

Beliefs & Intentions towards QR Code based Marketing in India & Japan: An Experimental Study of Culture as Influencer & Media, On-campaign Instructions and Location as Moderators

Hemant Bamoriya

Abstract

QR Codes in marketing are witnessing colossal growth globally. Despite this, many critics are worried about effective integration of QR Code in marketing mix, due to very less knowledge about consumers' beliefs and intentions towards QR Codes. Presence of substantial variation in exposure and adoption rate of QR Code across cultures, further exacerbate application of QR Code in marketing. This study intends to explore consumers' beliefs and intentions towards QR Codes in marketing across different cultures viz. India & Japan. Study also intends to analyze select variables moderating the relationship between beliefs and intentions. A scenario based experimental design was used and data was analyzed using Structural Equation Modeling & General Linear Modeling. On the basis of key findings, study made vital implications for both, theory and practice.

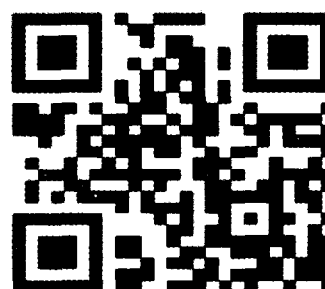
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Introduction

Global mobile phone penetration has already reached 86.7% (MobiThinking 2011) and no wonder marketers have growing interest in mobile phones as marketing channel (Wohlfahrt 2002). This high mobile phone penetration is only one indicator of huge potential of mobile marketing. Mobile phone's specific characteristics like ability of geo-targeting, personalization, 24*7 access, ubiquity, measurability and interactivity encourage application of mobile phones in marketing (Haghirian et al. 2005; Bauer et al. 2005). Further, application of mobile phones in marketing offers diverse modes like SMS (Short Message Service), WAP (Wireless Access Protocol), M-Videos, JAVA apps etc. (Beschizza 2009). One such innovative mode of

mobile marketing is Quick Response Code i.e. QR Code (Figure 1). QR Code, is a 2D code which once scanned using Smartphone -with a scanning application software either preinstalled or downloaded like Scanlife, i-nigma, QuickMark & an active internet-connects user to some specific online content say connecting to a webpage, delivering e-coupons, texting, leading to registration etc. (Bisel 2011; Handley 2012).

Figure 1: Sample QR Code



QR Code was first conceptualized in 1994 by Denso-Wave, Japan for quick and convenient tracking of inventory, as a QR Code was able to accumulate 10 times more information than a simple barcodes and can be scanned at very high speed. Marketers later began to realize functionalities of QR Code which could be transferable to marketing domain i.e. potential to connect easily & swiftly with customers on the go (the quick part of QR Code) and encourage customers' engagement (the response part of QR Code). Thus QR Code became commercialized in 2011 (Denso-wave 2012).

Potential of QR Codes in Marketing

Consumers have different expectations on mobile—they want easy access and quick payoff—Chan, H. (2011)

QR Code offers array of advantages to marketers due to unmatched features. QR Codes are open as Denso-Wave (developer of code) not patented it, thus tools to generate & scan QR Codes are freely available. This enables marketers to easily implement campaign and also supports consumers to scan QR codes used in these campaigns (Matt 2011). QR Code is Omin-directional scannable i.e. unlike barcodes it can be scanned from any angle (due to position detection patterns on three corners) thus offering further ease to consumers. Further, QR Code has interesting attribute of error correction, which means data can be restored even if a QR Code is 30% damaged. QR Code also offers great versatility to marketers as they can be enlarged to size of a hoarding or

minimized to size of a stamp (QRCode.com 2011). And, as being simply an image can easily be printed on any surface like newspaper, billboard, packaging, product itself (Bisel 2011). Even these monochrome codes can be transformed to 'designer' QR code by adding colors & putting brand name/ logo in code's forefront (Podfigurny 2011). Further, QR Code can be tracked for number of scans and media which is certainly a great aid to marketers in measuring consumer activity at micro level and analyzing the effectiveness of various advertising mediums (Patel 2012). Finally, at their best QR Codes can bridge the online and offline worlds as a QR Code provides possibility of integrating online content say a website and offline content say a newspaper ad. Thus QR Code enables markets to execute multichannel marketing to gain effectiveness (Handley 2012). And, for consumers it means offering an exciting avenue of interactivity & engagement (Bisel 2011). All above benefits reflect potential of QR Code as tremendous customer engagement & lead generation tool (Podfigurny 2011).

