

Challenges of Implementing Real Money: A Case of Gold Dinar in Kelantan.

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The August 2007, Global Financial Crisis was a blow to the world monetary system. The sophistication and advancement in the world financial infrastructure could not forecast lest prevent it. What started in US as a result default in securitized subprime loan has led to what economist now referred to as the most serious financial crisis after the Great Depression. Trillions of dollars in bailout did not prevent countries like Dubai, Greece and Ireland from defaulting in their commitment, and more and more are showing signs of distress (Portugal, Italy, Germany, Spain, etc) with no any sign of recovery in sight¹. Prominent leaders of the world have called for total overhauling of world monetary system from the scratch as done at Breton Wood². At community level, people have started resulting to self help and looking for alternative currency as a stop gap/solution to the credit crunch³.

The government of Kelantan in August 2010 launched Gold dinar as alternative currency for the state. During the launching, the government announced that more than one thousand business entities and some banks in the state have agreed to accept and safe keep the new

¹ The US is on the verge of default

² French President Nicholas Sarkozy, on 26 September, 2008 has called for rethink of financial system from scratch, as done in Breton Wood (George Parker, Tony Barber and Daniel Dombey, October 9, 2008). British Prime Minister Gordon Brown on October 13, 2008 said world leaders need to meet to take new economic system (Agence France-Presse (AFP), October 13, 2008). Russian Prime Minister Vladimir Putin on February 9, 2009 said the present world monetary system has allowed the wealth of the world to concentrate in a country and as such there is need to be a relook at it (Democratic Underground.Com. Jun 16, 2009).

³ Arche in Indonesia and Kelantan state in Malaysia people have started minting gold as a means of wealth preservation and possible alternative currency. The state of Utah has passed a bill on gold back currency, while that of North Carolina is also in the house.

currency and planned to give employees the option of receiving part of their salary in this currency, as well as introduce gold bars for large investments. She also said alms (Zakat) can also be paid with the coins⁴. However with much enthusiasm that brought about the launching, its real practicality has not been felt and the euphoria that greeted the launching is gradually fading away. Getting a new idea to be implemented even when it portends a lot of benefits is difficult. Many innovations need long period of time from invention to when they are widely adopted (Roggers, 2003). Why is a currency that was toasted as the people's savior gradually going into oblivion? What are the problems that are making it difficult for people to use the new Gold Dinar in their day to day transactions? These are the questions this research work tried to answer by conducting a field survey to determine the factors that have made dinar implementation difficult in Kelantan.

The main objective of this work is to determine the challenges of implementing real money. The specific objectives are:

- 1) To profile the socio economic characteristics of the respondents
- 2) Identify the challenges facing using gold dinar in Kelantan
- 3) Analyze the contribution of each of the challenges in implementing gold dinar in Kelantan.

Literature Review

Rogers (2003: 12-16) defines innovation as an idea, practice, or object that is seen to be novel by an individual or other unit of adoption. It is immaterial whether it is a new idea or the passage of time from its discovery has made it to become new to the adoption unit. Adopting a new knowledge with all its perceived advantages is not always easy. Many inventions need a

⁴ The Malaysian Insider: <http://www.themalaysianinsider.com/malaysia/article/kelantan-launches-gold-dinar/>

long period of time to become generally accepted. Rogers refers to the challenges that hinder adoption of new idea as complexity. Complexity is the extent to which a new idea is perceived to be difficult to understand and use. Some innovations are easy to understand by majority of people in a social system while others are more complicated and will be adopted more slowly. Innovations that are simpler to understand are adopted more rapidly than innovations that require the adopter to develop new skills and understandings.

The idea of gold currency is as old as human history. According to Burns (1927: 18), man acquaintance with gold is of great age that nobody knows when it was first used. Gold has served humanity in form of money from the time immemorial until the fall of Ottoman Empire in 1925. The recent re-introduction/re-invention of gold money (money) in Kelantan comes with its own challenges that militate against its adoption as an alternative currency. Naturally, gold as money has encountered a number of challenges right from its inception as money up to the late 20 century when its circulation as money was finally prohibited by the World Bank⁵. Going through history, people have encountered many challenges using gold as money. These include: Counterfeiting, clipping, sweating (heat solder until it melts and runs between surfaces to bond them), token money, debasement, issue of legal tender etc. We now turn to each of these challenges vis a vis how they have hindered gold currency in the past and the like effects they may have on the new gold dinar.

