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Challenges of E-Zwich at Ghana Commercial Bank: do the views of users differ to those of non-users?

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Abstract

As a pioneer biometric electronic payment system, the E-Zwich has witnessed minimal patronage over the past few years. Some scholars attribute this to the numerous challenges faced by users and operators of the product. Although several studies have sought the views of users of the above named product, the views of non-users have been ignored. A comparative study of users and non-users is useful for comprehensive decision making in the Banking Industry. The present study seeks to examine the challenges of electronic payment systems (E-Zwich) at GCB and further examines the extent to which users and non-users differ in terms of the identified challenges. Using a quantitative approach, questionnaires were issued to 120 users and 43 non-users. The study found that in terms of challenges, users and non-users share similar views using the independent samples t-test. The study recommends that GCB puts in place measures to improve E-Zwich services. The implications of the study are, thus, discussed.

Keywords: E-Banking, E-Zwich, Ghana Commercial Bank, Kumasi, Ghana

Introduction

For close to a century now, electronic banking has evolved as a simpler way of transacting business (Ofori-Dwumfour & Dankwah, 2013). It has been generally argued that electronic banking makes it easier for customers to compare banks' services and products and increase competition among banks, which allows banks to penetrate new markets and thus expand their geographical reach. For some scholars, electronic banking is an opportunity for countries with underdeveloped financial systems to lunch into developmental stages (Bassey, 2008). Customers in such countries can access services more easily from banks abroad and through wireless communication systems, which are developing more rapidly than traditional "wired" communication networks (Khan & Karim, 2010). Prior to its evolution, bankers, technology specialists, entrepreneurs, and others have advocated for the replacement of physical cash and the introduction of more flexible, efficient and cost effective retail payment solutions. Innumerable conferences, symposia and seminars have been organised to deliberate on the concepts of cashless and "chequeless" society globally (Abor, 2004; Issahaku, 2012).

Facing extremely severe competition from non-banking sector, the banking industry has adopted a more persistent approach in the development of new e-banking services (Akoh, 2001). Issahaku (2012) further explains that several measures including the use of electronic innovations such as Automated Teller Machine (ATM), telephone banking, personal computer banking, internet banking, branch networking, and most significantly,

electronic funds transfer at point of sale like the E-Zwich in Ghana have been used as a means to propagate the cashless society agenda. Introduced in April 2008, the E-Zwich smart card has been operational since then and seeks to reduce the risk at which ATM card theft was on the ascendancy a while ago. The Ghana Interbank Payment and Settlement System (GHIPSS) Limited, an establishment of the Bank of Ghana, is the issuer of the E-Zwich smart card. E-Zwich is the brand name for the common platform (the National Switch) that links the payment systems of all banks, savings and loans and rural banks in Ghana (Issahaku, 2012, p. 1).

The long queues that characterises most Ghanaian business transaction are abysmal. And it becomes very expensive for most financial institutions in reprinting papers for deposits and withdrawals (Sarpong, 2003). Consequently, an avalanche of studies has been conducted on e-banking products in different parts of Ghana using different approaches. Popular studies include those of Sarpong (2003), Abor (2004), Appiah and Agyemang (2009), Woldie, Hinson and Iddrisu and Boateng (2008), Kumaga (2010), Olatokun and Bankole (2011), Ali and Al-Jabri (2011), Issahaku (2012) and Owusu-Afriyie (2012), Ofori-Dwumfuor and Dankwah (2013).

However, few of the above studies have concentrated on electronic funds transfer at point of sale like the E-Zwich (Kumaga, 2010; Issahaku, 2012). Although Issahaku (2012) has conducted a recent study on E-Zwich, the author concentrated on the Upper West Region of Ghana. It is worth mentioning that since the challenges of E-Zwich are intertwined with socio-cultural and infrastructural factors, the results of respondents in the southern part of Ghana might be different. Moreover, Issahaku (2012) did not concentrate on one bank. As a result, the end results did not elucidate specific problems of a particular bank. Additionally, the author's paper however did not show how the users and non-users differ in terms of the challenges of E-Zwich. Unlike previous studies, the present study has chosen a specific bank in the southern part of Ghana-GCB. The contribution of the study cannot be over-emphasized. First and foremost, the study will extend existing literature on E-Zwich. The current study will serve as a blue print for the Bank of Ghana to evaluate the successes of E-Zwich since its introduction. In furtherance, the study will illuminate the major problems faced by both users and service providers of the E-Zwich.

