

THE TRENDS AND CHALLENGES OF A CASHLESS SOCIETY

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ABSTRACT

Advancement in Information technology over the past decades has opened new trends toward what is called a cashless society, which involve elimination of physical cash as a medium of transaction with its substitution with electronic payment system. This paper takes a look at the various technological advancements toward this technological trend and the challenges ahead. It also focuses on its implication on the global economy and the various opposition faced by its introduction and to what extent will legitimate economic, sovereignty and privacy concerns be satisfied?

INTRODUCTION

The idea of a cashless society or simply put a “world without money” has been around for decades even as far back as 1960s in some developed nations. The cashless society now envisioned goes beyond what was initially put in place. It would involve a digital system of currency where people can exchange credits and debits by computer "just as they would pass any bill from one wallet to another,”

The era of paper money and coinage is rapidly drawing to a close and the new age of a cashless society is dawning. It is argued that if modern electronic credit and debit cards can be substituted for cash, then every financial transaction of ones life can be catalogued and stored for future reference and those with the power to cut off ones access to electronic money can strangle one in a heartbeat. (*The McAlvany Intelligence Advisor*, 1991)

Some key questions to consider are

- i would a world without money work in favor of international bureaucrats who want to "make it easier for government to collect taxes” to get their hands on ones money despite the wishes of Congress?
- ii Will this system makes it easier for someone to plunder ones bank account?

FORMS OF NON-CASH PAYMENTS

Certainly the elimination of cash transactions is fast becoming technically feasible. Many electronic and other non- cash payments means are already in use. These include the smart card, Credit cards, debit cards, prepayment cards etc, each of these will be considered as follows.

PREPAYMENT CARDS.

Prepayment cards store value on magnetic, electronic, or optical media, often in appearance much like a credit card. When used, e.g. in a pay phone, the accepting device erases the proper portion of the value. Prepayment cards have substantial use in Japan. There use is also rather wide spread in Europe,

but not in the United States (Reynolds G. 19994). Some are being used on college campuses and are also being used for long-distance phone calls.

SMART MONEY CARDS

These devices contain a secure microchip which indicates how much money is present on the card. A personal identification number (PIN) is required to make transactions with the card--also circumventing robbery. Smart card is a small plastic card containing a microchip that can store personal data. While large purchases have been the domain of credit cards, small purchases are targeted by smartcard or stored-value card.

Store-value cards have a microchip embedded in them that allows the cards to 'load' money at a bank machine and dispense it through a retailer's equipment at the point of sale. The goal is to get people to use the new cards for purchases such as fast food, bridge or mass transit tolls

Smart cards are in a sense an extension of the prepayment cards. Like the prepayment cards, they can store value for future use, but they also include an internal microchip based processing capability. Smart cards have been little used in the United States, but are common in Europe.

The significant disadvantages are; First, they require you remember another PIN (using your bank PIN for smart card PIN is not a good idea). Next, they take up additional space in a wallet (or purse). Next, there is no standard for them. One can only use smart money cards at compatible smart money machines.

CREDIT CARDS

A Wall Street Journal article (Lipin Steven, 1993) described the credit card business as "a saturated market". It is not strictly a payment means, but a promise of deferred payment. Credit cards originated in the United States in the 1930s; their use was widespread by the 1950s. They are issued by many businesses serving the consumer, such as oil companies, retail stores and chain stores, restaurants, hotels, airlines, car rental agencies and banks. Some credit cards are honored in a single store, but others are general-purpose cards, for use in a wide variety of establishments. Bank credit cards, now also in use in Europe, are examples of the general-purpose card. Establishments dispensing almost every form of product or service are honoring such cards, and it is predicted that credit cards might some day eliminate the need for carrying cash.

When a credit card is used, the retailer records the name and account number of the purchaser and the amount of the sale, and forwards this record to the credit card billing office. At intervals, usually monthly, the billing office sends a statement to the cardholder listing all the charged purchases and requesting payment immediately or in installments. The billing office reimburses the retailer directly.