Current Status of QR Codes in Marketing

Many think that advantageous innovation will sell themselves, that the obvious benefits of idea will be widely realized by potential adopters, but situation is different—Rogers, E.M. (2003)

Today one of the most ubiquitous trends in marketing is the use & analysis of QR Codes especially in Japan, USA and Western Europe. Further, with the adoption of Smartphones QR Code is rapidly gaining popularity across Asia

especially in India, Korea, Indonesia (Densowave 2011; Pola 2012). Last 2-3 years observed tremendous growth worldwide, in both QR Code usages and scan. From January 2010 to January 2011, QR Code scans increased by whooping 4549% (Daniells 2011). Similarly, between April and June 2011 there was an 850% increase in active users, and an 810% increase in total QR Code scans (Tolliver-Walker 2011). Currently, 11 out of 50 Fortune companies are incorporating QR codes into their marketing strategy (Daniells 2011).

Despite the rapid growth of QR Codes many critics opine that QR code is just a fad and marketers are merely following trend (Patel 2012). On other hand, many think that QR Code itself is very powerful & cost effective tool. Rather, these are the marketers who are not clearly focused and adding value, thus failing to drive customer engagement through QR Codes (Jason 2011; Podfigurny 2011; Handley 2012; Kats 2012; Anonymous 2012). For example, a QR Code scan simply leading to homepage of a website which is non-optimized for mobile phones (Annexure 2) or a QR Code placed on hoarding on a speedy highway.

Scope of the Study

Earlier, couple of studies (e.g. Probst 2012; Okazaki et al. 2012) preliminary explored use of QR Codes in marketing. However they focused on perception rather than intentions part. Secondly, they focused on developed countries only (USA & Japan respectively); whereas research on developing country like India is practically nonexistent. This study focuses on

in-depth exploration of consumers' beliefs & intentions towards use of QR Codes in Marketing.

Study further attempts to explore consumers' beliefs about QR Code marketing across cultures like India and Japan. Reason being that impact of culture on consumers' beliefs and attitudes towards marketing promotion is well documented in the literature (Durvasula and Lysonski 2001; Roberts and Ko 2001; La Ferle et al. 2008; Wang and Sun 2010a; Wang and Sun 2010b; Mooij 2011). India & Japan are the two countries selected for cross-cultural comparison because both have entirely different cultural orientation (Hofstede 2001). These differences render a meaningful comparison to examine impact of culture on QR Code marketing. Because Japan has a high 40% penetration of Smartphones - basic device required for code scanning- and enjoys most QR Code scans (Daniells 2011). On other hand in India, Smartphone penetration is low and Smartphones constitute only approx 8% of total mobile phones in the country (Gartner Newsroom 2009). Further, India has only 1.8% of total global QR Codes in terms of country of origin (QRStuff 2012). But India is witnessing rapid diffusion of mobile internet & Smartphones, so it is sensible to analyze QR Code marketing in India along with Japan.

At last, study attempts to explore moderating role of select variables on the relationship between culture & consumers' beliefs. The findings may offer some valuable perspectives on the evolving nature of QR Codes in

marketing and may provide implications for marketers to expand across cultures.

