



*The University of Michigan Center for Sport and Policy  
School of Kinesiology 1402 Washington Heights Ann Arbor, MI 48109  
(734) 647-1309*

**Professor Mark S. Rosentraub, PhD**  
**Bruce and Joan Bickner Endowed Professor of Sport Management**

**Matthew Rust, Research Assistant**

# **The Economic Value of the Michigan International Speedway**

**April 2014**

## I. Introduction

The economic value of the Michigan International Speedway (MIS) is underscored by the scale of at least two of the events held each year at the venue. Since 1991 the MIS has been home to two of the largest (*if not the largest*) regularly scheduled single-day paid-admission sporting events held in Michigan.<sup>1</sup>

The MIS is owned by the International Speedway Corporation (ISC), the country's largest provider of motor sports entertainment. ISC's gross revenues annually exceed \$610 million. The ISC and its state-level tracks held events at 12 venues across the United States.<sup>2</sup>

Since the MIS is part of a national corporation, understanding its economic value to Michigan requires two separate analyses. As part of prestigious national firm, the MIS elevates the state's image and underscores the importance of Michigan as a location for the nation's leading entertainment and sports corporations.

As an integral component of a large corporation, however, a portion of the economic activity generated by the MIS from events held in Michigan actually accrues to the ISC. While there is value to Michigan in hosting major locations (or offices) of national and international corporations, assessing the direct and tangible economic value produced by these prestigious firms requires a separation of the pecuniary effects on the local or state's economy and what revenues are directed towards a corporation's out-of-state headquarters. As a result, understanding the economic value of the MIS to Michigan requires an assessment of its *economic footprint* which includes all of the revenue generated or produced by events in Michigan including those revenue streams that are transferred to the ISC (and thus to another state). The second analysis, a more traditional assessment of positive economic impacts, describes the unique impacts of the MIS to Michigan's economy as a result of the ISC having a venue in Brooklyn, Michigan.

Both perspectives are valuable and important to Michigan's community leaders and elected officials. *First*, having been selected as the Midwest location for the ISC produces important tangible and intangible benefits for Michigan. The prestige conveyed by having another set of major sports and entertainment events held in Michigan should not be overlooked even if some important revenues are transferred or accrue to ISC at its headquarters located in Florida. When that occurs Michigan still enjoys value as the location of important events. *Second*, the hosting of major events at the venue in Brooklyn, Michigan also produces a substantial level of economic benefits for Michigan that needs to be understood.

---

<sup>1</sup> Michigan International Speedway 2013 Media Guide; Readers are reminded that in 2006 Detroit and Ford Field hosted Super Bowl XL. In 2010 and 2014 Michigan Stadium was home to outdoor hockey games, each of which attracted more than 100,000 fans. The University of Michigan also hosts games that sometimes attract more than 114,000 fans. It is also likely that thousands more watch football games in parking areas near the stadium. Without debating whether gross revenues, non-game attendees, or those outside the venue meant that more people were at single events in Ann Arbor, it is sufficient to note that since 1991 the Michigan International Speedway, *each year*, hosts sports events that are at least equal to and probably larger than any events held elsewhere in Michigan.

<sup>2</sup> ISC 2012 Annual Report Form 10-k, p. 15

As a result, two separate chapters or sections of this report provide national, state, and local officials with a complete economic portrait of the importance of the MIS' operations regardless of the spatial distribution of the benefits and an enumeration of the benefits for Michigan. The value of national corporations – even though some revenues from their local operations is transferred elsewhere – changes but does not reduce the economic value of statewide effects for Michigan. Indeed, the MIS' national and local economic impacts *each* produce important value for Michigan.

Before focusing on the economic footprint or total value of the MIS and then its net positive economic value to Michigan's economy, the methodology that directed this report is described in Section II. Section III details the total economic value of the MIS. The unique economic value or "net positive impact" of the MIS on Michigan's economy is detailed in Section IV. The conclusions from the analyses are contained in Section V.

## II. Methodology

An industry of sorts has emerged when measuring the economic value or importance of amenities, sports venues, corporations, universities, and cultural centers to cities, regions, states, and the national economy. The proliferation of these assessments has led to some confusion as to what is or should be measured especially given the (1) integrated nature of regional and national economies and (2) relationship of local business or events to their national or international offices and locations.

There is also some confusion over the inputs that should be included or excluded when trying to measure the economic value that an amenity produces for local, regional, or state economies. The confusion is related to the observation that some of the revenue flows that are produced by business activities at almost every venue and office by-pass local or regional economies and actually create impacts in other states or countries. When an amenity or business is part of a national or transnational entity, care has to be taken to properly account for the impact of revenues produced by local events that are transferred to other states or countries. Those revenues while a valuable and important part of the economic footprint or definition of an entity have direct and indirect effects on other regions. There are some revenue streams that do not produce local, regional, or even statewide direct or indirect economic effects.

The loss of those dollars from the local or host state's economy does not reduce the overall economic importance of the amenity or business. It may, however, change the spatial distribution of its tangible effects.

Depending on which definitions are used, *very different measures of economic valuation can also be presented.* This section of the report is designed to **define terms** and **explain the methodological rules** followed to ensure that a proper measure of the MIS' economic impact or profile is produced. It is not an easy task to identify spending levels and revenues that result in economic value. The integration of firms and businesses in conglomerates and as part of national firms often leads to cross-state transfers of revenues and that reduces any business' impact on a local economy.

In addition, too often some economic impact studies fail to properly explain the ways in which multiplier effects should to be enumerated. Each dollar spent at a venue produces secondary effects only if that money is used for purchases that involve local inputs (labor and materials). If labor or inputs are produced elsewhere, indirect effects might be different.<sup>3</sup>

*What are the factors that often lead to this confusion?*

*First, some studies apply multiplier effects to direct spending estimates without properly considering whether or not local inputs were involved and if revenues were locally expended.*<sup>4</sup>

---

<sup>3</sup> Davidson, L.S., & Schaffer, W.A. (1980), "A discussion of methods employed in analyzing the impact of short-term entertainment events," *Journal of Travel Research*, 28 (3), 12-16.

<sup>4</sup> Crompton, J. L. (1995), "Economic Impact Analysis of Sports Facilities and Events: Eleven Sources of Misapplication," *Journal of Sport Management*, 14-35.

The salaries earned by athletes is an example of funds locally paid that might be expended elsewhere as athletes typically do not live in the area in which their teams are located (or near the tracks where they race). Multipliers must be properly interpreted to avoid any over estimate of local value or impact.

*Second*, if analysts do not clearly define multipliers or which multiplier is being used, improper interpretations of projections could result. Information is provided in the following parts of this report to describe input-output models and the value of the RIMS II multipliers for measuring economic impact.

*Third*, a discussion of the underlying assumptions and limitations of input-output models is also included to be sure readers are aware of the assumptions and limitations of these tools and their best and appropriate uses.

**Most importantly**, this section also illustrates how measuring the total economic value of the MIS is different from a measurement of its unique economic value specific to Michigan.

## **A. Defining Input-Output Models and Terminology**

Regional input-output (I-O) models provide multipliers that can be used to estimate the economy-wide effects that an initial change in economic activity has on a regional economy.<sup>5</sup> Regional I-O multipliers share similarities with what are commonly termed macroeconomic (Keynesian) multipliers. Both types of multipliers provide a way to estimate the economy-wide effects that an initial change in economic activity has on a particular economy. Both types are based on the idea that an initial change in economic activity results in diminishing rounds of new spending as leakages occur through saving or spending outside the local economy.

The size of both macroeconomic multipliers and regional I-O multipliers is smaller when there are more leakages. In larger economies it is not uncommon to find several rounds of spending and re-spending before the initial money impacts other regional economies. In smaller economies, as residents or businesses tend to spend money for goods and services produced elsewhere, the initial round of spending produces less of a “re-spending or ripple” effect within the local economy. For example, the size, composition, and consumer spending habits in the New York metropolitan economy produce smaller leakage effects when compared to an economy the size of the Ann Arbor metropolitan area. For that reason, multipliers would be expected to be larger for the New York regional economy than they would be for the Ann Arbor regional economy where more leakage occurs more quickly.

Despite their similarities, regional I-O multipliers are not a substitute for national-level macroeconomic multipliers.<sup>6</sup> Macroeconomic multipliers are based on behavioral assumptions related to how individuals adjust their labor supply, saving, and consumption decisions when there is an initial change affecting their income. The value of these multipliers is constructed from empirical estimates of the interrelationships between related economy-wide measures of

---

<sup>5</sup> Bess, R. and Ambargis, Z. O. 2011. “Input-Output Models for Impact Analysis: Suggestions for practitioners Using RIMS II Multipliers,” Washington, D.C.: U.S. Bureau of Economic Analysis

<sup>6</sup> Ibid.

economic activity. The size of macroeconomic multipliers is closely linked to the marginal propensity to consume.<sup>7</sup> In more extended models, the size of the multipliers may also be affected by the degree to which individuals are forward looking and shift consumption, labor supply, and savings across time in response to anticipated changes in taxes, interest rates, or asset prices that change individuals' behavior.

Multipliers are constructed from a detailed set of industry accounts that measure the commodities produced by each industry and the use of these commodities by other industries and final users. By incorporating information regarding inter-industry relationships, regional I-O multipliers can highlight the impact of demand changes on particular industry sectors within a region. I-O models do not account for price changes that may result from increased competition for scarce resources.

The relationship between consumption and income in I-O multipliers is based on personal consumption expenditures estimated in input-output tables for a given year. Regional I-O multipliers use the same spending response for all types of changes in regional demand.

## **B. Overview of RIMS II**

Since the 1970s, The United States Bureau of Economic Analysis (BEA) has produced regional I-O multipliers based on inter-industry purchases resulting from changes in final demand. Adjusting national I-O relationships with regional data creates the RIMS II model.<sup>8</sup>

RIMS II multipliers are based on a set of national input-output (I-O) accounts that illustrate the goods and services produced by each industry and the use of these goods and services by other industries and final users. For regional models, RIMS II figures are adjusted to account for regional supply conditions within a study region. These study regions must include a sufficient economic base (number of firms, employees and households) to measure the relationships necessary to form multipliers.

The multipliers produced by the model are customized to account for the economic activity in any set of contiguous counties. These multipliers represent ratios of total to partial changes in economic activity—for example, a total change in employment to an initial change in final demand. When these ratios are multiplied by a change in final demand that is specific to a local economic event, the result is an estimate of a total change in the local economy.<sup>9</sup> The basic idea behind multipliers is that industries within the region are not likely to produce all the intermediate inputs required to produce the goods and services purchased within the region. In these cases, local industries purchase inputs from outside the region creating “leakages” from the local economy.

---

<sup>7</sup> The marginal propensity to consume is the process of quantifying the relationship between changes in income and consumption expenditures.

<sup>8</sup> [http://www.bea.gov/regional/pdf/rims/RIMSII\\_User\\_Guide.pdf](http://www.bea.gov/regional/pdf/rims/RIMSII_User_Guide.pdf)

<sup>9</sup> Ibid.

## C. How Economic Values are Measured with Multipliers

When using RIMS II, there are four measures of changes of economic value that can be estimated—gross output, value added, earnings increments, and employment changes (number of jobs produced). Each is defined in the following paragraphs:<sup>10</sup>

**Gross output** is equal to the sum of the intermediate inputs and value added.<sup>11</sup> It can also be considered to be the sum of the intermediate inputs and final use. Gross output is a duplicative total in that goods and services will be counted multiple times if they are used in the production of other goods and services.

**Value added** is defined as the value of gross output *less* intermediate inputs. The value of this measure is equal to the sum of the compensation paid to employees, taxes on production and imports less subsidies, and gross operating surplus.

RIMS II **earnings** consist of wages and salaries paid to individuals and proprietors' income.<sup>12</sup> Employer contributions for health insurance are also included. Personal contributions to social insurance and employee pension plans are *excluded* because the model accounts for the portion of personal income that is available for households to spend.

**Employment** is the jobs produced and includes both full- and part-time positions created.

RIMS II provides users with Type I and Type II multipliers. The selection of a multiplier is determined by how goods and services are supplied in and to the region and by how these goods and services are consumed.

- Type I multipliers account for the direct and indirect impacts based on how goods and services are supplied within a region.
- Type II multipliers not only account for these direct and indirect impacts, but also account for induced impacts based on the purchases made by employees.

To effectively use these multipliers, the choice and accuracy of measuring economic value depends on several important considerations. In this section of the report, general RIMS II assumptions are discussed. Sections 3 and 4 detail specific concepts and adjustments to user inputs that were made to provide a prudent and precise measure of economic value.

---

<sup>10</sup> Bess, R. and Ambargis, Z. O. op cit.

<sup>11</sup> Intermediate inputs are goods and services that are used in the production process of other goods and services and are not sold in final-demand markets.

<sup>12</sup> Proprietors' income is the net earnings associated with non-corporate businesses.

