UrBizEdge

Data Analysis Industry Report 2016 - Nigeria

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Foreword

Data is the new crude oil. And business success in the 21st century is heavily reliant on the ability to mine and use relevant data about consumers, internal operations, financial operation and industry trend. This has given rise to a new fast growing industry: the data analysis industry.

Globally, it is a $16 billion industry and growing at a rate of 15% yearly. However, in Nigeria it is estimated to be about $150 million market and there are no strong local players in the industry. About 90% of the industry is serviced by foreign providers like Oracle, SAP, Microsoft, IBM and Tableau, often via local partners. They often sell mass produced solution offerings that users have to modify their operations or data to fit into which is creating a huge market opportunity for a more flexible better product local provider with deep knowledge of the Nigerian market.

From our experience working with companies – from multinationals to small businesses – we have gained a lot of knowledge about the Nigerian market and this report is a clear presentation of that knowledge for the benefits of business leaders, data analysis enthusiasts and every business that is seeking to use data to improve its operations.

As the lead consultant for UrBizEdge, I have been fortunate to catch the early waves of the data analysis ocean, and it has afforded me the rare privilege of seeing an entire industry come to life in an interesting market like Nigeria's. In interacting with dozens of companies and hundreds of business professionals, I have experienced first-hand the perceptions – both wrong and correct – that business professionals have about data analysis. I have seen business executives struggle with being on top of their business operations data; I have seen analysts confused by the plethora of tools available; and I have seen almost everyone confused by the different terminologies (business intelligence, data analysis, data analytics, business analysis, data visualization, etc.). I hope this report will reduce the number of people confused, and help business leaders and data enthusiasts make better informed decisions.

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Introduction

Data analysis is the structured use of data for decision making. It is the umbrella name for all forms of analysis that the primary input is data. InvestorWords has one of the best definitions for data analysis: "The process of extracting, compiling and modelling raw data for purposes of obtaining constructive information that can be applied to formulating conclusions, predicting outcomes or supporting decisions in business, scientific and social sciences settings." [1]

Data analysis can be descriptive, exploratory, predictive or prescriptive analysis. Descriptive analysis focuses more on using data to explain what has happened in a pre-defined way. Exploratory analysis is similar to descriptive analysis but focuses more on discovering new relationships within the data analysed. So while it also seeks to explain the past (descriptive analysis), it focuses more on discovering new links within the dataset rather than testing pre-defined relationships (metrics and KPIs). Predictive analysis goes further than descriptive and exploratory analyses; it focuses more on the future, trying to explain what could happen. Prescriptive analysis is a step ahead of predictive analysis, using algorithms to automate decision making based on the output of the predictive analysis.

Recently, there has emerged new distinct forms of data analysis. And these are the ones that confuse most people. They are business analytics, business intelligence and big data analysis. I also see people confuse business analysis with business analytics. Business analysis is not a form of data analysis; in fact, it is another field entirely. According to the International Institute of Business Analysis (IIBA) which is regarded as the global governing body for the business analysis profession, "Business Analysis is the practice of enabling change in an organizational context, by defining needs and recommending solutions that deliver value to stakeholders." [2] Business analysts have a lot more in common with project managers than with data analysts.

Business analytics is the combination of all the four levels of data analysis: descriptive, exploratory, predictive and prescriptive. Oftentimes, people use other terms like data analytics and advanced analytics for it. Business analytics allow businesses to make the most use of their business data to drive value adding change.

Business intelligence is mostly descriptive analysis but on an organization wide level. Rather than having different departments in the company generate standalone reports, with business intelligence the reports can be unified with drill down capabilities from company level to unit level.

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[1]InvestorWords (2016). *Data Analysis.* [Online] Available at: http://www.investorwords.com/19279/data_analysis.html [Accessed 17 May 2016]

[2] IIBA (2016). *What is Business Analysis?* [Online] Available at: http://www.iiba.org/Careers/What-is-Business-Analysis.aspx [Accessed 17 May 2016]

Businesses use business intelligence to have a wholesome understanding of what is happening at all operational levels of the business. It is not primarily to make predictions or prescriptions, it focuses on showing what has happened till now. And in most business use, it is connected to real-time data. Increasingly, though, more business intelligence vendors are now incorporating some basic predictive analysis in their solutions.

