

## Study of M-commerce and its Usability Factor with respect to Transaction and Entertainment in the Four Age Groups

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### Abstract

*Mobile Commerce is any transaction, involving the transfer of ownership or rights to use goods and services, which is initiated and/or completed by using mobile access to computer-mediated networks with the help of an electronic device. Mobile phones have a higher penetration rate than the Internet in India and majority of the population are ready to embrace m-commerce in a big way. Through this paper four very important aspects of M-commerce are studied and an exploratory research is conducted across various age groups through a questionnaire. This research brings to light the major findings related to these four important factors of M-commerce and helps the marketers an insight into the consumers needs. Recommendations findings of the research are listed which focuses on these factors.*

**Key words:** M-commerce, communication, transaction,

Today's communications market is moving quickly toward the promise of communications, commerce, and content available anytime, anywhere, and on any

device. Service providers are no longer simply network operators, but are evolving to become providers of rich, interactive media, productivity services, and retail experiences. Consumer expectations have also evolved to where the term wireless no longer implies just voice service, but rather represents a complex infrastructure to which one connects—in real time, from any place—to be informed, entertained, or engaged in visual or audio communication, or to buy goods and services. The constant exchange of value among the multitude of constituents is the pulse of this infrastructure, the underlying and measurable component of which is wireless commerce. This suggests that service providers are not only challenged with a need to quickly deploy new services, but also to measure and account for those services while honoring a new ecosystem comprised of diverse stakeholders and new and complex value chains.

This rapid evolution of the mobile market is causing service providers to seek back-office solutions that will allow them to become participants in, and enablers of, this new ecosystem without compromising their current services or support of existing subscribers. Those back office systems that

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most directly impact the subscriber experience are, in fact, the ones that have the greatest influence on a service provider’s success or failure. To be successful, service providers must build a flexible and integrated wireless commerce back-end that can be delivered with a subscriber-centric framework. The back-end must support the rapid deployment of new services, while the subscriber-centric framework ensures a high-quality, integrated, and consistent user experience carried through systems including billing, customer care, prepaid, roaming, clearing, and self-care services.

**Statements of problem**

Analyzing the four factors namely “Mobile Commerce: Usability- transaction and entertainment among the four age groups 20-30, 30-40, 40-50 and 50-60”

**Scope of study**

- It will help in analyzing the factors that drive people in accepting mobile commerce as the means of transaction.
- It will also facilitate the telecom companies in making m-commerce more favorable and user-friendly.
- People’s need can be addressed in a better way, as their need and

requirements will be clearly analyzed.

**Objectives of the research**

Finding people’s perception on the following factors

- Usability: Transaction, Entertainment

**Hypothesis**

- Ho1: Usability of M-Commerce for transaction purpose is equal among four age groups.
- Ha1: Usability of M-Commerce for transaction purpose is not equal among four age groups.
- Ho2: Usability of M-Commerce for entertainment purpose is equal among 4 age groups.
- Ha2: Usability of M-Commerce for entertainment purpose is not equal among 4 age groups.

**ANOVA is use for analysis purpose.**

**Statement of the Problem**

**People’s perception on M-Commerce Usability and Adaptability is studied**

**Respondents Profile:**

Age	Gender		Occupation			Professional Qualification	
	Male	Female	Students	Working	Home maker	Educated	Not educated
20-30	6	4	10	-	-	10	-
30-40	7	5	-	8	4	12	-
40-50	7	3	-	10	-	10	-
50-60	8	2	-	8	2	8	2
Total	28	14					

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Total number of respondents	42
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### Transaction

Mostly Used Service	Daily Use	Satisfaction level	Opinion about expensiveness of service	Factors for adopting service	Factors Restricting to adopt other Services
1.Ticket Purchase	1-25 26-50 51-75 76-100 >100	a)Highly satisfied, b)Satisfied, <b>c)Neutral,</b> d)Dissatisfied, e)Highly Dissatisfied	a)Highly expensive, <b>b)Expensive,</b> c)Neutral, d)Cheap, e)Very cheap	a)None, <b>b)Brand image,</b> c)Free trial, d)Discount , e)Low cost, f)Incentive, g)Interest, h)Family friends recommendation	a)None, b)Customer knowledge, c)Pricing, d)Technology, <b>e)Community usage,</b> f)Security challenge, g)Customer trust
2.Small Payment	1-25	Neutral	Neutral	Free trial	Customer trust
3.Banking Services	1-25	Neutral	Neutral	Discount	Security challenge