Relationship between Beliefs & Intentions

In psychology, Individual's intentions are assumed to capture motivational factors that influence a particular behavior. Thus intentions are indications of how much of an effort an individual is planning to exert in order to perform the behavior (Ajzen 1991). Many authors tag individual's intention to be outcome of his/her set of beliefs (e.g. Heider 1944; Milier 1956; Anderson, 1974; Godin & Shephard 1987; Wu and Wang 2005). As a general rule, the more favorable the beliefs with respect to a behavior, the stronger should be an individual's intention to perform that behavior referred as intention (Ajzen 1991). Thus individual forms beliefs about an object by associating it with certain attributes and ultimately get linked with particular intention. It is these salient beliefs that are considered to be the prevailing determinants of an individual's intentions (Wang and Sun 2010a).

In similar manner, authors report consumers' beliefs about marketing promotions (both offline & online media) to be determining consumers' intentions towards advertising (Ducoffe 1996; Mehta 2000; Brackett and Carr 2001; Tsang-Sing et al. 2004; Karson et al. 2006; Bamba and Barnes 2006; Chun and Wan 2009; Wang and Sun 2010a; Mafe' et al. 2010; Bamoriya and Singh 2012). Specifically in context of mobile marketing, Bamoriya and Singh (2012) empirically reported that consumers' beliefs about mobile marketing

influence their intentions in terms of receiving SMS ads. Similarly, Mafe' et al. (2010) explored the consumers' beliefs under attitudinal, normative & subjective dimensions towards SMS mediated promotions. They reported that consumers' beliefs strongly influence their intentions to respond to mobile promotion. As QR Codes being one of the modes of mobile marketing, so in this study consumers' beliefs about QR Codes were considered to be positively associated with their intention. So following directional hypothesis was proposed:

H₁- The stronger positive beliefs towards QR Codes in marketing, the more likely one will intent to scan a QR Code.

Various authors adopted model of Pollay and Mittal (1993) to measure beliefs about online advertising (e.g. Korgaonkar and Wolin 2002; Tan and Chia 2007; Wang and Sun 2010a; Wang and Sun 2010b) and mobile marketing (Tsang et al. 2004; Leppäniemi and Karjaluo 2005; Bauer et al. 2005; Usman et al. 2010; Bamoriya and Singh 2011). But QR Codes marketing promotion slightly differs from online advertising & mobile marketing, as it is more towards an instrument of (mobile) advertising. So much widely used scale by Pollay and Mittal (1993) may have little value. Instead, for beliefs about QR Codes in marketing a scale developed by Durvasula et al. (1997) may suite more for the purpose of study. Durvasula et al. (1997) measured beliefs & attitude towards advertising on a semantic differential scale viz. worthless/ valuable, unnecessary/ necessary, unimportant/ important & insincere/ sincere.

Culture, Beliefs and Marketing Promotions

According to Hofstede (2001) an individual's set of beliefs can be tied into 5 cultural dimensions viz. individualism/ collectivism, power distance, uncertainty avoidance, masculinity/ femininity and long-term/ short-term orientation. Index values of all these dimensions vary across cultures, as reflected in Table 1 for India and Japan (indicating cultural differences between two). Mooij (2011) intensively studied the application of the Hofstede's cultural dimensions in international marketing context and reported that due to cultural differences (significantly different index values) different belief sets towards marketing promotion should prevail.

Table 1: Cultural Dimensions – Index Values

Dimension	India	Japan
Individualism	48	46
Power_Distance	71	54
Uncertainty_Avoidance	56	92
Masculinity	56	95
Long-term_Orientation	61	80

Source: Hofstede (2001)

Relationship between culture and beliefs towards marketing promotions is well researched and documented (Taylor et al. 1997; Gregory and Munch 1997; Roberts and Ko 2001; Durvasula and Lysonski 2001; Mojsa and Rettie 2003; Al-Juhaim 2008; La Ferle et al. 2008; Usman et al. 2010; Wang and Sun 2010a; Wang and Sun 2010b). In general, findings from past studies suggest that beliefs towards marketing promotions vary across cultures, thus these variables should be intrinsically linked. Further, with rapid globalization marketers are increasingly interested in cross-cultural studies

in various business domains including mobile marketing & use of QR Codes in it. Insights from such studies would enable them to understand culturally diverse markets and respond accordingly. Hence, it will be of significance to examine beliefs about QR Code in marketing across cultures. However, due to practically non-existence of research on comparing QR code in marketing between Indian and Japan or any other countries, it would be premature to predict how culture influences these two variables. Hence, following non-directional hypothesis was proposed:

H_1 - Culture will influence individual's beliefs towards QR Codes in marketing.