Challenges of E-Zwich

Since ICT is improving service delivery and enhancing competition among financial institutions, several studies have soared lately on the various electronic products and how best to improve them for prospective customers. Consequently, the challenges of electronic payments, globally, have been well studied in recent times. On their part, Teddesse and Kidan (2005) confirm that such challenging factors militating against the introduction of electronic payment system include poor telecommunications infrastructure, limited readiness by banks, behavioural constraints, inadequate legal and regulating framework and low level of credit card access. Some of these findings have been confirmed by Bahl (2012). In his study of challenges and policy implications of e-banking, Bahl (2012) identified six key challenges with the adoption of e-banking including regulatory, operational, reputational, security, inconvenience and personal information challenges. Ali and Al-Jabri (2011) also report how cultural barriers have hindered the use of electronic payments in Oman. In another study by Bassey (2008) where the author looked into Africa's place in the new digital economy; the nature of payment system in Africa and its readiness for integration into the global e-payment system and the major challenges facing development of efficient e-payment system in Africa, the author emphasized that the development of infrastructure for ICT is a prerequisite for the development of electronic payment system. Hence, a major

challenge for the delayed survival of electronic payment could be attributed to poor ICT infrastructure. In detail, Bassey (2008) outlines three main groups of challenges namely infrastructure, regulatory and cultural-cum-human dimensions. However, the challenges of E-Zwich in Ghana have attracted little attention from researchers (Issahaku 2012); although, a report by Hesse (2010) traces its evolution and the major advantages of the E-Zwich electronic payment system. Two recent studies on E-Zwich worth highlighting are that of Kumaga (2010) and Issahaku (2012).

In a study of the implementation and usage of electronic payment system in Ghana focusing on E-Zwich, Kumaga (2010) categorised the challenges in his study into four main groups. These include security, infrastructure, legal and regulatory and socio-cultural issues. Based on a mixed approach including deep interviews with the Ghana Interbank Payment and Settlement Systems (GHIPSS) and senior officials of some of the major banks in Ghana and questionnaires distributed to shops and individuals that use E-Zwich and debit cards the study concluded that despite the challenges of implementing E-Zwich, there is the potential of reducing the unbanked in Ghana with massive public education. Although, Kumaga's (2010) work offers several conceptual issues on E-Zwich usage and implemtation, the author's work lack specificity. Since the challenges of E-Zwich vary from one bank to the other, it is prudent for a study to narrow the challenges to a particular bank and device specific measures to curb such challenges.

In another mixed method study by Issahaku (2012) in the Wa Municipality, the author found several challenges hindering the use of E-Zwich in the Wa Municipality. Both respondents and service providers expressed their views on the matter. Some major challenges identified in the study include link failure, frequent breakdown of machines, slow process of service delivery and long queues. Moreover, the service providers who participated in the study mentioned challenges including network connectivity problems, impatient customers, defects with regards to customers' cards due to improper handling and low benefits to banks as a result of banks operating the service on behalf of GHIPSS. However, similar to that of Kumaga (2010), the author also concentrated on several banks in the Wa Municipality. Unlike previous studies reviewed in this study the present study narrows the challenges of E-Zwich to a specific bank (GCB).

Bank Profile

Ghana Commercial Bank was founded in 1953, with 27 employees, as the Bank of the Gold Coast. Initially, it focused on serving Ghanaian traders, farmers, and business people, who could not obtain financing from the expatriate banks. In 1957, when Ghana attained Independence, the bank rebranded to Ghana Commercial Bank, to concentrate on commercial banking, since Bank of Ghana had been created to function as the central bank and banking regulator. In the beginning, the bank was wholly owned by the Government of Ghana. However, beginning in 1966, the government started partial divestiture until today, when government shareholding stands at 21.4%. Subsequently, the stock of the bank was listed on the Ghana Stock Exchange. Today, GCB serves the banking needs of large corporations, parastatal companies, small and medium enterprises as well as individuals. As of July 2012, the bank employs 2,315 staff, in branches distributed in all 10 provinces of the Republic of Ghana.