Table 1. source: Primary Data

### Entertainment

Mostly Used Service	Daily Use	Satisfaction level	Opinion about expensiveness of service	Factors for adopting service	Factors Restricting to adopt other Services
1.Download Games	1-25 <b>26-50</b> 51-75 76-100 >100	a)Highly satisfied, <b>b)Satisfied,</b> c)Neutral, d)Dissatisfied, e)Highly Dissatisfied	a)Highly expensive, b)Expensive, c) <b>Neutral,</b> d)Cheap, e)Very cheap	a)None, b)Brand image, c)Free trial, d)Discount , e)Low cost, f)Incentive, <b>g)Interest,</b> h)Family friends recommendation	a)None, b)Customer knowledge, <b>c)Pricing,</b> d)Technology, e)Community usage, f)Security challenge, g)Customer trust
2.Download Ringtones	1-25	Satisfied	Expensive	Free trial	None
3.Download Wallpapers	1-25	Neutral	Neutral	Low cost	None
4.Download Screen Savers	1-25	Dissatisfied	Neutral	Family friends recommendation	None

Table 2 source: Primary Data

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Age group-: 30-40

**Transaction**

Mostly Used Service	Daily Use	Satisfaction level	Opinion about expensiveness of service	Factors for adopting service	Factors Restricting to adopt other Services
1.Ticket Purchase	1-25 26-50 51-75 76-100 >100	a)Highly satisfied, <b>b)Satisfied</b> , c)Neutral, d)Dissatisfied, e)Highly Dissatisfied	a)Highly expensive, b)Expensive, <b>c)Neutral</b> , d)Cheap, e)Very cheap	a)None, b)Brand image, c)Free trial, d)Discount , <b>e)Low cost</b> , f)Incentive, g)Interest, h)Family friends recommendation	a)None, b)Customer knowledge, c)Pricing, <b>d)Technology</b> , e)Community usage, f)Security challenge, g)Customer trust
2.Small Payment	26-50	Satisfied	Expensive	Discount	Security challenge
3.Banking Services	1-25	Neutral	Neutral	Free trial	Security challenge

Table 3 source: Primary Data

**Entertainment**

Mostly Used Service	Daily Use	Satisfaction level	Opinion about expensiveness of service	Factors for adopting service	Factors Restricting to adopt other Services
1.Download Games	1-25 26-50 51-75 76-100 >100	a)Highly satisfied, <b>b)Satisfied</b> , c)Neutral, d)Dissatisfied, e)Highly Dissatisfied	a)Highly expensive, <b>b)Expensive</b> , c)Neutral, d)Cheap, e)Very cheap	a)None, b)Brand image, c)Free trial, <b>d)Discount</b> , e)Low cost, f)Incentive, g)Interest, h)Family friends recommendation	a)None, <b>b)Customer knowledge</b> , c)Pricing, d)Technology, e)Community usage, f)Security challenge, g)Customer trust
2.Download Ringtones	1-25	Neutral	Neutral	Low cost	Security challenge
3.Download Wallpapers	1-25	Neutral	Neutral	Family friends recommendation	Pricing
4.Download Screen Savers	1-25	Neutral	Neutral	Family friends recommendation	Pricing

Table 4 source: Primary Data

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Age group:- 40-50

### Transaction

Mostly Used Service	Daily Use	Satisfaction level	Opinion about expensiveness of service	Factors for adopting service	Factors Restricting to adopt other Services
1.Ticket Purchase	1-25 <b>26-50</b> 51-75 76-100 >100	a)Highly satisfied, <b>b)Satisfied,</b> c)Neutral, d)Dissatisfied, e)Highly Dissatisfied	a)Highly expensive, b)Expensive, <b>c)Neutral,</b> d)Cheap, e)Very cheap	a)None, b)Brand image, c)Free trial, d)Discount , <b>e)Low cost,</b> f)Incentive, g)Interest, h)Family friends recommendation	a)None, <b>b)Customer knowledge,</b> c)Pricing, d)Technology, e)Community usage, f)Security challenge, g)Customer trust
2.Small Payment	1-25	Neutral	Expensive	Family friend recommendation	Security challenge
3.Banking Services	1-25	Satisfied	Expensive	Family friend recommendation	Customer trust

Table 5 source: Primary Data

### Entertainment

Mostly Used Service	Daily Use	Satisfaction level	Opinion about expensiveness of service	Factors for adopting service	Factors Restricting to adopt other Services
1.Download Games	<b>1-25</b> 26-50 51-75 76-100 >100	a)Highly satisfied, b)Satisfied, <b>c)Neutral,</b> d)Dissatisfied, e)Highly Dissatisfied	a)Highly expensive, b)Expensive, <b>c)Neutral,</b> d)Cheap, e)Very cheap	a)None, b)Brand image, c)Free trial, d)Discount , <b>e)Low cost,</b> f)Incentive, g)Interest, h)Family friends recommendation	a)None, b)Customer knowledge, c)Pricing, d)Technology, e)Community usage, <b>f)Security challenge,</b> g)Customer trust
2.Download Ringtones	1-25	Neutral	Neutral	None	Customer knowledge
3.Download Wallpapers	1-25	Neutral	Neutral	c)Free trial	Pricing
4.Download Screen Savers	1-25	Neutral	Neutral	Discount	Pricing

