ASSESSMENT OF ELECTRONIC-BASED INTEGRATED MARKETING COMMUNICATION FOR RURAL AREAS IN NORTH INDIA

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Abstract: *This research paper highlights the impact of internet based marketing communication (referred as electronic integrated marketing communication or e-IMC) on the living standards of the rural population in selected North Indian villages from 4 states. A sample of total 320 respondents was taken to understand their perception about how internet communication has impacted their productivity in terms of saving costs and boosting margins on the sale of their yield. Research found use of e-IMC projects has helped them in saving moderate costs and boosting their margins from yield as much as 30 percent. It is also concluded that due to faster information access which takes less than day's time for villagers to reach has enhanced their decision-making. The research highlights the bottlenecks and reasons for absence of internet service providers. Research recommends that ICT projects requires public-private partnership to penetrate rural markets and give advantage to the rural population of reduced distribution costs and market for their products. The other suggestion includes that project offices should aspire to include more people into electronic based communication accessibility through appropriate training.*

Keywords: e-IMC, Integrated Marketing Communication, Rural, North India, Internet

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1. Framework of an Electronic Integrated Marketing Communication

In this knowledge era, businesses must articulate its mission to a certain desired target audience and with accountability to public. However this could only be made possible when different marketing tools works in integration to support each other to create greater message impact. Internet has contributed significantly in enhancing this relationship replacing need for traditional media with fast, proactive and cheap medium. Increasingly people are looking at different media sources to extract information relying less on traditional media sources and on one single medium. This has facilitated an electronic-based environment where almost everyone on network is a communicator on thousands of websites, chat rooms and micro-sites having specialized forums and social media. Target audiences have learned to chuck out the piles of information on the websites with control on their choice of information they are interested in receiving or responding to. Thus e-IMC or Electronic Integrated Marketing Communication is a marketing approach to make use of internet-based media for communication of marketing activities to the target segment. This has altogether created a new channel, called online marketing, requiring a separate marketing-mix on the internet. Due to which the competition has increased, markets have become more widened, bargaining power of buyers has increased and differentiators among competitors have reduced. It is therefore IMC is identified as an agent that gives function, purpose and future direction to the business. It revolves around corporate vision, competitive advantage and scope to expand organization's activities **(Holm, 2006)**. *Let us know further what does an e-IMC model looks like.*

2. Design of an e-IMC Model

Gurau (2008) proposed a model for online integrated marketing communication. The message has to be designed keeping in view 3 things: corporate values, strategic-tactical objectives and characteristics that defined customer segment possess. The message should be designed as based on – cover for transparency, interactiveness and memory – as defined earlier as well. These shall give scope for personalization/customization of message requirements as per to audience needs or even in case of un-targeted audiences as well. This could only be possible through such a model that gathers data and generate response for an effective CRM. This has been represented in the figure 1.

