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Linking the potentials of extended digital marketing impact and start-up growth: Developing a macro-dynamic framework of start-up growth drivers supported by digital marketing

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ABSTRACT

The contemporary market positions digital marketing as a powerful mediator between efficient digital interaction, data interpretation opportunities, and business growth, while extending its impact potential to tackle different growth challenges.

As start-ups usually have limited resources and struggle with customer engagement, retention, and other growth challenges, the low investment and dynamic elements of digital marketing tools can be used to support constructive digital interactions impacting start-up growth. Consequently, these links have outlined an extended digital marketing impact in the areas which build on marketing and sales and influence growth components such as product & market testing, customer engagement, and partnership development.

Through a systematic literature review, we present a holistic overview encompassing start-up growth areas that use digital marketing. We also discuss how digital marketing efforts complement the start-up maturity. Furthermore, we analyze the differences in B2B and B2C digital marketing usage and discuss how emerging technologies impact digital marketing. The link between the extended digital marketing impact, start-up challenges, and growth areas result in the identification of start-up growth drivers supported by digital marketing. We propose a Macro-Dynamic framework identifying the start-up growth drivers from product, market, team, and finance areas and digital marketing tactics connected to the identified growth drivers.

1. Introduction

The use of digital marketing has significantly changed how companies reach out to their customers. Digital format, availability of various content, and interactivity enable fluid and personalized customer communication. Consumers using digital resources in the buying process usually rely on the use of social media (Dwivedi et al., 2021). Digital platforms as Facebook, Google, and Instagram are offering different kinds of personalized campaigns the companies can use. The websites driving traffic synchronized with analytics allow companies to track and configure various options on how to attract and convert leads into new customers. Consequently, new concepts such as Growth Hacking have emerged, as a business scaling approach defined as a medium between marketing, information, and communications technology (ICT) with a focus on big data, social media, and artificial intelligence (Bohnsack and Liesner, 2019). Being creative and savvy with digital marketing can change the outlook of the whole company, regardless if it is a start-up or a corporate. Innovation is reaching new levels by using the opportunities of open innovation enabled by social media. The companies which fully exploit the benefits of social media have strategies that emphasize the coevolution of innovation and resources while sharing their vision and providing a framework for innovation (Hitchen et al., 2017). Digital content specific to the audience's purposes simultaneously opened the door for creativity and experimentation as no other traditional marketing channel can with the use of digital analytics. Social media has a significant positive impact on start-ups' innovation outcomes, in which digital interactions become a platform of exchange between learning and innovation (Corral de Zubielqui and Jones, 2020). In this sense, knowing which determinants lead to higher-value interactions activated by data analytics, and what is

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the process of gaining insight from digital channels (Kaur and Kumar, 2020), can be the key to enabling successful customer relationships, in the short and long run.

Emerging technologies such as blockchain create an environment of trust and information transparency between companies and consumers. Creating this environment can result in a more trusted digital and customer-centricity approach in which high levels of technological sophistication are used for protecting consumers' privacy and enhancing security in digital marketing (Rejeb et al., 2020). NFTs, as part of the blockchain ecosystem, are used to build communities and loyalty programs. Artificial intelligence enables companies to have high levels of targeted campaigns on digital platforms. Metaverse is already being used to enhance user experience and provide authentic brand communication strategies. Hence, digital marketing is becoming more diverse in its impact and includes not only selling but other initiatives accompanied by digitalization (Ancillai et al., 2019), and emerging technologies applied to digital marketing is a catalyst for cross-dimensional organizational impact.

In this digital market race, the companies with more resources have higher availability of interpreting the data and targeting their customers. From the organizational aspect, social media can be utilized as a strong element of social client relationship management (S-CRM), in which combined marketing and information insights can lead to enhanced customer engagements and services (Harrigan et al., 2020). In order to properly interpret and act on digital marketing analytics, crucial decisions need to be made in line with digital marketing strategy, specifically which metrics to follow, and how to set metrics and relevant KPIs per activity. Marketing managers must carefully consider which metrics they should monitor considering the differences between the platforms (Virtanen et al., 2017), and connect actionable metrics with business planning.

Nevertheless, start-ups are in the position to change faster, be more agile and also have the opportunity to design personalized activities through digital marketing channels. But the starting position is difficult. Start-ups are defined by a lack of resources in the sales & branding team, and online presence (Akter and Iqbal, 2020), and have the difficult task of needs prioritization while discovering the best product-market fit. Founders usually have a lack of experience (technical, marketing & sales, leadership), and balancing all the challenges of running a start-up is truly a grand endeavor. Thus, tools or tactics which can be applied and experimented with to gain quick results while informing on the decision-making process are more than valuable to start-ups. This point is where digital marketing can offer solutions within its channels, tactics, and opportunities that can support start-ups overcoming challenges and speed up the development process when properly used. One of the most important points why start-ups use digital marketing is its unique practicality of impact beyond sales and marketing, including other aspects such as experimentation, building communities, and customer relationships. We can argue that all of the mentioned aspects in the end lead to sales, and are more or less efficient based on their impact on sales. However, we can also argue that digital marketing tools and tactics from a start-up development perspective can impact growth (on a lower or higher scale) by using different kinds of data from reviews, comments, and analytics leading to new insights on product/feature development (Kuester et al., 2018). Strategic use of digital marketing tools can make a shift in start-up growth to gain higher maturity levels in different start-up growth components. Access to knowledge and digital interactions are opportunities that can be applied to design open innovation strategies (Hitchen et al., 2017) and use digital interaction as one of the bases for building adaptive solutions in versatile markets.

Following these notions, it is important to look at digital marketing impact from a macro and systematic point of view. Digital marketing tools, building up from the perceived utilization for sales & marketing, can serve as an enabler of several business objectives and act as a potential growth driver for start-up development in several areas. As noted by Appelbaum et al. (2017) corporates need to rethink their innovative agile practices, and start-ups will need to continue and foster their dynamic capabilities as they grow. Looking from a macro perspective all practices leading to creating and fostering start-up capabilities, especially the ones that are done daily and continuously as digital marketing, can make a substantial impact on growth or stagnation. How can digital marketing through its interactive structures enable discoveries and constant adapting to market conditions, remains to be investigated?

1.1. Digital marketing (extended) impact in the start-up environment

Start-ups, by their sole nature, are designed to answer a specific problem for their customers. In the initial stages, start-ups are in the position of still fine-tuning their presence on the market. As reported, only focusing on technological solutions is not a guarantee for survival and higher maturity (Giardino et al., 2015). Start-ups have high levels of resource constraints and time pressure of *as soon as possible* breakthrough to reach customers with a superior solution resolving their problem (Conway and Hemphill, 2019). The value proposition in the early stages is still not fixed and can be pivoted, in a more or less substantial way. At this stage, digital marketing presents a component frequently used not just to signal the presence of the start-up, but to set the first market testing as well (Bland and Osterwalder, 2020). The digital marketing insights from the testing process support the decision-making of different business processes (e.g. testing& analytics) and as such represent one of the extended impacts of digital marketing usage.

Supporting marketing instruments for start-up growth should be carried out in relation to the stages of its life cycle (Svetlana, 2018). Transmitting the message to a specific user community at the right time, followed by data analytics inevitably fits the start-up's spectrum of usage. For digital start-ups, answering the question of how to effectively build the user community is essential at 1st maturity level (Standing and Mattsson, 2016). Questions of trust, engagement with low costs, testing the working prototypes are points on which start-up builds upon from this phase and can largely be impacted by digital marketing. In the early stages, start-up variability moves between understanding the problem/solution fit and how the process can be optimized for pursuing the product/market fit (Giardino et al., 2014). All of these processes are constrained by the scarce resources managers have along with the responsibilities of making effective strategies (Giardino et al., 2014). Although its full adoption has its challenges as resources, skills, and sometimes costs of implementation, digital marketing can lead towards growth options. By analyzing traffic data from the website via analytics tools, optimization and understanding of customer behavior can be discovered (Bland and Osterwalder, 2020). In this context, designing digital marketing strategies to reach the right audience, build community and experiment with the product (features) can support start-ups in materializing their value proposition.

The search for product-market fit is an ongoing process while simultaneously the connection with customers is also being created. The early adopters need to be aware of the product, test it, and communicate with the brand while giving feedback. Only focusing on profit maximization and business model planning, without testing and execution, leads to start-up failure (Giardino et al., 2014). To test their model and market, restaurant aggregator and food delivery start-up Zomato in the early stages used email newsletters targeting young professionals during working hours with offerings on what to do/go during the weekend while incorporating their services (Raman and Raman, 2018). With the insights from the email campaigns, the start-up was able to design a fitting strategy that supported its growth towards stability. As exemplified, when proper strategies and tactics are used, the risk of early failures can be minimized and, at this point, digital marketing could represent one of the risk maneuvering instruments with its functional possibilities.

As less structure in the beginning allows founders to have more freedom, creativity, and innovation, after a certain time the start-up needs to grow out of the early stages and become more stable.

Stability signals maintaining constant growth and step-by-step maturing into a company with a strong value proposition, satisfied customers, and solid operational structure (Crowne, 2002). Maturity challenges such as product development, market research and customer relationship management, when linked with digital marketing tools can be reduced and supported within the value chain of activities.

The reported notions and examples do not exclude the essential need for non-digital research and tools usually done to overcome challenges. On the contrary, digital marketing can support growth (in higher or lower intensity) with its role in the process, but also the need for non-digital tools is crucial.

Thus, building community or testing products and ideas through digital marketing strategies and tactics have an extended impact as outcomes of the strategies are not just insights used for marketing calibrations, but also as insights for business modeling and as growth drivers.

1.2. Identifying research gaps and opportunities connected to digital marketing impact and start-up growth

Interaction on digital marketing channels has already moved far beyond convincing customers to purchase a product into making customers a prominent ally in the product development process (Phan et al., 2011). The digital format of interaction enables scaling, fast growth and engagement in which the objective *is not selling, but engaging*' through continuous interaction based on various digital platforms (Mingione and Abratt, 2020). Consequently, this point advances the digital marketing narrative not just as a business development tool, but as an interactive facilitator of co-creation in two-way communication with its stakeholders driving growth in several areas. Digital marketing from the strategic point of digital transformation links organizational value creation and the market while creating a feedback loop (with metrics) for the organization from sales, market analysis, customer support, and engagement (Peter et al., 2020). Powered by analytics and metric systems through the used digital platforms, digital marketing can support the decision-making process.

Existing research investigates different objectives influenced by social media as mostly impacting sales, brand, customer engagement, interactivity, and traffic generation, but also includes other more dynamic objectives (Felixa et al., 2017). With the uncertain market environments, the need for flexibility leading towards the objectives is necessary. Organizations can benefit from the dynamic capabilities of agile marketing by practically responding to changing market environments, and establishing (agile) paths of resource recalibrations (Moi and Cabiddu, 2021). With data analytics converted to insights, the mosaic of possibilities got an enriched portfolio for targeting and personalization throughout the whole customer journey, and in such a way enabled flexibility options for organizations. Effects of social media on companies include customer satisfaction, value creation, intention to buy and sell, building relationships, brand awareness, knowledge creation, perceived corporate credibility, acquiring of new customers, salesperson performance, employee brand engagement, and sustainability (Dwivedi et al., 2021). Messaging systems, reviews and feedback are being used as a channel for support, discovery, and opportunities for service innovation (Kuester et al., 2018), and therefore move the digital marketing impact towards supporting growth areas as an innovation process.

On the other hand, what has also been reported through the research is that start-up founders feel they effectively use digital marketing channels but are not aware of how to gain insights and look at the digital marketing activity results in a more systematic way (Kaur and Kumar, 2020). As start-ups struggle with gaining more customers, testing processes, and customer education, digital marketing can have content designed to engage and educate (Ho et al., 2020). Matching the challenges with opportunities leverages the risk of failure. Early recognition of crucial activities followed by critical issues management can increase the chances of start-up survival (Giardino et al., 2014). In this perspective, identifying challenges linked to digital marketing opus of impact becomes a strategic question of start-up growth. Which kind of digital analytics lead to customer retention (Conway and Hemphill, 2019), how to design practical testing through experiments (Gutbrod et al., 2018), and what are the suitable indicators of validating business models (Batocchio et al., 2017) can support start-ups to define their growth through digital marketing. Mapping out all the possible impact areas of digital marketing makes the bridge between challenges and the evolvement of extended digital marketing opportunities.

The second reason why mapping digital marketing's impact on start-ups bears importance is to provide an overview of which digital marketing tools and tactics can be used to drive start-up growth in a specific area. As indicated by (Dwivedi et al., 2020) *how to* properly articulate marketing activities followed by metrics calls for more research. If digital marketing channels are seen as an opportunity to target the right customers while having the right performance measurement and evaluation (Isohella et al., 2017), what kind of tools and tactics can lead to the growth of identified objectives (ex. customer engagement, lead generation), and what helps organizations to understand and act on the data provided by digital marketing (Silva et al., 2020). Continuing with content marketing strategies Mansour and Barandas (2017) propose more research on how content creation and management in a digital environment can be linked to business model innovation for small firms in general and high-tech small firms in particular? Focusing on the role of the sales team, Herhausen et al. (2020) propose more research on content management strategies in the context of social media for customer relationship building (especially on LinkedIn), as one important start-up growth area (Table 1).

