Feasibility analysis of Digital marketing for SMEs using ISM

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Abstract

This study examines digital marketing as a marketing tool for Indian Small and Medium Enterprises (SMEs) and identifies the key challenges affecting its adoption and implementation. Based on a literature review and inputs from industry experts, thirteen challenges were identified and analysed using Interpretive Structural Modelling (ISM) to establish their interrelationships. MICMAC analysis was further employed to classify the challenges based on their driving and dependence powers. The findings identified six significant challenges influencing the effective adoption of digital marketing: organizational culture and management support, budget constraints, inadequate access to technology, ineffective selling techniques, lack of qualified IT personnel, and inadequate organizational infrastructure. These findings suggest that managerial support, financial resources, technological accessibility, skilled IT personnel, and appropriate infrastructure are essential for SMEs to successfully implement digital marketing strategies. The study is subject to limitations, as the ISM model relies on inputs from experts and primary data, which may involve subjective judgement and bias. Furthermore, ISM does not provide a statistical ranking of the identified challenges. The study provides useful insights for SME managers and practitioners to understand the barriers to digital marketing adoption and develop appropriate strategies for its effective implementation in the Indian SME context.

Keywords: digital marketing, internet marketing adoption, small and medium enterprises (SMEs), India.

Introduction

“Digital marketing “ the word has benefits but is challenging, it is difficult for many companies to profit from the concept. Difficulties for practicing digital marketing relevant to respective industries are different. Further service providers related to digital marketing and industries have a few gaps in functionalities. Armbrust et al. (2010) explained that a significant factor of cloud computing is the transfer of data. Since the cost is falling faster than the cost of internet communications, marketing on net can represent a significantly lower than expected costing or there is a gap in understanding the impact and ROI on investment.

In many cases, it might be more appropriate to say (Oražem, 2014) we should use move towards cloud usage in large amounts, so that the security should not be a point of discussion, which is a concern of customers (Amma et al., 2012).

Internet marketing has the range of benefits to customers and organizations. It allows customer the knowledge access, positive behavioral calculation, and set alignment of the requirement and the facilities provided by organizations(Mujinga, 2013). Bakshi & Hemachandran (2011) identified some of the benefits of Internet marketing as- reduced time and cost benefit which address business changes rapidly with respect to the pace of the world.

Indian statistics indicate that 54% small business own their website (Vyas, A. 2018), while 40% of the world population has an internet connection. There are more than 3 billion internet users in the world. Younger generations are growing in the digital world who prefer to shop and order online. 2 out of 3 retail sales occur online. 58% online shopping revenue generated from mobile website, as opposed to native apps. It is also observed that 80% online users make research using their mobile phones before making any purchase by while 88% of purchase influence by online reviews before making a purchase. It may be noted that Indian organizations are interested in harnessing the cloud for more crucial business applications, such as internet of Things (IoT), data analytics, smart cars, etc., (CSA, 2016).

Hence we can say that there are many benefits of adopting digital marketing in the organizations. However, with respect to Indian context Marketing on internet adoption is half the way. So the aim of this study is to identify and model critical challenges in digital marketing in the Indian SMEs.

This paper planned with six primary goals identified with the help of literature review, which set the relationship between tools used in Digital marketing and challenges which in turn contribute to as reasons for success or failure of tool used. The ISM tool was used to establish interrelationship

The paper have major sections, the literature review of digital marketing in India; adoption and challenges, the world-wide studies and theoretical models. Further the research methodology and ISM model development. The data discussion and conclusion of the study are detailed and finally limitations, scope and managerial implications of the research are discussed in the paper.

Literature review

In order to study and understand the current state of knowledge and research, a brief review of the literature in Internet marketing in business had been conducted. The review is also about the papers published using ISM methodology are discussed.

Basics of Internet marketing

Digital content is defined as: ‘bit-based objects distributed through electronic channels’ (Rowley, 2008), Author argues along with the importance of digital content to business and it is also important seek a holistic perspective on the nature of digital content marketing (DCM). Digital marketing is the use of electronic media by the marketers to promote the products/services into the market (Afrina Yasmin, 2015). The main objective of digital marketing is attracting customers and allowing them to interact with the brand through digital media. Various elements of digital marketing are Email marketing; Social Media; text messaging; affiliate marketing; Search Engine Optimization (SEO); Pay Per Click (PPC). Managing change and innovation in technology and marketing tactics is a challenge for all marketers, but this is particularly true for digital marketers (Chaffey, 2010). The six areas of digital marketing governance are: digital channel strategy development; online customer acquisition; online customer conversion and customer experience; customer development and growth; cross-channel integration and brand development; and overall digital channel governance, including change management.

E-Market plan (Krishnamurthy, 2006) is designed to provide managers interested in using these technologies to market their products and services with a comprehensive plan , enact, and analyze their e-marketing campaign. The Internet has become one of the most competitive retail marketplaces (Piercy, 2009). The key issue in how companies can serve this market is the way in which they internally manage the relationship between the marketing and operations departments of the business.

Entrepreneurial small firm (ESF), if adopt and fully exploit the potential of the Internet, will develop and maintain relationships with its customers (Durkin, 2002). Majority of social media marketing initiatives take the form of communicating sales promotions to already engaged consumers (Don E. Schultz, 2013) Marketers need to find ways to use social media to create lasting brand engagement rather than to merely utilize this communication technology to enhance short-term revenue..

Applications of interpretive structural modeling (ISM) approach

ISM methodology is been published across various spheres across different countries of the world. In this section the discussion is on those published papers which impacted various variables and industries who applied the ISM methodology.

ISM model is applied (Mandal & Deshmukh ,1994) for establishing the relationship between the vendor selection criteria in India. The paper states that variables or factors in management and organization were the most significant. Again in India, Engineering industry and knowledge management towards strategy and knowledge in been mapped using ISM model (Singh et al. 2003) .

It was found that a variable namely IT system break down and IT security was critical (Jharkharia and Shankar ,2005) while applying ISM model to establish supply chain and IT-barriers. The low IT awareness supply chain was proved to be the driving force in the map.

The detailed causes of Khadi Village and Industry Commission, the business expansion and increase market share was explained (Thakkar et al. ,2006) using ISM approach. Common causes were quality monitoring and customer service were identified as prominent factors causing an overall effect in this case study. ISM tool identified the relationship between information risks and also model found the projection of IT awareness – supply chain system—IT infrastructure (Faisal et al.,2007) were significant enough in the analysis.

On the basis of experts' opinion (Prateek Maheshwari et al., 2017), the identification of advertisement effectiveness dimensions specific to Indian mobile phone industry. ISM assisted in the development of linkages among these identified dimensions based on their interrelations and attention, relevance, excitability, liking and consumer preference turned out to be premier measuring advertisement effectiveness in the Indian mobile phone industry.

