

Growth hacking and international dynamic marketing capabilities: a conceptual framework and research propositions

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Abstract

Purpose – Few studies have conceptualized how companies can build and nurture international dynamic marketing capabilities (IDMCs) by implementing growth hacking strategies. This paper conceptualizes growth hacking, a managerial-born process to embed a data-driven mind-set in marketing decision-making that combines big-data analysis and continuous learning, allowing companies to adapt their dynamic capabilities to the ever-shifting international competitive arenas.

Design/methodology/approach – Given the scarcity of studies on growth hacking, this paper conceptualizes this managerial-born concept through the double theoretical lenses of IDMCs and information technology (IT) literature.

Findings – The authors put forward research propositions concerning the four phases of growth hacking and the related capabilities and routines developed by companies to deal with international markets. Additional novel propositions are also developed based on the three critical dimensions of growth hacking: big data analytics, digital marketing and coding and automation.

Research limitations/implications – Lack of prior conceptualization as well as the scant literature makes this study liable to some limitations. However, the propositions developed should encourage researchers to develop both empirical and theoretical studies on this managerial-born concept.

Practical implications – This study develops a detailed compendium for managers who want to implement growth hacking within their companies but have failed to identify the necessary capabilities and resources.

Originality/value – The study presents a theoretical approach and develops a set of propositions on a novel phenomenon, observed mainly in managerial practice. Hence, this study could stimulate researchers to deepen the phenomenon and empirically validate the propositions.

Keywords Growth hacking, International dynamic marketing capabilities, International marketing, Big data, Cognitive computing, Data-driven decision-making

Paper type Conceptual paper



1. Introduction

We all want to do more with less — Ryan Holiday

International marketing capabilities theorists (Albaum *et al.*, 2008; Asseraf *et al.*, 2018; Bouwman *et al.*, 2018; Morgan *et al.*, 2018; Zahoor and Al-Tabbaa, 2021) have highlighted that firms operating in international markets are exposed to a greater variety of marketplace environments. The need to deal with such fast-paced complexity effectively and efficiently suggests that dynamic marketing capabilities may be particularly valuable for firms operating in international markets (Mitrega and Wieczorek, 2020). Difficulties in conceptualizing and operationalizing such marketing capabilities in a dynamic manner has, however, led academics to question how marketing capabilities – dynamic and operational – can be best built, maintained, improved and leveraged in firms operating in international markets (Morgan *et al.*, 2018).

In today's highly digitalized context, organizational routines are increasingly shaped by the ability of a firm to collect and analyse a large amount of data (Bertello *et al.*, 2020; Pappas *et al.*, 2018). Indeed, the literature on information technology (IT) has brought forward the importance of managing IT competences to exploit the benefits of technology through process improvements and operational excellence (Muhic and Bengtsson, 2021; Wang *et al.*, 2013). The intertwining of research on IT and international marketing has thus shown that digital competences help firms to overcome the liabilities of size, newness and foreignness during internationalization (Eggers, 2020; Ilmudeen, 2021; Schweizer, 2012) and that international dynamic marketing capabilities (IDMCs) allow firms to identify important foreign market signals; develop new processes, products or services; and design and execute effective responses to market change (Wang *et al.*, 2013; Wang, 2020). Digital technologies have in fact paved the way to a wide database for knowledge acquisition in foreign markets by improving communication and information exchange, which lowers location dependencies and makes it possible to strengthen marketing decision-making processes (Pappas *et al.*, 2018; Saura, 2021).

Sean Ellis, entrepreneur and tech investor as well as author of the book titled “Hacking Growth” (a Random House international bestseller), addressed the need to find new ways to engrave a data-driven mind-set into marketing decision-making, combining the elements of big data analysis and continuous learning, allowing companies to adapt their capabilities to the ever-shifting competitive arenas. In 2010, he developed the concept of growth hacking, which he defined in an interview with Holiday (2017) as “a process of rapid experimentation across the full customer journey to accelerate customer and revenue growth”. According to Ellis, growth hacking helps companies to develop the dynamic skills that are needed for growth, and this is particularly valid for international markets (Ellis and Brown, 2017). These dynamic skills leverage a data-driven approach to marketing and decision-making, but they also tackle innovation or rapid prototype design to intercept customer needs throughout the customer journey (Bohnsack and Liesner, 2019). More specifically, growth hacking posits that companies should turn data into information that can be transformed into the knowledge needed to develop learning and creativity in a circular process of continuous improvement (Troisi *et al.*, 2020). From a practical perspective, growth hacking is the process of rapid experimentation and implementation of resource-light and cost-effective digital marketing tactics to help acquire and retain an active user base, sell products and scale the business efficiently and effectively. It uses traceable marketing tools, so that data from individual and specific stages of the customer journey or funnel can be analysed to make decisions. Growth hacking has created a large consensus among managers, who have witnessed the benefits of its implementation (e.g. Dropbox, Facebook, Gmail, Amazon, Beiersdorf, etc.) in developing IDMCs and scale in many countries and among practitioners, who have even founded “Growth Studios” to spread growth hacking among companies and start-ups (GrowthHackers, 2021). For example, Dropbox scaled its business worldwide by allowing

its users to earn free additional space by inviting friends and make them sign up for the service. Through its NIVEA brand, Beiersdorf launched its first direct-to-consumer campaign to acquire a large amount of consumer data, thus overcoming the dependency on data coming from retailers. Facebook leveraged the iterative experimentation proper to growth hacking to come up with the idea of sending out emails to contacts if they were mentioned or tagged on Facebook, which had the effect of piquing people's interest and making them go to Facebook and sign up to see what has been said about them.

However, despite the wide spread of growth hacking among entrepreneurs and managers, as well as the steep growth in the number of studios advocating this new process to foster growth, the academic community seems to have been slow to conceptualize the phenomenon. In our view, the current malaise in framing new research over growth hacking reflects a lack of insights and conceptual frameworks that comprehensively explain the construct. The works by [Troisi et al. \(2020\)](#) and [Bohnsack and Liesner \(2019\)](#) are two exceptions. The former leveraged growth hacking to investigate the role of cognitive computing and big data analytics in redefining business processes; they identified, through a multiple case study, the most common strategies employed to exploit the opportunities offered by cognitive computing and big data analytics. [Bohnsack and Liesner \(2019\)](#), meanwhile, identified a taxonomy of 34 growth hacking patterns along the customer lifecycle and categorized them along two dimensions: resource intensity and time lag.

This research aims to address the general research gap by applying the theoretical lenses of IDMCs intertwined with the IT literature to conceptualize growth hacking and its antecedents and to uncover how companies can leverage their unique resources and capabilities for international outreach. Following the seminal work of [Alvesson and Sandberg \(2011\)](#), we leverage the methodology of problematization as it encourages researchers to produce novel research questions and theories by actively questioning and critically scrutinizing established knowledge in academia and in society at large. This methodology encourages the researcher not only to use his or her favourite theoretical position but to start using different standard stances to question one another, combining them into far more complex forms of questioning than any one theory can produce alone ([Abbott, 2004](#)).

Building on current knowledge regarding data-driven marketing decision-making and growth hacking ([Bohnsack and Liesner, 2019](#); [Troisi et al., 2020](#)), we conceptually unravel the antecedents underlying the three critical dimensions of growth hacking: big data analytics, digital marketing and coding and automation. We also develop a conceptual framework to uncover how companies can foster growth hacking, and we propose research avenues to advance the academic literature on the topic. Against this background, this paper aims to answer three specific research questions:

- RQ1.* What are the antecedents of the adoption of growth hacking within firms?
- RQ2.* How does IDMC foster the implementation of growth hacking in a firm along its operational phases and three critical dimensions (i.e. big data analytics, digital marketing and coding and automation)?
- RQ3.* In light of the conceptual model, grounded on the literature on IDMCs and IT, what are the possible future lines of research in the growth hacking field?

As prior studies on IDMCs ([Ilmudeen, 2021](#); [Mitrega et al., 2021](#); [Morgan et al., 2018](#); [Wang, 2020](#)) provide less attention to growth hacking, the proposed framework contributes to theory by unravelling the three main critical dimensions of growth hacking (i.e. big-data analytics, digital marketing and coding and automation) as elements to achieve growth in international markets ([Bohnsack and Liesner, 2019](#); [Feiz et al., 2021](#); [Troisi et al., 2020](#)). By combining the antecedents and outcomes of these three critical dimensions and leveraging the IDMC perspective, the framework provides not only a more in-depth view of the extant marketing

literature, but also a basis for future empirical testing to ultimately operationalize the framework. The interconnections between the three critical dimensions and the phases of growth hacking should help organizations to scale their business in foreign markets by exploiting a process of continuous improvement (Bresciani *et al.*, 2021; Irfan and Wang, 2019; Lv *et al.*, 2021; Pinelli *et al.*, 2022; Saura *et al.*, 2021).