Big data analysis is any level of data analysis carried out on big data. Big data refers to data that is too large (high volume) for traditional tools, comes in very fast (high velocity) and is a combination of both structured and unstructured data (variety). Any form of analysis for big data requires some special tools (new technology) that are different from the traditional tools used for data analysis. That is why it is separately classified as big data analysis. And in reality, the businesses using big data all try to use it at the predictive or prescriptive data analysis level.

Nigerian Data Analysis Market

The Nigerian Data Analysis market can be broken into three main categories:

1. Server Based Analytics segment
2. Self-service BI segment
3. Spreadsheet Based Analytics segment

Server Based Analytics segment

This is the high-end segment of the market and only affordable to big companies in Nigeria. The main players in Nigeria are Oracle, Microsoft and SAP.

They require expensive licences sold through select partners and often don't integrate well with database not from the provider. Oracle's OBIEE is engineered to work best with Oracle databases, same with Microsoft's SSRS expecting SQL server databases.

They are not only costly to buy but also costly to set-up. Usually, companies engage specialist consultants to set them up and often find themselves re-engineering their data warehouse to suit the analytics solution.

Self-service BI segment

This is the newest segment of the market, came into mainstream in Nigeria in 2014. The main players are Tableau, Microsoft and Qlik.

They allow business managers get a lot more control and flexibility on the analysis of their business operations data. Rather than a build once and deploy report that is common with the Server Based Analytics segment, Self-service BI allows the reports' consumers a lot more flexibility and control over the end reports from their operations data by enabling them interact more directly with the underlying data and edit the reports to their own satisfaction.

They also break away from the vendor locking that is common with the Server-Based Analytics solutions. They make it extremely easy to connect with different data sources from the conventional server database ones to flat files and web services.

Lastly, they are cheap and can be easily implemented without external specialist consultants.

Spreadsheet Based Analytics segment

This is the least sophisticated segment of the market. When companies are not aware of the other options or can't afford them, they use spreadsheets, especially Microsoft Excel, for all their business analytics. Microsoft Excel is the biggest player in this segment.

The biggest appeal of this segment is the low cost, both in financial and knowledge terms. Companies usually have skilled spreadsheet users who build analysis templates for day-to-day use.

The problem is that they end up using spreadsheets for what they were not designed nor suited for. The company finds itself paying a lot more in terms of sub-optimal operational efficiency due to human errors that abound in using spreadsheets and lack of (easy) collaboration.

Spreadsheets are good for ad-hoc analysis and non-complex reports. But when making company-wide reports that should integrate operations data across different units in the company and present them with detailed insights in real-time, Excel can cause more harm than good.

Importantly, companies must be careful to use tools for what they are designated for. They must not let the comfort zone of their internal staff or push from a vendor force them into picking a tool without ensuring that it is the right tool.

Every company has some key internal features which can work in its favour or against it, and it is proper to carry out an extensive internal analysis which will help shape the strategy the company will eventually adopt.

Data Analysis Awareness In Nigeria

The biggest issue in the Nigerian marketplace is the knowledge gap. And just like in any market, knowledge gaps lead to inefficient decisions and arbitration. An entire industry has emerged in Nigeria to exploit this knowledge gap. There is a sea of consulting firms in Nigeria who are exploiting the knowledge gap to sell to companies solutions that don't fit their need and further confuse them about the way to go about solving their data analysis needs.

The decision makers in most companies don't know much about data analysis and often rely on outside help, consulting firms which claim expertise in this domain, to help them understand and harness it for productive use in their organizations. The

trouble is that there are too many consultants claiming to know data analysis and crowding out the few who actually do. In the end, a lot of companies follow the wrong advice of those consulting firms, buy and implement the wrong data analysis solutions and don't see the promised benefits. The results has been a mix of some companies giving up and believing that the promised benefits of using data analysis is mostly hype, and the rest forcing the wrong solutions on their teams to achieve the promised benefits.

We conducted a survey of 84 professionals across 13 industries (Oil and Gas, Banking and Financial Services, Media, Health, Information Technology, Government, NGO, FMCG, Ecommerce, Management Consulting, Maritime, Hotels and Hospitality, Logistics and Education).