Table No 1

	Author –year – country	Industry	Variables/criteria/factors
1	Mandal and Deshmukh (1994) , India	Vendor management	communications convenience, after-sales service, willingness, and labour relations, Quality, delivery, price, financial position, technical capability, management and organization, transport
2	Singh et al. (2003) , India	Engineering Industries	Culture, leadership, strategic planning, knowledge resources, financial resources, technological infrastructure, innovation and knowledge creation, integration of systems, and knowledge capture.
3	Jharkharia and Shankar (2005), India	IT- Information technology	Disparity in trading capability, resistance towards IT, IT enabled SCM, threats of IT security, lack of trust in supply chain linkage, fear of IT system breakdown, low priority by the management, lack of funds, poor IT infrastructure, lack of IT awareness in supply chain management
4	Thakkar et al. (2006) , India	Khadi and village industries	Recover investment, improve customer service, identify new farmers, maintain and monitor quality, motivate government, business expansion, motivate sales outlet, and increase market share
5	Faisal et al. (2007), India	Cloud-Supply Chain	awareness about information risks, information sharing, supply chain strategies, level of supply chain integration, collaborative relationships, support to partners, reliable IT infrastructure, management commitment, availability of funds

6	Thakkar et al. (2008), Indian	SME	Technical/financial assistance from government and other bodies like UNIDO, inter-firm competition, impact of IT on competitiveness of firm, overall penetration of IT in SME cluster, understanding on benefits of IT, internal culture, availability of SME-specific e-commerce packages, complexity of managing network relationships and need for collaborating planning, expectations raised by customer/OEM, entrepreneurial/owner orientation and commitment.
7	Kannan et al. (2009) , India	Battery manufacturing industry	Quality, delivery, reverse logistics cost, rejection rate, technical/engineering capability, inability to meet future requirement, willingness and attitude.
8	Amma et al. (2012) , India	Cloud Inhibitors	Lack of sufficient security, lack of reliability, lack of portability, lack of privacy, lack of standardization, lack of comprehensive management tool, weak access control, lack of data confidentiality, ineffective back up management, cost/ time barrier, network management barrier, legal issues, infrastructure security –at network level, infrastructure security –at host level, infrastructure security –application level, data security, data integrity, and data availability.
9	Panahifar et al. (2014) Ireland	High-tech Industry	No shared-targets, lack of visible and effective leadership, management support obstacles, lack of forecasting, fear of losing competitive information, difficulties with real-time coordination, lack of compatibility, lack of commitment, and lack of trust
10	Bhadani et al. (2016a) India	Mobile Service Sector	Conducive policy, context awareness, convergent services, global MVAS leader, community identification, quality of service, Indian language support, information security concerns, low VAS usage , R&D in M-services, VAS prioritization over voice, sales of devices,telecom data analytics, and upgraded telecom infrastructure.
11	Poduval et al. (2015) India	Product Maintenance	Management, culture, cost, knowledge and skill, maintenance, and modification.
12	Dubey et al. (2015), India	Ubiquitous Manufacturing	Manufacturing flexibility, training, UM culture, UM leadership, secondary technology, pervasive technology, product quality, and Teamwork
13	Bhadani et al. (2016), India	Telecom	Adoption of mobile-based services, cost associated with services, low usage, inadequate basic infrastructure, installation and operation cost, digital and technical skill, limited or sub-standard technical infrastructure, purchasing power of customer is low, lack of source of income, sense of insecurity among trained technical staff, inertia to change the mindsets of customers, misalignment between the customers need and services offered, lack of customer awareness, and commitment from government
14	Jena et al. (2016) , India	Telecommuni	Customer willingness to pay, growth in export

		cation Industry	market, application store specific to Indian requirements, growing data usage, supplier network, global competitiveness, large handset market potential, product design, physical infrastructure, innovation and technological know-how, R&D funding, foreign direct investment (FDI), trained manpower, government and legislative support, and large consumer base.
15	Prateek Maheshwari et al. (2017), India	Indian mobile phone industry	attention, relevance, excitability, liking and consumer preference, advertisement effectiveness

Table No 2 Identification of the challenges of digital marketing

Sl.No	Challenging factors	References
1	Organizational culture & Management Support	Chris O'Leary, Sally Rao, Chad Perry, (2004) "Improving customer relationship management through database/Internet marketing: A theory-building action research project", European Journal of Marketing, Vol. 38 Issue: 3/4, pp.338-354
2	Budget	ZHU, L. Z. (2010). Internet Marketing budget allocation :from practitioner's perspective. International Journal of Information Technology & Decision MakingVol. 09, No. 05, 779-797
3	Inadequate access to technologies, ineffective selling techniques	Laosethakul, K., & Boulton, W. (2007). Critical Success Factors for E-commerce in Thailand: Cultural and Infrastructural Influences. The Electronic Journal of Information Systems in Developing Countries, 30(1), 1–22
4	Security of information	Karen A. Forcht, (1996) "Doing business on the Internet: marketing and security aspects", Information Management & Computer Security, Vol. 4 Issue: 4, pp.3-9,
5	lack of qualified IT personnel to develop and maintain	Laosethakul, K., & Boulton, W. (2007). Critical Success Factors for E-commerce in Thailand: Cultural and Infrastructural Influences. The Electronic Journal of Information Systems in Developing Countries, 30(1), 1–22
6	imbalance between investment costs and return on investment;	Gangeshwer, D. K. (2013). E-Commerce or Internet Marketing: A Business Review from. International Journal of u- and e- Service, Science and Technology, Vol.6, No.6, 187-194
7	unavailability of a proper infrastructure in the company	Laosethakul, K., & Boulton, W. (2007). Critical Success Factors for E-commerce in Thailand: Cultural and Infrastructural Influences. The Electronic Journal of Information Systems in Developing Countries, 30(1), 1–22
8	Complexity	Gary L. Geissler Ph.D., George M. Zinkhan Ph.D. & Richard T. Watson Ph.D. (2006) The Influence of Home Page Complexity on Consumer Attention, Attitudes, and Purchase Intent, Journal of Advertising, 35:2, 69-80,
9	Building and managing website	Kenneth A. SAban & Stephen E. Rau (2005) The Functionality of Websites as Export Marketing Channels for

		Small and Medium Enterprises, Electronic Markets, 15:2, 128-135
10	Valuable content on NET	Hagel, J. (1999). Net gain: Expanding markets through virtual communities. Journal of Interactive Marketing, 13(1), 55–65
11	Social media management	Rosemary Thackeray, B. L. (October 2008). Enhancing Promotional Strategies Within Social Marketing Programs: Use of Web 2.0 Social Media. Health Promotion Practice Vol.9 No.4, 338-343.
12	Engage in email marketing	PHELPS, J., LEWIS, R., MOBILIO, L., PERRY, D., & RAMAN, N. (2004). Viral Marketing or Electronic Word-of-Mouth Advertising: Examining Consumer Responses and Motivations to Pass Along Email. Journal of Advertising Research, 44(4), 333-348. doi:10.1017/S0021849904040371
13	Lead generation/Web traffic	Sarah Quinton, Mohammed Ali Khan, (2009) "Generating web site traffic: a new model for SMEs", Direct Marketing: An International Journal, Vol. 3 Issue: 2, pp.109-123

Research gap

From the notable good list of literatures study on Internet marketing adoption, it is found, not much work has been out in the area of challenges or limitations or obstacles to its implementation, especially in the SME's. Hence, in the present investigation, a research of identifying and modeling the critical limitations or challenges in the internet marketing practices in Indian SMEs scenario is presented by opting an interpretive structural modeling (ISM) methodology. ISM model helps in bringing up the interrelationship among the challenges and to identify the most significant limitation based on variables used.