To answer our research questions, the remainder of the paper proceeds as follows. In Section 2, we address RQ1 by leveraging the intertwining of IDMCs and IT literature to identify the different capabilities that must be operationalized at different levels of the firm to implement the different phases of growth hacking. In Section 3, we answer RQ2 by shedding light on how growth hacking operationalizes the IDMCs of a firm; more specifically, for each critical dimension, we develop propositions to pinpoint which capabilities the firm could develop to operationalize growth hacking and achieve international growth. In Section 4, each proposition is discussed and both theoretical and managerial implications are provided. Finally, in Section 5, we answer RQ3 by putting forward the most promising future lines of research, as well as concluding and pointing to some perspectives on and limitations of using growth hacking for international growth.

2. International dynamic marketing capabilities and growth hacking

International marketing theorists have long focused their attention on unravelling the underlying differences between dynamic marketing capabilities related to domestic markets and those related to international markets (Morgan *et al.*, 2018). The need to frame IDMCs has been recognized by academics (Barrales-Molina *et al.*, 2014; Mitrega *et al.*, 2021; Wang, 2020) who have put forward that IDMCs should, and actually do, differ from domestic capabilities. As indicated by Morgan *et al.* (2018), most studies have defined international marketing capabilities in the same way as they have been defined in the general marketing literature (Asseraf *et al.*, 2018; Wang, 2020). It has also been emphasized that the relevance of IDMCs is simply given by the fact that marketing activities and processes take place in an international context and fulfil international customers' needs to achieve international marketplace goals. Thus, dynamic marketing capabilities in international marketing are generally viewed in terms of a firm's ability to use available resources to understand and fulfil foreign market customer needs better than its rivals do (Mitrega *et al.*, 2021; Morgan *et al.*, 2018; Scuotto *et al.*, 2021). However, the ever increasing turmoil given by endogenous or exogenous market events, such as increased market competition or the global COVID-19 pandemic, has propelled a new stream of research (Mitrega *et al.*, 2021) to address the need of companies to find new business, organizational or decision-making models that would allow them to adapt to the higher degree of uncertainty and volatility in international markets.

IDMCs are widely considered to be the ultimate source of competitive advantage in complex and rapidly changing global markets, as they allow firms to continuously update their marketing capabilities and thus overcome path dependencies and avoid competency traps (Morgan *et al.*, 2018). Indeed, IDMCs are a firm's processes that use resources to match and even create market change (Barrales-Molina *et al.*, 2014). Dynamic capabilities are thus the organizational and strategic routines by which firms achieve new resource configurations as markets emerge, collide, split, evolve and die (Eisenhardt and Martin, 2022; Fabrizio *et al.*, 2022). More specifically, IDMCs are the processes by which the firm integrates, reconfigures, gains and releases resources.

We make use of the concept of IDMCs to create a theoretical framework for growth hacking. IDMCs aim to tackle the more or less complex organizational routines and managerial decision-making processes that shape company resources to address dynamically changing international markets (Eisenhardt and Martin, 2022; Mitrega, 2019; Peteraf *et al.*, 2013; Schilke *et al.*, 2018). Dynamic capabilities also appear to explain the differences in performance and adaptation between firms in the same sector most effectively (Barrales-Molina *et al.*, 2014).

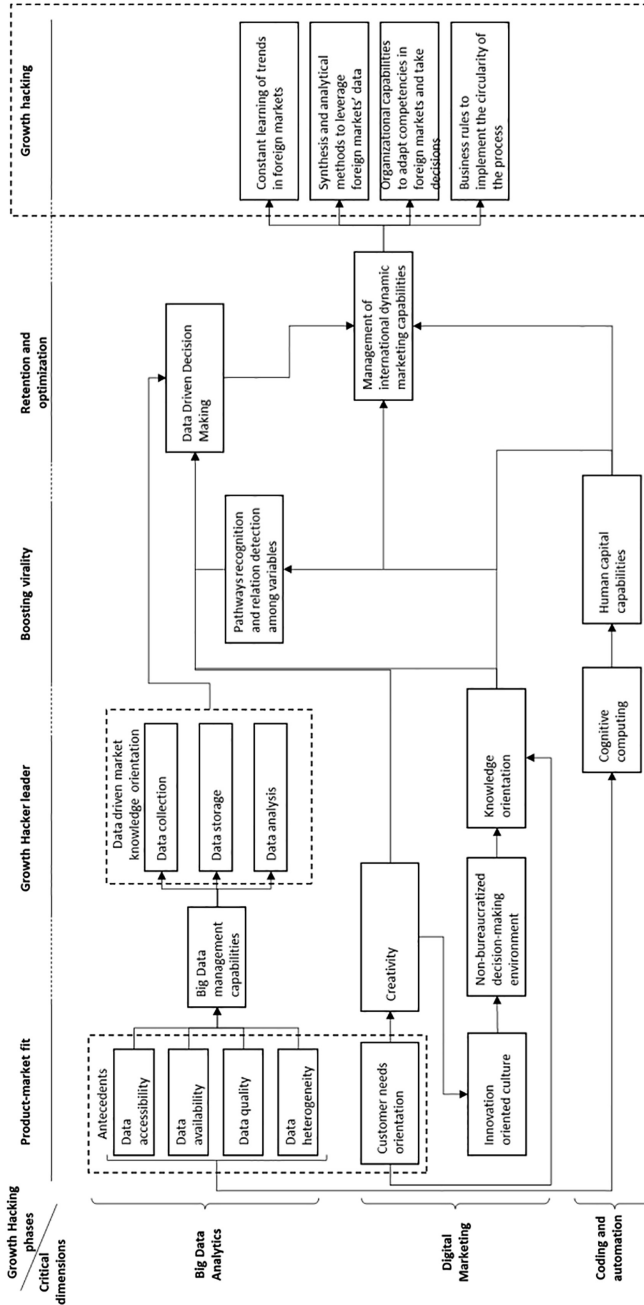
With the impetus of digital transformation, the dynamic capabilities of companies must be supported by the ability to collect and analyse big data (Bertello *et al.*, 2020; Kraus *et al.*, 2022). In an increasingly global competitive world, digital marketing capabilities are thus essential for a firm to grow internationally (Wang, 2020). Growth hacking has been suggested as a winning strategy to scale a business efficiently and effectively, including at the international level (Ellis and Brown, 2017). Despite this, the literature on growth hacking is very limited at present, especially in terms of its theoretical conceptualization.

Figure 1 is a visual representation of the conceptualization to frame growth hacking. More specifically, building on prior research (Barrales-Molina *et al.*, 2014; Maklan and Knox, 2009; Mitrega *et al.*, 2021) we leverage the phases of growth hacking (i.e. product-market fit, growth hacker leader, boosting virality and retention and optimization; Holiday, 2014) combined with the critical dimensions of growth hacking (i.e. big data analytics, digital marketing and coding and automation), developed through an extensive review of the literature on the topic. Finally, the core of the framework depicts the implementation of four IDMCs to explore and theoretically framework the four phases of growth hacking around its critical dimensions. First, international demand management capabilities provide a framework for how growth hacking ensures product-market fit and how this process can be applied to international markets. Second, the creation of international marketing knowledge is used to conceptualize how growth hacking targets the “right customers” and uses digital tools to generate and disseminate knowledge about the international competitive environments and its stakeholders throughout the firm. Third, building international capabilities is used to frame how growth hacking adapts the knowledge acquired about customers and increases the virality of the product or service through affordances. Fourth, international customer relationship management is used to conceptualize how growth hacking can contribute to customer retention and the use of digital tools to optimize the customer-company relationship. Building on the work of Bohnsack and Liesner (2019), we also operationalize the critical dimensions of growth hacking (i.e. big data analytics, digital marketing and coding and automation) from the perspective of IDMCs.

2.1 Ensuring product-market fit: an international demand management capability perspective

As the combined effects of technological innovation, increased competition, shortened lead-time and related trends heightens, the importance of IDMCs is apparent in both research and practice. The advent of digital technologies has allowed firms to leverage an increasingly global view of their markets (Bouncken *et al.*, 2019; Knight and Cavusgil, 2004). For example, the rise of born global firms has demonstrated that early adopters of internationalization start their entrepreneurial adventure with a global view of their markets and subsequently develop the capabilities needed to achieve their international goals at or near the firm’s founding. However, the ability to internationalize in foreign markets is a function of the internal marketing dynamic capabilities of the firm (Autio and Sapienza, 2000; McDougall and Oviatt, 2000). Previous studies have suggested that the ability of the firm to develop organizational capabilities consisting of critical competences and embedded routines is based on the degree to which they are able to sustain innovation and create knowledge (Knight and Cavusgil, 2004). In this direction, researchers have stated that innovation results from two major sources: internal research and development (R&D) that draws on the firm’s accumulated knowledge and imitation of the innovations of other firms (Lewin and Massini, 2004).

