O Impacto do *Inbound Marketing* na conversão de *leads* em oportunidades de vendas em um funil B2B ao longo do tempo

The impact of Inbound Marketing on converting leads into sales opportunities in a B2B funnel over time

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Resumo

Este estudo teve como objetivo comprovar se a prática do Inbound Marketing, ancorada na estratégia de Marketing de Conteúdo Digital e nas respetivas campanhas de mídia online, influenciou a mudança de estágio de lead qualificado para oportunidade de vendas num funil B2B ao longo do tempo. Os dados compreenderam o período entre março de 2018 e fevereiro de 2020 e foram analisados por meio da Regressão de Cox, por ser um método adequado para explicar a influência de variáveis independentes na ocorrência de um evento ao longo do tempo. Cada tipo de conversão foi analisado como uma variável independente, considerando conteúdo de topo, meio e fundo de funil e mídia própria, ganhada e paga, além do lead importado. Todas as variáveis impactaram o funil analisado, exceto as variáveis conversão para conteúdo meio de funil e conversão via mídia própria. Há expectativa de que este estudo contribua para a compreensão desta prática de marketing, colaborando tanto na perspectiva teórica, especialmente B2B e Marketing Digital, por meio dos resultados encontrados, quanto na perspectiva gerencial, com insights para uma correta alocação dos recursos de marketing.

Abstract

This study aimed to prove if the practice of Inbound Marketing, anchored in the Digital Content Marketing strategy and its respective online media campaigns, influenced the stage change from a qualified lead to a sales opportunity in a B2B funnel over time. The data comprised the period between March 2018 and February 2020 and were analyzed using Cox Regression, as it is a suitable method for explaining the influence of independent variables on the occurrence of an event over time. Each conversion type was analyzed as an independent variable, considering top, middle, and bottom of funnel content and owned, earned, and paid media, in addition to imported lead. All variables impacted the analyzed funnel except for the variables conversion to mid-funnel content and conversion via owned media. There is an expectation that this study will contribute to the understanding of this marketing practice, collaborating both from a theoretical perspective, especially B2B and Digital Marketing, through the results found and from a managerial perspective, with insights for a correct allocation of marketing resources

Palavras-chave: Inbound Marketing; Marketing de Conteúdo Digital; Mídias Pagas, Próprias e Ganhadas; Marketing B2B.

Keywords: Inbound Marketing; Digital Content Marketing; Paid, Owned and Earned Media; B2B Marketing.

1. INTRODUCTION

The need to study *business-to-consumer* (B2C) and *business-to-business (*B2B) marketing in isolation is recognized by researchers (Hadjikhani & LaPlaca, 2013; Wiersema, 2013; Lilien, 2016; Cortez & Johnston, 2017). For Lilien (2016), regardless of the context of customer choices, emotions, and tastes, B2C and B2B peculiarities must be considered.

Gummesson (2014) differentiated B2B marketing by its complexity and demand. It is more challenging to apply highly structured quantitative methods, which becomes one of the obstacles in the development of theory. Lilien (2016) cited as challenges of B2B research the complexity and heterogeneity of the problem, the lack of data availability, which requires companies to be open, and the distance between the researcher and the reality of the research. These challenges give subsidies to the lack of studies in the area, even considering the economic relevance of organizational purchasing, perceived worldwide and in Brazil (LaPlaca & Katrichis, 2009; Lacerda & Mendonça, 2010; Coda & Castro, 2019).

According to Steward *et al.* (2019), the realization that marketing theory did not fully explain the B2B buying process was the catalyst for the emergence of the first models that sought to understand this buyer's behavior. The authors pointed out that digital technology makes mapping the purchase journey more accessible and more accurate due to the wide availability of data, software, and resources used in this research.

Lingqvist *et al.* (2015) reinforced that mapping this path can help reallocate organizations' resources, directing them to activities that tend to influence purchasing decisions and organizational structure more heavily. Edelman e Singer (2015) stated that the ability to map the customer journey is a competitive advantage, and one of the success factors for organizations would be the superiority of the proposed journey.

In this digital journey, new media channels stand out as well as Digital Content Marketing, a valuable and relevant way to communicate with the public (Holliman & Rowley, 2014) being able to generate value in the relationship between organization, prospects, and customers (Magno & Cassia, 2019; Taiminen & Ranaweera, 2019). The 10th edition of the Content Marketing Survey, conducted by the Content *Marketing Institute* and *MarketingProfs*, found that 48% of content marketers produce content according to the buying journey (CMI, 2019).

Considering this context, Halligan and Shah created one of the first marketing automation companies in the world based on the concept of *Inbound Marketing* (HubSpot, 2021). The primary foundation advocated by the authors is that marketing actions should attract people, aiming to participate in conversations, not interrupt them. Digital Content Marketing, the central pillar of the methodology, can be instrumental in the corporate shopping process (Holliman & Rowley, 2014). Vieira *et al.* (2019) proposed that *Inbound Marketing* is a critical channel in B2B customer acquisition.

Kannan and Li (2017) defended the value of digital channels, in which these contents are distributed, whose investment is lower and the return can be higher, in addition to having more points of contact with consumers and more options for measuring results. Several studies have explored how online media, especially social media, impact marketing and sales activities, and some have compared traditional channels and online channels to prove their influence on the stages of this journey (Danaher & Rossiter, 2011; Wiesel *et al.*, 2011, Stephen and Galak, 2012; Srinivasan *et al.*, 2016).

These channels can be divided into paid, owned, and earned media, as explained by Stephen and Galak (2012). Paid media are those in which the company pays for space to disseminate its message; owned media are the brand's channels, and earned media come from activities generated by third parties. Stephen and Galak (2012) pointed out the scarcity of studies that combine the different types of media, especially earned media, with paid media being the most explored. Corrêa da Silva and Vieira (2019) assured that previous studies have supported the effects of new media on B2B sales in isolation and that studies integrating these different channels are lacking.

Thus, this study aims to understand how a content production strategy with dissemination in various digital media channels can be an effective source of results throughout the marketing funnel in the B2B segment. Facing the pandemic, especially, online channels have become practically the only alternative for companies. Even so, research on Digital Marketing, especially in the B2B segment, is in its embryonic stage, assured Kumar *et al.* (2020) and Pandey *et al.* (2020).