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Table 6 source: Primary Data

Age group -: 50-60

**Transaction**

Mostly Used Service	Daily Use	Satisfaction level	Opinion about expensiveness of service	Factors for adopting service	Factors Restricting to adopt other Services
1.Ticket Purchase	1-25 26-50 51-75 76-100 >100	a)Highly satisfied, b)Satisfied, <b>c)Neutral,</b> d)Dissatisfied, e)Highly Dissatisfied	<b>a)Highly expensive,</b> b)Expensive, c)Neutral, d)Cheap, e)Very cheap	a)None, b)Brand image, c)Free trial, d)Discount , e)Low cost, f)Incentive, g)Interest, <b>h)Family friends recommendation</b>	a)None, b)Customer knowledge, c)Pricing, <b>d)Technology,</b> e)Community usage, f)Security challenge, g)Customer trust
2.Small Payment	1-25	Neutral	Expensive	Low cost	Security challenge
3.Banking Services	1-25	Neutral	Neutral	Low cost	Customer knowledge

Table 7 source: Primary Data

**Entertainment**

Mostly Used Service	Daily Use	Satisfaction level	Opinion about expensiveness of service	Factors for adopting service	Factors Restricting to adopt other Services
1.Download Games	1-25 26-50 51-75 76-100 >100	a)Highly satisfied, b)Satisfied, <b>c)Neutral,</b> d)Dissatisfied, e)Highly Dissatisfied	a)Highly expensive, <b>b)Expensive,</b> c)Neutral, d)Cheap, e)Very cheap	a)None, b)Brand image, c)Free trial, d)Discount , e)Low cost, f)Incentive, g)Interest, <b>h)Family friends recommendation</b>	a)None, b)Customer knowledge, c)Pricing, d)Technology, e)Community usage, <b>f)Security challenge,</b> g)Customer trust
2.Download Ringtones	1-25	Neutral	Expensive	Family friend recommendation	Customer trust
3.Download Wallpapers	1-25	Neutral	Expensive	Family friend recommendation	Customer knowledge
4.Download Screen Savers	1-25	Neutral	Expensive	Family friend recommendation	Customer knowledge

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Table 8 source: Primary Data

The responses were put into a proper tabular form and ANOVA was used for analyzing the factors w.r.t age groups.

Analysis of variance – F test for the four factors

**Usability:**

**1. Transaction**

Age group/ Likert scale	20-30	30-40	40-50	50-60
1	0	1	2	3
2	1	0	1	2
3	2	3	3	0
4	4	6	3	3
5	3	2	1	2

**Hypothesis**

**Ho1: Usability of M-Commerce for transaction purpose is equal among four age groups.**

**Ha1: Usability of M-Commerce for transaction purpose is not equal among four age groups.**

**ANOVA Table**

Source of variance	Sum of square	D.F	Mean square
<b>Between</b>	0.6	3	0.2
<b>Within</b>	53.9	16	3.37

$F = \text{Variance between samples} / \text{Variance within samples} = 0.2/3.37 = 0.593$

For  $v_1=3$  and  $v_2 =16$  Table value of F at 5% level of significance = 3.24

The calculated value of F is less than the table value and hence the difference in the mean value of the is not significant i.e. hypothesis is accepted.

**2. Entertainment**

Age group/ Likert scale	20-30	30-40	40-50	50-60
1	1	2	3	3
2	3	2	0	4
3	4	0	3	1

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4	2	5	2	1
5	0	3	1	1

### Hypothesis

**Ho2: Usability of M-Commerce for entertainment purpose is equal among 4 age groups.**

**Ha2: Usability of M-Commerce for entertainment purpose is not equal among 4 age groups.**

### ANOVA Table

Source of variance	Sum of square	D.F	Mean square
Between	0.6	3	0.2
Within	40.3	16	2.518

$F = \frac{\text{Variance between samples}}{\text{Variance within samples}} = 0.079$

For  $v_1=3$  and  $v_2 =16$  Table value of F at 5% level of significance = 3.24

The calculated value of F is less than the table value and hence the difference in the mean value of the is not significant i.e. hypothesis is accepted.

### Summary of Findings

Findings from the analysis:

- 1) Usability of M-Commerce for transaction purpose is equal among four age groups.
- 2) Usability of M-Commerce for entertainment purpose is equal among four age groups.
- 3) Since 13 out of 40 respondents have shown a neutral response regarding leaning to use M-Commerce i.e. almost 14% of them. But there is an

almost equal numbers which have shown interest and have agreed that they are very much keen on learning to use M-Commerce and that number stands at 11 out of 40 i.e. 28%.