However, growth hacking aims to overturn this view by putting forward that product innovation (and even whole businesses and business models) does not derive just from internal R&D but rather from the necessity to fulfil a compelling need for a defined group of people. What might appear to be a slight semantic difference is, in reality, a revolutionary way to fuel innovation and boost its growth. A useful analogy that growth hackers often use



Source(s): Authors' elaboration

Figure 1.
Growth hacking
conceptual framework

to explain the revolutionary concept behind the customer-centric approach in product development is made using authors and books. [Holiday \(2014\)](#), in working with dozen of bestsellers and as many books that were not as successful, noticed that the books that tend to flop upon release are those for which the author goes into a cave for years to write. Instead, he continues by stating that best-selling books often come from authors who blog extensively before publishing and are based on themes that naturally gravitate towards the themes that are dear to the readers. This analogy helps to explain that, in an ever-changing environment, the ability to ensure product-market fit derives from gaining knowledge about the markets and customer needs, thus relying on the so-called lean start-up approach.

In this context, the theoretical perspective of IDMC helps to explain the capabilities of the firm in developing a market-oriented culture when confronted with innovation of products and business models ([Bouncken et al., 2019](#); [Randhawa et al., 2021](#)). In fact, market orientation is theorized as a set of observable behaviours, including gathering intelligence, processing information and coordinating the functions of the company ([Acosta et al., 2018](#); [Kohli and Jaworski, 1990](#); [Kraus et al., 2021](#)). In the same direction of growth hackers, researchers define market orientation as an approach centred on customers, competitors and broader international market conditions ([Santos-Vijande et al., 2022](#); [Schindehutte et al., 2008](#)). Indeed, an international market-driven orientation is based on a firm's understanding and reaction to the preferences and behaviours of different customers within their markets ([Randhawa et al., 2021](#)). Market-driven firms might display more exploitative behaviour (e.g. [Lisboa et al., 2011](#)), based on iterative processes, that entails developing new knowledge about the firm's domestic and international markets, products and capabilities.

In this context, international markets represent a fertile ground not only for the allocation of new products and the gathering of new resources but also for the acquisition of market knowledge. The iterative process of refinement-led innovation lies at the heart of growth hacking, which posits that products can and should be changed until they are fit for the markets and until they generate explosive reactions from the First People who see them ([Holiday, 2014](#)). Through the first phase of growth hacking (i.e. ensuring product-market fit), companies foster routines in the form of dynamic capabilities that are embedded in cumulative, existing knowledge. More specifically, they involve the analysis of customer needs in different markets by leveraging existing knowledge and rules of thumb (e.g. heuristics), followed by an iterative phase of adjustment to ensure product-market fit. These effective product development routines typically involve the participation of cross-functional teams that bring together different sources of expertise ([Eisenhardt and Martin, 2022](#)).

Growth hacking also relies on two specific IDMCs. First, it posits that product-market fit should be based on continuous flow of data and information over the targeted market and customers. This makes it possible to work out the so-called pains and gains felt by the customer and to improve the value proposition. Second, product development should be "tweaked and tweaked and tweaked until it can meet the needs of customers" ([Holiday, 2014, p. 6](#)). In the growth hacking process, the continuous flow of data and information is fuelled by the use of digital technologies (e.g. big-data analytics, AI, machine learning) but also, and most importantly during the first phase of the growth hacking journey, on early feedback from customers. Data analysis and customer orientation are an essential feature of the growth hacking process, and the data management capabilities of the company and the openness to feedbacks from early adopters are the antecedents of the iterative process of evaluating the product-market fit. Correspondingly, it is proposed that:

- P1. Companies who implement growth hacking strategies and (a) ensure high data management capabilities, as well as (b) being customer oriented, will likely increase their probability of successful product-market fit in international markets.

2.2 Finding your growth hack: creating international marketing knowledge capabilities

To achieve competitive advantage in international markets, companies should recognize and capture their customer knowledge, which helps firms to focus on their customers' needs, ultimately increasing the perceived value and switching costs of a firm's products (Khosravi and Hussin, 2014). Indeed, creating a customer knowledge orientation within the organization can ease marketers in predicting demand, which then helps to leverage competitive advantage more effectively (Glavas *et al.*, 2019). The second phase of the growth hacking process actually consists in targeting the right customers in the most efficient (least costly) way for the company. In other words, the hack phase focuses on targeting the right customers, in the right time, at the right place. For example, in its early days, Uber distributed coupons for free rides outside of conference venues; this hack strategy led to a high conversion rate, growing the business quickly and effectively.

Although researchers have pinpointed that the role of IDMCs is to have an impact on the firm's extant marketing resources and transform them such that a new bundle or configuration of resources generates competitive advantage (Mitrega *et al.*, 2021), it has been suggested that a central concern of a firm's overall international marketing strategy is maintaining a dynamic fit between what the firm has to offer and what the foreign environments dictate (Foss *et al.*, 2011). Innovative firms devise particular types of knowledge and capabilities that become embedded in the organization's culture to sustain innovation.

Within the framework of growth hacking, specific ways of adapting a firm's marketing activities to the international context emerge from the core capabilities founded on the marketing knowledge and skills embodied in organizational employees and can be codified and structured into a base of tacit information and routines (Knight and Cavusgil, 2004). As such, a firm must possess the essential IDMCs to reconfigure, renew and redeploy its resources and capabilities constantly to capture and exploit the changing opportunities of foreign markets.

Growth hacking also implies that adapting marketing capabilities to international markets derives from the effective use of systems and platforms that others have not used yet. Leveraging the dynamics of content marketing strategy – defined as a strategic marketing technique that focuses on developing and distributing valuable, pertinent and consistent content to attract and maintain a well-defined audience and ultimately to conduct profitable customer behaviour (Pulizzi, 2012) – growth hacking teams develop content marketing formats and tactics, including blog posts, videos, podcast, pitch emails or user-generated content to “do whatever it takes to pull in a small contingent of initial users from their particular space” (Holiday, 2014, p. 23). At this stage of the growth hacking process, these content formats do not aim to boost virality but to inform the target and prospective customers about the product or service. More specifically, these tactics seek to attract that target group of consumers potentially interested in using the product and who are likely to become ambassadors of the product or service and make it viral during the next stage of growth hacking.

From an organizational perspective, growth hacking teams have leveraged the advent of digital technologies to reduce marketing costs relative to conventional marketing, and as business opportunities in a digitally enabled world rely on real-time and seamless communication between actors (Wang, 2020), a key focus for IDMCs is exploiting data to boost growth. In other words, growth hacking exploits traceable tools (e.g. social media, email marketing retargeting) to make it possible to evaluate the effectiveness of the strategies after the fact.

Recent theoretical developments in research on international marketing and IT have put forward the necessity of rethinking digital capabilities as pertaining only to market development and customer management (Saura *et al.*, 2021). In fact, leveraging the IT literature, we can identify a more holistic approach to digital marketing. IT literature

(Bharadwaj *et al.*, 2013) posits that digitalization reconfigures marketing functions because products and services are themselves embedded in digital technology (Wang, 2020). The data management capabilities developed within the organization have also paved the way for the integration of traditional content marketing strategies into social media platforms, which allows companies to develop and evolve data acquisition capabilities (Abkenar *et al.*, 2021; Nguyen *et al.*, 2015). In the context of IDMC, the development of data management capabilities has made it possible to boost firms' internationalization (Findlay *et al.*, 2021; Kahiya and Warwood, 2022; Mudalige *et al.*, 2019). Growth hacking, by implementing a lean process of customer acquisition that leverages digital platforms, social media and data management capabilities, has lowered firms' marketing-related costs and boosted internationalization (Holiday, 2014). We can thus affirm that, to a certain extent, growth hacking blurs the boundaries between domestic and international markets. The dexterity required to reach customers based on the platforms they use or the channels they operate in and the organizational capabilities developed to process a large amount of cross-country data to retrieve useful information allow growth hacking teams to reach a global competitive arena. Correspondingly, it is deduced that:

- P2. Growth hacking teams develop core capabilities founded on marketing knowledge and skills that are then embodied, codified and structured in the organization into a base of tacit information and routines that foster businesses scalability to hack international markets.

2.3 Going viral: an affordance perspective to develop IDMCs

From an IDMC perspective, growth hacking appears to be a game changer in rethinking the processes and resources that "traditional" marketers leverage to promote products, services or brands. While the extant literature has highlighted the importance of word-of-mouth, both in the physical and digital contexts, and has deeply analysed the motives underlying the sharing of opinions about products (Allsop *et al.*, 2007; Donthu *et al.*, 2021; Erkan and Evans, 2016; Ngarmwongnoi *et al.*, 2020), growth hacking overturns this approach by proposing that companies need to rethink the process through which they publicize products and services.

The crucial difference is that a growth hacker understands that this [going viral] cannot be left to chance. [...] Virality isn't something that comes *after* the fact. Instead, the product must be inherently worth sharing—and then on top of that, you must facilitate and encourage the spreading you'd like to see by adding tools and campaigns that enable virality (Holiday, 2014, p. 33).