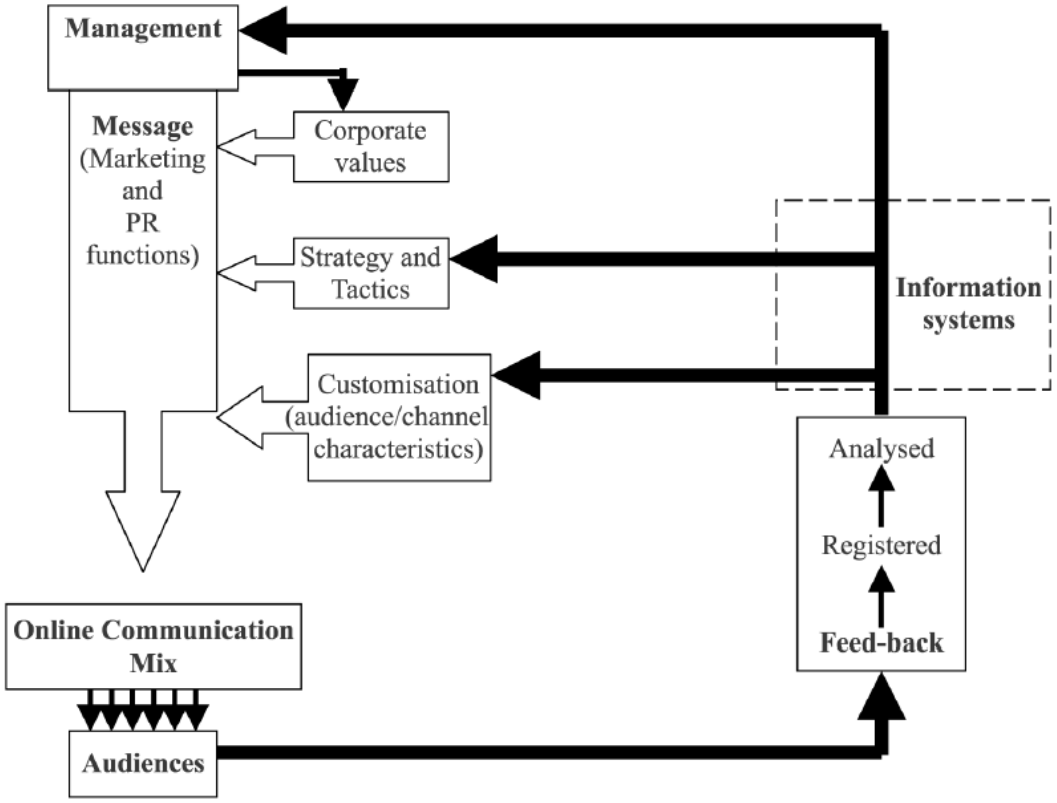


Figure 1: An e-IMC Model

After understanding of the model, let us look at few approaches to build an e-IMC model for the different purposes a business might have.

3. Approaches to Integrating e-IMC

An e-IMC model encompasses of marketing campaigns on the internet and mobile; which include activities like e-mail banners, blogs, webinars, podcast, internet t.v and mobile-based communication like SMS, MMS, WAP-based applications & GPRS. Integration of marketing tools, approaches and resources to maximize consumer interest for most effective cost-benefit ratio is what labeled as electronic internet based marketing communication. In fact it integrates multiple form of communication for marketing purpose in simpler words; and otherwise it is the integration of highly specialized media i.e. internet. Its existence has caused major shift in the internet-based marketing tools (e.g. social networking sites) and applications (like 3G, MPEG-4) for corporate to find their target market in every nook and

corner, 24x7; and continuous pestering with messages for top-of-the-mind recall, brand associations, developing client loyalty, and instant feedbacks.

This integration could be categorized as horizontal and vertical and, internal and external. Horizontal signify an integration between marketing-mix and other business functions like production, distribution etc. Vertical means an integration of marketing objectives with corporate philosophy and vision. Internal integration focuses upon motivating the employees and keeping them informed about official developments like new advertising campaign, new corporate identity, change in service standards and addition of new strategic partners. External, on contrary, is integration with advertising and publicity agencies. Thus, IMC is a holistic approach that makes use of vertical and horizontal; internal and external integration of communication to reach marketing objectives.

Below mentioned are some of the benefits that impacts and influences the customers in their decision-making and thus total value to them.

4. Some Underlying Benefits

So the question might arise why these should work in integration. The answer is to – develop sustainable competitive advantage – through optimizing customer value and costs to the company. IMC influences the consumer buying process positively by developing a dialogue and nurturing relationship (e.g. loyalty programs) with consumers creating a favourable image for the corporate (e.g. share value). IMC acts as catalyst to infuse possibility of marketing message. Stretching the message through different marketing tools and approaches creates high chances for corporate to arouse consumer interest, help them in decision-making in different buying stages, and to buy products or services. The message could thus be communicated in the form of timely reminders (like paying bills), information updates (like brand or product comparisons), offers and schemes (like certain discounts) thus moving through buying process stages to help consumer make decision in the clutter (of messages, products and services). The advantage is it shortens the buying cycle by reducing the search for products with re-assurance (dissonance reducing behaviour). Not just this, with precise database on consumption behaviour, corporate can market their product well by knowing well what set of audience need what sort of product. Competitiveness for corporate do not rest on just one function and its functional efforts rather it an integration of activities of a

corporate **(Christiannse and Kumar, 2000)**. Thus, IMC proves to be a great tool of competitiveness for corporate in terms of market share, visibility and brand image using online environment as ideal platform **(Gimenez and Lourenco, 2008)**.

But benefits don't come without obstacles. Few of these are discussed in the section below.

5. Common Obstacles in Designing e-IMC

The biggest of all problems is with communication itself. A vast variety of consumer-set requires designing different communication; tailor made to suit what rather would appeal to them. Decoding simple messages are easy but interpretation rests with the receiver whose demographic profile affects its interpretation. Thus messages could be misunderstood, or ignored or not delivered on-time. It is also because relevance of message depends upon target audience's needs, emotions, interests etc.

Not just this, message has to be designed to meet brand objectives, corporate vision, enhancing stockholder's value, offset competition, responds to pressure groups and overall creates a favourable effect for corporate **(Gronroos, 2004)**. A multi-cultural set of audience requires message to be adapted to meet language barrier posed due to socio-economic and culture factors. Then challenges are also posed by need for message to be designed interesting in terms of interactive-ness with static and dynamic web pages **(Ashcroft and Hoey, 2001)**.

Grove, Carlson and Dorsch (2002) pointed out single but adequate challenge in designing the IMC in services due to intangibility issue attached. The intangibility for services corporate makes it difficult for marketing to create positioning of the product in target segment's mind, and therefore consistent communication become a challenge.

After understanding the conceptual framework of e-IMC, its benefits and challenges, let us proceed to gain a view of present use of IMC and the developments further in the modern India before embarking our research.

