AI and related Data-driven Market Research Methods

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The expanding use of AI supported market research methods can't be denied. As the use of synthetic data grows, it becomes important to identify in what business situations it has its best fit and can contribute the most value.

Synthetically generated data is a quantitative market research tool. It has the advantages of providing higher volumes of information in a short period of time. These tasks can also be accomplished at a much low-cost as opposed to other data gathering methods.

At the same time, recognizing the limitations of AI supported synthetic data becomes equally important for management and the market research team. This will determine the way in which the use of synthetic data in their market research efforts.

Market Research Overview

At the 50,000 foot-level, the choice of market research methods can be generally partitioned into two general categories:

- ***Qualitative* market research**- Identification of future trends in a target market space
- ***Quantitative* market research**- The gathering and analysis of current and historical data from a wide range of sources. AI supported synthetic data is included in this category.

Qualitative market research focuses on identifying and understanding the trends and dynamics of the of a particular market space. *Information generated in this way is intended to assist management in making better decisions about their business going forward*. It includes the gathering of relevant historical information and researching trends that can impact future revenue streams for the company with a defined market space.

Among the market research methods used to develop qualitative business information are targeted interviews, surveys, one-on-one industry expert inputs, and focused groups. In many cases the market research effort involves contracting with external sources to perform the work.

The scope, objectives and goals for the research are project specific as defined by management or market research team. Contracting with an outside firm also adds needed objectivity and input from sources outside of the organization.

Examples of qualitative market research topic include:

Table 1: Qualitative Market Research Examples

- Channel-to-market pathways
- Competitive landscape assessment
- Product/technology transitions
- Game-changing events
- Strategic M&A events & their impact
- Geographic market shifts
- New or pending regulatory actions
- Industry-driven, next-gen technology
- Other

Quantitative market research, as the name implies, focuses on the generation of multiple data sets. The selection of these data sets is guided by the goals and objectives identified by management for a particular market research effort.

In general, *these data sets contain relevant information on current and past business activity. It is intended to deliver insights and perspective to management that can either reinforce or challenge present go-to-market strategies.*

At the same time, data sets generated in this way do not effectively provide vision into the future trends, market transitions, and other business dynamics occurring within the targeted market space.

Quantitative, data-driven market research methods are often closely or directly linked to understanding and tracking consumer demand and individual buying or brand preferences. In addition, data sets generated from a wide range of related market sources provide an understanding of historical trends that affect choice.

Properly designed and executed, the resulting data sets will improve the business results obtained from the market research effort. With certain market research methods real-time sales data can be obtained. This can help management make fast adjustments to their business strategies based on a variety of chosen variables. Examples include differences by geographic region, store type or location, by product features, by packaging or price point, etc.

Data-Driven Market Research Methodologies

Table 2: Key Quantitative Market Research Methods

- Analytics
- Automated, In-house Platforms
- AI and Synthetically Generated Data
- AI Co-pilots and Machine Learning

- **Analytics**
  Analytics is a business tool that involves identification, selection, and gathering of large amounts of data from multiple data sets. This includes data sets from internal and external data sources. Analytics provides management the ability to understand past and current behavior patterns impacting their business as a basis for decision-making.

  Collectively, these data sets, referred to as “big data,” are then stored into what is called a “data lake.” The data contained within the “data lake” is a collection of internally generated company data and from sources externally identified that are relevant to the market research goals.

A key challenge in accessing and using “big data” is that data obtained primarily from various external formats often involves customized or specialized software. As a result, effectively integrating external data sources into a workable “data lake” often requires outside expertise and experience.

Data storage is then configured onto a cloud platform such as those available from Amazon or Google. They can also be custom-configured onto company hardware using data storage systems such as Apache Hadoop.

The costs involved in identifying and configuring the “data lake” to fit with the program goals are significant. It is important to get it right the first time as back-tracing can be difficult and costly. As a result, when employing analytics. It is critical to identify and characterize all the internal and external data sources that are required to satisfy managements goals for the project early.

- **Automated, In-house Platforms (AIP)**

  An automated, in-house platform (AIP) involves the development of market data and/or business information generated from internal company sources. This can extend across divisions, geographic locations, or industry specific company activities. It can also be used to generate data on narrowly defined business disciplines in areas such as accounting, manufacturing, or sales.

  AIP relies on the use of customized, company-specific software as opposed to commercially available options. As a business tool it is designed to address specific data/information needs within the context of the parameters designed by management or a market research team.

  AIP is also intended to generate the desired data sets on a regularly scheduled cycle time or as a continual data stream. In contrast to other methods of data gathering, automated platforms are intended to avoid the need for employee involvement to manage the output once the format has been established.

As a company specific market research tool, the data and information generated from AIP is only accessible within the organization by designated employees or by specified outside contract agents.

- **AI and Synthetically Generated Data**
  AI generated data is rapidly gaining the attention of many organization as an effective market research tool. AI generated data (synthetic data) is created through "simulated responses" obtained by exploring a range of sources related to a particular market research topic.

  Source selection with AI is intended to be more comprehensive and include many additional market influences in its output. AI supported market research allows accessing an essentially "unlimited" range of relevant sources from which it can generate simulated responses. Synthetically generated data also allows market researchers to be creative and explore concepts that would not have been possible with other methods.

  This approach has already demonstrated its ability to provide data sets that (in most cases) are comparable to those obtained from other more established market research methods. It also has shown an ability to produce a high-level of repeatability when sufficient training and experience has been gained by the market researchers involved.

  The use of AI offers several key advantages. First, the speed at which market research data can be generated is superior to alternative, data-driven methods. Second, the costs associated with its use versus other methods are much lower.

  The choice of sources will have a significant influence on the value of the output it generates. Incorporating other data-driven market research tools into the process as a cross-check against synthetically generated data-sets is an important consideration.

The market research value for AI supported synthetic data is greatest when there are significant relevant information sources from which the market researcher can choose. When the focus is on areas where limited information is available to draw upon there is a much greater chance for the "synthetically" generated responses to become skewed and of lesser value.

Finally, the information generated in this manner will not provide a basis for predicting future trends or preferences beyond what can be supported by current and historical sources.

AI Copilots and Machine Learning

As an adjunct to AI, machine learning and AI copilots use artificial intelligence that employs algorithms. These algorithms perform a range of tasks to assist users in enhancing their productivity or output.

This includes such things as automatically repeating certain tasks and making suggested changes such as coding or data analysis to improve the quality of the output. As a market research tool, machine learning through AI copilots will adapt and improve over time.