## D. Important Considerations When Estimating Economic Value With RIMS II Multipliers

The accounting conventions that form the basis of an I-O model impose assumptions on the appropriate application of multiplier effects. Since many of these assumptions can lead to an overstatement of the impacts of a project or program, many consider the estimates as upper bounds. These assumptions and accounting conventions are detailed below.

### *(1) Backward Linkages*

Impact models can measure the effect an industry's production has on other industries in two ways. If an industry increases its production, there will be an increased demand on the industries that produce the intermediate inputs. Models that measure impacts based on this type of relationship are called backward-linkage models. If an industry increases its production, there will also be an increased supply of output for other industries that contribute to production. Models that measure impacts based on this type of relationship are called forward-linkage models.<sup>13</sup> The RIMS II model is a backward-linkage model.

RIMS II multipliers are created to estimate the total impacts resulting from incremental changes in final demand. More plainly, it begins from the assumption that the MIS does not exist in the economy. Because the model is based on existing industry relationships, RIMS II multipliers are not specifically designed to estimate the total contribution of an existing industry to any economy when it currently exists.

Multipliers created by the RIMS II model include the current industry relationships in the economy because of the existence of the MIS. As a result the multiplier provides a lens to view how these relationships subsequently change the economy.

This assumption affects every measure of economic value presented in this piece. As a result, the term **“footprint”** is introduced. The values placed in the context of “footprint” should be understood not as new contributions to the economy, but rather *a component of the economy* generated from operations and spending during events held at the MIS. Values placed in this context refer to economic values relative to a larger integrated economy.

The terms “increment, positive or real” throughout this report refers to the portion of economic value that is unique to the MIS. This term can be better understood as a **“unique increment value,” “real economic development,”** or **“net positive impact”** of the MIS. Values placed in this context refer to economic values relative to Michigan. More plainly, these economic values *would not exist in the Michigan economy if the MIS did not exist in Brooklyn or anywhere in Michigan.*

---

<sup>13</sup> For a full discussion of backward- and forward-linkage models, see Miller, R. E. and Blair, P. D. (2009), *Input-Output Analysis; Foundations and Extensions*, New York: Cambridge University Press.

## *(2) Fixed Production Patterns, Substitution Effects, and Retained Spending*

I-O models typically assume that inputs are used in fixed proportion, without any substitution, across a wide range of production levels. In other words, the model assumes that an industry must double its inputs to double its output without substitution. If these assumptions are inconsistent with the true production patterns in the local economy, then the impact of the change on the local economy will differ from that implied by a regional multiplier.

The assumption of fixed production patterns relates to labor inputs as well. I-O models typically assume that changes in output will result in a proportional change in jobs based on the average production patterns for the industries in a local economy. If an industry can increase its output by extending the number of hours that existing employees work, then the results estimated with RIMS II multipliers will overstate the actual increase in local employment.

Substitution effects refer to the options available to consumers if an event does not occur or if a firm does not exist (meaning that consumers or businesses find other substitutes). This concept is particularly important when measuring the value of entertainment and sports events, but it also applies to the value of a particular firm if reasonable substitutes for its products or services exist. With regard to sports and entertainment, if an event is not held people could still spend some if not all of their discretionary income (or the money they would have spent to attend a game or race) within the state. That spending could be for entertainment in Ann Arbor, Oakland County, or in downtown Detroit. The concept of substitution means that in many instances if an event does not exist people will still spend some (and possibly all) of their discretionary income for other forms of entertainment or products leaving the economy unchanged by the existence of the new event, race, or game. Spending at a venue or event that is a *substitution* or *transfer* of spending that would likely have taken place elsewhere in Michigan represents *no unique economic value specific to the MIS*. The procedures to ensure that safeguards were in-place to remove all substitution effects from the measurement of economic development are detailed in the next section of the report.

Some economic impact studies fail to account for substitution effects.

If no adjustment or methodology is introduced into an economic impact study then it is possible that the reported effects are overstated. The most important task for any economic impact study is to explain how, after identifying the total spending levels that exist what appropriate adjustments for substitution effects were made. In the absence of events at the MIS, many of tourists would likely **not** spend their discretionary income in Michigan. As a result their spending is positive economic activity for the state. In this context, the term “real economic development” or “net positive impact” intuitively makes complete sense. Again, for the purposes of this report, “unique economic value”, “real economic development” or “net positive impact” refers to this component of economic value that would be lost in the Michigan if the MIS did not exist.

In a similar vein, it is also possible that if some events were not held at the MIS – or the MIS did not exist – residents of Michigan would attend races in Indiana or Illinois. If that would take place, then the MIS retains revenue for Michigan, and those funds are real growth for the state’s

economy. This *retained* tourist spending by the state’s residents must also be identified and estimated.

### *(3) Local Supply Conditions, Leakages and Ownership Structures*

Regional I-O tables that are based on national I-O relationships need to make adjustments to account for local supply conditions. The basic idea behind these adjustments is that industries in the region are not likely to produce all of the intermediate inputs required to produce the change in final demand (or the goods, products, or services enjoyed by consumers). In these cases, local industries must purchase intermediate goods and services from producers outside the region, thereby creating leakages from the local economy.

RIMS II accounts for these leakages by adjusting national I-O relationships with regional location quotients (LQs). For most industries, LQs consist of the ratio of an industry’s share of regional earnings to the industry’s share of national earnings. If the LQ for the industry is one or greater, then the industry’s national coefficients are used for the region. If the LQ for an industry is less than one, then the national coefficients are reduced by the ratio to account for leakages.

The use of LQs to adjust the national coefficients does not explicitly account for what is typically referred to as cross hauling. Cross hauling refers to the phenomenon where goods and services are imported from outside a region even though there is an adequate supply of these goods and services produced within the region.

*How do analysts adjust for these supply conditions?*<sup>14</sup>

The study region should be large enough to include the industries that supply a large share of direct inputs. The model also requires that relationships created between spending and industries exist within the study region. This raises an important issue when measuring the economic value of the MIS.

Although RIMS II multipliers adjust for “leakage” within a region, if inputs are not supplied within the respective region, the multiplier effects will be less than anticipated.

For example, if a restaurant or venue purchases all of the food or other products that they sell from suppliers located in a neighboring state or country, it is inappropriate to include these inputs as part of the calculation of primary and secondary effects. More plainly, even though businesses may exist within the local region to supply and purchase goods, non-local entities maybe the suppliers invalidating the use of local multipliers.

*So what does this mean for reporting economic value?*

The multiplier assumes that the initial round of spending is spent in the host economy (study region) as a result of locally supplied inputs. If a business through its atypical organization circumvents the assumptions made in the production of I-O tables adjustments must be made. In

---

<sup>14</sup> Bess, R. and Ambargis, Z. O., op. cit.

the case of the MIS, some of its inputs as a result of its parent firm's horizontal and vertical business relationships are *not* locally produced. The MIS sells food and other products that are produced elsewhere by ISC subsidiaries. Those relationships are part of the MIS' economic footprint but not of its state and local effects.

Although MIS operates within the Michigan market and employs approximately 140 state residents, ISC owns and/or operates tracks throughout the United States. The parent company earns revenues through affiliate entities with locations outside of Michigan. The ISC generates substantial cash flows from admissions (tickets sold to events); television media rights fees; promotion and sponsorship fees; hospitality rentals (including luxury suites, chalets and the hospitality portion of club seating); advertising revenues; royalties from licenses of trademarks; parking and camping; and track rentals.<sup>15</sup> These cash flows are realized at the national level (umbrella entity) and the subsequent multiplier effects are generated in numerous regions (throughout the U.S economy). The ISC also owns businesses that produce inputs or items for sale at the MIS; those subsidiaries are also not located in Michigan.

With these concepts in place, the following measures of the MIS's economic value are presented in Sections III and IV.

---

<sup>15</sup> See ISC Financials, <http://ir.internationalspeedwaycorporation.com/phoenix.zhtml?c=113983&p=irol-reportsannual>

### III. The Total Economic Value or *Footprint* of The MIS

#### A. Defining Total Economic Value as The MIS' Footprint

The MIS is an important Michigan corporation producing valued entertainment opportunities for residents and non-residents. Its entire economic profile should be considered when portraying the contributions the company makes to the state and its identity. That contribution is not diminished by the MIS' relationship to the ISC.

The transfer of some portion of the MIS' economic activity or footprint to the ISC and Florida does **not** diminish the scale of the corporation's overall tangible and intangible benefits to Michigan.

As part of a large corporation, the total economic value generated by the MIS is larger than its effect on Michigan's economy. For this reason, this chapter focuses on the MIS' total *economic impact without reference to the spatial distribution of those direct and indirect revenues*. In that regard, what is presented in this chapter can be thought of as the "footprint" of an entity (team, venue, university, corporation, etc.) regardless of where that impact ultimately occurs.

What is meant by the use of the word footprint is to present to readers and community leaders an unambiguous measure of the economic contribution of the MIS. These data offer a precise measure of the importance of the local corporation. As already discussed, correctly identifying study regions and ownership structure is vital to any understanding of the spatial elements of different economic impacts. The economic footprint represents the entirety of spending attributed to the MIS regardless of the local or non-local region in which it occurs (state, metropolitan area, etc.). Understanding the total economic footprint is valuable for important policy discussions.<sup>16</sup>

Focusing on the total or national economic footprint of an entity without regard to its local or regional spatial effects requires the use of multipliers that account for national relationships. Information provided by the MIS and from the ISC's *2012 Annual Report* were utilized and provided the flexibility to adjust spending by specific geographic regions. As would be expected the larger economic footprint of the MIS far exceeds its tangible economic contributions to the local and state economies. The intangible benefit of this larger economic impact for Michigan and its residents was not measured. Readers are reminded that the focus on the MIS' effect regardless of the spatial component of those impacts sustained the use of larger multipliers

---

<sup>16</sup> This is very different from the incremental or additive revenues that represent the net positive economic impact of an entity on its community or the space within which it is located. Total receipts or revenue/expenses include all of the spending at a venue and associated with an event (e.g., media sales, etc.) if those revenues are retained by the entity and then spent within the local or regional economy. Revenues received that are exported or invested in other regions do not produce net positive economic impacts.

reflecting the national economy as opposed to the relationships that exist in Michigan or the Ann Arbor metropolitan statistical area.<sup>17</sup>

A brief example illustrates why the MIS' economic footprint is larger than its impact on Michigan. Americrown and the Motor Racing Network (MRN) are subsidiaries of the ISC. Americrown is responsible for souvenir merchandising operations, food and beverage concession operations, and catering services (in both general and premium seating areas). MRN creates motorsports-related programming content.<sup>18</sup> Both of these entities are integral to race events and as result their activities produce a substantial level of revenue from activities that take place in Michigan. These corporations, however, are not located in Michigan and revenues are transferred to their respective home locations. In addition, Americrown purchases few inputs from the Michigan economy. Their involvement suggests the need for the use of multipliers that reflect their operational linkages and more importantly illustrates how revenues produced by a race in Michigan can by-pass the local economy.

To better account for the geographic nature of different revenue streams, two separate categories were created: (a) general operations spending *and* (b) the spending by attendees. Analyzing MIS' economic contributions in these categories produces a more accurate measure of impact and allows for a more precise input/output model in these categories.

## **B. Total Operating Footprint**

Relative to operations at the track, there are four measures of total economic activity that can be measured — gross output, value added, earnings, and employment. Which multipliers are used and the application of these multipliers is determined by what information is gathered and how the direct expenditures change the economy. Regardless of the type of multiplier used, the results report (a) the initial spending or the direct impact and (b) subsequent indirect and/or induced economic effects. The form of the initial spending directs the choice of the multiplier to be used.

### *(1) Direct Impact*

The first step in analyzing the economic value or footprint of MIS is to determine the total direct spending attributed to MIS' operations. For this section, the multipliers used by RIMS II represent a national economy. Moreover, the MIS' executive staff provided a detailed breakdown of revenues and spending by category. These streams of spending represent expenditures made to host events at the venue and the revenue generated. The direct spending in each of these categories was used in models to estimate indirect and induced benefits attributable to each

---

<sup>17</sup> Although the ISC received revenues generated by MIS, as a publically traded company, the subsequent multiplier affects should be taken in a national context. This paper aims to adequately define which study regions are applicable to respective streams of spending.