40.4% of B2B marketers said they were not prepared to deal with the scenario imposed by the disease, according to the survey "B2B Marketing and the Impact of the Coronavirus," conducted with 353 Brazilian marketing leaders (Intelligenzia, 2020). The changes were global and seemed to have a long-term impact. According to a study conducted by the *Content Marketing Institute* (CMI, 2020), 70% of B2B marketers have made significant or moderate adjustments to their strategy due to the pandemic, and 66% see these changes impacting them in the short and long term.

For sales, where the presence of a sales representative was commonplace, the changes also show permanence. Harrison and Stanley (2020) reported that even after the pandemic and operating in the ideal model, only between 20 and 30 percent of U.S. B2B decision makers intend to have face-to-face contact with salespeople, with 90 percent expecting the remote and digital model to continue in the long term and 75 percent believing this model to be as or more effective than the pre-Covid-19 model.

Given the above, we have the following research question:

How do content production and different digital channels impact a B2B sales funnel?

2. THEORETICAL FRAMEWORK

2.1. 2.1 Content Marketing: The Right Message to the Right Person at the Right Time

Considered the protagonist of *Inbound Marketing*, Digital Content Marketing can be very useful in the B2B context (Holliman & Rowley, 2014), in which the purchasing process is more complex and involves more people (Cortez & Johnston, 2017). In this sense, Halligan and Shah (2016) stated that it is essential

to produce quality content that brings potential customers valuable and relevant information and disseminates it through a blog and social media.

According to Holliman and Rowley (2014), one of the first and most cited concepts of Content Marketing is that of Pulizzi and Barrett (2008 *apud* Holliman & Rowley, 2014). They defined it as producing and disseminating educational and attractive content in various formats to attract and retain customers. Later, Rose and Pulizzi (2011 *apud* Holliman & Rowley, 2014) added that Content Marketing is a strategy that focuses on creating a valuable experience. Holliman and Rowley (2014, p. 287) proposed their concept from their research: "Digital Content Marketing is the activity associated with the creation, communication, distribution, and exchange of digital content that has value for consumers, customers, partners, and the company and its brands."

The 11th edition of the Content Marketing Survey (2020) highlights the objectives achieved by brands with Content Marketing: create brand recognition (87%), build credibility/trust (81%), and educate audiences (79%). However, fewer practitioners were successful with generating sales and revenue (51%), building an audience (47%), and supporting new product launches (45%). These goals coincide with those presented by Holliman and Rowley (2014).

Bakhtieva (2016) identified 39 types of content that were classified into four purchase stages, the search, the evaluation of alternatives, the purchase, and the post-purchase. The results of Bakhtieva (2016) showed that although organizations consider the purchase journey, the focus is still on selling the products and services, and a greater diversity of content formats needs to be considered. This result is in line with CMI's (2019) research, which presents that 50% of content covers the top of the funnel or pre-purchase, with goals of generating recognition and interest; 22%, the middle of the funnel, with content for consideration and intention; 14%, the bottom of the funnel, with content for evaluation and purchase; and 11% encompassing content dedicated to post-purchase and loyalty. It is worth noting, however, that the studies cover quite different geographic areas and audience clippings.

In this same perspective, Järvinen and Taiminen (2016) examined the marketing and sales actions of a B2B company and demonstrated the relevance of Content Marketing in each stage of the sales funnel, which categorizes potential customers based on their buying stage. The authors reinforced the efficiency of the processes between marketing and sales in the company studied. After implementing Content Marketing and automation software, the volume and quality of marketing *lead* delivered to sales improved considerably, and marketing ceased to fulfill a tactical role to assume a strategic function, a concern presented by some scholars, such as Wiersema (2013).

Järvinen and Taiminen (2016) also highlighted critical elements for this scenario, such as high-quality content, which creates value for customers that goes beyond promoting the company's product or service, and automation itself, which helps in storing information and managing *leads* more fluidly, with marketing software being integrated and sending as well as receiving information from sales software, the CRM. Järvinen and Taiminen (2016) concluded that content marketing could not be integrated with B2B sales processes without seamless cooperation.

In line with the study by Järvinen and Taiminen (2016), Wang *et al.* (2019) also set out to understand how Content Marketing contributes to a new marketing function that is more aligned with the sales force. Wang *et al.* (2019) compared the effectiveness of Content Marketing dissemination through digital channels and in-person events in a B2B company. Through random effects negative regression

models with panel data from an international consulting provider over four years, it was observed that the number of sales *leads* and opportunities gained are affected by the frequency of attending digital events and consuming digital content. However, the same was not corroborated for in-person events.

B2B Content Marketing can help potential customers stay up to date on new trends, helping them make decisions, come up with new ideas, provide them with advice, and even get them to think differently about their business (Wang *et al.*, 2019). From these results, Wang *et al.* (2019) stated that Content Marketing is an effective way for marketers to become instrumental in creating value for customers and the sales team.

Based on the previous assumptions, four research questions were formulated, considering the purchase stages, defined by CMI (2019) as the top, middle, and bottom of the funnel:

Q1: Does the amount of content consumed impact the probability of moving from the qualified lead stage to a sales opportunity over time?

Q2: Does the consumption of top-of-funnel content impact the likelihood of moving from the qualified lead stage to sales opportunity over time?

Q3: Does mid-funnel content consumption impact the likelihood of moving from the qualified lead stage to sales opportunity over time?

Q4: Does bottom-of-funnel content consumption impact the likelihood of moving from the qualified lead stage to sales opportunity over time?

The answers to these questions were expected to be positive, with consumption of more bottom-of-funnel content expected to have a more significant impact than other types of content.

2.2. 2.2 Digital Channels: If Content is King, Distribution is Queen

The distribution channels of Digital Content Marketing deserve attention. In Holliman and Rowley's (2014) research, there was no consensus on using channels for content distribution, with tests indicating what works best. The three most commonly used types of organic channels, according to the CMI (2020) survey, were social media (89%), e-mail (87%), and the organization's website/blog (86%). In addition, 72% of professionals used paid channels to promote content, the main mediums being social media ads (83%), ads on search engines like Google (65%), and sponsorships (60%). LinkedIn, Twitter, and Facebook were the leading platforms in which companies invested in organic and paid content promotion (CMI, 2020).

