

# UNDERSTANDING DOMESTIC GAMING'S CONTRIBUTION TO THE BAHAMAS

A report to The Bahamas Gaming Operators Association

JUNE 2018

# CONTENTS

|   |    |
|---|----|
| Executive Summary .....                               | 4  |
| 1. Introduction .....                                 | 6  |
| 2. Economic Impact Results .....                      | 9  |
| 2.1 Jobs, Contribution to GDP, Income .....           | 9  |
| 2.2 Tax Contribution .....                            | 11 |
| 3. Building The Bahamas .....                         | 12 |
| 4. A Commitment to Communities.....                   | 13 |
| 5. Professional Opportunity .....                     | 15 |
| 6. Conclusion.....                                    | 16 |
| Appendix A: Working Proactively with Regulators ..... | 17 |
| Appendix B: Methodolgy .....                          | 18 |

## OXFORD ECONOMICS

Oxford Economics was founded in 1981 as a commercial venture with Oxford University's business college to provide economic forecasting and modeling to UK companies and financial institutions expanding abroad. Since then, we have become one of the world's foremost independent global advisory firms, providing reports, forecasts, and analytical tools on 200 countries, 100 industrial sectors, and more than 3,000 cities. Our best-of-class global economic and industry models and analytical tools give us an unparalleled ability to forecast external market trends and assess their economic, social and business impact.

Headquartered in Oxford, England, with regional centers in London, New York, and Singapore, Oxford Economics has offices across the globe in Belfast, Chicago, Dubai, Miami, Milan, Paris, Philadelphia, San Francisco, and Washington DC. We employ more than 300 full-time people, including more than 200 professional economists, industry experts and business editors—one of the largest teams of macroeconomists and thought leadership specialists. Our global team is highly skilled in a full range of research techniques and thought-leadership capabilities, from econometric modeling, scenario framing, and economic impact analysis to market surveys, case studies, expert panels, and web analytics. Underpinning our in-house expertise is a contributor network of over 500 economists, analysts and journalists around the world.

Oxford Economics is a key adviser to corporate, financial and government decision makers and thought leaders. Our worldwide client base now comprises over 1,000 international organisations, including leading multinational companies and financial institutions; key government bodies and trade associations; and top universities, consultancies, and think tanks.

### June 2018

All data shown in tables and charts are Oxford Economics' own data, except where otherwise stated and cited in footnotes, and are copyright © Oxford Economics Ltd.

The modeling and results presented here are based on information provided by third parties, upon which Oxford Economics has relied in producing its report and forecasts in good faith. Any subsequent revision or update of those data will affect the assessments and projections shown.

To discuss the report further please contact:

**Dan Levine**

*Practice Leader, Location Strategies*

Oxford Economics

5 Hanover Square, 8th Floor

New York, NY, 10004

Tel: 646-503-3067

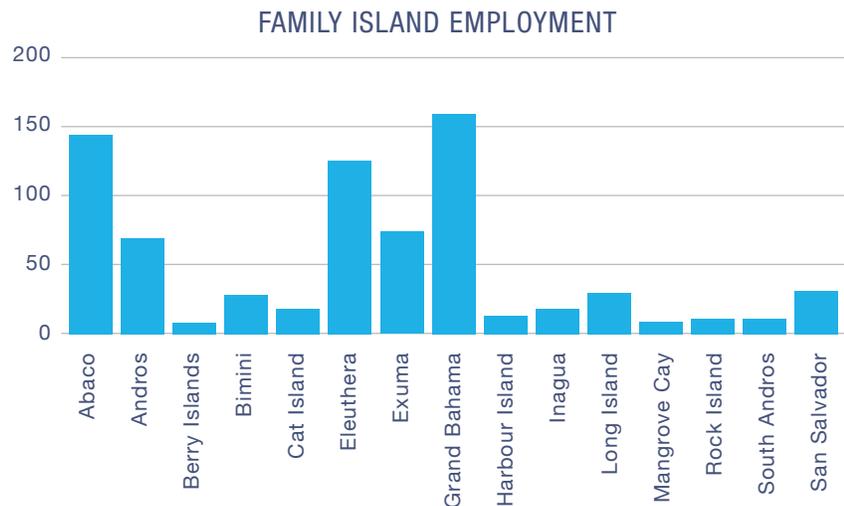
Email: [danlevine@oxfordeconomics.com](mailto:danlevine@oxfordeconomics.com)