Counterfeiting

Counterfeiting is defined as Intentional and calculated reproduction of a genuine article (such as money or trademark) for the purpose of misleading the recipient or buyer into believing

⁵ International Monetary Fund Fact Sheet: <http://www.imf.org/external/np/exr/facts/gold.htm>

he or she is receiving or buying the genuine article itself⁶. Counterfeiting, according to free online legal dictionary, is the process of fraudulently manufacturing, altering, or distributing a product that is of lesser value than the genuine product⁷. The word counterfeit always refer to forging of currency and document as well as imitating art work. Counterfeiting currency dated back to earliest period of money when there was little technique to determine its purity and the currency was still circulate by weight. The moneyer reputable had to put their seal on metal ingot to certify that it was real and of the weight attached to it. Counterfeiting is a general problem of currency and at certain period in history carried death penalty (Burn 1927: 61). With improvement in technology, counterfeiting was made difficult if not impossible. However, with the new dinar introduction Kelantan, one may not rule out the issue of counterfeiting the new currency. As a result of this we asked questions regarding counterfeiting in our research.

Clipping

Clipping is an act of trimming or cut back neatly of metal currency in such a way that the receiver will not suspect. Clipping reduces the bullion weight of the currency and give the clipper undue or fraudulent gain. This act is as old as the introduction of currency and led to the serration of gold currency to detect any fraudulent act. Until 1963, English coins were not marked or milled on the edges and the practice arose from clipping small pieces off the coins. 3 Henry declared clipping washing or filling the coin of the realm as high treason. This act was repealed by 1 Mary, but its provisions were re-enacted and extended by 5 Eliz. C. 11, and 18 Eliz. c. 1. The introduction of milling tended to prevent clipping, but during the 17th century clipping was a common offence owing to large gains resulting. Notwithstanding the re-coinage

⁶ <http://www.businessdictionary.com/definition/counterfeiting.html>

⁷ <http://legal-dictionary.thefreedictionary.com/counterfeiting>

of Elizabeth and the issue of new coin in the subsequent years, the amount of clipped coins steadily increased, the new coin being melted down or exported. It was estimated that the coinage had lost one-third its weight. In 1695, provision was made for restoring the coinage to its full weight: the cost, amounting to £2,703,164, being met from the earth-tax. [The New Palgrave Dictionary of Money and Finance 1992, Vol. p.375]

Debasement

There are three different widely used definition of the term debasement: narrow, wider and widest definitions. The narrow definition refers to debasement as a reduction in the fineness of metal used in coinage under a commodity money standard. The wider definition defines the term debasement as a reduction in the specie content of a coin which could occur through a decrease in fineness or decrease in weigh of the coin. Under widest definition of debasement it means the reduction in the unit of account value of coin made from a given weight of specie metal whether through a decrease weight or fineness of a coin, or through an increase in the unit of account value of the coin (the latter is termed an enhancement or ‘crying up’ of the money)⁸.

Debasement dated back to the ancient civilizations. In ancient Greece, Persian and the Roman Republic, debasements were experimented with only briefly. The Romans did however institute a unique form of debasement (Burns, 1927:401). Under the Lex Papiria (in about 91 BC) the government minted coins with one in eight being only silver plate! The ratio was publicly known, and the objective was to raise revenue for the Social War. However the plate coins were readily identifiable and commanded a different price, thus dual price system emerged with one price for silver dinarii and one for base denarii. Debasement was used on a more

⁸ The major party of this section is taken from [The New Palgrave Dictionary of Money and Finance 1992, Vol. 1 & 2]

prolonged basis during the Roman Empire, and between the reign of Nero in the mid-1st century AD and the end of the third century, the fineness of silver coinage was reduced to two percent.

Throughout more recent European history, debasement has been primarily response to wartime financial crises. French monetary history illustrates many aspects of medieval experience. During the peaceful 12th and 13th centuries the monetary authorities agreed not to manipulate the coinage exchange for the imposition of new taxes. However, wartime fiscal demands led to a series of debasement in the early 14th century and by 1360 the ‘silver coinage’ was 20 percent silver and 80 percent alloy. With peace came a return of strong money until the renewed fighting in the Hundred Years War led to even more serious debasements between 1417 and 1429. The profits from these episodes were immense. Rey (1965) shows that Charles VI in 1420 raised 678,596 livres tournois in total revenue, of which 547,247 livres tournois came from mint profits. The end of the Hundred Year War led to a reduced need for revenue and the stabilization of the tax system, and the coinage remained relatively stable until John Law in 1720.

The French experience was better than some and worse than others. In England debasement was rare – except for Henry VIII’s ‘Great Debasement’ in 1542-60. In Castille, the coinage lost 95 percent of its value during the 15th century (Spufford 1988: 314). Spufford attributes the differing experience of European countries to differences in the availability of alternative sources of revenue, that is, their tax systems, and in the need for revenues, that is, their political/military history [The New Palgrave Dictionary of Money and Finance 1992, Vol. p.575-6].