Kannan and Li (2017) stressed the importance of investigating which channel performs best to allocate marketing investment more optimally. Stephen and Galak (2012) assured that few studies cover more than one media type, with most focusing on the effects of paid media. The three types of media described by Stephen and Galak (2012) are used in this study. However, since the research object is Digital Content Marketing, only online channels were understood. As with Digital Content Marketing, few studies simultaneously explore the impacts of content actions and digital channels.

Studies mapped by Kannan and Li (2017) about the effectiveness of paid media showed that ads on the search network could be a high-value customer selection mechanism, more efficient than offline

advertising, and longer lasting than other online channels such as e-mail. Regarding earned media, Kannan and Li (2017) pointed out that negative online word-of-mouth is more influential than positive word-of-mouth, and company monitoring and performance are essential. Although in different contexts, studies like these help understand digital channels' effects on business results.

In the B2B context, the only study found in the *Web of Science* base that combined the three types of media, paid, owned, and earned, was that of Vieira *et al.* (2019), who stated that their research aimed to contribute to diminishing the scarcity of systematic investigations of digital strategies in the segment. Vieira *et al.* (2019) started from the concept of *Echoverse,* by Hewett *et al.* (2016, p. 1), "the entire communication environment in which a brand/company operates, with actors contributing to and being influenced by each other's actions." The definition is grounded in the echo generated by content created on the internet in the universe composed of several actors: the media, consumers, and companies.

The results found by Vieira *et al.* (2019) highlighted that: the association between owned media and new sales is the strongest among all media types; the relationship between earned social media and new sales is positive but low; paid media, through Facebook and Google ads, does not positively associate with business results; *Inbound Marketing* plays a critical role in customer acquisition, and the average effect of organic search on sales is positive. In addition, it was identified by Vieira *et al.* (2019) that *feedback loops* exist between digital media investments and marketing performance results, suggesting that when there is higher revenue generation and newer customers through different digital media promoted by companies or the market, there is a proportional investment in Digital Marketing strategies.

Vieira *et al.* (2019) pointed to a circular buying process in which content generated by both the company and the user can be used to map the stages of the purchase decision journey, assisting in the creation of more precise marketing interventions. Kannan and Li (2017) stated that digital channels could shorten and optimize consumers' purchase decision journey by offering features such as search engines and access to other customers' opinions in an agile manner, which was also pointed out by Edelman and Singer (2015). Without this information, customers could research more and take more time to be convinced of their purchase decisions, highlighting the importance of cost reduction brought by Digital Marketing (Kannan & Li, 2017).

According to media channel relevance, it was decided to investigate the impact of each channel type on the outcome of the funnel. The following questions were raised:

Q5: Does conversion originating from paid media impact the likelihood of moving from the qualified lead stage to sales opportunity over time?

Q6: Does conversion originating from owned media impact the probability of moving from the qualified lead stage to a sales opportunity over time?

Q7: Does the conversion originating from earned media impact the probability of moving from the qualified lead stage to a sales opportunity over time?

Thus, it was expected that the different types of media, paid, owned, and earned, associated with an *Inbound Marketing* strategy, would affect *the likelihood of changing from the qualified lead stage to sales opportunity over time*. The research proposal is summarized in Figure 1.

Figure 1 - Theoretical model of the influence of Content Marketing and Digital Channels on the marketing and sales funnel

Source: elaborated by the author

3. METHODOLOGY

3.1. Research Strategy

This research is a concluding study with a longitudinal cut-off between March 6, 2018, and February 29, 2020. The end date was chosen to avoid including data during the Covid-19 pandemic, which could bias the results of online activities and, consequently, the analyses. A significant advantage, however, was to study behaviors and variables related to the behavior of *leads* along the marketing funnel of a real business case, thus not opinion-based variables.

The Cox Regression was chosen as the means of analysis. This type of regression aims to explain the influence of independent variables on the occurrence of an event over time. The Cox Regression or Proportional Hazards Model, as it is also known, is a model widely used in Survival Analysis (Ferreira, 2007). The model is semiparametric and considers that the rates of occurrence among different groups, the predictor variables, are proportional over time. The application of the model is explained in the next section.

3.2. Data Source

This research used a secondary database provided by a Brazilian organization that serves schools in the Basic Education segment (B2B), offering educational solutions for private schools through *Inbound*

Marketing techniques. The data were extracted from marketing automation software, managed by the marketing team, and *Customer Relationship Management* (CRM), operated by the sales team.

We collected data from 11,317 qualified *leads*, i.e., contacts who had the profile to become clients: *coordinators, principals,* and *other* decision-makers in private schools with at least 150 students and operating from kindergarten to high school, excluding *leads* who work only in kindergarten. According to the 2020 Brazilian School Census, there are 37,654 private school managers, and in the database, 2,420 declared themselves to be *principals*, 6.5% of the total population, besides having representatives from all Brazilian states and 3,790 different schools.

Regarding the types of content, top, middle, and bottom of the funnel, consumed by these *leads,* it was adopted the classification made by a team of four professionals who act as Content Marketing Analyst and their respective managers, in addition to considering the concept presented of the purchase journey and used in the research of the Content *Marketing Institute* (CMI, 2019). When it comes to channels and their classification into owned, paid, and earned media, the same line of reasoning presented by authors such as Stephen and Galak (2012) was used.

The accuracy and reliability of the analyzed information depend on what the audience - the *lead* - filled out in the forms made available by marketing, which offered content such as e-books, infographics, sales contact, and others. However, the bases were checked to ensure the integrity of the data prior to analysis.

Each of the conversions (filling out these marketing forms) was classified concerning the channel and the content, making up the independent variables. Among the variables, there is also the imported *lead*, which came from offline actions and was imputed in the tool. These variables were divided into continuous variables, which change over time, and categorical variables, which can be binary, and whose possible answers are yes and no.