In line with the interactivity options of the emerging technologies, the digital marketing perspectives will need to be adapted towards the possibilities of further integrations, starting from the bases of big data towards the higher levels of emersions intertwined with digital marketing efforts (Chylinski et al., 2020). Having a comprehensive identification of digital marketing's extended impact on start-ups can outline the usage of specific tools and tactics for the targeted growth area. Thus, mapping the growth areas that digital marketing can influence benefits start-ups to first identify what kind of start-up growth areas can be influenced through digital marketing tools, and secondly, which digital marketing tactics can be used to drive growth for a specific area.

2. Key objectives of the paper

This paper aims to review the articles which identify how digital marketing tools and tactics can impact start-up growth in different areas. To do so, the investigation will include the identification of the extended impact digital marketing has in the digital era, influencing growth beyond sales and marketing. The next research focus will include an analysis of digital marketing strategies, frameworks, tactics, and their influence on start-ups. Within this scope, the extended impact and drivers of growth for start-ups from the perspective of digital marketing will be investigated and identified. As the difference exists between the B2B, B2C, and B2B2 models, one part of the work will also analyze the main differences between models and which growth areas are impacted by digital marketing usage.

In the second part of the research, the challenges start-ups have in connection with digital marketing from a broader perspective will be identified. The goal is to match the extended impact, potentials of influence with start-up challenges and map out the start-up growth drivers supported by digital marketing. As start-up maturity levels have different needs including growth potentials from digital marketing, the differentiation and main identifiers of growth possibilities through maturity levels will also be developed.

This research will result in a designed framework of start-up growth drivers identified from the digital marketing aspect with corresponding digital marketing tools and tactics. Based on this review we aim to answer the following Key Research Questions:

Table 1
A summary of relevant research gaps and opportunities from the literature connected with mapping the digital marketing impact.

Digital marketing frameworks & strategies	Data analysis & indicators	Start-up growth potential via digital marketing
• Articulation and realization of social media marketing objectives (Dwivedi et al., 2020) • Identifying the actions leading to customer retention (Conway and Hemphill, 2019) • Start-up founders are not aware of how to gain insights and have DM activity results in a more structured way (Kaur and Kumar, 2020) • Content creation in business model innovation (Mansour and Barandas, 2017) and content management strategies of social media for customer relationship building (Herhausen et al., 2020) • From a B2B knowledge management perspective, lack of work on dynamics of online interaction (users-company) and learning orientation on digital marketing channels (Wang et al., 2017)	• More research in linking start-up performance with consumer-centric innovation (Rajagopal and Davila, 2020) • Which data analytics offer the most meaningful insights (Dwivedi et al., 2020) • Research on DM performance measurement with web analytics are scarce and theoretical undeveloped (Järvinen and Karjaluoto, 2015) • Understanding organizational processes for data analytics interpretation (Silva et al., 2020) • Adapted to emerging technologies, starting from the bases of big data towards the higher levels of emersions (Chylinski et al., 2020)	• How to obtain a product-market fit, through product development and growth hacking techniques (Zaheer et al., 2019) • How to set activities for designing minimum Viable Product with the number of iterations (Nguyen-duc, 2020), make the fit through customer co-creation (Akter and Iqbal, 2020) • What criteria can be used to determine if an indicator is suitable for validating a choice in a business model (Batocchio et al., 2017) • For pre-PMF software start-ups - identifying the riskiest assumptions, turning the assumptions into metrics, and practical testing through experiments (Gutbrod et al., 2018)

- What are the possible areas of extended digital marketing impact?
- What digital marketing strategies and frameworks are used by start-ups?
- What are the different types of start-up challenges linked with digital marketing?
- What are the start-up growth drivers for which digital marketing can be used?
- Which digital marketing tools and tactics are mostly used for start-up growth drivers?

Identifying the challenges that start-ups have will automatically serve as a guide outlining which start-up growth potentials and drivers digital marketing can influence. Connecting challenges and potentials makes the basis for exploring which digital marketing channels and tools can be used to impact start-up growth. As the sphere of digital marketing influence is wide, the objective is to identify the main challenges, and components of digital marketing influence on start-up growth. The end result of the work will be creating a macro-overview of digital marketing potentials in the form of a Macro-Dynamic Framework for matching Digital Marketing Tactics with identified Growth Drivers.

In the next section, we present the research methodology and the taxonomy of research articles connected with the trends and themes of research. Section 3 continues with the literature review concentrated on the analysis of digital marketing strategies and models, linking digital marketing strategies, frameworks, and tools in the start-up environment, including the relationship between emerging technologies and digital marketing extended impact. In Section 4 and Section 5, the start-up challenges connected to digital marketing, start-up maturity, different usage forms of B2B, B2C and B2B2C digital marketing are synthesized. In Section 6, based on the researched articles, a macro dynamic overview of digital marketing will be presented through the growth drivers of digital marketing and its impact on start-ups. The macro dynamic framework of digital marketing techniques and growth drivers for start-ups will represent an answer to 3rd and 4th research questions by outlining used channels and tactics, and the individual potential of each activity impacting growth drivers. The drivers of start-up growth within digital marketing influence will be presented and discussed along with corresponding digital marketing tactics (and examples) in Section 6. In the final sections, the conclusion and limitations of this work are discussed.

3. Research methodology

In order to present a systematic and scientific literature review of digital marketing strategies for start-ups, we used the literature review methodology suggested by Briner and Denyer (2012). Through the review, the following steps were implemented:

- Identification of the key objectives while defining the scope of the review and utilized protocols.
- Review of the relevant research articles, while verifying the scope and the quality of the articles.
- Taking notes, extracting the relevant data, and synthesizing the relevant data to be incorporated and presented.
- Developing overall conclusions and presenting the knowledge generated from the process.

3.1. Identification of the procedure for relevant articles

To address our primary research questions, a review of the published literature was carried out on all articles published between 2015 and 2022. The main database for performing this research was Scopus. Because this database covers peer-reviewed multi-disciplinary research studies, there was a high level of confidence that studies on startup-ups and digital marketing, connected with fields of business, marketing, management, and new technologies focus would be identified. The results from databased were refined based on the following steps of the analysis and literature review process:

1. The initial screening and identification process

The first step began by setting certain practical screening criteria to ensure that only quality publications are included in the review. The first search, therefore included journal articles, conference articles, working papers, book reviews, and book chapters intending to identify the possible topics of interest and new keywords.

The keywords used for the research were: „digital marketing start-ups“, “extended digital marketing impact”, „digital marketing strategy start-ups“, “digital marketing tactics”, „content marketing start-ups“ “digital marketing channels start-ups“, „social media start-up“, “B2B and B2C digital marketing strategies”, „start-up challenges“, “inbound digital marketing start-up”, „start-up maturity“, „product-market fit start-ups“, „testing ideas start-up“, “metaverse”, “digital marketing trends startups”, “emerging technologies”, and all the possible combinations of the above keywords, while also adding the AND in the query. As some of the primary queries for the keywords discovered a large number of data, the combinations of the keywords were used to filter out the relevant results of the search (ex. Startup challenges and social media; digital

marketing tactics and startups; startup maturity and social media). Furthermore, relevant publications had to include one of this work's main keywords in the title, abstract, or keywords to meet the search criteria. However, in several cases, as some of the articles were highly important from their knowledge contributions, the publications without having the main keywords identified as previously explained have been also included in this study.

2. The screening process of the studies

The next step of the review process was performed based on the abstract and the full text. Several exclusion criteria were applied to the research:

a. Exclusion of Non-English Articles
b. Exclusion of articles that do not address the use of digital marketing impacting start-up activities from a business (value) perspective (as mathematical, technical and engineering models)
c. Exclusion of articles that do not address the discussion of any use cases/practical implementation of digital marketing in start-ups
d. Include articles that address challenges and start-up maturity levels connected to digital marketing scope
e. Include articles that have an insightful perspective on a specific growth theme from which start-ups and other types of organizations can benefit from
f. Articles including the themes of digital marketing evolvement in the sphere of emerging technologies

Narrowed to the subject areas of marketing, economics, business management, and emerging technologies, through the screening process the identified 247 publications considered relevant for this type of analysis. As the aim of the study is to connect digital marketing and its current impact on start-ups, the advantage was given to the studies which had empirical and practical implications in digital marketing in start-ups. The exclusion criteria were independently applied by the authors with a reached consensus. Most of the excluded papers were not oriented or focused on the application of digital marketing but rather on the identification of digital marketing barriers to implementation, or other topics which were not relevant to the research questions identified. After the selection, 94 articles were included in this study along with some articles which did not fit this time frame but were very valuable to include in the study.

3. Meta-analysis and knowledge generation

The data analysis and extraction steps reflected the Research Process and Subjects of this work (as presented in Fig. 1) and encompassed gained knowledge on start-ups, digital marketing, and the dimensions relevant for this bond (as growth marketing, extended digital marketing impact, etc.). In the knowledge generation process, the researchers analyzed all the data from the articles and cross-referenced the inputs with the research questions of this work. Fig. 2 provides a diagram describing the review process.

After the selection, the articles were organized by the specific theme they covered and examined in detail to identify research subjects, points and trends. As insightful content, trends, and several dimensions were identified in the early stages of the analysis, this methodological step gave researchers a conceptual idea of developing the framework presented at the end of this research. Establishing the research trends also helped the authors to design the article based on the actual points in research and industry. It also shows what is a particular research timeline of start-ups and digital marketing subjects and how they evolved. Secondly, these actions also supported the writing of the storyline for the article.

The full analysis of the gathered publications was complete in the knowledge generation stage and the systematization of the findings is presented in the following article sections (including the Taxonomy of the research).

3.2. Taxonomy

The articles included in this study spanned from 2015 to 2022 (Fig. 3). From 2015 to 2017, most of the articles investigated the formulation of digital marketing strategies, usually focused on social media strategies. From 2018, the research scope is extended by content marketing strategies, and several articles investigate the innovative elements and content strategy influence.

We can also identify the spike in research on digital marketing from a strategic point starting from 2019. Including subjects of growth hacking strategies, business model conceptualization, strategy formulations, and topics as industry 4.0 and supply management connected to digital marketing strategies.

In Fig. 4, we organize the selected research articles by the themes covered in the article. As digital marketing strategies encompass several channels (email, videos, website including a different mix of strategies etc.) and objectives (engagement, brand building, market research and readiness, digitalization etc.,) upon which strategies can be implemented, we grouped all the articles covering this subject in Digital Marketing Strategy Formulation, except Social Media and Content Strategies. The largest number of articles were focused on the topic of

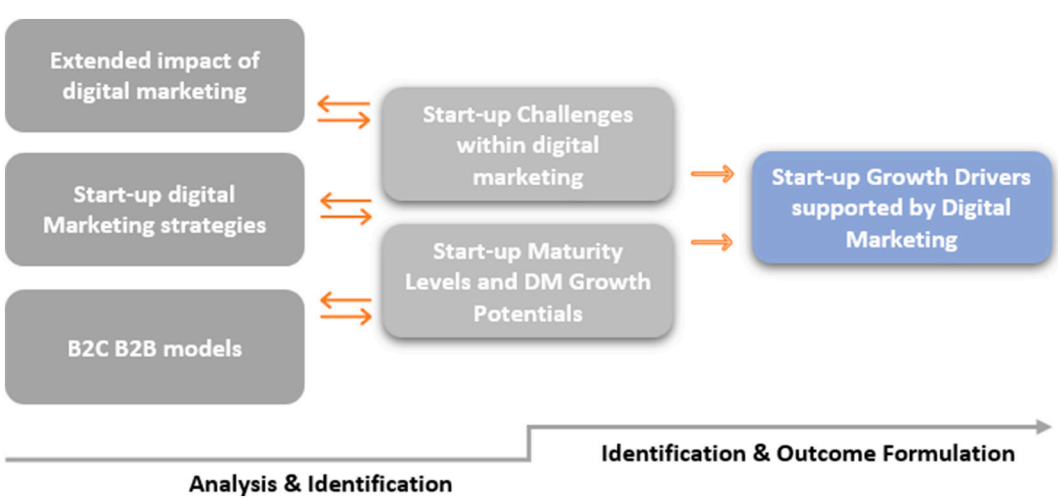

Fig. 1. Research process and subjects.

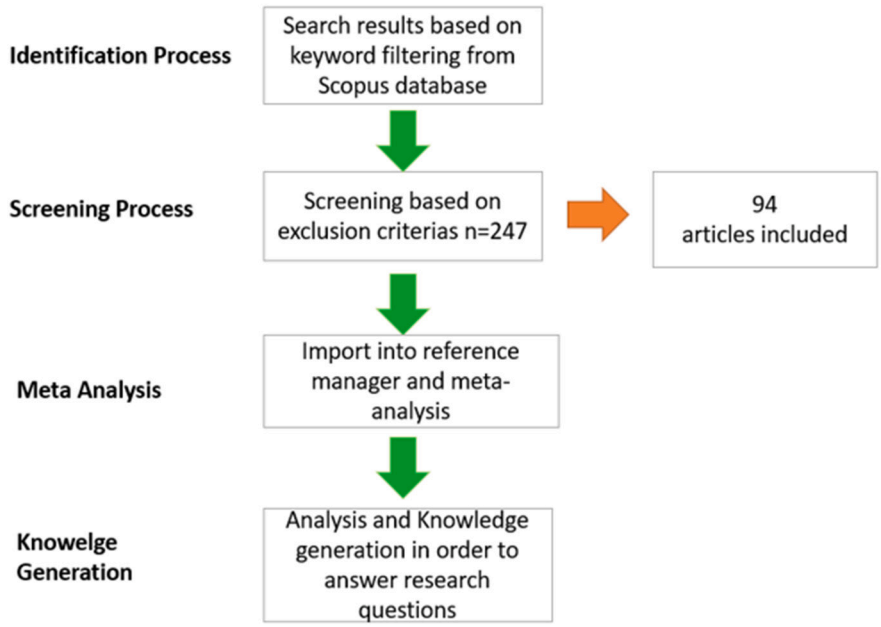

Fig. 2. Literature review process.

