Araştırma Makalesi

IMPACT OF ANALYTICS ON STRATEGIC MARKETING PERFORMANCE

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ABSTRACT

In the current era of digitalization new tools are being used to create competitive advantages in the market. The use of analytics in the strategic marketing involving segmenting, targeting and positioning (STP), have become a differentiator between successful and non-successful organizations that have access to big data.

Even if most of the marketers seem to be aware of this, the number of companies collecting and leveraging their data is relatively reduced. In a general way there exist several practices of strategic marketing, but in order to be consistent they must be closely integrated to the business nature. This complicates their application and increases the costs. In this research, STP bases are analyzed and the potential application of current existing Business Intelligence tools.

Keywords: Analytics, big data, strategic marketing, segmenting, targeting, positioning, business intelligence

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1. INTRODUCTION

The more significant shift in the marketing practice of placing the customer on the center has changed all the academics and practitioner's orientation. Since then, the consumer/customer has been the protagonist of the new organizational strategies with a proven success in financial performance. Even more notorious when the markets of practice are substantially large (Henderson, Lee & Palmatier, 2012).

At the beginning of the commercial era in ancient and medieval times, there were no mass transactions and the contact between the producer and the seller was practical and simple. With the evolution and growth of the markets and needs, the gap between both has increased, so the producer's strategies were not as efficient as to satisfy at its best the consumer needs. In order to take the best profitable business decisions, the marketing discipline emerged as a solution. The massification of transactions drove the practitioners to start data collection procedures and to develop databases from different sources like market surveys and operations records in order to visualize customer preferences and try to define the customer behavior. In the end this variables integration process ended up being quite complex (N. Dholakia & R. R. Dholakia, 2013/2014).

With the refinement of the data collection practices, it became possible to track customers buying frequency and/or services acquisition, allowing to create an historic of operations and therefore define the customer loyalty. Moreover, based on the length of the customer-provider relationship the Customer Lifetime Value (CLV) concept was developed (Maycotte, 2015). Finally, relations with customers started being considered as market-based assets for companies and gave birth to the "Customer Relationship Management (CRM) discipline as a major shift in marketing theory and practice" (Estrella, Sánchez-Pérez, Swinnen, & VanHof, 2013, p.48). Rather than focusing on discrete transactions, CRM emphasizes the cultivation of long-term exchanges (Morgan & Hunt, 1994), because in the long run relationships of this kind are considered more profitable (Reichheld & Sasser, 1990).

After the final adoption of the customer-oriented approach another big upgrade showed up with the development and inclusion of technology and later on the internet for a much more complex producer-consumer relation and thus data collection. Given this new framework for strategic marketing, the more data the firms have access to the more advantage they can take over their competitors and on the profit maximization.

2. MEANING OF BIG DATA

"Big Data refers to datasets whose size is beyond the ability of typical database software tools to capture, store, manage, and analyze" (Mckinsey, 2011, p.1). Nevertheless, this concept is subjective, due to the fast evolution of software technologies nowadays it is not possible to assume a certain number of bytes for example. If this were the case the concept would have to update itself every certain time, maybe in five years we would have to refer to it as an amount of petabytes.

Furthermore, according to Russom (2011) "size matters, but there are other important attributes of big data, namely data variety and data velocity" (pp.6). It is certain that volume may be the main attribute for considering a set as database, nevertheless the more diverse it is the more reveling and consistent the potential benefits are, besides if it is more variable it would be inevitably larger. The other complementary feature that contributes with the size is the speed. In a great way Big Data is useful because of the speed of collection and the possibility of showing the results in a very immediate way, mostly because in many cases the results are needed in the short term in order to take action in a timely manner. Once again, it is easy to correlate and infer that the faster the data is collected the larger the size of the series will be. Other authors like Kannan & Wedel (2016) also add two extra v's to the Big Data definition: veracity, for reliability and validity; and value, for the functionality and added value it involves.

In the actuality the digital data has spread to every sector in all the economies around the world and so the ability to store, aggregate and combine data from diverse sources. In the marketing discipline this data is often referred to transaction registers and demographics leaving traces of the consumption behavior in records and customer databases. Let us illustrate a retail outlet as a source common data as an example, consider the marketing research surveys with the buyers or the daily customer transactions records. Generally, the starting point is a customer database that is elaborated in terms of demographics variables like age, family size and income. Customers leave traces of their purchasing patterns in store scanning data, catalogue purchase records and customer databases. This sets reflect their preferences as raw data through data mining is possible to extract precious information that allow to segment them into profiles of low, medium, or heavy buyers for example, which is very useful for the design of special promotion or loyalty associated programs.

