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The Impact of Integration Quality on Customer Equity in Data Driven Omnichannel Services Marketing

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Abstract

The plethora of digital channels has shifted multichannel services to an omnichannel environment. In the omnichannel context, the borderline of offline, online and digital channels is diminishing as consumers utilize several channels simultaneously to complete any purchases. Additionally, as more channels are introduced, the amount of customer data collected at each touch point is increasing rapidly. However, the urgent need to integrate all information with service attributes within these channels will result in increasing cost and consequently customer dissatisfaction if they are disintegrated. To address this phenomenon, this research focuses towards developing quality dimension for data driven omnichannel services marketing. Within omnichannel literature, conceptualization of service quality perception on channel integration is rare. Therefore, additional research is required to know more novel outcomes of the channel integration within omnichannel services marketing. To address this gap, this research focuses on customer equity and its three drivers i.e. brand equity, value equity and relationship equity as the possible outcomes of data-driven omnichannel services marketing. Additionally, research on customer equity has not been addressed within this stream. Hence, this research illuminates a potential avenue for omnichannel services research by conceptualizing customer equity as a possible outcome of integration quality.

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1. Introduction

We live in an omnichannel world. Online and the new digital channels that are operated by separate departments are not viewed as secondary channels anymore¹. Rather, these are becoming an integral part of many different channels utilized by companies in today's omnichannel environment. Due to the advent of Information Communication Technology (ICT), channel proliferation is taking place, where companies are developing interactive websites, practical mobile apps, digital kiosks and many other technologically advanced channels besides their traditional physical stores². The borderline between online, offline and digital channels are diminishing. Customers are frequently using multiple channels simultaneously to complete even one single purchase³.

Use of technologically advanced channels are creating challenges for big companies. Companies need to evaluate threats and opportunities due the advent of omnichannel services marketing. Additionally, the amount of customer data generated through omnichannel touchpoints are creating further challenges and opportunities for managers. Firms should focus on the more connected future of digital ecosystems⁴. Businesses such as Uber (challenging taxis); Airbnb (challenging hotels); Apple Pay (challenging banks); and Amazon (challenging booksellers and retailers) are leveraging the power of omnichannel and data-driven strategies to challenge long standing traditional businesses. Companies like Amazon ensures a full-fledged omnichannel ecosystem by offering integrated branded platform, ensuring greater customer experience within all channels, analysing large amount of customer data and integrating these data within all its channels. Due to this digital disruption, Rigby⁵ has indicated omnichannel strategy as the mode of survival for companies, Verhoef, Kannan, Inman³ argued omnichannel as the next development of retailing and future shape of retail landscape while Brynjolfsson, Hu, Rahman⁶ assessed omnichannel marketing as an instrument to extend market reach and a way to introduce customer with products and services that they do not even know about.

The present study calls for assessing service quality perception due to integrating all the customer touchpoints within an omnichannel environment. If companies are not integrating channels and delivering a connected and seamless experience, they risk dissatisfying customers and incurring unwanted cost¹. To address this issue, several studies related to service quality research have advocated a new service quality component *Integration Quality* (i.e. consistency of service elements, aligning channels and its attributes under one umbrella) within omnichannel, as being the key to provide unified service experience⁷⁻¹³.

From a theoretical point of view, till now literature on service quality have predominantly focused on a single-channel mindset where physical service quality and virtual service quality have been conceptualized incoherently^{10,13}. A few pieces of research have focused on addressing factors influencing channel integration^{10,13-16}. However, research on omnichannel in the context of consumer behavior is lacking³.

To address the above-mentioned gap in the extant literature, this research focuses on customer equity, which is defined as customer's discounted lifetime value¹⁷, as the possible outcome of data-driven omnichannel integration. Research on customer equity has not been addressed within omnichannel. Based on extensive literature review within the domain of omnichannel marketing and integration quality, this research answers the questions: "How data-driven omnichannel marketing influences the drivers of customer equity?"