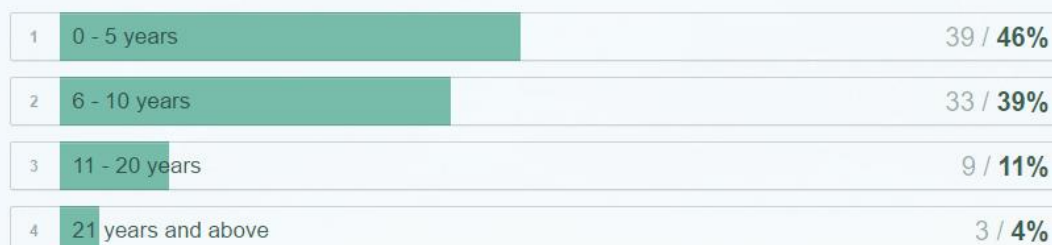Below is a graphic description of the participants.

Country of work?

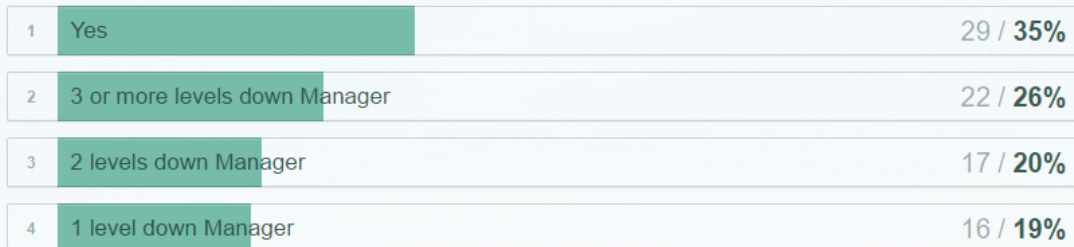84 out of 84 people answered this question

1	Nigeria	81 / **96%**
2	Outside Africa	2 / **2%**
3	Another African Country	1 / **1%**

Years of work experience

84 out of 84 people answered this question

1	0 - 5 years	39 / **46%**
2	6 - 10 years	33 / **39%**
3	11 - 20 years	9 / **11%**
4	21 years and above	3 / **4%**

Do you report directly to the CEO/MD?

84 out of 84 people answered this question

1	Yes	29 / **35%**
2	3 or more levels down Manager	22 / **26%**
3	2 levels down Manager	17 / **20%**
4	1 level down Manager	16 / **19%**

We asked questions about relevance of data analysis in their company, the use of analytics in decision making, the value of data analysis skills in the company, engagement of external data analysis consultants, management perception of data analysis and their perceived role of data analysis in today's business world.

The following are the insights we got from their combined responses:

1. There is an increasing awareness of the value to productivity and profitability that proper use of data analysis can lead to.
2. Companies are placing more value on managers who can make data-driven business cases
3. Most companies still don't have dedicated data analyst roles
4. Most companies don't yet engage external consultants on putting in place a data analysis system to support/enhance their core operations
5. The demand for data analysts is concentrated in specific industries
6. Most companies still equate data analysis skills to Microsoft Excel skills
7. Many companies still don't have an integrated way of gathering data relating to operations. They leave the decision of what data to gather and use to each separate unit of the company.

The Future And The Opportunities

The data analysis industry is already growing in Nigeria. This year we have gotten more data analysis projects request than in both 2014 and 2015 combined. Part of this growth can be attributed to our growth and increased visibility in the industry but the major contributor is the increased interest in companies for the operational benefits of proper data analysis to support their core operations.

The largest contributor to this increase are foreign owned companies, multinationals, whose headquarters have instituted an integrated data analysis solution and the Nigerian subsidiary needs to plug in by doing one locally too. The next category are

the traditionally data heavy companies – banks, insurance companies, FMCG companies and telecommunications companies. We are also seeing new generation companies, especially those headed by globally aware managers, take interest in data analysis for improved operations of their business. And we believe that this trend will only grow.

There is a big door of opportunity opening to genuinely competent data analysis consulting companies. Ones that are more technically sound than salesy. Companies will trust and give repeat businesses to consulting companies that can demonstrate deep knowledge of the data analysis industry and tools, recommend without being salesy the appropriate tools and help the company realise the benefits promised.

About Us

UrBizEdge Limited is a registered leading business data analysis company in Nigeria.

We help companies get the edge they need from the data and tools they already have. We have the industry's best data analysis professionals and we have the only Microsoft Excel Most Valuable Professional in Africa (there are only about 128 in the whole world).

Our laser-like focus in the emerging data analysis industry and broad experience working with companies within Nigeria makes us a premium partner to our clients.

We give you that needed business edge!

Our Clientele:

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