Big Data can create value in several ways supported in a big organizational and managerial transformation potential based on five main improvements: transparency, the managers are able to access data in a timely manner; experimentation, the Business Intelligence allows to instruments processes and then set up controlled experiments; segmenting populations, allows the aggrupation of very highly detailed groups and create hypothesis to meet their needs; replacing/supporting human decisions through automated algorithms, decision taking is eased and the risk is minimized through highly accurate simulation of human behavior; innovating new business models, products and services, the information hidden on the series can reveal new forms for meeting the consumers' needs (Mckinsey, 2011).

3. DATA MINING AND MARKETING

The purpose of the integration between data mining and the marketing managerial processes is to collaborate to improve its efficiency, sales, and customer support management through a better understanding with their behavior. There are two presentations for data mining: directed and undirected. Directed data mining looks for the explanation or categorization of a specific variable like income or response. Undirected data mining searches for patterns or similarities without considering a particular variable (Berry & Linoff, 2004).

With the increasingly high growth of data availability of the current information era the firms have recognized the competitive advantages of managing Big Data and analytics, which has promoted its development and extensive study (Davenport, 2006).

On the other side, the customers have new capabilities and for this reason new behaviors that have made generic promotions and make campaigns become obsolete and, in many cases, irrelevant. Nowadays customers are looking after the buy experience which means having interaction with the business or seller. This new feature arises along the brand awareness and the customer loyalty concepts. Marketing as a discipline has reinforced its functions of collecting information through several ways of interaction with the customers in real time in order to reply on a timely basis to anticipate the customers' unstable needs and desires. When the marketing campaigns fail to offer a unique buy experience an unappropriated message is being sent to the customer and may conclude as a negative experience affecting the brand image and lowering the brand awareness (Harvard Business Review [HBR], 2014).

Under this context the usage of specially designed algorithms and advanced analytics techniques have taken certain protagonism and are revolutionizing the sales and marketing practices. The following are some of the effects and impacts:

- Price optimization process is much more accurate: according to Mckinsey estimations the effect for the increase 1% in the price would be traduced into 8.7% of operating profits (no volume loss) and they also estimate that at least 30% of the thousands of pricing decisions of the main companies from their database fail to reach the proper price for their customers (Mckinsey, 2014).
- Almost 40 percent of advertisers employ three or more data management platforms and nearly 45 percent use three or more analytics platforms (Vittal, 2017).
- The Total Data market is expected to nearly double in size in a five-year period, growing from $69.6B in revenue in 2015 to $132.3B in 2020 (Colombus, 2016).
- Analytics are able to provide a clearer customer insight in order to increase the profit leverage of the Customer Life Value and improve the loyalty (Whitler, 2017).
- According to a Spencer Stuart study made in the United States, more than half (58%) of the Chiefs in Marketing Offices (CMOs) state that it is on the *search engine optimization* (SEO), *marketing*, *mobile marketing* and *internet marketing* fields where Big Data is having the bigger impact followed by a 49% that consider that it is on Customer Segmentation (Spencer Stuart, 2013).
- Customer loyalty and engagement is increased and represents a competitive advantage for the leaders of ten of the largest industrial sectors that use data market driven strategies (Forbes, 2015).

Big Data management and analytics seek to provide more information business under the premise that better based decisions will lead to better results. Good access to data by itself might not provide the most effective strategy but an advantageous insight to be more effective and competitive in the market. Metrics provide precise indicators of marketing's performance and contribution. By using metrics, "the marketing team and the company can determine with precision how marketing influences revenue. Furthermore, these analytics are a management tool that helps marketing optimize its efforts and produce the best possible outcomes" (Rackley, 2015, p.10). One of the most

interesting functions provided by these practices is that the extracted knowledge from the historical data series could be used to predict a future customer behavior having a great impact on the targeting and positioning processes of the strategic marketing.

3.1. Metrics in Marketing

The processes of segmentation in an extensive database help to analyze the behavior of the conglomerates, the new applications allow to visualize the behaviors and the changes in the behaviors of these conglomerates, but what do these changes tell us? It is necessary to define if a behavior or a change is convenient and to what extent the company can face it.

