Big Data Can Boost the Value of Competitive Intelligence

In this article: There is a great need to understand how big data can help better orient the strategy of companies, especially those competing in global markets. It is likely that big data will become increasingly useful in generating unexpected insights. The massive investment in big data could be much better served by being more oriented to better understanding the external business environment. This can only be achieved by close cooperation with CI, BI, and Strategy.

Introduction

Organizations are becoming increasingly interested in finding ways to engage with insights that deal with competitors and the marketplace. There is a strong belief that big data will have a large scale impact in all business domains (Ranjan and Foropon, 2021). The question is, ***how will big data directly influence the performance of competitive intelligence***?

Companies increasingly mine their own customer data for insights into the market. But what about data that tracks your competitors' activities? Unfortunately, it appears that competitive intelligence professionals are still not sufficiently aware of this opportunity. In today's age, ***CI practitioners who aren't using big data on a regular basis aren't performing to the expectations of their decision makers***.

If we compare the value of CI practitioners who are engaged heavily with big data and those who are not, we can see a difference in the value added by those who leverage big data. While its impact can be huge, that impact is often seen only by those who are familiar with it. Big data usage by CI is a key driver and key success factor to corporations, especially those who are struggling in the international competitive arena.

We see continuous gathering from social media, website changes, news sources, and documents online. However, this is the question: ***Are we becoming more clever in our decision making as a result of the digital stream***?

These days, we are expected to look at big data as a strategic asset that enables CI to support corporations in need of better orientation and direction to foresee the near and the far future. There is still a need to provide a context for developing big data frameworks and process models for CI in organizations.

Defining the big data phenomenon

A good definition for big data is taken from SAS Corporation:

Defining big data

"Big data is a term that describes the large volume of data – both structured and unstructured – that inundates a business on a day-to-day basis. But it's not the amount of

> data that’s important. It’s what organizations do with the data that matters. Big data can be analyzed for insights that lead to better decisions and strategic business moves. " **(SAS Corp.)**

It is useful to add to this definition that: “***Big data deals with data sets that are too large or complex to be dealt with by traditional data-processing application software. Big data is related closely to both business intelligence and to the CI discipline***" (Xu et al. 2016).

Although big data has become an important tool in business, it can be challenging to use correctly. It is already having an impact on decisions in areas such as process improvement, marketing capabilities, R&D, business development, supply chain optimization and more. It is impossible to ignore how it is playing a growing role in improving firm’s capabilities by better collection, and analysis of information (Watson et al., 2018).

In the background, however, is the main problem, how to deal with all this data. Usually, we refer to this question when raising the following challenges: the **volume** of data, **velocity** of streaming data, **variety** of different forms of data and **veracity** or uncertainty of data. (Calof, Richards and Santilli, 2017). Given the impact of these 4 V’s, the CI discipline can deliver huge internal impact by knowing how to leverage big data properly. The desired outcome is competitive edge, thanks to better decisions based on insights that emerged from big data systems. To deliver this, **it's key for CI professionals to be fluent in big data**

systems and capabilities, so that they can extract insights from these systems.

Case study - Israeli health insurance firm

An interesting case study can show the potential of the cooperation between big data and CI. In a leading Israeli health insurance firm, a rapid decline in customer retention was causing significant financial losses. The CI unit was assigned to look into this crisis and to find the reasons for this phenomenon and to advise what can be done. The CI unit compared the quality and quantity of health services of all the players in the marketplace. Through a sophisticated big data platform, huge amounts of information about the availability of these services was gathered: doctors, laboratories and emergency services together with relevant information about customers extracted from social media. After analyzing the information, the CI director was able to determine that the decline in customer retention was due to better availability of services from the competition. As a result, the firm implemented a new five-year strategic plan to build a more competitive offering.

Using a big data platform, the CI director was able to determine the reason for the decline in customer retention.

Big data and senior management

I’m not arguing that a CI practitioner must become a big data expert. On the contrary. Practitioners must learn the basics of big data, so that they're able to extract relevant information and then to deliver insights based on these outputs to management.

In many cases, the most valuable contribution of big data to a firm may be in understanding customers’ needs. However, ***there is a great need to understand how big data can help better orient the strategy of companies***, especially those competing in global markets.

For years, we've known that knowledge is one of the most important sources of competitive advantage, based on the knowledge-based view (KBV) theory introduced first in 1996 (Grant, 1996). KBV is a management concept of organizational learning that provides firms with strategies for achieving competitive advantage, where knowledge bases and firm capabilities are the major determinants of sustained competitive advantage and superior performance.Through big data systems, large-scale data can be easy to deal with: to create, collect and convert to intelligence.

Although integration of intelligence into decision-making is an ongoing challenge, it's one that can be met by CI practitioners. Many senior executives don't fully comprehend the real meaning or value of big data systems. This is exactly where CI professionals must prove the value they obtain from these systems. One well-known example is how Amazon used the huge amounts of information about customers,

competitors, and markets from selling books online to infiltrate new segments far from its core business (more on this later).

The need to better understand threats and opportunities is greater, generally, for global markets than for purely domestic ones. The diversity and intensity of international markets make the requirements of solid information more critical, and increase the need for CI professionals to understand and use big data, leveraging the KBV theory that supports business initiatives based on intelligence.