Variables Moderating the Relationship between Belief & Intentions

Preliminary findings of focus group study of Okazaki et al. (2012) hint that location of customer where s/he would encounter QR Code (say home or bus stop) and type of media used (say magazine or billboard) may influence customer's intention to scan a QR Code. But there is no explicit academic literature on the variables which might moderate the relationship between beliefs towards QR Codes in marketing and subsequent intentions. There could be other possible moderators apart from media & location affecting above relationship between beliefs & behavioral intentions. So couples of informational interviews were held with a range of subject matter experts to explore the area. Majority of the experts strongly opine that media and location should moderate the

relationship between beliefs and intentions in context of QR Codes in marketing, thus adding validity to the findings of qualitative study by Okazaki et al. (2012). Further, majority opine that on-campaign instructions may be very critical in driving desired behavior, as general awareness about QR code is still not very high. Online marketing survey by market research firm Simpson Carpenter verifies it, which states that only 36% consumers know what a QR Code is and how to scan it (Charlton 2011, Sep). Hence, on the basis of above views and studies following non-directional hypotheses were proposed:

H₃- Type of media used will moderate the relationship between beliefs towards QR Codes in marketing and intention to scan QR Codes.

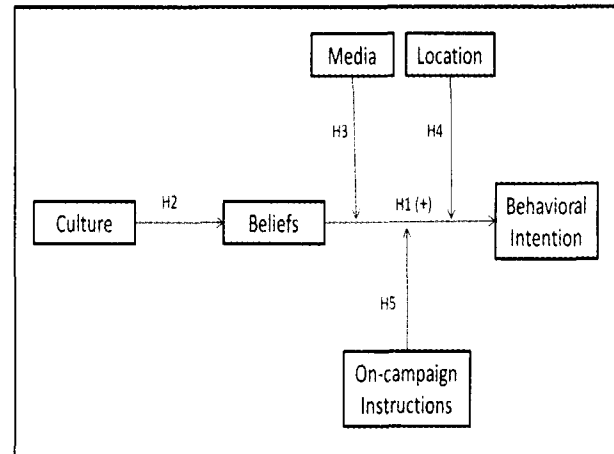
H₄- Location of customer will moderate the relationship between beliefs towards QR Codes in marketing and intention to scan QR Codes.

H₅- On-campaign instructions will moderate the positive relationship between beliefs towards QR Codes in marketing and intention to scan QR Codes.

Conceptual Framework

Figure 2 presents the conceptual model underlying this study. Model posits that culture influences beliefs towards use of QR Codes in marketing. Further, these beliefs influence intention to scan QR Code. This relationship of beliefs and intention is moderated by variables viz. Media, Location and On-campaign instructions.

Figure 2: Conceptual Model



Research Methodology

Design

For the study, a 3 (media: magazine, product packaging & pamphlet) by 2 (location: home & shopping mall) by 2 (with & without on-campaign instructions) between-subjects 'scenario based experimental design' was used to test the hypotheses set forth (Table 2). For this, media types selected were- magazine (coded as 3), product packaging (coded as 2) & pamphlet (coded as 1). Similarly, home (coded as 2) and shopping mall (coded as 1) were selected as the location where customer will encounter a QR Code. 'On-campaign instructions' variable was chosen as dichotomous; with instructions (coded as 2) – a scenario where marketing communication explicitly specifying how to scan QR code, where to find application and what to expect after a scan and without instructions (coded as 1). These twelve scenarios (3 X 2 X 2) were intended to be administered across cultures, where Indian culture was coded as 1 while Japanese culture was coded as 2.