Growth hackers have proposed that virality is already embedded in the product or service itself. In fact, a good product-market fit (phase 1 of growth hacking) and the right target (phase 2 of growth hacking) lead to an iterative process of refining the product design such that products advertise themselves and create a behavioural residue that sticks in the mind of consumers even after purchase.

Building on the IT literature (Bloomfield *et al.*, 2010; Kavada, 2012; Zheng and Yu, 2016) – and more specifically, on affordance theory (Bloomfield *et al.*, 2010; Wagner *et al.*, 2014) – we conceptualize how growth hacking teams embed virality within their products or services. The concept of the affordance has been adopted by many researchers to identify the abilities afforded by computerized systems to aid a user in performing a task within a specific context. Virality has been fuelled by the rise of social media platforms and their ability to foster bidirectional communication, which has introduced greater cooperation, flexibility and data-gathering capabilities than were possible in traditional media (Argyris and Monu, 2015; Wagner *et al.*, 2014). Affordances can be applied to understand how growth hacking teams implement virality, as the analysis of the affordances demonstrates that social media provide unique capacities to aid external communication compared to traditional media, and the

affordances of computerized systems are best understood when usage contexts and users' goals are taken into account (Argyris and Monu, 2015; Bloomfield *et al.*, 2010).

The development of product and service affordances in the digital context can be applied to the international outreach of a company, as they are not country specific. The everyday adaptive actions taken by growth hacking teams when implementing affordances lie at the heart of the creation of IDMCs. The idiosyncratic responses from consumers to the affordances of products and services and the iterative approach in their refinement are gradually internalized into a firm's predispositions, which then provide the inimitable and non-substitutable core for IDMCs (Sedalo *et al.*, 2022).

We posit that the Teece capacities to "sense, seize and transform" and to "integrate, build and reconfigure" ultimately rest on the iterative process of IT affordances development and enable firm members to act creatively and adaptively *in situ* (Nayak and Canales, 2020; Teece, 2017). From a consumer perspective, the shared dimension involved in the perception of affordances fuels the virality of products fit for their target market and leverage the innovative character of the affordance (Gibson, 2015; Nayak and Canales, 2020). Digital technologies, and more specifically social media, have boosted these responsive uptake activities (Varis and Blommaert, 2018). Liking a post, for example, is as form of self-interpellation, in the sense that people express a judgment that they themselves belong to the intended audiences of a message or sign, while sharing recontextualizes and directly reorients this statement towards one's own community, triggering another phase in the process of viral circulation. Accordingly, it is proposed that:

- P3. The everyday adaptive actions and routines taken by growth hacking teams when implementing product and service affordances across international markets enable firm members to act creatively and adaptively to foster product virality.

2.4 Retention and optimization: absorption capabilities in the context of IDMCs

The last step in the growth hacking process consists in fostering customer retention, through the implementation of data-driven customer relationship management (CRM) tools and the optimization of the firm's marketing activities related to implementing incentives and loyalty programmes. CRM is certainly not a new concept within the literature on IDMCs (Maklan and Knox, 2009). However, growth hacking introduces a novel approach to CRM by proposing an iterative approach to customer retention and product optimization, as well as data-driven decision-making in the marketing function (Holiday, 2014). Prior studies have demonstrated the importance of the customer and customer satisfaction as the main asset of any firm (Khan *et al.*, 2022). This implies that firms must always find new ways to manage resources and develop capabilities to retain and build trustworthy relationships with clients (Gallego-Gomez *et al.*, 2021). Moving in the same direction, research on IDMCs posits that firms must recombine the resources that have already been identified to foster new value creation-oriented strategies and generate new distinct capabilities or exploit capabilities that already exist to retain customers (Scuotto *et al.*, 2021).

The ability to reconfigure processes and capabilities in international markets suggests that companies should maintain an organizational learning system (Zahra *et al.*, 2022). Indeed, all organizations develop routines to operate their processes in complex and heterogeneous markets (Zahra *et al.*, 2022). When the proper resources are applied, efficiency is reached in those processes and across markets. Nevertheless, the dynamic orientation of companies is fostered by the ability to foresee market shifts or the need to change and consequently to develop new capabilities to adapt to different markets (Mitrega and Wiczorek, 2020). CRM tools represent practices and processes that develop knowledge over international markets and foster the capabilities that each organization develops; these differ according to organizational needs and the knowledge that they are able to generate and materialize.

It can be theorized that growth hacking teams, in implementing CRM processes, develop IDMCs in the form of absorption capabilities. More specifically, these capabilities consist in acquiring and interiorizing the external information of both domestic and foreign markets, integrating that information into the firm's current knowledge, with the main objective of increasing the loyalty of its customers while improving the processes and strategies applied to marketing issues (Cohen and Levinthal, 1990; Zahra *et al.*, 2002).

CRM processes are defined as the application of digital technologies in the management of customer relationships (Chang *et al.*, 2010; Wang, 2020; Wang and Kim, 2017). The rise of digital technologies has enabled the development of e-CRM processes, which use the internet as a platform to deliver CRM functions (Chi, 2021; Minh Ngo *et al.*, 2018). The main tasks in implementing CRM processes are defining which key customers or customers' segments are most important for the firm and how to allocate the appropriate level of resources to retain those customers (Minh Ngo *et al.*, 2018). Digital technologies are fundamental here, as they are employed to analytically define the tasks such as data warehousing and data mining that support the marketing decision-making strategies based on customer behaviour patterns (Saura *et al.*, 2021).

In conclusion, the development of absorption capabilities allows MNEs (multi-national enterprises) or born global companies to make strategic changes in their marketing strategies and provides the flexibility required to operate in foreign markets. Firms that acquire external knowledge about customers in foreign markets are more likely to increase their customer retention rate and customer loyalty. Companies that lack the required absorption capabilities will not achieve innovative results as required by the growth hacking imperative. The rapid data-driven experimentation process typical of growth hacking makes it possible to test which incentive mechanisms support customer loyalty in the long term. Correspondingly, it is theorized that:

- P4.* Growth hacking teams foster consumer retention in international markets by developing absorption capabilities fuelled by an organizational learning system that makes it possible to reconfigure processes and capabilities in iteratively.

3. IDMC at the crossroads with IT literature: three critical dimensions of growth hacking

3.1 Big data analytics

The first critical dimension of growth hacking is big data analytics (Bohnsack and Liesner, 2019). The possibility of leveraging a large amount of data, often cross-country and user-generated, constitutes the main pillar for hacking growth. Big data enable marketing decision makers to make decisions on the basis of factual data instead of sentiment (McAfee *et al.*, 2012; Shamim *et al.*, 2019) and also increase their knowledge creation capabilities (Khan and Vorley, 2017). Shamim *et al.* (2019, p. 1) define big data as "data sets that are very high in velocity, volume, and variety, which makes them incompatible with traditional techniques and tools".

However, to collect those data companies need to develop big data management capabilities (Rialti *et al.*, 2019). The use of big data for better marketing decision-making presents major management challenges, including attracting the right people with the right skills (Tambe, 2014). To develop the capabilities required to maximize the benefits from big data management, firms need both tangible and intangible resources, such as human resources (HR), culture, technology and managerial and technical skills (Shamim *et al.*, 2019). Extant IT research (McAfee *et al.*, 2012) has argued that overcoming leadership, talent management and technological challenges is very important to reap the benefits linked to the use of big data in decision-making. More specifically, these challenges can be overcome by

adopting a leadership focus, a non-bureaucratical decision-making process, harnessing talent and technology management and developing the company culture.

Building on the work of [Shamim et al. \(2019\)](#), which highlighted how leadership is an important influencer of IDMC development that is usually achieved through interactions and complementarities among processes, individuals and structures ([Felin et al., 2012](#)), we posit that IDMCs are associated with a particular orientation of marketing managers towards change, opportunity recognition in changing existing routines and resources and the willingness and ability to implement such changes ([Kor et al., 2007](#)). The ability of managers to recognize opportunities for change in global markets is critical for the development of IDMCs suited to cope with turbulent or fast changing competitive arenas ([Helfat and Peteraf, 2015](#)). A marketing manager's attention to strategic shifts across international markets and the ability to iterate a refinement process to ensure product-market fit and efficiently manage the organization helps in developing the organizational routines needed for IDMCs to develop and for growth hacking to be implemented ([Dutton and Jackson, 1987](#); [Kor and Mesko, 2013](#)).

To implement growth hacking efficiently and effectively it is thus necessary for marketing managers to have an inclination towards big data to enhance relational governance and to encourage both inter- and intra-organizational collaboration to facilitate knowledge exchange and influence organizational processes ([Shamim et al., 2019](#)). Correspondingly, it is deduced that:

- P5. Growth hacking teams, by leveraging big data to develop data-driven decision-making, foster a non-bureaucratical organizational approach that makes it possible to harness talent and technology management capabilities.