Research methodology

What is ISM methodology? and how the ISM is adopted is discussed in detail in the subsequent section.

Introduction to ISM methodology

Interpretive structural modeling- ISM is a known model for finding out the relationships between factors and in hierarchy (Warfield, 1974; Sage, 1977; Jharkharia and Shankar, 2005). ISM is a structure in which the factors are mapped to describe the direct or indirect relationship between items. The variables in the selected research case are identified, and then the interrelationship is established based on the case or situation. Based on the pair-wise comparison of these factors, a structural self-interaction matrix (SSIM) will be drawn from the element table. Transitivity is checked, and the matrix model is obtained. In the ISM model, theoretical and computational powers meet each other and describe the contextual relationship among a group of variables.

Based on the expert's judgement and input, ISM uses an interpretive approach for establishing the contextual relationship among the different related factors, which may solve the problem definition (Warfield, 1974; Sage, 1977; Mudgal et al., 2009). ISM model use simple notations of graph theory to describe the give a composite relationships map (Malone, 1975; Singh et al., 2003; Ravi et al., 2005).

The ISM approach helps in formulating ambiguous model into visible, correctly defined model useful for defining the direction to the complex relationships (Mandal and Deshmukh, 1994; Sage, 1977; Diabat et al., 2013). This is the methodology widely used by the researchers for exploring the direct

and indirect association among the identified factors in various industries in a simplified way. ISM modeling is carried out as follows:

Step 1: the challenges in adoption of Internet marketing in SME are listed.
Step 2: an interrelationship is established among all the identified factors
Step 3: self–interaction matrix (SSIM) is formulated - to develop a pair-wise relationship among factors
Step 4: from the SSIM matrix, check for the transitivity. ISM tool defines if a factor 'X1' is related to 'X2' and 'X2' is related to 'X3' then 'X1' is similar to 'X3'.
Step 5: From the final reachability matrix from step 4 is now portioned into different levels.
Step 6: output of step5, a directed graph (digraph) is drawn, and transitive links are removed from the same.
Step 7: replacing the nodal elements with the statements, the developed digraph is transformed into ISM model of critical factors.
Step 8: the developed model is reviewed and verified for any conceptual anomalies.
Figure-01 is the flow chart explaining the steps of ISM model, towards challenges identified through survey and experts and thus the subsequent model is elaborated and used in this paper.

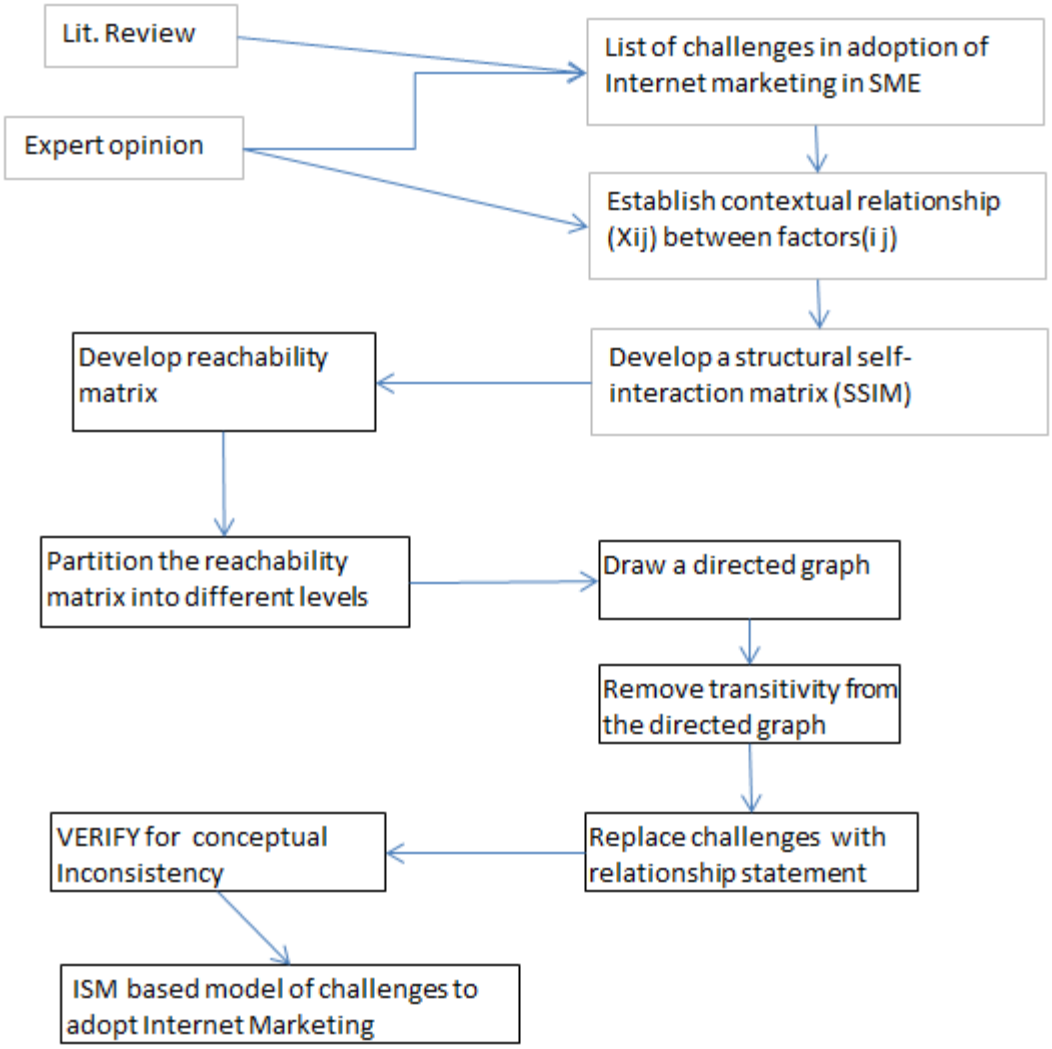


Figure -01: SM model general structure

ISM model development

In this paper, the challenges of Internet Marketing are identified and modeled, by the help of literature and industry experts. The ISM methodology is applied to the study area. Following are the various processes towards formulation of the ISM model.

Table No 3 Challenges of Internet Marketing

Sl.No	Challenging factors	Sl.No	Challenging factors
1	Organizational culture & Management Support	8	Complexity
2	Budget	9	Building and managing website
3	Inadequate access to technologies, ineffective selling techniques	10	Valuable content on NET
4	Security of information	11	Social media management
5	lack of qualified IT personnel to develop and maintain	12	Engage in email marketing
6	imbalance between investment costs and return on investment;	13	Lead generation/Web traffic
7	unavailability of a proper infrastructure in the company		

4.1 The structural self-interaction matrix (SSIM)

The structural self-interaction matrix (SSIM) is formulated from the relationship among the significant variables identified through literature review and experts from the study area. Following are the symbols which guide to build the relationships among variables.