Table 2: Study's Experimental Scenarios

Media	Location	On-campaign Instructions (OCI)	Scenario
Magazine	Home	With OCI	1
Magazine	Home	Without OCI	2
Magazine	Shopping Mall	With OCI	3
Magazine	Shopping Mall	Without OCI	4
Product Packaging	Home	With OCI	5
Product Packaging	Home	Without OCI	6
Product Packaging	Shopping Mall	With OCI	7
Product Packaging	Shopping Mall	Without OCI	8
Pamphlet	Home	With OCI	9
Pamphlet	Home	Without OCI	10
Pamphlet	Shopping Mall	With OCI	11
Pamphlet	Shopping Mall	Without OCI	12

In all above scenarios a hypothetical person (Mr. Z) was used as suggested by Havlena and Holbrook (1986). Purpose was to provide a projective task, thereby to discourage social desirability effects and to avoid problems involving individual differences in reactions to specific set of activities. So, a narration of each scenario was prepared describing location (home/ shopping mall) of Mr. Z and media (newspaper/ product packaging) on which QR Code is placed. In six scenarios with on-campaign instructions, adjacent to the QR Code, some clear instructions were placed regarding what Mr. Z should do to get a code reader, how to scan the code and what would be there for Mr. Z if he scans the code. But in remaining scenarios i.e. without on-campaign instructions, QR Code had no such instructions. All scenarios included a visual representation of a QR Code along with narration. Subsequently, each scenario was subject to pretest using convenience sampling to gauge clarity of the scenario and to determine face validity. Based on the total 33 responses, minor rewriting was done in two open ended questions, and scenarios were finalized.

Scale

Beliefs about QR Codes in marketing were measured before administrating scenario based experimental study. To measure it a 4-item five point semantic differential scale (worthless/ valuable, unnecessary/ necessary, unimportant/ important & insincere/ sincere) was adopted from Durvasula et al. (1997). Original study reported above scale to be reliable (Cronbach's $\alpha = .93$) and valid. As in Structural Equation Modelling (SEM) ensuring convergent validity is very critical (Abramson et al. 2005), so Product-Moment-Correlation was estimated for data from India and Japanese samples. Analysis suggested presence of convergent validity, as moderate to strong correlation existed between four items measuring belief construct. Further, Cronbach's alpha values were also exceeding recommended value of .7 for both Indian (.84) and Japanese samples (.88).

Intention towards QR Code in marketing was measured after administrating scenario based experimental study. It was conceptualized as intention to scan QR code and was measured on a 5 point likert scale; 1 for 'very unlikely' to 5 for 'very likely'.

Sampling & Data Collection

A purposive sampling (unit of analysis; college students) was executed at one Indian and one Japanese university, on the basis of 3 screening questions related to mobile internet usages and exposure to QR Codes. Overall, 289 questionnaires were collected in India and 297 in Japan. After cleaning data for missing values

and outliers a total of 574 usable questionnaires (3 outliers in Indian sample & 9 outliers in Japanese sample detected by computing Z scores) were available for analysis. Among Indian respondents, 63.3% were male and 34.6% female. Among Japanese respondents, 57.3% were male and 42.7% female. On an average, Japanese respondents (M= 6.7 yrs) had longer history of mobile internet usages than Indian respondents (M= 2.5 yrs). Further, Japanese respondents (M= 3.24, SD= .93) reported higher exposure to QR Codes than Indian respondents (M= 1.95, SD= .90).

Scenario-administration

To one of the twelve scenarios, groups of about 20+ respondents were randomly assigned, each from Indian and Japanese Samples. Appropriate coding was done for 'culture' variable and also for 3 moderating variables viz. media, location and on-campaign instructions. Respondents were asked to read the written scenario and answer the questionnaire to measure their intention towards QR Code in marketing.