3.2 Digital marketing

Digital marketing represents the second building block of growth hacking ([Troisi et al., 2020](#)). Over the past two decades, digitalization has revolutionized not only the relationships between consumers and products (e.g. e-commerce, mobile devices multi-sided platforms) but also how companies leverage technologies to identify and address consumer needs ([Desai and Vidyapeeth, 2019](#); [Diaz et al., 2022](#); [Herhausen et al., 2020](#)). For example, the Internet of things and artificial intelligence (AI) can be leveraged to support digital marketing strategies. Indeed, digital marketing includes all activities, resources and processes facilitated by digital technologies that contribute to the creation, communication and delivery of value for customers ([Herhausen et al., 2020](#)). For example, data mining based marketing decision support systems enhances organization performance by analysing the ground reality instead of making decisions based on feelings ([Kumar, 2020](#)).

Growth hacking streamlines the process of incorporating digital technologies throughout the marketing funnel by leveraging big data management capabilities ([Feiz et al., 2021](#)) to, for example, track, monitor and analyse consumers' data from social media marketing activities, as well as implement marketing automation strategies that combine process engineering skills and digital tools, or companies can use search engine marketing tactics to boost organic virality through network effects ([Dornberger, 2021](#); [Peter et al., 2020](#)). However, to conceptualize and understand how firms leverage digital marketing resources and skills, two digital marketing capability gaps must be bridged ([Herhausen et al., 2020](#)).

The first is the practice gap, which identifies the deficit between managers' current modus operandi and their "ideal" digital marketing capabilities ([Herhausen et al., 2020](#)). Here, a central role is played by a firm's human capital resources, which are instrumental to the implementation of growth hacking processes within the firm and the organizational climate of the company. More specifically, growth hacking requires a non-bureaucratized environment to facilitate iterations in experimentation and to provide the necessary resource base to hire or train personnel.

The second is the knowledge gap, which highlights the necessity for the firm to be knowledge oriented and incorporate experiences and information resulting from a combination of contextual information and data-driven insights (Ajmal and Koskinen, 2008; Davenport and Prusak, 1998; Herhausen *et al.*, 2020). Knowledge orientation is strongly linked to human capital capabilities (Javalgi and Todd, 2011) and thus the development of the necessary skills to process data and contextual insights into useful information. However, the quality of data-driven decisions does not solely depend on the data themselves but is also linked to the strategies employed for data collection and analysis.

In this context, previous research on IT (Kumar, 2020; Saura, 2021; Saura *et al.*, 2021) has highlighted how the integration of data-driven decision support systems in marketing management routines help to reduce the human burden in analysing large quantities of data. Such systems also increase the rapidity of decision-making by providing data on which managers base their strategic decisions. However, data quality represents a key aspect in the ability of the company to foster internationalization and achieve growth across markets (Bertello *et al.*, 2020; Glavas *et al.*, 2019).

As theorized by Kumar (2020), decision support systems collect information and data on consumers, markets and competitors and prepare comparative analysis, forming assumptions about future trends in a specific context. More specifically, in the context of digital marketing, decision support systems can select and analyse the data to obtain the right trends, so that strategies and solutions can be framed. Data are the main element in the decision process, so the support system summarizes the information either graphically or textually using its expert AI. Consequently, it is inferred that:

- P6. Growth hacking teams overcome the digital marketing capabilities gaps (in knowledge and practice) by implementing data-driven decision-making routines within the organization.

3.3 Coding and automation

Growth hacking is an experimental and iterative process that leverages automation and coding to simplify the touchpoints between customers and the product (Bohnsack and Liesner, 2019). To achieve a lean organizational approach to product development, the continuous tailoring of the product is necessary. Increasing the level of automation and coding of the data drawn from the analysis of customers allows for more rapid experimentation and field testing. For example, companies can leverage coding and automation capabilities when implementing retargeting strategies to increase their conversion rate. Marketing managers, by placing a small, unobtrusive piece of code on the company website, unnoticeable to the site visitors, will be able to drop, every time a new visitor comes to the website, an anonymous browser cookie. When visitors with these cookies surf the Internet, the cookie determines when to serve ads, ensuring that the ads are served only to people who have previously visited the company's website.

The major goal of the coding and automation dimension of growth hacking is extracting knowledge from data analysis to identify the specific needs of customers across markets, resulting in increased internationalization of the firm. From a dynamic capabilities perspective, the use of data science allows organizations to identify and extract patterns from databases to explain a problem or to formulate hypotheses (Saura, 2021). Data science allows growth hacking teams to leverage a unique resource: the multitude of non-obvious but useful patterns (Berry and Linoff, 2004; Kelleher and Tierney, 2018; Saura *et al.*, 2021). Cognitive computing technologies, designed to collect and analyse big data sets from a multitude of sources (Troisi *et al.*, 2020), also allow for the reproduction of human thought processes on a larger scale through advanced reasoning, predictive modelling and machine learning techniques (De Maio *et al.*, 2019).

At the crossroads of research on IT and IDMCs, previous studies have highlighted the importance of data science in supporting strategic marketing decision-making and organizational routines in fast-changing environments. Today, growth hacking teams implement data science to extract knowledge from data analysis (Kelleher and Tierney, 2018). Data science posits that the patterns identified in data through analysis are non-obvious and useful for companies (Berry and Linoff, 2004; Saura, 2021). While humans can only identify a maximum of three attributes (Saura *et al.*, 2021) or characteristics of an item (e.g. product, services, community), with cognitive computing, AI and machine learning, hundreds and thousands of attributes (variables) can be identified simultaneously (Berry and Linoff, 2004). These patterns are particularly useful for growth hacking teams, as they help to obtain actionable insights (Kelleher *et al.*, 2020). Indeed, according to Saura (2021) “the term ‘insight’ is this context refers to the capacity of patterns to provide meaningful information that can help to solve the problem at stake” (p. 93). Here, actionable insights refer to the ability of the growth hacking teams to implement organizational routines and capabilities to transform those insights into strategic marketing decisions.

Research on IT has suggested that companies should pay particular attention to the coding capabilities and skills of growth hacking teams. In fact, big data are characterized by the “three Vs” rule: (1) volume, or a large amount of data; (2) variety of data types and (3) velocity at which the data must be processed (Kelleher *et al.*, 2020; Saura, 2021). This type of data must be processed through coding to extract useful patterns and insights. For example, in the work of Saura (2021), great attention is given to the development of data storage and the birth of new databases known as NoSQL databases, which can store variable data and their attributes with languages such as JavaScript Object Notation (JSON). These codes or languages are particularly beneficial for data-driven and knowledge-oriented companies that employ growth hacking as they weigh less, have higher processing speed and are self-describing, rather than being based on a table-based relational model like SQL.

The intertwining of research on IT and marketing capabilities has highlighted that patterns identified through the help of data science and coding allow growth hacking teams to obtain actionable insights (Kelleher *et al.*, 2020; Saura *et al.*, 2021) – that is, meaningful information that can help to solve the problem at stake. Correspondingly, it is theorized that:

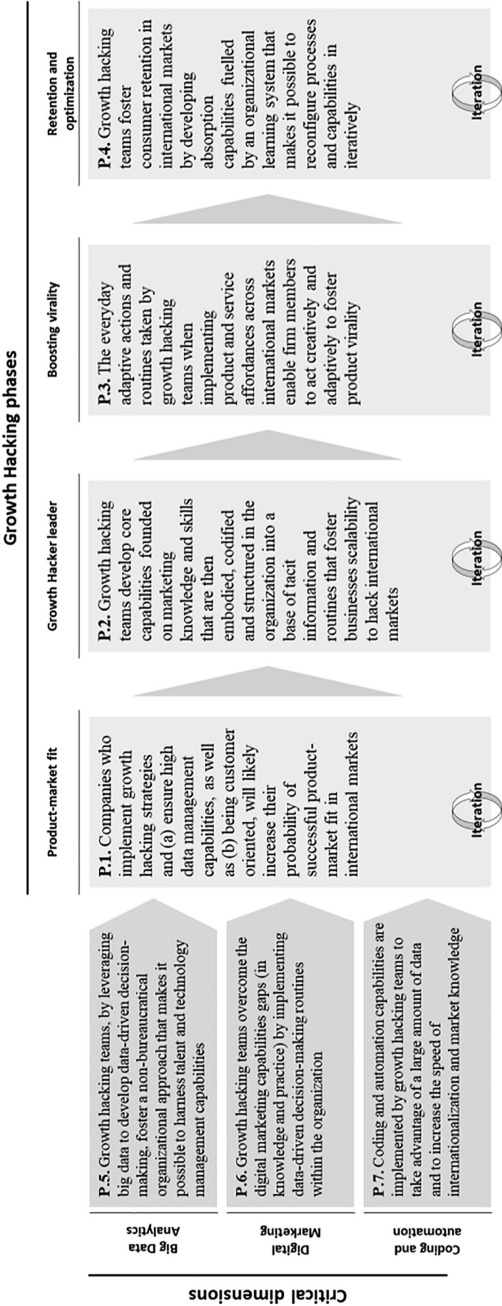
- P7. Coding and automation capabilities are implemented by growth hacking teams to take advantage of a large amount of data and to increase the speed of internationalization and market knowledge.