For the purpose of time and financial constraints, this study concentrated on three main branches of GCB in the Kumasi Zone, namely Kumasi Main, Harper Road and Bantama. This selection was based on convenience.

Research Methodology

The study targeted users and non-users of E-Zwich in Ghana Commercial Bank Limited in the various branches selected branches. The break-down of the sample size included 120 E-Zwich card bearers and 43 non E-Zwich card bearers. The study utilized probability sampling techniques of data collection to ensure equal chance of selection (Kumar, 2005; Sarantakos, 2005). The population was stratified into two main strata, thus, the E-Zwich card bearers and non E-Zwich card bearers. After the stratification, simple random sampling technique was used to select 120 E-Zwich users and 43 non-users of E-Zwich.

The questionnaires for this study were guided by recent work by Issahaku (2012) and Kumaga (2010). In addition to the basic information of key respondents, the questions were divided into three sections with each one probing related questions to the objectives of the study. The first section focused on types of electronic payments in use. The electronic payments were categorized into debit, credit, prepaid, internet banking and mobile banking and customers were required to tick as many as are applicable. The objective of this section was to have a broad overview of the types of e-payments issued by the banks and used by customers. The section B examined the challenges that individuals faced in using e-payments (E-Zwich) using a five-point Likert scale of *1=Strongly Disagree (SD), 2=Disagree (D), 3=Neutral (N), 4=Agree(A), and 5=Strongly Agree (SA)*. The main objective here was to obtain the challenges from the perspective of the individuals. This continued scale was further tested to see if the challenges differ across users and non-users using independent samples t-test. In order to ensure the validity of the instruments, the questionnaires were pre-tested.

Data collected from the field were cleaned and outliers removed. The questionnaires were coded for traceability and easy entry using Statistical Package for Social Sciences (SPSS version 16). This quantitative data processing software was used to generate cross-tabulation and, again, test for interrelationships and differences using t-test and one-way analysis of variance (ANOVA). The inferential statistics was necessary to help ascertain whether respondents differ in term of the challenges of E-Zwich. The data were presented in tables.

Results

Socio-demographic features of respondents

Table 1 presents demographic features of respondents. Of the 163 questionnaires administered, 112 were males and 51 were females. Thus, more than half (68%) of the respondents were males with about 31.3% being females. Majority of the respondents were aged 35-39 years followed by those within the 25-29 age brackets (36.2%). Results of the study also reveals that majority of respondents were highly educated (86.5%). This, perhaps, relates to the fact that e-banking products are common among highly literate Ghanaians than the illiterate counterparts. About 58.9% of the respondents were single and the remaining 41.1% were married.

Close to half of the respondents 47.9% were Christians with banking (33.7%) being the dominant profession though a significant numbers were self employed (22.7%), teachers (19.6%) and students (11.7%). More than half (51.5%) of the respondents had a high income level (above 200 Ghana cedis). About 73.6% of respondents who participated in this study were users of the E-Zwich electronic payment system (Table 1).

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Table 1: Socio-demographic profile of respondents

Variable	Frequency	Percentage (%)
Gender		
Male	112	68.7
Female	51	31.3
Age		
20-24	9	5.5
25-29	59	36.2
30-34	16	9.8
35-39	67	41.1
40+	12	7.4
Level of education		
Primary	3	1.8
Secondary	19	11.7
Tertiary	141	86.5
Marital Status		
Single	96	58.9
Married	67	41.1
Religion		
Christianity	78	47.9
Islam	60	36.8
traditional	25	15.3
Occupation		
Student	20	11.7
Banker	55	33.7
Teacher	32	19.6
Self employed	37	22.7
Other	19	12.3
Income level		
50-100	4	2.5
110-150	23	14.1
160-200	52	31.9
210+	84	51.5
Status		
User	120	73.6
non-user	43	26.4

In order to understand the differing demographic features of users and non-users of E-Zwich, a cross-tabulation was generated with help of SPSS. Table 2 presents the different demographic features of users and non-users of E-Zwich. From