# EXECUTIVE SUMMARY

In 2014 domestic gaming became a regulated industry in The Bahamas and in the four short years since then, the industry has emerged as a major contributor to economic activity throughout the country and today employs 2,753 Bahamas citizens.<sup>1</sup> Moreover, nearly 800 (or nearly one third) of these positions are in the Family Islands where employment opportunities are often limited.

Domestic Gaming supports an estimated **3,881 jobs** throughout The Bahamas and contributes **\$284 million** to national GDP.

**FIGURE 1: Employment Spread Throughout the Country**



When the full economic impact of the industry is considered, Oxford Economics estimates that domestic gaming supports 3,881 jobs. In a country struggling with chronically high unemployment, these jobs, and the \$101 million in income they generate, would be very difficult to replace. Moreover, the industry increases GDP in The Bahamas by \$284 million. In fact, each gaming employee contributes \$103 thousand each year to

<sup>1</sup> Oxford Economics obtained detailed financial information from 5 of the 7 active licensee members of the BGOA. No information was provided by the 2 non-active licensee members. Oxford Economics based all its baseline economic impact calculations on the information provided by the 5 active members. BGOA members employ a reported 1,460 workers. BGOA provided Oxford Economics with statistics released by the Ministry of Finance reporting that total industry employment is 2,753. Accordingly, Oxford Economics grossed up its calculations based on the assumption that these two non-reporting entities collectively employ 1,293 workers. Therefore, all of the Oxford Economics calculations presented in this report are scaled to reflect the 2,753-employment number reportedly published by the Ministry

Domestic ownership matters. Profits funneled into real estate support an **additional 200 jobs** and charitable contributions support social organizations and foundations.

national GDP. This activity, plus taxes paid directly by the industry, generates an estimated \$46 million in annual tax payments to the national government

In a country anxious to expand its technology cluster, the domestic gaming industry employs an estimated 75 information technology experts working on computer programming and networks, cybersecurity and web development. This is in addition to the professional development opportunities provided to nearly 90 financial, compliance and human resource managers.

The industry was founded by domestic entrepreneurs who remain involved to this day. Domestic ownership matters. Profits generated by domestic gaming are often funneled right back into the community. For example, real estate investments made by BGOA members support an estimated 200 jobs each year in The Bahamas, mainly in construction. These are in addition to the 3,881 jobs referenced earlier. Furthermore, these companies do important charitable work. During 2018, for example, BGOA members will spend an additional \$7.1 million supporting community and social service organizations throughout the country.

Domestic gaming is a highly regulated and supervised industry. In Appendix A to this report, we explore how BGOA and the domestic gaming companies are committed to working proactively with the appropriate regulators to ensure that the industry continues making a positive contribution to The Bahamas economy.

# 1. INTRODUCTION

With the passage of the 2014 Gaming Bill, the domestic gaming industry became a regulated industry and key contributor to The Bahamas economy. Today, the seven gaming operators that comprise the industry support 3,881 jobs and over \$101 million in income throughout the country. Moreover, the domestic gaming industry annually contributes an estimated \$35 million in direct tax revenue.

Bahamas economic growth is slow, unemployment high, and jobs supported by gaming much needed.