6. IMC and Indian Experience in Rural Areas

According to **India Business Weekly (2008)**, India has more than 50 million online user base in which there is 1 out of every 5 is a rural-area user. The statistics reveal that there are 82% online users in India come from urban population, while remaining 18% from rural areas. However, the total internet penetration stands at 4.5% of total population in India.

Being at the helm, with IT outsourcing and exports of software services, India still don't have greater internet penetration but has progressed from being at 0.4% penetration (in the year 2000) **(Kiggen, 2001)** to today at 4.5% and from 38.5 million in 2005 to 100 million in 2007 and estimation of 96 million in 2013 **(eMarketer, 2010)**. There is a continuous focus on internet (broadband) with belief that it will empower the rural population, improve their lives and contribute larger sales volume for corporate **(Jhunjhunwala, Koilpillai and Ramamurthi, 2009)**.

Connecting villages for balanced growth and distribution of equitable welfare among the rural regions is most prominent criteria for socio-economic development of rural India. Not just this but rural market are deemed to be of worth of million in sales volumes but rate of reaping benefits and focus area is quite slow and limited respectively. The integration of marketing communication (IMC), and in particular, internet based, has known to be evolved as the most contemporary subject for tapping rural mass potential vastly distributed in regions extensively.

The question – why (e) IMC, holds special relevance for mass markets in rural and remote areas, is due to facts **(FAO, 2008)** as stated hereunder:

1. It improves vertical (communication with decision-makers) & horizontal (communication between agencies linked to rural development) communication information flow constantly. This improves the quality of the decisions and interventions that impact upon the rural people.
2. It extends the application of Marketing Information Systems, in concurrence with existing and more widely used communication media such as rural radio enables the broad enhancements of information and communication resources for rural people.
3. Electronic enabled IMC or e-IMC provides a rural connectivity model at state and national levels, hence accessing a large volume of virtual information is easy without being impeded by geographic barriers.
4. Some models may include e-commerce based trading networks, local business information systems, portals and community financing or even health management programmes.

5. Another important desired use of IMC is integrating the efforts of governments and various institutions associated in bringing the socio-economic development in rural communities by bridging the knowledge gaps.
6. IMC synonyms for new ideas, discussion groups, access to expert advice, education resources, global understanding, cultural awareness, and more specifically here, product-market issues viz. product placements and locating medium for promotions electronically.

The core of this paper is to dipstick to analyze the awareness level of rural population about marketing communication, its major sources, and its impact on their lives.

Before we dipstick and analyse the source of marketing communication and its impact on rural lives, let us briefly look at the developments in the rural areas.

7. Growth Story of Rural India

The Indian growth story is now spreading itself to India's hinterlands. Rural India, which accounts for more than 70 per cent of the country's one billion population (according to the Census of India 2001), is not just witnessing an increase in its income but also in consumption and production. Rural areas constitutes of more than 70 percent of population in India who lives in villages with adult literacy rate at 58.8 percent **(World Bank, 2002),** which is approximately 65 percent now **(Indian National Literacy Mission, 2009)**. The size of rural market was estimated at 42 million households and rural market has been growing at five times the pace of the urban market. Also, there is increasing agricultural productivity leading to growth of rural disposable income and finally, the lowering of difference between taste of urban and rural customers **(Bhattacharya, 2008; Bansal & Easwaran, 2004)**.

The rural consumer market, which grew 25 per cent in 2008 when demand in urban areas slowed due to the global recession, is expected to reach US$ 425 billion in 2010-11 with 720-790 million customers, according to a white paper prepared by CII-Technopak **(National Commission on Population, 2010)**. According to a Rabobank report, the agri-biotech sector in India has been growing at a whopping 30 per cent since the last five years, and it is likely to sustain the growth in the future as well **(Rao, 2004)**. The report further states that agricultural biotech in India has immense potential and India can become a major grower of transgenic rice and several genetically engineered vegetables by 2010.

According to **Chatterjee (2002)**, modern information and communications technologies (ICTs) and web based marketing of agricultural (e-IMC) produce hold great promise for the socio-economic development of rural hinterlands in India and at grass root level, their implementation must be carefully localized **(Ramirez, 2007)**. However there exist limitations on the type and quantity of resources available in rural areas **(Daly and Avant, 1999; Tiwari, 2008)**. But based on close ties of family and friendship, people know each other; they help each other; and, frequently live out their lives in close interaction with a small group of people with similar norms and values **(Daley and Avant, 2004; Martinez-Brawley, 2000)**, the relationships in rural community can prove beneficial for sharing resources and accessing services that connect them to family, groups, organizations and communities within and outside the rural area. Figure 2 represents the connect between roles that e-IMC could perform for agricultural development in rural areas.