Figure 2 illustrates a summary of the propositions developed to explain the connections between growth hacking phases, its critical dimensions and the development of IDMCs. While many companies might (voluntarily or not) implement single phases of the growth hacking process, the illustration in Figure 2 tries to reveal the connections and forces that drive change within the organization and allow firms to build scalable business models to hack international markets.

4. Discussion and implications

Starting from the need to theoretically frame a practitioner-born concept, this paper developed a set of propositions addressing the IDMCs necessary to implement each phase of the growth hacking process (Bohnsack and Liesner, 2019; Feiz *et al.*, 2021; Mitrega *et al.*, 2021; Scuotto *et al.*, 2021; Troisi *et al.*, 2020). Leveraging previous research on IT, we provided a conceptualization of the resources and capabilities necessary to develop the three critical dimensions under which growth hacking is implemented (Herhausen *et al.*, 2020; Saura, 2021; Shamim *et al.*, 2019). To the best of our knowledge, this is the first study to theoretically conceptualize growth hacking. While only a few scientific studies have been published on the

Figure 2.
Growth hacking
process, critical
dimensions and
propositions



Source(s): Authors' elaboration

topic thus far, we sought to provide a clearer picture of what growth hacking is to stimulate future empirical testing and validation of the theorized relationships. More specifically, we have added to the studies on the international marketing perspective, uncovering the dynamic capabilities necessary to implement the growth hacking process.

Because growth hacking is a practitioner-born concept, in this section we develop theoretical and managerial implications for each proposition. Tying together theory and practice will help clarify the required IDMCs to spur international growth and how those capabilities should be operationalized within the firm. An overview of the proposed research propositions and the associated key theoretical and managerial implications is presented in Table 1.

While digital technologies have advanced and improved the manufacturing capabilities for material artefacts (e.g. increasing production efficiency through sensors and big data, decreasing worker fatigue through exoskeletons or even predicting the obsolescence of machinery through AI), abstract artefacts such as processes or business models can also deeply benefit from the use of digital technologies (Bouwman *et al.*, 2018; Pappas *et al.*, 2018). Growth hacking streamlines the integration of digital technologies into a well-defined marketing process that allows companies to create and adapt IDMCs (e.g. organizational routines, knowledge management capabilities and decision-making strategies) to foster a firm's rapid international scalability.

From a theoretical point of view, conceptually framing growth hacking through the lens of IDMCs makes it possible to uncover which capabilities companies should develop to effectively scale their business across industries and geographical boundaries. We posit that companies who implement growth hacking strategies, ensure high data management capabilities and are customer oriented will likely increase the probability of their successful product-market fit in international markets (P1). Data management capabilities represent the building block for developing the critical competences and embedded routines necessary to gather, develop and diffuse international market knowledge within the organization (Khan and Vorley, 2017; Shamim *et al.*, 2019). From a managerial perspective, this remains a challenge for managers that face the double necessity of having a data-oriented mind-set and but also needing to ensure the availability of HR with the necessary skills to manage and elaborate a large amount of data coming from different markets. Managers also need to foster the processes within the organization that allow rapid iterations to improve the product-market fit, which is a necessary condition for completing the first step in the growth hacking process.

In growth hacking, attracting the right people (i.e. the growth hacker) to scale up the business requires the development of extensive IDMCs founded on marketing knowledge and skills, which are then embodied, codified and structured in the organization into a base of tacit information and routines that foster business scalability to hack international markets (P2). From an IDMC perspective, we posit that growth hacking teams must reconfigure, renew and redeploy resources and capabilities to constantly capture and exploit the changing opportunities of foreign markets (Holiday, 2014; Troisi *et al.*, 2020). Growth hacking blurs the boundaries between domestic and international markets by adapting marketing activities through data-driven strategies. From a managerial perspective, growth hackers have to develop tactics and strategies to pull in a small contingent of initial users, for whom, the value proposition of the company must be relevant – and this is a matter of the utmost importance. To hack growth, selecting the right target group of customers is key. Engaging those initial customers through data-driven strategies (i.e. to inform the target and prospective customers about the product or service) is part of the iterative process that helps the business refine the selection of the target.

Finally, through the IDMC lens, we posit that the tactics employed by growth hacking teams represent the antecedent of business model scalability. In fact, finding the “right”

Table 1.
Summary of
propositions and
implications

	Propositions	Theoretical implications	Managerial implications
Ensuring product-market fit and international demand management capability perspective	P1. Companies who implement growth hacking strategies, ensure high data management capabilities and are customer oriented will likely increase their probability of successful product-market fit in international markets	Data management capabilities foster the development of critical competences and embedded routines necessary to gather, develop and diffuse international market knowledge within the organization. These organizational capabilities sustain the marketing function by developing a market-oriented culture when confronted with the innovation of products and business models across international markets	The implications for managers are threefold. First, to fuel innovation they should start by focusing on the resources (i.e. human resources [HR]) necessary to gather the large amount of data coming from different markets. Second, managers should use the information coming from markets to improve the product (e.g. open up to feedback). Third, managers should implement business rules to build an iterative approach to test product-market fit. Firms should develop international ambidexterity to integrate explorative and exploitative strategies to develop product-market fit to strengthen competitiveness in international markets
Finding your growth hack: creating international marketing knowledge capabilities	P2. Growth hacking teams develop core capabilities founded on marketing knowledge and skills that are then embodied, codified and structured in the organization into a base of tacit information and routines fostering businesses scalability to hack international markets	Firms that implement growth hacking strategies must possess the essential international dynamic marketing capabilities (IDMCs) to reconfigure, renew and redeploy resources and capabilities to constantly capture and exploit the changing opportunities of foreign markets. Growth hacking blurs the boundaries between domestic and international markets by adapting marketing activities through data-driven strategies and iterative experiments	Managers who intend to develop growth hacking strategies need to develop content marketing formats and tactics (e.g. blog posts, videos, podcast, pitch emails or user-generated content) to pull in a small contingent of initial users from their particular space to implement data-driven strategies to inform the target and prospective customers about the product or service. More specifically, these tactics aim to attract the target group of consumers who are potentially interested in using the product and are likely to become ambassadors of the product or service, making it viral at the next stage of growth hacking. Companies must create a multi-disciplinary team with very diverse skills. This team is led by the growth hacker, namely a transversal figure within the company who makes multi-disciplinarity her/his strength

(continued)

	Propositions	Theoretical implications	Managerial implications
Going viral: an affordance perspective to develop IDMCs	P3. The everyday adaptive actions and routines taken by growth hacking teams when implementing product and service affordances across international markets enable firm members to act creatively and adaptively to foster product virality	We conceptualize that growth hackers embed virality within their products or services by leveraging the affordance theory. The development of product and service affordances in the digital context can be applied to a company's international outreach as they are not country specific. The everyday adaptive actions taken by growth hackers when implementing affordances lie at the heart of the creation of IDMCs. The idiosyncratic responses from consumers to product and service affordances and the iterative approach in their refinement are gradually internalized in a firm's predispositions, which then provide the inimitable and non-substitutable core of IDMCs	Marketing managers who intend to develop growth hacking strategies need to foster virality from the very beginning of the innovation process (i.e. ensuring a good product-market fit). In the growth hacking process, going viral is something embedded in the product or service itself. Managers and practitioners must understand that the product or service must be inherently worth sharing and that, through affordances, they should facilitate and encourage this spread by adding tools and campaigns that enable virality across markets. Affordances should help the design of the product to embed virality, and marketing managers should develop tactics that facilitate virality. From a firm perspective, the organization must develop adaptive routines to efficiently react to accelerated business scalability (i.e. be prepared for hyper-scaling)
Retention and optimization: absorption capabilities in the context of IDMCs	P4. Growth hacking teams foster consumer retention in international markets by developing absorption capabilities fuelled by an organizational learning system that allows iterative reconfiguration of processes and capabilities	Growth hackers, in implementing customer relationship management (CRM) processes, develop IDMCs in the form of absorption capabilities. More specifically, these capabilities consist in acquiring and internalizing the external information of both domestic and foreign markets, integrating that information according to the firm's existent knowledge, with the main objective of increasing customer loyalty while improving the processes and strategies applied to marketing issues	Growth hacking is not about chasing new customers but rather about internal optimization to attract better and more profitable customers. Managers should foster the necessary organizational resources to focus on product refinement and improvement instead of spending millions on driving new customers through marketing channels if they immediately leak. Growth hackers use all available information to figure out where the problem is and iteratively try to solve the problem until users are so happy they cannot stop using the product. Firms should implement data-driven CRM tools and optimize marketing activities related to the implementation of incentives and loyalty programmes

(continued)

Table 1.

Table 1.