Legal Tender

Legal tender refers to money that a creditor is obligated to receive in payment of a debt. Money can be unlimited legal tender, such as Bank of Canada notes within Canada today, or

limited legal tender, such as Canadian quarters which are legal tender to a value of \$10 in any payment. Theoretically it is not necessary for a monetary economy to have legal tender legislation (see, for example, the monetary economy of Kiyotaki and Wright 1989). However, there is evidence that as early as Greek city states coins were assigned legal tender values in the unit of account (Angell 1930).

For both a fiat money system and a commodity money system, legal tender legislation defines the unit of account. The legal tender laws permitted fluctuations in the definition of the unit of account which, amongst others, made it possible for monetary authorities to generate considerable revenue, both from seigniorage and by inflating away normally denominated debt.

In medieval Europe monarchs typically held the right to grant legal tender and a monopoly (which some exercised directly and others farmed out) over minting. Typically, the sovereign ordered the mint to produce a variety of coins specified by weight and quantity of silver, and the coins were then proclaimed legal tender at certain values in the unit of account. The coins had specified design but no face values stamped on them. The monarch could then enhance or ‘cry up’ the currency by raising the value at which the coin was legal tender.

Legal tender legislation entered a new era when paper monies were made legal tender. The earliest examples of paper money being made legal tender were short, typically wartime, experience, such as the playing card currency of French Canada, the bank notes of John Law, the assignats of revolutionary France, and greenback confederate issues during the Civil War in the US. Bank of England notes were not made legal tender during the Napoleonic Wars, but they were receivables in government offices at par and creditors who tendered Bank of England notes could not be arrested for non-payment (Fetter 1950).

The Ringgit became the legal tender law in Malaysia in 1975 after the country pull out of the confederation currency. With this, Bank Negara becomes the sole issuer of Malaysia currency and nobody or authority has the right to issue or import either currency notes or coins in Malaysia without the prior permission of Bank Negara and there is limit to the amount allowed. Bank Negara therefore reserves the right to confiscate any unauthorized money and even fine the issuer as much as RM 5,000⁹. Creating alternative currency in Malaysia is usurping the right conferred on Bank Negara by the legal tender law.

Methodology

Study Area

This study was carried out in Kelantan state, Malaysia. Kelantan is situated at the north-east coast of peninsular Malaysia facing the South China Sea and covers an area of 14,922 sq km. Its state capital is Kota Bharu. It is connected to other major towns in Malaysia and serves as administrative centre and business activities for Kelantan. Kelantan (which means the ‘land of lighting’) lies between latitudes 4-4.5⁰ and 6.25⁰ north and between longitudes 101.30⁰ and 102.40⁰ east. Kelantan shares a common boarder with Perak in the west, Pahang in the south, Terenganu in the east and China Sea in the north. Kelantan has a coastal line about 96km and her total land frontier is about 576km long. It is an agrarian state with abundant paddy field, rural fishing communities and casuarinas lined beaches. Kelantan is home to some of the most primordial archeological discoveries in Malaysia¹⁰

Sample

⁹ http://www.bankinginfo.com.my/_system/media/downloadables/illegal_transactions.pdf

¹⁰ <http://tic.kelantan.gov.my/> and <http://en.wikipedia.org/wiki/Kelantan>

Participants for this study were individual who uses or intend to use gold as currency, age above 20 years, citizen or non citizen and resident or non resident of Kelantan using purposive sampling method. This method is a non-probability sample that conforms to certain criteria (Cooper and Schindler, 2001). This method was appropriate for our study since some criteria need to be met for a respondent to be selected. As such, valuable responses could be elicited from respondents who meet these afore set criteria as it relates to the subject matter of the study.

A total of 400 questionnaires were distributed to individual respondents out of which 300 were returned. The effective response rate is 75 percent, which is rather high as per similar previous studies. About 8 respondents were excluded from further analysis due to non-conformity to the requirement (criteria) to be used as samples and excessive missing data. The data in this instance was missing completely at random (MCAR). As suggested by Hair et al (2006, 2010), any remedy for missing data could be used. However, given sufficient sample size for the SEM, the authors preferred to exclude affected cases from further analysis. Therefore, the final sample size was 292 respondents.

Respondents' Profile

The profile of the respondents is shown in Table 1 below.