Marketing strategies require planning activities in order to meet their objectives over time. The planned activities must be monitored and, as in any planning, the deviations and results obtained must be measured in order to compare them with the expected goals and this is where the measurements or metrics are essential to know the status and efficiency of our business model. These metrics are made by means of something that can be counted or compared and are better known as KPI's "Key Performance Indicators". An indicator is a measure, quantitative or qualitative, on the progress or degree of fulfillment of organization goals. The subject of an indicator is a particular feature or quality of an element in the business environment, e.g., the workload of an employee, or the compliance of an internal process with respect to external regulations (Barone, 2011).

3.1.1.Objectives to be Measured

The objectives to be measured can vary and be considered in different aspects, some of which could be defined as:

- **Financial:** They value the economic behavior of the company.
- **Operating:** They measure the efficiency of the operational processes.
- **Organizational:** Evaluate the growth and sustainability of the company.
- **Stakeholders:** Evaluate the vision and acceptance of clients.
- **Social:** They measure compliance with established social and environmental commitments and compliance with legislation in this regard.
- **Competitive:** Compare the position of the company against its competitors.

Figure 1. Objectives to be measured.

3.1.2.Characteristics of Good KPI's

Potentially many KPIs can be identified and used in any context, but the objective should be to select those measures that have certain inherent qualities that deliver the most value as a tool for policy analysis, performance

improvement, and communication of results. People often use the acronym "SMART" to refer to the characteristics of good performance indicators. Each letter of the acronym represents an important characteristic. To determine whether the performance indicator meets the criteria for each characteristic, one should consider the following checklist:

- **Specific:** Does the indicator convey at a glance what it is measuring, and how the measurement is derived? KPIs should communicate clearly what the Company is doing.
- **Measurable:** Can the measurement be expressed as an objective value? Do reliable data exist? Can they be easily collected?
- **Achievable:** Does the indicator measure something within the program or activity's manageable control?
- **Relevant:** Does the indicator measure the most important result of the activity?
- **Time-bound:** Is there a deadline for achieving the performance indicator? Are data reported at sufficiently regular intervals to support tracking and management decision making?

Different sources will offer different definitions or characteristics for the "SMART" acronym, because in reality, there are more than five issues to consider when evaluating the merits of one performance measure or another. It helps, however, to have the above criteria as a handy checklist when exploring and developing KPIs and PIs. (Source: Developing Key Performance Indicators-USAID's Health Finance and Governance HFG).

3.1.3.Why is KPI Valuable?

- It allows the monitoring of the strategic plan measuring the achievement of the proposed objectives.
- It helps decision-making in the strategic marketing environment.
- It shows the deviations of the strategic plan and the application of corrective actions.
- Evidence new events and opportunities to consider within the strategic plan of the company.
- It allows the discovery of errors and anomalies within the various operational processes.
- Can give us a vivid picture of the manner in which the organization has allocated its resources, and the efficiency with which those resources have been utilized (Gilligan et al., 2009, p.137).

3.1.4.Some KPI´s According to Different Aspects Mentioned

Financial KPI: At an organizational level the ultimate financial measure of short-term efficiency is the relationship between net profit and capital employed, typically expressed in percentage terms as the rate of return on capital employed or the rate of return on investment (ROI) (Gilligan et al., 2009 p.139):

$$ROI = \frac{Net\ Profit}{Sales\ Revenue} x\ \frac{Sales\ Revenue}{Capital\ Employed} \quad (1)$$

Operating KPI: a widely used index is the operational productivity index, and it could be employed on the amount or request of products or service Vs. the amount of man working hours spent by activity or department. For example:

$$Productivity\ = \frac{Qtty\ of\ ODS}{Man\ Hours\ Worked} \quad (2)$$

when ODS is service order.