DEBIT CARDS

Debit cards allow one to pay "virtual cash" directly from the current balance of a bank account (usually chequing or savings) to the retailer in question. The bank usually charges a slight fee for the transaction, however most banks offer unlimited free transactions for a flat monthly fee. Once you have confirmed the purchase price and entered your PIN on a numeric keypad, magically you lose money and the retailer gains money, with no physical coins or notes exchanging hands.

Debit cards have been available for years. They represent a true payment means since the amount of the purchase is taken from an account belonging to the customer.

BIOLOGICAL PIN

This involves the coupling of voice recognition and retinal imaging to complete a secure and seamless means of identification.

Voice recognition is a proven technology, and has been around for many years. This is the ability for a machine to "listen" to the sound of one voice and make sure it matches things said earlier (while banking in person, for example). No two humans share exactly the same voice. Even people who can professionally imitate the voices of others cannot fool voice recognition machines.

Retinal scanning is fairly new, however the technology present as of the year 2000 can accurately scan the retina from a distance between three and five feet. A computer cannot be tricked into thinking a photograph of your eyeball is you because the photograph isn't alive. The computer can detect the motion of blood through the eye's vessels, the slight contraction and expansion of the pupil, all in a fraction of a second.

So, instead of carrying around a debit card, you can simply carry around your eyes and your voice. Even if your wallet is stolen, you'll still have immediate access to your funds. When you go through the check-out aisle at the grocery store, you'll no longer have to figure out which way the debit card should face before you swipe. You simply verbally declare from which account the payment will be withdrawn. Looked at from the aspect of "time is money", so it saves time which would have otherwise spent in keying in PINs as obtained in the other methods.

AUTOMATIC BANKING MACHINES

These are electronic machines in public places that enable users to conduct cash withdrawals and other banking transactions.

IMPLANTS

Possibly the most frightening aspect of the movement toward a cashless society is the emergence of technology that would allow a microchip to be placed in the human hand that would identify every human being on the planet and allow them to buy and sell without coins

Paper or a card.

One expert on this new "biochip" technology charged that the U.S. government will introduce a national I.D. card, supposedly to end illegal immigration that will extend into commercial activity. This card will be the last step before the government will move to place a biochip in the right hand of every American.(Terry Cook,2000).

BENEFITS OF ELECTRONIC CASH

- It makes cash and credit management far easier to control as it reduces the need for banks and governments to concern themselves with the whereabouts of all the millions of bits of paper and metal that we can all currently freely exchange, without having to be accountable to anyone for it.
- It also removes the need to worry about counterfeit money, cash transactions that avoid tax, and any transactions that could be vaguely considered 'illegal' under the plethora of ever-increasing laws over which mere citizens have almost no control. In Canada, in the year 2000, roughly \$3.7 million was found in circulated counterfeit notes. A high of just over \$5.1 million in counterfeit notes were found in circulation in 1998. Even in Nigeria there have been proliferation of the market with counterfeit notes which the government is still waging war against.
- Another benefit of no physical money is robbery rates would decline rather sharply. Granted, people could still be robbed for jewelry, but that's probably a significantly lower form of robbery than for cash. This in turn means people will still have more money (since they won't need to spend as much in personal defense and can't be robbed of what they carry).
- The immediate benefits would be profound and fundamental. Theft of cash would become impossible. Bank robberies and cash-register robberies would simply cease to occur (Warwick, D.R., 1992)].

Not all proponents are as ecstatic about the benefits as that author. However, regardless of the advantages (or disadvantages), some observers think "it is only a matter of time before the cashless society arrives." (Read R.J, 1989). Others, though, describe the elimination of coins and currency any time soon as "a myth"(Harrop Peter, 1989)

CHALLENGES IN A CASHLESS SOCIETY

ECONOMIC HURDLES

Economic hurdles may limit the development of systems, which are technically feasible. The cost of paper handling and getting authorizations accompanying the acceptance of credit and debit cards has been such a barrier in the past, especially for moderate size transactions. The development of low cost point of sale terminals has been eliminating the need for this paper handling since it makes possible the exclusively electronic handling of the transaction. (Davies Jarvis, 2000) This has resulted in more than a 90% reduction in the cost of an average credit authorization over the past decade. The cost of

handling transactions electronically is approaching the level that makes even relatively small purchases with electronic payment means feasible. Such non-paper exchanges can now have a cost advantage over checks.