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the table, about 73.2% male respondents were users whereas the remaining 26.8% males were non-users of the E-Zwich product. A similar trend was seen on the side of female respondents as users dominated with about 74.5% with about quarter (25.5%) being non-users of the product. Unlike the overall age trend reported earlier in Table 2, the results revealed that when grouped under users and non-users, those within the 20-24 age brackets dominated with about 88.9%. Perhaps, since users dominated the respondents almost all age groups reported high figures under users. An interesting trend was seen with regards to the educational level of respondents. From Table 2, majority (100%) of non-users had lower level of education as compared with their counterparts who were users of E-Zwich product. This is consistent with earlier studies in the literature that have identified e-product usage as common among literate population (Kumaga, 2010). With respect to the occupation of users and non-users, quite a competitive number of students were users (52.6%) and non-users (47.4%) of the E-Zwich product. However, an overwhelming number of bankers were users of the product 72.7% whereas about 27.3% chose not to use the product. Quite impressive income levels were recorded for user of E-Zwich product.

Table 2: Respondents' profile by their E-Zwich Status

Variable	E-Zwich Status		Total
Gender	User (%)	Non-User (%)	(%)
Male	73.2	26.8	100.0
Female	74.5	25.5	100.0
Age			
20-24	88.9	11.1	100.0
25-29	69.5	30.5	100.0
30-34	81.2	18.8	100.0
35-39	73.1	26.9	100.0
40+	75.0	25.0	100.0
Level of education			
Primary	.0	100.0	100.0
Secondary	78.9	21.1	100.0
Tertiary	74.5	25.5	100.0
Marital Status			
Single	75.0	25.0	100.0
Married	71.6	28.4	100.0
Religion			
Christianity	71.8	28.2	100.0
Islam	71.7	28.3	100.0
Traditional	84.0	16.0	100.0
Occupation			
Student	52.6	47.4	100.0

Banker	72.7	27.3	100.0
Teacher	68.8	31.2	100.0
Self employed	78.4	21.6	100.0
Other	95.0	5.0	100.0
Income level			
50-100	75.0	25.0	100.0
110-150	73.9	26.1	100.0
160-200	75.0	25.0	100.0
210+	73.6	26.4	100.0

Challenges of E-Zwich

According to Bassy (2008), the challenges to the adoption of e-payment systems in Africa could be grouped into three categories namely the infrastructure, regulatory, cultural-cum-human dimensions. Using a five-point Likert scale of *1=Strongly Disagree (SD), 2=Disagree (D), 3=Neutral (N), 4=Agree (A), and 5=Strongly Agree (SA)*, respondents were made to indicate their position on this specific objective (Table 3). Challenges were grouped under the key three themes identified by Bassy (2008).

The results of the study reveal that respondents generally agreed that infrastructural issues hampered the use of E-Zwich with statements like "ICT accessibility is a challenge for E-Zwich usage" recording as much as 90.3% of agreement. However, some respondents did not consider the affordability of E-Zwich as a challenge as more than half of the respondents disagreed (70%) to this statement. However, respondents laid much emphasis on the frequent network failure that thwarts the usage of E-Zwich. Hence as many as 98.8% of the respondents agreed to this statement. Moreover, with current erratic power supply in Ghana, it was not surprising that respondents noted this irregularity as a challenging factor for the successful usage of E-Zwich. Regulatory challenges in the form of rules and security governing the use of E-Zwich were also noted by respondents. Specifically, respondents (97.0%) agreed that regulatory and security (87.7%) hampered the use of E-Zwich. The findings of the study confirm challenges outlined by Issahaku (2012) and Bassey (2008) in previous studies. According to these earlier authors, e-banking has been ineffective in Africa due poor regulatory and infrastructural systems.

Table 3: Challenges of E-Zwich product

Statement	No.	SD (%)	D (%)	N (%)	A (%)	SA (%)
Infrastructure						
ICT accessibility is a challenge for E-Zwich usage	163	3.1	0.6	3.1	30.3	63.0
E-Zwich is not affordable	163	43.0	37.0	3.0	5.0	12.0
Frequent network failure thwarts E-Zwich usage	163	0.6	0.0	0.6	48.8	50.0
Poor connectivity hamper E-Zwich usage	163	4.9	0.6	1.2	93.3	0.0
frequent breakdown of machine make E-Zwich unattractive	163	2.5	0.6	0.6	50.3	46.0
The slow processes makes E-Zwich	163	1.2	0.0	50.3	40.5	8.0