2. Literature Review

2.1. Data driven Omnichannel Services Marketing and Integration Quality

Today's customers have access to wide range of technologies. Compared to earlier generations, customers nowadays are highly influenced by different technologies¹⁸. The omnichannel concept is where a firm offers its products and services to a connected customer¹⁹. Connected customers regularly interact with multiple channels such as mobile devices, social media, direct mail and catalogs, call centers, gaming consoles, kiosks, televisions, home services, networked appliances, location-based marketing, etc., often at the same time to make a purchase¹⁹. The omnichannel concept incorporates this full range of channels, enabling customers to experience a seamless and consistent channel system in their purchase processes¹⁹.

Although, omnichannel marketing is an evolution of multichannel marketing, most multichannel companies use a siloed approach towards channel management, where physical and online stores are managed separately^{5,20}.

Therefore, this siloed approach to multichannel marketing is no longer appropriate. Companies that are shifting to omnichannel marketing system, collaborate online and offline strategies including all communication channels such as social media, review websites, etc. They strive to provide personalized shopping experience, value-added mobile services and self-service technologies in store, and use geo-location software to provide integrated services.

Omnichannel marketing provides great opportunity for developing a data driven channel strategy. Omnichannel sales information can be assisted by cloud and electronic point of sales and machines that records transaction information²¹. Additionally, firms can get a large amount of consumer data through different marketing touchpoints such as social media, loyalty programmes and mobile apps²¹. Brynjolfsson, Hu, Rahman⁶ indicated the importance of using big data and analytics to better understand customer needs and values to create successful omnichannel retailing strategies. Weill, Woerner⁴ mentioned big data analytics, social media, mobile apps and customer experience metrics such as the Net Promoter Score as important techniques to understand end consumers in an omnichannel environment.

Integration is at the heart of omnichannel marketing. The users of multichannel services perceive the quality of all the channels they use and integrate them into an overall perception of service quality. Acknowledging this phenomenon, Sousa, Voss¹⁰ proposed the term *integration quality* within omnichannel marketing. Integration quality is defined as “the ability to provide customers with a seamless service experience across multiple channels”^{10 pg. 365}.

2.2. Outcomes of Integration quality

Several studies have focused on the outcomes of consumer perception of service quality. Various literature has indicated perceived value^{22,23}, word of mouth intentions^{24,25}, purchase intention^{24,26-28}, trust^{29,30} etc. as the outcomes of service quality.

The extant literature is mainly focused on either physical service quality or virtual service quality. For omnichannel services, the outcomes of the past research failed to address integration quality. In regards to omnichannel integration, conceptualization of the outcomes of integration quality is rare. Most studies have focused on satisfaction^{10,31}, customer value³²⁻³⁴, and loyalty^{9,33,35-38} as the outcomes of omnichannel marketing. Hence, the extant research indicates an important gap in service quality literature regarding the consequences of omnichannel marketing. Further research can be focused towards addressing more novel outcomes and illustrate their impact on consumer behavior due to the impact of integrated marketing channels.

2.3. Customer Equity

Past research has indicated the relation with integration or integrated service quality and customer equity³⁹. Customer equity is related to value creation resulting from profit, costs, cash flow, customers and customer relationship³⁹. It is the concept that results from maintaining lifetime relationship with customers utilizing advanced marketing technologies and maximizing direct marketing benefits⁴⁰. Lemon, Rust, Zeithaml¹⁷ defined customer equity as customer’s discounted lifetime value. Discounted lifetime value calculates customers’ value to the firm by factoring in issues such as acquisition, retention, profits and costs. However, this definition of customer equity is financial in nature. On the other hand, considering the behavioural aspect of consumers’, existing research proposes three drivers of customer equity, namely; 1. Value Equity, 2. Brand Equity and 3. Relationship Equity^{17,41-43}. By improving these three drivers firms can enhance customer equity⁴⁴.