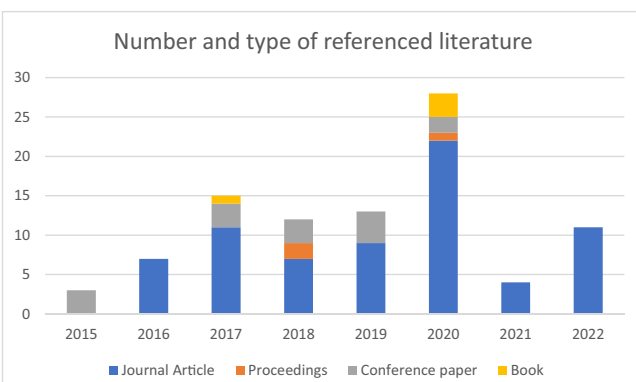

Fig. 3. Number and type of referenced literature.

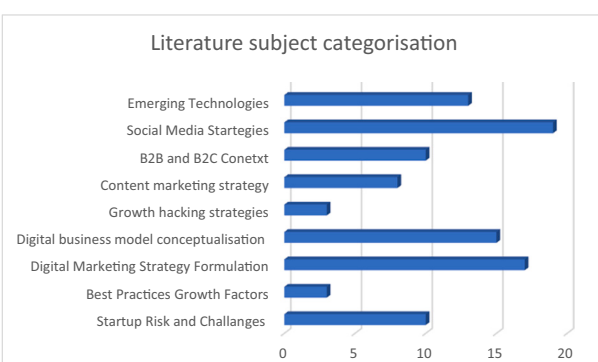

Fig. 4. Literature subject categorization.

Digital Marketing strategy formulation (16), Digital Business Model Conceptualization (15), and Social Media Strategies (11). The B2B and B2C contexts of digital marketing usage along with Content Marketing have a positive trend in the present research. We can also establish that best practices of digital marketing strategies are getting more researched in the period of the last 3 years, and new subjects are being introduced as growth hacking, connecting digital marketing with digital models, content market strategies and emerging technologies.

4. The relationship between digital marketing objectives, strategies, and their impact on start-ups

4.1. Analysis of digital marketing frameworks, dimensions, and objectives for extended marketing impact

In the digital marketing framework analysis, the focus is to identify the models, frameworks, and connections derived from digital marketing's extended impact on the organizational business components. As the vast field of digital marketing includes many frameworks and models, we investigated the specific ones which will help us define what are the dimensions and objectives from the overall organizational perspective and include the possible extended digital marketing influence. The goal is to research the key influence of digital marketing connected to several dimensions, objectives, and outcomes within its extended field of influence, reaching beyond the sales process and including new dimensions inside digital marketing opus which can impact organizational growth.

In Table 2, the extended impact of digital marketing from the perspective of cocreation, business dimensions, and value chain is identified through frameworks, usage examples, and development dimensions currently established by researchers. Interdisciplinarity and cross-functionality are marked as the pillars of stakeholder value creation in social media marketing (Felixa et al., 2017) and in such a way contribute to the company's strategic objectives of value creation. Moreover, focusing on social media marketing influence Felixa et al. (2017) propose a four-dimensional framework diversifying between different marketing scopes, traditional and flexible marketing culture, organizational structure, and governance models in the realm of social media marketing while structuring the right value creation stream. Within the perspective of supply management Hartono et al. (2020) imply how the vital role of supply chain management in the new business products establishment can be made within the digital marketing environment. The use of the supply chain technique conducted on social media channels had several impacts on start-ups and new products. Having a responsive service, maximizing marketing efforts with attractive content while maintaining customer service quality implemented by

Table 2
The identification of potential extended impact through digital marketing frameworks and dimensions.

Themes	Topics
Value chain	Stakeholder value creation – potentials of Interdisciplinarity and cross-functionality through social media marketing for value-creating within the stakeholder network Supply chain management and customer services - Responsive service, maximizing marketing efforts with attractive content through social media impacting new products establishment (Hartono et al., 2020) Online value delivering process - digital channels as key instruments in delivering value process distributed online within sharing economy influencing decision-making (Key, 2017)
Cocreation & community	Online community and content creation – Community building, active participation, and co-creation through digital platforms (Oestreicher-Singer and Zalmanson, 2013) Reducing uncertainty and customer education- reducing psychological distance and uncertainty for existing and new products via live video streams (Zhang et al., 2020)
Business model development	High-tech entrepreneurial content marketing – content marketing elements influencing the high-tech small firm's business model innovation (Mansour and Barandas, 2017) Internationalization process – the e-marketing dimension influencing communication, product or service adaptation, business model, distribution, market intelligence, and partnership development (Dethine et al., 2020) Customer dialog facilitation & recruitment - Digital marketing is used to support the goals of customer conversation enhancement (thus quality feedback collection) and as a recruitment tool (Taiminen and Karjaluoto, 2015)

(Authors' elaboration)

prepared teams defines this positive impact (Hartono et al., 2020). Planned execution and invested time in digital marketing strategy should be seen as a concept of business development, rather than just as a point of sales referrals. Nevertheless, if not properly managed (with specifically allocated working hours) the digital marketing impact won't be optimal (Hartono et al., 2020) and will require additional team resources to reach complete efficiency. Within the decision-making spectrum and value creation, Key (2017) divides digital marketing channels of sharing economy into three domains: e-mail marketing, social media marketing, and SEM. The channels are identified as key instruments in the process of delivering value (products and services), solely distributed online.

Using the video live stream strategy, Zhang et al. (2020) present how in the e-commerce platform TaoBao the perceived uncertainty and consumers' psychological distance are positively mediated by live video streaming (LVS) for product purchase intention. Looking at the videos of e-retailers and interacting in real-time via LVS can represent an effective way to reduce the psychological distance between already experienced products and new search products on the TaoBao platform (Zhang et al., 2020). From the online community and content creation, Oestreicher-Singer and Zalmanson (2013) synthesize community behavior and participation objectives in four stages:

- a reader type - only consumes content,
- users investing some time and effort in contributing with minor acts of participation and content organization,
- users which invest a large amount of time and effort in community participation
- members creating substantial content, leads, and moderate discussions in the community.

Having a participatory role in community building evokes cocreational behavior on digital platforms (Oestreicher-Singer and Zalmanson, 2013), which also connects to digital marketing as the same users by participatory actions are converted into paying members, act as content creators, and even can be recognized as brand ambassadors.

From a business model innovation Mansour and Barandas (2017) formulate the High-Tech Entrepreneurial Content Marketing framework with five elements: adapting content marketing in the business model, customizing content and customer profiling, organizational learning and business model experimenting, building strategic networks, content marketing, and the high-tech small firm's business model innovation. In the internationalization process of organizations, the e-marketing dimension impacts the following activities: communication, product or service adaptation, business model, distribution, market intelligence, and partnership development (Dethine et al., 2020). The feedback received either from platforms, websites or other digital marketing mediums combined with data analytics allows companies to have personalized data-driven targeted content for their customers. As the results show (Taiminen and Karjaluoto, 2015) the most important objective in SMEs for digital marketing tools was to facilitate sales, followed by communication facilitation and customer services. The research also included the following objectives: advertising and customer dialog facilitation, and recruitment. The main reasons why companies utilize digital marketing are the speed of communication, cost savings, and changing customer behavior (Taiminen and Karjaluoto, 2015).

In the identified areas of business models, cocreation & community, and value chain, it is evident how digital marketing impacts several development components, different than the traditionally perceived. These distinctions, from the strategic points, can position digital marketing as a growth supporter (or developer) within the specified areas.

4.2. *Emerging technologies and extended digital marketing impact*

Emerging technologies are changing the outlook of how marketing in general is conceptualized and used in the customer journey. From this perspective, we can already address some of the current prospects that emerging technologies and digital marketing create together (Table 3 summarizes the main findings of this connection).

Machine learning enables companies to obtain large databases which can be used for the optimization of digital marketing channels. Gupta et al., 2021 discuss how combining insights and big data analytics is used as a tool to identify opportunities in strategic decision-making on a company level.

Looking at Industry 4.0 needs and possibilities, Nosalska and Mazurek (2019) identify 5 principles of marketing intertwined with the usage of I4.0 technologies: Connectivity, Cooperation, Communication, Co-creation, and Cognitivity. In their marketing mix, a product is co-created, promoted, and distributed with mutual communication and coordination of the stakeholders. The price is determined dynamically from the data gathered (cognitive processes) by analyzing real-time customer behavior (Nosalska and Mazurek, 2019). Digital technologies empower new products being designed and used, but also from a strategic point, marketing connects and truly enables a digital ecosystem to have a holistic mission while creating a long-term relationship with stakeholders (Nosalska and Mazurek, 2019).

From another point, the extended realities will redesign the way marketing is done from its functional perspective. Wagner and Cozmiuc (2022) argue that within the IoT-enabled environments, in the case of digital enterprise architecture the extended reality technologies remodel the digital marketing functions from customer delivery mode, customer value proposition, choice of customer channel (the omnichannel) and possibly lead to new customer relationships, such as co-creation. The authors state that digital marketing through e-commerce platforms is complementary to digital supply chain management and as such its positions itself strongly within the customer management area. This point is implicating that marketing as a function might be adapted to provide an integrated solution in line with the business models of digital enterprises.

Table 3
Research findings regarding emerging technologies and digital marketing.

Article	Context	Impact areas
(Nosalska and Mazurek, 2019)	The I4.0 technologies & data analytics	Digital marketing principles and practices influencing the usage of I4.0 technologies and features (e.g. analyzing real-time customer behavior and price connection.
(Wagner and Cozmiuc, 2022)	Extended reality marketing impact on IoT platforms and digital architecture businesses	Extended reality (including augmented, virtual, and mixed) and marketing integration into Business Process Management Solutions and Enterprise Architecture.
(Gupta et al., 2021)	The use of big data as a tool to identify opportunities in strategic decision-making - combining human insights and BD analytics	Strategic decision-making via Big Data Analytics
(Chylinski et al., 2020)	Augment reality and marketing	Designing experiences extending the interactivity possibilities; customer journey enrichment
(Jung and Tom Dieck, 2017)	The environment of value co-creation	Contributing to the value co-creation of cultural heritage from the points of organization and visitors' experience (personalized, educational, memorable, and interactive)
(Tan et al., 2022)	AR impact on sales (retail)	The use of AR in facilitating product evaluation before purchase and its impact on sales in online retail
(Rauschnabel et al., 2022)	Creating AR environments for multiple touchpoints of customer journeys	Multiple touchpoint integrations within the customer journey including interactivity and links with existing marketing practices
(Kumar et al., 2016)	Intelligent agent technologies in marketing	The usage of IAT adoptions in the marketing domain
(Chohan and Paschen, 2021)	The use of NFTs to engage with the customer base	NFTs characteristics - scarcity, nonfungibility, proven authenticity, proof of ownership, royalties, and direct distribution infrastructure as opportunities in building higher customer engagement through marketing synchronization
(Rejeb et al., 2020)	Blockchain impact on marketing	Blockchain technology opportunities in marketing: privacy protection, combating click fraud, loyalty programs, trust & transparency, digital marketing security, and digital interlinks between users.

(Authors elaboration)

Continuing with transformations, Kumar et al. (2016) investigate which characteristics of intelligent agent technologies can be adopted within the marketing domains of companies. Within the augmented reality research, Chylinski et al. (2020) identify a number of digital affordances which can be developed within augmented reality marketing and what type of experiences ARM offers as existent marketing approaches (e.g. community interactivity and connectivity in digital environments).

As AR typically interacts with other media and touchpoints it needs to be well integrated with other media and marketing elements (Rauschnabel et al., 2022). Crosslinking the AR with digital marketing and creating journeys with multiple touchpoints seems to be the next step in synchronized marketing activities. It also exemplifies the emerging technologies position the marketing department towards having stronger strategic influence in the organization. Furthermore, as suggested by Jung and Tom Dieck (2017) the effective use of multiple technologies including AR contributes to the co-creation process (for organizations and visitors in tourism), implying the symbiosis of emerging technologies will move marketing departments even closer to the development areas. As within AR, the customer journey is enriched with multiple touchpoints, marketing will inevitably play a higher role in product/service development itself and play a part in the cocreation path of the interactive environments.

Current market trends reveal that correlation between AR, users, and creating a relationship between the brand is done through gamification processes. This process is based on the digital strategy of the brand within websites or applications, with the predictions of an exponential increase in customer leads and conversion rates through AR (Snap Consumer AR Global Report, 2021). In this situation, following the start-up metrics taxonomy, the Net promoter score (NPS) is expected to raise (Romero, 2022) as this immersive experience is likely to be shared by users with their close community. For instance, the retail brand Pull & Bear, in collaboration with Facebook Creative Shop launched Pacific Game. Users can open the game via the front camera function on Instagram, embarking on a virtual journey from California to Tokyo. The feature within the game allows users to interact with Pull & Bear's 'Pacific girls' collection instantly, without downloading it, and enables them to share it with friends (Versteeg, 2021).