Domestic gaming is a home-grown industry in The Bahamas. In this report, we explore how the transition from operating in an unregulated to a regulated environment created some challenges; but more importantly, how the historical roots of the industry have allowed it to make unique contributions to The Bahamas economy. For example, local ownership is one of the defining characteristics of the domestic gaming industries. Profits earned are often reinvested in communities. In addition, as a group, owners of the domestic gaming companies are big supporters of charitable activities. For instance, earlier this year, BGOA announced its commitment to invest \$7.1 million during 2018 in social and philanthropic activities.<sup>2</sup>

The economic impact of the gaming industry is especially important to The Bahamas given the country’s persistently slow economic growth and stubbornly high unemployment rate. In our research reports, Oxford Economics forecasts that household income in The Bahamas will remain flat through 2022 and the country’s unemployment rate will remain unchanged at over 12% during the next 5 years; absent steps to accelerate economic growth.

**FIGURE 2: Bahamas National Economy: Slow Growth Forecast**

| Year over Year Change (except as noted) | 2018  | 2019  | 2020  | 2021  | 2022  |
|---|-------|-------|-------|-------|-------|
| Ave. household income                   | -0.1% | -0.5% | 0.0%  | 0.2%  | 0.0%  |
| GDP (real, local currency)              | 2.5%  | 2.3%  | 2.1%  | 1.9%  | 1.8%  |
| Unemployment rate (%)                   | 12.5% | 12.4% | 12.4% | 12.4% | 12.4% |

Source: Oxford Economics, International Monetary Fund

<sup>2</sup> Bahamas Gaming Operators Associations commits \$7.1M in 2018 to civic and corporate initiatives. The Nassau Guardian. March 16, 2018.

Oxford Economics set out to calculate the economic impact that radiates from domestic gaming and to place the industry's contribution in the broader context of The Bahamas' economy.

Our economic impact analysis began by collecting data from BGOA members regarding company spending and employment patterns. Using an input-output model,<sup>3</sup> the data provided by these companies formed the basis for our economic impact calculations. These completed surveys also form the basis for our estimates of Family Island employment, taxes, and occupation profiles provided later in this report. In addition, Oxford Economics conducted on-site interviews with each BGOA member, officials of the Central Bank of The Bahamas, the Gaming Board for The Bahamas, and the three community organizations cited later in this report.

On the following page is an overleaf that provides a more detailed explanation of the input-output methodology and the terminology used throughout this report.

3 This is a type of model which relies on input-output tables to calculate the economic relationships among industries and are widely used throughout the economics profession to estimate economic impacts. More detail on our use of this model, and project methodology, can be found in Appendix B.

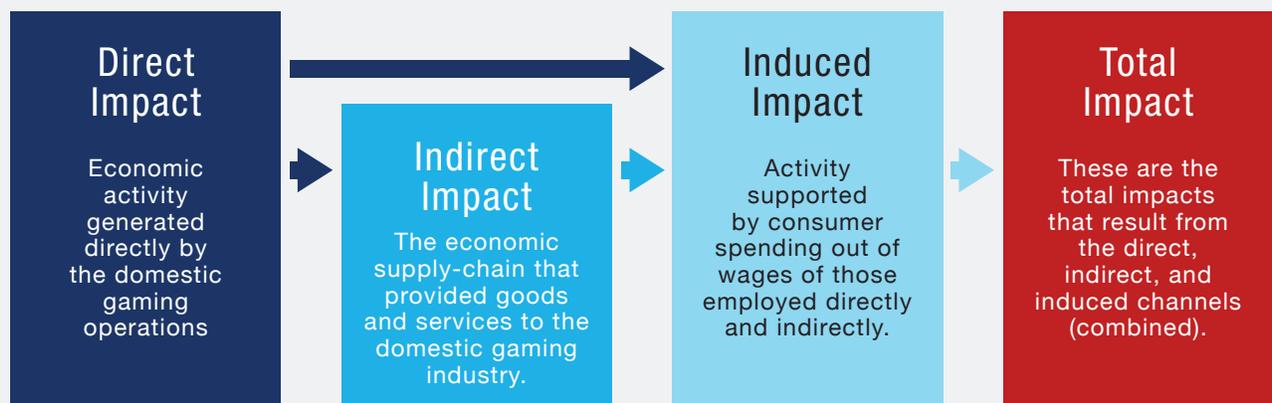
# METHODOLOGICAL INTRODUCTION: ECONOMIC IMPACT ANALYSIS

Standard economic impact assessments calculate the flow of economic activity across the following three channels:

- **Direct:** These are the jobs and activity attributable directly to the gaming industry's aggregated operational and capital expenditures. Data was collected from each active BGOA member, and estimates made for the two non-active BGOA members.
- **Indirect:** These are the employment and value-added contributions that are supported by companies and businesses providing goods and services to the gaming industry. This is often called the "supply chain", a term which refers to the network of businesses that a company buys good and services from to be able to produce and bring to market its products or services.
- **Induced:** This is commonly called the "multiplier effect". It measures the economic impact that results as the employees included in our direct channel as well as those of their suppliers spend their wages and earnings throughout the broader economy.

For each of the three channels (above), we calculate the following metrics:

- **GDP:** This is a measure of economic activity measured as the total "value-added" contribution to Gross Domestic Product (national or state).
- **Employment:** This is a jobs calculation measured in terms of headcount.
- **Income:** The compensation paid to workers, and self-employment income.
- **Taxes:** Gross tax receipts paid at the national level.



## 2. ECONOMIC IMPACT RESULTS

As economic benefit spills-over to the broader economy, an **additional 1,130 jobs** throughout The Bahamas are supported by gaming.

### 2.1 JOBS, CONTRIBUTION TO GDP, INCOME

The 2,753 employees of the domestic gaming industry support an additional 1,130 jobs throughout The Bahamas. (Please note in Figure 3 that the domestic gaming industry is included in the sector labeled “community, social and personal services”). In examining Figure 3, we see that the businesses that most closely support the gaming industry (“indirect” column) are in the finance, real estate, and insurance sector; plus, transport and communication. Recall that the indirect column captures what is commonly referred to as the “supply-chain” to the domestic gaming industry. As the workers directly employed in the domestic gaming industry, plus those workers employed in its supply-chain spend their wages and earnings; the economic impact spills-over into the broader economy (“induced” column). The process by which the economic impacts spreads throughout the national economy is called the industry’s “multiplier effect.”

**FIGURE 3: Employment by Sector**

| Employment                              | Direct       | Indirect   | Induced    | Total        |
|---|--------------|------------|------------|--------------|
| Agriculture and Related                 | 0            | 2          | 28         | 30           |
| Electric, Mining, Gas, Water            | 0            | 12         | 13         | 25           |
| Manufacturing                           | 0            | 16         | 17         | 33           |
| Construction                            | 0            | 7          | 10         | 17           |
| Wholesale & Retail                      | 0            | 24         | 126        | 150          |
| Hotels & Restaurants                    | 0            | 11         | 70         | 81           |
| Transport, Communication                | 0            | 75         | 54         | 129          |
| Finance, Real Estate, Business Services | 0            | 376        | 118        | 494          |
| Community, Social, Personal Services    | 2,751        | 23         | 148        | 2,922        |
| <b>Total</b>                            | <b>2,751</b> | <b>545</b> | <b>585</b> | <b>3,881</b> |

Source: Oxford Economics (rounding errors may occur)

In Figure 4, on the next page, we see that the domestic gaming industry annually contributes an estimated \$284 million to national GDP. In fact, this contribution is significant enough to make a measurable difference to the country’s entire GDP, increasing it by 2.9 % (GDP in The Bahamas is \$9.79 Billion in 2018 per Oxford Economics research reports).

**FIGURE 4: GDP by Sector**

| GDP (\$ mil)                            | Direct     | Indirect  | Induced   | Total      |
|---|------------|-----------|-----------|------------|
| Agriculture and Related                 | 0          | 0         | 1         | 1          |
| Electric, Mining, Gas, Water            | 0          | 1         | 1         | 3          |
| Manufacturing                           | 0          | 2         | 4         | 5          |
| Construction                            | 0          | 0         | 1         | 1          |
| Wholesale & Retail                      | 0          | 1         | 7         | 8          |
| Hotels & Restaurants                    | 0          | 0         | 3         | 3          |
| Transport, Communication                | 0          | 5         | 4         | 9          |
| Finance, Real Estate, Business Services | 0          | 44        | 22        | 66         |
| Community, Social, Personal Services    | 179        | 2         | 7         | 188        |
| <b>Total</b>                            | <b>179</b> | <b>56</b> | <b>49</b> | <b>284</b> |

