



## Editors' reflections and introduction to the special section on 'information technology meets marketing: Value-creation along the customer journey'

This special section began with the observation that information technology advancements fuel much excitement among marketers. The accelerated development of information technology affects nearly every interaction between customers and companies (Larivière et al., 2017; Roy, Balaji, Sadeque, Nguyen, & Melewar, 2017). We also pointed out how this excitement about new technology-driven opportunities – for example, enabled by various social media applications and artificial intelligence – can turn sour. Marketers often turn out to be as confused as they are delighted with information technology, with questions such as when to adopt what platforms for value-creation along the customer journey keeping even the most seasoned practitioners up at night (Gartner Research, 2019; Lemon & Verhoef, 2016). The manuscripts we received in response to our call help solve some of this confusion among practicing marketers. In other words, our special section helps close the strategy-execution gap that exists when marketers are aware of the imperative of assimilating information technology into marketing practice, but are seeking guidance towards optimal solutions to do so (e. g., Bohnsack & Liesner, 2019). Indeed, the four papers that made the final cut advance our theoretical and, to a surprising extent, practical knowledge on how to make the most of digital tools to unlock value-creation opportunities along the customer journey. Collectively, the articles make two key contributions. First, they identify key challenges marketers face when assimilating various information technology platforms. Second, they provide distinct strategies on how marketers can overcome the identified challenges so as to make the most of information technology tools. In the following section, we provide a more detailed account of these two contributions by way of a summary of each of the four articles. Next, in the final section, we offer concluding thoughts including an overview of what research we would have liked to receive more of in our role as special section editors. We do so in the hope that our thoughts will aid scholars in keeping pace with the astounding speed at which information technology keeps transforming marketing practice.

### 1. Information technology challenges and how to overcome them

All submissions we have received subscribe to the view that technology is a powerful force for today's marketers. And the four articles in this special section are no exception. On the contrary, the articles reflect enthusiasm for information technology and its implications for the marketing landscape. However, what is most remarkable is the articles' collective and self-reflective critique of the current state of the literature and its (in)ability to tackle many pertinent information technology

challenges combined with their proffering of inventive solutions to overcome these challenges. Therefore, we summarize these two contributions (i.e., identified challenges and solutions) for each article:

- Parthiban, Qureshi, Bandopadhyay, and Jaikumar (2021) have identified a dearth of research into the challenge of how bottom of the pyramid producers can best boost value-creation through information technology. The base of the pyramid is an analogy that captures the many people (nearly four billion) who earn less than US \$2 per day. In this context, several questions arise as to how information technology can be best assimilated despite – or perhaps because of – the limited opportunities and constraints that often keep base of the pyramid organizations in a vicious cycle of poverty. The authors conduct extensive qualitative case studies to explore the value of information technology in this resource-constrained environment. Through these case studies, the authors are able to provide a number of meaningful insights that can pave the way for information technology's adoption and value-creation in resource-constrained contexts. Among many insights, one that stood out for us was the authors' detailed explanation and illustration of how even the simplest information and communications technology (e.g., WhatsApp messenger services) can, through repeated and innovative engagement, lead to significant value-creation for both producers and their customers. This finding hints at a broader but often neglected trend by organizations to adopt a "whatever works" attitude over a more deliberate strategic mindset when it comes to information technology adoption. Notably, Power & Gruner, 2016 have reached a similar conclusion for resource-constrained small and medium-sized enterprises and their adoption of inter-organizational information technology, namely that many platforms are adopted in an *ad hoc* fashion to overcome various hurdles and technology infrastructure limitations.
- Harrigan et al. (2021) have identified the challenge of harvesting the vast amounts of unstructured data often available on social media. In particular, the authors make a strong case for the importance of using these data to identify social media influencers. After all, as they explain, these so-called market mavens often hold a disproportionately large sway over their (many) social media followers and the decisions they make along the customer journey. Problematically, however, marketers lack comprehensive guidance about how best to identify these mavens to then influence them and thus gain or maintain some level of control over their marketing communications. To meet this challenge, this study adopts a mixed-method research design to shed light on the section of what distinguishes

mavens from non-mavens. At least in the context of Twitter, the authors provide some clear answers here. Market mavens on Twitter have not only more followers and interact with other users more often (duh!), but also have less readable posts, use more uppercase letters, use less distinct words, and use hashtags more frequently than everyone else posting on Twitter (i.e., the many non-mavens among us). With these results, the authors create some clarity on how marketers can locate – to then more closely work with – influencers. The study also makes an important contribution by paving the way for more research exploring the nature and implications of interactions between social media influencers, their followers, and marketers.