At the same time, global companies are already testing their markets in Metaverse. It's expected that when regional and local brands start entering the Metaverse, a big breakthrough for Metaverse will occur (Hollensen et al., 2022). The virtual production start-up, Dimension Studio (Vogue Business, 2021) experimented with Metaverse for fashion brands. The virtual production set-up was established allowing a user to step into a platform, be scanned by 106 cameras, and be dropped into virtual worlds to test out garments and other items. Fashion brand Bulgari also launched its virtual world on Zepeto, currently Asia's biggest metaverse platform (Sandra Halliday, 2022). From an investment perspective, actions such as these signalized that the brands are opening up towards higher investments in having the interactive - virtual and physical space connected. This also exemplifies that digital strategies are already focusing on investing in interactive advertising environments, and especially as mostly the strategies are aiming at Gen Z as the target audience, future strategies will continue to develop leaning on the interactivity uniqueness of metaverse and virtual worlds.

Blockchain has materialized as a form of trust, where all data and critical records are stored in a decentralized way securing the ownership and authenticity of an asset (Nodehi et al., 2022). Along with blockchain, NFTs emerged. A non-fungible token (NFT) is a record on a blockchain connected with a particular digital or physical asset and its ownership is securely recorded in the blockchain. As it can be transferred by the owner, a new market has opened in which NFTs are traded. Companies should actively start using the NFTs for their brands, and build connections with their customers based on the unique NFT characteristics while relating to the brand's objectives and personality (Chohan and Paschen, 2021). As NFT is a digital asset, its value grows with scarcity. NFT creators build their profiles through different digital channels supporting them to connect with customers, communities and secure that their work authenticity will be recognized. Brazilian football club Vasco da Gama recently partnered with Block4 (a start-up specializing in the creation of NFT collectibles) to issue NFT tickets for the team's fans (Fernandes, 2022). With these actions companies are trying to build a special loyalty program based on the virtual interactive component of NFTs. Along with reinforcing trust, tech-based intermediation and privacy protection (Rejeb et al., 2020) argue that blockchain impacts marketing with loyalty programs, combating click fraud and empowering overall digital marketing security.

As the market is already changing and companies are recognizing the importance of testing their entrance into immersive realities (Rejeb et al., 2020), the future will surely hold more investments and marketing synergies with emerging technologies. It will depend on the pace of how

consumers will be moving to new realities but as stated in Snap Consumer AR Global Report (2021) the overall trend is moving upwards. This implies the possible scenario of stronger interconnection between existing digital marketing practices and new hybrid ones as previously exemplified through the gamification process. With a rich amount of data gained through interactive experience (Rauschnabel et al., 2022) the targeted advertising will be enabled on another level. Marketers are adopting their digital strategy led by the notion of which devices are users using, an interactivity is already becoming an important part of digital marketing strategies. From the product perspective, the acceptance rate of AR with users depends on the brand popularity, is the product considered mainstream or not, have the users ever purchased this product, or the other product from the same category (Tan et al., 2022). The process of full alliance between the digital marketing channels and new technologies depends strongly on user profile (ex. Gen Z) and interactivity ability via devices (Snap Consumer AR Global Report, 2021). Intertwined with already existing digital channels, strategies in this stage will likely continue to progress as a mix of currently established digital marketing practices and new emerging technologies. In parallel, a new business model might be designed interlining the marketing, platforms, and emerging technologies (Wagner and Cozmiuc, 2022) positioning companies and start-ups to explore the new hybrid ways of digital strategies and seize the opportunity to create different forms of digital marketing strategies and interactivity.

4.3. Start-up digital marketing strategies analysis

The focus of this analysis is to identify the digital marketing frameworks and strategies start-ups use, and their different points of impact. After the analysis, the preconditions for proper usage are also identified.

When designing a strategy and starting from objectives, Dave Chaffey (2017) begins with the question "Why do you want to go online, what are the objectives, benefits and advantages?". The 5S framework Dave Chaffey (2017) summarizes digital marketing objectives as Sell, Serve, Speak, Save and Sizzle, starting with identifying the goals and afterward discovering the right strategy to implement. Digital marketing options represent a crucial modern marketing tool for start-up promotion (Svetlana, 2018). Using digital marketing start-ups develop activities and strategies supporting their goals and reaching the target audiences. To reach a video streaming audience as eSports viewership, Lehnert et al. (2020) emphasize that in order to promote streams, marketers need to determine not only the demographic but also the psychographic makeup of viewers, which needs to be done as part of the overall strategy. The viewers participate in the stream (via chat) and build relationships with streamers, which opens an opportunity to use engagement tactics and build upon this connection.

Before each digital strategy launch, setting the right goals is a precondition. As shown by Kaur and Kumar (2020) without a systematic approach to digital marketing, the impact is limited. To formulate a digital strategy Safanta et al. (2019) used the SOSTAC framework accompanied by the SMART and Race framework for goals formulation and SWOT analysis. The framework was used to set goals, understand the market, competition, and internal capacities as a base formulation. After setting the formulation, digital marketing targets, strategies and tactics were made. Continuing with the same line of methodology Muhammad (2019) analyzed and provided insights on potential information technology-based marketing strategies, used by a start-up in the tourism sector adopting the SOSTAC and RACE planning framework. The results crafted strategies and tactics which included analytical tools to reinforce the main framework basis. In the context of mobile commerce Iru et al. (2017) also used the SOSTAC framework to deliver a set of recommendations – digital marketing strategies and tactics for a digital start-up. While forming growth hacking strategies, the RACE framework was also used by Coll-Rubio (2020) as a leading framework leading to short-term marketing goals.

The product-market fit should be achieved before viral growth happens (Conway and Hemphill, 2019). Having prior research done before starting with digital marketing activities and continuous evaluation (in line with Race methodology) are the key processes in the public relations actions implemented by start-ups with higher maturity levels (Coll-rubio, 2020). The research by Koch (2015) indicates scarcity and personalization can be used to activate promotional feedback campaigns for new IT start-ups when collecting user feedback on pricing, value proposition, and product-market fit.

From the point of how social media influences innovation outcomes (Corral de Zubielqui and Jones, 2020) discover that start-ups can utilize social media as an effective channel for accessing information, knowledge, and managerial learning while facilitating innovation. Start-ups within their networks on social media benefit more from learnings in technologically stable environments, and in dynamic market environments (Corral de Zubielqui and Jones, 2020), which further implies that start-ups' ability to act on digital marketing analytics can make a strong influence on its growth in versatile environments.

Crowdfunding has already established its position as a convenient strategy for using the wisdom of the crowd to raise funds and connect solutions and customers. Prototyping the product, building customer relationships with feedback collection and community building through social media and blogs, drives start-ups towards higher user engagement and product-market fit with right-on-time transparent communication (Li et al., 2016). Even with the present risks of underestimating demand, too crowded market and designing a comprehensive campaign, the possibilities of crowdfunding as a strategy go beyond just getting the first funding for the start-up solutions.

While studying which digital marketing strategies are used by start-ups in developing stages vs. a unicorn start-ups, content marketing in various forms via digital channels was found to be the primary strategy used (Tjandrawira et al., 2022). The findings also imply that a unicorn start-up, due to the budget flexibility used strategies that include a mix of traditional and digital marketing to enhance the customer journey. On a similar note Chen et al. (2017) present how in case of a dynamic content strategy of regularly disseminating information on product development, new industry trends, job recruitment successfully impacts start-up on team recruitment and brand awareness. According to Kuester et al. (2018) in the early stages, start-ups use a social, customer-centric promotion approach due to financial limitations. The mix usually includes social media (providing customer referrals by engagement in positive word-of-mouth), content on the website (blogs press), customer testimonials, merchandising, and videos – all low investment techniques. The usage of low investment techniques needs prior customer research to have an audience-channel fit which will naturally lead to the utilization of the fitting channels (as the concept of lean start-up develops on prior customer discovery). A key finding was the issue of not overinvesting in technical solutions up front, but rather developing solutions to a workable level and building the user group (Kuester et al., 2018). In their research Raman and Raman (2018) demonstrate how a strategic content marketing strategy, social media and customized videos lead Zomato to successfully connect customer engagement and growth retention.

As start-up matures, the need for digital marketing strategies differs. A marketing tool for assessing the sustainable development of a start-up by stages with defined criteria was developed by Svetlana (2018). The tool presents profiles of the optimal criteria values that are unique for each stage of the start-up life cycle from the marketing perspective. The start-up cycles are presented through four stages, concept, test, working-out, and launch. The study implies the number of marketing instruments rises as the start-ups enter a new stage (Svetlana, 2018) directly emphasizing the role and importance of strategic marketing implementation.

When a start-up matures, the maturity cycle continues to drive the start-up on having a corporate brand. Mingione and Abratt (2020) indicate which 5 marketing imperatives are transforming digital-born start-ups into a successful corporate brand: acting as an internal

accelerator, nurturing adaptive identity with flexible strategy, having online and offline experience, empowering internal stakeholders, and creating a trustful partners ecosystem. The authors also state that in order for this kind of brand to evolve organically, digital and social media are a priority while engaging and co-creating the brand with communities in the points of attraction, diffusion, and content consolidation. From another point, this process must be followed by investing in offline relationships.

4.3.1. Preconditions of the digital launch

From the reviewed articles we can establish that the digital marketing strategy has several preconditions before the digital launch: goals formulation (Safanta et al., 2019) or strategy goals aligned by situation analysis - benchmarking techniques (Iru et al., 2017), product-market fit for some tactics (Conway and Hemphill, 2019), clear indicators of measurability (Svetlana, 2018) followed by detailed research on customers (using different techniques to find an audience-channel fit). Having a customer persona and previous research on targeted customers/audience is essential. Recognizing the drives, values and motivations of the customers, geographic and psychographic dimensions (Lehnert et al., 2020), will help to understand and overcome obstacles to acquiring the targeted consumers (Lehnert et al., 2020). In the realm of content co-creation, it is very important to notice the benefits connected to digital community creation are multiple. As a precondition to produce a value-creating virtual environment that facilitates effective value capture and profits, companies need to understand users' behavioral dynamics in the given social context (Oestreicher-Singer and Zalmanson, 2013).

The result of the digital strategy formulation is represented by tactics designed to lead towards identified goals (raising brand awareness, customer loyalty, new user experiences, etc.).

Even more importantly, we can identify that digital marketing strategies are contributing to the development of several start-up growth areas. Using social media as customer resource management (Raman and Raman, 2018), having specific tactics to test products or services digitally (Li et al., 2016), relying on digital marketing channels to attract new talent (Chen et al., 2017), became the effective growth activities successfully applied by start-ups. These activities testify to the extended impact digital marketing tolls have on start-up operations and thus the need to understand and further identify the digital marketing driving the start-up growth.

4.4. B2C, B2B, and B2B2 digital marketing usage

With digital media, setting up activities and using different strategies to support objectives can be easily enabled through digital marketing channels, but differentiate between used business models.

Formulated social media marketing objectives can depend on the industry (e.g., B2B vs. B2C), the size of the firm (Felixa et al., 2017), and company stage development. Within Table 4, the research findings regarding the digital marketing usage points and goals between B2B, B2C, and B2B2C are presented.

The goal in each case is to have the right audience-channel fit, and this calibration can be different for B2B and B2C, or the B2B2C model. Even when the appropriate channel is used, the right strategy needs to be implemented to fully benefit from digital marketing. Although both types of companies invest, actively use and implement social media strategies, there is a noticeable gap in the evaluation process of strategies (Silva et al., 2020).

Unstructured usage of social media may cause unnecessary risks such as the loss of information on customer needs (by sales teams), and the „partial shift of the bargaining power relating to information access from the seller to the buyer"(Buratti et al., 2018). Therefore creating a social media marketing (SMM) strategy requires a higher level of commitment and a strategically clear vision of the SMM role within the company (Buratti et al., 2018).

Table 4
Research findings regarding the digital marketing usage points and goals between B2B, B2C, and B2B2.

Digital marketing channels	Digital marketing usage points and goals	B2B	B2C	B2B2C
Social media	Audience-channel fit needs to be formed (Felixa et al., 2017) Audience channel fit is used for content distribution and feedback for content design improvement (Yaghtin et al., 2019)	x	x	x
Social media	Evaluation process and measuring ROI (Silva et al., 2020);	x (Higher involvement from team and process analysis)	X (ROI evaluation stage better developed than B2B);	
All channels	Type of customer relationships formed within the strategy (Bhandari et al., 2017)	Company	Individual	
All channels	Buying cycle/ customer journey touchpoints (Bhandari et al., 2017)	Months	Days	
All channels	Budget availability on marketing and analytics spending (Bhandari et al., 2017)	Presumably higher	Presumably lower	
Social media	Customer engagement – through content and behavior analysis - posting content by inserting and highlighting the corporate brand names, functional and emotional appeals (Swani et al., 2017)	x (Increases the likelihood of audience approval)	x (Lower approval compared to B2B)	
Social media	Customer service and building customer relationships – are highly important (Iankova et al., 2019).			x
All channels	Customer satisfaction and acquisition, sales, stakeholder engagement, and customer relationships (Dwivedi et al., 2021)	x		
Social media	Employee brand management and company credibility as unique outcomes of usage (Dwivedi et al., 2021)	x		
Social media	Employee recruiting channel, company promotion (Svante Andersson, 2017)	x		x
Social media	The most commonly used tool of DM (	x		x

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Table 4 (*continued*)

Digital marketing channels	Digital marketing usage points and goals	B2B	B2C	B2B2C
Social media	Buratti et al., 2018); As a customer acquisition tool (Svante Andersson, 2017) Product functionality and content generation (YouTube Videos); Customer education on product/ company via blogs (Svante Andersson, 2017)	x	x	x
Social media	Difficulties in its utilization on Twitter (Svante Andersson, 2017)	x		x
Social media	Branding, sensing market, managing relationships, and content development - mobile social media (Bolat et al., 2016)	x		
Social media	Customer engagement and building long-term relationships (Rowley, 2017)	x		
Social media	Customer engagement – most engaging content (tweets) had elements of awareness, preference, and conviction (Juntunen et al., 2020)	x		
Social media	The effects of cannibalization from using multiple digital platforms can appear (Gruner and Power, 2018)	x		
Social media	Main objectives of content marketing (Instagram posts): customer acquisition/ retention, higher post traffic, lead management, brand awareness, and customer service (Yaghtin et al., 2019)	x		
Social media	Sales through social media are partially mediated by individuals and especially by the organizational factor (Guesalaga, 2016)	x		
Social media	Social media marketing is used more as a relationship and communication instrument rather than a sales-promotion tool (Silva et al., 2020)	x	x	

From a general perspective, we can identify there are several points in which digital marketing usage differs for B2B and B2C, mainly in the type of customer relationships being formed and decision-making process (company vs. individual), buying cycle/customer journey touchpoints (days in B2C vs months in B2B) and budget availability in order size (Bhandari et al., 2017). Several studies reveal the content and frequency of digital marketing strategies on digital platforms from B2B and B2C perspectives. By measuring liking and commenting behaviors Swani et al. (2017) made the key differentiation between B2B and B2C content on Facebook in terms of branding, message appeals, selling, and information search cues. The results of the study indicate that inserting and highlighting the corporate brand names, functional and emotional appeals followed by information search cues while posting on social media increases the likelihood of audience approval of B2B messages in comparison with B2C messages.