Table 1 - Independent variables analyzed in this study

Type	Variable	Description
Continuous	*Total conversions*	The number of online forms filled out by *leads* to receive some content or offer.
Categorical	*Conversion to top-of-funnel content*	The top-of-funnel content is comprehensive content about the segment studied, which addresses topics highly sought after by the target audience.
	Conversion to mid-funnel content	Mid-funnel content covers topics that talk about the problems and needs of the target audience and can cite the company as a possible solution.
	Conversion to bottom-of-funnel content	Bottom-of-funnel content is more commercial, presenting the solution as an exciting alternative for the *lead to* solve his problem.
	Imported lead	The imported *lead* came from an existing list, usually from face-to-face events or from collecting visits from salespeople in the field.
	Conversion via paid media	Paid media can be ads on social media like Facebook and Instagram, or Google.
	Conversion via proprietary media	Owned media make up conversions from the website, blog, or an e-mail sent by the company.

	Conversion via earned media	The earned media can originate from an organic search, direct access, a third-party site that cited the site of the company studied, and postings by other people on social media.

Source: elaborated by the author

The interest or response variable is the *probability of changing from the qualified lead stage to a sales opportunity over time*. An opportunity is characterized by a qualified lead who has requested a presentation and conversation with the sales team via a form.

3.3. Data Manipulation

In this work, technically, it can be stated that the response variable is the *probability* that an observation unit will convert from a *qualified* lead into an opportunity over time. The time of occurrence of the event was calculated by the difference between the date of entry into the contact base and the date of the first opportunity when the *lead* was first referred to sales. For *leads* that did not become an opportunity, the difference date is the final observation period (*i.e.,* the data export date for the analysis in this research, i.*e.,* February 29, 2020).

The cases in this research have been right-censored, meaning they are qualified leads that have not turned into an opportunity by February 29, 2020. It is essential to mention that there is only one form of censoring for this research when individuals enter the study and leave without turning into an opportunity, representing about 85% of the base.

Regarding the time variable, it was decided to separately analyze the *occurrence time, i.e., the time* of *leads* until they became an opportunity, and the *censoring time*, *i.e., the* time of *leads* that did not become an opportunity. The data are presented in table 2, including the analysis of the continuous variable total conversions. As in both times, the median is lower than the mean. It can be seen that the time distribution is asymmetric, a typical condition for the application of survival models (Colosimo & Giolo, 2006).

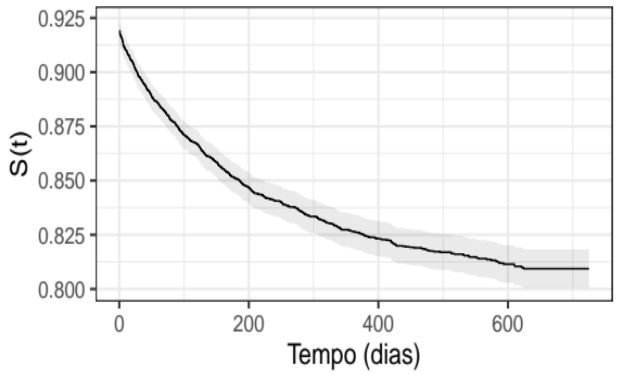
Table 2 - Descriptive statistics of the response variables' Occurrence Time, Censored Time (in days), and Total Conversions

Variable	Minimum	1st Quartile	Average	Median	3rd Quartile	Maximum	Standard Deviation
Time of occurrence	0	0	58,7	0	72	624	108,7
Censorship time	0	107	309,9	210	539	725	232,6
Total conversions	1	2	6,5	3	7	163	9,9

Source: elaborated by the author

Based on the overall data, the overall survival curve for a general sample is presented in figure 2, showing a conversion rate of leads into opportunities of 16% after 200 days.

Figure 2 - Kaplan-Meier Curve for General Survival Data



Source: elaborated by the author

Table 3 shows the descriptive statistics for the categorical variables.

Table 3 - Descriptive statistics of the variables

Variable	Category	Frequency
Conversion to top-of-funnel content	Yes	10.578 (93%)
	No	739 (7%)
Conversion to mid-funnel content	Yes	2.348 (21%)
	No	8.969 (79%)
Conversion to bottom-of-funnel content	Yes	4.423 (39%)
	No	6.894 (61%)
Imported lead	Yes	1.531 (14%)
	No	9.786 (86%)
Conversion via proprietary media	Yes	5.414 (48%)
	No	5.903 (52%)
Conversion via earned media	Yes	3.369 (70%)
	No	7.948 (30%)
Conversion via paid media	Yes	8.784 (78%)
	No	2.533 (22%)

Source: elaborated by the author

The *Wilcoxon* tests presented in Mantel (1966) and Gehan (1965) was used to check whether the categories of variables were statistically equal. The null hypothesis is that the curves were equal for the two categories. The results are shown in Table 4.

Table 4 - Log-rank and Wilcoxon test for the categorical variables in the data set

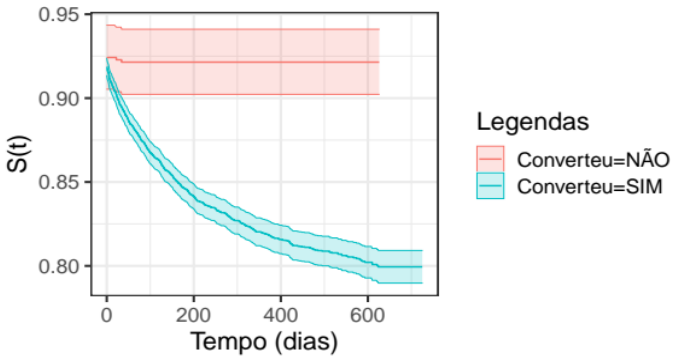
Covariate	*Wilcoxon*
Conversion to top-of-funnel content	< 0,001
Conversion to mid-funnel content	0,138
Conversion to bottom-of-funnel content	< 0,001
Imported lead	< 0,001
Conversion via proprietary media	0,265
Conversion via earned media	< 0,001
Conversion via paid media	0,018

Source: elaborated by the author

Based on the findings, it can be said that the *conversion of the variable into mid-funnel content* and *conversion via own media* presented a p-value more significant than 5%. Thus, these variables present that their categories, yes or no, have no statistical difference, not being included in the Cox model.

Based on the results of the Wilcoxon test, a significant effect of funnel top-type content on conversion is observed, revealing that individuals who did not convert on this type of content virtually do not become opportunities over time, as shown in Figure 3.