- [Buhalis and Volchek \(2021\)](#) have identified a lack of comprehensive knowledge concerned with marketers' attribution methods. These methods hold the potential to analyze a vast amount of data to assess marketing performance and account for which information technology platform created how much value along the customer journey. We concur that more research on attribution methods that determine how credit for sales and conversions is assigned to the many touchpoints along customers' journeys is needed. Oftentimes practitioners struggle to overcome attribution challenges and gauge the true value of their campaign investments. Think, for example, of the multinational giant P&G. Their digital annual marketing communication budget exceeded US\$2 billion in the financial year 2018–2019 and was spread over hundreds of platforms and touchpoints – how can its managers and media planners accurately assess the return on investment for individual platforms? To meet this challenge, this study supplies a timely tool that allows organizations to identify and distinguish between different attribution methods to find the one(s) that deliver. More specifically, based on a structured literature review, the authors develop a taxonomy that matches customers' contextual factors with specific attribution methods. In so doing, the authors make a contribution at the intersection of big data, marketing performance analytics, and customer journeys.
- [Kang, Lu, Guo, and Li \(2021\)](#) have identified a lack of research concerned with the challenge of fostering digital engagement with customers through interactive, synchronous streaming communities. It is clear that research on these particular communities and their real-time information exchange is scarce. Further, from a practical standpoint, interactivity (or lack thereof) remains a hot topic with most people consuming marketers' online content in a passive fashion. Against this backdrop, the authors go some way toward answering questions concerned with the relationship between interactivity and customer engagement behaviour and how different boundary conditions (e.g., a live stream's popularity measured by the number of concurrent viewers) affect this relationship. Following the analysis of a large dataset, they offer several insights, some of which detailing the curvilinear relationship between the variables in question. We also learn – perhaps not surprisingly – that broadcasting organizations benefit from close relationships with customers and high quality content when streaming (to what extent this might lead to a virtuous cycle remains an open question, however). One of several findings is that “broadcasters should manage live streaming rooms and promptly silence users who post swearwords or meaningless emotions ([Kang et al., 2021](#)).” Although we do not believe that higher levels of organizational control on social media – especially by means of “silencing” users – is always the answer, with online anti-social behaviors, bullying and the polarization of opinions on the rise, we agree that it is high time to act. Even social media giant Facebook has acknowledged this problem and is conducting research into their algorithms' role in feeding users with misinformation, which could fuel divisiveness and polarized opinions among consumer groups ([Boutyline & Willer, 2017](#); [Gramenz, 2020](#)).

As shown, the four articles offer a critique of the current literature that often goes hand in hand with pertinent challenges marketers face in

their adoption and use of different types of information technology for value-creation along the customer journey. In light of these challenges, collectively and individually, the articles provide a theoretical foundation with relevant practical insights that can assist marketers in their daily decision making as well as long-term strategic planning concerned with the assimilation of information technology. Interestingly, the four papers are all, to different extents, concerned with social media platforms (as were many of the other submissions that did not make the final cut), which suggests that social media platforms remain a key concern for scholars. Likewise, it is probable that social media will continue to both delight and trouble decision makers across most industries for many years to come as traditional communication channels and our brick-and-mortar operations continue to decline ([Dwivedi et al., 2020](#); [Naylor, Lamberton, & West, 2012](#)). That said, we wish to add one caveat to this statement. We believe that the boundaries between social/digital and traditional touchpoints will become more blurred as we move toward this digitalized market landscape. In fact, we believe that the lines between traditional and digital will become indistinguishable leading to a world with no more *digital* marketing experts, professors, or even special sections on the topic as marketing itself becomes synonymous with digital. Much like we do not usually refer to *color* television sets anymore.

## 2. The flipside and concluding thoughts

In our call for this special section, we asked many research questions. Clearly, it was not our goal to receive answers to all of them and we are glad many questions have been addressed (in a practical and rigorous fashion too, as outlined). However, we were surprised that, by and large, the manuscripts we have received forfeited an opportunity to explore questions concerned with the flipside of technology's use along the customer journey. The research questions in our call concerned with value-destruction and possible unintended consequences stemming from the adoption of technology across touchpoints were largely ignored. Few submission we have received touched upon the many ethical dilemmas that technology-facilitated value-creation along the customer journey can pose and how these can be overcome. This is unfortunate. Potentially negative implications (i.e., value-destruction) of information technology's use constitute fruitful research territory (see also [Dwivedi et al., 2020](#)). What if technology met marketing and a few years into their relationship, interactions become tainted by fatigue, vested interests, greed and intentions to mislead? Surely, we then have a responsibility to face and tackle these negative aspects heads on.

