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Contribution by

ZIMBABWE

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WHAT ARE THE ROLES AND VALUE OF DATA IN E-COMMERCE AND THE DIGITAL ECONOMY IN THE CONTEXT OF INCLUSIVE TRADE AND DEVELOPMENT?

1.0 INTRODUCTION AND BACKGROUND

1.1 E-commerce is an abbreviation for Electronic Commerce which is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the internet. These business transactions occur either as business-to-business (B2B), business-to-consumer (B2C), consumer-to-consumer (C2C) or consumer-to-business (C2B).

1.2 The beginning of e-commerce can be traced to the 1960s, when businesses started using Electronic Data Interchange (EDI) to share business documents with other companies. In 1979, the American National Standards Institute developed ASC X12 as a universal standard for businesses to share documents through electronic networks. After the number of individual users sharing electronic documents with each other grew in the 1980s, the rise of eBay and Amazon in the 1990s revolutionized the e-commerce industry. Consumers can now purchase endless amounts of items online, from e-tailers, typical brick-and-mortar stores with e-commerce capabilities and one another.

2.0 UNDERSTANDING DATA

Data is the combined collection of traditional and digital row facts and figures from inside and outside your company. Its purpose is to be a source of analysis and continued discovery. The storage of data has allowed businesses to have access to significantly larger amounts of facts, all combined and packaged for analysis.

This data offers insight for e-commerce businesses. E-commerce business owners can take the information from data and use it to study trends that will help them gain more customers and streamline operations for success.

Here are five ways data will continue changing the face of e-commerce in the near future.

2.1 Increased shopper analysis

Understanding shopper behaviour is essential for business success. Data is an essential component of the process, and provides information on trends, spikes in demands and customer preferences. Business owners can use that data to make sure most popular products are available and being marketed. If customers visit your site to search for products you don't offer, data is how you will learn about those searches, helping you seize new opportunities.

During this year, you will see more e-commerce businesses fine-tuning their marketing strategies, social media advertising and intuitive shopping processes to continue boosting sales and engagement in a competitive market.

2.2 Improved Customer Service

Statistics regarding unhappy customers and poor customer service are alarming. For instance, 91 percent of unhappy customers will not willingly do business with a company if they've had a poor customer service experience. Focusing on customer service is crucial to the success of all e-commerce businesses.

Understanding your shoppers is important, but even more important is making it easy for customers to contact your business, resolve issues or find answers to their questions. Data provides the metrics needed to see how quickly customers are able to complete these tasks.

Through this year, expect data to continue offering ways to track customer service experiences, but also to add even more predictive monitoring. This will help online companies identify potential problems and resolve them before a customer even gets involved.

2. 3 Easier and more secure online payments

Data has a significant role in making online payments easier and more secure. Here are eight different ways data is changing the e-commerce payment industry.

- Data integrates all different payment functions into one centralized platform. Not only does it help with ease of use for customers, it also helps reduce fraud risks.
- The advanced analytics offered by big data are powerful and intuitive enough to discover fraud in real time and to provide proactive solutions for identifying risks.
- Data can detect payment money laundering transactions that appear as legitimate payments.
- Recently, payment providers have started realizing the potential of monetizing merchant analytics. Payment providers can help different merchant retailers understand their customers better.
- Data analytics allows e-commerce businesses to cross sell and upsell.
- Push notification-generated sales act as an effective means to validate customer data.

2.4 Continued advances in mobile commerce

The number of people who use smartphones is increasing every day, to the point where researchers predict desktop computers will soon become obsolete.

Data makes mobility possible, especially when it comes to e-commerce. Brands can now collect data from multiple sources and analyze customers through mobile technology.

Google has jumped at this trend, giving preference to sites that are mobile friendly and responsive. Companies who do not have mobile friendly websites will continue to see a decline in traffic to their pages.

2.5. Virtual Reality advancements in the retail world

Data and virtual reality are two of the biggest technological innovations in the world right now, and their connection only enhances their effectiveness. Together, big data and virtual reality are revolutionizing the e-commerce world. They offer the tools needed for businesses to more efficiently present their brand, advertise and offer an evolving shopping experience for customers – right from the comfort of their homes.

Virtual reality can analyze big data and change actions based on its findings, often without the help of a human. We can expect to see even more virtual reality and streamlined shopping experiences soon, thanks in large part to big data.

