



Aalto University
School of Business

Digital Marketing: Challenges and Opportunities

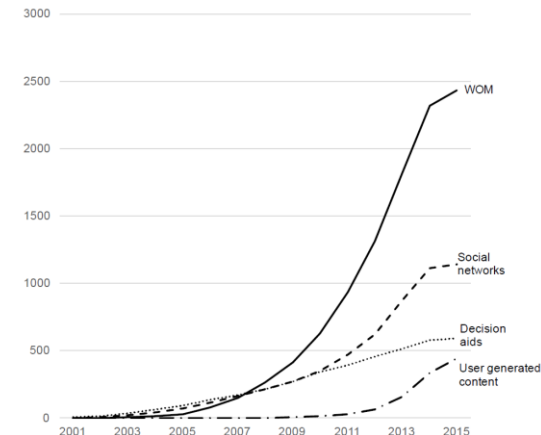
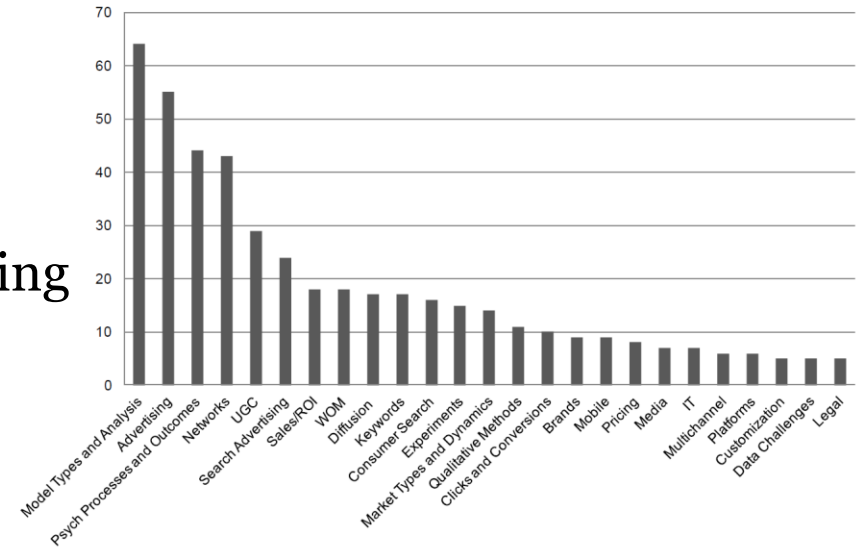
Ashish Kumar
Assistant Professor

Digital Marketing Revolution

- **Online marketing**
 - eCommerce, Multichannel retailing
- **Social media marketing**
- **Mobile marketing**