Organizational KPI: The sustainability of the business can be measured as an increase in the average cost derived from the total income between two periods.

$$Sustainability = \frac{\frac{Cost\ period\ 2}{Income\ period\ 2}}{\frac{Cost\ period 1}{Income\ period\ 1}} \quad (3)$$

Stakeholders KPI: The satisfaction level can be measured as the average of the positive satisfaction surveys of customers or customer segments and Vs. the total of surveys conducted.

$$Satisfaction = \frac{Number\ of\ positive\ satisfaction\ surveys}{Total\ satisfaction\ surveys\ conducted} \quad (4)$$

Social and Environmental KPI: Compliance with the social and legal commitments completed may be established Vs the commitments to be executed in a given period

$$Social\ Compliance = \frac{Commitments\ completed}{Total\ Commitments\ planed} \quad (5)$$

Competitive KPI: The positioning measure is one of the most difficult difficulties to establish for each company that seeks to maintain the confidentiality of its operations. Resorting to Benchmarking data has become a means to obtain positioning indexes in the specific market of the company.

3.2. Data Analytics Today and Tomorrow

Nowadays, the development of sophisticated software and advances in communication systems have cleared the way to applications that allow the analysis of data in real time basis allowing opportune responses that challenge our imagination.

Thus, the algorithms that support the analysis of data by means of segmentation mechanisms, with techniques such as K-means or relational analysis just to mention the most popular ones, are evolving into sophisticated and digital analysis tools.

The latest trend in the world of Business Intelligence and Analytics is known as "augmented analytics" (Artificial Intelligence as science of training systems to emulate human tasks through learning and automation augmenting human efforts) usually also referred as "smart data discovery". In this context, software users do not require programing language to explore the data and define indicators of interest.

This data access democratization is giving birth to the citizen data scientists, i.e. regular workers that will leverage data independently (Howson, Idoine & Sallam, 2017). Meaning that the real holders of the operational knowledge would be able to interact and model with data independently from the IT department. This empowerment would scale up productivity and would contribute to transform the decision-making process, from a top-down to a bottom-up structure (Cornelissen, 2018).

The following picture shows a timeline with the evolution of BI&A tools, taken from presentations by Gartner (leading IT consultant) available on their website www.gartner.com:

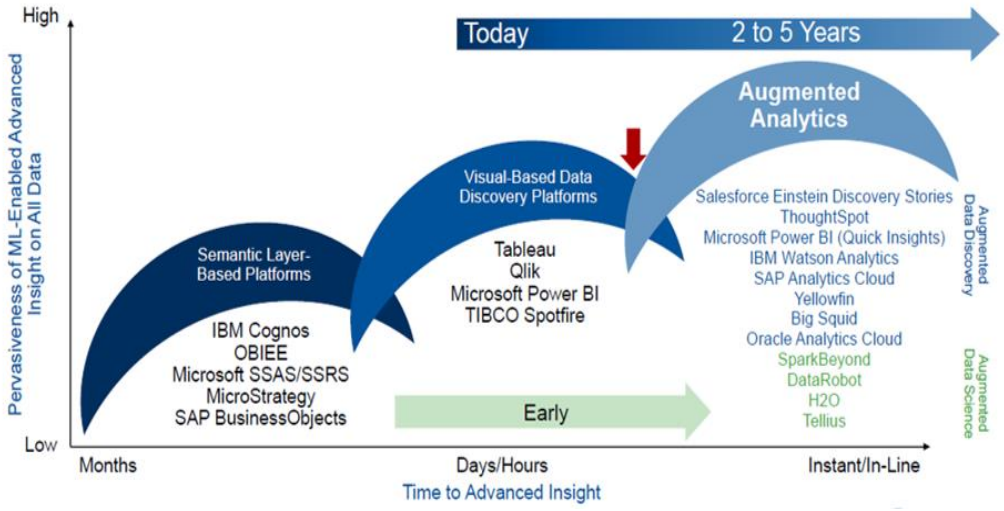

Figure 2. Business Intelligence tools evolution (Howson, Idoine and Sallam, 2017).

a) Semantic Layer based platforms: also known as Traditional BI platforms, which were focused on the intervention of technical personnel for the development of applications (functions and indicators) involving the use of programming language. This was a high cost process and as shown in the axis (X), the results could take months and the results were superficial (Y axis).

b) Visual-based Data discovery platforms: visualizations are obtained more immediately, but for its complexity to be significant the intervention of trained personnel is required. The data explorations are still limited for regular business users. Nowadays tools are on this group and most of the activities at the business level are focused on reporting, since complex insights require time and are costly.

c) Augmented Analytics: its development is still in progress, but there are already in the market some tools that are innovating in the way which operations are developed. Reporting capabilities are included as well, but higher insight rates are unlocked in real time. According to the image, it is expected that by 2020 new solutions will be available to fill the growing skill gap of skilled personnel in the data professionals' sector[1].

