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Perceptions About Electronic Money as Transaction Payment

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Introduction

Electronic Commerce (E-commerce) is the sharing of business information, maintaining business relationships, and conducting business transactions by means of telecommunications networks (Zwass, 1996). The focus of this study is "conducting business transactions" by means of telecommunications networks. More specifically, we are investigating perceptions related to the development of electronic money (E-money) which is expected to substitute for credit and debit instruments (Levy, 1997).

Since e-money is an enabling service whose purpose is to aid consumers in conducting transactions (Zwass, 1996). Some issues related to conducting transactions with e-money need to be addressed before this practice will become widespread.

Security and Reliability. Since originally the Internet was designed for research and not commerce, much of the system is built on trust. This makes the issue of transaction security paramount to both consumers and providers (Bhimani, 1996; Borenstein, 1996). Realizing the importance of this issue, MasterCard and Visa have been working together to develop a single standard to aid in secure e-commerce called Secure Electronic Transactions (SET) (Loeb, 1996). Since no one actually controls, manages, or has authority over the Internet, the reliability of the system, while ever improving, can still be questionable (Pyle, 1996).

Flexibility and Convenience. Each of us has our own ideas about what it means to conduct flexible and/or convenient transactions. For some it is anonymity, being able to conduct transactions which cannot latter be traced back to them. For others it is liquidity, the acceptance of a particular payment form by all or most of the agents of an economy. For others it includes speed and time savings (Panaruch, 1996). While it is difficult to develop a universal definition of flexibility and convenience that fits all consumers, it is an important transactional concept which warrants investigation.

Proposition #1: There are significant difference in perceptions about the: (1) form; (2) convenience; (3) flexibility; (4) reliability; and (5) security of electronic money based on: (1) familiarity with the Internet; (2) percentage of money spent on luxuries; and (3) past money transactions over the Internet.

Methodology

Sample. For this study, a sample of undergraduate students from a public university in the Midwestern United States. Specifically, a questionnaire was administered to students enrolled in a lower division undergraduate information systems course. This group was considered to more accurately represent the views and perceptions of the general public than upper division students or IS majors, yet have enough understanding of the concepts involved to be able to respond to the items on the questionnaire.

The Instrument. A 23 item questionnaire was developed to collect perceptions about concepts related to electronic commerce and electronic money. In addition, six demographical items were added to the questionnaire to aid in analysis.

Results

Respondents. Ninety-five usable responses were collected from the undergraduate students. Of these respondents, 72 percent were between 19 and 24 years old; 49 percent had annual income of less than

\$10,000; 55 percent were male and 45 percent female; 87 percent were single, and 93 percent had no children. The respondents were found to spend between zero and 45 hours on the Internet each week, with the average being 7.25 hours.

Hypothesis #1a: Table 1 shows that of the respondents, eleven had purchased goods or services over the Internet in the past. At a level of significance less (0.05), these eleven perceived electronic money to be more like using a money order and less like using a credit card, then those respondents who had not purchased goods or services over the Internet.

Hypothesis #1b: Table 2 shows that respondents consider e-money to be less secure than a personal check or cash and about as secure as a credit card. E-money is considered less reliable, less flexible and less convenient than cash, a personal check or a credit card.

Hypothesis #1c: Table 3 shows that respondents who spent more than 25 percent of their money on luxuries perceive electronic money to be significantly more convenient and significantly more flexible than those who spend less than 25 percent of their money on luxuries.

Conclusion

Overall, it would appear that we still have along way to go in both educating the consumer and providing goods and services which encourage use of the Internet for conducting business transactions.

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Additional Tables available upon request from the first author

TABLE 1

QUESTION:

Electronic Money is similar to:

	n=81	n=11	P-VALUE
an automatic withdraw	4.81	4.55	0.6210
using the barter system.	2.60	2.82	0.6565
using cash	4.09	3.91	0.7636
using a credit card.**	4.89	3.73	0.0369
using direct deposit.	4.59	5.18	0.2722
using a money order.**	3.63	4.82	0.0243
using a personal check.	4.35	4.45	0.8520
using travelers' checks.	3.67	4.45	0.1497
wiring money.	4.65	5.18	0.3311

TABLE 3:

QUESTION	n=47	n=47	P-VALUE
	< 25%	≥ 25%	
Using cash is convenient.	5.81	5.68	0.6605
Using cash is flexible.	5.75	5.34	0.1427
Using cash is reliable.	5.57	5.36	0.5643
Using cash is secure.	4.55	4.57	0.9775
Using a credit card is convenient.	6.27	5.87	0.1873
Using a credit card is flexible.	5.68	4.79	0.0020
Using a credit card is reliable.	5.11	4.53	0.0855
Using a credit card is secure.	4.21	3.87	0.3794
Using electronic money is convenient.	5.17	4.46	0.0311
Using electronic money is flexible.**	4.89	4.24	0.0363
Using electronic money is reliable.	4.41	4.15	0.3748
Using electronic money is secure.	4.22	3.96	0.4233
Using a personal check is convenient.	5.47	4.96	0.1620
Using a personal check is flexible.	4.98	4.66	0.3499
Using a personal check is reliable.	4.96	4.38	0.1183
Using a personal check is secure.	4.91	4.40	0.1585

* P < 0.1 ** P < 0.05 *** P < 0.01

Note: Mean scores represent the average measured on a seven point self anchoring scale (interval scale 1-7 : 1 = Strongly Disagree and 7 = Strongly Agree).