DSMM: Digital Social and Mobile Marketing

- **Implications**
 - Buyer behavior
 - Seller behavior



Challenges

- **Newness**
- **Data**
- **Modeling**
- **Changes in technology**

Digital Era

1
digital media facilitates
expression and decision
making

2
primetime for WOM and
the rise of networks

3
everyone is connected and
social media is everywhere

KEY ARTICLES AND TOPICS THROUGH THE EVOLUTION OF CORE DSMM THEMES FROM 2000-2015

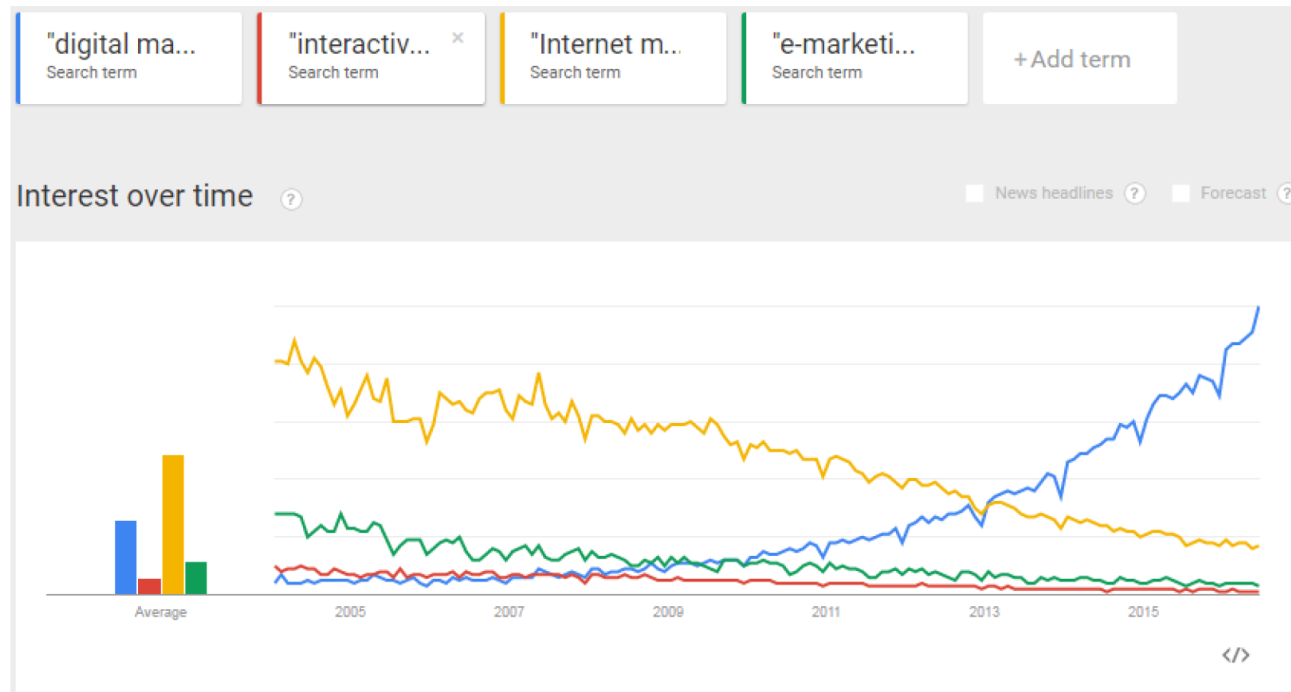
Topic	Era 1	Era 2	Era 3	Current
Individual expression	<i>Benefits the consumer by augmenting offline life:</i> Kozinets 2002 Schau and Gilly 2003	<i>Benefits the consumer via sharing of opinions and narratives:</i> Kozinets et al. 2010 Schlosser 2005	<i>Benefits both the consumer and the firm via viral transmission and content creation:</i>	<i>Benefits the firm differently with regard to volume v. valence:</i>
	<i>Benefits the firm via WOM:</i> Dellarocas 2003 Godes and Mayzlin 2004	<i>Benefits the firm via WOM:</i> Chevalier and Mayzlin 2006 Godes and Mayzlin 2004 Trusov, Bucklin and Pauwels 2009	Berger and Milkman 2012 Toubia and Stephen 2013	You, Vadakkepat and Joshi 2015
The internet as a tool	<i>For consumers to raise choice quality without higher price/effort:</i> Brynjolfsson and Smith 2000 Häubl and Trifts 2000 Lynch and Ariely 2000	<i>For firms and consumers to gain information, based on network position:</i> Chen, De and Whinston 2009. Watts and Dodds 2007 Goldenberg et al. 2009 Ghose and Yang 2009 Trusov, Bodapati, and Bucklin 2010	<i>For marketers, who can benefit from user-generated content:</i> Albuquerque et al. 2012 Ghose and Han 2011 Ghose et al. 2012 Goldenberg et al. 2014 Moe and Trusov 2011 Shriver et al. 2012 Stephen and Galak 2012 Tirunillai and Tellis 2012 Wang et al. 2014	<i>For firms and consumers, by using or buying search terms:</i> Narayanan and Kalyanam 2015
Marketing intelligence source	<i>For observing, analyzing and predicting behavior:</i> Ansari et al. 2000 Bradlow and Schmittlein 2000 Bucklin and Sismeiro 2003 Chatterjee et al. 2003 Montgomery et al. 2004	<i>For observing, analyzing and predicting behavior:</i> Katona and Sarvary 2008 Katona, Zubcsek, and Sarvary 2011 Stephen and Toubia 2010 Wilbur and Zhu 2009	<i>From specific social media platforms:</i> Naylor et al. 2012 Toubia and Stephen 2013 Wilcox and Stephen 2013	<i>At lower cost than other methods:</i> Du, Hu and Damagir 2015 Kim and Krishnan 2015



4
boom time for
digital, social
media, and mobile
marketing

We don't go online, We live online

Definition of Digital Marketing



Digital Marketing

The use of digital technologies to create an integrated, targeted and measurable communication which helps to acquire and retain customers while building deeper relationships with them