As referred before, this new process of distributed agile analysis is better known as "Smart Data Discovery" and allows users to prepare information, find hidden patterns in large datasets, and finally share the findings on real time to act on operational processes and marketing strategies.

The figures 4 and 5 illustrate the current state of the processes and how would they evolve in an augmented data science scheme thanks to the innovation of the BI and Analytics tools. These processes include mainly the new machine learning technology, a subclass of Artificial Intelligence, in which the machines are able to discover new paths and information in the data by themselves. This last assumption is precisely what is being considering in the scope of this research; what operations related the adding value hidden in the data can be significantly improved to assist the human talent.

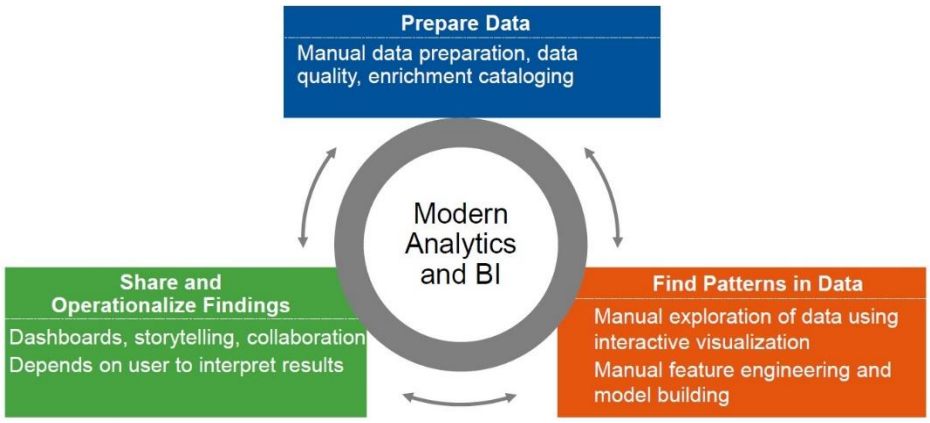

Figure 3. Modern Analytics and BI Today Process (Sallam. Gartner webinar, 2018).

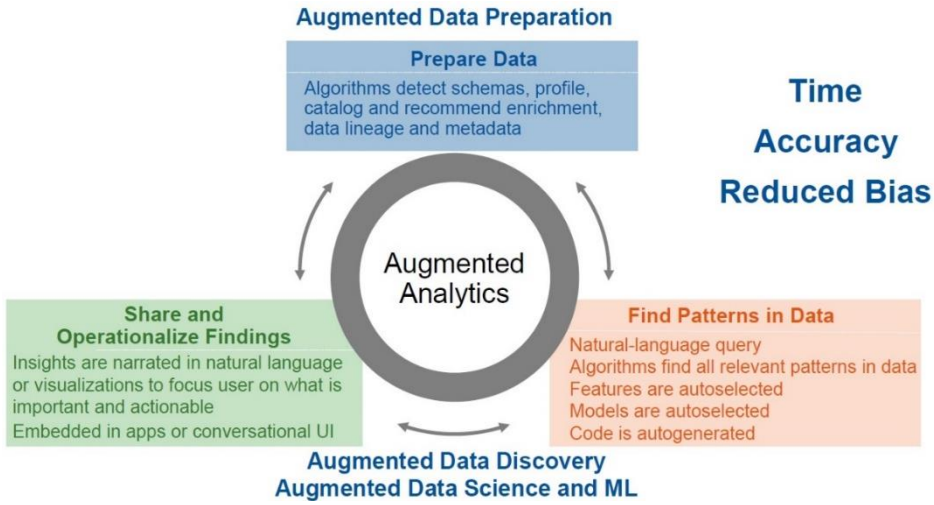

Figure 4. Augmented Analytic and BI Tomorrow Processes (Sallam. Gartner webinar 2018).

