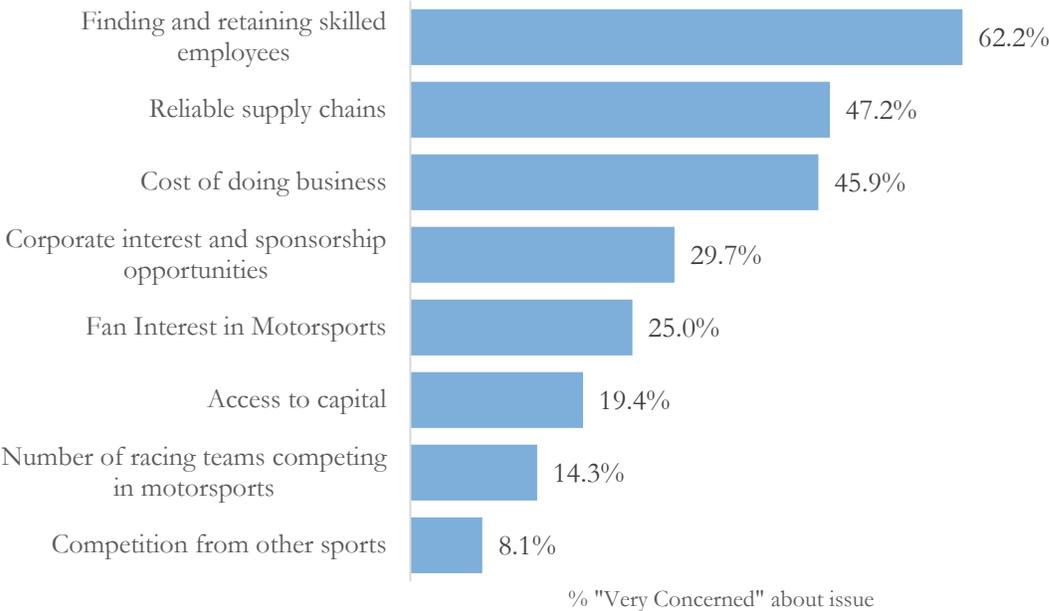
Challenges Facing the Motorsports Industry

While many of Indiana’s motorsports businesses have an optimistic outlook and are planning for future growth, they are also contending with the same challenges facing most employers in this current business environment. If not remedied, these obstacles could threaten growth prospects for many in the industry.

The one concern that stands above all others is the shortage of qualified workers. In response to a question asking the degree to which certain issues were a concern for their business, 62 percent of respondents stated that they were “very concerned” about “finding and retaining skilled employees” (see **Figure 6**). All other respondents indicated that they were “somewhat concerned” about this issue, making it the only issue that rated as either very concerning or somewhat concerning by all survey respondents. Concerns associated with a shortage of qualified labor will likely only heighten as an already older existing workforce continues to age and some new technologies demand different skillsets.

Survey respondents were also concerned with supply chain issues and the rising cost of doing business. Somewhat lower on the list of concerns are the issues that are more unique to the motorsports industry, such as sponsorship or fan interest in the sport.

Figure 6: Survey Findings— Percent of respondents who indicated that these issues were “Very Concerning” for their business



Note: question text: “How would you rate each issue as a concern for your business”. Findings based on 37 responses
Source: Indiana Business Research Center, findings from Indiana motorsports industry survey conducted October/November 2021

Respondents identified many of the same issues when asked to list the greatest challenges facing the motorsports industry. Rising costs was the challenge mentioned most often, followed by concerns over the age structure of the fan base, a shortage of qualified labor, potential for new government regulations, and the pool of sponsorship dollars (see **Table 5**).

Table 5: Survey Findings— Topics mentioned as the greatest challenges facing the motorsports industry over the next 3 to 5 years.

Challenge	Number of Comments
Rising costs	11
Attracting a younger audience / age of current fan base	8
Finding and retaining qualified workers	7
Government regulation	7
Sponsorship / corporate partnership	7
Adapting to new technologies	4
Providing more entertainment value	2
Supply chain concerns	2