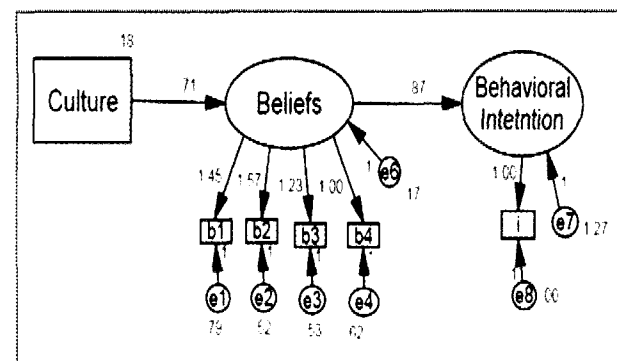
Analysis

Linear Effects

Structural equation modeling (SEM) using AMOS-18 was performed to assess the proposed model fit and to test hypotheses. Generalized Least Square (GLS) estimation method was used as it is scale free minimization technique (Kline 2005). In order to test hypotheses H1 and H2, a SEM was first conducted without the moderating effect of media, location and on-campaign instructions

(Figure 3). AMOS took 8 iterations to achieve minimization, where model was found to be recursive. Results indicated a good model fit with $\chi^2(11) = 17.01$; $p > .001$; $\chi^2/df = 1.546$; GFI = .917; RMSEA = .068 and a significant improvement over null model with CFI = .921; NFI = .912.

Figure 3- Structural Model without Moderating Effects



Note: GLS, $df=11$, Unstandardized Estimates

Findings suggested that hypothesized relationships between culture & beliefs (regression weight= .709; $p < .05$) and beliefs & intention (regression weight= .868; $p < .01$) are significant. Hence, hypothesis H2 that “Culture will influence individual's beliefs towards QR Codes in marketing” is not rejected. Similarly, hypothesis H1 that “The stronger positive beliefs towards QR Codes in marketing, the more likely one will intent to scan a QR Code” is not rejected.

Moderating Effects

To estimate moderating effects of media, location and on-campaign instructions on the relationship between beliefs towards QR Codes in marketing and intention, General Linear Model (GLM) univariate analysis was

performed. Here, intention (i) was dependent variable while composite scores (scores calculated by averaging scores of the subscale items that belonged to the construct) for beliefs about QR Code in marketing was a fixed factor (b). Model was balanced as each category of hypothesized moderating variables had equal number of cases. First, moderating variable media (m) was selected as covariate and estimated for effects of beliefs (b), media (m) and interaction (b*m) on intention (i). Subsequently, same procedure was performed for remaining two moderating variables viz. location (l) and on-campaign instructions (o) (Table 3).

Table 3- GLM Analysis Output

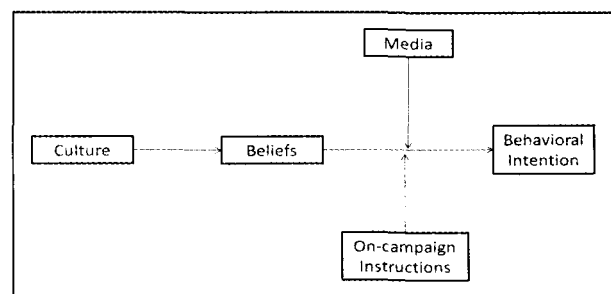
Effect	Mean Square	F	P
<i>GLM Analysis 1</i>			
Beliefs (b)	.889	.599	.009**
Media (m)	.581	.401	.032*
Interaction (b*m)	.161	.097	.000***
<i>GLM Analysis 2</i>			
Beliefs (b)	.791	.511	.041*
Location (l)	1.105	.910	.093 (n.s.)
Interaction (b*l)	.333	.291	.298 (n.s.)
<i>GLM Analysis 3</i>			
Beliefs (b)	.809	.606	.007**
On-campaign inst.(o)	.621	.484	.036*
Interaction (b*o)	1.77	.109	.001***