[1] "Back in 2012, the research firm Gartner said there would be a shortage of 100,000 data scientists in the United States by 2020. A year earlier, McKinsey put the national gap in data scents and others with deep analytical expertise at 140,000 to 190,000 people by 2017, resulting in demand that's 60 percent greater than supply. In 2014, the consulting firm Accenture found that more than 90 percent of its clients planned to hire people with data science expertise, but more than 40 percent cited a lack of talent as the number one problem." (Woodie, 2016)

3.3. Data Analytics in Strategic Marketing

According with Kotler (Kotler, P., & Keller, K., 2012) we can divide the value creation and delivery sequence into three phases:

Marketers must segment the market, select the appropriate target, and develop the offering's value positioning. The formula "segmentation, targeting, positioning (STP)" is the essence of strategic marketing. The second phase is providing the value. Marketing must determine specific product features, prices, and distribution. The task in the third phase is communicating the value by utilizing the sales force, Internet, advertising, and any other communication tools to announce and promote the product. The value delivery process begins before there is a product and continues through development and after launch. Each phase has cost implications.

The present work is related to the first phase of value creation, market strategy, or better expressed, the influence and penetration that technological advances have had to enhance the development capacity of this first phase of value creation, whose main aspects (STP) are briefly described below.

3.3.1.Segmenting

"Segmentation is the process of placing buyers in a product-market into sub-groups so that the members of each segment display similar responsiveness" according to a defined criterion (Cravens & Piercy, 2006. pp.99). This practice is frequently used in current data mining applications and generally the customer data is partitioned into certain number of segments or groups. It sounds more simply than it really is, and sometimes the data may contain such a complex structure that not even the most efficient data mining technics are able to identify meaningful patterns. There are several algorithms and formulas designed for segmenting, one of the most well-known is the K-means clustering algorithm which is based on "the look for a fixed number of clusters which are defined in terms of proximity of data points to each other" based on the Euclidian distance formulation (Berry & Linoff, 2004. p. 354), or Relational Analysis theory, with a broad application field initiated and development by J.F. Marcotorchino around the 70's, and its understanding has been the base in the evolution of modern applications.

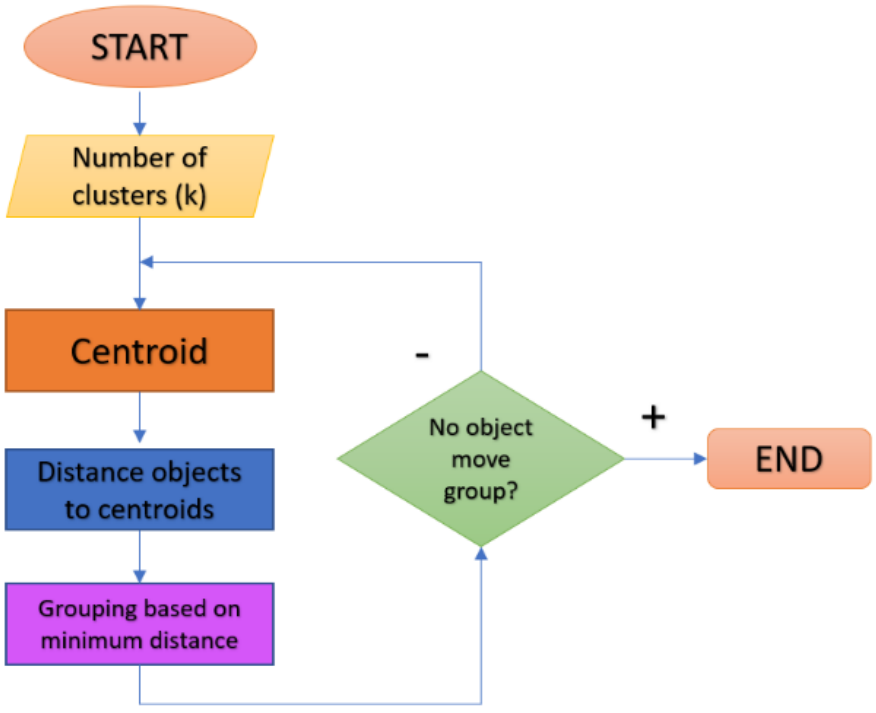

Figure 5. K-Means Diagram (International Journal of Computer Science and Information Technologies).

On the other hand, segmentation allows a company to operate with limited resources because it no longer requires mass production, distribution or advertising; In addition, it allows to compete successfully against large companies as it maximizes profit per unit and sales per segment. (David, 2003)

Typically, companies perform segmentation based on demographic, geographical or psychographic characteristics. Other characteristics can be defined as for example industrial or commercial groupings according to the economic activity to which they are dedicated.