Table 1: Demographic Distribution of Respondents

	Frequency (N)	Percentage(%)
Age		
20-30	150	52.1
31-40	70	24.3
41-50	39	13.5

51 and above	29	9.9
Gender		
Males	168	58.3
Females	118	41.0
Ethnic Background		
Malay	279	95.9
Chinese	7	2.4
Others	5	1.7
Religion		
Islam	284	98.3
Buddha	2	0.7
Christian	3	1.0
Income		
<3000	154	54.4
3001-5000	73	25.8
5001-10000	42	14.8
>10000	14	4.9
Education		
Standard 6	6	2.1
High school	78	27.9
Diploma	64	22.9
Degree	132	47.1
Political Affiliation		
BN	31	14.3
PAS	127	58.5
PKR	8	3.7
AKIM	4	1.8
Others	47	21.7
State of Origin		
Kelantan	185	64.6
Selangor	21	8.0
Johor	8	2.7
Kedah	7	2.4
Malacca	2	.7
N. Sembilan	3	1.0
Pahang	9	3.1
Perak	12	.3
Perlis	1	2.7

Penang	3	1.0
Sabah	5	1.7
Terengganu	17	5.8
Occupation		
Architecture	2	0.7
Banker	8	2.7
Business	37	12.7
Civil Servant	32	11.0
Engineer	4	1.4
Farmer	1	0.3
Housewife	10	3.4
IT Professional	2	0.7
Lecture	8	2.7
Medical Practitioner	2	0.7
Pensioner	2	0.7
Pilot	1	0.3
Private	26	8.9
Sales agent	20	6.8
Student	39	13.4
Teacher	14	4.8

Table 1 presents the demographic characteristics of the respondents. It can be seen that more than half of the respondents age below 30 years and only 10 percents are age 50 years and above. The sex distribution shows that 58 percent are male while the remaining 42 percent are female. In terms of ethnic background, majorities are Malay (95.9 percent), 2.4 percent Chinese and the remaining 1.7 percent are others. Out of this 98.3 percent are Muslims, 0.7 percent Buddhist and 1 percent Christian. On the income, majority (54 percent) of the respondents earn less than 3,000 ringgit per month, while only 4.5 percent have monthly income above 10,000 ringgit a month. However, it can be observed that 70 percent of the respondents have education at diploma and above, with only 2 percent having not more than standard 6 certificate.

The respondents came from almost all the state in Malaysia, with the exception of Sarawak. However, majority are from Kelantan (65%). In terms of political affiliation, most of the respondents belong to PAS (58.5 percent) followed by BN (14.3 percent) and the remaining 30

percent shared by other political parties. Table 1 also revealed that the respondents belong to various occupation categories which include: civil service, lecturing, business, teaching, pensioner, housewife, farmer, private etc.

Questionnaire Development

In developing our questionnaire, many important questions that have to do with the problems of using gold as currency were considered. The respondents were asked to give their response based a 5-point likert scale. The aspect that captured challenges of gold dinar in our questionnaire consisted of 11 items. We used the scale of “1 –strongly disagree” to “5 –strongly agree”. This was to give the respondents the opportunity of flexibility when answering the questions. The questionnaire items were translated from English to Malay language to make it accessible by all the respondents. This was printed and administered to the respondents.

The response obtained from the returned questionnaire was then analyzed by SPSS for internal consistency and Principal component analysis (PCA) and AMOS for confirmatory factor analysis (CFA). The scale to measure challenges of gold dinar in Kelantan has good internal consistency, with a Cronbach alpha coefficient of 0.920.

Dimensions of challenges of Gold dinar

This study aimed to identify the validity of constructs specified for challenges of implement gold dinar in Kelantan based on our data. This dimension was sought through principal component analysis (PCA) thereafter, confirmatory factor analysis (CFA) was conducted to confirm the dimensionality obtained through PCA.

Exploratory Factor Analysis (Principal Component Analysis)

The underline dimension of the challenges of adopting gold dinar in Kelantan was explored using PCA. The 11 items of challenges of adopting gold dinar in Kelantan were subjected to principal component analysis (PCA) using SPSS version 18.0. Before performing PCA, the suitability of data for factor analysis was assessed. Inspection of the correlation matrix showed the presence of many coefficients of .3 and above. The Kaiser-Meyer-Okin value was .906, more than the recommended .6 and Bartlett's Test of Sphericity reach statistical significance [$\chi^2(55) = 2031.631, p < .001$], supporting the factorability of the correlation matrix (Pallant, 2007).

Principal component analysis revealed the presence of two components with eigenvalues exceeding 1, explaining 55.9 percent and 9.5 percent of the variance respectively. An inspection of screeplot revealed clear break after the second component. Following Catell's (1966) scree test, it was decided to use two components for further investigation. This was further supported by the results of Parallel Analysis which showed only two components with eigenvalues exceeding the corresponding criterion values for a randomly generated data matrix of the same size (11 variables x 292 respondents).