2.3.1. Value Equity

Value equity is derived from customer’s assessment of a brand, based on the perception of what is given up for what is received⁴². It is based on price, quality, and convenience. Zeithaml⁴⁵ suggested low price, product features, perception of price-quality relation, including time and effort as customer’s perception of value. Holbrook⁴⁶ argued output/input, quality, convenience and aesthetics as the drivers of perceived value.

2.3.2. Brand Equity

Brand equity is defined as customer's subjective and intangible assessment of the brand⁴². It is based on image and meaning to fulfill vital roles¹⁷. Brand equity plays important role to firstly, attract customers and allow them to evaluate the brand by using brand recognition and brand perception; secondly, continuously remind them about the brand, and finally, connect customers emotionally with the company³⁹. Brand equity is measured in accordance with corporate value equity as monetary value that is intangible, features customer recognition and allows brands to be expanded in a contemporary market economy. Strong brand or brand with high equity is a key to attract new customers¹⁷. However, the overall brand equity is dependent on customer involvement, customer experience, and the ease of which customers can evaluate the product or service quality.

2.3.3. Relationship Equity

Relationship equity is defined as customer's inclination towards the brand and how customers would always return based on their objective and subjective assessment of the brand¹⁷. It is the type of glue that sticks the customers to the company, the stickiness that strengthens the relationship between the firm and customer¹⁷.

Relationship equity is based on the belief that value equity and brand equity may not be enough to hold a customer to the brand. Even if a customer evaluates a product or service objectively and subjectively, they may not rebuy it based on different issues such as individual situation or marketing efforts from other companies⁴⁷. Relationship equity has been at the forefront of several research⁴⁸⁻⁵⁰. To enhance relationship equity, companies need to undertake loyalty programs, special recognition and treatment activities, affinity programs, communication-building programs and knowledge building programs¹⁷.

2.4. Data-driven Omnichannel Marketing and Customer Equity

As mentioned earlier customer equity comprises of three drivers i.e. value equity, relationship equity and brand equity. Within omnichannel literature, the concept of customer equity and all its three drivers were not addressed by any research at a time. However, few studies have conceptualized the above-mentioned drivers individually within multichannel concept^{19,32,33,36,51-55}.

In regards to value equity, several studies have indicated customer value as an outcome of multichannel usage^{32,33,51}. Payne, Frow⁵¹ explained integration quality as the full range of available channels to serve customers and indicated that firms should utilize integration strategy to find out ways to increase customer value. Payne, Frow⁵¹ argued channel integration as a strategy for value creation. Neslin, Grewal, Leghorn, Shankar, Teerling, Thomas, Verhoef⁵⁴ indicated multichannel customer management as a value creating process through acquisition, retention, and development. Hence, it is evident that customer value or value equity within customer equity is an important facet of omnichannel marketing.

Several studies have indicated the relation between customer retention, customer-firm relationship and customer lifetime value with multichannel strategies^{19,32,33,36,51}. Bhalla¹⁹ argued interaction between omnichannel would deepen customer relationship with the firm and affect customer lifetime value and long-term profitability. Van Baal³³ used the term harmonization to indicate omnichannel and tested its relationship with customer retention. Bendoly, Blocher, Bretthauer, Krishnan, Venkataramanan³⁵ argued integration will reduce customers switching to other providers due to product unavailability. Hence, influence higher customer retention and longer relation with the firm. These arguments suggest the relation between omnichannel and relationship equity within customer equity.

Lastly, brand image and brand equity have been a focus of several omnichannel studies^{19,52-55}. Within omnichannel context, brand experience within firms' channels has been addressed extensively. In its core definition, omnichannel marketing includes brand experience, where omnichannel firms let customers experience the brand rather than their channels¹⁹.

Within the above discussion, it is evident that although customer equity has not been addressed within omnichannel marketing, its three drivers i.e. value equity, relationship equity and brand equity, are surely influenced due to omnichannel usage. Thus, this research extends service quality literature by conceptualizing customer equity as an important outcome of data-driven omnichannel services marketing (Figure 1).