	Propositions	Theoretical implications	Managerial implications
Big data analytics	P5. Growth hacking teams, by leveraging big data to develop data-driven decision-making, foster a non-bureaucratically organizational approach that makes it possible to harness talent and technology management capabilities	The most important resource to leverage the growth hacking strategy is data. To develop big data management capabilities, firms need both tangible and intangible resources, such as HR, culture, technology and managerial and technical skills. Building on the extant literature we highlight that leadership is an important influencer of IDMC development, and that it is usually achieved through interactions and complementarities among processes, individuals and structures. We also posit that IDMCs are associated with a particular orientation of marketing managers towards change, opportunity recognition in changing existing routines and resources and the willingness and ability to implement such changes	Developing big data management capabilities allows managers to recognize opportunities for change in global markets and is critical for the development of IDMCs suited to cope with turbulent or fast-changing competitive arenas. A marketing manager's attention to strategic shifts across international markets and the ability to iterate a refinement process of product-market fit and efficiently manage the organization helps in developing the organizational routines needed for the development of IDMCs and the implementation of growth hacking. From an organizational perspective, firms must develop an inclination towards big data to enhance relational governance and to encourage both inter- and intra-organizational collaboration to facilitate knowledge exchange and to influence organizational processes

(continued)

	Propositions	Theoretical implications	Managerial implications
Digital marketing	P6. Growth hacking teams overcome digital marketing capabilities gaps (in knowledge and practice) by implementing data-driven decision-making routines within the organization	Implementing growth hacking reveals the necessity to overcome two digital marketing capability gaps. The practice gap h identifies the deficit between managers' current modus operandi and their "ideal" digital marketing capabilities. Academics should untangle the antecedents for effectively managing human capital resources that are instrumental to the implementation of growth hacking processes within the firm. The knowledge gap highlights the necessity for the firm to be knowledge oriented and to incorporate experiences and information resulting from a combination of contextual information and data-driven insights. Academics should investigate the ties between knowledge orientation and human capital capabilities to foster the necessary skills to process data and contextual insights into useful information	Marketing managers should understand that the integration of data-driven decision support systems in marketing management routines helps to reduce the human burden in analysing large quantities of data. It also increases the rapidity of decision-making by providing data on which managers base their strategic decisions. However, great attention must be paid to the data quality, which is a key aspect in the ability of the company to foster internationalization and achieve growth across markets. From a firm perspective, companies need to foster organizational agility and non-bureaucratical governance to capitalize on iterative experimentation and develop data-driven decision-making practices

(continued)

Table 1.

Table 1.

	Propositions	Theoretical implications	Managerial implications
Coding and automation	P7. Coding and automation capabilities are implemented by growth hacking teams to take advantage of large quantities of data, increasing the speed of internationalization and market knowledge	IDMCs affect coding and automation initiatives depending upon the actions that are implemented, such as the necessity of organizations to change in response to external and internal data-driven evidence (e.g. changes to operational and tactical activities). Growth hacking teams operationalize the IDMCs necessary to coordinate and leverage people with coding and automation skills (e.g. data scientists or individuals with highly developed mathematical, computational and statistical knowledge) to provide competitive advantage over rivals in international markets	Growth hackers, by leveraging data analysis and, more broadly, data science methodologies, can obtain actionable insights or meaningful information that can help to solve the problem at hand. Marketing managers who are willing to implement growth hacking should pay particular attention to the coding capabilities and skills of employees and the "three Vs" must be respected: volume, or a large amount of data; variety of data types and velocity at which the data must be processed. This type of data must be processed through coding to extract useful patterns and insights. From a firm perspective, to develop the continuous tailoring of international markets and product fit, companies must develop a lean organizational approach to product development. This can be done through an increased level of automation and coding of the data deriving from the analysis of international markets and target customers. For example, companies can leverage coding and automation capabilities when implementing retargeting strategies to increase their conversion rate

Source(s): Authors' elaboration

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growth hacker within the company means matching dynamic HR capabilities to foster talent within the organization and market orientation to focus on the correct target of people to minimize the costs of client acquisition (Kolpak *et al.*, 2020; Zahra *et al.*, 2022). A fundamental aspect of growth hacking is the definition of a process that allows the organization to target the right people and allows for rapid experimentation of a minimum viable product. If the response of customers to this product is not as expected, then the IDMCs developed by the organization will increase company resilience by quickly adapting through a rapid iteration of the process, minimizing the cost of failure and maximizing the knowledge gathered from customer feedback.

Increased digitalization and the rise of social media has amplified the urge for content creators and brands to pursue virality (Varis and Blommaert, 2018). While in many cases virality is a non-pursued outcome of posting relevant content for a large audience, in the growth hacking process, virality is the result of a well-developed strategy for product-market fit. We theorize that the everyday adaptive actions and routines taken by growth hackers when implementing product and service affordances across international markets enable firm members to act creatively and adaptively to foster product virality (P3). We posit that IDMCs developed within the organization allow for the increased virality of a product/service for two principal reasons (Zheng and Yu, 2016): First, by ensuring maximum product-market fit the organization develops routines and capabilities that allow for rapid experimentation and iteration in case of failure; and second, the increased product-market fit and the data-driven decision-making across markets embeds virality in the product/service itself, allowing for the business to scale up. From a managerial point of view, marketing managers who intend to develop growth hacking strategies need to foster virality from the very beginning of the innovation process (i.e. ensuring a good product-market fit). Managers and practitioners must internalize that a product or service, to go viral, must be inherently worth sharing and that, through affordances, they should facilitate and encourage this spread by adding tools and campaigns that enable virality across markets.

While virality helps growth hacking teams to attract a large number of consumers/users, it is vital to retain those consumers/users. Customer retention lies at the heart of marketing strategies and is enabled, in the growth hacking process, by the development of IDMCs (Bohnsack and Liesner, 2019; Falasca *et al.*, 2017; You and Joshi, 2020). Growth hacking teams foster consumer retention in international markets by developing absorption capabilities fuelled by an organizational learning system that makes it possible to reconfigure processes and capabilities in an iterative process (P4). Absorption capabilities consist in acquiring and internalizing the external information of both domestic and foreign markets, integrating it according to the firm's existent knowledge, with the main objective of increasing customer loyalty while improving the processes and strategies applied to marketing issues (Hoque *et al.*, 2022; Pai and Hung-Fan, 2013). This proposition has strong managerial implications, as it suggests that growth hacking is not about chasing new customers but rather about internal optimization to attract more profitable customers across markets. Managers should foster the necessary dynamic organizational resources to focus on product refinement and improvement instead of spending millions on driving new customers through marketing channels if they immediately leak. Growth hacking teams use all available information to figure out where the problem is and iteratively try to solve that problem until users develop higher switching costs that discourage the search for substitutes.

From an IT perspective, the process of hacking growth requires extensive efforts within the organization. The IDMC lens helps to frame those efforts by underpinning the organizational and technological requirements to foster growth hacking. In fact, we suggest that growth hacking teams, by leveraging big data to develop data-driven decision-making, foster a non-bureaucratical organizational approach that makes it possible to harness talent and technology management capabilities in an international context. (P5). We propose that

growth hacking is not a process that is entirely oriented towards consumers/users but first and foremost unravels the necessary internal conditions of the company to efficiently intercept consumer needs and to remain resilient to market shifts. Growth hacking is deeply related to big data management capabilities (Bertello *et al.*, 2020; Troisi *et al.*, 2020). The development of those capabilities allows managers to recognize opportunities for change in global markets and is critical for the development of IDMCs suited to cope with turbulent or fast-changing competitive arenas (Bresciani *et al.*, 2021; Irfan and Wang, 2019). Marketing managers therefore need to have an inclination towards big data to enhance relational governance and to encourage both inter- and intra-organizational collaboration to facilitate knowledge exchange and to influence organizational processes.

We propose that growth hacking teams, to develop those IDMCs, need to overcome two main digital marketing capabilities gaps – in knowledge and practice – by implementing data-driven decision-making routines within the organization to foster internationalization (P6). Advancing the theoretical contribution on growth hacking and IDMCs, we propose that, looking at the practice gap, academics should untangle the antecedents of the effective management of human capital resources that are instrumental to the implementation of growth hacking processes within the firm. Looking at knowledge gap, academics should investigate the ties between knowledge orientation and human capital capabilities to foster the necessary skills to process data and contextual insights into useful information. From a managerial perspective, growth hacking teams should understand that the integration of data-driven decision support systems in marketing management routines helps to reduce the human burden in analysing large quantities of data. IDMCs developed to foster data-driven decision-making increase the speed at which an organization can react to shifts in international markets, providing managers data on which decisions can be made. Data quality represents a key aspect in the ability of the company to foster internationalization and achieve growth across markets.