The two component solution explained a total of 65 percent of the variance, with component 1 contributing 55.9 percent and component 2 contributing 9.5 percent. To assist our interpretation of these two components, oblimin rotation was performed. The rotated solution revealed the presence of simple structure (Thurstone 1947), with both components showing a number of strong loadings and all variables loading substantially on only one component. Following the guideline provided by the scholars (Byrne 2001, 2010; Hair et al. 2010, and Kline, 2011) to consider higher factor loading and adequate number of items, the two factors are named internal and external challenges.

Construct Validity of challenges of Gold dinar adoption

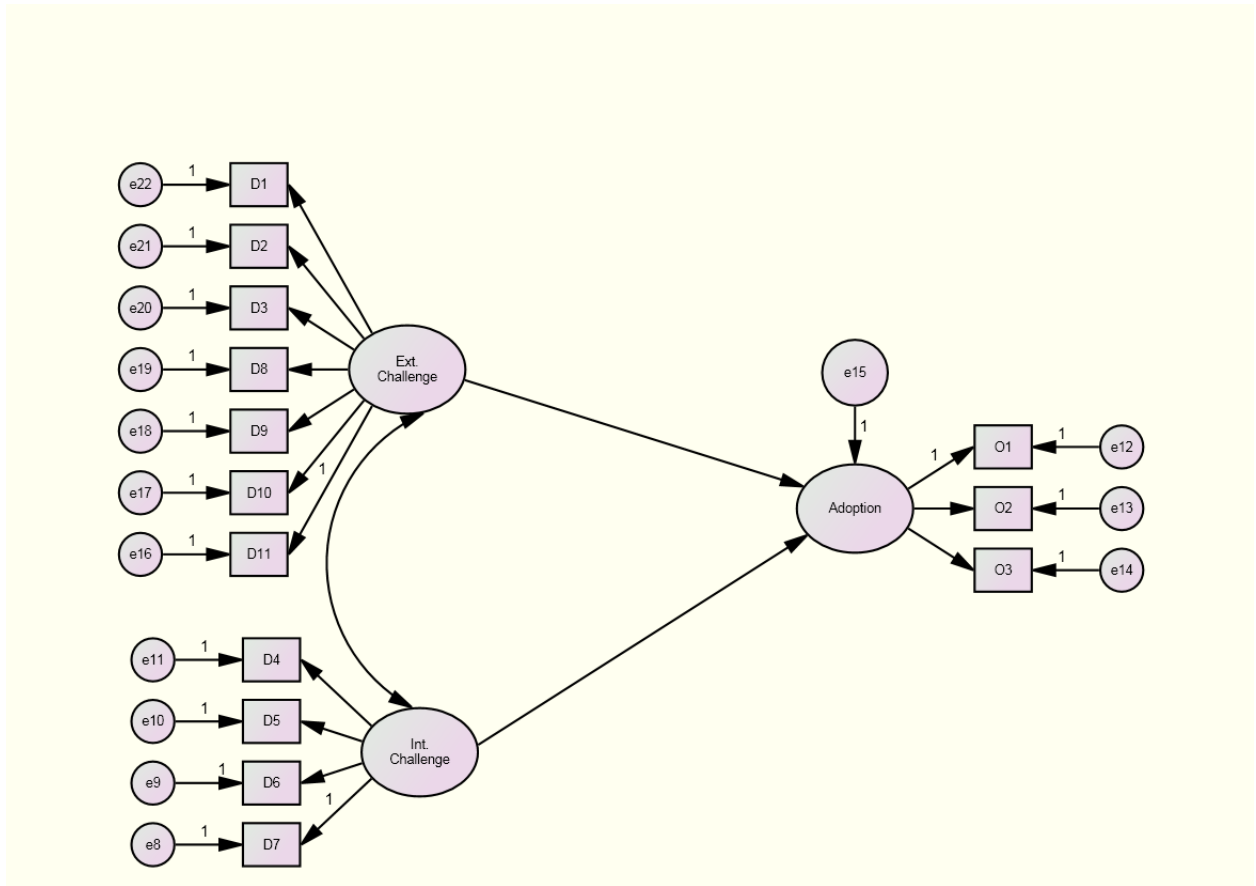
The hypothesized measurement model of challenges facing adoption of gold dinar is explained by two dimensions: external and internal challenges (figure 1).