3.0 HERE'S HOW DATA AND ANALYTICS CAN BENEFIT E-COMMERCE BUSINESS OWNERS

At present, most business owners use just 0.5% of all the big data at their possession. The bigger chunk of data remains siloed in proprietary software and external tools. However, as machine learning technologies are getting significantly better at retrieving and transforming scattered data into actionable insights, e-commerce companies are finally starting to unclog their data pipe. Below are just a few benefits that emerge as a result.

3.1 Higher revenues from cross-sell and up-sell campaigns

The typical customer buying journey is no longer linear – they switch between website, search Google for promo codes and, according to a blog post by Konstruct Digital, drift to trusted online sources for reviews, before returning to your website and making a purchase through another device.

Capturing and analyzing all those interactions is a challenging task for human analysts. But it hardly present any difficulties for an intelligent algorithm. By gauging and churning all those online behaviours, new-gen

analytics tools can compile comprehensive user personas – data-rich profiles of different audience segments. The depth of such profiles goes beyond the general demographics data. They capture all the interactions a user previously had with a brand – products viewed, clicks, past purchases etc. – and deliver personalized product recommendations based on everything the system knows about a particular customer.

Predictive intelligence recommendations can significantly improve your business bottom line. Amazon's product recommendation engine drives 35% of cumulative company revenue. What's even better, the results arrive fast: companies who have already chosen to adopt a predictive intelligence solution have reported a 40.38% influence in revenue after just 36 months' post-adoption.

3.2 Data-driven product research and product development

Deciding upon new products to sell or develop is never an easy task for e-commerce brands. The idea may look good on "paper", but eventually flop due to poor market research and product positioning. According to Hubspot, 66% of products fail within the first two years and 80% of new products stay on the shelves for less than two years.

"A lot of new e-commerce entrepreneurs tend to capitalize on-the-moment product trends, rather than develop a 360-degree industry outlook and plan ahead," said Nahar Geva, CEO of Zik Analytics, who claims his company helped over 20,000 eBay sellers in the last one year. "But every hunch should be backed by solid data, showing you exactly what people are buying, what price they are ready to pay on average and so on. Most believe that you need to pay at least five figures to some consulting company for such research. But that's no longer the case. Data analytics platforms can supply you with all those insights for a fraction of the cost. You just need to learn how to interpret that data".

Data analytics platforms can supply you with all those insights for a fraction of the cost. You just need to learn how to interpret that data. "Consumers are being prominently vocal online with their demands and preferences," said Vlad Dobrynin, CEO of Humans.net, a third generation social community applying artificial intelligence (AI) to revolutionise how workers and businesses connect. "Brands that manage to capture that data and apply it to product development and how they hire their staff succeed better in the long run."

3.3 Enhanced Pricing Strategy

Big data analytics unlocks access to more granular insights, allowing you to surge or drop the prices depending on individual customer's tolerance just like Uber does. Data-backed price management initiatives bring

significant results in the short terms perspective: 2%-7% increase in business margins and a 200-350% average growth in ROI over a 12-month period according to Deloitte data.

Automation tools can also enable better on-the-spot decision making, for instance showing your sales teams how discounting a certain product line will impact your profitability or how likely customer segment A will respond to a 15% discount. Big data analytics allows your business to become more agile and instantly respond to market changes – surge the price for shovels during heavy snowfall.

Jerry Useem writers that large e-commerce players have already become notoriously successful in creating elaborate pricing strategies, derived from the recorded customer purchasing interactions. "[Amazon's] software engine is built to manage consumers' perception of price. The software identifies the goods that loom largest in consumers' perception and keeps their prices carefully in line with competitors' prices, if not lower. The price of everything else is allowed to drift upward". Clearly, not all shoppers are thrilled with such tactics. So brands that are yet to venture into algorithmic price optimization should carefully balance their desire to maximize the revenue with the growing customer's demand for transparency and fair market practices.

Big data can bring substantial competitive advantages for your company. But to achieve the most benefits in the long run, your data should be gathered with only the best programs, built around the value that they could bring for your customers (as well as your bottom line) and streamlined with a log management program that organizes it in the most useful ways for detecting and understanding the problems that arise in software and infrastructure.

4.0 HOW EFFECTIVE DATA MANAGEMENT CAN HELP SCALE E-COMMERCE GROWTH

The reality of business and e-commerce today makes data management a necessary component of operations. Whether it's your customer's information stored in your CRM, in-app analytics, conversations recorded with chat bots, the millions of Slack messages between your team, or any combination of these, data management is an integral part of doing business. Unfortunately, many businesses cannot count on neat streams of uniform data, instead they spend significant time structuring and cleaning data to make it fit their operations.