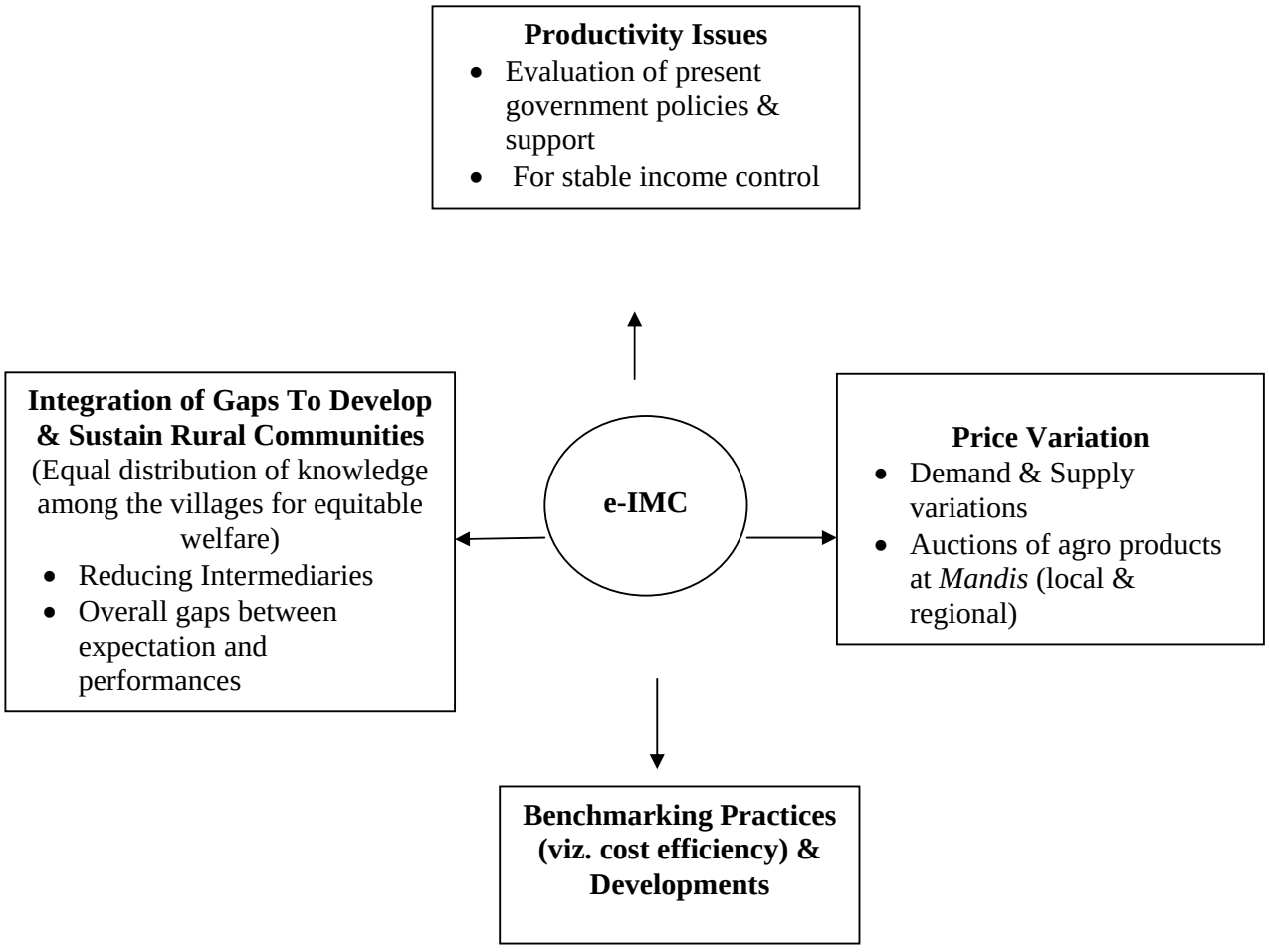


Figure 2: Concerned Roles of e-IMC for Rural Development

Going by the proposed model of e-IMC, it is clear that functions of e-IMC have major impact on enhancing the productivity related to agriculture. It gets reflected in managing productivity through being aware on government policies and regulations, and support on the same for stable income throughout year **(Raj and Selvaraj, 2007)**. It reduces the role of intermediaries to bring maximum advantage to the farmer **(Kanungo, 2004)**. It also helps in controlling the price variations of the yields which should actually be based on real-time demand and supply and discourages hoarding of produce and thus reaching of the same to common man or rising thereby superficial inflation of commodities. It has slowly eliminated the need for *mandi* by the local intermediaries that have motive to purchase farmer's yield at lower costs, to re-sell the same as raw material to other producer at a higher cost **(Nikam, Ganesh and Tamizhchelvan, 2004)**.

Figure 3 presents an interface of e-IMC and the bodies associated to communicate with rural communities. However not all of these are active at the same time for all the regions.