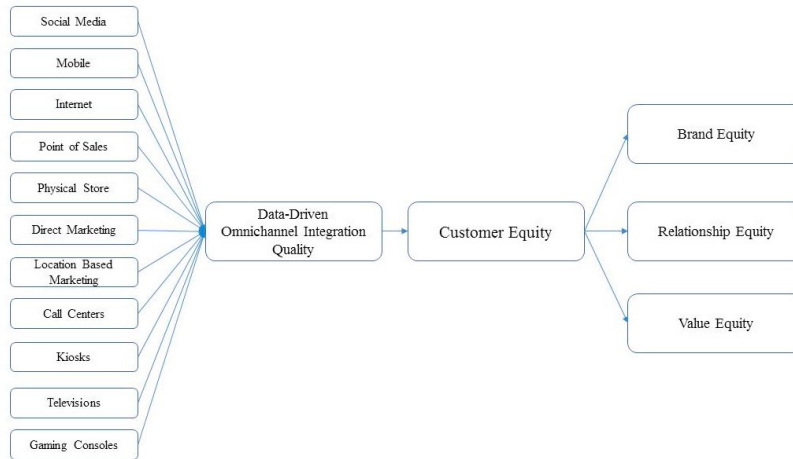


Figure 1 Customer Equity Model for Data-driven Omnichannel Service Integration Quality

3. Conclusion and Future Research

Research towards data driven omnichannel services marketing needs to focus on conceptualizing more novel outcomes of integration quality. Customer equity which consists of three highly important and relevant drivers can be examined as an outcome of channel integration. This paper conceptualizes customer equity as an important outcome of data-driven omnichannel services marketing. It also discusses the drivers of customer equity to demonstrate the relation between each driver with omnichannel marketing.

There are few areas where future research can focus in regards to customer equity and data-driven omnichannel marketing. Research could focus on how customer data collected across multiple touchpoints could be integrated and used to develop higher customer equity. Additionally, research could investigate different industries such as health care services in which patients have limited input in information generation vs. tourism where travelers are exposed to large amount of consumer generated data, to understand the impact of customer data within omnichannel in relation to customer equity. Furthermore, a fruitful avenue of future research can be, investigation on how integration quality may result in the perception of higher value, better brand image and improved relationship between customer and the firm by generating scaled items for research instrument and developing theoretical model for data-driven omnichannel marketing and customer equity within service quality domain.

References

1. Forrester Inc. *Customer Desires vs. Retailer Capabilities: Minding The Omni-Channel Commerce Gap*. January 2014 2014.
2. Lazaris C, Vrechopoulos A. From multi-channel to “omnichannel” retailing: review of the literature and calls for research. Paper presented at: 2nd International Conference on Contemporary Marketing Issues.(ICCM)2014.
3. Verhoef PC, Kannan P, Inman JJ. From multi-channel retailing to omni-channel retailing: Introduction to the special issue on multi-channel retailing. *Journal of Retailing*. 2015;91(2):174-181.
4. Weill P, Woerner SL. Thriving in an increasingly digital ecosystem. *MIT Sloan Management Review*. 2015;56(4):27.
5. Rigby D. The future of shopping. *Harvard Business Review*. 2011;89(12):65-76.
6. Brynjolfsson E, Hu YJ, Rahman MS. Competing in the age of omnichannel retailing. *MIT Sloan Management Review*. 2013;54(4):23.
7. Johnston R, Clark G. *Service Operations Management*. Harlow, UK: Pearson Education; 2001.
8. Ganesh J. Managing Customer Preferences in a Multi-channel Environment Using Eeb Services. *International Journal of Retail & Distribution Management*. 2004;32(3):140-146.
9. Montoya-Weiss MM, Voss GB, Grewal D. Determinants of Online Channel Use and Overall Satisfaction with a Relational, Multichannel Service Provider. *Journal of the Academy of Marketing Science*. 2003;31(4):448-458.