The review of social media's influence on B2B companies (Dwivedi et al., 2021) identifies several key observations starting with the fact that B2B companies benefit from social media through customer satisfaction and acquisition, sales, stakeholder engagement, and customer relationships. The same authors also notice the outcomes of social media usage are mostly similar in the context of B2B and B2C companies, with the difference that outcomes such as employee brand management, and company credibility are unique for B2B companies. Furthermore, in the context of B2B companies can use Facebook as an employee recruiting channel and as a company presentational tool in a more informal way (Svante Andersson, 2017). LinkedIn is identified as the most used tool in B2B service firms operating in conservative industries (Buratti et al., 2018), more commonly used by B2B and B2B2C organizations (Iankova et al., 2019), and as a strategy for targeting new customer by connecting to larger networks (Svante Andersson, 2017). YouTube is used for videos on product functionality and content generation (Svante Andersson, 2017) while blogs are utilized to target customers by providing in-depth information about the company or a product. B2B2C businesses indicate high importance to social media in terms of providing customer service and building customer relationships (Iankova et al., 2019). Twitter was found to be a platform in which companies have more difficulties in its utilization, and in some cases can fail to meet expectations of value provided (Svante Andersson, 2017).

Contributing to the development of different outcomes from digital marketing channels, Bolat et al. (2016) demonstrate how B2B companies from the marketing and advertising sector use mobile social media for branding, market sensing, managing relationships, and content development.

Interestingly, in a B2B environment, the effects of cannibalization from using multiple digital platforms can appear and Gruner and Power (2018) study findings suggested that social media activity on LinkedIn, Twitter and YouTube can negatively affect the marketing activity on Facebook. This study indicates that focusing on specific social media platforms leads to higher effectiveness in creating a successful inter-organizational bond rather than a multiplatform approach.

Customer engagement on social media usage in sales is partially mediated by individuals and especially by the organizational factor (Guesalaga, 2016) as businesses strive to make successful long-term relationships with their stakeholders. In B2B context, social media channels are strongly identified as an opportunity to engage and cultivate customer engagement followed by strengthening already formed customer relationships (Rowley, 2017). Furthermore, in relation to customer engagement and social media content in B2B environment (Juntunen et al., 2020) reveal that the most engaging tweet content had elements of awareness (cognitive), preference (affective), and conviction (conative). With the objectives of audience engagement on social media companies can successfully attract not just their usual audience, but even reach out to potential buyers who are usually not perceived by the sales team (Juntunen et al., 2020). Moreover, Yaghtin et al. (2019) identify the main objectives of content marketing in B2B (Instagram posts) involve customer acquisition/retention, higher post traffic, lead

management, brand awareness, and customer service. The same authors conclude with a strategic suggestion that it's important to consider making an appropriate audience channel fit for content distribution and using the audiences' feedback as insights to improve the content design.

Social media marketing is used more as a relationship and communication instrument rather than a sales-promotion tool, for both B2B and B2C companies but especially for B2B (Silva et al., 2020). Interestingly, when it comes to measuring the return of investment (ROI) in the same study B2C companies with an online commerce activity could measure the SMM benefits easier, making them more developed than B2B companies in the ROI evaluation stage. The strongest point of interaction for both types of companies is the investment in the organizational resources enabling them to understand and act on the data provided by digital marketing (Silva et al., 2020).

Making digital tools a cross-sectional mediator for stronger cooperation between marketing and other functions (cross-functional task forces, customer service, product development, digital sales channel management, customer communication, and strategy development) benefits companies' performance (Leeflang et al., 2014). Aligning digital marketing impact possibilities with companies' audiences seems to have the same priority from the strategic point for B2B and B2C companies, and the next steps in effective digital marketing plan realization should be focused on what will be the right strategy and how will the process be designed throughout the whole customer journey.

5. The relationship between start-up challenges and digital marketing

5.1. An overview of the existing research on start-up challenges connected with digital marketing

The fuzzy knowledge of key business components and time invested in the latest technology developments while underestimating the needs in marketing and brand initiatives mark the first challenges start-up have (Standing and Mattsson, 2016). Time dedicated towards product and technology development overtakes marketing and customer relationship areas. As product development progresses, approximately the same level of effort should be added to get customers educated or accustomed to the product. Start-ups must familiarize the customers with their product for a positive impression of the brand's quality, performance, uniqueness, and image (Ghelichkhan et al., 2020) to reduce the unknown character of the start-up presence on the market. In such a way, first product introductions to customers should serve as an activity to gain higher levels of trust by reducing uncertainties on start-ups and products. The success of social media marketing is dependent on actively engaging with customers at an early stage, and start-ups that adopt the idea of being active right from the start will benefit from advantage beyond reliance on potential customers (Virtanen et al., 2017). Digital marketing channels and practices are bridging the lack of start-ups unfamiliar presence and can form a sustainable connection between start-ups and customers. Several uncertainties occur within the early stage, especially concerning customers and how to reach the first, early adopters. In their research Lehnert et al. (2020) recognize the importance of creating the customer persona to understand the pains, needs, motivations and emotions of the targeted audience. In the early stages, a start-up reputation is not yet developed, and generating awareness with different brand co-building strategies can be introduced (Chen et al., 2017).

As digital marketing strategies are inbound, customers can be easily reached with personalized content based on their data. This fact opens the door, as never before, to ethical and transparency questions in virtual two-way communication. Personal data and insights gathered from the customers through several touchpoints of the customer journey might represent a matter of concern. The way the company tracks/communicates the user's online behavior, data protection and the amount of data requested are one of the most common reasons why millennials change their relationship with companies (Deloitte, 2019), making transparency an important element that influences decision making.

From the point of the experimentation process, the challenge start-ups have from R&D before the launch of the product is to target the most promising market (with adequate maturity level) and reduce waste (Bekhradi, 2018). Different market research techniques can be done through digital marketing channels supporting start-ups in the understanding of the market (trends), targeting customers and their needs (testing process, cohort analysis). Therefore, 1st maturity actions should be made by a simple strategy of fast iterative experimental approach, small scales, and a simple logistics process (Standing and Mattsson, 2016).

Lack of marketing and sales strategies, internet marketing strategy and good social media presence were identified by Akter and Iqbal (2020) as points for further development in digital platform start-ups. The identified points navigate towards the organizational group of factors, meaning that they can be directly influenced by the founder's team. The same authors identify areas that can be also linked to digital marketing influence as lack of customer understanding, product mistiming, user-unfriendly products, and products without a proper business model. Chakraborti et al. (2022) also note that the strongest barriers to digital marketing from the start-up side include usage, value, risk, and psychological barriers.

If we consider the minimal viable product (MVP) as a creative and engineering process relying heavily on the context in which it's being designed for software start-ups (Nguyen-duc, 2020) the digital marketing strategies used to test the MVP (ex. landing page) need to correspond the context, target audience and resources start-up has to implement the strategies. Furthermore, the term MVP is identified as an iterative testing process of learning through experimentation (as adopted through lean methodology) and represents a need to experiment and understand ideas, users, and the market (Melegati et al., 2020). This way the MVP is observed as a continuous learning process, rather than a tool for solely designing an initial version of the product and time-to-time testing process.

Therefore, all the mentioned challenges become possible growth areas and drivers which can be influenced by digital marketing tools. Looking at it from a strategic point, this opportunity calls for a more systematic outlook on digital marketing activities and how if used as a strategic tool, can impact a number of start-up challenges. The point here is the have a guided process on the possibilities of digital marketing influence connected with start-up challenges, from a macro (strategic) perspective. In the following Table 5, the start-up challenges connected to digital marketing are presented. In order to group challenges into complementary areas, the categorization was done in line with Macmillan (1987) dimensions corresponding to product, market, team, and finance areas.

From reducing technology uncertainty through customer education (Kuester et al., 2018), to the design process of supply chain management as part of customer service on social media (Hartono et al., 2020), challenges start-up can be interconnected with the potential influence of digital marketing. For this reason, in the last column of Table 5, we propose several potentials of influence that can be connected as a (partial or total) solution from the digital marketing spectrum to the linked challenges. Resolving certain challenges have the potential of influencing several areas because of the different context solutions that can be introduced and the type of digital marketing activities. For example, if the challenge a start-up has is how to introduce new features and improve on existing ambiguity of usage (Bohnsack and Liesner, 2019), through digital marketing channels customers can be educated on product usability, origin and benefits, and specific use of the feature itself. Furthermore, after launching the new feature and publishing the relevant content, through online feedback (and data analytics) direct insights can be gathered from customers, which can also influence service innovation design (Kuester et al., 2018).

Table 5
Start-up challenges connected to the digital marketing potential of influence.

Start-up challenge	Source	Business operation area	Digital marketing (DM) extended potentials of Impact
Technology uncertainty	(Giardino et al., 2015)	Product	Customer education (on product usage, start-up, innovation origin, etc.); User testing/ experimentation (turning feedback into insights)
Defining minimum viable product/ product market fit	(Nguyen-duc, 2020)		Identifying product-market fit (using DM strategies)
Product mistiming	(Akter and Iqbal, 2020)		Market/competition research
Failure to pivot	(Akter and Iqbal, 2020)		Product-market fit (using DM strategies); Market/competition research
Unique brand identity	(Kim et al., 2021)		Brand building and awareness (through DM channels and strategies)
R&D before the product launch	(Bekhradi, 2018)		Testing/ experimentation through DM tools; Market research
Introducing new features; Identification of potential lacks clarity related to new features	(Bohnsack and Liesner, 2019)		Publishing content on Product Features (Usability, Technology); Receiving Feedback through DM Channels; Customer Education (usability, origin, benefits)
Transparent communication; Sustainability	(Kim et al., 2021)		Transparent content & communication
Consumer concerns about online privacy, data, fake news	(CIGI-Ipsos Global Survey, 2019)		Customer education on data privacy and security
Fake online reviews; Misinformation distribution; negative eWOM	(Dwivedi et al., 2021)		Publishing verified information (on products, processes, financial & sustainability reports)
Decision-making involving market and technology aspects.	(Bekhradi, 2018)	Market	Testing/ experimentation through DM; Market research data (from all stakeholders)
Acquiring first paying customers	(Giardino et al., 2015)		Generating leads through DM channels - sales; Customer engagement & retention techniques
User unfriendly product, Ignore customers	(Akter and Iqbal, 2020)		Customer education; Testing/ experimentation (feedback collection); Product feature content (usability)
Customer retention	(Conway and Hemphill, 2019)		Customer Engagement, Retention &Support; Cultivating long-term relationships with customers (and partners in the value chain); Partnerships with different stakeholders
Little user knowhow	(Marins et al., 2017)		Testing/ experimentation DM options; Insights from product-market fit; Market research; Customer education
Targeting a niche Market	(Giardino et al., 2015)		Market research (on customers, products, competition, trends); Testing/ experimentation DM options; Insights from product-market fit;
Customer persona	(Lehnert et al., 2020)		Market research (on customers, products, competition, trends); Testing/ experimentation DM options
Credibility and trust	(Kuester et al., 2018)		Customer education & Support through DM channels and strategies, transparent activities, and partnership development.
Almost non-existent brand image	(Marins et al., 2017)		Brand building and awareness; Customer education on brand: Partnering with complementary brands
Delivering customer value	(Giardino et al., 2015)		Product-market fit; Supply chain management and customer services; Simplicity in defining and delivering value
Lack of marketing and sales strategies; Lack of a powerful internet marketing strategy; Not having a good social media presence; Campaigns with a low probability of successful funding	(Akter and Iqbal, 2020) (Marins et al., 2017)		Generating leads through DM channels & strategies; Customer engagement & retention techniques; Brand building and awareness
Start-up success factors: enough market Feedback, defining the right market	(Bormans et al., 2020)		Market research (on customers, products, competition, trends); Testing/ experimentation DM options; Insights from product-market fit
Lack of resources; building entrepreneurial teams	(Giardino et al., 2015) (Oliva et al., 2019)		Team contributions to content development; Recruiting announcements through DM Channels (viral effect); Data analytics as a resource
Supply chain management	(Hartono et al., 2020)	Team	Customer education & Support through DM channels and strategies; Simplicity in the supply-delivery process
An excessive number of requests on social media to salespeople	(Dwivedi et al., 2021)		Planned customer support through DM Channels
Resistance to documentation; Short delivery;	(Oliva et al., 2019)		Using data analytics provided by digital platforms as inputs for

(*continued on next page*)

Table 5 (*continued*)

Start-up challenge	Source	Business operation area	Digital marketing (DM) extended potentials of Impact
Pressure for results in a short period			internal planning and strategy delivery
Usage, value, risk, and psychological barrier	(Chakraborti et al., 2022)		Team contributions to content development
Acquiring initial funding	(Giardino et al., 2015)	Financial	Raising Investor awareness by publishing different content (start-up industry news, recruitment, product information, leadership articles, etc.)
Matching funding, investors, and start-ups with blockchain	(Saji et al., 2019)		Raising funds, secured and transparent with digital and blockchain strategy
Poor creativity with funding	(Akter and Iqbal, 2020)		Low investment techniques and strategies for a targeted audience

(Authors' elaboration)

The start-ups with the highest level of development are the ones in line with the highest level of knowledge adoption management – used practices and tools representing planning, execution, and control of the knowledge process (Oliva et al., 2019). With this notion and context of digital marketing, the plan is to present and interconnect which digital marketing practices lead towards higher start-up growth and how the process of knowledge can be tracked and measured.