O- No relation between variables
X- If variables help to achieve each other
V- factor i will contribute to making factor j.
A- factor j will help to make element i

4.2 Formulation of Reachability matrix

The initial reachability matrix shown in Table 4 is developed from the SSIM using the following rules

a. If the entry of (i, j) in the SSIM is 'V' then the (i, j) value in the reachability matrix will be '1' and the (j, i) value becomes '0'.
b. If the entry of (i, j) in the SSIM is 'A' then the value of (i, j) in the binary matrix becomes '0' and the value of (j, i) will be '1'.
c. If the entry of (i, j) in the SSIM is 'X' the value of (i, j) and (j, i) in the reachability matrix will be '1'.
d. If the entry of (i, j) in the SSIM is 'O' then the value of (i, j) and (j, i) in the binary matrix becomes '0'.

The final reachability matrix is obtained from the initial reachability matrix by adding transitivity to the latter manually, and is shown in Table 03.

Table 04 Structural self-interaction matrix (SSIM)

Sl.No	Factors	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Organizational culture & Management Support		V	V	V	V	V	V	V	V	V	V	V	V
2	Budget			V	V	V	V	V	O	V	O	V	V	O
3	Inadequate access to technologies, ineffective selling techniques				V	O	X	X	O	V	V	V	V	V
4	Security of information					O	O	A	X	O	O	A	A	O
5	lack of qualified IT personnel to develop and maintain						V	O	X	V	V	V	V	V
6	imbalance between investment costs and return on investment;							A	X	A	A	A	A	V
7	unavailability of a proper infrastructure in the company								V	V	V	V	V	O
8	Complexity									V	V	O	O	O
9	Building and managing website										X	V	V	V
10	Valuable content on NET											X	V	V
11	Social media management												V	V
12	Engage in email marketing													V
13	Lead generation/Web traffic													

Table 05: Initial reachability matrix of factors

Sl.No	Factors	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Organizational culture & Management Support	1	1	1	1	1	1	1	1	1	1	1	1	1
2	Budget	0	1	1	1	1	1	1	0	1	0	1	1	0
3	Inadequate access to technologies, ineffective selling techniques	0	0	1	1	0	1	1	0	1	1	1	1	1
4	Security of information	0	0	0	1	0	0	0	1	0	0	0	0	0
5	lack of qualified IT personnel to develop and maintain	0	0	0	0	1	1	0	1	1	1	1	1	1
6	imbalance between investment costs and return on investment;	0	0	1	0	0	1	0	1	0	0	0	0	1
7	unavailability of a proper infrastructure in the company	0	0	1	1	0	1	1	1	1	1	1	1	0
8	Complexity	0	0	0	1	1	1	0	1	1	1	0	0	0
9	Building and managing website	0	0	0	0	0	1	0	0	1	1	1	1	1
10	Valuable content on NET	0	0	0	0	0	1	0	0	1	1	1	1	1
11	Social media management	0	0	0	1	0	1	0	0	0	1	1	1	1
12	Engage in email marketing	0	0	0	1	0	1	0	0	0	0	0	1	1
13	Lead generation/Web traffic	0	0	0	0	0	0	0	0	0	0	0	0	1

Table 06: Final reachability matrix of factors

Sl.No	Factors	1	2	3	4	5	6	7	8	9	10	11	12	13	D.P
1	Organizational culture & Management Support	1	1	1	1	1	1	1	1	1	1	1	1	1	13
2	Budget	0	1	1	1	1	1	1	0	1	0	1	1	0	9
3	Inadequate access to technologies, ineffective selling techniques	0	0	1	1	0	1	1	0	1	1	1	1	1	9
4	Security of information	0	0	0	1	0	0	0	1	0	0	0	0	0	2
5	lack of qualified IT personnel to develop and maintain	0	0	0	0	1	1	0	1	1	1	1	1	1	8
6	imbalance between investment costs and return on investment;	0	0	1	0	0	1	0	1	0	0	0	0	1	4
7	unavailability of a proper infrastructure in the company	0	0	1	1	0	1	1	1	1	1	1	1	0	9
8	Complexity	0	0	0	1	1	1	0	1	1	1	0	0	0	6
9	Building and managing website	0	0	0	0	0	1	0	0	1	1	1	1	1	6
10	Valuable content on NET	0	0	0	0	0	1	0	0	1	1	1	1	1	6
11	Social media management	0	0	0	1	0	1	0	0	0	1	1	1	1	6
12	Engage in email marketing	0	0	0	1	0	1	0	0	0	0	0	1	1	4
13	Lead generation/Web traffic	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	DEPENDANCE	1	2	5	8	4	11	4	6	8	8	8	9	9	83

Level partitions

Final reachability matrix of factors, the reachability set and antecedent set are obtained. Reachability set of factor consists of element itself and other elements to which it may help to achieve.

The antecedent set contains, the element itself and other elements which assist in achieving it. Derive the intersection set for all factors. The elements same in columns reachability set & intersection set is the top-level element in the ISM hierarchy.

Now, The top-level elements are separated out from the other elements, and the procedure repeats for Level -02 and so on. This will help building the digraph (Singh and Kant, 2008) and the final ISM model. Following tables are the process of all the thirteen factors for six levels of partitions.

Level partition -01 **Table No 7**

Sl.No	Reachability set	Antecedent Set	Intersection set	Level
1	1,2,3,4,5,6,7,8,9,10,11,12,13	1	1	
2	2,3,4,5,6,7,9,11,12	1,2	2	
3	3,4,6,7,9,10,11,12,	1,2,3,6,7	3,6,7	
4	4,8,11,12	1,2,3,4,7,8,11,12	4,8,11,12	
5	5,6,8,9,10,11,12,	1,2,5,8,	5,8	
6	3,6,8,	1,2,3,5,6,7,8,9,10,11,12	3,6,8	
7	3,4,6,7,8,9,10,11,12	1,2,3,7	3,7	I
8	4,5,6,8,9,10	1,4,5,6,7,8	4,5,6,8	
9	6,9,11,12,	1,2,3,5,7,8,9,10	9	
10	6,9,10,12,	1,3,5,7,8,9,10,11	9,10	
11	4,6,10,11,12,	1,2,3,5,7,9,10,11	10,11	
12	4,6,12,	1,2,3,5,7,9,10,11,12	12	
	13	1,3,5,6,9,10,11,12,13	13	