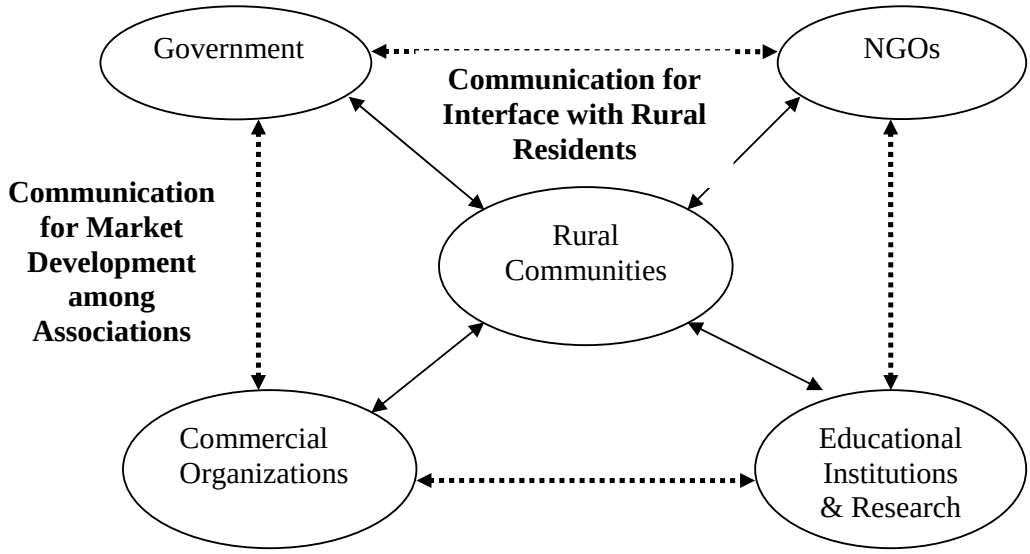
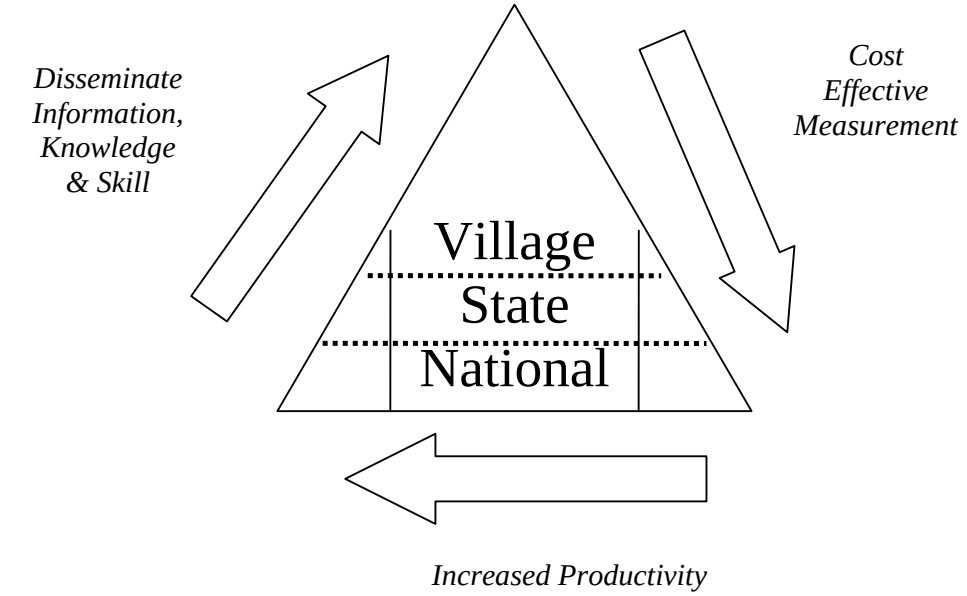


Figure 3: An Interface Model for e-IMC

Figure 4 presents an information dissemination model describing how the information dissemination takes place. The objective of information disseminate is 3 fold: a) to share knowledge and skill related to agriculture; b) making it cost effective; and c) utilizing it for enhancing the output. Both horizontal and vertical communication takes place. While horizontal is among the villagers mostly and constitutes tacit part of information through

informal discussions the vertical communication is instant, largely explicit and more of routine.



------ *Horizontal Communication* ——— *Vertical Communication*

Figure 4: Information Dissemination through e-IMC

8. Objectives of this Research

The broad objective of the research is focused around present experience of rural population with marketing communication in online environment, registering the impact of such communications on their produce and the lifestyle.

This has been studied under 3 objectives:

1. To study the relevance of electronically enabled Integrated Marketing Communication (e-IMC) for rural areas in selected states and villages of Northern India.
2. To study the relevant requirements for a useful e-IMC for these areas for the rural respondents.
3. To assess the impact of IMC on standard of living of rural consumers & farmers.

Based on the above stated objectives a review of e-IMC in Indian context is presented below with focus on ongoing e-IMC projects in various villages in Northern India.