Research Hypotheses

H₁: External challenges is hypothesis to have negative effect on adoption

H₂: Internal challenges is hypothesis to have negative effect of adoption of gold dinar

Figure 1: Hypothesized Model of challenges to adoption of gold dinar in Kelantan.



Model specification

The two factors extracted from the result of the PCA were hypothesized as the unobserved variables of challenges of gold dinar adoption. The hypothesized measurement model, containing the two latent variables loaded with the 11 indicators is shown in figure 1. The first latent variable is external challenge with internal consistency of .893 and the second factor is internal challenge with internal consistency of .850 based on the data collected from 292 respondents in Kelantan (n = 292).

The relationships among the 11 measurement items of Challenge of Adoption of gold dinar were examined and the indices were found to be statistically significant (see Table 1). Also the normality of the data was examined, using AMOS (version 18.0), there was no serious

violation of the normality assumption as indicated by the indices of skewness and kurtosis. All the values of skewness were negative and smaller than 0.1. We also examined the presence of outlier in our data by the Mahalanobis distance. There was no outlier in our data in our data which justifies use of CFA to address our research hypothesis.

Measurement Model Estimation

A confirmatory factor analysis was conducted on the 292 sampled data collected from gold dinar users in Kelantan through Structural Equation Modeling in AMOS (Version 18), using Maximum Likelihood (ML) estimation (Byrne, 2010). SEM is a multivariate technique used to analyze hypothesized relationship specified on theoretical or empirical evidences, and transformed into path diagrams (Mueller and Hancock, 2008). According to Hair, et al (2010), SEM's graphical features do not only allow for the analyses of latent factors just like in the regression analysis but also permit modification of theoretical models to capture varying interrelationships. According to Byrne (2001, 2010), SEM possesses four desirable characteristics that other multivariate analyses do not have, (1) SEM takes a confirmatory approach to data analysis rather than exploratory in other multivariate procedure. (2) It provides clear estimates of error variance parameters. (3) It can incorporate both un-observed and observed variables. (4) It is the only widely and easily applied alternative method for modeling multivariate relations, estimating point and/or interval indirect effects. Therefore the choice of SEM for this research stemmed from its relevance to accommodating many latent variables.¹¹

The measurement model of the two latent constructs revealed that the overall data model fit was $\chi^2 (74) = 406.602$, $p = .000$ (figure 2). The highly significance of the model is an indication of misfit between the covariance matrix of the observed data and the implied

¹¹ Each latent construct is represented by several measured variables as used in this study, thereby, permitting the measurement of latent constructs and inclusion of measurement errors for each indicator (Blunch, 2008)

covariance matrix of the model. Following the recommendation of researchers (Byrne, 2001, 2010; Hair et al, 2006, 2010) that at least one absolute fit index and one incremental fit index be used in addition with the chi-square and its associated degree of freedom, we chose the Normed chi-square (CMIN/DF), the Comparative Fit Index (CFI) and the Root Mean Square Error of Approximation (RMSEA).

All the fit indices, CFI = .855 (below the threshold of 0.9 and above), CMIN/DF = 5.495 (above the recommended ≤ 3 cut- off point) and RMSEA = .124 (above the recommended $\leq .08$) were found to be inappropriate (Byrne, 2001, 2010; Hair et al, 2006, 2010). However, all the loading values of observed variables of the model are above .50 showing that they are all statistically significant. However, the overall fit of the model shows that the model did not fit the data well.