10. Sousa R, Voss CA. Service quality in multichannel services employing virtual channels. *Journal of Service Research*. 2006;8(4):356-371.
11. Falk T, Schepers J, Hammerschmidt M, Bauer HH. Identifying Cross-Channel Dissynergies for Multichannel Service Providers. *Journal of Service Research*. 2007;10(2):143-160.
12. Patrício L, Fisk RP, Falcão e Cunha J. Designing multi-interface service experiences: the service experience blueprint. *Journal of Service Research*. 2008;10(4):318-334.
13. Banerjee M. Misalignment and Its Influence on Integration Quality in Multichannel Services. *Journal of Service Research*. 2014;17(4):460-474.
14. Oh L-B, Teo H-H. Consumer value co-creation in a hybrid commerce service-delivery system. *International Journal of Electronic Commerce*. 2010;14(3):35-62.
15. Berman B, Thelen S. A guide to developing and managing a well-integrated multi-channel retail strategy. *International Journal of Retail & Distribution Management*. 2004;32(3):147-156.
16. Wang T, Yeh RK-J, Yen DC, Nugroho CA. Electronic and in-person service quality of hybrid services. *The Service Industries Journal*. 2016:1-20.
17. Lemon KN, Rust RT, Zeithaml VA. What drives customer equity. *Marketing Management*. 2001;10(1):20.
18. Cook G. Customer experience in the omni-channel world and the challenges and opportunities this presents. *Journal of Direct, Data and Digital Marketing Practice*. 2014;15(4):262-266.
19. Bhalla R. The omni-channel customer experience: Driving engagement through digitisation. *Journal of Digital & Social Media Marketing*. 2014;1(4):365-372.
20. Gallino S, Moreno A. Integration of online and offline channels in retail: The impact of sharing reliable inventory availability information. *Management Science*. 2014;60(6):1434-1451.
21. Rozados IV, Tjahjono B. Big data analytics in supply chain management: Trends and related research. Paper presented at: 6th International Conference on Operations and Supply Chain Management 2014.
22. Parasuraman A, Zeithaml V, Berry L. ES-QUAL a multiple-item scale for assessing electronic service quality. *Journal of Service Research*. 2005;7(3):213-233.
23. Sweeney JC, Soutar GN, Johnson LW. The role of perceived risk in the quality-value relationship: a study in a retail environment. *Journal of Retailing*. 1999;75(1):77-105.
24. Holloway BB, Beatty SE. Satisfiers and dissatisfiers in the online environment a critical incident assessment. *Journal of Service Research*. 2008;10(4):347-364.
25. Hartline MD, Jones KC. Employee performance cues in a hotel service environment: Influence on perceived service quality, value, and word-of-mouth intentions. *Journal of Business Research*. 1996;35(3):207-215.
26. Pantano E, Viassone M. Engaging consumers on new integrated multichannel retail settings: Challenges for retailers. *Journal of Retailing and Consumer Services*. 2015;25:106-114.
27. Yoo B, Donthu N. Developing a scale to measure the perceived quality of an Internet shopping site (SITEQUAL). *Quarterly journal of electronic commerce*. 2001;2(1):31-45.
28. Herhausen D, Binder J, Schoegel M, Herrmann A. Integrating Bricks with Clicks: Retailer-Level and Channel-Level Outcomes of Online-Offline Channel Integration. *Journal of Retailing*. 2015;91(2):309-325.
29. Collier JE, Kimes SE. Only if it is convenient understanding how convenience influences self-service technology evaluation. *Journal of Service Research*. 2013;16(1):39-51.
30. Sparks BA, Perkins HE, Buckley R. Online travel reviews as persuasive communication: The effects of content type, source, and certification logos on consumer behavior. *Tourism Management*. 2013;39:1-9.
31. Stojkovic D, Lovreta S, Bogetic Z. Multichannel strategy - the dominant approach in modern retailing. *Economic Annals*. 2016;61(209):105-127.
32. Hsieh Y-C, Roan J, Pant A, et al. All for one but does one strategy work for all? Building consumer loyalty in multi-channel distribution. *Managing Service Quality: An International Journal*. 2012;22(3):310-335.
33. Van Baal S. Should retailers harmonize marketing variables across their distribution channels? An investigation of cross-channel effects in multi-channel retailing. *Journal of Retailing and Consumer Services*. 2014;21(6):1038-1046.
34. Payne A, Frow P. The role of multichannel integration in customer relationship management. *Industrial marketing management*. 2004;33(6):527-538.
35. Bendoly E, Blocher JD, Bretthauer KM, Krishnan S, Venkataramanan MA. Online/in-store integration and customer retention. *Journal of Service Research*. 2005;7(4):313-327.
36. Cao L, Li L. The impact of cross-channel integration on retailers' sales growth. *Journal of Retailing*. 2015;91(2):198-216.
37. Seck AM, Philippe J. Service encounter in multi-channel distribution context: virtual and face-to-face interactions and consumer satisfaction. *Service Industries Journal*. 2013;33(6):565-579.
38. Lee H-H, Kim J. Investigating dimensionality of multichannel retailer's cross-channel integration practices and effectiveness: shopping orientation and loyalty intention. *Journal of Marketing Channels*. 2010;17(4):281-312.
39. Wang H, Kim KH, Ko E, Liu H. Relationship between service quality and customer equity in traditional markets. *Journal of Business Research*. 2016;69(9):3827-3834.
40. Blattberg RC, Malthouse EC, Neslin SA. Customer lifetime value: Empirical generalizations and some conceptual questions. *Journal of Interactive Marketing*. 2009;23(2):157-168.
41. Rust RT, Lemon KN, Zeithaml VA. Return on marketing: Using customer equity to focus marketing strategy. *Journal of marketing*. 2004;68(1):109-127.
42. Rust RT, Lemon KN, Zeithaml VA. *Driving customer equity: Linking customer lifetime value to strategic marketing decisions*. Marketing Science Institute; 2001.
43. Leone RP, Rao VR, Keller KL, Luo AM, McAlister L, Srivastava R. Linking brand equity to customer equity. *Journal of service research*. 2006;9(2):125-138.
44. Hyun SS. Creating a model of customer equity for chain restaurant brand formation. *International Journal of Hospitality Management*.