9. Research Methodology Followed

For this purpose, sample is collected from the states of Punjab, Haryana, Uttar Pradesh and Uttarakhand 320 rural households are taken as sample size, on the basis of average population, consumption patterns and competition prevailing in markets. The selected villages have proper ICT facilities with minimum one ICT-based marketing project ongoing. The total sample qualifies for the present study is 320 rural households from 5 states (out of 500 estimated). A total of 90 samples from Punjab, 73 samples from Haryana, 103 samples from U.P and 54 from Uttarakhand were taken. In this case respondent's primarily are farming households with income upto Rs. 7,000 per month however irregular due to seasonal incomes. The literacy rate is not required due to the fact that the study do not undertake to establish any relationship between literacy rate and incomes. However the due effort was taken to ensure that respondent understands the communication terminologies to respond the most preferred communication media. The information about respondent's detail is captured under heads like yield, average monthly turnover, mode of sales, and education level. The eligibility criteria respondent should have to be minimum higher secondary degree holder with exposure to mediums defined in the questionnaire annexed. For information gathering, state government offices were approached at Block Development Officers (BDO) level through e-mails and personal visits, requesting for the data through the use of questionnaire. The internet was also used to refer to statistics available on official website of the Indian government like National Commission on Population; Telecom Regulatory Association of India; Internet Service Providers Association of India and; Indian Council for Research on International Economic Relations. The questionnaire used had 3 sections. **Section A** captures the respondent's details like socio-economic details; **Section B** analyses the level of information access to the respondents, and **Section C** details about the benefit of online environment in communication in terms of living standards. Mainly the questionnaire was 'close-ended' in nature except section A which is open-ended. Detailed questionnaire has also been annexed at the end of the study as ***Annexure – I***.

10. Questionnaire Analysis & Findings

The analysis start with Section A that basically highlights the respondent's profile.

Education Classification of Sample

The education-wise status describes that only 2% of 320 respondents i.e. 7 claims to be post graduates while mostly have studied up to the level of higher secondary which is the mandatory criteria for being respondent to this survey. It describes the number and percentage against 5 segregated educational classifications. As much as 199 respondents have just studied higher secondary degree.

Monthly Household Economic Status

The analysis reveals as much as 189 households which is 59 percent falls into income group with more than Rs. 10,000 but under Rs. 15, 000 on per month basis. However the income here represents the total household income from all sources, and classifying these income sources might not be possible to study and neither is the purpose here. This is only for understanding of earning capacity of these households to highlight their living standards. Similarly, it presents the classification of expenditure for these households. As per the chart mostly households can be grouped between Rs. 2000 and Rs. 5000 category for monthly expenditure. This constitutes 62 percent of the sample.

As far as the yield concerns, mostly rural households are dependent on agriculture. However the present research is segregated as per selected projects like for example, agronet in Punjab which is completely different from animal husbandry project in Haryana. Hence results for yield will be different and state specific due to dissimilarity of projects. This item was included in questionnaire to cross-check if the respondents are citing these projects as contributing to their "source of income" or not. This relationship was important to verify whether the respondents relate themselves with the said projects or not.

Average Monthly Spending

With marketing communication available to locate nearby buyers or access to daily rate; the respondents now know where to sell their produce and for what rate. The mode of sales has eliminated the need for intermediary and approach to final buyer for their produce. Here *Section A* ends, and the summarization follows that mostly respondents have studied upto

higher secondary, with monthly income between Rs. 10000 to Rs. 15000, and comparatively monthly expenditure of Rs. 5000 to Rs. 7500. Next follows the analysis of *Sec B* that presents the analysis for the sources of information to the respondents. The most used source of information is Project office which represents 37 percent of the sample.

Sources of Information to Respondents

The category 'others' refers mostly is a mix of referral sources like relatives & friends, traditional media like leaflet distributions, radio and TV etc. Self-Help groups and NGO are also active source of information but in particular area like health and sanitation, as based on their presence in the area. However these are big source of social gathering for their social-based activities.

Mediums Used for Information

The break-up for most used information mediums that shows face to face discussions tops the list among other mediums with as much as 51 percent. These discussions however happen with whom is not clearly known. It is being concluded that discussions are initiated by village communities and project offices mostly. This is here the information gets disseminated further. The assistance from SHG/NGOs, government and corporate also augments the process in the form of educational demonstrations, awareness camps and specialized training drives in these areas. However the purpose of the research here is to understand the online environment better. To find out this, it is best to find out the reasons for poor internet awareness among the respondents.

Classification of Internet as Source of Information & Medium

Internet as information medium constitutes only 4 percent which is just 13 respondents which further has been analyzed using the pie-chart below. However these 13 respondents are those who acknowledged internet as 'information medium' but might not know how to operate.