unattractive						
low bandwidth,	163	0.6	0.6	50.9	47.9	0.0
Erratic power supply is a key challenge	163	4.3	2.5	2.5	20.8	70.0
Regulatory/Legal						
Poor regulatory systems impinge on E-Zwich usage	163	0.0	0.6	2.5	49.1	47.9
Poor security assurance	163	1.8	4.9	5.5	7.7	80.0
Socio-cultural/human dimensions						
Low community acceptance	163	0.6	4.3	3.7	46.0	45.4
Ignorance by most customers is a challenge	163	0.0	0.0	0.0	60.1	39.9
E-Zwich deny service providers of tips from customers	163	49.1	0.0	0.0	20.9	30.0
E-Zwich is characterised by poor service delivery	163	0.0	49.1	0.0	50.9	0.0
There always long queues at the E-Zwich service point	163	0.0	9.0	39.1	20.0	30.9

The study in addition sought the different views on the challenges of E-Zwich. Using two parametric test tools (Independent samples t-tests and One-way analysis of variance).

Both means (*M*) and p-values (*P*) were reported (Table 4). The five point Likert scale used for interpreting the means are: *1-1.49= SD, 1.50-2.49=D, 2.50-3.49=N, 3.5-4.49=A, 4.5-5.0=SA.* The in-dependent samples t-test was used to test differences between male and female participants across the three main challenges.

From Table 6, no significant differences were detected by the test statistic with respect to infrastructural (*P=0.938)* and regulatory (*P=0.453)* challenges as the means were very close. For instance, for infrastructural, males agreed (*M=3.661*) together with their female *(M=3.672)* counterparts that E-Zwich was hampered by the above-named factors.

However, differences (*P=0.000*) were detected by the t-test with respect to socio-cultural challenges. Thus, respondents shared varied opinions on the matter. For instance, whereas males agreed (*M=3.636*) to socio-cultural challenges, female participants were in doubt (*M=3.118*).

A similar pattern was recorded for respondents' age across the various challenges of E-Zwich. From Table 4, no significant differences were detected by the One-way analysis of variance for both infrastructural (*P=0.711*) and Regulatory (*P=0.207*); as all the age groups agreed on that issues.

However, differences were detected in socio-cultural challenges (*P=0.014*). From Table 4, differences were detected in educational level across both regulatory (*P=0.003*) and socio-cultural (*P=0.040*). However, no differences were recorded for infrastructural across the different educational level (Table 4).

Table 4: Respondents' profile by their views on E-Zwich challenges

Variable	No.	Challenges		
		Infrastructural	Regulatory	Socio-cultural
Sex				
Male	112	3.661	4.630	3.636
Female	51	3.672	4.592	3.118
		P=0.938	*P=0.453*	*P= 0.000**
Age				
20-24	9	3.653	4.778	3.778
25-29	59	3.665	4.585	3.529
30-34	16	3.703	4.563	3.313
35-39	67	3.666	4.455	3.367
40+	12	3.604	4.792	3.783
		P=0.711	*P=0.207*	*P=0.014**
Level of education				
Primary	3	3.750	3.400	2.800
Secondary	19	3.665	4.658	3.579
Tertiary	141	3.662	4.564	3.474
		P=0.704	*P=0.003**	*P=0.040**
Marital Status				
Single	96	3.673	4.573	3.465
Married	67	3.651	4.530	3.487
		P=0.440	*P=0.629*	*P=0.792*
Religion				
Christianity	78	3.655	4.622	3.621
Islam	60	3.656	4.459	3.063
Traditional	25	3.710	4.580	4.000
		P=0.380	*P=0.228*	*P=0.000**
Occupation				
Student	20	3.632	4.790	3.579
Banker	55	3.661	4.518	3.542
Teacher	32	3.680	4.672	3.438
Self employed	37	3.642	4.405	3.443
Other	19	3.719	4.525	3.300
		P=0.509	*P=0.101*	*P=0.380*
Status				

Users	120	3.671	4.617	3.560
Non-users	43	3.645	4.584	3.512
		P=0.424	*P=0.180*	*P=0.597*

**Significant difference (p≤0.05)*

No significant differences were detected by the independent samples t-test in marital statuses of respondents across the three different challenges (infrastructural [*P=0.440*]; Regulatory [*P=0.629*]; Socio-cultural [*P=0.792*]. However, differences (*P=0.000)* were detected in socio-cultural challenges across the different religious across. Similarly, a significant difference was detected in regulatory challenge across the various occupation identified. Finally, no significant difference was recorded in user status across the main three challenges of E-Zwich. This means that both groups share similar views on the matter. According to Ali and Al-Jabri's (2011) study, the unattractiveness of electronic payment systems is fascinating, as people still resort to the traditional ways of transacting business due to perceived challenges by both users and non-users.