Source: Oxford Economics

The domestic gaming industry generates \$101 million in income that is shared throughout the national economy. In Figure 5, we note that one-third of the income generated is in industries other than domestic gaming.<sup>4</sup>

**FIGURE 5: Income by Sector**

| Labor income (\$ mil)                   | Direct    | Indirect  | Induced   | Total      |
|---|-----------|-----------|-----------|------------|
| Agriculture and Related                 | 0         | 0         | 0         | 0          |
| Electric, Mining, Gas, Water            | 0         | 1         | 1         | 1          |
| Manufacturing                           | 0         | 0         | 0         | 1          |
| Construction                            | 0         | 0         | 0         | 1          |
| Wholesale & Retail                      | 0         | 0         | 3         | 3          |
| Hotels & Restaurants                    | 0         | 0         | 1         | 1          |
| Transport, Communication                | 0         | 2         | 1         | 3          |
| Finance, Real Estate, Business Services | 0         | 14        | 4         | 18         |
| Community, Social, Personal Services    | 67        | 1         | 4         | 72         |
| <b>Total</b>                            | <b>67</b> | <b>18</b> | <b>15</b> | <b>101</b> |

Source: Oxford Economics

<sup>4</sup> In Figure 5, we note that \$67 million is in the community, social and personal services sector and this is the contribution made by domestic gaming. The total income supported by the industry is \$101 million. That ratio produces the result that 33% of income supported is in places other than domestic gaming itself.

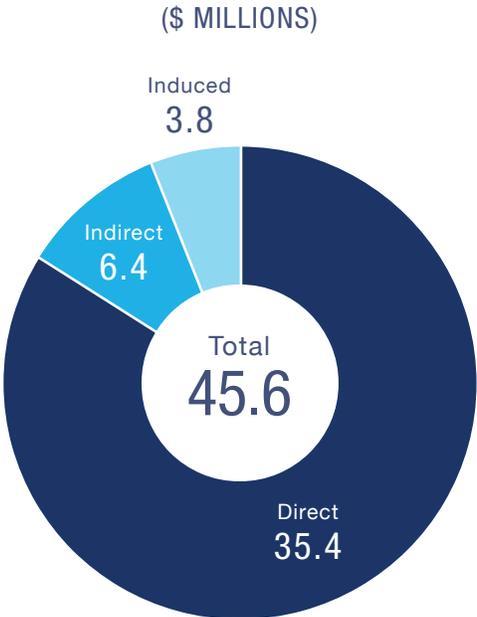
Domestic gaming directly contributes an estimated **\$35 million in taxes** to the national government.

## 2.2 TAX CONTRIBUTION

Domestic gaming contributes an estimated \$35 million in tax revenue to The Bahamas government. Please note that this estimate does not include VAT since our input-output model did not capture that tax.<sup>5</sup>

As reported by BGOA members, an estimated \$35 million in taxes is directly paid by the industry for corporate taxes and license fees. As Figure 6 describes, a further \$10 million in taxes results from the economic activity that domestic gaming supports in the broader national economy.

**FIGURE 6: Domestic Gaming’s Tax Contribution**



Source: Oxford Economics

5 The input-output table from which our model is constructed included information only on the following: taxes on imports (including duty and stamp tax), other product taxes (including stamp duties) minus subsidies, and other taxes on production. The most recent tables for The Bahamas predate the introduction of the VAT.

### 3. BUILDING THE BAHAMAS

When gaming was an unregulated industry, there were limited opportunities to invest profits earned. Unregulated industries have difficulty accessing banks and capital markets and consequently, tend to invest in projects nearer to home. As a result, the industry became involved in local real estate development; a tradition that continues to this day.