<sup>18</sup> <http://ir.internationalspeedwaycorporation.com/phoenix.zhtml?c=113983&p=irol-reportsannual>

activity. Similar to an annual budget, these expenditures represent direct economic contributions.<sup>19</sup> Annual economic contributions of the MIS include:

- Facility Maintenance
- Management (administration, facility and racing operations)
- Media Production (sponsorship, broadcast rights, advertising and hospitality)
- NASCAR Related Revenue

In 2013, after adjusting for net purchases of goods and services, MIS was responsible for more than \$65.7 million in direct economic activity. As mentioned earlier, this figure represents a variety of spending streams with different spatial effects. To appreciate all of the spatial elements, the vendors/suppliers involved and their locations were identified. The inputs purchased from these vendors/suppliers and the number of the MIS' employees was verified with the assistance of staff from the MIS and the organization's records.<sup>20</sup>

### *(2) Multiplier Effects and Total Impact*

When multipliers are added to the direct expenditures an estimate of the total impact economic activity of the MIS is produced.<sup>21</sup> More plainly, the summation of direct, indirect and induced total economic activity is the total of all goods and services at the track, the total compensation paid to employees, the taxes paid, the products external to the economy that were used to stage events, media income, and the gross operating surplus.<sup>22</sup>

After attributing \$65.7 million of direct spending to several corporate activities in the input/output model, **an additional \$42.8 million in indirect and induced activity is produced**. This means that the MIS' economic footprint each year **is more than \$108.5 from expenditures and revenues at the MIS events and from its operations**. The \$108 million represents all inputs to operations, all items consumed at the track, and income earned by all industries

---

<sup>19</sup> Direct spending also includes net purchases of goods and services.

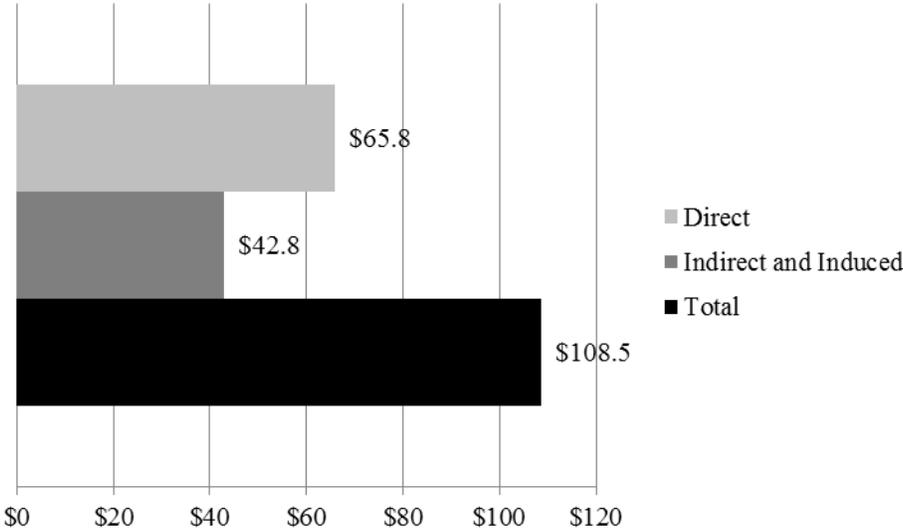
<sup>20</sup> Changes in direct impact should be measured by the price paid to producers rather than the prices paid by consumers or the purchase price.

<sup>21</sup> For this analysis, multipliers were utilized for each specific industry. The Bureau of Economic Analysis recommends that when analysts cannot find a suitable industry multiplier averages for separate industries should not be averaged together. RIMS II multipliers are derived from detailed I-O tables and regional data. As a result each multiplier is unique to each industry and region and cannot be averaged with those for other industries or regions. Another practice that should be avoided is summing multipliers across regions or breaking down multipliers in constituent regions. These practices do not account for the interaction between industries and the leakages from regions. For this section, multipliers were used at the MSA level. This was done because a significant amount of direct spending was retained within the Michigan economy. In addition, MSA level multipliers assume less leakage and thus produce larger multiplier affects. These effects however are smaller than one would see if larger national multipliers were used. For this study, it was assumed that national production patterns, industry homogeneity, and prices in the larger national multipliers would produce inflated projections of subsequent rounds of spending. The study region should be large enough to include the industries that supply a large share of the direct inputs, but small enough so that the impacts are not overestimated.

<sup>22</sup> Final demand output multipliers were used to measure total economic footprint.

involved with the \$65.7 million in direct spending (see Figure 1). It represents an impact that is both inside and outside the state of Michigan.

**Figure 1:** Total Economic Footprint of Operations on the U.S Economy (in \$Millions)



### (3) Defining Impacts

To better understand the total impact effects of the \$108.5 million, RIMS II provides earnings multipliers. These multipliers provide another lens to view how spending impacts the economy. When these multipliers are applied, it produces a figure that illustrates how much in wages, salaries, and proprietors' income is supported by \$108.5 million of total impact.<sup>23</sup> The results of this analysis indicate that nearly \$72 million in total earnings impact is supported by the \$108.5 million economic footprint.<sup>24</sup>

Lastly, to further understand the \$108.5 million in total economic activity, RIMS II also provides multipliers to estimate the number of jobs supported. The results of this analysis indicate that 1,868 result from operations activity at the MIS (across the United States).<sup>25</sup> Figure 2 illustrates the total economic footprint of MIS operations on the US economy.

**Figure 2:** Economic Footprint of Operations

<u>Category</u>	<u>In \$ Millions</u>		<u>Jobs Impact</u>
	<u>Output Impact</u>	<u>Earnings Impact</u>	
<b>Direct</b>	\$65.8	\$53.4	1,468
<b>Indirect &amp; Induced</b>	\$42.8	\$18.7	399
<b>Total</b>	\$108.5	\$72.0	1,868

<sup>23</sup> This figure is not an addition to the \$108 million in total impact. Rather, it represents earnings associated with the economic activity generated.

<sup>24</sup> Earnings' final demand multipliers were applied to the initial spending (final demand change or "direct spending)." Depending on the geographic origin of the spending type I or type II multipliers were used. As such, subsequent induced spending is generated by Type II multipliers. The earnings impact was approximately \$72 million.

<sup>25</sup> Impact models measure the effects of an industries production on other industries in the economy. The RIMS II model as a backward linkage model treats this spending as if it did not exist in the economy and inputs to supply materials and labor reorganize themselves to meet this new demand. In actuality, this spending is a current part of the economic equilibrium and assumes an abundance of new jobs is incorrect. In actuality, if these streams of spending increase or decreases, jobs may be added. But without an examination that includes a temporal dimension, referring to these jobs as new additions to the economy may not be accurate. The term economic footprint is more intuitive to these measures of "impact."

### C. Total Visitor Spending Footprint Value

The second generator of economic contributions is the spending by visitors to the MIS. In 2013, the MIS hosted 19 event dates. MIS hosted a pair of NASCAR event weekends in June and August attracting more than 337,000 fans. The first step in the analysis of visitor spending was to estimate the number of attendees. Figure 3 illustrates the 2013 Michigan International Speedway Schedule. Event weekends are bolded.

**Figure 3:** 2013 Schedule of Events at the MIS

<u>Event</u>	<u>Date</u>	<u>Description</u>
1	May 7-28	Track and Explore
2	May 3-5	Square One Education Network
3	May 9-11	Formula SAE
4	May 18	Michigan Wine and Beet Fest
5	May 25-26	Sport Car Club of America
<b>6</b>	<b>June 14</b>	<b>ARCA Racing Series</b>
<b>7</b>	<b>June 15</b>	<b>NASCAR- Alliance Truck Parts 250</b>
<b>8</b>	<b>June 16</b>	<b>NASCAR- Sprint Cup Series Quicken Loans 400</b>
9	June 29-30	Tough Mudder
10	July 19-21	Faster Horses Festival
11	July 25-28	Make-A-Wish/WAM Bike Ride
12	July 27	Drive 4 UR Community Program
<b>13</b>	<b>August 16</b>	<b>NASCAR Spring Series Practice and Qualifying</b>
<b>14</b>	<b>August 17</b>	<b>NASCAR Camping World Truck Series MI National Guard 200</b>
<b>15</b>	<b>August 18</b>	<b>NASCAR Spring Series Pure Michigan 400</b>
16	August 23-25	CHUMP Car Series
17	September 11	Sprint of America
18	September 13-15	Michigan Karting Club
19	November 2	MHSAA State Cross Country Final

In this section, the two major race weekends were separately analyzed providing a better comparison of NASCAR impacts relative to other sporting events at other venues. The vast majority of the economic footprint of the MIS, 96 percent, is a result of these two events. The specific events associated with these two weekends are listed as events 6, 7, 8, 13, 14, and 15 in Figure 3. It is estimated that these two weekends attract 337,000 visits to the MIS.<sup>26,27</sup> The MIS offers a variety of race-related experiences for fans and tourists.

Recent renovations to the MIS facilities in 2010 added premium seating products including 30 suites in the pit area and 16 others offering panoramic views of the race. These renovations increased the seating capacity to more than 85,000. NASCAR weekend events attract visitors

<sup>26</sup> Total attendees: includes fans, corporate visitors additional workers and media related personnel

<sup>27</sup> ZYNP Strategy Presentation and A Consumer Marketing Presentation provide by MIS

from Michigan, the Midwest, and Canada. Nearly 60 percent of attendees do not live in Michigan.<sup>28</sup>

MIS also operates 12 campgrounds. There are 9,000 camping sites at these venues making MIS the largest registered campground in Michigan.<sup>29</sup> As a result, events at the MIS offer a unique vacation experience to visitors. A variety of expenditures are generated through a number of different product offerings at the campsites. Consequently, adjustments must be made to account for these streams. These adjustments are explained in detail in the Section IV.

Similar to the categories created to adjust for operational economic contributions, visitor driven impacts were differentiated to generate precise measures of the economic impacts.

### *(1) Direct Spending At Racing Events*

Total economic footprint from visitor spending is the summation of all expenditures by attendees. In the absence of exhaustive survey data, a conceptual framework derived from cost-factor and expenditure models was created to estimate visitor spending.<sup>30</sup> Different concepts between these models were utilized to adjust visitors' expenditures:<sup>31</sup>

- Entertainment/Recreation Expenditures – Spending at recreation facilities, user fees, admissions, attendance at other entertainment and other forms of entertainment and recreation while in transit to the event.
- Food/Beverage Expenditures – Spending at restaurants and grocery stores as well as items purchased for off-premise consumption.
- Retail Expenditures – Spending for items including souvenirs.
- Lodging Expenditures – Spending for accommodations at hotels and motels, the use of campgrounds and trailer parks, the rental of vacation homes, or any other money spent for the use of facilities for overnight or all-day visits.
- Travel Expenditures – Spending for all forms of transportation to the MIS or while attending an event.

The amount each visitor spends depends on length of stay, transportation costs, food and beverage consumption, and the purchase of other goods or services in and outside the venue. To estimate these streams of spending, each visitor was assigned a “per diem” for spending across event weekends. These “per diem” allotments include spending for each of the four expenditures mentioned above and were adjusted accordingly to visitor characteristics. Following the visitor descriptions, adjustments to per diems are then detailed.

---

<sup>28</sup> *MIS Media Guide, 2013*

<sup>29</sup> See *MIS Media Guide, 2013*

<sup>30</sup> World Tourism Organization (2000) *Measuring Total Tourism Demand*, Madrid, Spain: World Tourism Organization.

<sup>31</sup> Glossary of terms are consistent with TIA and its proprietary Travel Economic Impact Model (TEIM). TEIM is used to measure the impact of travel on the U.S Economy by the US Travel Association

Step 1: Attendee Mix

The first step was to enumerate in-state visitors to the MIS and tourists from other states and countries. Figure 4 illustrates the distribution of tickets by attendees' home areas.

**Figure 4:** Geographic Breakdown of June and August Race Weekend Ticket Sales<sup>32</sup>



**Source:** Data provided by the MIS

---

<sup>32</sup> Includes all tickets sold for General Admission and Camping

## Step 2: Per Diem Spending

This section details the spending of approximately 337,000 fans by visitor category (see Figure 5). The figures used were taken from estimated per diem spending levels produced by the U.S. General Services Administration (GSA).<sup>33</sup> As noted, the following categories of spending were included. (A detailed explanation of spending rates is contained in Appendix A).

- Entertainment/Recreation Expenditures
- Food/Beverage Expenditures
- Retail Expenditures
- Travel Expenditures

Of the 337,000 fans visiting MIS on race event weekends, nearly 75 percent (or 252,750) did not stay on campgrounds. Approximately 40 percent (101,100) of attendees were from Michigan; the balance or approximately 60 percent (151,650) were residents of other states or countries. There were 84,000 campers with more than half, 55 percent, residents of other states or countries (see Figure 5).

**Figure 5:** Selected Characteristics of Fans at the MIS on Race Weekends

<b><u>In-State Fans</u></b>	<b><u>Out-of-State Fans</u></b>	<b><u>Total</u></b>
134,800	202,200	337,000

<b><u>Non-Camping</u></b>	<b><u>Non-Camping</u></b>
101,100	151,650
<b><u>Camping</u></b>	<b><u>Camping</u></b>
33,700	50,550

## Step 3: Direct Spending for Fans and all Attendees

With fans divided into residents and non-residents of Michigan, it is estimated that approximately \$166 million was generated from the fans visiting the MIS on race weekends. Furthermore, approximately 60 percent of the spending can be attributed to out-of-state visitors (see Figure 6).