5.2. *Start-up maturity levels and digital marketing extended potentials of impact*

When connecting digital marketing strategies and start-up challenges, it is also important to present which kinds of challenges are linked to different start-up maturity levels. To encompass start-up challenges, maturity levels, and potential influence on growth from digital marketing, within Fig. 5. The Start-up maturity framework and digital marketing potentials of influence are presented. The start-up maturity levels used in this framework are based on Crowne (2002) business dimension propositions along with suggestions by Besker et al. (2018). The last column of the Start-up Maturity Framework and digital marketing growth potential of Fig. 5 presents the possibilities of where digital marketing can support start-up growth.

At the first level, early-stage start-ups face numerous challenges. From a maturity perspective, there is an ongoing process of defining value propositions, matching products with the market, and discovering

Start-up Maturity Levels	Early-stage	Stabilization	Scale-Up	Maturity
	1st level	2nd Level	3rd Level	4th Level
Key level processes	First product release First Customers First Revenues	Additional key features Additional customers	Specialization and coordination Scaling to several customers/new markets	Expansion/ extension (build vs. buy)
Resources	Lack of time, personal, funds; Focus on technical functions Strategically non-aligned	Short-term funds available, in search of new investments or higher sales; Team roles need to be strategically defined; Main KPIs identified; Resources not yet in line (HR, Strategic alignment)	Easily attracting new investment (if needed); Team Roles defined. Targeted hiring, improving quality and implementing processes*	Targeted hiring, improving quality and implementing processes* Experienced team and leadership in place Resources functionally aligned
Maturity Level Challenges	Defining VP; First sales; Market and customer discovery; Lack of Knowledge diffusion and regular practices; Lack of strategic plan of product development	Product still not finalized; Customer base still growing; Team not yet complete; Low level of work practices establishment; Business objectives planned (with milestones and KPIs) Marketing and sales getting set with clear objectives and measurements	All business processes getting refined. Growing into stable innovative-working culture (attracting the best talent)	Decision making connected to growth (new markets, customers, industries)
Digital Marketing Challenges	Lack of dedicated staff/team/ digital marketing resources; Lack of market and customer understanding; Lack of customized market messaging; Lack of (or basic) marketing planning; Limited (or no) data analytics use from DM Channels Digital marketing as a separate start-up function	Marketing role defined; Audience-Channel fit; Corresponding Objectives and measures identification (leads and conversion); Higher need for brand awareness and customized content marketing; Digital marketing actively supporting other business processes	The start-up is in process of having or has a dedicated inhouse team that generates new ideas, design campaigns and executes them and/or outsources parts of process. Smart data obtained from DM converted into insights for decision making.	Full alignment between data, marketing, sales, and other sections; Creating relevant content, campaigns, and activities in all types of formats, channels to position/remain as a market leader/ enter new markets
Digital Marketing Extended Potentials of Impact	Product-Market Fit; Sales & Lead Generation*; Market Research; Customer Education & Support; Engagement and Retention; Community Building Brand Building &Promotion* Testing & Analytics *; Partnership development; Raising Investor Awareness	Sales & Lead Generation*; Product Features Optimization; Testing & Analytics*; Brand Building &Promotion*; Transparency Community Building; Internal Process Development; Partnership development; Customer Education & Support*; Engagement and Retention*	Product Features Optimization Sales & Lead Generation* Product-Market Fit (new products/markets) Testing & Analytics* Cultivating long-term relationship* Transparency Culture building and talent search Raising Investor Awareness	Internal Process Development (Complete data optimization); Cultivating long-term relationship*, Culture building and talent search Product-Market Fit (new products/markets); Brand Building &Promotion* Sales & Lead Generation* Communication, Engagement and Retention

Fig. 5. Start-up maturity levels and digital marketing growth potentials.
(Authors elaboration based on Crowne (2002) and suggestions of Besker et al. (2018))

the target market while usually having limited resources (Giardino et al., 2015). Continuing with the start-up market perspective, the discovery and knowledge gap exists in market and customer understanding, along with reducing uncertainty (Kuester et al., 2018) followed by almost non-existent brand and marketing strategies (Akter and Iqbal, 2020). Additionally, in this (and the next stage) start-ups usually need to acquire new investments as well (Giardino et al., 2015).

The development of new business models and enablement of full digital marketing potential requires certain resources to encompass new insight, and smart data (Peter et al., 2020) while balancing resources of time and team skills. Start-ups with higher maturity levels usually research (customers, market, audience-channel fit) before they start with digital marketing activities and continuously follow up on camping evaluation results (Coll-Rubio, 2020). The use of data optimization, defining business, and marketing process starts to happen in the next start-up maturity stage, stabilization. The product is already developed with (possible) needs for upgrades and further testing, the audience-channel fit is being finalized, the team is aligned (although not fully) and the customer base is growing. The specific needs in this stage are more focused on stabilizing business processes (supported by smart data), progressive brand building, and customer retention (Kim et al., 2021), while designing the customer journey as a long-term relationship experience. As start-ups reach higher levels of maturity, a well-defined internal system of using data analytics to influence decision-making by translating data into insights can bring a lot of clarity and direction for future steps. Social media utilization through effective strategies and cost efficiency enables further start-ups to be established (Crammond et al., 2018).

When a company is in a position to scale into new markets or extend its impact towards old/new customers, it has reached the stages of scale-up and maturity. As exemplified in the case of Zomato growth (Raman and Raman, 2018), reaching this stage required investment in talent and business operations while implementing niche strategies with different revenue streams for entering the new markets. Other than challenges connected to new market entries, creating a long-term relationship with creative and high-level content, remains a crucial point in customer experience design at this stage. From the content perspective, designing attractive content, campaigns, and activities in all types of formats and channels needs to be done to be positioned/remain a market leader.

Nevertheless, in all the maturity stages the possibilities of growth connected to digital marketing can be identified. This fact is opening a space to shape and elevate start-up growth by using different digital marketing tools and impact growth within diverse business dimensions.

6. Encompassing extended potentials of digital marketing impact into start-up growth drivers

Digital marketing has a macro dynamic role as it can influence supply chain management (Hartono et al., 2020), enabling start-ups to test and improve communication and delivery within their supply chain. In the early start-up stages, digital marketing can educate customers on product usability, reduce uncertainty and build trust. Furthermore, it outlines the need of having complex processes narrowed simply and understandably (Standing and Mattsson, 2016), accelerates the enrichment of the customer journey by using data analytics, and acts as a link of sustainable and transparent communication with stakeholders.

As researched in the literature, no framework or overview has been identified which connects the overall influence digital marketing can have on start-ups as a potential driver of start-up growth within several business operation areas. Thus, the goal of this article was to identify how digital marketing can be used to assist different business operation areas in start-up growth. Firstly, the analysis was made to identify the digital marketing methodologies, strategies used to tackle certain objectives, strategic perspectives, and different usage of digital marketing between B2B-B2C aspects. Secondly, we have reviewed start-up challenges connected to the digital marketing realm while also analyzing which challenges are commonly identified throughout different start-up maturity levels.

After the identification of challenges start-ups have within the digital marketing opus, we have mapped out the possible impact areas in which digital marketing can make an effective contribution and further drive start-ups towards growth. This resulted in creating the following framework of growth drivers for start-ups that can be supported by digital marketing tools and tactics (Fig. 6).

In the following Fig. 6, a macro-dynamic Framework identifying Growth Drivers and Digital Marketing Tactics for achieving Start-up Growth is presented. The framework summarizes the findings of the literature review and connects growth drivers with digital marketing channels and tactics used to tackle different start-up challenges. The term *growth driver* in this context links the extended digital marketing impact, start-up challenges, and business dimensions that could be influenced in some aspect by digital marketing tools. The framework starts with presenting growth drivers connected to the appropriate business operations area. The growth objectives encompass the identified influence of digital marketing channels, tools and tactics on start-up challenges and maturity (as presented in Sections 2 and 3). The objectives for digital channels by Taiminen and Karjaluoto (2015) were used as the base for growth drivers identification, followed by other dimensions and areas identified in the literature supporting start-up growth through digital marketing. With the same classification as in previous sections, the growth drivers are grouped into four categories - product, market, team, and the financial area proposed by Macmillan (1987), and altogether 15 growth drivers are established.

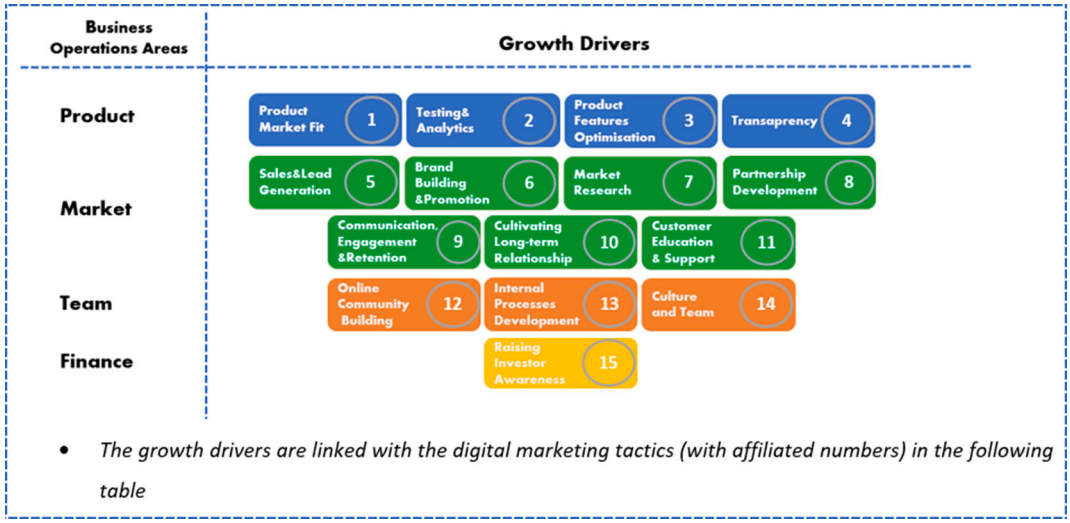
This framework is made to serve as a strategic macro perspective of the digital marketing possibilities influencing certain aspects of start-up growth. Having this in mind, for the sake of simplicity some of the similar growth drivers were associated under one term (ex. Brand Building & Promotion also represents Brand awareness, Reputation and Uniqueness). The growth drivers can also represent strategic business objectives linked with digital marketing possibilities.

The second part of the Framework encompasses the digital marketing channels and tactics used to impact specific growth drivers (the connection is made by corresponding numbers of growth drivers and tactics presented in Fig. 6).

In the literature and practical industry examples, we can observe the use of the term *tactics* as the end product of a digital marketing strategy and/or growth hacking activities, which will also be used in this work.

The tactics are linked with different digital marketing channels. Some tactics can overlap between channels and for this overview, the connection between tactics - channel was made based on the most frequent usage of the channel (and strategy) on which a certain tactic was implemented. One tactic can influence several growth drivers, but in order to have a more focused view on impact, tactics are connected to growth drivers based on the context they were used in. Nevertheless, they can be also efficiently used for other drivers in a different context (Live Video Streaming can be used for Customer engagement but through the identified research it was used for Customer engagement & retention). Tactics that have a similar (or same) impact have been grouped under one line. Presented tactics identified through this research (individual or grouped) had the criteria of potentially influencing minimally three growth drivers.