For e-commerce companies with large data pools and significant analytics needs, this also means investing heavily in staff and resources to keep this data organized so analytics tools can run smoothly.

This can quickly become a costly endeavour, as the rigid structures of data warehouses require dedicated administration and making changes can involve substantial coding. But the value in using data for e-commerce growth is worth it.

Let's look at a few ways to leverage data for growth.

4.1 Data lakes for holistic insights and flexibility for e-commerce

E-commerce retailers can significantly improve demand forecasting by creating customer profiles and looking at their customer's behaviour – which days and times they prefer to shop, the number of items they usually purchase, which products they typically buy, etc.

The idea of a data storage system that simply let's data sit in its raw, unstructured form until needed seems pointless to some critics. However, advocates of data lake architecture argue that method actually holds tremendous value because of its lack of structure. Instead of restricting the data they use and fitting information into pre-made analytics models, data lakes allow for a more holistic approach to data science. More and more, companies are seeking data lakes as an answer to many of their analytic and data storage needs.

Data lakes, by their very nature, collect data without any restrictions and without creating hierarchies. For data scientists, this presents two key benefits: they can decide which data is required and useful at each moment, and they can perform a wider variety of analysis based on each moment's needs.

Some companies have gone to data lakes as a way of reducing both data management costs and complexity. For example, Vicomi, an emotional intelligence firm for online services, was limited to producing adequate insights at significant costs. But by switching to a data lake architecture powered by Upsolver, they were able to cut down significantly on their development time for new analysis models, predict new trends and reach more customers.

For companies that need to create new analysis models quickly and constantly change their marketing campaigns to reach new customers and drive sales, data lakes deliver greater flexibility along with the ability to produce new ways to filter that data.

4.2 Utilize artificial intelligence (AI) to prevent obstacles and predict opportunities for E-Commerce growth

Broken systems and uncovering opportunities are among the biggest drivers of AI adoption for data and analytics.

Amazon has grown tremendously since its start and is now one of the world's largest e-commerce stores with annual revenue north of $100 billion, and is a prime example of AI e-commerce growth.

The e-commerce giant didn't grow to this magnitude from just selling books and video games. A core aspect to its growth is making sure clients always have the products they want and showing them options they didn't know they needed. Building a better algorithm to detect problems involves more than simply analyzing sensor data.

In order to use AI to make sense of the data, there needs to be a better approach to blend existing processes to machine learning with expert-driven systems that can provide operators with more actionable feedback. This is achieved through AI e-commerce and machine learning.

By analyzing buyer history, Amazon can 'predict' what a customer will purchase next. Whenever you look at a product page on Amazon, each product recommendation and "customers who bought this item also bought" suggestion is generated through AI and machine learning. The more you purchase, the more accurately Amazon is able to send you relevant product recommendations. This methodology helps stores stay up to date with online shopping trends.

By data mining the buying habits of customers, Target was able to know that a woman was pregnant before her father did. By creating a set of criteria, the store was able to isolate which women would soon be expecting a child and send them relevant marketing information. And while this may appear to be extreme, it does make way for very effective product marketing options.

But AI in e-commerce doesn't have to be reserved only for big companies leveraging in-house teams.

"Most entrepreneurs and marketers are collecting data, but not sure how to organize it or leverage it to drive growth. That's where we see the biggest opportunity. Analyzing the data correctly can show either, gaps in the marketplace, or uncover new opportunities in growth and sales," says Carlos Cruz, CEO of Clicktool, a marketing analytics toolkit and management software that provides data insights needed to run more effective campaigns.

Data is not just about predicting problems, but relaying that information so you can take preventative measures. Creating this sort of defensive position will enable you and your team to seek out new opportunities using data, which ultimately drives new sales and e-commerce growth.

In summation, we find out that data has a very critical role and the development of e-commerce and the running of day to day transactions on digital platform therefore there is need to employ measures that will enhance saving and safe keeping of data within the systems. The big data revolution has only enhanced the e-commerce process, making it easier for online stores to be successful and useful. For e-commerce store owners looking to get ahead, big data provides a wealth of tools needed to find success

Prepared by:

T.A Manjengwa - ICT Officer

Albert Muziti - Economist

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