<sup>33</sup> <http://www.gsa.gov/portal/content/104877>

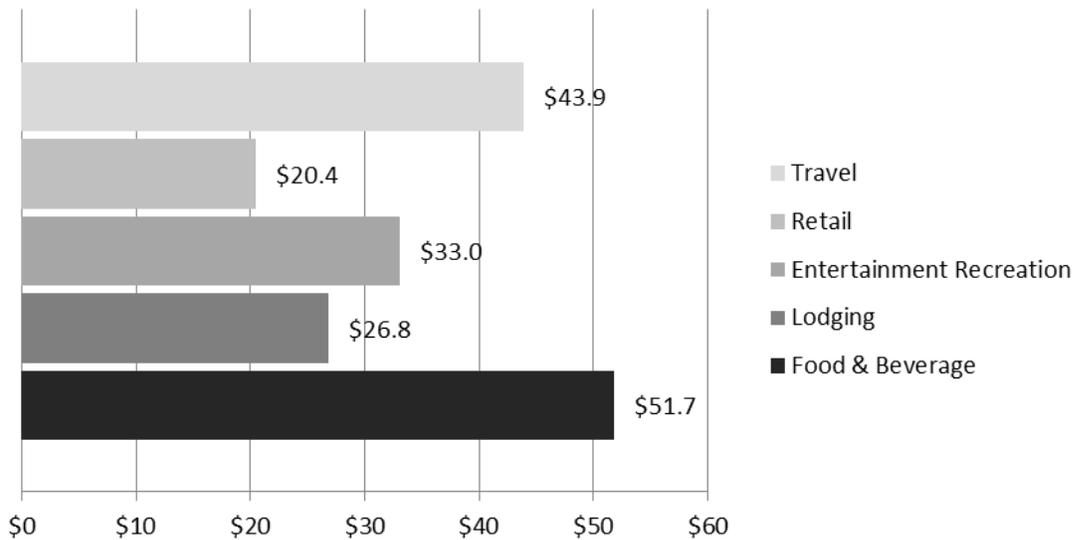
**Figure 6: Total Direct Spending by Fan Type to MIS Race Weekend Events<sup>34</sup>**

Fan Description	Number of Visitors	Total Spending Per Fan: Entire Visit			Total Spending
		Low	High	Average	
In-State Non-Camping	101,100	\$419	\$566	\$492	\$54,523,634
In-State Camping	33,700	\$320	\$357	\$338	\$11,828,026
Out-of-State Non-Camping	151,650	\$419	\$566	\$492	\$81,785,452
Out-of-State Camping	50,550	\$320	\$357	\$338	\$17,742,039
<b>Total (average)</b>	<b>337,000</b>	<b>\$369</b>	<b>\$461</b>	<b>\$415</b>	<b>\$165,879,151</b>

The media covering the events, participants (racing teams), temporary workers, and other guests could mean that as many as 360,000 people are present for these racing events. Partial per diem rates were included for these other 23,000 individuals. It is anticipated that their spending would be approximately \$10 million.

In summation, then, *the total direct spending for all attendees at MIS race weekend events is estimated to be \$176.1 million.*<sup>35</sup> Figure 7 illustrates the total direct spending for all attendees to MIS race weekend events by expenditure type.

**Figure 7: Direct Spending by All Attendees to MIS Race Weekend Events**



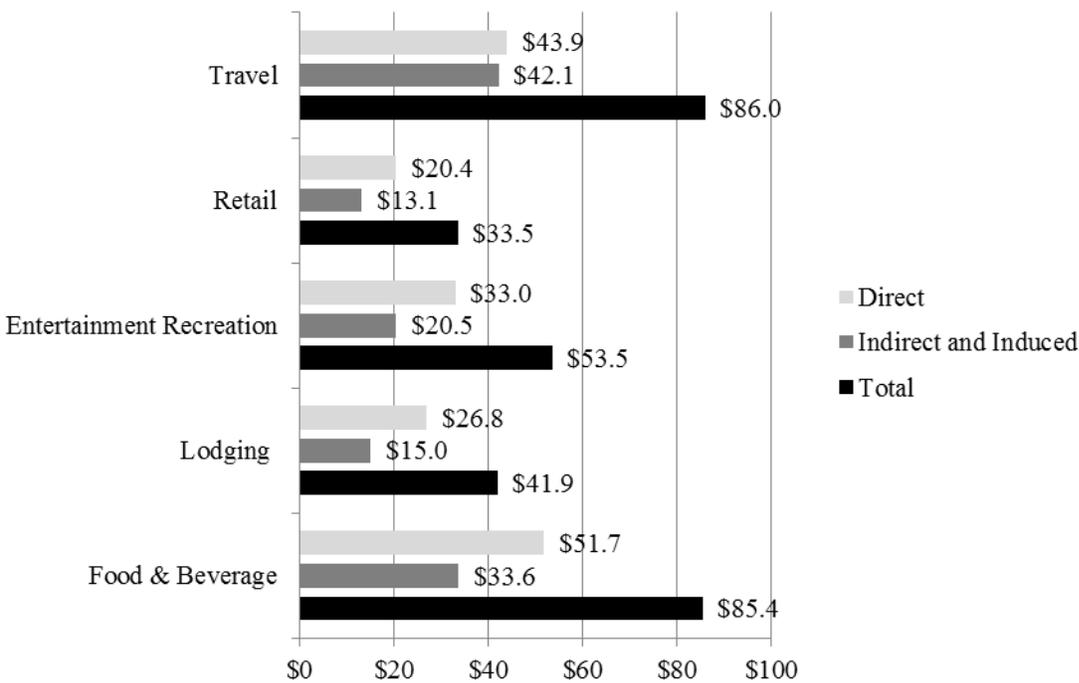
<sup>34</sup> See Appendix A for a description of per diem adjustments and spending

<sup>35</sup> This direct spending reflects all expenditures made by attendees for their entire trip.

## (2) Multiplier Effects and Total Impact

The subsequent rounds of spending resulting from visitors' direct expenditures are detailed in Figure 8.<sup>36</sup> The expenses for travel, entertainment/recreation (ticket sales), retail (souvenirs), lodging, and food and beverages represent direct impacts to the economy. When multipliers are applied an additional \$124.3 million of indirect and induced economic activity for Michigan and the US economy is supported (see Figure 8).

**Figure 8:** Direct, Indirect, and Induced Effects of Spending by Attendees



<sup>36</sup> Multipliers utilized by RIMS II include accommodation, food, entertainment, retail, and travel services. Multipliers for the annual series are used as they are based on more recent information and more closely match the industry detail of spending. Type I multipliers were used for in-state attendees while Type II multipliers were used for out-of-state attendees. The study area chosen for attendee spending was the MSA level. This region is appropriate as a majority of attendee spending from in-state and out-of-state attendees took place in tourism-related industries within Michigan. Although multipliers for the MSA were utilized, the resulting subsequent rounds of spending may or may not affect the state's economy. The geographic origin of where the direct expenditure took place as well as the entity that realized the purchase dictates how the tertiary effects of spending accrue to the larger US economy. As a result, although multipliers from Michigan were used, these subsequent rounds of spending should be thought of in the larger context of the US economy.

*(3) Defining Impacts*

The economic footprint of attendee spending at the MIS is \$300.4 million of direct, indirect and induced total economic activity. This figure represents the total of goods and services produced, compensation paid to the employees, taxes paid on production, and the gross operating surplus.<sup>37</sup> Of the \$300.4 million of total economic activity supported, approximately \$154.5 million is considered wages, salaries, and corporate income. When employment multipliers were used from the RIMS II model, it is estimated that 3,546 jobs throughout the U.S. benefit from visitor spending at the MIS. Figure 9 illustrates the total economic footprint of attendee spending on the US economy.

**Figure 9:** Economic Footprint of Attendee Spending at the MIS

<u>Category</u>	<u>In \$Millions</u>		<u>Jobs Impact</u>
	<u>Output Impact</u>	<u>Earnings Impact</u>	
<b>Direct</b>	\$176.1	\$102.5	2,250
<b>Indirect &amp; Induced</b>	\$124.3	\$52.1	1,296
<b>Total</b>	\$300.4	\$154.5	3,546

**Note:** Even though RIMS II multipliers are appropriate for many tourism impact studies, it is important to revisit one element. Special events similar to a motor race weekend generate new streams of spending during short periods of the year. It is appropriate to interpret multiplier effects of these streams of spending given a repetitive time dimension. The summation of these events contributes to larger effects in the economy. For example, if the two major race weekends did not exist in the economy, expenditures may or may not exist in the economy depending on consumer spending decisions. The resulting balance of the larger impact would subsequently balance over a period of time. The motor sports events satisfy the temporal requirement.

*(4) Summarizing the Total Economic Footprint of the MIS on the U.S Economy*

**The total economic footprint of the MIS from motor sports events is \$409 million of direct, indirect, and induced total economic activity.**

This figure represents the total of goods and services, the compensations paid to employees, taxes paid on production, and gross operating surplus that is supported by the economic footprint of the MIS. Of the \$409 million of total economic activity supported, approximately \$226.6 million is considered wages, salaries and corporate income. When employment multipliers were used from the RIMS II model, it is estimated that 5,413 jobs throughout the U.S. benefit from the total economic footprint of the MIS. Figure 10 illustrates the total economic footprint of both operations and attendee spending on the US economy.

<sup>37</sup> Final demand output multipliers were used for the totality of impact.

**Figure 10:** Economic Footprint of the MIS from Motor Sports

---

<u>Category</u>	<u>In \$Millions</u>		<u>Jobs Impact</u>
	<u>Output Impact</u>	<u>Earnings Impact</u>	
<b>Direct</b>	\$241.9	\$155.8	3,718
<b>Indirect &amp; Induced</b>	\$167.1	\$70.7	1,695
<b>Total</b>	\$409.0	\$226.6	5,413

---

*(5) The Direct Economic Impact Of Visitor Spending At Other Events*

There are two events held by other organizations at the MIS that are viewed as unlikely to be hosted elsewhere in Michigan. *Faster Horses* is a 3-day country music festival. A conservative estimate is that the visitors spent at least \$14.9 million at campsites in the area.

The vast majority of the attendees, 77.6 percent, however, were residents of Michigan (at the 2013 event). This raises the possibility that those discretionary dollars would be spent elsewhere in the state. The out-of-state attendees, however, spent **\$2.7 million** and those funds would represent new income for Michigan. The \$2.7 million figure is a very conservative estimate of another increment to the MIS' footprint.

*Tough Mudder* is set of races and endurance challenges that attracted more than 18,000 visitors in 2013. Total direct spending was estimated at \$12.2 million. Again, as would be expected, the largest proportion of participants lived in Michigan. Non-residents were projected to have spent \$2.6 million.

**These two events, then, add another \$5.3 million to the MIS' footprint increasing its total effect to \$414.3 million.**

## IV. The Tangible Value of the MIS to Michigan's Economy

### A. Defining Unique Economic Value that generates Real Economic Development

As a part of a large corporation, Section III underscored the scale of the MIS' total economic value. The analysis in this section is a traditional assessment of the pecuniary or positive economic benefit of the MIS for Michigan's economy. For a sports venue like the MIS its positive impact is the net economic change – or unique economic value – it produces for a host region or state from inputs and spending attributed to a sport event or facility.<sup>38</sup>

Section IV is designed to **distinguish** the components of the MIS's economic value that generate *real economic development* for Michigan. Preceding the calculations is a discussion of the methodology that guided the analysis.

It is often expected that the total spending at a venue or by a team, university, or corporation is an increment to a local, regional, or state's economy. That occurs *only* when (1) substitution effects are eliminated from the calculation and (2) if precise estimates of revenues *accruing* to the host state are measured.

It is not an easy task to identify spending levels and revenues that result in economic value for a single state. The integration of firms and businesses with other firms (business-to-business relationships), in conglomerates, and as part of national firms often leads to cross-state revenue transfers.

When that occurs the value of any business to an individual state or economy is reduced.

What are the factors that make it unreasonable to conclude that all spending is an increment?

*First, consumers can shift spending within a range of substitute activities and goods* also available within a region. This means, for example, that if people do not attend an event they might still spend money at another entertainment or sport venue, or for another product available in the area. When that occurs the spending at a venue such as the MIS is merely a substitute for one form of consumption by someone (or an expenditure of discretionary income) who would have spent that money in the region (in the absence of the event).

If residents of Michigan attend an event at the MIS, what is the probability that had they not attended the event they would have spent their discretionary income in another state or province? Any economic impact study has to answer that question to produce a valid estimate of the effects of a business or venue.

---

<sup>38</sup> Turco, D.M., & Kelsey, C.W. (1992). *Conducting economic impact studies of recreation and parks special events*. Arlington, VA: National Recreation & Park Association.