Level partition -02 Table 8

Sl.No	Reachability set	Antecedent Set	Intersection set	Level
1	1,2,3,4,5,6,7,8,9,10,11,12	1	1	II
2	2,3,4,5,6,7,9,11,12	1,2	2	
3	3,4,6,7,9,10,11,12	1,2,3,6,7	3,6,7	
4	4,8,11,12	1,2,3,4,7,8,11,12	4,8,11,12	
5	5,6,8,9,10,11,12	1,2,5,8,	5,8	
6	3,6,8	1,2,3,5,6,7,8,9,10,11,12	3,6,8	
7	3,4,6,7,8,9,10,11,12	1,2,3,7	3,7	
8	4,5,6,8,9,10	1,4,5,6,7,8	4,5,6,8	
9	6,9,11,12	1,2,3,5,7,8,9,10	9	
10	6,9,10,12	1,3,5,7,8,9,10,11	9,10	
11	4,6,10,11,12	1,2,3,5,7,9,10,11	10,11	
12	4,6,12	1,2,3,5,7,9,10,11,12	12	

Level partition -03 Table 9

Sl.No	Reachability set	Antecedent Set	Intersection set	Level
1	1,2,5,7,9,10	1	1	III
2	2,5,7,9	1,2	2	
3	7,9,10	1,2,7	7	
5	5,9,10	1,2,5	5	
7	7,9,10	1,2,,7	7	
8	5,9,10	1,5,7	5	
9	9	1,2,5,7,9,10	9	
10	9,10	1,5,7,9,10,	9,10	
11	10	1,2,5,7,9,10	10	

Level partition -04 Table 10

Sl.No	Reachability set	Antecedent Set	Intersection set	Level
1	1,2,5,7	1	1	IV
2	2,5,7	1,2	2	
3	7	1,2,7	7	
5	5	1,2,5	5	
7	7	1,2,7	7	
8	5	1,5,7	5	

Level partition -05 Table 11

Sl.No	Reachability set	Antecedent Set	Intersection set	Level
1	1,2	1	1	v
2	2	1,2	2	

Level partition -06 Table 12

Sl.No	Reachability set	Antecedent Set	Intersection set	Level
1	1	1	1	vi

Formation of the ISM Model

By the process of iterations of level of partitions on final reachability matrix, helps building the digraph (Singh M. D., 2008) and the final ISM model. ISM is achieved by removing transitivity from original digraph and hence transformed into a ISM model for challenges internet marketing as illustrated below.