Real estate investments by domestic gaming support an additional 200 jobs, \$7 million in income and contribute \$15 million to national GDP.

Today, for example, profits from domestic gaming are often channeled into real estate development activity throughout The Bahamas, and projects currently underway or recently completed include residential complexes, townhouses, apartment style and stand-alone homes for middle-class families; plus, commercial office and retail space for small, medium and large businesses.

Through our surveys with BGOA members, Oxford Economics estimates that the construction spending associated with this real estate currently averages approximately \$15 million per year. Using our input-output model for The Bahamas (previously described), we calculated the economic impact that results from this type and amount of construction activity. Our results are summarized in Figure 7:

**FIGURE 7: Real Estate Impact Supported by Domestic Gaming**

| (\$ amounts in millions) | Direct | Indirect | Induced | Total  |
|--------------------------|--------|----------|---------|--------|
| Jobs                     | 117    | 54       | 40      | 211    |
| Income                   | \$4.4  | \$1.5    | \$1.0   | \$6.9  |
| GDP                      | \$6.6  | \$4.6    | \$3.3   | \$14.6 |
| Taxes                    | \$0.1  | \$0.9    | \$0.3   | \$1.3  |

Source: Oxford Economics

Importantly, the economic impacts resulting from real estate development are all in addition to those reported previously and attributed to domestic gaming. These added benefits reinforce the importance to The Bahamas of having an industry with local owners who are committed to investing their earnings into The Bahamas.

Please recall that as noted previously, the tax contribution attributable to this construction activity is likely understated because it does not include VAT.

## 4. A COMMITMENT TO COMMUNITIES

The BGOA recently announced, on behalf of its members, domestic gaming's commitment to invest \$7.1 million during 2018 in social and philanthropic activities. During a recent visit to The Bahamas, several charities shared with Oxford Economics their stories about how the (voluntary) financial contributions made by the domestic gaming industry provide critical support that allows their organization to continue enriching people and communities in The Bahamas.

During 2018, domestic gaming will spend \$7.1 million supporting charities and community groups throughout The Bahamas.

**The Junior Baseball League:** Voluntary contributions from the domestic gaming industry are critical in allowing the league to support less favorable children who could otherwise not afford the equipment costs or the travel cost associated with participation in international baseball league tournaments. For example, contributions from the domestic gaming industry were critical in allowing the league to purchase a pitching machine and to attend a recent World Baseball League tournament in Aruba. The domestic gaming industry's financial support changes children's lives- 50 graduates of the Junior Baseball League earned scholarships to play in the United States and several now play at the Triple-A level.

**The Valley Boys Junkanoo Group:** Junkanoo is the premier cultural event in The Bahamas. Because of a five-year partnership with the domestic gaming industry, the Valley Boys Junkanoo Group is now able to successfully combine its commitment to culture with an expanded community and social mission. For example, the financial support it receives from domestic gaming has allowed the Valley Boys to advance its plans for a multipurpose community center, fund the procurement of Junkanoo materials and supplies for costume production, and provide musical instruments to young adults who participate in the annual parades and community events. Through the support of the domestic gaming industry, the Valley Boys is more empowered to meet its mandate and promote cultural awareness throughout The Bahamas.

**The Bahamas AIDS Foundation:** Children with HIV/AIDS face special challenges everywhere but especially in The Bahamas where cultural bias

and scarce resources cause additional burdens. Support from the domestic gaming industry provides critical financial support to the Foundation; for example, by providing the money necessary to purchase some of the second or third stage treatment drugs that the Ministry of Health simply cannot afford to provide. In addition, the domestic gaming industry provides the financial and marketing support necessary to make the annual National HIV Testing Day a success.

# 5. PROFESSIONAL OPPORTUNITY

The domestic gaming industry offers employment to people from all walks of life and throughout the country (as described previously, the industry employs nearly 800 on the Family Islands). In addition, included in the 2,753 people directly employed by the industry are many professionals as well as managers who were promoted from within the ranks.

Domestic gaming employs an estimated 165 people in highly skilled positions such as technology, finance, and risk management.