- a. Hence it shows that people are divided over the fact that people want to learn to use M- commerce or not.
- 4) Since 17 respondents have expressed that they are neutral regarding the fact that it is safe to make purchases using M-Commerce also 12 respondents out of 40 have agreed that it's not safe to make purchase using M-Commerce. Hence we conclude that that majority of the respondents that is almost 43% are neutral, however a minority of them i.e. 8% strongly disagrees with this and they are not in favor of making purchases through M-Commerce.

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The mobile service providers hence need to make sure that they keep the views of these respondents also

## Conclusion

The major limitations of m-commerce, as viewed today, are small screens on wireless devices, limited processing power, modest memory, restricted power consumption, poor voice quality, low-speed data transmission, non-ubiquitous coverage, unproven security, scarce bandwidth, and possible health hazards.

## Suggestions

- Telephone companies can either fund startups or offer project specific funding assistance.
- Promote content bundled along with the connectivity, thereby extending the market for content to include even non-connected users
- With electricity continuing to be a pressing challenge in many parts of rural India, mobile forms the ideal device to access the common man living in the remote villages of India.
- The entire gamut of banking services is yet to be offered on the mobile phone, which will significantly fuel the growth and success of m-commerce in India.
- While most banks are yet to develop their m-payment gateway, the need for a robust m-payment gateway on the lines of the e-payment gateway.
- Banks must also come forward and take a bold step towards reducing the

cost of transactions on mobile phones.

- Industry players need to come together to establish industry standards for m-commerce transactions and as 'opinion builders', media has a well defined role to play.
- In creating the curiosity and confidence in the mindsets of the consumers to trial and experience so that m-commerce becomes a 'cannot do without it' or 'must have' service.
- The government should also consider, extending financial support to application developers, easing the tax laws for service providers engaged in m-commerce and offering special tax rates for m-commerce transactions.
- **Advertisers need a mobile-friendly site** - Of people who react to seeing a mobile ad: 42 percent click on the mobile ad; 35 percent visit the advertiser's site; 32 percent search for more information on their phone; 49 percent make a purchase and 27 percent call the business.
- 71 percent of Smartphone users that see TV, press or online ad, do a mobile search for more information

## References

Ahlström, P., M. Berg and A. Winberg (2002). Stationary Mobility: Designing for Train Travellers. Proceedings of the 25th Information Systems Research Seminar in Scandinavia (IRIS 25).

K. Bødker, M. K. Pedersen, J. Nørbjerg, J. Simonsen and M. T. Vendelø, Bautahøj, Denmark, August, IRIS Association.

Alphonse, J. (2004). Re-creating the Norwegian Model for Selling Mobile Content in Malaysia. Proceedings of the 27th Conference on Information Systems Research Seminar in Scandinavia (IRIS). P. Flensburg and C. Ihlström, Falkenberg, Sweden, August 14-17, IRIS Association.

Andersson, M., Y. Wridell and Y. Lindgren (2004). A Qualitative Interview Study Investigating the Role of Transport Information Systems in Road Haulage Firms.

#### **Journals**

Proceedings of the 27th Information Systems Research Seminar in Scandinavia (IRIS 27), 105-122. P. Flensburg and C. Ihlström, Falkenberg, Sweden, August 14-17, IRIS Association.

Andreasson, N., J. Axelsson and J. Kuschel (2002). Sharing of mobile tools: An ethnographic workplace study in a car repair shop.

#### **Websites and Links**

[http://www.gs1.org/docs/mobile/GS1\\_Mobile\\_Com\\_Whitepaper](http://www.gs1.org/docs/mobile/GS1_Mobile_Com_Whitepaper), viewed on 06/04/2012

<ftp://ftp.cordis.europa.eu/pub/ist/docs/3g-rz-mob-action-may29.pdf>, viewed on 18/04/2012

<http://www.hipc.org/hipc2003/HiPC03Posters/m-commerce>, viewed on 04/05/2012

[http://en.wikipedia.org/wiki/Mobile\\_commerce](http://en.wikipedia.org/wiki/Mobile_commerce), viewed on 12/05/2012

<http://seminarprojects.com/tag/m-commerce-pdf>, viewed on 20/05/2012

<http://www.verisign.com/in/static/037241.pdf>, viewed on 26/05/2012

<http://www.isg.rhul.ac.uk/~scarlet/documents/Secure%20m-commerce%20ECEJ.pdf>, viewed on 28/05/2012

<http://www.authorstream.com/Presentation/CellStrat-749488-mobile-commerce>, viewed on 29/05/2012