Note: Findings based on 24 comments from survey respondents

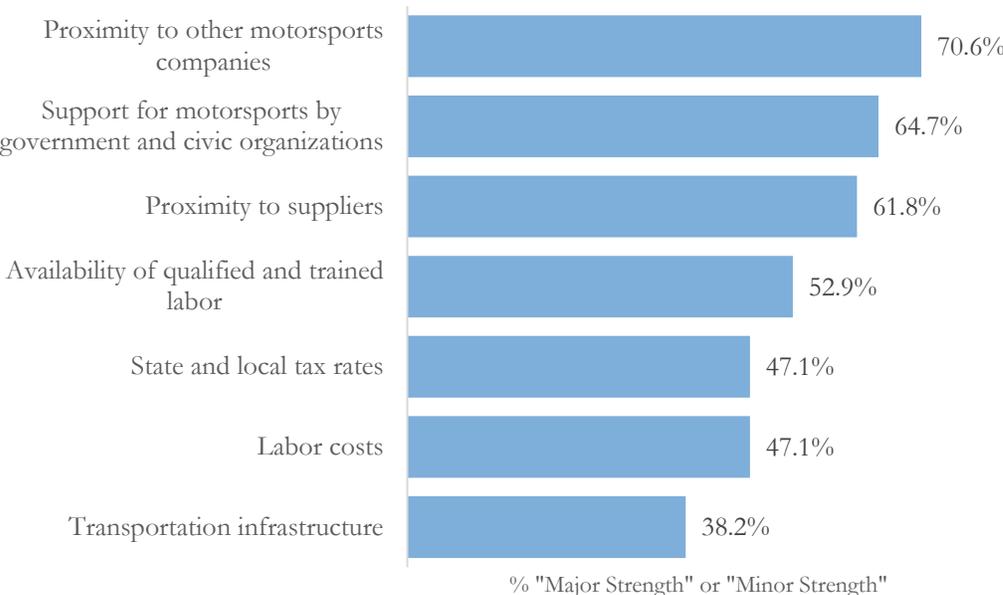
Source: Indiana Business Research Center, findings from Indiana motorsports industry survey conducted October/November 2021

The State of Indiana’s Support for the Motorsports Industry

The State of Indiana, along with other government entities and civic organizations in the state, will certainly play a major role in helping to meet the challenges that face the motorsports industry. These organizations will also need to help the industry prepare for new innovations and growth opportunities, while also acting as a conduit for technology transfer between motorsports and other industries.

Fortunately, many in motorsports already view the support offered by government and civic organizations in the state as an important advantage for the industry. Nearly two-thirds of survey respondents stated that they view support for motorsports from these entities as a strength for doing business in Indiana (see **Figure 7**). Other advantages for operating in the state revolve around the size of the motorsports cluster and the supplier network that has grown alongside it.

Figure 7: Survey Findings— Percent of respondents who indicated that these features were either a “Major Strength” or “Minor Strength” for doing business in Indiana



Note: question text: “To what degree do you consider the following to be a strength or weakness for operating your business in Indiana”. Findings based on 35 responses
 Source: Indiana Business Research Center, findings from Indiana motorsports industry survey conducted October/November 2021

Survey respondents were also asked an open-ended question on what the State of Indiana could do to help strengthen and grow the motorsports industry. As **Table 6** shows, tax incentives and grant funding targeted at the motorsports industry were at top of mind for many respondents, as were low taxes and regulations. Another common comment was the continued need to support smaller venues and grassroots racing.

Table 6: Survey Findings— Topics mentioned as actions the State of Indiana or other institutions could take to help strengthen and grow the motorsports industry.

Type of Action	Number of Comments
Tax incentives / grant funding	10
Continue to support small venues / grassroots / youth involvement	6
Low taxes and regulation	3

Note: Findings based on 25 comments from survey respondents

Source: Indiana Business Research Center, findings from Indiana motorsports industry survey conducted October/November 2021

Below are additional topics raised by respondents as actions that the State of Indiana could take to help strengthen and grow the industry. Note that these are not direct quotes, but are summaries prepared by the research team based on multiple comments:

- Help attract new businesses to the state by promoting Indiana’s motorsports history as a proving ground for automotive innovation.
- Regarding hybrid and electric vehicles, take the lead in connecting motorsports with innovations in the consumer markets, including businesses developing the infrastructure needed for electric vehicles.
- Further develop a workforce development pipeline for the motorsports industry with opportunities at various levels of education (high school, trade school, university, etc.).

Conclusion

The importance of the motorsports industry to the Indiana economy is clear. The combined effects of this industry support nearly 9,800 jobs in Indiana and contributes an estimated \$1.2 billion to the state's GDP. Moreover, the average compensation per job in Indiana's motorsports industry is 20 percent higher than the state average for all jobs, and the employment multiplier of 2.0 means that every direct job in motorsports creates one additional job at other businesses in the state.

Even more encouraging, a survey of motorsports businesses in the state reveals that most respondents have an upbeat outlook. A majority of those who took the survey reported that they expect revenue growth over the next few years and that they plan expansions to their business that will lead to major new capital investment and hiring.

Amid these positive signs, however, there are still several challenges facing the motorsports industry. Labor shortages, rising costs, rapidly changing technologies in the consumer vehicle market and attracting the next generation of fans all loom large. As the findings in this report demonstrate, any efforts by state government or other civic organizations to help the Indiana motorsports industry overcome these challenges and continue to thrive will generate positive ripple effects throughout the state's economy.