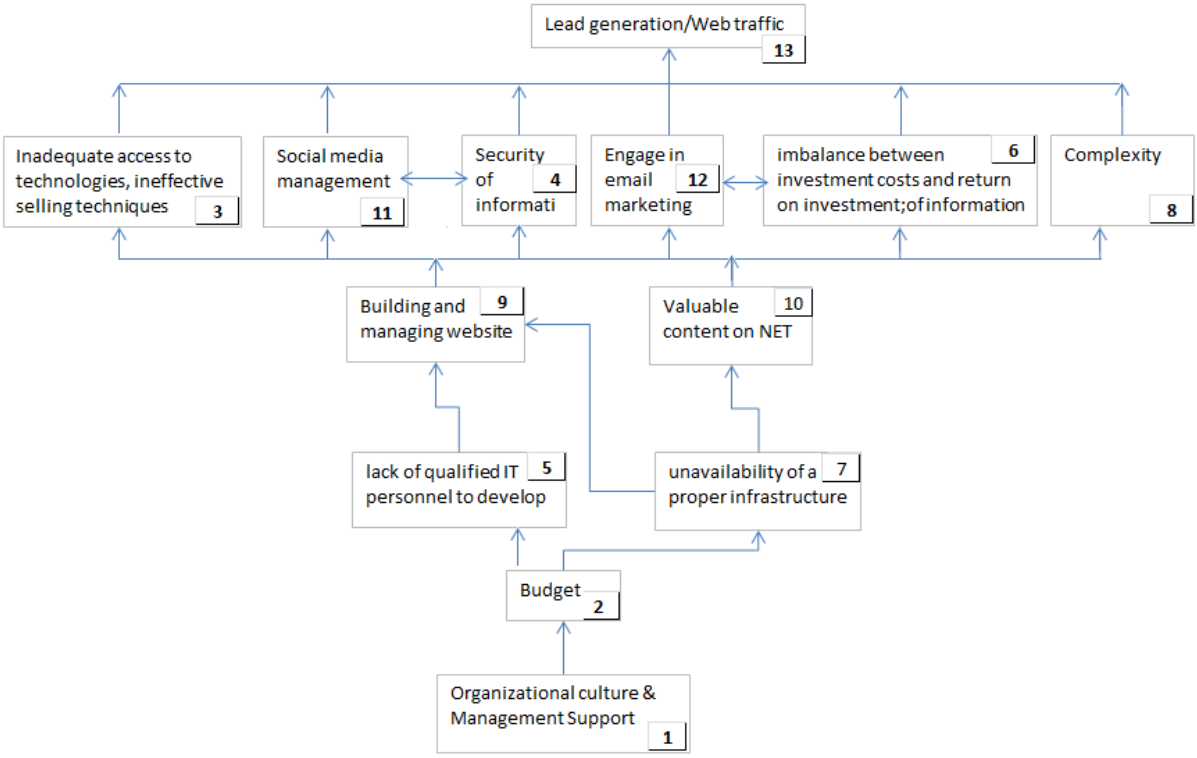


Figure 02: ISM model of challenges for Internet marketing

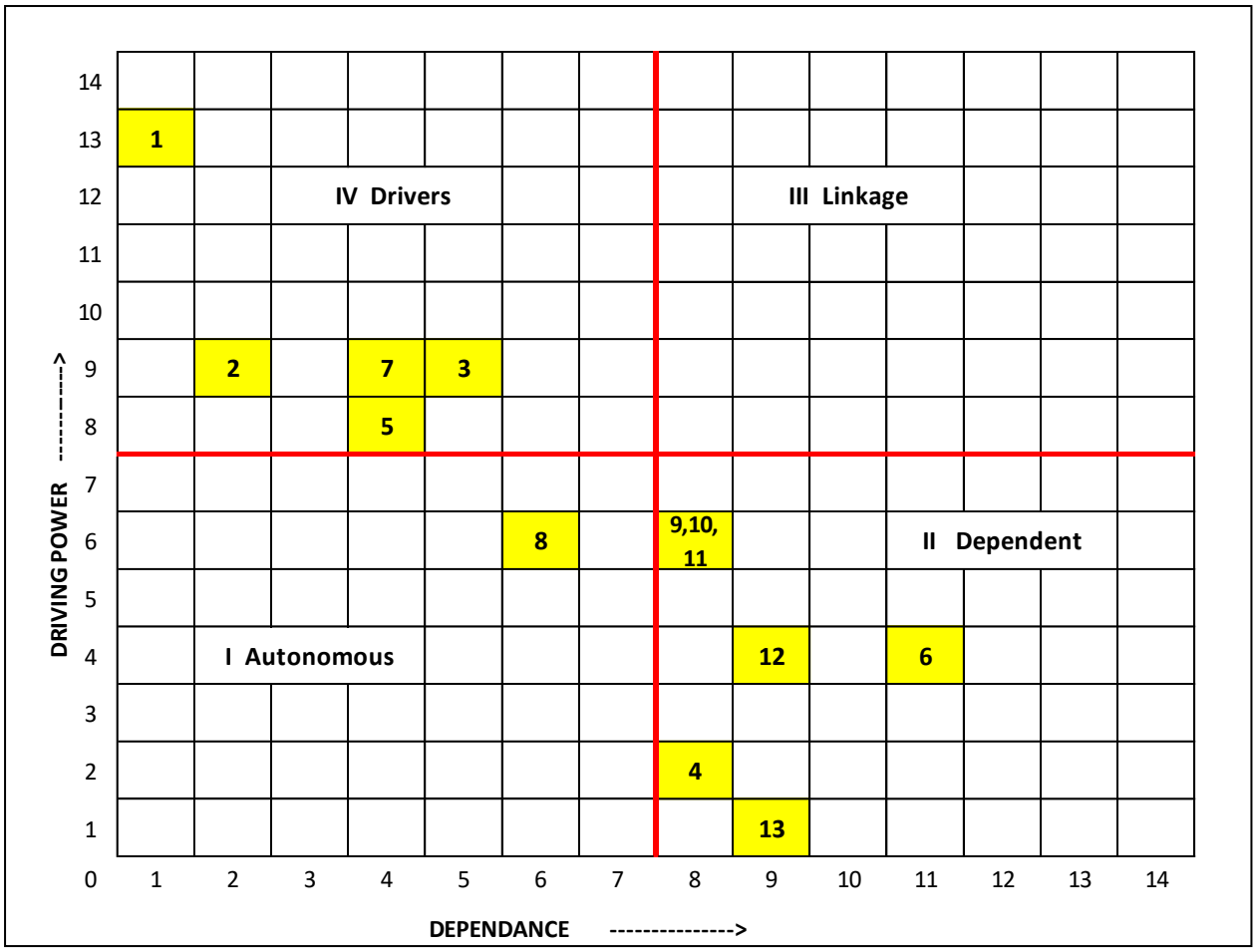
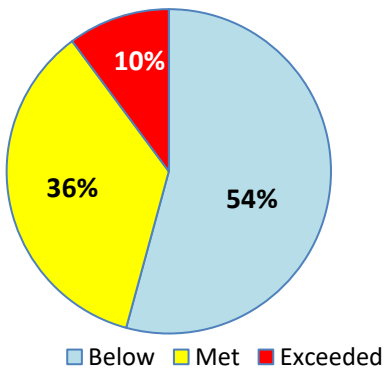


Figure 03: Driving poser and dependence diagram

Demographics and primary detailed data

From the primary data of sample size 120, following are the demographic details, with respect to internet marketing. A large majority (54%) of the SME respondents to the survey mentioned that they 'Met below their Expectations' related to their digital marketing performance in 2018. An amount of the minority marked 10% Exceed expectation' and 36% only met expected results .



Source : primary data

Figure 04 : SME's 2018 digital marketing performance

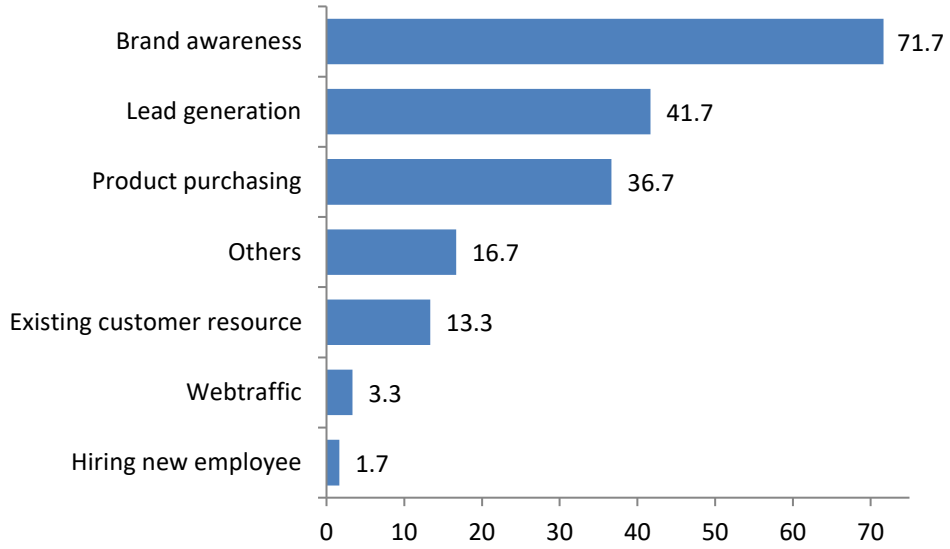
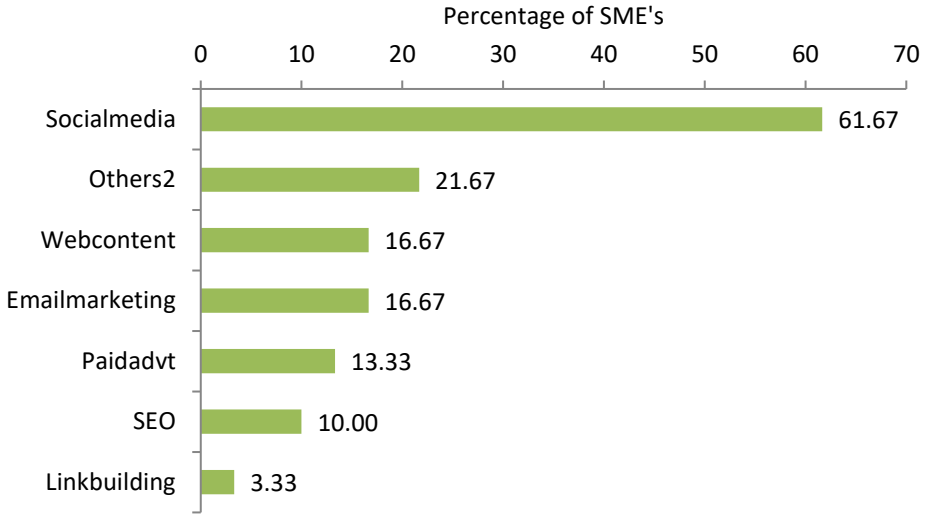


Figure 05: Primary goals of digital marketing efforts

Source : primary data

Almost 72% of the SME owners marked Brand Awareness as their primary goal for digital marketing. Lead Generation is ranked among the goal of the digital marketing for nearly 42%. It can likely be concluded that product purchase (36.7%) [sales] is the third major ranked goal of the SME's.[sample size 120]



Source : primary data

Figure 06: Most effective digital methods

Social media is king, right? Our primary survey also depicts the same. Social media is the clear winner in the most effective methods in digital marketing. Surprisingly, Web content and email-marketing is almost 17% effective method. SEO was effective only for about 10% ,while 13.33% only feel Paid Advertising effective. [sample size 120]