Discussion

The prevalence of the three major challenges of E-Zwich in Ghana is in line with the general technological challenges in Africa. As Bassey (2008, p. 20) emphasised in his study, understanding the challenges of electronic payment systems is imperative to wading through the turbulent sea which modern day globalization represents. For Issahaku (2012), identifying the challenges of an electronic payment like E-Zwich and ranking these challenges constitute one of the significant ways to inform policy prioritisation in Ghana. The study has also confirmed the unattractiveness of e-products to illiterates. For Kumanga (2010), e-products are highly patronised by literates since they have the requisite skill for its use. This leads to an educational challenge of E-Zwich which has not been highlighted in previous studies. In Oman, Ali and Al-Jabri (2011) reports that Omani society prefers making payments through cash and cheque. This is as a result of poor e-skills among most societies rendering them handicapped.

The present study has also found that whether the challenge is social, regulatory or infrastructural (Bassey, 2008), the views of both users and non-users are the same. As Ali and Al-Jabri (2011) write, electronic payments have numerous challenges which make most societies still stick to the old way of transacting business when they can easily do that through internet banking. Another relevant observation worth discussing is the varied view respondents shared on socio-cultural challenges. Almost the majority of differences detected in the present study were found under socio-cultural and human challenge. Socially, people are trained differently and observe phenomena differently and for that reason their views on that matter might differ from one person to another.

Conclusion

The main purpose of the present study was to examine the challenges of E-Zwich delving more into the differing perspectives of users and non users. In order to achieve the set objectives, a quantitative approach was adopted and questionnaires were used to obtain data from 120 users and 43 non-users. Using two parametric test tools (Independent samples t-tests and One-way analysis of variance), both means (*M*) and p-values (*P*) were reported. The in-dependent samples t-test was used to test differences between male and female participants across the three main challenges. The study found that no significant differences were detected by the test statistic with respect to infrastructural (*P=0.938)* and regulatory (*P=0.453)*

challenges as the means were very close. However, differences (*P=0.000*) were detected the t-test with respect to socio-cultural challenges as males and females had varied views on the matter. In details, whereas males agreed (*M=3.636*) to socio-cultural challenges, female participants were in doubt (*M=3.118*). A similar pattern was recorded for respondents' age and views with regards to E-Zwich as differences were detected in socio-cultural challenges (*P=0.014*). Moreover, differences were detected in educational level across both regulatory (*P=0.003*) and socio-cultural (*P=0.040*). However, no differences were recorded for infrastructural across the different educational level.

In short, despite the quest by most banks to increase E-Zwich patronage, various challenges hamper the use and provision of E-Zwich services. Moreover, whether respondents use E-Zwich or not, they perceive the outlined challenges as key issues hindering the successful operation of E-Zwich in the country. This major finding implies that both users and non-users share similar views on the challenges and, hence, these challenges constitute the saturation point to curb the problems of E-Zwich in Ghana. It also provides operators with a clear perception of E-Zwich in the minds of non-users and why they have chosen a withdrawal approach towards the introduction of the above-named e-product.

Since education has a link with the adoption of e-products, the study recommends that GCB trains customers and prospective customers on the use of e-product. Consequently, to make E-Zwich attractive to local folks with no high level education, there is the need to create public awareness and educate them on the use and benefits of this electronic payment system. There is also the need for Bank of Ghana (BOG) to enforce the provision of E-Zwich services by most banks.

Banks' staff should be trained on how to provide quality service for E-Zwich customers who are not well educated. The study also recommends that more reliable internet system be put in place to avoid unnecessary network failures that impede on E-Zwich service delivery. As part of increasing patronage, salaries could be placed or transferred through the E-Zwich system.

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