Figure 3 - Kaplan-Meier Estimated Survival Curve by Top-of-Funnel Conversion



Source: elaborated by the author

3.4. Estimation of the Cox Proportional Hazards Model

The Proportional Hazards model proposed by Cox (1972) is the most famous and widely used in survival analysis, mainly because it was the first model with survival data that allows the inclusion of censored data, having presented a formulation that allows the incorporation of covariates or explanatory variables that are related to the time until the event of interest.

The R platform, version 3.6.3, and the *survival* and *MASS* packages were used. *In* addition to the independent variables, the *censoring time* variable was included. It adds values of 0 or 1, whereas, for *leads,* that became an opportunity until February 29, 2020. The value one was assigned (*leads* that went through the event of interest), and for the others, the value 0 was assigned (censored *leads*). The reference variables for the categorical variables were the option "No" for *conversion to top-funnel content*, *conversion to bottom-funnel content*, *imported lead*, conversion *via earned media,* and conversion *via paid media.*

The Wald test was used to verify significance, as shown in Table 5.

Table 5 - Cox Model Summary

Variable	Category	Estimate[1]	OR[2]	I.C. 95%.[3]	Wald[4]	p-value[5]
Conversion into top-of-funnel content	Yes	1,626	5,085	(3,627; 7,128)	9,436	< 0,001
	No	REF	REF			
Conversion into bottom-of-funnel content	Yes	5,066	158,7	(99,447; 253,202)	21,253	< 0,001
	No	REF	REF			
Imported lead	Yes	-0,747	0,473	(0,394; 0,568)	-8,039	< 0,001

	No	REF	REF			
Conversion via earned media	Yes	0,419	1,521	(1,344; 1,722)	6,644	< 0,001
	No	REF	REF			
Conversion via paid media	Yes	0,165	1,18	(1,020; 1,365)	2,232	0,026
	No	REF	REF			
Total conversions		-0,025	0,975	(0,969; 0,981)	-7,851	< 0,001

[1] Estimate is the estimate of the coefficients /[2] OR represents the estimate of the *odds ratio* /[3] 95% C.I. means the 95% confidence interval of the R.R./[4] Wald represents the Wald test statistic /[5] p-value is the significance of the Wald test

Source: elaborated by the author

According to the p-value test presented in table 5 for the model's covariates, it is found that all are smaller than 5%. Therefore, all explanatory variables considered in the model are essential to explain the *time until a lead becomes an opportunity*. To test the assumption of Proportional Risks was done by analyzing residuals, which indicated that the covariates' *conversion to bottom-of-funnel content* and *conversion via paid media* have Proportional Risks characteristics. However, since the sample is large, it is held that the sensitivity of the test may have led to the rejection of the proportionality hypothesis for the other variables. The *Variance Inflation Factor* (VIF) analysis was also performed, and the results were lower than 1.3, indicating the absence of multicollinearity problems. Thus, it was decided to use the Proportional Risks model using the variables described.

4. RESULTS

Of the ten variables analyzed, all presented, to a greater or lesser degree, some impact on the time a *lead* spent in the funnel until it became an opportunity. Only the variables *conversion in mid-funnel content* and *conversion via own media* presented similar times in some days of the study and were not included in the Cox model.

When it comes to the overall time of the *leads*, the time of *occurrence* corresponds to the time between the entry of the *lead* into the base and its change from stage to opportunity. We noticed that the median of this time between the two stages is 0 days, which in a way could be expected due to the company's strategy, which included offers for raising hands, the main trigger for a *lead to* become an opportunity, in all the "thank you" pages[1] Of the content produced. This action aimed to generate faster opportunities for the internal sales team, which depended on these deals for performance.

On the other hand, the censoring t*ime* can be explained by the fact that the solution sold involves a complex decision, with many people involved, a high average ticket, and a long contract, up to three years, characteristics of B2B sales, presented by authors such as Lilien (2016).

4.1. Content and Conversions

The conversion variable on mid-funnel content showed no statistical difference in the Wilcoxon test. Therefore, research question 3, "Does mid-funnel content consumption impact the probability of switching from the qualified lead to sales opportunity stage over time?" was not evaluated.

[1] The "thank you" page is a page that usually appears after a person has filled out a form to receive content.

The variables top-of-funnel content conversion, bottom-of-funnel content conversion, and total conversions were measured from the perspective of the Cox model. As for the Kaplan-Meier survival curve, only the total number of conversions was not analyzed because it is a continuous variable and, therefore, cannot be examined in this model, which only treats categorical variables in a univariate way.

Considering research question 1 ("Does the amount of content consumed impact the probability of moving from the qualified lead stage to sales opportunity over time?"), it was observed that there is a negative effect of the number of conversions on the probability of converting to the next funnel stage ($b = -0.025$; Wald = -7.851; $p < 0.001$). It indicates that the more content is consumed, the lower the chance of becoming an opportunity. The results seem to make sense since higher content consumption may indicate that the prospect is not yet ready to buy.

As for question 2, "Does the consumption of top-of-funnel content impact the probability of changing from qualified lead stage to sales opportunity over time?", the effect is positive ($b = 1.626$; Wald = 9.436; $p < 0.001$). After 200 days, it can be seen that 16% of leads with some top-funnel content conversion have turned into an opportunity. Furthermore, the probability of a lead with conversion in top funnel content becoming an opportunity is five times higher than that of leads that have not consumed content classified as such.

As a result of question 4, "Does the consumption of mid-funnel content impact the probability of change from qualified lead stage to sales opportunity over time?", the effect is positive ($b = 5.066$; Wald = 21.253; $p < 0.001$). After 100 days, it can be seen that 31% of the leads that have some conversion in bottom-of-funnel content become an opportunity, while for those who have not converted, this percentage is 2%. The probability of these leads becoming an opportunity is 158 times higher than those that have not consumed bottom-of-funnel content, which can be explained by the fact that this is the triggering offer for the leads to change stage to become an opportunity.

The results above, regarding the production of Digital Content Marketing, classified as top and bottom of the funnel, reinforce the importance of content production along the journey, both valuable and relevant content, which is not predominantly about the company's product or service, but about the needs of potential customers, and the more commercial content, which has the role of supporting the final purchase decision. These premises are in line with what Holliman and Rowley (2014) and Halligan and Shah (2016) conceptualize, in addition to what CMI research (2019, 2020) presents.