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Growing competition has positioned CI in the forefront, especially in the wake of the COVID-19 pandemic. In order for executives to wisely use insights obtain from big data systems, the best path is through a CI function operating within the firm, not through outsourced support. The value of CI unit is its ability to analyze information and to present it as a final product to the decision makers. While executives will not engage with the analysis themselves (they expect a finished intelligence product), they must provide feedback to the CI unit about the intelligence they receive and also better define their intelligence needs. In other words, they must encourage CI professionals to better use their intelligence sources, including big data.

Competitive & business intelligence

Companies have been collecting information on the competitive landscape for decades. Only recently has this become an organized effort often managed by professionals in intelligence and strategy.

Big data is replacing old data methods through its ability to process huge amounts of information from almost infinite sources, from multiple domains, and for CI professionals to use the outputs to support decision making. However, **who is responsible for converting information on the external environment into intelligence**? We have seen market research change its focus, relying more on gathering information from social media rather than only speaking directly to customers with specific questions.

The same issue arises when extracting information from social media about competitors. This must be undertaken by professionals who are capable of determining Key Intelligence Topics (KITs) and performing high-end analysis. CI's value add is typically measured by the degree to which supports decision makers with intelligence that helps enhance and preserve their competitive edge (Chabowski et al., 2018).

There is no one-size-fits-all approach to the relationship, routines, or processes between big data and CI. It is recommended that CI units work closely with big data systems experts, often known as business intelligence (BI) analysts. A BI analyst typically reviews data to produce finance and market intelligence reports, which are used to

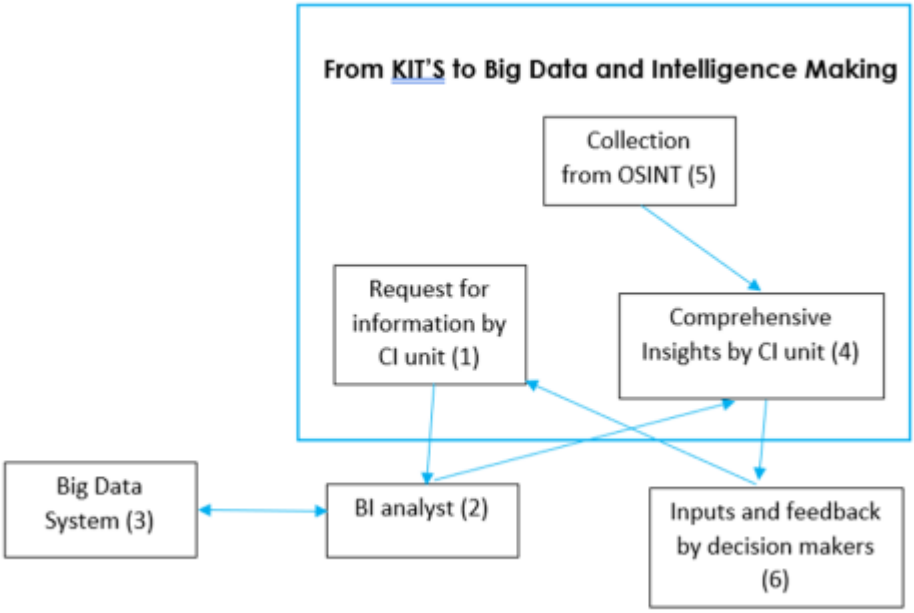
highlight patterns and trends in a given market that may influence the company's operations and future goals. BI analysts must understand the business, understand business problems, and create insights. Therefore, they will have the ability to ask the right questions. In addition, the analyst should have a strong understanding of customers.

The way forward for CI professionals

Demand for BI analysts is growing, and with it the opportunity to partner closely with CI and CI activities. Taking it one step further, CI professionals should have strong capabilities in BI formations and analysis, so that they're capable of extracting information and convert it into insights for CI needs.

BI analysts should be exposed to CI so that they're better able to help CI units.

I'm urging a new orientation for CI professionals – to dive into the practical aspects of big data systems by building a basic level of knowledge in how big data systems operate (see Figure 1, the conceptual model).



There are various training programs for BI analysts that are quite relevant for CI professionals. Conversely, I recommend that BI analysts get exposed to the CI discipline so that they're better able to help CI units and potentially to become an integral part of CI. It is likely that big data will become increasingly useful in generating unexpected insights, far more more than today. **The massive investment in big data could be much better served by being more oriented to better understanding the external business environment**. This can only be achieved by close cooperation with CI, BI, and Strategy.

Case study - Amazon's competitive advantage through big data

Amazon is a giant in how it uses big data. Perhaps one of its greatest innovations is the personalized recommendation system – which, of course, is built on the big data it gathers from its millions of customer

transactions. Their systems are getting better, and what we've seen so far is only the beginning. Amazon has recently obtained a patent on a system designed to ship goods to us before we have even decided to buy it – **predictive dispatch**.

This is a strong indicator that their confidence in reliable predictive analytics is increasing. Consider how commercial Amazon is in its use of big data, compared to others that also deal with huge amounts of data. Unlike Facebook – which might know an awful lot about which movies you like or who your friends are – most of Amazon's data on us relates to how we spend money. Knowing how to use big data to get more money out of our pockets, it is now setting out to help other corporations do the same – by making that data available for advertisements, encouraging us to buy more. As with Google, we now see advertisements driven by Amazon's platform and based on its data appearing on other sites. This makes the company a direct competitor to Google – with both online giants fighting for a chunk of marketers' budgets.

Amazon has grown far beyond its original foundation as an online bookshop, and much of this is due to its enthusiastic adoption of big data principles to achieve competitive advantage (Chaffey, 2020). It appears ready to continue breaking new ground for the foreseeable future.

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