CONSUMER RESISTANCE

Lack of consumer acceptance has retarded the spread of debit cards [9] and may also slow further advances in electronic payments means. The problem may partly have been the name "debit card". To offset this, MasterCard is calling its debit card a "cash card" and Visa its debit card a "check card"(Harrop Peter, 1989). Another obstacle is that for many consumers there is no net advantage to debit cards. There is an element of convenience over carrying cash or even a checkbook. However, the user loses the deferred payment feature inherent in credit cards and assumes greater potential liability if the card is lost or stolen. Considering these factors, Consumer Reports advised: "People who pay off their credit-card balances every month will in most cases be better off with one of the many no-fee credit cards now available than with a debit card." (Michael J, 1996). Many consumers are likely to reach the same conclusion, though those who don't qualify for credit cards may find the debit cards appealing.

Consumers still use cash more than any other payment means for personal consumption expenditures and the Nilson Report estimates that it will still be used in almost half of such spending in the year 2000.(Harrop Peter, 1989)

PRIVACY CONCERNS.

One of the greatest positions faced by the idea of cashless is that of privacy issues. Many argued that the companies introducing different form of cash payment invade into ones privacy. Others are worried about the detailed record of their transactions left by non-cash transactions

Fears of being tracked in detail are not groundless. Last year, for example, Visa introduced a new service "that allows banks to more precisely analyze cardholders' buying patterns and target sales promotions to customers." [14]

Prepayment cards are generally anonymous in use. However, there is no technological barrier to the issuer encoding information about the purchaser on the card and tracking its use. Some systems already have point-of-use devices networked to computers to spot misuse of the cards (e.g. reloading them fraudulently). (Warwick David, 1992). It is not hard to visualize the practice expanding.

Cash means freedom since it assures privacy and anonymity during transactions. It also means decentralization. The control of someone's finances equates with the control of his life, and the "masters" are aware of this. In order to completely track, monitor and control the population, cash must be eliminated, if possible. A cashless society, where all transactions are forced through a computerized banking system is the goal. (Michael J., 1996)

RELIGIOUS CONCERN

There is a great concern in the Christian circle that the intended cashless society is nothing but a way of fulfilling the Bible prophecy as stated in Revelation chapter 13 during the reign of the antichrist. Then everybody will be forced to have a mark on his or her right hand or forehead to buy or sell. This will probably be an embedded computer chip. This idea is to be vehemently rejected by the Christians that will alive at that time.(Violino, Bob, 1993)

They argue that;

- i It will lead to a worldwide dictatorship.
- ii It means that your freedom to work, buy, travel and pay with be controlled by those who maintain the control grid.
- iii It means every transaction you make will be traceable and you will be traceable by every transaction.

When you eliminate cash, you eliminate anonymity," any kind of technology that tracks purchases can be used by governments to control food supplies.

What this means is, if the Police State has its way, is that you won't be able to buy or sell without biometrically scanning (or perhaps one day by having your implanted microchip scanned). With nothing concrete to show for your financial worth, you will be completely controlled by the cashless society grid

CONCLUSION

This paper has provided an overview of various technological advances towards achieving a society without cash otherwise coined as "cashless society". Though presently all over the world (Nigeria inclusive) there is gradual decline in carrying of cash about with the use of debit cards, credit cards, ATM cards etc to make transactions, yet the society is not totally cashless. So with the various oppositions been mounted against it especially as regards privacy issues will the idea scale through? Well only time will tell, as we know there is no barrier or limit to technological advancement.

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