Digital Content Marketing in the B2B segment can help potential customers stay up-to-date on new trends, assisting them in making decisions, having new ideas, providing them with advice, and even leading them to think differently about their business (Wang et al., 2019). The result also meets the findings of Järvinen and Taiminen (2016), in which, in the company studied, after the implementation of Content Marketing and automation software, the volume and quality of marketing lead delivered to sales improved considerably.

4.2. Origin of Conversions

Conversion via paid media among the studied base represented 78%. It is worth mentioning, however, the relevance of *conversion via earned media*, which reached 70% of this population. Finally, 48% of the *leads* have some conversion *via their media,* and 14% are *imported leads*.

The conversion originated in *owned media*, such as e-mail and websites. It did not show a statistical difference in the Wilcoxon test, and therefore question 6, "*Does the conversion originated in owned media impact the probability of changing from the qualified lead stage to a sales opportunity over time?* The variables *paid media conversion*, *earned media conversion,* and *leads imported from* a pre-existing list were studied from the perspective of the Cox Proportional Hazards model.

Analyzing research question 5, *"Does conversion originating from paid media impact the probability of moving from qualified lead stage to sales opportunity over time?"*, a positive effect of the number of conversions on the probability of conversion to the next funnel stage (b = 0.165; Wald = 2.232; p = 0.026) was noted after 200 days. It was found that 17% of the *leads* that originated from this type of channel turned into opportunities. Moreover, the *probability* that a *lead that* has some *conversion via paid media* becomes an opportunity is 18% higher than the *leads that* do not have this conversion.

This result is in line with what was presented by Kannan and Li (2017), in which paid media showed that search network ads could be a mechanism for selecting high-value customers, more efficient than offline advertising, and more durable than other online channels such as e-mail. However, in the study by Vieira *et al.* (2019), paid media, through Facebook and Google ads, did not positively associate with business results.

Several reasons explain the different results, such as methodology and metrics used, market segment, and geographic location.

As for question 7, *"Does the conversion originated in earned media impact the probability of changing from the qualified lead stage to a sales opportunity over time?"* the effect observed is positive and presents the best performance (b = 0.419; Wald = 1.521; p = < 0.001), validating the importance of this type of media as studied by Stephen and Galak (2012). In the survival curve, after 100 days, 21% of *leads* that have at least one *conversion via earned media* turned into an opportunity. The *probability of* a *lead that has* a *conversion via earned media* becoming an opportunity is 52% higher than *leads* that did not come from these channels.

Stephen and Galak (2012) studied earned media from the perspective of traditional and online channels and found that: both types of media affected sales; the impact on sales by events in traditional media was more significant than in social media; due to the more significant occurrence of activities in social media, adjusted the frequency of these events, the elasticity of this medium was significantly greater than that of traditional media; and earned social media activities seemed to play an essential role in promoting earned media in traditional media. This result can be explained by the fact that in social media, people may be more engaged and prone to take action, while in traditional media, they may "stumble upon" the content without giving it much importance (Stephen & Galak, 2012).

Notably, this research classified as *conversion via earned media conversions* originated from organic search, referral, and direct traffic, in addition to organic social media, which were not generated by the actions of the company. It is also fair to point out that the result of conversions and actions coming from organic search and referral is a direct consequence of the consistent investment in owned media, especially the continuous content production and search engine optimization performed in the management of the company's website. Moreover, the direct traffic, also considered in this group, reflects the brand's performance in all channels, even the offline ones. Finally, *imported leads* were analyzed, about 14% of the base.

From the standpoint of the Cox model, a negative effect was perceived for the leads that were imported (b = -0.747; Wald = 6.644; p = < 0.001). In 100 days, 14% of the *leads that were* not imported had become an opportunity. At the same time, the percentage of *imported leads that became* an opportunity in this period was 7%. In the risk-ratio analysis, *imported leads* had a 53% lower *probability of becoming* an opportunity than the leads that were not imported.

This result can be attributed to the fact that *leads* that arrive naturally at the base are better than *leads* that come from cold lists, such as offline events, reinforcing what *Inbound Marketing* advocates, by Halligan and Shah (2016), that marketing should attract its audience. This data also goes along with the study by Wang *et al.* (2019), who proved that *leads* originating from online events performed better.

5. CONCLUDING REMARKS

B2B Digital Marketing is a hot area from academic and professional perspectives. The literature reviews by Kumar *et al.* (2020) and Pandey *et al.* (2020). reported how the topic has been studied over the past few decades, especially after the 2000s, and how there is room to develop. From a professional perspective, it is believed that the coronavirus pandemic should further exalt the importance of marketing using digital media to communicate with its audience.

Based on this reality, this research sought to verify whether content production practices following the precepts of Digital Content Marketing, emphasized, for example, by Holliman and Rowley (2014), and distribution in different online channels, characterized as owned, paid, and earned media, following the classification proposed by Stephen and Galak (2012), affect the *probability of change from the qualified lead stage to sales opportunity over time*.

Each type of conversion per content and channel was verified*, in* addition to considering the *imported leads,* the *total number of conversions,* and their respective *probabilities of changing from the qualified lead stage to a sales opportunity over time* through the survival curve and Cox's Proportional Hazards model. Except for the conversion of the variable *in mid-funnel content* and *conversion via own media*, all variables impacted the *probability of change from qualified lead stage to sales opportunity over time*. It can be said that this type of marketing strategy contributes to business generation.

5.1. Academic and Managerial Implications

This study proves relevant for academics and marketing professionals first because it meets the calls for studies that connect theory and practice (Gummesson, 2014; Lilien, 2016; Cortez & Johnston,

2017), having one of the researcher's proximity and professional experience in the studied market. Moreover, it addresses the Digital Marketing gap in the B2B segment, as presented by literature reviews (Kumar *et al.*, 2020; Pandey *et al.*, 2020), with one of the leading contemporary marketing challenges being "the digital", as stated by Leeflang *et al.* (2014).