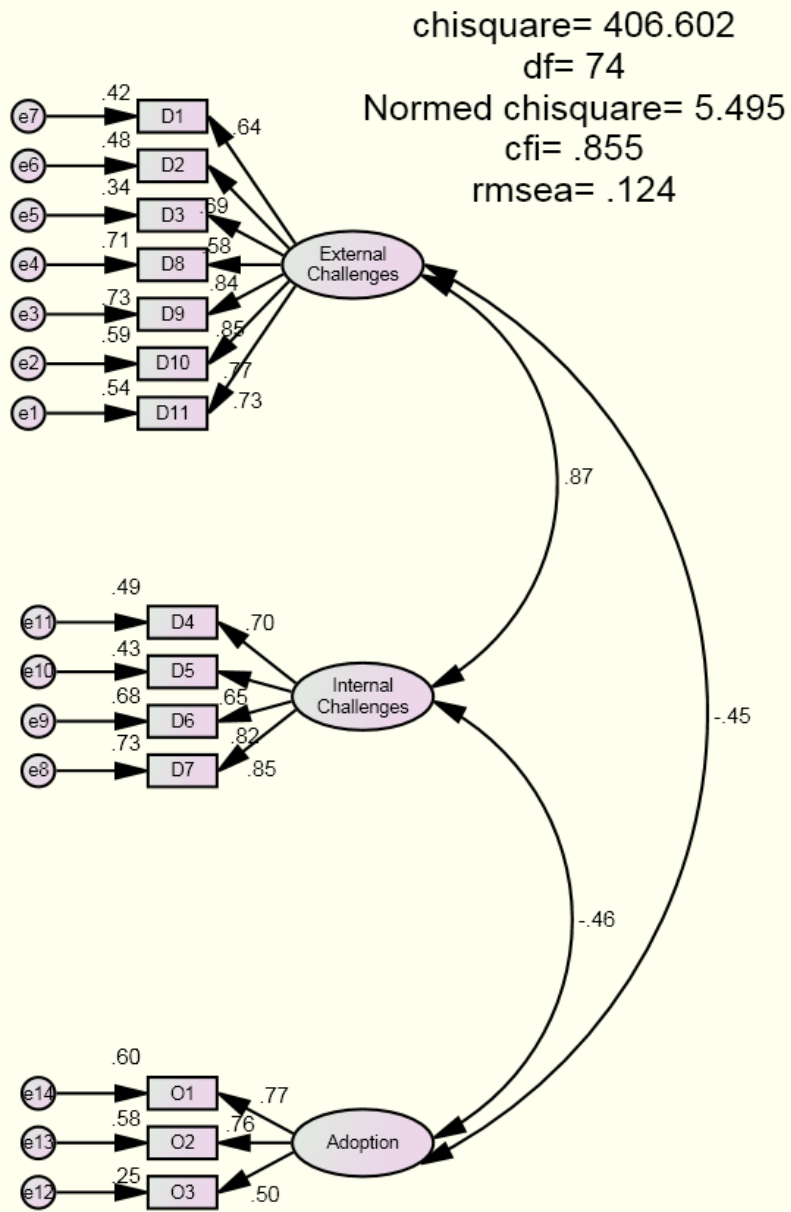


Figure 2.

Because of the inappropriateness of the data to our hypothesized model, we tried to search for a better model fit for the data by examining the model fit. Examination of all the indicators shows that none of them has a serious problem. We then turn to the Post hoc modification index (MI) to identify a more parsimonious model. Our examination showed that there were correlations between errors (e6 & e7) of indicators D10 and D11, and that of D1 and D2 (e1 & e2) of the variable, external challenges. A plausible explanation of these is that there is high possibility that respondents might have answered these questions in a similar manner, hence the correlation of the errors. The model was estimated again after free the two inter-correlation among the four errors as suggested by the parameter of Modification Indices.

The Revised Measurement Model

As shown in figure 3, the goodness of fit indices show the overall fit of the revised model to be consistent with the data. The new chi square statistic was statistically significant, $\chi^2(72) = 194.338$, $p = .000$, meaning that there is no difference in the covariance matrix of the observed data and the implied matrix of the revised model. The change in chi square statistics between hypothesized model and revised model is also significant, $\chi^2(2) = 212.264$.

All the fit indices show that the revised model fits the data. The Normed chi square (CMIN/DF) was 2.699, below the recommended cut-off point of 3 for χ^2/df to reflect good model fit. Also the Comparative Fit Index (CFI) of .947 and the Root Mean Square Error of Approximation (RMSEA) of .076 indicated that the data fit the revised model well (Byrne, 2001, 2010; Hair et al., 2010). Furthermore, all the parameter estimates are also statistically significant (figure 3). They all showed logical signs with no offending estimates. The variance explained by the 11 observed indicators as shown by the squared multiple correlations (SMC) provided

reasonable values, ranging from .320 (D3) to .773 (D9) (refer to Table 3). The revised model therefore, best suite the data compared to the originally hypothesized model (refer to Table 4).