- 2009;28(4):529-539.
45. Zeithaml VA. Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. *The Journal of marketing*. 1988;2-22.
 46. Holbrook MB. *Consumer value: a framework for analysis and research*. Psychology Press; 1999.
 47. Oliver RL. Whence consumer loyalty? *the Journal of Marketing*. 1999;33-44.
 48. Berry LL. Relationship marketing of services—growing interest, emerging perspectives. *Journal of the Academy of marketing science*. 1995;23(4):236-245.
 49. Liljander V, Strandvik T. The nature of customer relationships in services. *Advances in services marketing and management*. 1995;4(141):67.
 50. Storbacka K, Strandvik T, Grönroos C. Managing customer relationships for profit: the dynamics of relationship quality. *International journal of service industry management*. 1994;5(5):21-38.
 51. Payne A, Frow P. A strategic framework for customer relationship management. *Journal of marketing*. 2005;69(4):167-176.
 52. Verhoef PC, Kannan PK, Inman JJ. From Multi-Channel Retailing to Omni-Channel Retailing. *Journal of Retailing*. 2015;91(2):174-181.
 53. Picot-Coupey K, Huré E, Piveteau L. Channel design to enrich customers' shopping experiences: Synchronizing clicks with bricks in an omni-channel perspective – the Direct Optic case. *International Journal of Retail & Distribution Management*. 2016;44(3):336-368.
 54. Neslin SA, Grewal D, Leghorn R, et al. Challenges and Opportunities in Multichannel Customer Management. *Journal of Service Research*. 2006;9(2):95-112.
 55. Ailawadi KL, Farris PW. Managing Multi- and Omni-Channel Distribution: Metrics and Research Directions. *Journal of Retailing*. 2017;93(1):120-135.