*Significant at .05, **Significant at .01, ***Significant at .001 level

Findings of GLM univariate analysis suggested that in case of influence on intention, the interactions between beliefs & media (.097, $p < .001$; GLM Analysis 1) and the interaction between beliefs & on-campaign instructions (.113, $p < .01$; GLM Analysis 3) were significant. But interaction between beliefs & location (.289, $p = .301$; GLM Analysis 2) was not significant. Hence, hypothesis H3 that

“Type of media used will moderate the relationship between beliefs towards QR Codes in marketing and intention to scan QR Codes” and H5 that “On-campaign instructions will moderate the positive relationship between beliefs towards QR Codes in marketing and intention to scan QR Codes” are not rejected. But hypothesis H4 that “Location of customer will moderate the relationship between beliefs towards QR Codes in marketing and intention to scan QR Codes” is rejected. Hence, finally on the basis of findings of both SEM & GLM analysis following model was retained:

Figure 4: Retained Model



Results and Discussion

Preliminary analysis suggests that Japan is ahead of India in average hours of mobile internet usages. Also Japanese have higher level of exposure to QR Codes as marketing tool in comparison to Indians. Reason could be attributed to the fact Japan is origin of QR Codes. Higher penetration level of Smartphones in Japan could be another plausible reason. Aggregately, self reported level of exposure to QR Codes is low (especially in India), so marketers should focus on educating consumers about QR Codes and its purpose, rather than simply adding QR Codes to their marketing campaigns.

SEM analysis suggests that consumers' beliefs towards QR Codes in marketing positively influence their intentions. This finding is consistent with previous studies in relatable areas like online advertising (Ducoffe 1996; Mehta 2000; Brackett and Carr 2001; Karson et al. 2006; Wang and Sun 2010a) and mobile marketing (Bamba and Barnes 2006; Bamoriya and Singh 2012). Precisely these findings suggest that those consumers who believe that use of QR Codes in marketing is necessary, valuable, important and sincere are very likely to scan a QR Code. This is a vital implication for marketers. First, if marketers want positive response from consumers then their QR Code marketing promotion should be well planned. It means, marketers looking to implement QR codes into their overall strategies should define their goals and objectives in crystal clear manner. Else it would give impression of an unnecessary promotional effort from marketer's side, merely following current trend (Patel 2012). Second, Marketers must provide some real value to customers once they scan a QR Code. Here, focus on consumer experience & value addition after the scan will be very critical element to success (Annexure 1). For creating value marketers should utilize tracking capabilities of QR Codes and should analyze data in terms of location, time, duration, operating system & demographics of engaging consumers. Such metadata generated should be used in making QR Code experience highly relevant to consumers thus creating value for consumers. Third, QR Code marketing promotion must avoid any insincere approach as

it would lead to consumers' frustration. A common case is non-optimized-webpage for mobile phones (Annexure 2). Many a time marketers are not using URL shortners resulting in very dense QR Codes which are difficult to scan by 'not so high camera resolution' mobile phones (Kats 2012). Marketers should avoid such insincere approaches while dealing with QR Codes.

SEM analysis further suggests link between culture and beliefs. This key finding i.e. culture would influence an individual's beliefs towards QR Codes in marketing is consistent with past relatable studies (Durvasula and Lysonski 2001; Roberts and Ko 2001; Mojsa and Rettie 2003; La Ferle et al. 2008; Wang and Sun 2010a; Wang and Sun 2010b; Mooij 2011). In context of use of QR Codes in marketing, Japanese respondents have more positive beliefs towards QR Codes. Further, Japanese respondents reported higher intention to scan a QR code used in marketing. As hierarchy of effect theory suggests belief is likely to have a positive impact on intention (Lavidge and Steiner 1961). Obviously, Japanese respondents' positive beliefs further led to higher intentions towards QR Code marketing. These findings can be attributed to the cultural differences (significantly different index values for Hofstede's dimensions) between India and Japan. Especially, the two countries differ on uncertainty avoidance dimension which is particularly relevant to innovative marketing practices (See Table 1; Hofstede 2001). This is another important implication for international marketers, who need to be aware of such

cultural differences when employing a centralized mobile marketing approach using QR Codes around the world.