The evaluation of the market segments requires strategists to determine the characteristics and needs of consumers, the analysis of similarities and differences between consumers and the design of profiles of consumer groups. The segmentation of the consumer markets is easier than the segmentation of the industrial or service markets because the last two are directed to all consumers without greater discrimination, as is the case for example, with the electronics or household appliances industry or telecommunication services or of legal advice, where it would be necessary to implement a methodology of grouping different geographical location, lifestyle, etc. (David, 2003).

A company can operate in different segments, establishing several effective strategies, in order to detect the origins of market fluctuations more accurately, discover the niche segments as new business opportunities, and optimize efforts.

3.3.2.Targeting

Depending on the degree of segmentation (sub segments), we can further differentiate the wishes and preferences of customers at different times in the market and at the same time determine the profitability of each segment and the number of target segments in which we want to participate.

The decision to participate in a certain segment will depend on certain factors, among which we can highlight:

- The size of the segment.
- The identification of the different competitors.
- The services required by the segment in terms of distribution channels, communications, geographical extension, etc.

"Targeting involves the decision of the number of different segments to select and serve and the best action plans to reach the identified segments" (Ford, Ibrahim & West, 2010 p.169).

According to Gilligan, et al. (2009) there are five ways or strategies of how and how many segments should the organization focus on:

1. Single segment concentration. Here, the organization focuses on just one segment.
2. Selective specialization. As an alternative to concentrating upon just one segment, the strategist may decide to spread the risk by covering several. These segments need not necessarily be related, although each should be compatible with the organization's objectives and resources.
3. Product specialization. Here, the organization concentrates on marketing a particular product type to a variety of target markets.
4. Market specialization. Here, the organization concentrates on satisfying the range of needs of a particular target group. An example of this would be an agrochemicals manufacturer, whose principal target market is farmers.
5. Full market coverage. By far the costliest of the five patterns of market coverage, a strategy of full market coverage involves serving all (or most) customer groups with the full range of products needed.

The more homogenous is the group, the easier it will be to establish their members' preferences and the easier it will be to succeed in the following stages of STP for that segment. On the contrary, if it is the case of a Single segment concentration the size of the market is usually more limited and so the growth potential of the organization.

A strategy of Full market coverage considers that consumers might have different preferences and even if a broad market is covered, positioning will be more difficult. This strategy will be attractive for the so-called global products and could involve product diversification.

Which criteria shall we consider to select the most appropriate strategy? In a general way a marketing definition could help to clarify the answer: customer lifetime value. The higher is the value of this variable means that the relationship with the costumer is more convenient for the business. From this affirmation is possible to infer that the combination with the higher values should be the one considered to increase the firm profitability.

The formal equation for calculating customer lifetime value (CLV) is the following:

$$CLV = \sum_{n=1}^{N} \frac{(CR_n - C_n) \times R^n}{(1+d)^n} - AC \quad (6)$$

when $\boldsymbol{CR}$, $\boldsymbol{C}$, $\boldsymbol{R}$, $\boldsymbol{d}$, and $\boldsymbol{AC}$ observe customer revenues, customer costs, retention rate, discount rate and acquisition rate.

The calculation of customer value may be quite complex if we consider its definition: "total revenue due to customer minus the total cost of maintaining the costumer". How much revenue comes from the customer? and even more complex, how much of the costs shall be allocated to them? in order to get the right answers the financial definitions must be precise and clear. If these two issues are sorted the retrospective data of the customer value would be clear, so the data mining techniques could resolve the prospective of the customer value (Berry & Linoff, 2004. p.114).

Customer Life Cycle is based on the business relationship and considers that the relation with the customer evolves over time into five major phases or steps on the loyalty ladder: prospects, customers, clients, supporters and advocates. Each definition varies according to the nature of the business. The nature of the data will define the function of a model based on metrics (Berry & Linoff, 2004).