Classification of All Respondents (=307 Sample)

Out of 13 respondents, only 1 respondent is confident about operating internet and does so on regular basis while as much as 23% or 9 respondents are just aware but can not operate internet on their own. If analyzed as 1 respondent out of 320 total the percentage will be 0.31 percent. Thus actual penetration of internet is even less than 1 percent for respondents where

the ICT-based projects have been implemented to communicate about markets, products, buyers and quality of yield with information on enhancing productivity.

Membership to Online Community Membership

However, addressing the same question to all the 320 minus 13 respondents i.e. 307 again to cross check, the following is revealed. As much as 66 percent which is 201 respondents of 307 sampled are not at all aware about the internet as source of information or medium. While 22 percent that is 69 respondents consented to be aware of internet but expressed inability to operate. Only 3 percent operate on regular basis while 9 percent are occasional user of internet for information. The analysis suggests that among 307 respondents, a total of 106 only are aware about internet as information source or medium. Hence out of 320, the figure will be 119 (106 + 13) respondents who know the term 'internet'. The rest part of the questionnaire is administered to these 119 respondents and the next question put forth was about respondents association with any online/internet-based membership. The result has been summarized in the table 8.

Information Exchange on Different Levels

It compares level at which information is exchanged by the respondents with help from the respective project office. 'Without-internet' and 'with-internet' both have been studied separately. 'Without-internet' option constituted of 320 respondents; while 'with-internet' option constituted of 119 respondents, who are aware about the internet. In without internet, it was reported that 94 respondents have village-level; 141 have state-level; 64 have national-level and 21 have global-level information access but without using the internet as information source. Similarly, in case of people who are aware of the internet or the online environment, it is found that 44 respondents have village-level; 23 have state-level; 33 have national-level and 19 have global-level access to information using the internet by self or through the project office to get the information.

Frequency & Intensity of Information Access

It discuss 38 percent that is 45 respondents out of total 119, agree that information access using the internet environment of the project office is rapid and fast; but 29 percent which is 34 respondents, also admitted that information though available but frequently get delayed. The repercussion of the delay might affect their chances to get the desired urgent information like bids for their produce or the prevailing rate of the day for their produce. 14 percent which

is 17 respondents complained that no information is being made available to them from any project office. Challenges like slow pace of information or delay in making it available poses threat to productivity level of respondents.

Challenges in Accessing the Information from Project office

67 respondents that are 56 percent of total 119 internet-accessing respondents blame poor and inadequate infrastructural requirements for information inaccessibility at the project office. Second challenge is manpower related which 27 percent of respondents have quoted as unable to work with the technology which further has given birth to challenges of technology, as claimed by 8 percent respondents. Project costs are worth in crores hence cost related challenges are based on perception of the respondents based on the premise that project office conveys to them while discussing the plans to expand the project to other areas.

Complexity Issues in Information Access

Information accessibility has certain issues attached to it. For example, 57 respondents or 48 percent of 119 respondents believe accessing information through project office is a highly technical task for them. Then, 31 percent feel there is too much of hardware complexity involved in operating computers to access the information. It is also not clear very much that the information thus obtained will be useful to the respondents. Infact 18 percent say that the information can not be used in their context or is not significant for re-use.

Infrastructural Bottlenecks

The most rated challenge was related to the infrastructure requirements to improve the information access by the respondents. This included electricity, telephony, and the computer itself. Electricity is reported to be affecting the most as per to 43 percent respondents out of 119 who are aware and use online environment. Second is fixed line telephony (technically, it is broadband) which as much as 28 respondents find problematic when connecting to the internet. Location is also a constraint as 13 percent respondents agree; but more than that, it is the ratio of computer to people that needs the improvement the most. Almost 16 percent respondents call this infrastructural bottleneck.

Analysis of Internet-Based Interaction

The human (320 respondents) versus internet-based (119 respondents) interactions, for human level interaction, it is mainly the local discussions which constitutes 50 percent or 162

respondents, while in an online environment, it is the specialized online resource forwarded to them by the project office through workshops or lecture sessions, quoted by 61 percent or 73 respondents.

Analysis of Resource-based Information for Decision-Making

56 percent or 68 respondents from 119, say that information on resources for decision-making is usually made available in a less than day's time, assuming on an average some 4-5 number of people requires to find out different information. Normally, the cause of concern is same or related and hence only 4 or 5 questions qualify for the information.

Language-based Information Accessibility & Information Type & Quality

The research further assesses the language of information resource and its quality and type as perceived by the respondents. Hindi remains the most preferred communication language with 78 percent or 93 respondents voting it as most accessible information source. English still is way below to be used as communication language. Good information is available with aptly supported recommendations as quoted by 62 percent or 74 respondents. However, very good information availability is quoted by 27 percent or 32 respondents. These are presented below.

From the above information, it can be concluded that most preferred communication language is Hindi only, and least preferred is English, and that very minuscule percent of respondents feel that quality of information is poor.