--- Digital Marketing Institute

- **Digital marketing relates to communication**
 - Direct marketing (unidirectional)
 - Interactive marketing (bidirectional) (now digital marketing)

Technology

- **Internet Marketing/Online Marketing /e-Marketing (electronic marketing)**
 - Technology: Internet
- **Digital Marketing**
 - Mobile (SMS, MMS, Geo-Location)
 - Internet
 - Social media
 - Online platforms

Effect of Digitalization on Customer Behavior

- **Change in media consumption habits**
 - Media multiplexing
- **Change in communication patterns**
 - eWom
 - Customer co-creation
- **Change in purchasing behavior**
 - Purchase journey
 - Customer experience

Digital Marketing Strategies

- **Content marketing**
 - Customers control over marketing messages
 - Customer engagement
 - Stimulating sales
- **Personalization (customer initiated)**
 - possible through customer-data, different from customization (customer initiated)
 - Active learning
- **Data-driven marketing**
 - What do we think -> What do we know
 - CRM
 - Marketing Analytics

Digital Analytics

Tool	Description
Web analytics	Web analytics collects clickstream data regarding the source of website traffic (e.g., email, search engines, display ads, social links), navigation paths, and the behavior of visitors during their website visits (Nakatani & Chuang, 2011). The data can be used for understanding customer behavior on the website, measuring the outcomes of website visits, and optimizing website structure and content to maximize results.
Social media monitoring	Social media monitoring tracks and classifies eWOM information regarding specific keywords (Sponder, 2012). It enables firms to monitor and measure the volume and valence of online discussions related to the company, competitors, industry, or particular marketing campaigns.
Marketing automation	Marketing automation refers to the automatic personalization of marketing mix activities (Heimbach, Gottschlich, & Hinz, 2015). It capitalizes on behavioral tracking techniques similar to Web analytics, but employs more advanced capabilities for identifying individual customers and following their behaviors over extended periods of time. It can be used for targeting potential buyers through the use of personalized content.

- **Optimizing marketing-mix spending**
- **Personalization**
- **Customers' privacy and data security**

Challenges of Digital Marketing

- **Linking marketing activities with long-term impacts**
- **Isolating marketing impacts from other influences**
- **Organizational Challenges**
 - Metrics selection
 - Measurement process
 - Data silos

Research Priorities

MSI

- 1 Quantitative models to understand causality, levers, and influence in a complex world
- 2 Delivering integrated, real-time, relevant experiences in context
- 3 Making sense of changing decision process(es)
- 4 New data, new methods, and new skills – how to bring it all together?
- 5 Innovation, design, and strategy in an age of disruption

Source: http://www.msi.org/uploads/articles/MSI_RP16-18.pdf

AMA

1. Effectively targeting high value sources of growth
2. The role of marketing in the firm and the C-Suite
3. The digital transformation of the modern corporation
4. Generating and using insight to shape marketing practice
5. Dealing with an omni-channel world
6. Competing in dynamic, global markets
7. Balancing incremental and radical innovation

Source: <https://www.ama.org/events-training/Conferences/Pages/AMA-Intellectual-Agenda-.aspx>

Endogeneity

- **Endogeneity occurs when explanatory variables are correlated with error terms**
 - Problem is severe when it is systematic
 - **Source of endogeneity**
 - Self selection issue
 - Reverse causality
 - Missing variables
 - Reflection
 - **Problem**
 - Identification
 - Causal interpretation
-

Causal Link (X -> Y)

- **Y follows X temporally**
- **Y changes as X changes**
- **No other causes should eliminated the relationship between X and Y**

Methods to Address Endogeneity

- **Sample selection**
- **Copula method**
- **Instrument variable**
- **Latent Instrument variable (LIV)**
- **Joint Estimation**
- **Exclusion restriction**

Experiments

Field Experiments

- Nature of the subject pool

Lab Experiments

- Nature of the information that subject brings to the task

Artefactual Field Experiments

- Nature of the task or the trading rules

Framed Field Experiments

- Nature of the environment

Natural Field Experiments

Natural Field Experiment

- **Event of intervention**
- **User groups**
 - Treatment (exposed to event intervention)
 - Control (unexposed to event intervention)
- **Data**
 - For both the groups
 - For both the periods (pre and post)