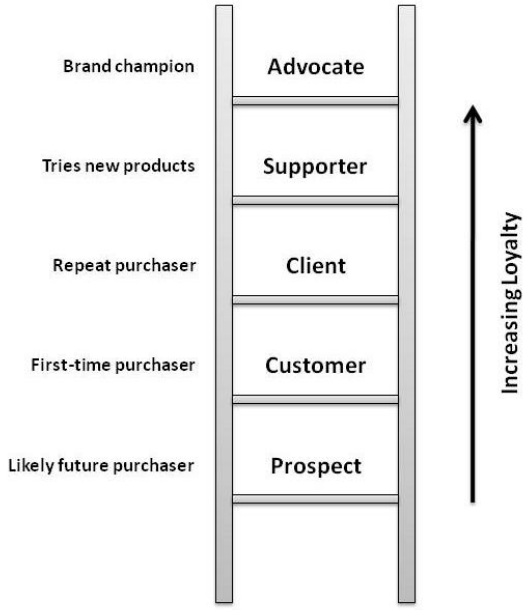

Figure 6. Loyalty ladder (Eight Leaves).

3.3.3.Positioning

The last step of the strategic marketing might be the most difficult to determine by metrics given its relative nature and difficulty to quantify and measure. According to Ford et al. (2010) positioning refers "to the placing of the product or service in particular perceptual position within the mind of the costumer" (p. 171). A position in the market is directly linked to the market strategy and it is usually centered on the brand. The positioning strategy covers a wide field of the marketing practices: product, supporting services, distribution channels, prices and promotion actions. The actual positioning of a brand is determined by the buyer's current perception of it, including customer analysis, competitor analysis and internal analysis. Some promising results have been achieved by models that include historical sales series combined with marketing program data (Cravens & Piercy, 2006).

Gilligan and Wilson (2005) illustrated that the process of positioning involves three major steps:

1. Identifying the organization or brand's possible competitive advantages
2. Deciding on those that are to be emphasized
3. Implementing the positioning concept

It is relevant to state that the position of the brand is determined after certain time of operations and presence on the market. Therefore, Gilligan and Wilson (2015) also display the possibility of re-positioning strategies due to market development, variance of competitors, and change of customers' expectations and/or needs. According to this the marketing planner has four options, and even if the outcome of choosing any of them might be supported by metrics, it would merely depend on the rational factor and organization's vision:

1. Gradual positioning: planned and gradual adaption to a changing market.
2. Radical positioning: involves a reinvention of the brand previous and new proposal.
3. Innovative repositioning: reallocation to a new positioning not yet discovered by competitors.
4. Zero positioning: to maintain an unchanged position, supported by previous image or none.

Companies are constantly reinventing themselves to achieve leadership in the market of their competition and technological advances have become a preponderant role in obtaining and managing information that enhance strategies and minimize efforts.

3.3.4.STP Integration

Recent researches and developments promote new applications that allow the analysis of large databases that could not be handled in depth by humans without the support of these tools. A new world of information is offered to the world in all areas and it is the objective of this work to show the potential of big data management, artificial intelligence and analytics in the strategic marketing field.

Companies with superior information can choose their markets better, develop better offerings, and execute better marketing planning. Every firm must organize and distribute a continuous flow of information to its marketing managers. A marketing information system (MIS) consists of people, equipment, and procedures to gather, sort, analyze, evaluate, and distribute needed, timely, and accurate information to marketing decision makers. It relies on internal company records, marketing intelligence activities, and marketing research. (Keller & Kotler, 2012)

4. CONCLUSION

The usage of specially designed algorithms and advanced analytics techniques on the digital era are becoming a must on every marketing strategy. Analytics or business intelligence models allow organizations to break down their customers' data, define trends over time, and compare or combine different sectors. They provide as sufficient information to improve the Customer Relationship Management, inventory levels, pricing, customer behavior prediction and commercial campaign designs that will positively impact the return on investment of the organizations.

"Augmented analytics" (Artificial Intelligence as science of training systems to emulate human tasks through learning and automation augmenting human efforts), also referred as "smart data discovery" has been recognized as the following step in BI&A field. Every day the knowledge in Information Technology (IT) required for data exploration is being reduced, while in the counterpart the productivity levels are rising significantly. Most of the debates are focused on the issue that machines could wipe out the human labor, the correct direction is to understand that the best combination possible is human + machine and not any of them separately.

The time for embracing the digital BI&A tools is now. Most of the companies understand the value of data, still they are not doing anything about it. Analytics can be profited at all levels no matter the size of the organization. The trend is going as fast that even regulatory bodies are on the delay and several stakeholders are taking advantages for individual interests, several political cases have been identified on the recent years.

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