Appendix

Research Notes

The first task in this analysis was to compile a list of employers operating in Indiana that rely on motorsports for at least a sizeable portion of their business. The IBRC research team drew this list from a variety of sources including the Indiana Economic Development Corporation, the Indy Partnership, the Indianapolis Business Journal, the Data Axle database (formerly Infogroup), and the Performance Racing Industry website. Data Axle was the primary source used to develop the employment numbers for motorsports businesses and to assign the industry codes needed to run the input-output analysis.

The research team also used this group of businesses to develop the distribution list for the motorsports industry survey. Researchers used the Qualtrics survey software to program and distribute the survey via email. The survey was sent to 143 motorsports businesses and 37 responses were received (a 26 percent response rate).

Key Terms

Direct Effects: Refers to the change in GDP or employment in the state that can be attributed specifically to the motorsports industry.

Ripple Effects: A combination of the indirect and induced effects generated by the direct effects. Indirect effects measure the change in GDP or employment caused when motorsports businesses increase their purchase of goods and services from suppliers and, in turn, those suppliers purchase more inputs and so on throughout the economy. Induced effects reflect the changes—whether in GDP or employment—that result from the household spending of employees directly linked to Indiana motorsports, along with the employees of its suppliers.

Total Effects: The sum of the direct effects and ripple effects.

Government Revenue: The IMPLAN model also tracks the tax effects associated with all the transactions and economic activity associated with the direct and ripple effects. For example, household spending at retailers generates state sales tax. In addition, those retailers also pay property taxes to local governments. As a result, this analysis was also able to estimate the state and local government tax flows.

Multiplier: The multiplier is the magnitude of the economic response in a particular geographic area associated with a change in the direct effects. The multiplier equals the total effect divided by the direct effect.

GDP: Also known as value added, GDP is a measure of the economic activity generated by a given industry. GDP is the difference between an industry's total output and the cost of its production inputs. GDP consists of four components: employee compensation, proprietor income, other property income and indirect business tax.

Compensation: compensation consists of wages and salaries plus benefits. Compensation is the total payroll cost of employees.

About IMPLAN Economic Impact Modeling Software

IMPLAN is built on a mathematical input-output (I-O) model that expresses relationships between sectors of the economy in a chosen geographic location. In expressing the flow of dollars through a regional economy, the input-output model assumes fixed relationships between producers and their suppliers based on demand.

It also omits any dollars spent outside of the regional economy—say, by producers who import raw goods from another area, or by employees who commute and do their household spending elsewhere.

The idea behind input-output modeling is that the inter-industry relationships within a region largely determine how that economy will respond to economic changes. In an I-O model, the increase in demand for a certain product or service causes a multiplier effect, layers of effect that come in a chain reaction. Increased demand for a product affects the producer of the product, the producer’s employees, the producer’s suppliers, the supplier’s employees, and so on—ultimately generating a total effect in the economy that is greater than the initial change in demand. For instance, say demand for Andersen Windows’ wood window products increases. Sales grow, so Andersen has to hire more people, and the company may buy more from local vendors, and those vendors in turn have to hire more people . . . who in turn buy more groceries. The ratio of that overall effect to the initial change is called a regional multiplier and can be expressed like this:

$$(\text{Direct Effect} + \text{Indirect Effects} + \text{Induced Effects}) / (\text{Direct Effect}) = \text{Multiplier}$$

Multipliers are industry- and region-specific. Each industry has a unique output multiplier, because each industry has a different pattern of purchases from firms inside and outside of the regional economy. (The output multiplier is in turn used to calculate income and employment multipliers.)

Estimating a multiplier is not the end goal of IMPLAN users. Most wish to estimate other numbers and get answers to questions such as: How many jobs will this new firm produce? How much will the local economy be affected by this plant closing? What will the effects be of an increase in product demand? Based on those user choices, IMPLAN software constructs “social accounts” to measure the flow of dollars from purchasers to producers within the region. The data in those social accounts will set up the precise equations needed to finally answer those questions users have—about the impact of a new company, a plant closing or greater product demand—and yield the answers.

IMPLAN constructs its input-output model using aggregated production, employment and trade data from local, regional and national sources, such as the U.S. Census Bureau’s annual *County Business Patterns* report and the U.S. Bureau of Labor Statistics’ annual report called *Covered Employment and Wages*. In addition to gathering enormous amounts of data from government sources, the company also estimates some data where they haven’t been reported at the level of detail needed (county-level production data, for instance), or where detail is omitted in government reports to protect the confidentiality of individual companies whose data would be easily recognized due to a sparse population of businesses in the area.

The IBRC’s analysts have attended advanced training in the use of the IMPLAN modeling software. The estimates that the IBRC analysts generate are scrutinized closely to ensure that they are accurate and reflect the most trustworthy application of the modeling software.