GLM univariate analysis suggests that type of media used for QR Code marketing moderates the relationship between beliefs and intention towards QR Code in marketing. This finding is consistent with qualitative findings of Okazaki et al. (2012). In the study three media types were used viz. magazine, product packaging and pamphlet to form different scenarios. On the basis of cell mean comparison for behavioral intention for these media types, magazine was found to be associated with more favorable behavioral intention to scan QR Codes while pamphlet with least. Reason could be nobility and credibility associated with magazines as a marketing media (Pollay 1985). Here lies an implication for marketers, they need be careful while selecting optimum media for QR Code marketing campaigns. Similarly 'on-campaign instructions' variable has moderating effect on the relationship between beliefs and intention. This finding is consistent with Kats (2012) reporting that a QR Code based promotion offering clear instructions can drive consumer scans up by 500 to 800%. Possible reason is that the use of QR Codes in marketing is not very old and consumers are not fully aware about them (Tolliver-Walker 2011; Charlton 2011; Cummings 2011; O'Reilly 2011). This is an important implication suggesting that marketers should focus on increasing consumers' awareness level on QR Codes i.e. how to get a code reader, how to scan codes, what to expect from a code scan, so as to lead easy diffusion of

QR Codes.

Conclusion

Use of QR Codes in marketing has been prevailing in Japan and now gradually rising in India also. This study attempted to explore the relationship between consumers' beliefs & intentions towards use of QR Code in Marketing across cultures like India and Japan using SEM. Further, study attempted to explore moderating role of media, location and on-campaign instructions on the relationship between beliefs and intention GLM analysis. Culture was influencing belief towards use of QR Codes in marketing and this belief in turn was significantly affecting intention to scan codes. Type of media used and on-campaign instructions were significant moderating variables.

Limitations & Future Research

This study also has certain limitations. And underlying those limitations there are some implications for future research. First, study operationalized the concept of culture as cultural background of the respondents. This may cause loss of robustness of cross-cultural model, as strong individual differences could exist within a cultural group. Second, study only dealt with intention rather than actual behavior i.e. scanning a QR Code. This might have led to loss of some explanatory power of the model. So future studies could focus on actual behavior, under true experimental design. Third, for sake of parsimony and understanding (as research area is almost virgin) model was constrained to

only key constructs of theoretical importance. This implies that there could be other significant variables in context of mobile promotions such as social norms (Karjaluoto et al. 2008), attitude towards advertising in general (Singh and Vij 2008) on which future studies could focus. Fourth, due to very short history of QR Code marketing especially in India, consumers' beliefs may still be evolving. Thus current cross-sectional design is far from enough to capture that evolution. Hence, a longitudinal study in future may provide more insights. Fifth, as it is recommended that the final model to be tested on a second sample (Kline 2005), but due to sample size constraints, model replication was not exercised. So future studies could replicate the model across geographies & ethnic groups. At last, study tested moderating effects of media, location and on-campaign instructions on the relationship between beliefs and intentions towards QR code marketing. Future studies may examine other possible moderators like code placement & design, incentives offered for code scan, privacy issues etc.

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Annexure

Annexure 1: Value for Customers

Shoppers who scan QR Code on the wine bottle of Sacre Bleu, are forwarded to a mobile-optimized webpage providing interesting tips on food-wine pairing from renowned chef B.Sorenson.



Source: Entrepreneur, Oct.2011, www.entrepreneur.com/article/220359

Annexure 2: Insincere in Approach

Asmi Jewelers placed a QR Code at left-bottom with no 'call to action'. Even when scanned it linked to a non-mobile-optimized homepage, which was very difficult to be viewed on mobile phone.



About the Author

Hemant Bamoriya is an Assistant Professor at Acropolis Faculty of Management & Research, Indore. The author can be reached at hemantbamoriya@acropolis.in