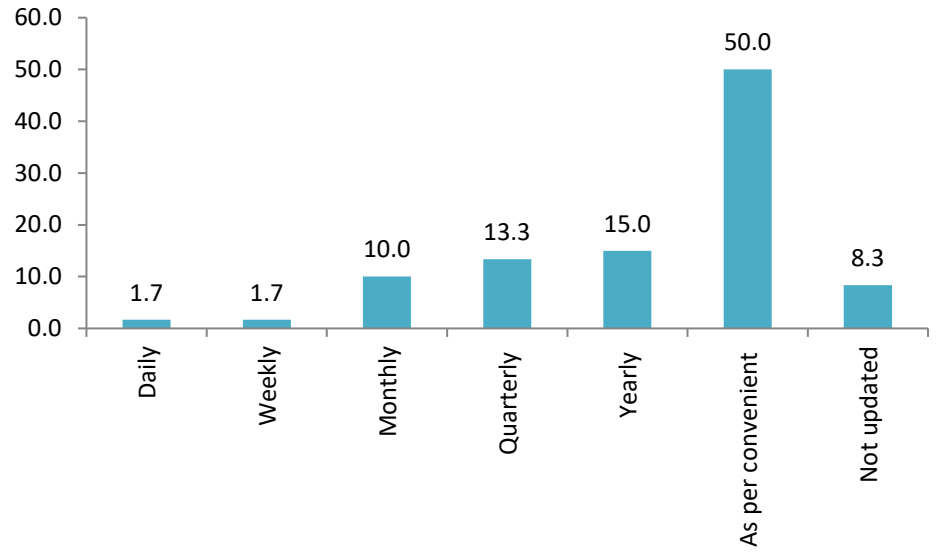


Figure 07: Updating of content on your website

Source : primary data [sample size 120].

Earlier we noted that social media is the most effective method that our SME respondents used. That same vein carried through into the frequency in which organizations were adding or updating their social media marketing. 50% of the responses noted that they updated their content as per convenience. Daily and weekly updates are less than 2% of responses, 10% of them update their social page once a month.

Interesting, but not surprising, was that of the organizations that marked themselves as performing "Below Expectations", almost all of the respondents also noted updating content regularly.

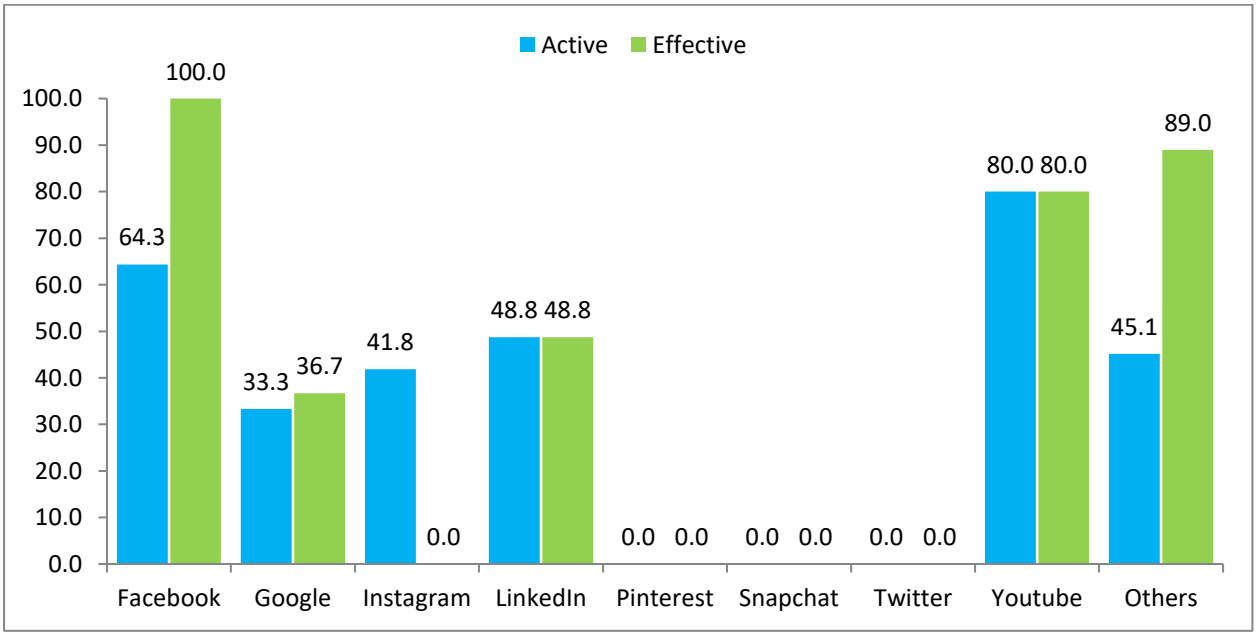


Figure 08: What social media platforms active? And which are effective?

Table 13: Active social media & which are effective

	Active	Rank	Effective	Rank
Face book	64.35	2	100.00	1
Google	33.33		36.67	4
Instagram	41.82		00.00	
LinkedIn	48.75	3	48.75	
Pinterest	00.00		00.00	
Snapchat	00.00		00.00	
Twitter	00.00		00.00	
YouTube	80.00	1	80.00	3
Others	45.13	4	89.00	2

Source : primary data [sample size 120].

When it comes to social media, Facebook was the big winner in terms of activity and effectiveness. Youtube seemed to be the social media platform that most people used, and equally effective. Very few of SME's have opined the respondents found Google to be effective.

Instagram, LinkedIn and others are all being used, but don't appear to be in the "standard" package of social media platforms that were adopted. For marketers looking to try out a new platform, it appeared that YouTube was having some level of success, the value for time.

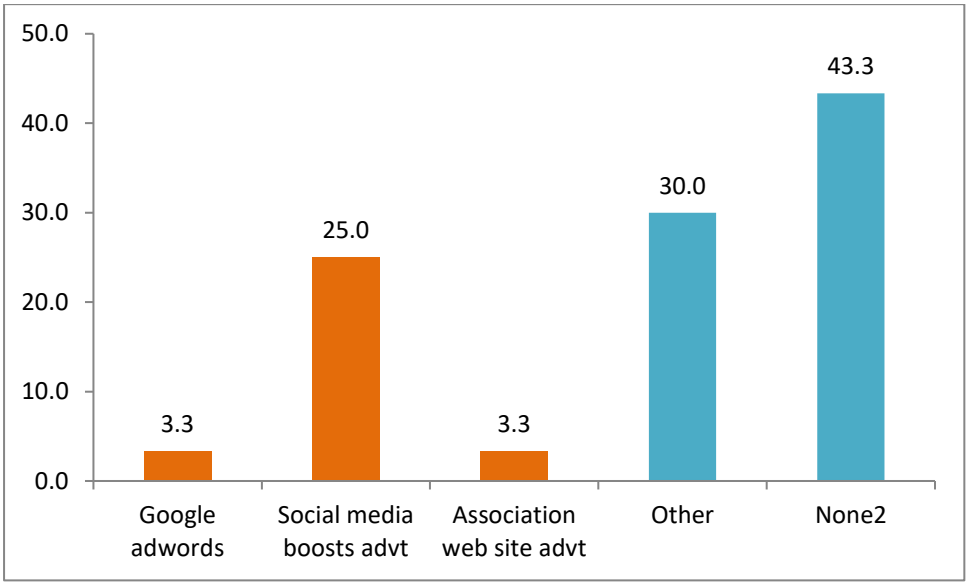


Figure 09: Paid Digital Advertising in practice

Source : primary data

Almost 25% of the organizations surveyed are doing paid social media advertising. After Facebook changed it's algorithm, reaching audiences organically became more and more difficult. Additionally, paid social media advertising has a low cost to get started. These factors would lead to believe that paid social media advertising will only increase over time.