Negative aspects range from relatively harmless ones, such as cognitive overload, digital-fatigue and “overshot” consumers ([Lukas et al., 2013](#)) to more serious consequences including depression associated with feelings of FOMO (fear of missing out). Social media platforms are also increasingly criticized for their role in creating polarized (political) opinions among its users (e.g., [Boutyline & Willer, 2017](#)). The polarization of group opinions is not new nor limited to digital media. Related concepts including selective exposure, confirmation bias, and audience fragmentation have existed for some time ([Iyengar & Hahn, 2009](#)), yet with algorithms' in-built bias toward exposing people to information they are receptive to (or have been in the past) various online platforms likely fuel their occurrence and severity ([Webster & Ksiazek, 2012](#)). Although an ambitious goal, it is important for future researchers to more critically reflect on marketers' use of digital engagement tools and their consequences. And while this editorial is not another call for a special section on this topic, we nonetheless wish to conclude in the same manner we have started this journey, namely with questions that we hope will inspire scholars to undertake more work in this field. This time, however, the research questions we ask are specifically concerned with possible friction and pain points when technology meets marketing:

- How can organizations engage consumers without cognitively overloading them and instead create truly targeted communications that create value at the right time and place along the customer journey (a question that is particularly pertinent given an increasingly fierce competition for digital consumers' attention)?
- What types of value does information technology provide or destroy (e.g., cognitive, sensory/emotional, social and so forth) and when does it do the latter?
- What role should marketers play in educating their customers about how the attention economy and its algorithms work and what societal impacts they might have (see [Mittelstadt, Allo, Taddeo, Wachter, & Floridi, 2016](#))?
- What role do (or could) the hundreds of petabytes of data (some big tech companies keep a record of everything their users do!) play in predicting and influencing consumers and where are the ethical boundaries of what data can be used, how, when, and for what purpose?
- Is it ethical for marketers to work with social media influencers (see [Harrigan et al., 2021](#)) to promote their products when these influencers only exist virtually, as perfect people/avatars in carefully crafted utopian worlds ([Katz, 2018](#))?
- How do technology providers (e.g., Facebook, Google, and Instagram) monetize their "free" services together with advertisers, and are its users being sold out in the attention economy?
- Why does false information spread faster than the truth on social media platforms (see [Dizikes, 2018](#)) and how does this affect marketers and their consumers in today's fast-paced online communication ecosystems (e.g., is there a disinformation for profit business model)?

Information technology touches upon nearly everything marketers and consumers do. The trend toward increased digitization has been accelerated by the Covid-19 pandemic (for example through more home office workers), yet we have likely only witnessed the beginnings of information technology's potential in creating radically new experiences along the customer journey. Consequently, it is difficult to do future research avenues justice. There are simply too many unexplored issues. Nevertheless, based on our joint research efforts in this space and our work as editors of this special section, we not only summarize what its articles do but also what they do *not* do. In so doing, it was our intention to encourage scholars to think more about technology's role in marketing as a potential force for good rather than evermore sophisticated empirical methods that primarily benefit organizations and their bottom lines.

To conclude, we extend our gratitude to the authors from all over the world who submitted their manuscripts for potential publication in our special section. We also thank the team of international reviewers who have provided many constructive suggestions and comments. Finally, we thank *International Journal of Information Management's* editor-in-chief, Professor Yogesh Dwivedi and his team for providing us the opportunity to launch this special section and assisting us tirelessly in making it happen. We are confident this special section will act as a platform for more exciting work at the intersection of technology and marketing. Despite much progress, we have likely only scratched the surface of this growing research field.