Analysis of Online with Offline Communication in terms of Costs/Margins

Respondents with online environment experience believe that internet as an information source for their yield has saved them costs and helped in boosting margins for their yield. Out of 119 respondents who are aware of internet, 6 respondents believe that internet (as information source) has helped them in saving costs and getting higher margins of upto 30 percent. While highest number i.e. 64 respondents claim that it has saved them costs besides giving them 10 percent higher margins. Last but not the least, 39 respondents have reported that internet has helped them in saving cost and margins between 3 to 5 percent. And only 10 respondents have reported that internet as a medium of communication have not saved them costs or added any value to their margins.

For offline respondents (total 320), 176 respondents have reported that internet as information medium has saved them costs and improved their margins between 3 to 5 percent. While 21 respondents reported that it has saved them costs with 30 percent more margins on their yield; a larger respondent base of 102 have admitted to saving costs and with moderate margins of upto 10 percent on their total yield. This proves internet as source of information has added to respondent productivity in terms of saving their costs and improving margins on their yield.

Section C explores the benefits of online format further in the table 1.

Table 1: Percentage Scores for Online Respondents

SEC C: Total 119 Respondents	**STRONG (=3 Marks)**	**MEDIUM (=2 Marks)**	**WEAK (=1 Marks)**
1. Online format improves the quality of decisions:	53	46	20
2. Online format reduces the transaction costs:	50	61	8
3. Online format is an easy to use information and communication resource:	44	69	6
4. Online format provides instant access to large volume of information:	39	68	12
5. Online format helps locate and connects to a buyer:	34	77	8
6. Online format makes the information sharing easy:	38	69	12
7. Online format gives the expert advice:	59	52	8
8. Online format readily makes useful information available as and when desired:	62	52	5
9. Online format lets prompt discussion on issues pertaining:	67	44	8
10. Online format makes aware on product-market situation:	45	72	2
11. Online format allows for product placements and locating medium for promotions electronically:	45	57	17
TOTAL:	**536**	**667**	**106**
SCORE OBTAINED:	**1608**	**1334**	**106**
TOTAL SCORE POSSIBLE:	3927	2618	1309
PERCENTAGE	**40.95**	**50.95**	**8.10**

Table 1 presents the summary of internet-aware &/or user 119 respondents of the total 320 respondents. Based on the 11 statements above, the scores of the respondents can be presented as 41, 51 and 8 percent against *Strong, Medium and Weak* respectively. These statements and scores against the classification described as strong, medium and weak depict the respondent's score overall for the statements. 41 percent of respondents 'Strongly' believe the usefulness of internet as information source and a great communication source. However 51 percent respondents which are more than half of the respondents perceive online environment on an average (Medium) as contributing positively to their information-based needs for decision-making or in directly enhancing the productivity.

11. Concluding Observations

Respondents are mostly engaged in face-to-face discussions with the representative of project offices and there is low internet-based information penetration. Only 119 respondents have claimed to be aware of internet or have used it as medium for information through these project offices. Initially only 13 respondents confirmed, however after cross verification, it is found that there are as much as 119 respondents who have known about the internet or have used/seen as being used as information resource. While mostly respondents admitted of not being part of any online community; but have agreed that using internet through project offices, their level of information has moved beyond village level though mostly is at State-level.

Using internet the village level interaction has been further augmented. Most of the respondents agree that intensity and frequency of information through internet is rapid and fast, and that it is made available in majority of cases in one working day's time to make use of most of it in prompt decision-making. However not without challenges, most respondents supported the need for better infrastructural requirements to support online environment, electricity being the most crucial followed by broadband based fixed telephony. Contrary the respondents also agreed that the process of retrieving information through internet is "too technical". In non-internet case, majority of respondents reported that the source of information and its dissemination takes place mostly through local discussions among the village communities, followed by lectures or workshops organized by the project office. However for internet-aware respondents, the internet-based interaction mostly takes place

using specialized online resource centre made available by project office, followed by websites, and webinars/podcasts.

The major language in use for communication is Hindi, and usually good quality of information is available with aptly supported data or recommendations to the respondents. The comparison between online and offline communication in terms of impact on saving costs and boosting margins (for their yield) revealed that for offline, project offices using the traditional communication has helped in saving costs and improving margins by 3 to 5 percent. The same in case of internet-aware respondents is moderate cost savings upto 10 percent of more margins on their yield. This proves internet or e-IMC has an effective and better edge over traditional communication channel for being rapid and fast enough to make information available the same day on issues related to productivity. This is evident in the scores obtained from 119 respondents to understand the percentage contribution of online environment in enhancing their productivity and thus the incomes. 41 percent strongly supported the use of internet while 61 percent found its use satisfactory in enhancing their margins and saving costs, thus improving incomes. Only 8 percent found no contribution of internet based information format in enhancing their standard of living which is very miniscule percentage.

The research thus proves the use of internet-based communication or electronic integration of respondents through project offices for information on their yield or managing the costs.

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