For academics, the study examines how investment in Digital Content Marketing and online media impacts conversion in the marketing funnel, thereby contributing to theory development in a less explored segment, B2B. This research addresses this context from a comprehensive perspective cited as a research opportunity in the literature reviews and the *Marketing Science Institute (*MSI, 2020*)* research questions. It also meets the call of Vieira *et al.* (2019), who presented *Inbound Marketing* as a critical channel in B2B procurement. However, the practice is outsourced and not in-house, as in this case.

The use of a quantitative method to evaluate a relevant and accurate database is also one of the contributions of this study, given the *gap* in the B2B segment presented, for example, by Gummesson (2014). We also have survival analysis and Cox's Proportional Hazards model, little explored in marketing studies but suitable for understanding the influence of time on an event of interest, as a basis for further research. Finally, the study presents a path for the construction of performance indicators to evaluate the marketing strategy, bringing ways capable of measuring the value of the content produced by companies, another research question raised by MSI, which also reaffirms the value of marketing in generating business results, an imperative widely cited by researchers such as Wiersema (2013).

For marketers, the study demonstrates how investment in Digital Content Marketing and its distribution in different online channels help bring results for an organization, even if it sells a complex solution with a high average ticket. Another point to which this study contributes is the *insights* about the conversion funnel, the predictability of the stages, and the performance analysis of how the different content and media impact the result and can help companies better allocate resources. It also highlights how the analysis of time and metrics can help set realistic goals. This outcome is a significant concern for marketing managers.

5.2. Research Limitations

This study's main limitation is that it used data from only one company, and the generalization of the results is limited. Another limitation was the low sales volume of the size of the *lead* base, which made it impossible to analyze this variable using survival techniques due to the high censoring rate. Furthermore, there is a limitation to counting the time between the *lead* having entered the base and the date it became an opportunity because, for the opportunity date, the last event is registered, making it possible, although rare and technically impossible, to happen in an automated way in the software.[2] , that *lead* had been an opportunity previously. Finally, the low volume of B2B Digital Marketing studies, especially for the variables analyzed, does not allow an adequate comparison of results.

[2] This is because opportunity marking happens via an automation flow where the lead passes only once, but it is possible to mark an opportunity manually.

For future research, it is suggested that using the same nomenclatures as a starting point be applied to other organizations that have implemented *Inbound Marketing* as a demand generation strategy for sales to allow comparison between the results and the development of theory. This has been a challenge encountered in this study. For investigations in B2C or even B2B companies that have a significant sales volume, a possibility would be the survival analysis with the variable sales response instead of business opportunity.

Regarding the statistical models used, one can also highlight the non-use of approaches with greater predictive power and suitable for contexts of large volumes of data of dynamic temporal evolution, characteristic of the *significant data* era. It is worth noting that, although *machine learning* and artificial intelligence models can produce more accurate estimates by using complex parameters and algorithms that apply to large volumes of data, these models transgress because they present parameters (nodes) whose interpretation is complex and not very intuitive. Thus, such models have limited application in providing *insights into* research questions or management guidance. Nevertheless, it is recommended that future studies use artificial intelligence models concomitantly, such as *random forests* or Chaid, with parametric (or semi-parametric) models, such as Cox regression and survival curves, aiming to combine the benefits of explaining and predicting conversion factors.

Another opportunity for study would be to consider including traditional media channels in the proposed model, with, in this case, the need to adapt and understand the metrics to be measured. There is also room to analyze the intra-channel and inter-channel comparison used in this research, considering the effects and the synergy, and other methods may be combined with the one explored.

A study of the company that provided the survey data in the pre-and post-pandemic Covid-19 would also be interesting, allowing a comparison of the impact of the context imposed by the disease on the results of Digital Marketing and distance sales, which have become one of the only alternatives for companies, this being a challenging reality, especially for corporate sales. This research could also help discuss the permanence or reallocation of business resources with the return of everyday activities in the post-pandemic period.

Referências Bibliográficas

Coda, R. C., & Castro, G. H. C. (2019). Marketing business-to-business: análise da produção científica brasileira de 2008 a 2018. *Revista de Administração de Empresas*, 59, 258–270. https://doi.org/10.1590/s0034-759020190404

Colosimo, E. E., & Giolo, S. (2006). *Análise de sobrevivência aplicada*. (1st ed.) São Paulo: Blucher.

Content Marketing Institute. (2019). *B2B Content Marketing 2020:* Benchmarks, Budgets, and Trends - North America. Consultado em 21 fev. 2021. Available in: <https://contentmarketinginstitute.com/2019/10/success-differentiators-b2b-research/>.

Content Marketing Institute. (2020). *B2B Content Marketing 2021:* Benchmarks, Budgets, and Trends - North America. Consultado em 21 fev. 2021. Available in: <https://contentmarketinginstitute.com/2020/09/b2b-industry-benchmarks-budgets-trends-research/>.

Corrêa da Silva, N. S. de A., & Vieira, V. A. (2019). Efeitos das Mídias Digitais nas Novas Vendas B2B: Um ensaio sobre inbound marketing, mídias pagas e ganhadas on-line. *Revista Eletrônica de Ciência Administrativa*, *18*, 194–212. https://doi.org/10.21529/recadm.2019008

Cortez, R. M., & Johnston, W. J. (2017). The future of B2B marketing theory: A historical and prospective analysis. *Industrial Marketing Management*, *66*, 90–102. https://doi.org/10.1016/j.indmarman.2017.07.017

Cox, D. R. (1972). Regression models and life-tables, *Journal of the Royal Statistical Society: Series B (Methodological)*, 34, 187–220. https://doi.org/10.1111/j.2517-6161.1972.tb00899.x

Danaher, P. J., & Rossiter, J. R. (2011). Comparing perceptions of marketing communication channels. *European Journal of Marketing*, *45*, 6–42. https://doi.org/10.1108/03090561111095586

Edelman, D. C.; Singer, M. (2015). Competing on customer journeys. *Harvard Business Review*. Consultado em 21 de fev. 2020. Available in: <https://hbr.org/2015/11/competing-on-customer-journeys>

Ferreira, E. C. (2007). *Um Modelo Quantitativo para o valor do cliente*. (Tese de Doutorado em Administração, Análise e Tecnologia da Informação). Fundação Getúlio Vargas, São Paulo.