The framework is made to simply guide start-ups when it's necessary to tackle challenges while turning them into growth drivers. To use the framework the first step is to look at growth drivers presented as items in the first part of the framework and select the growth driver which start-up wants to develop/has a challenge in this area. The second step is to look at the number of growth driver and identify all the proposed tactics with the same number as the driver (or vice versa). If a start-up is releasing a product and simultaneously needs to educate customers on the product usage/value, Customer Education & Support (number 11) as a growth driver can be identified in the framework. In this way, the framework helps the start-up identify the growth drivers and offers the



	Digital Marketing Tactics	Digital Marketing Tools/Channels	Growth Drivers
1	Social media campaigns & promotional posts	Social Media& Content Marketing	1. 5. 6. 9.
2	Recruitment Posts	Social Media& Content Marketing	6. 9. 13. 14.
3	Authentic content – Founder's story-telling, frequent blog, education on innovation origin, e-books, podcast, webinars	Social Media& Content Marketing	5. 6. 9. 11. 15.
4	Content shared from other sources (Reports, e-books, podcasts, industry news)	Social Media& Content Marketing	6. 8. 11.
5	Content Cocreation (by community members, contributors, partners)	Social Media& Content Marketing	9. 10. 12. 14.
6	New product feature announcement, product usability messaging	Social Media& Content Marketing	3. 9. 11.
7	Partnership building – joint reports, e-books, podcasts, promo sharing, webinars	Social Media& Content Marketing	5. 6. 8. 10.
8	Contests, challenges, and gamification	Social Media& Content Marketing	5. 6. 9.
9	Hiring Influencers	Social Media& Content Marketing	3. 5. 6. 10.
10	Loyalty program & Referral Program	Social Media& Content Marketing	5. 6. 9. 10.

Fig. 6. A macro-dynamic framework identifying growth drivers and digital marketing tactics for achieving start-up growth.

solution of several digital marketing tactics which can be utilized to directly impact the identified growth driver and challenge.

The tactics presented in this framework are identified through literature and industry examples. In the next section, all the identified growth drivers will be presented along with corresponding digital marketing tactics and industry examples.

6.1. *Digital marketing growth drivers for start-ups*

6.1.1. *Product-market fit*

Product-market fit is identified as a set of activities, objectives and techniques used by start-ups to understand the market need and validate the value proposition. Through a series of build-measure-learn iterations (Chanin et al., 2020) the base function of product-market fit is to clearly identify the need which customer base has, while simultaneously fully understanding the customer base itself. Some of the activities can be marked as pre-product-market fit or post-product market fit (Gupta et al., 2020), depending on the type of the product/service, but in general perspective, product-market fit activities include:

- collecting inputs from the customer base (through interviews, surveys, and all kinds of research methodologies)
- market research on themes and trends similar to the product idea
- based on the inputs and insights collected (pains ad gains) forming the value proposition¸
- designing working prototypes and minimal viable products,
- validating prototypes and MVP quantitatively (data analytics) and qualitatively (feedback in all forms) followed by selecting and prioritizing the most important features/pain points

11	Online community building	Social Media& Content Marketing	9. 10. 12.
12	Customer Support/ Feedback Messaging	Social Media& Content Marketing	10. 11.
13	Transparent communication & content (Understandable privacy policy, transparent content)	Social Media& Website& Content Marketing	4. 6. 9. 11. 14.
14	Market research via platforms - Competition scanning, search trends, keyword optimization, the search of demotic and negative keywords	Website, Social Media, SEO&SEM	1. 2. 7. 9. 13.
15	Website & Landing Page, Retargeting, Case Studies	Website, Affiliate, SEO&SEM	1. 2. 5. 6. 9.
16	A/B Testing, Cohort analysis, and other audience testing options with data analytics	Website, Affiliate, SEO&SEM	1. 2. 3. 13.
17	Retargeting Audience	Website, Affiliate, SEO&SEM	5. 6. 9.
18	Integrated platform options (Single sign-in login, automated content sharing)	Website, Affiliate, SEO&SEM	3. 9. 13.
19	Clickable Prototype (part of testing process/ communication)	Website, Affiliate, SEO&SEM	1. 2. 3. 7.
20	Traffic Data Analysis (on customer behavior) & Online Panels	Website, Affiliate, SEO&SEM	2. 7. 13.
21	Scheduled newsletters, Personalized Email & Keyword-based emailing	Email Marketing	2. 5. 6. 9. 10.
22	Surveys, polls, and pop-ups (during the whole customer journey)	Email&Social Media&Website	1. 2. 7.
23	Videos & Live Video Streaming	Video Marketing & Device/App	5. 9. 12. 14.15
24	Emerging technologies - Augmented Reality Experiences, Blockchain NFTs	Interconnected with used digital platforms	2. 3. 4.10.12.
25	AI-powered analysis and customer targeting	Interconnected with used digital platforms	3. 5. 7. 9

Fig. 6. (*continued*).

- product validation (number of reported sales establishing the product-market fit has been acquired)

It's important to note that there are three active processes while defining the right market fit for a start-up value proposition (Gupta et al., 2020):

- Problem validation or exploration (initial exploration based on the observed problem customers have)
- problem-solution fit (mapping the services and product which might be an answer to the problem) and
- product-market fit, creating first solutions based on the two previous processes.

However, when looking at all three mentioned processes from the perspective of one overall activity, the final output is reaching the product-market fit. For that reason, product-market fit is selected as a theme for all the activities digital marketing has at its disposal, from initial problem research to establishing the right point of product validation. In the first stages, it's recommended not to invest in more sophisticated tactics of growth hacking until the target audience is defined and a surge in growth is needed (Conway and Hemphill, 2019). In this scope, tactics that can be used mainly belong to the market research section: different kinds of surveys and social media (Digital Marketing Institute, 2017), competition scanning (Chen et al., 2017), clickable prototypes (Bland and Osterwalder, 2020), using platform data from social media campaigns to define the audience (Bohnsack and Liesner, 2019), and using search trends along with keywords for better needs & trends definition, transition to testing with landing pages, a/b test and other forms in later stages (Conway and Hemphill, 2019). To test whether people would like to use software to schedule their tweets, Buffer.com developed a simple landing page in two layers by asking would people use it and whether they would pay for such a product. The test resulted in positive interest from the users and the start-up went ahead and developed the real product.

In a more progressed stage when the product-market fit is finalized, digital marketing combined with data analytics software (ex. Google Analytics, Optimizely, HubSpot) becomes unified as a driving solution for higher retention and configurations of constantly updating for a better fit.

6.1.2. *Testing & analytics*

Testing is the key solution to reducing risk in idea validation and that's why testing actions are divided into several hypotheses using different tools of testing (Bland and Osterwalder, 2020). The testing process is connected to the product (service), features, or customer relationship refinement. Within the testing scope, the test of hypotheses or models can be done for product (idea) desirability, feasibility and viability (Bland and Osterwalder, 2020). Connected with data analytics, insight collected through the testing process makes one of the key points for decision-making on future actions of the business model.

Landing pages can influence lead generation while answering the question of desirability and validation of the product/service with a call to action (feasibility). Search Trend Analysis as a digital marketing tactic

can give insights on the current market outlook and how the solutions are presented (viability). Different models as freemium also represent a form of test validating used business model, and shaping the environment to gather data on subscribers behaviors while simultaneously using the data for customer retention (Oestreicher-Singer and Zalmanson, 2013).

In this overview, tactics presented in the framework experiment on several different processes through digital marketing channels:

- value proposition/product-market fit testing
- market and customer base testing
- product features testing
- content/messaging testing.

Online panels on crowdsourcing sites as Amazon Mechanical Turk can be used for testing website layouts, customer communication format and feedback collection through the lean discovery process in a specific context (Carroll and Casselman, 2019). This kind of testing enables a high level of engagement, reduces time and money, and has the flexibility of data optimization while uncompromising parts of customer-building relationships. Traffic data analysis on the website is used as a tool for optimization, testing, and understanding customer behavior (Bland and Osterwalder, 2020) exemplifying how big data and machine learning (as part of emerging technologies) are already being used to test and optimize digital marketing channels via digital analytics tools and software.

6.1.3. Product features optimization

Product features are closely linked with product-market fit and testing but still can represent an individual component as features can be tested or validated as a single entity of a product/service. Especially in scenarios of having additional features added to the initial proposition, the single new component needs to be monitored from the point of how much value does it bring to the overall product/service. Through communication strategies (ex. blogs) new feature announcements adding value can be tracked and measured on how it impacts the overall value offering (Bohnsack and Liesner, 2019). As the impact of influencers is identified through "hedonic and utilitarian" values of products and services (Lin et al., 2018), this digital marketing tactic (with the right match previously defined between start-up, influencers, and audience) can support stronger acceptance of product features on the market. From the emerging technologies perspective, social network Snapchat is considered a pioneer of AR with its Lenses feature/experience in the app, adding to the value of hybrid bonds between digital marketing and emerging technology (Rauschnabel et al., 2022).

What is also recommended in the overall product (and features) design is to have simplicity as a method of developing and introducing products along with the features to the customer base. Start-ups tend to have too complex models in the beginning (Standing and Mattsson, 2016) and complexity impacts all business dimensions, including digital marketing. Simplicity is connected to the value proposition, if the product explanation or education takes too much time, customers can easily switch to using a competitive product. Simplicity as a concept is driven by making an understandable solution with intuitive usability and as such needs to be implemented in digital marketing activities. Simplicity implies more of a preparation or testing view while launching any activity. If the goal is to make a video to boost customer education, does it simply present the benefits of the product? If the landing page is being launched, is communication towards users fluent and leads to an understanding of what the call to action is? Simplicity also connects to iterations (product and features), overall communication, logistic process (Standing and Mattsson, 2016) and from a content marketing perspective, ensures the content stays easy and understandable which are identified as important points of content communication (Gupta and Nimkar, 2020).

6.1.4. Transparency

As Kannan and Alice (2017) identified, the digital marketing agenda calls for more research on gaining higher levels of trust through personal information protection and privacy issues. Although customers with digital marketing are gaining a higher level of personalization, the ratio of what data is collected and what is transparently communicated has been a concern of many customers. On one hand personalization through customer behavior and digital marketing delivers products that fit the consumer needs, but can severely breach trust if data, converted into insight on consumer behavior are not transparent. Transparency also includes the overall communication brand has towards its stakeholders.

Another important fact is that consumers are getting more educated and concerned about their online privacy and data (over 50 % of customers are more concerned than they were a year ago[1]). Handling online personal data, depending on the country/region is regulated or not (GDPR, Australia, State of California), but the fact stays that it causes a point of distrust. These facts are signalizing that the consumers will be even more aware and want to have digital interactions which are transparent, secure and trustworthy on a higher level. The communication of all data towards consumers should be clearly handled ensuring the general communication (especially the data used for personalization) is transparently presented, and complementary to the customer's needs. As blockchain empowers relationships being built on trust and high technology sophistication, designing an environment in which campaigns are made transparently and consumers' privacy is safeguarded (Rejeb et al., 2020) can represent a game-changer in building a transparent and unique relationship with customers.

6.1.5. Sales & lead generation

This category represents all the efforts that are conducted in the digital marketing strategy to generate more potential customers, leads. Micro-Targeting Placing ads on Facebook, Instagram, or Twitter and making use of the extensive targeting options for a specific niche market (Bohnsack and Liesner, 2019) is an example of a tactic which enables acquiring new leads. Video as a content format represents a powerful tool to build up an audience, has the virality effect of content sharing, educates on potential product features (Gupta and Nimkar, 2020), and ultimately leads customers towards purchasing decisions. The landing page has been used as one of the most popular tactics to get leads for both, products and services. Website as the first impression a customer gets from the company is also an important form of communication with customers, serving many functions including acting as a landing page. Other tactics used to support generating new leads are hiring influencers as brand promoters (Kusumawati, 2019) while supporting stronger product-market fit and different kinds of partnerships (Raman and Raman, 2018) including promotional swaps and referral programs (promo codes, vouchers). Ridesharing platform Bolt offers a promo code when a new user is referred by an existing user, and both benefit from the code sharing as the price of the next ride will be reduced by a certain amount. Personalized emails, emails with targeted content and specialized offers towards targeted audiences have proven to still act as a strong mediator towards generating leads (Raman and Raman, 2018), announcing new product features and testing different kinds of content (Bland and Osterwalder, 2020). Retargeting is a tactic of both generating leads and customer engagements as the former page visitors who did not make a purchase yet, are retargeted based on the first visit data (Bohnsack and Liesner, 2019). Gamification, organized contests, and challenges through digital marketing channels also represent a form of generating leads as they are designed to be informative, and sharable while interconnecting with the customer base (Ho et al., 2020).

[1] CIGI-Ipsos. 2019. "2019 CIGI-Ipsos Global Survey on Internet Security and Trust."www.cigionline.org/internet-survey-2019

6.1.6. Brand building & promotion

One of the key functions digital marketing has is to promote brands through any kind of digital media (Kusumawati, 2019). A wide set of opportunities to build, promote and raise awareness of start-up activities are enabled through digital marketing channels. The growth driver of Brand building & Promotion includes all strategic activities related to brand awareness, reputation, promotion and how to effectively use these strategies in the digital marketing environment. As reported by Ho et al. (2020) content marketing can be successfully used as a strategic branding investment to redefine brand experiences while de-emphasizing on sales content, especially for millennials. Furthermore, intentional posting of "how-to" content on subjects that lead to customer education start-up WeChat also used as a tool for brand and exposure building (Chen et al., 2017). Partnering up can help start-ups with similar audiences to build brands and generate leads from each other's customer communities. The founder's storytelling on their start-up's vision and how they intend to develop can be used as a tactic for early-stage start-ups. Recruitment posts (Dethine et al., 2020) and sharing industry news represent techniques for raising brand awareness as well.

6.1.7. Market research

Digital platforms as Facebook, Instagram, LinkedIn, and others have already integrated information of their users which can be provided by setting up ads. Trend search can give information on key keywords used connected to the product (SEO building) while analytics software can provide web traffic and behavioral metrics of the market. Identifying keywords that do not lead to a conversion and adding them as negative keywords can also be utilized for better positioning in search engine ranking (Bohnsack and Liesner, 2019). Surveys can be used to reach out to the consumers and ask a set of questions during the customer journey. Within e-marketing tools, research on foreign markets and competitors can also be conducted (Dethine et al., 2020). Platforms such as Hotjar support in building survey experience, optimizing it for feedback collection and insights prioritization.