#### Author statement

**Sanjit K. Roy:** Special issue proposal, Managing reviews, Editorial.

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#### References

- Bohnsack, R., & Liesner, M. M. (2019). What the hack? A growth hacking taxonomy and practical applications for firms. *Business Horizons*, 62(6), 799–818. <https://doi.org/10.1016/j.bushor.2019.09.001>.
- Boutyline, A., & Willer, R. (2017). The social structure of political echo chambers: Variation in ideological homophily in online networks. *Political Psychology*, 38(3), 551–569. <https://doi.org/10.1111/pops.12337>.
- Buhalis, D., & Volchek, K. (2021). Bridging marketing theory and big data analytics: The taxonomy of marketing attribution. *International Journal of Information Management*. <https://doi.org/10.1016/j.ijinfomgt.2020.102253>.
- Dizikes, P. (2018) <https://news.mit.edu/2018/study-twitter-false-news-travels-faster-true-stories-0308>.
- Dwivedi, Y. K., Ismagilova, E., Hughes, D. L., Carlson, J., Filieri, R., Jacobson, J., ... Kumar, V. (2020). Setting the future of digital and social media marketing research: Perspectives and research propositions. *International Journal of Information Management*. <https://doi.org/10.1016/j.ijinfomgt.2020.102168>.
- Gartner Research. (2019). *Hidden forces that will shape marketing in 2019*. Available at <https://www.gartner.com/smarterwithgartner/4-hidden-forces-that-will-shape-marketing-in-2019/>.
- Gramenz, J. (2020). *Facebook hit back at Netflix Social Dilemma documentary*. Available at <https://www.news.com.au/technology/online/social/facebook-hit-back-at-netflix-social-dilemma-documentary/news-story/b59ab5d7bdf139535b298b4e392f0c81>.
- Harrigan, P., Daly, T. M., Coussement, K., Lee, J. A., Soutar, G. N., & Evers, U. (2021). Identifying influencers on social media. *International Journal of Information Management*. <https://doi.org/10.1016/j.ijinfomgt.2020.102246>.
- Iyengar, S., & Hahn, K. S. (2009). Red media, blue media: Evidence of ideological selectivity in media use. *Journal of Communication*, 59(1), 19–39. <https://doi.org/10.1111/j.1460-2466.2008.01402.x>.
- Kang, K., Lu, J., Guo, L., & Li, W. (2021). The dynamic effect of interactivity on customer engagement behavior through tie strength: Evidence from live streaming commerce platforms. *International Journal of Information Management*. <https://doi.org/10.1016/j.ijinfomgt.2020.102251>.
- Katz, M. (2018). *CGI "influencers" like Lil Miquela are about to flood your feeds*. *Wired*.
- Larivière, B., Bowen, D., Andreassen, T. W., Kunz, W., Sirianni, N. J., Voss, C., ... De Keyser, A. (2017). "Service Encounter 2.0": An investigation into the roles of technology, employees and customers. *Journal of Business Research*, 79(October), 238–246. <https://doi.org/10.1016/j.jbusres.2017.03.008>.
- Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing*, 80(6), 69–96. <https://doi.org/10.1509/jm.15.0420>.
- Lukas, B. A., Whitwell, G. J., & Heide, J. B. (2013). Why do customers get more than they need? How organizational culture shapes product capability decisions. *Journal of Marketing*, 77(1), 1–12.
- Mittelstadt, B. D., Allo, P., Taddeo, M., Wachter, S., & Floridi, L. (2016). The ethics of algorithms: Mapping the debate. *Big Data & Society*, 3(2), 1–21. <https://doi.org/10.1177%2F2053951716679679>.
- Naylor, R. W., Lambertson, C. P., & West, P. M. (2012). Beyond the "like" button: The impact of mere virtual presence on brand evaluations and purchase intentions in social media settings. *Journal of Marketing*, 76(6), 105–120. <https://doi.org/10.1509%2Fjm.11.0105>.
- Parthiban, R., Qureshi, I., Bandopadhyay, S., & Jaikumar, S. (2021). Digitally mediated value creation for non-commodity base of the pyramid producers. *International Journal of Information Management*. <https://doi.org/10.1016/j.ijinfomgt.2020.102256>.
- Power, D., & Gruner, R. L. (2016). Towards a calculative model of supply chain enabling IT implementation. *International Journal of Operations and Production Management*, 36(5), 490–511. <https://doi.org/10.1108/IJOPM-02-2014-0068>.
- Roy, S. K., Balaji, M. S., Sadeque, S., Nguyen, B., & Melewar, T. C. (2017). Constituents and consequences of smart customer experience in retailing. *Technological Forecasting and Social Change*, 124(November), 257–270. <https://doi.org/10.1016/j.techfore.2016.09.022>.
- Webster, J. G., & Ksiazek, T. B. (2012). The dynamics of audience fragmentation: Public attention in an age of digital media. *Journal of Communication*, 62(1), 39–56. <https://doi.org/10.1111/j.1460-2466.2011.01616.x>.

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