Gehan, E. A. (1965). A generalized Wilcoxon test for comparing arbitrarily singly-censored samples. *Biometrika*, 52, 203–224. https://doi.org/10.1093/biomet/52.1-2.203

Gummesson, E. (2014). The theory/practice gap in B2B marketing: Reflections and search for solutions. *Journal of Business and Industrial Marketing*, 29, 619–625. https://doi.org/10.1108/JBIM-10-2013-0222

Hadjikhani, A., & LaPlaca, P. (2013). Development of {B2B} marketing theory. *Industrial Marketing Management*, *42*, 294–305. https://doi.org/http://dx.doi.org/10.1016/j.indmarman.2013.03.011

Halligan, B., & Shah, D. (2016). *Inbound Marketing:* Get Found Using Google, Social Media, and Blogs. (2nd ed.). Nova Jersey: John Wiley & Sons.

Harrisson, L, & Stanley, J. (2020). Survey: US B2B decision-maker response to COVID-19 crisis. Consultado em 21 fev. 2021. Available in: <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/survey-us-b2b-decision-maker-response-to-covid-19-crisis>.

Hewett, K. *et al.* (2016). Brand buzz in the echoverse. *Journal of Marketing*, 80, 1–24. https://doi.org/10.1509/jm.15.0033

Holliman, G., & Rowley, J. (2014). Business to business digital content marketing: Marketers' perceptions of best practice. *Journal of Research in Interactive Marketing*, 8, 269–293. https://doi.org/10.1108/JRIM-02-2014-0013

HubSpot. (2021) Nossa história. Consultado em 21 fev. 2021. Available in: <https://br.hubspot.com/our-story>.

Intelligenzia. (2020) *O Marketing B2B e Impacto do Coronavírus.* Consultado em 21 fev. 2021. Available in: <https://www.intelligenzia.com.br/wp-content/uploads/2020/04/pesquisa-coronavirus-final.pdf>.

Järvinen, J., & Taiminen, H. (2016). Harnessing marketing automation for B2B content marketing. *Industrial Marketing Management*, 54, 164–175. https://doi.org/10.1016/j.indmarman.2015.07.002

Kannan, P. K., & Li, H. (2017). Digital marketing: A framework, review and research agenda. *International Journal of Research in Marketing*, 34, 22–45. https://doi.org/10.1016/j.ijresmar.2016.11.006

Kumar, B., *et al*. (2020). Digital mediation in business-to-business marketing: A bibliometric analysis. *Industrial Marketing Management*, 85, 126–140. https://doi.org/10.1016/j.indmarman.2019.10.002

Lacerda, T. M.; Mendonça, B. Q. (2010). Marketing B2B: mapeamento dos trabalhos acadêmicos no Brasil de 1998 a 2007. *Revista de Administração da UFSM*, 3, 219–229. https://doi.org/10.5902/198346592335

LaPlaca, P. J.; Katrichis, J. M. (2019) Relative presence of business-to-business research in the marketing literature. *Journal of Business-to-Business Marketing*, 16, 1–22. https://doi.org/10.1080/10517120802484213

Leeflang, P. S. H., *et al*. (2014). Challenges and solutions for marketing in a digital era. *European Management Journal*, 32, 1–12. https://doi.org/10.1016/j.emj.2013.12.001

Lingqvist, O., *et al*. *Do you really understand how your business customers buy?*Available in: <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/do-you-really-understand-how-your-business-customers-buy>. Last access: 21 fev. 2020.

Lilien, G. L. (2016). The B2B Knowledge Gap. *International Journal of Research in Marketing*, 33, 543–556. https://doi.org/10.1016/j.ijresmar.2016.01.003

Magno, F.; Cassia, F. (2019). Establishing thought leadership through social media in B2B settings: effects on customer relationship performance. Journal of Business and Industrial Marketing, 35, 437–446. https://doi.org/10.1108/JBIM-12-2018-0410

Mantel, N. (1966). Evaluation of survival data and two new rank order statistics arising in its consideration, *Cancer Chemotherapy Reports*, 50, 163–170.

Marketing Science Institute. (2020). *Research Priorities 2020-2022*. Consultado em 21 de fev. 2020. Available in: <https://www.msi.org/wp-content/uploads/2020/09/MSI-2020-22-Research-Priorities-final.pdf>.

Pandey, N., *et al*. (2020). Digital marketing for B2B organizations: structured literature review and future research directions. *Journal of Business and Industrial Marketing*, 35, 1191–1204. https://doi.org/10.1108/JBIM-06-2019-0283

Srinivasan, S., *et al*. (2016). Paths to and off purchase: quantifying the impact of traditional marketing and online consumer activity. *Journal of the Academy of Marketing Science*, 44, 440–453. https://doi.org/10.1007/s11747-015-0431-z

Stephen, A. T., & Galak, J. (2012). The effects of traditional and social earned media on sales: A study of a microlending marketplace. *Journal of Marketing Research*, 49, 624–639. https://doi.org/10.1509/jmr.09.0401

Steward, M. D., *et al*. (2019). From transactions to journeys and beyond: The evolution of B2B buying process modeling. *Industrial Marketing Management*, 83, 288–300. https://doi.org/10.1016/j.indmarman.2019.05.002

Taiminen, K.; Ranaweera, C. (2019). Fostering brand engagement and value-laden trusted B2B relationships through digital content marketing: The role of brand's helpfulness. *European Journal of Marketing*, 53, 1759–1781. https://doi.org/10.1108/EJM-10-2017-0794

Vieira, V. A., *et al.* (2019). In pursuit of an effective B2B digital marketing strategy in an emerging market. *Journal of the Academy of Marketing Science*, 47, 1085–1108. https://doi.org/10.1007/s11747-019-00687-1

Wang, W. L., *et al*. (2019). B2B content marketing for professional services: In-person versus digital contacts. *Industrial Marketing Management*, 81, 160–168. https://doi.org/10.1016/j.indmarman.2017.11.006

Wiersema, F. (2013). The B2B Agenda: The current state of B2B marketing and a look ahead. *Industrial Marketing Management*, 42, 470–488. https://doi.org/10.1016/j.indmarman.2013.02.015

Wiesel, T., *et al.* (2011). Marketing's profit impact: Quantifying online and off-line funnel progression. *Marketing Science*, 30, 604–611. https://doi.org/10.1287/mksc.1100.0612