If people would have spent their money in Michigan, then spending at the MIS does not represent economic development. If, however, they would have attended a race in Indiana, for example, then their spending at the MIS is economic development (retained consumption). **A decision rule has to be selected to estimate how much spending by Michigan's residents is real economic development or represents net positive impacts** as opposed to a substitution effect.

*Second, as noted and discussed earlier, some of the income produced by sporting events can completely or mostly by-pass a local, regional, or state's economy.* This occurs when income earned from the sale of broadcast rights is earned by organizations that spend some of that revenue for investments elsewhere or distribute some of the revenue to athletes who also reside elsewhere.

*Third, athletes and entertainers have spending and savings patterns that differ from other workers.* With higher propensities to save, athletes (given the expectation of lower earnings later in life) spend less of their earnings in any state and thus lower the overall positive economic impact of sports on a region.

*Fourth, it is appropriate to apply multiplier effects to direct expenditures to produce an accurate measure of a business or amenity's impact on a regional or state's economy.*

There is, however, a ***vital exception*** to this last principle that relates to the MIS. Multiplier effects are created as a result of permanent changes in an economy. As a result, for example, in Orlando, Florida, where there is a constant stream of tourists it is appropriate to include measures of indirect and induced effects, as spending occurs across the year and the regional economy has adjusted to this relatively permanent level of activity. The same observation would apply or be made when thinking about visitors to Las Vegas, New York City, or other tourist destinations that attract people every month.<sup>39</sup>

Special events similar to a motor race, a music festival, or another single athletic that takes place on one weekend or across one week creates a permanent changes in business-to-business relationships within a region's economy *only* if it is relatively permanent (takes place each year). It is appropriate, however, to apply multiplier effects to the spending at events that satisfy that criterion (relative permanence). The permanence of annual events suggests that the regional economy has been changed.<sup>40</sup> Induced and indirect effects should be calculated for on-going operational impacts since expenditures have an annual (on-going) effect on an economy.

What this means for the MIS is multiplier effects should be determined for spending at annual events that have been staged for several years (five is appropriate). Less frequently staged events and those that have far less permanency are less likely to invoke permanent realignments within a regional economy.

---

<sup>39</sup> Bess, R. Ambargis, Z. O. (2011), op. cit.

<sup>40</sup> The validity of this methodological adjustment to the measurement of economic development effects is explained in United States Bureau of Economic Analysis, *RIMS II: An Essential Tool for Regional Developers and Planners*, Washington, DC: U. S. Bureau of Economic Analysis, [https://www.bea.gov/regional/pdf/rims/rimsii\\_user\\_guide.pdf](https://www.bea.gov/regional/pdf/rims/rimsii_user_guide.pdf), accessed February 5, 2014.

The best examples underscoring the importance of this issue are the lack of permanent economic changes resulting from the hosting of the Olympics or a Super Bowl. Both are the best examples of important events that are not a permanent or on-going element in any region's economy.

There are always extraordinary proclamations of immense economic benefits from the hosting of these mega events. Yet, when Detroit hosted the Super Bowl or the NCAA Men's Basketball Final Four the regional economy was not permanently enhanced or changed. Similar observations have been made for Indianapolis (one Super Bowl), Athens, Greece (one Olympics), and even Sydney (one Olympics). One-time events cannot change an economy and hence that is why the analysis in this part of the report applied multipliers only for events that have had a permanency sufficient to re-align the regional economy.

An example of the challenge associated with measuring the economic increments from sports and entertainment activities can also be illustrated by the distribution of league income to each franchise in the National Football League. For the 2012 season each team including the Detroit Lions received \$286 million from the sale of media rights and other revenues earned by the National Football League and shared with each team. Is all of this money economic impact for Detroit or Michigan?

The answer of course would lie in where the team's owner spent that money and how much of that occurs in Detroit or in Michigan. In addition, a large portion of that revenue is used for players' salaries (approximately \$103 million in 2012). With many of the players living elsewhere for several months and likely saving a portion of their earnings for their non-playing years, a large portion of the revenue collected by the Lions is likely spent in other economies.

The methodology that guides this part of our study of the MIS' economic value was designed to ensure that those funds that actually enhance the state and region's economies were isolated from those that while valuable to the MIS would likely not change Michigan.

When considering the unique economic value of the MIS, several different terms have to be understood. Each of these are briefly detailed before turning to a description of the data collection techniques used and the presentation of the information that supports a precise projection of the economic value of the MIS to the region and Michigan.

### *(1) Substitution Effects and Retained Spending*

If an event is not held people could still spend some if not all of their discretionary income (or the money they would have spent to attend a game or race) within the state. That spending could be for entertainment in Ann Arbor, Oakland County, or in downtown Detroit, but people will still spend some of their discretionary income for other forms of entertainment. Spending at a venue or event that is a **substitution** or **transfer** of spending that would likely have taken place elsewhere in Michigan represents no **real economic development or a net positive economic**

**impact.** The procedures to ensure that safeguards were in-place to remove all substitution effects from the measurement of economic development are detailed below.

Some economic impact studies fail to account for substitution effects. If no adjustment or methodology is introduced into an economic impact study then it is possible that the reported effects are overstated. The most important task for any economic impact study is to explain how, after identifying the total spending levels that exist what appropriate adjustments for substitution effects were made. In the absence of events at the MIS many of tourists would likely not spend their discretionary income in the area or state. As a result their spending is new income for Michigan.

In a similar vein, it is also possible that if some events were not held at the MIS – or the MIS did not exist – residents of Michigan would attend races in Indiana or Illinois. If that would take place, then the MIS retains revenue for Michigan, and those funds are real growth for the state’s economy. This *retained* tourist spending by the state’s residents was estimated.

## (2) Leakage

Leakage refers to revenues related to MIS events that are not spent or retained in the region. As noted earlier, broadcast revenues is an example of leakage. Leakage also occurs when corporate income earnings are invested or redistributed elsewhere. Secondary spending was calculated using RIMS II multipliers produced by the BEA. Those data account for expected leakage resulting from revenues collected and then re-spent or re-circulated in the local economy.<sup>41</sup>

When considering the unique value of the MIS generating real economic development, two separate categories were created to adjust for substitution and leakage effects of direct impact.<sup>42</sup> Figure 11 (below) details the adjustments to direct impact that were made yielding a more precise estimate of the MIS’ direct economic value (positive direct economic impact) to Michigan. For this analysis, the spending and induced and indirect spending effects that change the economies of the region and Michigan are also identified (on-going, annual operations). Readers are reminded that multiplier effects are introduced ***following*** the adjustments to direct impacts. A separate fiscal impact assessment also includes the total tax payments made by the MIS and the taxes generated by employees.

---

<sup>41</sup> The multipliers for the Ann Arbor MSA were used in this analysis.

<sup>42</sup> In local and regional economies, the direct effect is likely to substantially outweigh the other effects. Adjustments to multipliers (aside from the mathematical imprecision associated with it) do not account for “entry level leakage” responsible for the largest impacts to the economy. This report focuses on adjustments to direct impact and the application of multipliers consistent with the economic geography of Michigan.

**Figure 11:** Adjustments to MIS’s Direct Impact to the state of Michigan

<b>Direct Operations</b>	(+)	<b>Direct Visitor Spending</b>	(=)	<b>Total Direct Economic Impact</b>
(Less) Leakage		(Less) Substitution		(Less) All Direct Adjustments
		(Less) Leakage		
<hr/> <hr/>		<hr/> <hr/>		
<b>Adjusted Direct Operations</b>	(+)	<b>Adjusted Direct Visitor Spending</b>	(=)	<b>Total Direct Economic Development</b>
(+) Multiplier Effects		(+) Limited Multiplier Effects		(+) Multiplier Effects
<hr/> <hr/>		<hr/> <hr/>		<hr/> <hr/>

## B. Direct Economic Development from Operations

### (1) Direct Economic Impact from Operations

The first step in analyzing real economic development (positive economic impact) requires an enumeration of the total direct footprint from operations attributed to MIS' operations.

In 2013, \$65.8 million was spent for annual operations as a result of events held at the MIS.<sup>43</sup>

### (2) Leakage

It is important to underscore that not all of the *direct* economic impact of the MIS is a net gain for Michigan's economy. In highly integrated metropolitan regions, the benefits of spending cross both municipal and state boundaries. Vendors, suppliers and service providers may reside outside Michigan.<sup>44</sup> Furthermore, payments to athletes and staff who reside outside of Michigan do not produce direct or indirect economic benefits for the state.

To more accurately measure the impact of spending streams within the Michigan economy, the second step in the analysis was to examine the structure of the ISC (as discussed earlier). A careful assessment and separation of spending streams to the ISC and the MIS produced an accurate measure of the real contributions of the MIS to Michigan's economy.<sup>45</sup>

For expenditures made to local businesses and salaries paid to Michigan resident employees, the first rounds of spending and successive rounds will be retained in patterns predicted by RIMS II multiplier coefficients. A detailed analysis was conducted to better understand where businesses associated with annual MIS activities were located.<sup>46</sup> Information provided by the MIS and gathered from annual financial reports permitted a precise estimate of spending that produced economic development for Michigan.<sup>47</sup> The application of the multiplier effects was included when a net figure for expenditures paid to Michigan residents and businesses was determined.

In some instances, however, expenditures or revenues were directed towards businesses located outside of Michigan. For example, Americrown and the Motor Racing Network, Inc. (MRN) are fully owned subsidiaries of the ISC. Americrown is responsible for the following: (1) souvenir merchandising operations, (2) food and beverage concession operations and (3) catering services,

---

<sup>43</sup> These revenues are a result of income from broadcast rights, sponsorships, permits, advertising, etc.

This figure is consistent with the total direct operating footprint figure calculated in Section III Part B-1

<sup>44</sup> The expectation of a proportional outcome relative to economic benefits is drawn from Paul Krugman's *The Self Organizing Economy* (1996). Post-hoc assessments of contracts and employment patterns associated with a particular project might disclose concentrations that differ from those projected from an approach based on the proportional distribution of labor and firms. In an attempt to predict future outcomes, however, the logic that existing systems have produced an order that predicts short-term future outcomes is an appropriately conservative basis for estimating benefits.

<sup>45</sup> Detailed analysis was conducted to adjusted gross spending effects. Simply applying multipliers to gross budget figures would in fact double count affects in particular industries.

<sup>46</sup> MIS Financials: MIS provided a list of vendors and suppliers used in annual expenses.

<sup>47</sup> <http://ir.internationalspeedwaycorporation.com/phoenix.zhtml?c=113983&p=irol-reportsannual>

both in general and premium seating products. MRN creates motorsports-related programming content.<sup>48</sup> Both of these organizations are part of the total economic impact of the MIS but do not change the economy of Michigan. In 2013, sponsorship, advertising, broadcasting and hospitality revenue accounted for nearly 75 percent of NASCAR event weekend revenues.<sup>49</sup>

As a result, much of the “impact” associated with these revenue streams produces little or no positive economic impact for Michigan. These subsidiaries purchase goods and services produced by Michigan businesses, but a great deal of the impact leaks outside the state in the form of retained earnings and purchases from businesses and individuals in other states. A *portion* of these expenditures is captured in Michigan (spending associated with employees of these businesses), and a careful assessment was made to determine the proportion of spending that took place in Michigan and elsewhere.

The vast majority of MIS employees live in Michigan. Funds earned by non-residents have to be eliminated from the direct effect calculation. The following section provides an estimate of how much spending accrues to Michigan and how much of that spending supports Michigan businesses and residents.

### *(3) Computing Direct Economic Development from Operations*

In 2013, after adjustments were made to account for the leakage of non-local direct impacts, the direct impact to the Michigan economy was \$29.7 million. Below is a brief description of the direct contributions within the State of Michigan.

- Salaries, Wages and Benefits
- Capital Improvements (annual or reoccurring)<sup>50</sup>
- Purchased Services
  - Local Advertising
  - Local Sponsorship, Corporate Expenses<sup>51</sup>
  - Supplies
  - Hospitality Supplies, Track Rentals<sup>52</sup>
  - Emergency Services
  - Utility and Maintenance

Figure 12 details the difference between total direct operations and total direct economic development from operations.

---

<sup>48</sup> <http://ir.internationalspeedwaycorporation.com/phoenix.zhtml?c=113983&p=irol-reportsannual>

<sup>49</sup> Provided by MIS

<sup>50</sup> Labor and construction inputs supplied from companies in Michigan. An average was taken for years 2011-2013 for capital expenses as well as percent share of that expense accruing to Michigan businesses and workers.