For example, as Figure 8 highlights, in a country anxious to develop its technology sector, the gaming industry already employs an estimated 75 full-time computer network administrators, programmers, web designers, and cybersecurity experts, and other information technology workers.

Beyond that contribution, nearly 90 more are engaged in financial, compliance, and human resource management. For these 165 workers plus the many more operational and supervisory managers, gaming provides an opportunity for career advancement and professional development.

**FIGURE 8:** Some of the Professionals Employed by Domestic Gaming



Source: BGOA Survey, Oxford Economics

## 6. CONCLUSION

Domestic gaming employs 2,753 Bahamas residents including nearly 800 on the Family Islands. When the full economic impact of the industry is considered, Oxford Economics estimates that an additional 1,130 jobs are supported in a variety of sectors throughout the country. All this activity contributes to national GDP and generates tax revenue for the government. In fact, each employee of the domestic gaming industry contributes more than \$100,000 to national GDP each year.

The industry is also providing career opportunities for many in The Bahamas. In addition to operational management and supervisory positions, an estimated 75 highly trained technical workers are employed in the industry, and nearly 90 more are employed as financial, risk and human resource managers. In a country with stubbornly high unemployment and low growth forecasts, these jobs and skills are critically important to retain.

Gaming companies are locally owned by individuals committed to improving life on The Bahamas. Much of the money earned by domestic gaming companies are reinvested back into the community. For example, each year an estimated 200 Bahamas residents are employed in jobs that are supported by the real estate development activities of the domestic gaming companies. Moreover, in 2018, the industry has announced plans to contribute \$7.1 million to various charities throughout the country, several of which were profiled in this report. As profiled in this report, domestic gaming voluntarily contributes to groups such as the Junior Baseball League, the Valley Boys Junkanoo Group, and The Bahamas Aids Foundation and this financial support allows these groups to provide social, cultural, and health benefits to the citizens of The Bahamas.

## APPENDIX A: WORKING PROACTIVELY WITH REGULATORS

Gaming in The Bahamas is now a fully regulated industry. However, traces of legacy issues or concerns dating back to its unregulated era remain among customers, operators, and regulators. The industry and its regulators continue to work together to make sure that the most important of these issues are properly addressed.

**Shadow Banking:** As reported during interviews with regulators and operators, the emergence of the domestic gaming industry approximately ten years ago coincided with a decline in banking services on some of the Family Islands. Gaming accounts filled this vacuum by allowing money to be transferred among parties on different islands, even when the transaction did not involve gaming. Today, such transactions must be much more tightly controlled. Specifically, the gaming industry (both foreign and domestic) is working hard in partnership with regulators to make sure that gaming operations are in compliance with all applicable anti-money laundering and counterterrorist financing regulations. Given the importance of the finance sector to The Bahamas economy, all parties understand the importance of compliance with these requirements. Some regulators interviewed expressed the opinion that the large foreign-owned casinos are more sophisticated in their effort to enforce these regulations. The BGOA is working with all parties to further improve the compliance of its members with these rules as well. For example, both (some) regulators and gaming industry officials expressed the hope that the resources currently devoted to providing extensive physical on-site coverage by investigators might be re-directed to higher risk enforcement concerns.

**Responsible Gaming:** During our interviews with regulators, some concern was expressed that the domestic gaming operations were not as advanced as the foreign casinos with addressing responsible gaming concerns. For example, some regulators expressed concern that signage directing customers to social service support was not always prominently displayed and that the quality of service offered to those seeking assistance might need further improvement. BGOA is committed to working with the industry's regulators to make sure that these concerns are all properly tackled, and that clear standards are articulated as to how the industry can best address responsible gaming concerns.

## APPENDIX B: METHODOLOGY

Economic impact results were calculated using The Bahamas 2012 Supply-Use Tables from The Bahamas Department of Statistics.<sup>6</sup> These tables, which include 88 products produced by 23 industries, were used to produce a Bahamas input-output model using standard techniques.<sup>7</sup> Importantly, these tables, which are the most recent ones available, pre-date the adoption of the Value Added Tax in The Bahamas, making it impossible to produce detailed estimates of VAT tax impacts.