Growth hacking reveals new challenges for academics at the crossroad of IT and IDMC research who should investigate how data science can support strategic marketing decision-making, which organizational routines should be fostered in fast-changing environments and what impact they have on performance. We propose that coding and automation capabilities are implemented by growth hacking teams to take advantage of a large amount of data, increasing the speed of internationalization and market knowledge (P7). Academics should investigate how decision-making patterns identified through data analysis differ from those identified through manager heuristics. From a managerial perspective, growth hacking teams, leveraging data analysis and, more broadly, data science methodologies, can obtain actionable insights – meaningful information that can help to solve the problem at stake (Kelleher *et al.*, 2020; Kumar, 2020; Saura *et al.*, 2021). To gather insights across international markets, growth hacking teams should also pay particular attention to the coding capabilities and skills of their teams to ensure that the “three Vs” of data management are respected: volume, or a large amount of data; variety of data types and velocity at which the data must be processed.

5. Limitations and avenues for future research

Despite its contributions, this research is also subject to a number of limitations. First, while a double perspective on growth hacking phases has been adopted that leveraged two literature streams (i.e. on IDMCs and IT), other research streams could be beneficial to the understanding of how the growth hacking process can be framed and coded. Second, future research is required to verify the extent to which companies actually implement the overall growth hacking process. Many companies (consciously or unconsciously) implement some phases of the process but fail to build the necessary IDMCs to implement the process as a whole and scale up the business.

However, this study constitutes a starting point for the development of future research on the topic. From a general perspective, we propose that future conceptual development or refinement of this theoretical framework is required, which could include, for example, investigating the applicability of this process to companies operating in high (vs. low) capital intensive industries or the possibility of implementing the growth hacking process in already well established MNEs versus SMEs and the different impacts on firm organization and performance.

More specifically, the conceptualization of growth hacking through the theoretical lenses of IDMCs has made it possible to elaborate 28 future research questions (see Table 2). Following the developed propositions, we propose different research avenues that would shed light on several aspects of growth hacking. We encourage researchers to deepen the role of growth hacking in ensuring product-market fit by uncovering, for example, the role of organizational agility and the iterative experimentation process proper to this approach in the context of global markets. We suggest that future research uncover the role of growth

	Propositions	Future research avenues
Ensuring product-market fit: an international demand management capability perspective	P1. Companies who implement growth hacking strategies, ensure high data management capabilities and are customer oriented will likely increase their probability of successful product-market fit in international markets	1) Clarify the role of organizational agility (OA) in fostering growth hacking processes, directly linking the actions and capabilities of OA to the process of ensuring product-market fit across geographical boundaries 2) Examine the role played by digital platforms in facilitating the agile iteration of product-market fit 3) Investigate how growth hacking tackles the standardization vs adaptation dilemma of global marketing strategies and, more specifically, test the performance outcomes of firms that adopt standardized international branding with the adaptation of product specifications to national preferences or vice versa 4) Clarify how business model development, led by data-driven experimentation processes, is carried out in international markets and, more specifically, how the implementation of growth hacking strategies contributes to the effectiveness in achieving product/market fit
Finding your growth hack: creating international marketing knowledge capabilities	P2. Growth hacking teams develop core capabilities founded on marketing knowledge and skills that are then embodied, codified and structured in the organization into a base of tacit information and routines fostering businesses scalability to hack international markets	1) Clarify how individuals contextualize knowledge and which different cognitive schemes they employ to pass knowledge through the organization, shedding light on the IDMCs needed to contextualize knowledge in multicultural systems 2) Determine how growth hacking helps firms generate networks that allow for systemic market and customer-knowledge sharing 3) Investigate the role of knowledge sharing activities in fostering innovation through growth hacking processes from cross-subsidiary perspective in the international market environment 4) Investigate how growth hacking streamlines serendipitous discoveries leveraging experiential knowledge and network knowledge

(continued)

Table 2.
Summary of
propositions and future
research avenues

	Propositions	Future research avenues
Going viral: an affordance perspective to develop IDMCs	P3. The everyday adaptive actions and routines taken by growth hacking teams when implementing product and service affordances across international markets enable firm members to act creatively and adaptively to foster product virality	1) Investigate the role of digital nudges, focusing on the iterative experimentation of user-interface design, in fostering virality in different geographical contexts. This could contribute to the understanding of how different elements of user interfaces affect virality in international contexts 2) Compare the different responses from consumers to the affordances of product and service in digital vs non-digital choice environments, highlighting how different contexts (e.g. international markets vs local markets) allow for different performance outcomes for growth hacking strategies 3) Investigate if and how big data coming from digital platforms could be leveraged to predict the virality of products, services or ad campaigns to shed light on the existence of market-specific behaviours of consumers in reacting to growth hacking strategies 4) Building on extant literature, clarify the role played by firms' social media activities in fostering internationalization. More specifically, investigate the role of affordances in fostering market intelligence, marketing communications and relationship marketing
Retention and optimization: absorption capabilities in the context of IDMCs	P4. Growth hacking teams foster consumer retention in international markets by developing absorption capabilities fuelled by an organizational learning system that allows iterative reconfiguration of processes and capabilities	1) Clarify the role of absorptive capacity and data gathering in the strategic international marketing field, specifically in increasing customer retention through better product-market fit; identify how growth hacking can facilitate cultural interactions between groups of entities (e.g. firms) to facilitate customer intelligence in an international context 2) Investigate and conceptually frame the intertwining of growth hacking and open innovation (OI) strategies to maximize customer profitability in international markets. It could be beneficial to understand how OI affects the development of market-fit products or services, as well as performance outcomes 3) Deepen our understanding of which technologies foster absorptive capacity and knowledge management with the firms that apply growth hacking strategies in international markets 4) Examine the impact of firm cultural intelligence and the role of social media technology in the development of international marketing capabilities through growth hacking processes

Table 2. (continued)

	Propositions	Future research avenues
Big data analytics	P5. Growth hacking teams, by leveraging big data to develop data-driven decision-making, foster a non-bureaucratically organizational approach that makes it possible to harness talent and technology management capabilities	1) Investigate the role of growth hacking in developing different big data capabilities based on firm type (e.g. SMEs vs. MNEs) and investigate the role of a firm's strategic orientation in defining growth hacking objectives 2) Determine how growth hacking might facilitate the use of unstructured data to implement automated decision-making processes and formulate strategies by grabbing evidence-based opportunities 3) Determine how exploitation of big data in the iterative growth hacking process can support various business model elements such as value proposition, revenue model or user experience. Which are the most promising tools and framework that can be leveraged in those processes? 4) Clarify how competitive intensity affects the efficacy of growth hacking strategies in international markets and how big data capabilities can help firms to maintain competitive advantage
Digital marketing	P6. Growth hacking teams overcome digital marketing capabilities gaps (in knowledge and practice) by implementing data-driven decision-making routines within the organization	1) Investigate how growth hacking might profit from the development and inclusion of artificial intelligence (AI), the Internet of things and smart environment capabilities that ensure seamless interaction between consumers and how this could be beneficial to fuel growth in an international environment 2) Untangle the role of business and marketing analytics (CRM) tools in developing personalized yet permission-based digital marketing strategies across borders 3) Investigate the impact that new behavioural data coming from the interaction of consumers in virtual worlds might have on the capabilities developed by the organization and how growth hacking might reduce firm vulnerability 4) Explore the nexus between digital marketing strategies implemented through growth hacking processes and information presentation. While it has been proven that information presentation is culture specific, growth hacking might overcome this liability by proposing new approaches to personalized customization experience and cultural information processing

(continued)

Table 2.

	Propositions	Future research avenues
Coding and automation	P7. Coding and automation capabilities are implemented by growth hacking teams to take advantage of large quantities of data, increasing the speed of internationalization and market knowledge	1) Deepen the existence of different process automation types and associated capabilities based on firm type (e.g. SME, MNE, start-up) or industry 2) Conceptualize the emerging construct of intelligent automation (or hyper-automation) – that is, the integration of machine learning and other digital technologies (i.e. AI) into existing automation capabilities, leveraging the IDMC theoretical lens 3) Extend the contribution in understanding how automation, embedded in products and services offered to consumers, affects the relationship between the company and the consumers across different markets 4) Empirically uncover if and how the coding and automation capabilities developed through growth hacking affect firm performance and resilience

Table 2. Source(s): Authors' elaboration

hacking in creating international marketing knowledge by, for example, deepening the role of growth hacking in fostering networks to share individual knowledge. We also propose new research that tackles the need to foster virality, such as the iterative experimentation of user-interface design. We encourage academics to tackle the needs of practitioners and managers to retain customers by developing new knowledge on absorptive capacity and data gathering. Future research could also unravel the role of growth hacking in developing different big data capabilities to facilitate the iterative experimentation process of growth hacking to support various business model elements (e.g. value proposition, revenue model or user experience). Researchers could also investigate the impact of digital marketing in overcoming gaps in knowledge and practice to uncover how growth hacking might profit from the development and inclusion of AI, the Internet of things and smart environment capabilities to fuel growth in an international environment. Finally, future research could extend this contribution by clarifying how coding and automation affects the relationship between companies and consumers across different markets.

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