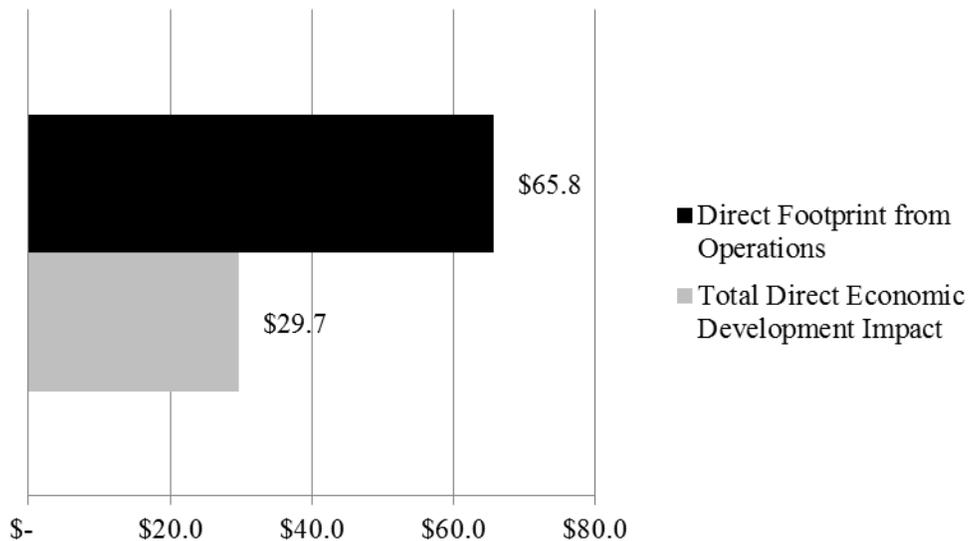
<sup>51</sup> This refers to sponsorship investments and corporate investment that would otherwise likely be made in other states or provinces

<sup>52</sup> Hospitality sales include purchases relevant to visitor spending; another adjustment was made to avoid double counting expenditures used in models to project multiplier effects.

In 2013, approximately 56 percent or \$15 million in vendor expense was attributed to Michigan businesses. In addition, the MIS annually spends \$5.4 million on maintenance or modifications to the venue itself; 80 percent of those expenditures typically accrue to Michigan businesses and workers.

Sponsorship and advertising expenses were included if the firm was seeking exposure to NASCAR fans. That market is only available in Michigan if the MIS exists. If the MIS did not exist, it is likely those sponsors would decide to advertise at races held in other states and provinces.<sup>53</sup> If the MIS did not exist and if racing events were located elsewhere, Michigan's economy would not enjoy the benefit of that company's advertising commitment.

**Figure 12:** Total Operations and Direct Economic Impact



<sup>53</sup> Specific names were excluded from this analysis to protect confidentiality

## C. Direct Economic Development from Visitor Spending

Tourists (visitors to MIS events from other states, provinces, and countries) generate positive economic impact or economic development for Michigan. In addition, the spending by Michigan residents attending events in Brooklyn, Michigan instead of activities elsewhere also produces real economic development or net positive economic impacts that should be part of any assessment of the value of the MIS.

It is relatively easy to identify tourists who live outside of Michigan and then project the effect of their spending patterns (which are net positive economic impacts producing real economic development).<sup>54</sup> It is far more challenging to precisely account for the spending by residents of Michigan who could have expended their discretionary income dollars in other states or provinces if the MIS did not exist. The spending by residents who have a high demand for the products only available from a raceway (and would likely attend events at the Indianapolis Motor Speedway or a venue in Canada) is referred to as retained (or deflected) economic activity. The spending by residents who want the products available from the MIS and not available elsewhere in Michigan is thus retained or deflected away from other states or provinces.

The best way to understand where people would spend their discretionary income if the MIS did not exist is to interview visitors to the track. The absence of interviews with Michigan residents attending MIS events and their possible spending patterns if the MIS did not exist means that we must rely on other studies to *project* retained consumption.<sup>55</sup> Studies of tourists and their spending and expenditures by an area's residents are commonly referred to as measures of the "with and without principle" or the "but if" component of economic development studies.<sup>56</sup>

Detailed below are the steps undertaken to produce a reliable estimate of the spending of Michigan residents that constitutes retained or deflected economic impact.

### (1) Substitution Effects

Before detailing the steps taken to estimate retained consumption it is best to review work done on the overall substitution effect when in-state tourists visit a particular amenity (as opposed to

---

<sup>54</sup> Out-of-region visitors who do not replace other tourists that would have visited an area in the absence of an event produce net positive economic impacts. For example, a Super Bowl held at a popular tourist destination (e.g., New York City and warm weather climates in February) effectively means normal tourism patterns (which could include people from the north on vacations to avoid inclement weather) are replaced by football fans. When that occurs the overall net positive impacts of the Super Bowl are partially offset since tourists would have been in the area even if the game were not held. Super Bowl attendees might spend more dollars (creating new spending) but a substantial level of spending would have simply replaced the dollars spent by visitors on a vacation. The concept of crowding effects from major events disrupting normal tourist patterns was first observed in connection with the 1984 Olympics in Los Angeles when visitor counts at Disneyland declined from previous years.

<sup>55</sup> Sheldon, P. J. (1990). "A Review of Tourism Expenditure Research." In *Progress in Tourism, Recreation and Hospitality Management*, vol. 2, Cooper, C., editor, London: Belhaven Press, pp. 28–49.

<sup>56</sup> Vanhove, N. (2005) *The Economics of Tourism Destinations* Oxford, UK: Elsevier Butterworth-Heinemann.

another). When that occurs, where spending occurs has pronounced local effects even if statewide spending levels are unchanged. Those local effects have long-been the focus of studies of urban or regional economic change. At the state level, however, there is no change in the state's economy if spending takes place in one part of a state as opposed to another. The same observation has been made at overall spending levels within a region. There too there are local effects that while critical do not change overall economic development patterns.<sup>57</sup>

Crompton, Lee, and Shuster (2001) note "Economic impact attributable to [an event] relates only to new money injected into the [study area] economy by visitors...from outside the community.....Expenditures by those who reside in [the study area] represent only a recycling of money that already exists there."<sup>58</sup> A local consumer's spending on a sporting event is not new economic activity; more plainly, this spending represents a reshuffling of spending within a regional or state's economy. For this reason, analysts advocate that most if not all of the spending by local residents should be excluded from any measure of positive economic impact.<sup>59</sup>

For this study local residents are those people from Michigan attending MIS events. Conversely, non-local attendees are out-of-state visitors. Attendees who reside in other states or provinces and whose primary motivation for visiting is to attend the sporting event, or who stay longer and spend more because of it, produce positive net economic impacts. Their expenditures represent economic development. With this concept in mind, it could be argued that \$69.8 million of direct visitor spending by Michigan residents does not necessarily generate economic development. **We took a slightly different tact.**

As noted earlier, major events do ensure that some spending that would be lost if people left Michigan for entertainment is retained because of the presence of special events.<sup>60</sup> If NASCAR or other events unique to MIS did not exist, some consumers would attend events in Indiana or Canada.

Those retained expenditures are increments to the Michigan economy that generate real economic development. Measuring these expenditures requires extensive surveys. As a result

---

<sup>57</sup> Rosentraub, M. S. (2010) *Major League Winners: Using Sports and Cultural Centers as Tools for Economic Development*, Boca Raton: CRC Press/Taylor & Francis.

<sup>58</sup> Crompton, J. L., Lee, S., and Shuster, T. (2001), "A Guide for Undertaking Economic Impact Studies: The *Springfest* Example." *Journal of Travel Research*, 40 (August): 79–87.

<sup>59</sup> Matheson, V. A. (2006) "Mega Events: The effect of the worlds biggest sporting events on local, regional, and national economies," Department of Economics, College of The Holy Cross, JEL Classification Codes: L83

<sup>60</sup> Getz, D. (1991). *Festivals, special events and tourism*. New York: Van Nostrand Reinhold

many analysts have concluded that its best to simply *discount* all potential spending by residents, and treat those dollars as substitution expenditures.<sup>61,62,63</sup>

That appears to be too stringent a rule as NASCAR events do offer a unique form of entertainment. If unavailable in Michigan, it is reasonable to expect that some fans would attend races elsewhere. There is evidence that when some forms of entertainment are not available, especially casino-style gaming, residents of one state do travel to nearby locations.<sup>64</sup> To estimate the proportion of Michigan residents who might spend some of their discretionary income elsewhere if NASCAR events were not held at the MIS an assessment of tourism surveys in Michigan was undertaken.

A post-event consumer marketing study performed after the *Pure Michigan 400* in 2013 provides some insights into the preferences of in-state visitors. The study reported that people attending in 2012 purchased approximately 43 percent of the tickets sold for the 2013 event (included in this figure are Michigan residents and non-residents). To measure consumer loyalty that would better conforms to elements often included in modeling long-term or permanent shifts in economic activity and development, loyalty was defined as qualifying purchases in 5 consecutive years.

Slightly more than half of those who had renewed their tickets from 2012 (52 percent) had actually been regular or loyal attendees. That means that 22.4 percent of fans purchasing tickets to NASCAR weekend events could be considered permanent or loyal.<sup>65</sup>

It is also possible that in-state customers are more likely to be loyal as a result of lower travel costs. Measures were taken to validate the estimate that 22.4 percent of local spending was deflected into Michigan by the MIS. It is reasonable to assume that tickets purchased long before the date of an event indicates a loyal or recurring customer. The results of this analysis suggest that a loyalty proportion of 22.4 percent could be low; as such, while it was not possible to identify where the loyal customers lived, expecting that 22.4 percent of Michigan residents were loyal fans that would leave the state for events is reasonable.<sup>66</sup>

Important insight into fan substitution also exists from other studies. In an assessment of substitution effects during the 2004 and 2005 when the National Hockey League (NHL) cancelled all of its games, fans in markets that had teams were more likely to attend minor league hockey games. In markets without a NHL team attendance at minor league hockey did not

---

<sup>61</sup> Baade, R. A. & Dye, R. F. (1990) "The impact of stadiums and professional sports on metropolitan area development," *Growth and Change*, 1-14

<sup>62</sup> Bums, J.P.A., & Mules, T.J. (1986) "An economic evaluation of the Adelaide Grand Prix," in Syme, B.J. Shaw, Fenton, P. M. & Mueller, W.S. (eds.), *The Planning and Evaluation of Hallmark Events* (172-185) Aldershot, England: Avebury.

<sup>63</sup> Smith, S.L.J. (1989). *Tourism analysis: A handbook*. New York: Longman.

<sup>64</sup> Rosentraub, M. S., Koo, J., and Horn, A. (2007) "Rolling the dice? Casinos, tax revenues, and the social costs of gaming," *Journal of Urban Affairs*, 29 (4), 367-381.

<sup>65</sup> This figure represents all accounts purchasing tickets to MIS events.

<sup>66</sup> In a subsequent guest profile provided by the MIS, 63 percent of guests surveyed indicated that they have been NASCAR fans for more than 16 years.

change.<sup>67</sup> From this observation it could be deduced or inferred that racing fans in Michigan – where there is no substitute – might go elsewhere as did hockey fans. That observation has to be balanced with the possibility that these fans could still watch televised races. Even considering that possibility, compromising on “retention of spending factor” of 22.4 percent seems plausible.

In this study, 22.4 percent of local non-camping related total spending was added back into direct economic development unique to MIS. This added approximately \$12 million to the measure of the direct economic impact.

Furthermore, visitor expenditures should be net of “time switchers” and “casuals.” Some non-local visitors at a sports event may have been planning a visit to the area but changed the timing of their visit to coincide with the event. Their spending cannot be attributed to the event, because it would have been made without the event, albeit at a different time of the year. Expenditures by these visitors would have occurred without the event, so income generated by their expenditures cannot be attributed to it. It is necessary to distinguish between gross visitor expenditures and the net increment of those expenditures, which is the spending attributable to increased length of stay because of the sports event.

Brooklyn, Michigan is not a traditional tourist destination and it might be that this issue is not relevant. It is possible, however, that someone interested in a camping experience in Michigan chooses to do so during a NASCAR race weekend (to enjoy the festivities). A 2012 study by the Outdoor Foundation found that nearly 33 percent of all campers chose “camping itself” as the “main motivation for camping.” Furthermore, the same survey indicated that 6 percent of campers at least 18 years of age chose camping “to enable participation or competition in other sports of active pursuits” as their motivation for camping. More than 13 percent indicated that “an equal mix of camping and sporting activities” was a main motivation for a camping trip. Regardless, the simple act of camping is the biggest motivation for taking a camping trip and “time switching” could be applied.

With this information in mind however, adjustments were not made to account for possible “time switchers”. Conversely, what is important is that a camping experience at the MIS produces different revenue streams. According to the 2012 study by the Outdoor Foundation, approximately 60 percent of campers purchased items before the trip, including food and beverages. Approximately 5 percent of purchases are made on-site.

---

<sup>67</sup> Winfree, J. A. & Fort, R., (2008) “Fan substitution and the 2004-05 NHL lockout, *Journal of Sports Economics*, 9: (4), 425-434

As a result, adjusted direct spending from campers who live in Michigan only includes incremental purchases (tickets and 40 percent of food/beverage expenditures) given that the majority of camping purchases would occur regardless of event. The inclusion of 40 percent of food/beverage expenses represents the increment attributed to higher priced items during event weekends and those items purchased as a result of the MIS race weekend festivities. Additionally, adjusted direct spending from out-of-state campers includes expenditures for ticket purchases and from the purchase of 40 percent of their expected food, beverage, retail and travel.