Inputs to the model come in the form of dollar values spent on each of the 88 products. The model then tracks the inter-industry spend as money flows through the economy, including impacts lost to “leakages” in the form of foreign imports. The outputs of this modeling process (i.e., direct, indirect, and induced impacts) are described in the box at the end of section 1.

Oxford Economics obtained detailed financial information from 5 of the 7 active licensee members of the BGOA. No information was provided by the 2 non-active licensee members. Oxford Economics based all its baseline economic impact calculations on the information provided by the 5 active members. BGOA members employ a reported 1,460 workers. BGOA provided Oxford Economics with statistics released by the Ministry of Finance reporting that total industry employment is 2,753. Accordingly, Oxford Economics grossed up its calculations based on the assumption that these two non-reporting entities collectively employ 1,293 workers. Therefore, all of Oxford economics calculations presented in this report are scaled to reflect the employment number published by the Ministry of 2,753.

Model Inputs for the operational impacts were estimated using survey data provided by the member firms of the BGOA. Direct impacts (employment, labor income, and taxes) were provided directly by those surveyed. Firms also provided supply chain spending, which was allocated among the 88 products of the model based on the descriptions provided. In addition, firms provided 2017 tax payments made to the federal government for corporate, license, and social responsibility fees and taxes. Both direct and supply chain spend were scaled up to account for firms that did not respond to the survey.

6 Industry employment figures for 2012 were also obtained from a separate Department of Statistics report. Inputs in 2017 dollars were adjusted for inflation. See <http://www.bahamas.gov.bs/wps/>.

7 See, e.g., Miller, Robert E. and Peter D. Blair (2009). *Input-Output Analysis*. Cambridge University Press. For induced impacts (i.e., impacts from spending out of labor income), both salary and mixed (self-employment) income were included, and a spending rate of 70% of income was assumed.

Construction impacts were based on a spend of \$15 million, 75% in residential construction, 25% in non-residential construction. The \$15 million in annual construction was reported by BGOA members as a part of the survey process.

**Global headquarters**

Oxford Economics Ltd  
Abbey House  
121 St Aldates  
Oxford, OX1 1HB  
UK  
**Tel:** +44 (0)1865 268900

**London**

Broadwall House  
21 Broadwall  
London, SE1 9PL  
UK  
**Tel:** +44 (0)203 910 8000

**New York**

5 Hanover Square, 8th Floor  
New York, NY 10004  
USA  
**Tel:** +1 (646) 786 1879

**Singapore**

6 Battery Road  
#38-05  
Singapore 049909  
**Tel:** +65 6850 0110

**Belfast**

**Tel:** + 44 (0)2892 635400

**Paarl**

**Tel:** +27(0)21 863-6200

**Frankfurt**

**Tel:** +49 69 95 925 280

**Paris**

**Tel:** +33 (0)1 78 91 50 52

**Milan**

**Tel:** +39 02 9406 1054

**Dubai**

**Tel:** +971 56 396 7998

**Philadelphia**

**Tel:** +1 (610) 995 9600

**Mexico City**

**Tel:** +52 (55) 52503252

**Boston**

**Tel:** +1 (617) 206 6112

**Chicago**

**Tel:** +1 (773) 372-5762

**Los Angeles**

**Tel:** +1 (424) 238-4331

**Florida**

**Tel:** +1 (954) 916 5373

**Toronto**

**Tel:** +1 (905) 361 6573

**Hong Kong**

**Tel:** +852 3103 1096

**Tokyo**

**Tel:** +81 3 6870 7175

**Sydney**

**Tel:** +61 (0)2 8458 4200

**Melbourne**

**Tel:** +61 (0)3 8679 7300

**Email:**

[mailbox@oxfordeconomics.com](mailto:mailbox@oxfordeconomics.com)

**Website:**

[www.oxfordeconomics.com](http://www.oxfordeconomics.com)