Google Adwords also seemed to be a next popular channel for paid advertising. Unlike social media adversiting, Adwords is more technical to setup, and often much more costly. More than 43% of those surveyed are doing no paid advertising [sample size 120].

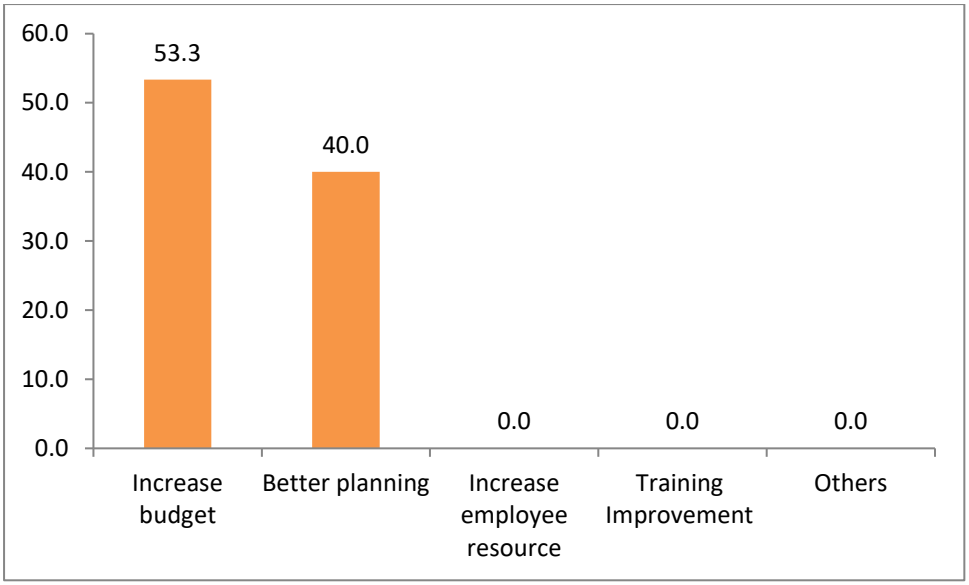


Figure 10: How are you making your digital strategy more effective?

Source : primary data sample size 120

The most important question, what next? Almost 40% of the respondents marked that they are going to do better planning to help with their digital strategy of. Based on the responses relating to current "challenges", these responses were not all too surprising.

What was interesting though, was that only 53% of the survey respondents were planning on increasing their digital marketing budget. It seems the issue for many marketers is not how much they are spending, but *where* they are planning and spending their resources.

Data discussion and conclusion

By the MICMAC analysis is opted in this study to identify the critical challenges of internet marketing based on the driving power and dependence, which is calculated from the final reachability matrix.

These critical factors are classified into four categories such as – (I) autonomous, (II) dependent, (III) Linkage and (IV) Drivers.

I- Autonomous- These factors appear as weak driver as well as weak dependent and are relatively disconnect from the system i.e these factors do not have much influence on the other factors of the system.
II- Dependent- these are the factors with a weak driving power and a high reliance power.
III- Linkage- these are the factors with a great driving and dependence power.
IV- Drivers - these are the factors, with high driving and weak relationship power (Kannan, 2007).

From figure 03 quadrant –I Autonomous elements are to develop and maintain –The challenge – Complexity (8) is mapped in the figure 03, which is weak drivers as well weak dependent and relatively disconnected from the system.
But on the other Quadrant II- seven Dependent factors –Security of information(4) imbalance between investment costs and return on investment(6) Building and managing website(9) , Valuable content on NET(10), Social media management(11), Engage in email marketing(12) and Lead generation/Web traffic(13) having high reliance and weak driving power. There are no linkage factors in quadrant III , while in quadrant IV has five Driver factors, with high driving and weak relationship

power and demand the maximum attention of the decision makers are Organizational culture & Management Support(1), Budget (2), Inadequate access to technologies, ineffective selling techniques (3), lack of qualified IT personnel (5) and unavailability of a proper infrastructure in the company(7)

The ISM model made of thirteen challenges from the inputs of industry and academic experts is shown in Figure 02 indicating their levels. The major challenge is lead generation / web traffic (13). Hence, remaining are the challenges (Twelve) to achieve the challenge –LEAD GENERATION. In the next level Inadequate access to technologies(3), Social media management(11), Security of information (4), engage in email marketing (12), Imbalance between cost & ROI (6) and complexity(8). These challenges of second level influence the challenges of the first level. Further, building managing website(9) and valuable content on Net(10) are the challenges which support the level two challenges. But, challenges such as, Lack of qualified IT personnel (5) and unavailability of proper infrastructure (7) substantiate the challenges. Budget (2) is the base challenge for all the tree up challenges and budget is depends on the challenge organization culture and management support(1). So the organization culture and management support(1) followed by Budget(2) are the uproot and solve probably web traffic and lead generation.

Depending on the dynamic scenario of small business, it is very important for the SME to be competitive by adopting the Internet marketing. The efficient and effective internet marketing campaign leads to considerable ROI, increases lead generation or web traffic and provides the image of the SME.

In this study, the critical challenges for internet marketing the Indian SME's were identified through the literature survey and expert opinions. The experienced academicians and industry were involved and thirteen significant challenges for Internet marketing were identified. Then, an ISM- interpretive structural modeling approach was employed for establishing the association between challenges and to identify the most significant by the MICMAC analysis.

The resultant of MICMAC analysis and ISM model highlighted that significant challenges are Organizational culture & Management Support(1), Budget (2), Inadequate access to technologies, ineffective selling techniques (3), lack of qualified IT personnel (5) and unavailability of a proper infrastructure in the company(7) .

Scope, Managerial implications and limitation

First and foremost limitation, the ISM model developed has the challenges listed by inputs of the experts, and which could be biased and may influence and reliability of the model. This is a first scope and direction for further research. The ISM methodology does not provide the ranking of the variables identified in the research. An ISM model considers only the binary digits, 0 and 1 which is having a limited scope. Ranking of variable can be solved by the analytical hierarchical process (AHP).

Implications: Indian SME's have made lots of IT adoption in the last decades, very specifically in the field of social media. However, there is a plenty of scope for improvement. No doubt, technology adoption, will play a key role in the Indian SMEs.

The challenges are extremely complex, Internet marketing may help the organizations gain competitive advantage and gain of web traffic, in future. Generally social media is used for brand development, but for SME's it's the lead generation activity, so in total internet marketing is the tool to reach out to socially and environmentally to conscious customers and build the SME business.

This research contributes a substantial insight to the researchers and practitioners. This study guides the SME's and decision makers for better strategic planning and for eliminating unwanted challenges to ease in the effective implementation of Internet marketing.

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ational Journal of Information Technology & Decision MakingVol. 09, No. 05, pp. 779-797.

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