This adjustment represents the direct impact likely to accrue to Michigan's economy as a result of the motor racing events. Furthermore, camping materials and supplies were not considered unique to event weekends at the MIS under the assumption that most campers choose to camp beyond reasons attributed to the MIS. The bulk of expenses would accrue to area of residence whether campers chose to camp in Michigan or not. Moreover, not all travel expenses took place in Michigan.

With these considerations in mind, of the \$29 million in total camping expenses by fans, approximately **\$16 million is considered real economic development**. Readers are reminded that the initial \$29 million does not include supplies purchased to camp. Moreover, the \$29 million does include all food, beverage, retail, ticket spend and travel expense. The \$16 million figure entails a percentage of food/beverage and admission fees paid by local residents. This figure incorporates spending by non-residents plus a percentage of retail and transportation purchases that would not occur in Michigan if MIS racing events did not exist.

## (2) Leakage

While money may be spent in local economies during event weekends some spending can spill into other state's economies. Multipliers used in *ex ante* analyses are calculated using complex input-output matrices based on expected inter-industry relationships within regions. During events, however, the economy within a region is not normal, and these inter-industry relationships could be inaccurate.<sup>68</sup>

There is substantial reason to believe that during NASCAR event weekends the multipliers could be smaller than anticipated. For example, revisiting the ownership structure of the MIS, Americrown is responsible for souvenir merchandise operations, food and beverage concession

---

<sup>68</sup> Matheson, V., "Economic Multipliers and Mega-Event Analysis," *College of the Holy Cross Working Paper Series*, no. 04-02 (2004).

operations, and all catering services.<sup>69</sup> Those inputs would not be appropriate to include in any determination of multipliers related to the Michigan economy.

According to the MIS, Americrown Service Corporation sold the following quantities (see below) of items each NASCAR weekend.<sup>70</sup>

- 31,000 gallons of soda
- 14,500 hot dogs
- 25,000 hamburgers
- 10,300 bags of chips
- 42,000 bottles of 16 oz. waters
- 64,000 credentialed holders
- 130,000 T-shirts
- 100,000 hats
- 80,000 sets of ear plugs
- 33,000 seat cushions

A large proportion of the direct expenditure for these items involves firms located outside of Michigan. (Therefore the inputs to their production do not involve workers or businesses from Michigan.) In addition, some income from ticket sales is retained as corporate earnings and is also expended outside Michigan. Depending on employment and vendors/suppliers used there could be some level of impact on the Michigan economy.

After analyzing leakage relative to Americrown's operations and the ISC retained earnings associated with entertainment purchases (tickets), approximately \$48.6 million was considered not directly having an impact on Michigan's economy. This leakage of direct spending is critical in a study of economic impact. Furthermore, this concept precedes the application of multipliers in a way that argues for the absence of multiplier effects for a portion of visitor spending if it existed.

After these substitution effects were considered, total direct attendee spending that generates real economic development is approximately \$71.4 million. Adjustments for leakage relative to Americrown's operations and ISC earnings totaled \$48.6 million.

---

<sup>69</sup> <http://ir.internationalspeedwaycorporation.com/phoenix.zhtml?c=113983&p=irol-reportsannual>

<sup>70</sup> 2013 MIS Media Guide

## D. Computing Multiplier Effects for Real Economic Development

The direct effect of operations and attendee spending is, respectively, \$29.7 million and \$80 million each year. When multipliers are applied to these direct effects, larger impacts for Michigan's economy result. Simply put, the direct, indirect, and induced represent the portion of Michigan's economy that would not exist if the track did not exist (excluding fiscal or tax effects which are separately enumerated).

### Step 1: Multipliers for Operations Spending

Relative to operations at the track, there are four measures of changes in total economic activity that can be estimated — gross output, value added, earnings, and employment. Which multipliers are used and the application of these multipliers is determined by what information is gathered and how the direct effect changes Michigan's economy. Regardless of the type of multiplier that is used, the resulting estimate includes (a) the initial round of spending on the economy (direct effect) and (b) subsequent effects (indirect and/or induced). The characteristics of the inputs used in the analysis dictate the methodology used to project the subsequent effects. Most importantly, the accuracy of applying multiplier effects relies on correctly identifying and specifying the direct effect change, the affected industries, and employees relative to Michigan.

The MIS generates nearly \$29.7 million in *direct* economic development impact. As mentioned earlier, this figure represents a variety of spending streams. The direct effects (also referred to as final demand changes) were analyzed. Subsequently, the vendors/suppliers used, the inputs purchased by these vendors/suppliers, and the number of employees of the MIS was verified.<sup>71</sup> Inter-industry and household spending effects were separated. Of the \$29.7 million in direct impact, approximately \$26.1 million is considered direct output impact (purchases of goods and services by MIS from Michigan businesses). When multipliers are added to this figure, it produces a total impact amount that accounts for all economic activity.<sup>72</sup> The results of this analysis indicated that nearly \$34.7 in total economic output impact exists.

To better understand the effects of \$34.7 million in total impact, RIMS II multipliers were used. These multipliers provide another lens to view how the initial \$26.1 million in impact changes the Michigan economy. When these multipliers are applied, the \$26.1 million produces nearly \$12.7 million in wages, salaries and proprietors' income that supports approximately 388 jobs.

Returning to the \$3.6 million not included in the \$26.1 million figure, the effects of salaries paid to MIS employees were separated for two reasons.

*First*, for the previous value of \$26.1 million it was unknown how much of this spending resulted in earnings for businesses and individuals. It was only known how much was spent and to what business.

---

<sup>71</sup> Changes in direct impact should be measured in the prices paid to producers rather than the purchase price. Total economic activity refers to all goods and services, compensation to employees, taxes on production, imports, and gross operating surplus.

<sup>72</sup> For this analysis, output multipliers were utilized for specific industries.

*Second*, the additional \$3.6 million in salaries paid to the 140 MIS employees is a direct impact. After the application of multipliers, the salaries and spending of these employees supports an additional \$760,000 in earnings and 12 additional jobs in Michigan.<sup>73</sup>

The \$29.7 million in spending generates an additional \$5 million in economic activity (additional spending on goods and services purchased in Michigan). The total of \$34.7 in economic activity generates approximately \$17.1 million of total earnings in Michigan. These earnings support approximately 540 jobs.

### Step 2: Multipliers for Visitor Spending

Even though RIMS II multipliers are appropriate for economic impact studies of tourism activities, it is important to revisit one element.

Special events similar to a motor race weekend generate new streams of spending during short periods of the year. It is appropriate to interpret multiplier effects of these streams of spending given a repetitive time dimension. The summation of these events contributes to larger effects in Michigan's economy. For example, if the two major race weekends did not exist in Michigan's economy, the portion of direct visitor expenditure would immediately leave the economy. As already noted, the direct impact for Michigan's economy from the MIS includes \$71.4 million worth of purchases made by attendees. More plainly, it represents the spending that directly affects Michigan businesses. Readers are reminded that spending that would occur regardless of MIS and spending that does not directly pass through the Michigan economy was removed in the section IV.

---

<sup>73</sup> These earnings and employment estimates differ slightly from the impacts with final-demand multipliers because the direct earnings and employment figured assumed in the RIMS II model differ.

**Figure 13:** Total Adjusted Direct Spending From Attendees at MIS Race Weekends (\$Millions)<sup>74</sup>

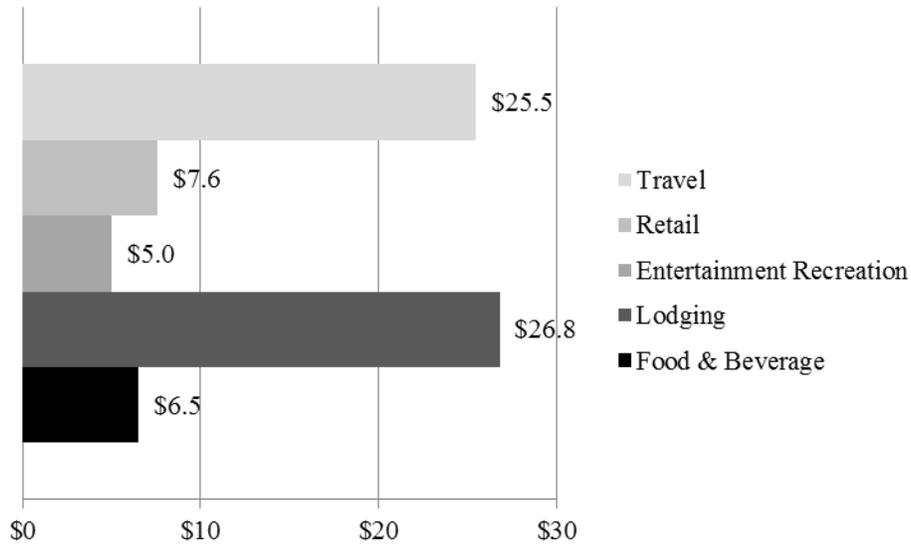


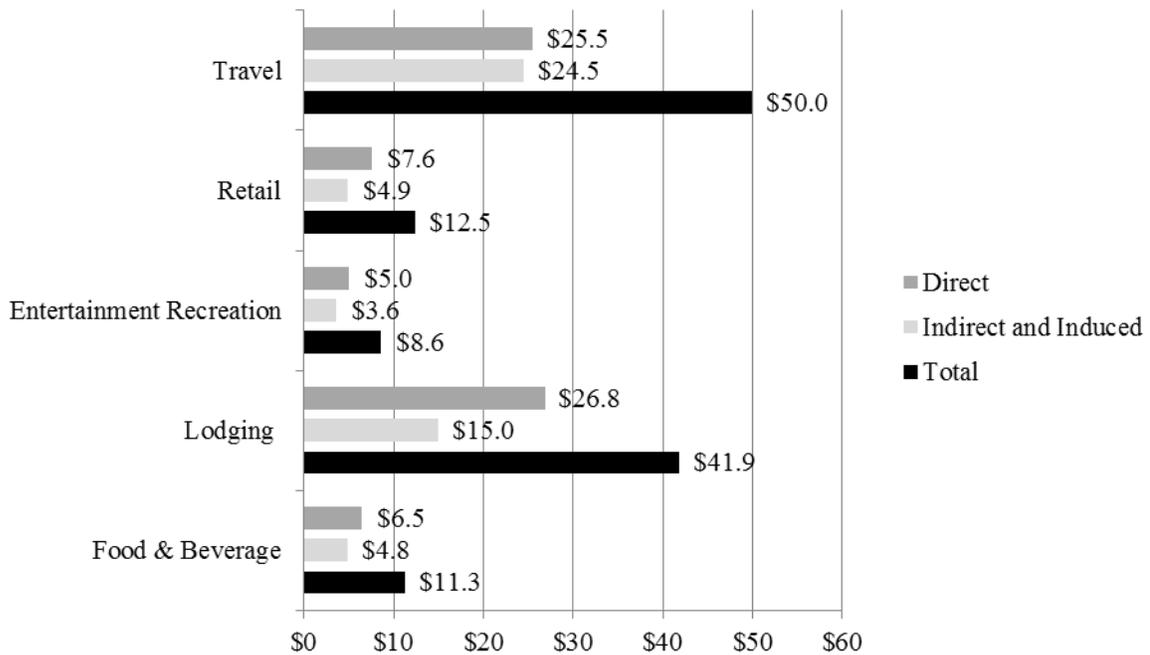
Figure 13 details expenditures that directly affect the Michigan economy. The expenses for travel, entertainment/recreation (outside of ticket sales), retail (outside MIS affiliated entities), lodging, and food and beverages made outside MIS grounds represent direct impacts to Michigan’s economy. Figure 14 details the percentage of direct expenditures from the direct expenditures that subsequently produced indirect and spending. The majority of food/beverage and entertainment expenditure do not directly affect Michigan’s economy. When multipliers are applied an additional \$52.8 million of indirect and induced economic activity for Michigan is produced (see Figure 14).

**Figure 14:** Comparing Adjusted Direct Spending and Total Direct Spending by all Attendees (\$Millions)

Category of Spending	Adjusted Direct Spending	Percent of Total Direct Spending
Food & Beverage	6.5	13
Lodging	26.8	100
Entertainment Recreation	5.0	15
Retail	7.6	37
Travel	25.5	58

<sup>74</sup> This figure represents all spending by attendees adjusted for substitution and leakage.

**Figure 15:** Total Development Impact From Attendees Spending By Category at MIS Race Weekends (\$Millions)



Following the same logic as the previous section, earnings multipliers were applied to better understand how the \$124.2 million in total impact affects the Michigan economy. When these multipliers were applied, nearly \$40.5 million in wages, salaries and proprietors income is supported by the \$124.2 million in total economic activity; the \$40.5 million represents “non-corporate impact”.