6.1.8. Partnership development

Partnering with other companies can bring many direct advantages for start-ups and can be used as (Kuester et al., 2018):

- a PR strategy to benefit from the credibility of established companies,
- to build on a customer base from the partner's ecosystem,
- engage customers in testimonials and
- increase accessibility and accelerate the adoption of early innovations.

Partnership benefits imply the risk reduction of uncertainty and directly reflect on trust-building with customers. Developing joint e-books, reports, webinars, podcasts, and other content forms are used to convey visibility and trust in start-up communication along with lead generation. Making joint engagements using a promo swap with other companies (which are not competitors but have a similar industry area audience) and recommending each other products can result in higher engagement and retention (Bohnsack and Liesner, 2019). Having an active partnership can be also a powerful tool for organic content development and dissemination (Chen et al., 2017) mark partnership development through digital channels as a useful strategic and growth component for start-up maturity.

6.1.9. Communication, engagement & retention

Building a customer base and trusted relationships are identified as crucial points in start-up development (Standing and Mattsson, 2016), making the process of building user community essential in the onboarding experience. The two-way communication on digital platforms enabled many different formats for a brand to communicate and engage with its customers. To get users interested and more engaged, Zomato shared inviting and relevant content (high-quality pictures, infographics, videos, newsletters) as a key content strategy (Raman and Raman, 2018). Making content in the forms of e-books, infographics, or webinars can offer added value and boost engagement as HubSpot did with creating e-books and free site rating tools for its customers (Bohnsack and Liesner, 2019). The videos of e-retailers and interaction in real-time via Live Video Streams, can reduce psychological distance and uncertainty for already experienced and new products (Zhang et al., 2020), impacting customers to make the final purchase. The use of contests and challenges in content marketing is utilized to make higher engagement with the product/service and target sales turnover (Ho et al., 2020). Automated sharing (on platforms) as part of user experience and single sign-in (with accounts) are simple ways of allowing customers to transit into the next form of subscriptions and make the user experience more interactive and shareable (Bohnsack and Liesner, 2019). Notifications through SMS and apps, creating an experience through gamification as reminders/information on player status is also used as engagement triggers (DuoLingo, a language learning platform, uses app notification and gamification to remind users of their progress level).

6.1.10. Customer education & support

Customers need to be educated on products and how to utilize full product value (Standing and Mattsson, 2016). The connection between the product/service utility and customer's usage is vital in understating product efficiency, and digital marketing channels are playing the interpreter role in this relationship. Several specific points of customer education from pre-launching to the final usage process need to be covered to minimize fuzziness and uncertainties in products and start-ups. Topics on which customers need to be educated throughout the customer journey include technical/platform usage of product/service, product benefits and innovation, new feature introduction, and start-ups origin. Also, the particularly sensitive subject of data security, privacy settings, and personal data storage needs to be communicated as one of the base points of customer education in the digital environment (Kuester et al., 2018). Customer education continues all the way through the customer journey and in later stages represents a strong component of building long-term customer relationships. Start-ups can use several tactics to elevate customer education: publishing on start-up and industry news (Chen et al., 2017), creating various content as webinars, podcasts, posts, etc. and focusing on product usability messaging (Kuester et al., 2018), content (ex. blogs) for new feature announcements (Bohnsack and Liesner, 2019), share more information on innovation origin (why, how, what's the use) to raise credibility and trust (Kuester et al., 2018). For example, start-up Slack - the team collaboration tool, in order to educate customers on the new feature release used a short video to show the practical usage of the new message button by simply creating lots of different scenarios for its use.

Social media is strongly used as a customer support channel where start-ups can efficiently give information on products/services, resolve complaints, and have open communication with customers while building a relationship (Chen et al., 2017).

6.1.11. Cultivating long-term relationships and cocreation

Driving the digital marketing strategy towards the long-term relationship represents a difficult task, especially for the early-stage start-up as audience-channel fit has not yet been properly established. With maturity, long-term relationship delivery becomes more focused as the proper audience-channel fit is identified, and the communication and messaging strategies have been tested and validated with customers. Being in the position to have customers as co-creators in product/services design has been implied as a successful practice (Kim et al., 2021) resulting in the repurchase. When customer feedback is used in the cocreation process by integrating feedback into service innovation (Kuester et al., 2018) relationship-building turns into a tool of innovation and cultivation of long-term customer engagement. Beauty brand

Clinique made a competition for its loyalty program members by offering a limited-edition NFT which gives members access to various products each year for the next decade (Walker, 2022). Making loyalty programs for customers and proposing special, personalized offers, can have a strong influence on cultivating a long-term relationship. Implementing a successful loyalty program could build trust and support customer retention.

6.1.12. Online community building

Depending on the business model (ex. freemium) and platform rules (levels of control on how much content can be created by users) online communities of consumers and participants are designed. Building an active and participatory community can have a number of benefits, from cocreation in content perspective to conversion into paying customers (with the right alignment of business strategy and content/features attractive to the target group). Consumer's community activity is not only linked with increased willingness to pay for a premium subscription (making the second step and paying for the service) but also cuts the time frame (making the first step of lead conversion) between joining the website and subscribing into a freemium model (Oestreicher-Singer and Zalmanson, 2013). From a content perspective, blog creation and moderation of content (by group leadership) are the high participatory community activities strongly linked to the subscription decision (Oestreicher-Singer and Zalmanson, 2013). Content creation also has educational elements since its written by community members.

Digital marketing tactics can be powered by social tokens and NFTs. Social tokens are a type of cryptocurrency that a person or brand/organization uses to monetize themselves besides traditional avenues such as paid advertising, ambassadorships, and sponsorships (Sensorium, 2022). For example, the Giraffe Tower NFT has created software, Social Connector, that allows its network of creators to automatically reward community members for engaging with their content on different social channels. If a community member likes, comments, or retweets particular Twitter posts, they can automatically earn coins, which in parallel drove huge spikes in social engagement for many creators (Piper, 2022).

6.1.13. Internal (organizational) process development

The successful development of a start-up brand is supported by the empowerment of its internal community, start-up founders and team (Raman and Raman, 2018). The start-up teams can contribute by creating content (blogs, tutorials, opinion pieces) elevating the start-up brand. They also get familiar with managing the marketing process while influencing on the culture of co-creation. With these actions, employees grow on internal marketing process knowledge and have the opportunity for "job rotations" since there are exiting their usual roles (Raman and Raman, 2018). As a result, a new set of internal processes gets designed by all start-up team members contributing with content that is different from the usual marketing content, as it will be written from the perspective of team members with various backgrounds. Using internal capabilities the content is fundamentally made for impact and higher reach of targeted communities with less effort as time passes, making this approach successful in content traction and shareability (Ho et al., 2020).

Another set of opportunities for business process development of digital marketing is via data analytics gathered insights. As analytics are defined and measured by indicators, this ongoing process sets an opportunity from monitoring the progress of digital marketing actions and influencing future business development. The process of collecting and converting information from digital interactions (data, reviews, comments, etc.) powered by analytics, impacts service innovation design (Kuester et al., 2018). When established as a continuous process with a direct insight on possible innovation, digital marketing & analytics possibilities can shift into an internal process which can lead towards the opportunity for new business or value creation.

6.1.14. Culture building and talent search

If start-up founders make content on how and why they founded a start-up it helps with branding and customer education. Furthermore, if a leadership and opinion piece on subjects from the start-up industry is written, it can help with affirming the start-up and industry itself (Chen et al., 2017). When employees contribute with content it sets another dimension of culture cultivation and internal knowledge sharing. Also, posts on digital marketing channels can be used for employee recruitment purposes (Dethine et al., 2020) with the additional possibility of the post becoming viral on social media (Chen et al., 2017). When all the mentioned actions are grouped, digital marketing opportunities can support the design of specific start-up culture created and nurtured by the start-up team.

6.1.15. Raising investor awareness

Making a content strategy to regularly inform on product development, new industry trends, job recruitment (Chen et al., 2017) creates a buzz on digital media which could also impact attracting new investors. LinkedIn can offer an alternate information source on start-up progress including new products or services, employee benefits and leadership pieces (Arnav et al., 2019). This kind of designed content can support start-up brands and raise awareness. Moreover, as start-ups are yet to establish a reputation in the market, their growth depends on investors, policies and market adoption (Yue et al., 2019). By using digital media to have active communication (ex. tweet more industry news) the chances of successfully attracting different stakeholders can be elevated. In their work (Saji et al., 2019) propose a framework in which entrepreneurs can raise funds via blockchain technologies. By doing so, it would help start-ups, and entrepreneurs reach a wider market to share their ideas and invite funding proposals in a secure and transparent way. Effectively communicating on digital media with relevant content reduces uncertainty, and this does not apply solely to customers, but all stakeholders in the network including possible investors.

7. Conclusion

Digital marketing can be identified as one of the fastest-growing and most impactful aspect of conducting business. It has reinvented its role from being a synonym for marketing and sales to acting as a relationship concierge shaping new forms and levels of digital engagement. This transition established digital marketing to have high levels of impact on the product, market, team, and financial areas of the organizational growth. Having low investment techniques and tools (Kuester et al., 2018) sets digital marketing usage in start-ups as a practical and strategic solution covering many challenging growth components. When used in a start-up environment, digital marketing strategies enable dynamic, iterative actions contributing to growth.

The goal of this paper was to map which challenges and business dimensions can be impacted through extended digital marketing tools and tactics from a macro perspective. By identifying start-up challenges and digital marketing tools used for diverse impact of organizational growth, we have established 15 growth drivers that digital marketing influences and supports in the start-up maturity process. As start-up maturity challenges differ across start-ups at different stages of evolution, we have also presented the challenges and growth opportunities for the start-up maturity levels, including different approaches to digital marketing strategy usage from B2B and B2C perspectives. Furthermore, as emerging technologies are becoming very relevant for shifting marketing practices towards higher interactivity levels, this is explored in this article and the framework.

As the usage of digital marketing tools and tactics is an evolving matter, the identified growth drivers encompass several categories which represent the forms of extended digital marketing impact as customer education, transparency and online community building. The Macro-dynamic framework identifying Growth Drivers and Digital Marketing Tactics for achieving Start-up Growth was designed based on

the link between start-up challenges, business dimensions, and the extended impact of digital marketing tools.

The designed framework encompasses four groups of impact in organizational terms (product, market, team, and finance), fifteen growth drivers associated with the areas of impact, along with twenty five digital marketing tactics used to support the growth drivers. Through the first part of the framework, growth drivers and associated areas are identified. Four start-up growth drivers are identified from a product area perspective: product-market fit, testing & analytics, product features optimization and transparency. From a market perspective, digital marketing influences how relationships, sales management, and market research can be carried out within 7 growth drivers identified along with a number of digital marketing tactics. Furthermore, from the team and financial perspective, the framework presents how the search of talent, shaping online communities for co-creation, organizational process development and raising investor awareness can be designed through digital marketing efforts. The second part of the Framework identifies the application of relevant digital marketing tools and tactics that accompany the identified growth drivers.

When used practically, the framework guides a start-up to identify which challenges and growth drivers can be influenced using digital marketing tools and tactics. By identifying growth drivers, the framework can also be utilized as a strategic tool for recognizing the points of development in business operations.

As the potential of digital marketing is connected to new technologies, its influence will surely continue to grow. Because the realm of digital marketing research is a wide knowledge set investigated from perspectives of digital marketing channels, objectives, and strategies, with this paper we intended to synthesize presented cross-sectional knowledge and map the start-up growth drivers from a macro perspective. Connected to start-up challenges, the review aimed to make a comprehensive framework utilized to understand and identify the extended impact of digital marketing in the start-up environment.

8. Limitations and further research

The first limitation of this work is that the presented framework is indeed a descriptive one. The objective was to provide an insightful framework with examples of how an extensive form of digital marketing in the start-up's environment. Thus, the framework quite naturally developed as a descriptive one including a theoretical and practical view of extended digital marketing impact.

Secondly, the Macro-dynamic framework aims to encompass the overall view of growth drivers for start-up support. As the goal of this research was to present a macro view of digital marketing's impact on start-up growth, detailed research on all elements of digital marketing strategies was not part of this research scope. The review was designed to present the possibilities of digital marketing usage for start-ups in a holistic view, linking the start-up challenges and dynamic elements of digital marketing strategies. Therefore, the Marco view provides a general view of extended impact intentionally not focusing solely on one or several objectives, or growth drivers. In this way, it presents an exemplified and theoretically grounded extended digital marketing list of possibilities that start-ups can build on. The readers can get introduced to the start-up growth drivers, but the framework cannot give answers to how, in full capacity, each growth driver can impact start-up growth. Due to the complexity of such work, this framework only maps out the potential of the overall extended impact. Future research can be suggested to have each growth driver/supported through digital marketing identified as a main course of research and provide insights from theoretical and practical influence in the start-up environment.

However, through the literature review, it was established that the body of knowledge lacks this kind of theoretical contribution. Within the identified research gaps, we felt the need to summarize and develop a work that points out the overall possibilities of digital marketing's extended impact through models, strategies, and emerging technologies on start-up development objectives. In this sense, this article contributes to the extant literature on digital marketing's impact on the start-up environment. In parallel, the framework can be used as a tool for practitioners while working on strategic business objectives linked with digital marketing possibilities.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

No data was used for the research described in the article.

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