### E. Other Events at the MIS

There are two events held by other organizations at the MIS that are viewed as unlikely to be hosted elsewhere in Michigan. *Faster Horses* is a 3-day country music festival. A conservative estimate is that the visitors spent at least \$14.9 million at campsites in the area.

The vast majority of the attendees, however, 77.6 percent were residents of Michigan (at the 2013 event).

This raises the possibility that those discretionary dollars would be spent elsewhere in the state. The out-of-state attendees, however, spent **\$2.7 million** and those funds would represent new income for Michigan. The \$2.7 million figure is a very conservative estimate of another increment to the MIS’ economic footprint.

*Tough Mudder* is set of races and endurance challenges that attracted more than 18,000 visitors in 2013. Total direct spending was estimated at \$12.2 million. Again, as would be expected, the largest proportion of participants lived in Michigan. Non-residents were projected to have spent \$2.6 million.

**These two events, then, add another \$5.3 million to the MIS' economic impact for Michigan.**

## V. Conclusions and Fiscal and Other Impacts

The MIS is as an important asset for Michigan as NASCAR remains an extremely popular spectator sport. The presence of major NASCAR events in the state underscores Michigan's leadership in many aspects of spectator sports. In additions the races broadcast from Michigan reach audiences in many countries providing a very favorable image. The MIS is an ambassador for Michigan.<sup>75</sup> The Sprint Cup Series alone reaches nearly 5.3 million viewers.<sup>76</sup>

***As a part of a large corporation***, Section III underscored the scale of the MIS's economic footprint from operations and visitor spending.

When both operations and visitor spending are considered together, the totality of this economic value is estimated at more than \$400 million in total output footprint across the nation. Nearly \$226 million of earnings and approximately 5,400 jobs benefit from the business activities and consumer spending associated with the MIS.<sup>77</sup>

***As an integral component of the Michigan economy***, Section IV distinguishes the components of the MIS's economic value that produce *real economic development* for Michigan.

The results of this analysis indicate that the effect of racing events held at the MIS on Michigan's economy is substantial even when leakage and substitution effects are considered. The impact of operations (considered an output impact) generates nearly \$35 million in economic activity annually and the economic effect of attendee spending contributes approximately \$124.2 million of total economy activity within Michigan.<sup>78</sup> More than 900 jobs in Michigan benefit from the salaries paid to MIS employees and the purchases made by the MIS from businesses located in Michigan.

**When the spending out out-of-state visitors to the events held by other organizations is included, visitor spending rises to \$126.9 million.**

---

<sup>75</sup> ZYNP Sponsorship Strategy with MIS for NASCAR June 2012 Race Weekend

<sup>76</sup> Ibid.

<sup>77</sup> Readers are reminded that the scale of these figures is a function of MIS's position in the portfolio of its parent company, ISC.

<sup>78</sup> As mentioned earlier, total spending effects do not necessarily produce this level of activity each year. The effect of holding these events each year for several years generates a permanent level of economic activity as a result of out-of-state visitors' spending that should be considered as an on-going and annual increment to the state's economy.

Fiscally, the MIS is an important asset to the Michigan economy and community. MIS annually pays more than \$2 million in local property taxes and an additional \$8.3 million in various state taxes.<sup>79</sup>

In addition, the MIS and its staff are committed to a tradition of community involvement.<sup>80</sup>

*MIS Cares* focuses on raising money for various charities. MIS has also welcomed businesses from not just the state of Michigan, but globally for automotive research and the testing of new products. MIS provides automakers and after-market manufacturers the ability to test and develop connected vehicle systems and other technologies in a protected environment. The MIS offers a connected vehicle test and evaluation laboratory on both public and private roads. In August 2009, TEAMLINE held the MIS's first multiple vehicle tests. The track serves as neutral-test ground for the manufactures to work together as the technology continues to develop. Testing is scheduled from numerous days throughout the facility and the manufacturers continue to reserve additional dates.

The MIS is not just used the racing and entertainment events. Annually, MIS welcomes visitors to events other than those held during two prominent race weekends in June and August. Below is a list of events that draw additional tourist impact to Michigan.

- Track Tours
- Michigan Kart Club
- Driving Schools
- Michigan Wine and Beer Fest
- Formula SAE
- Sports Club Car of America
- Track Laps

In summary, approximately *\$159.2 million in net positive economic impact for Michigan is produced for Michigan*. When the impact of supplementary events and track rental for Research and Development purposes is considered, *an additional \$8.4 million of economic development value is created in Michigan*.

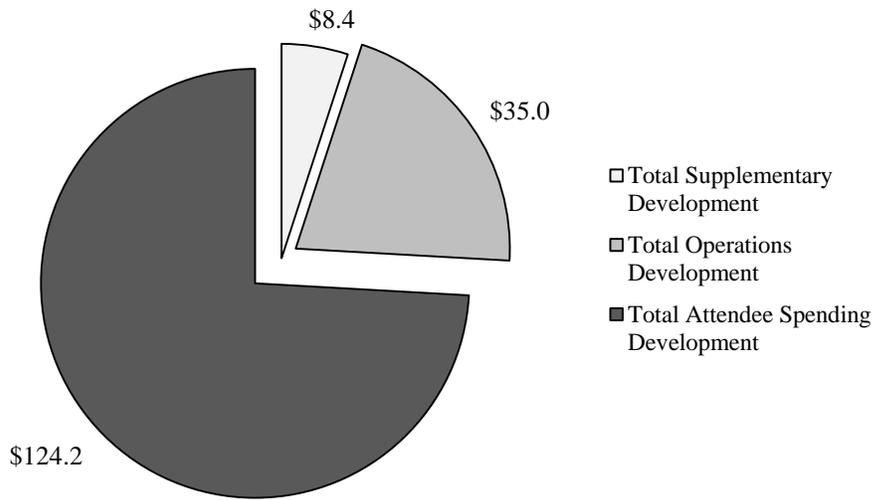
The inclusion of *both racing activities and supplementary (other than Faster Horses and Tough Mudder) events* held at the MIS generates **\$167.2 million in economic development for the State of Michigan** (see Figure 17).

---

<sup>79</sup> The various taxes include: payroll, income, lodging, sales and other payments made by umbrella entities out of state

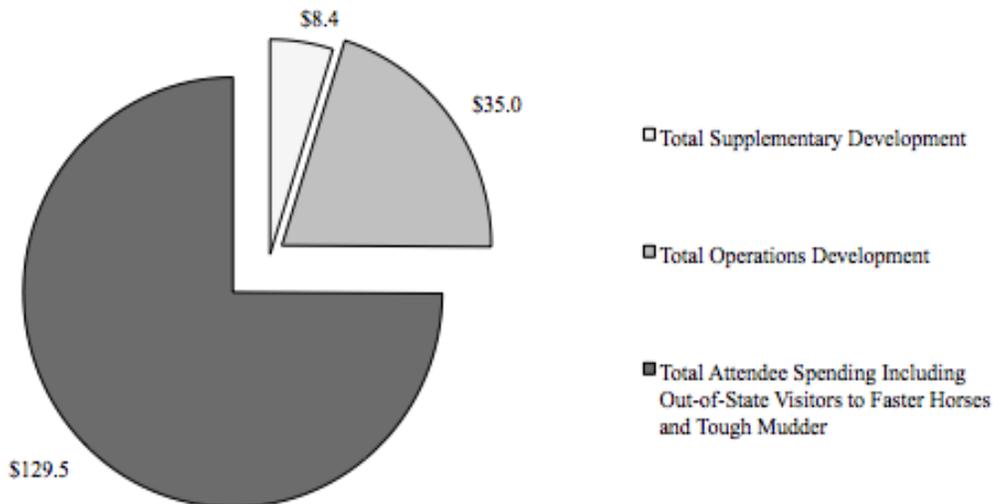
<sup>80</sup> See <http://www.mispeedway.com/About-MIS/Special-Events.aspx> for event details

**Figure 17:** Total Economic Development of MIS on Michigan’s Economy



**When the spending from out-of-town visitors attending *Faster Horses* and *Tough Mudder* are included, the annual impact rises to \$172.9 million.**

**Figure 18:** Total Economic Development of MIS on Michigan’s Economy Including Spending By Out-of-State Attendees to *Tough Mudder* and *Fast Horses*



**Readers are reminded that the spending at *Faster Horses* and *Tough Mudder* that was included in the measurement of the MIS' impact was limited to that from out-of-state visitors. This ensures that an appropriately conservative measure of MIS' economic impact for Michigan is presented. With that precaution taken the projection of the MIS' impact on Michigan is confidently placed at more than \$172 million. Simply put, if the MIS did not exist these revenues and the jobs produced would not exist in Michigan.**

If the spending by Michigan residents was also included total expenditures by attendees at *Faster Horses* rises to \$7.4 million (as compared to the \$2.7 million spent by non-residents in Michigan). That figure was not used in measuring the economic value of the MIS for Michigan, as it is possible there were substitution effects related to the spending by residents. Similarly, almost 80 percent of the \$12.2 million spent by attendees to the *Tough Mudder* was by residents of Michigan.

## Appendix A: Explanation of Fan Spending Adjustments

Each fan was allotted a baseline amount for Travel, retail, entertainment, lodging and M & IE (Food, Beverage and incidentals). These estimates were created using data compiled from the U.S General Services Administration. In the absence of exhaustive visitor survey data, a model was created to adjust for the amount of allowances per visitor.

**Figure A-1:** Distance Traveled to June and August Raced Weekends by Fans<sup>81</sup>

Proximity	General Admission % Visitors	Camping Admission % Visitors
0 - 50 Miles	18.4	15.0
51 - 100 Miles	24.5	23.3
101 - 200 Miles	22.0	23.0
201 - 300 Miles	7.7	11.2
301 - 400 Miles	2.0	3.2
401 - 500 Miles	1.8	1.4
501 - 600 Miles	1.0	0.9
601 - 700 Miles	0.4	0.4
701 - 800 Miles	0.1	0.0
801 - 900 Miles	0.2	0.0
901 - 1000 Miles	0.2	0.6
1000+ Miles	0.8	0.5
Canada	11.8	19.0
International	0.2	0.0
N/A	9.0	1.5

The estimate on the amount of money spent by visitors was based on the distance traveled to the MIS (see figure A-1). The MIS provided billing zip code information for all ticket purchases made by fans. Travel and lodging expenditures were based on how close attendees lived to the MIS. For example, the U.S Travel Research Association recommends that only visitors traveling more than 50 miles produce overnight stays.<sup>82</sup> This is consistent with a guest profile report provided by the MIS that estimated that approximately 22 percent of its fans stayed in a hotel or motel. As a result, visitors traveling to MIS from less than 50 miles away were not allotted lodging expenditures.

In addition, visitors to the campgrounds were expected to spend different amounts than those purchasing general admission tickets. For example, visitors camping on MIS campgrounds were expected to spend less on food and beverage purchases given the majority of these purchases are made prior to the trip according to studies of expenditures made by campers.<sup>83</sup>

<sup>81</sup> The proportion of In-state vs. out-of-state fans was calculated using consumer marketing information provided by MIS. Ticket sales may not be 100% indicative of visitor profiles. For example, a ticket may be sold to a purchaser in NY but in fact be used to bring a Michigan resident to MIS events. Without full visitor profile, this uncertainty was not adjusted for.

<sup>82</sup> US Travel Association (Travel Economic Impact Model: TEIM) glossary of terms

<sup>83</sup> 2012 American Camper Report noted that nearly 63 percent of purchases were made at home while approximately 17 percent of the purchases were expected to be made on site.

**Appendix B: Diagram of Economic Values**

<b>Total Economic Value of MIS</b>						
<b>Report Section</b>	Direct Operations	(+)	Direct Visitor Spending	(=)	Total Direct Footprint	<b>Value Context</b>
<b>Section 3</b>	<u>(+) Multiplier effects</u>		<u>(+) Multiplier effects</u>		<u>(+) Total Multiplier effects</u>	<b>Across United States</b>
	Total Operations Footprint		Total Visitor Spending Footprint		<b>MIS Total Economic Footprint</b>	
<b>Unique Economic Value of the MIS to Michigan</b>						
<b>Report Section</b>	Direct Operations (Less) Leakage	(+)	Direct Visitor Spending (Less) Substitution and Leakage	(=)	Total Direct Footprint	<b>Value Context</b>
<b>Section 4</b>	<u>Adjusted Direct Operations</u> <u>(+) Multiplier Effects</u>	(+)	<u>Adjusted Direct Visitor Spending</u> <u>(+) Limited Multiplier Effects</u>	(=)	Adjusted Direct Economic Development <u>(+) Total Multiplier Effects</u>	<b>Michigan</b>
	Total Economic Development from Operations	(+)	Total Economic Development from Visitor Spending	(=)	<b>Total Economic Development attributed to MIS in Michigan</b>	