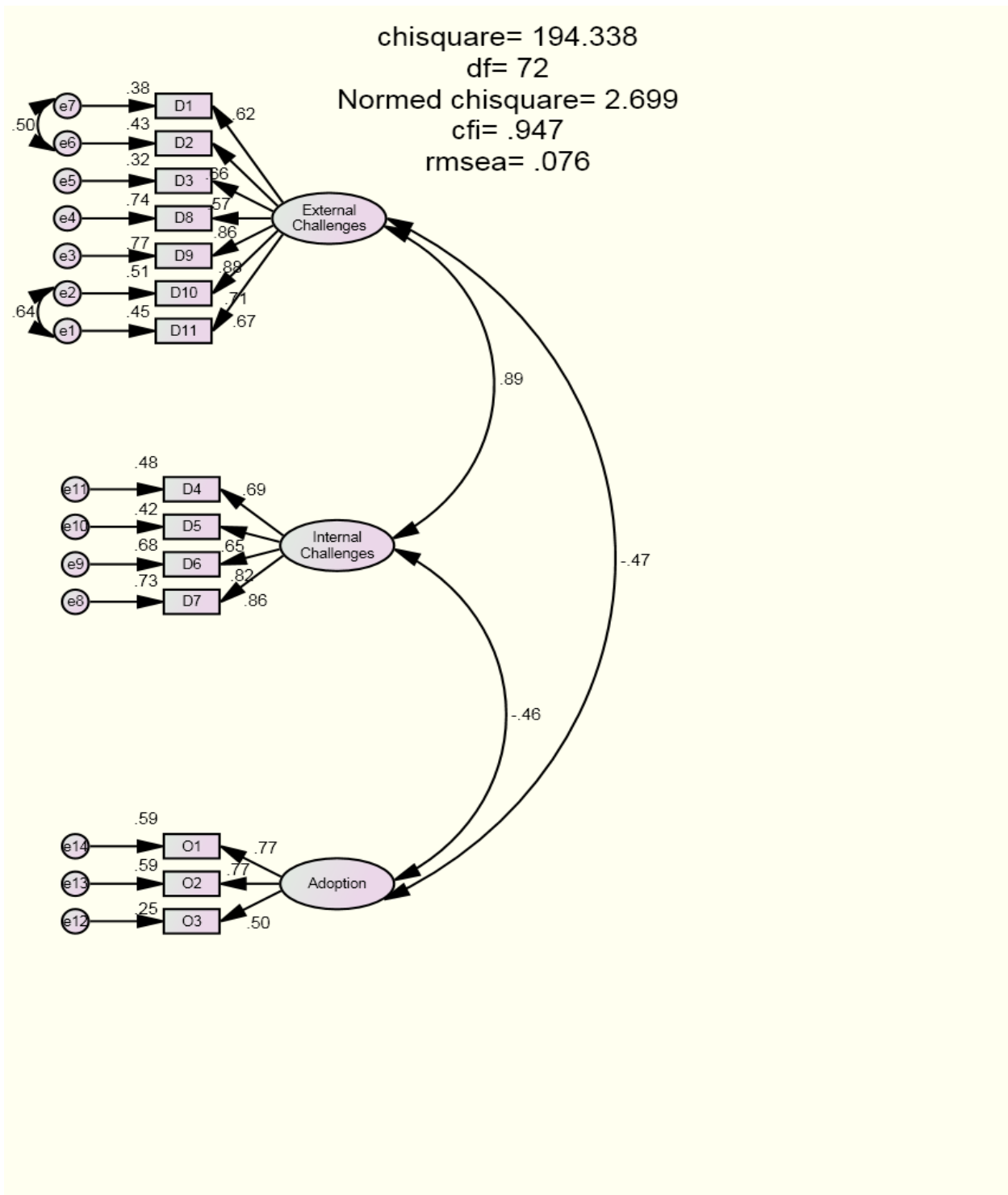


Figure 3.

Table 3: Square Multiple Correlation

	Estimate
O1	.594
O2	.590
O3	.248
D4	.480
D5	.421
D6	.681
D7	.732
D1	.382
D2	.430
D3	.320
D8	.741
D9	.773
D10	.510
D11	.452

Analysis of the Structural Model

The hypothesized model (Figure 1) was evaluated using AMOS version 18.0 based on the following indexes: the chi-square test, the comparative fit index (CFI), and the root mean square error of approximation (RMSEA). In addition, the path coefficients were assessed for statistical significance at $p < .05$.

As indicated in Figure 4, the chi-square test was significant, $\chi^2 (72, N=292) = 194.33, p = 0.000$,¹² nonetheless, the results yielded acceptably high goodness-of-fit indexes. This indicated that the hypothesized model fits the observed data well. This was established with a Normed chi-square (CMIN) value of 2.699 which is well below the value of 5 often indicated as the benchmark in SEM literature. The CFI also yielded an impressive index of 0.947, also the RMSEA value of 0.076 is below the 0.08 cut-off point. All these show a good fit of the model. The two path coefficients indicated that both are not statistically significant ($p < .05$) but

¹² This indicates a bad fit. In SEM, Chi square test non-significance is expected, i.e, $p > .05$. However, Mueller and Hancock (2008) noting the susceptibility of chi-square to sample size, recommended the use of the CMIN instead.

practically significant (standardized $\beta > .2$) with logical sign (negative), indicating that the two form of challenges (External and Internal) are inversely related to the adoption of gold dinar in Kelantan (figure 4).

Figure 4:

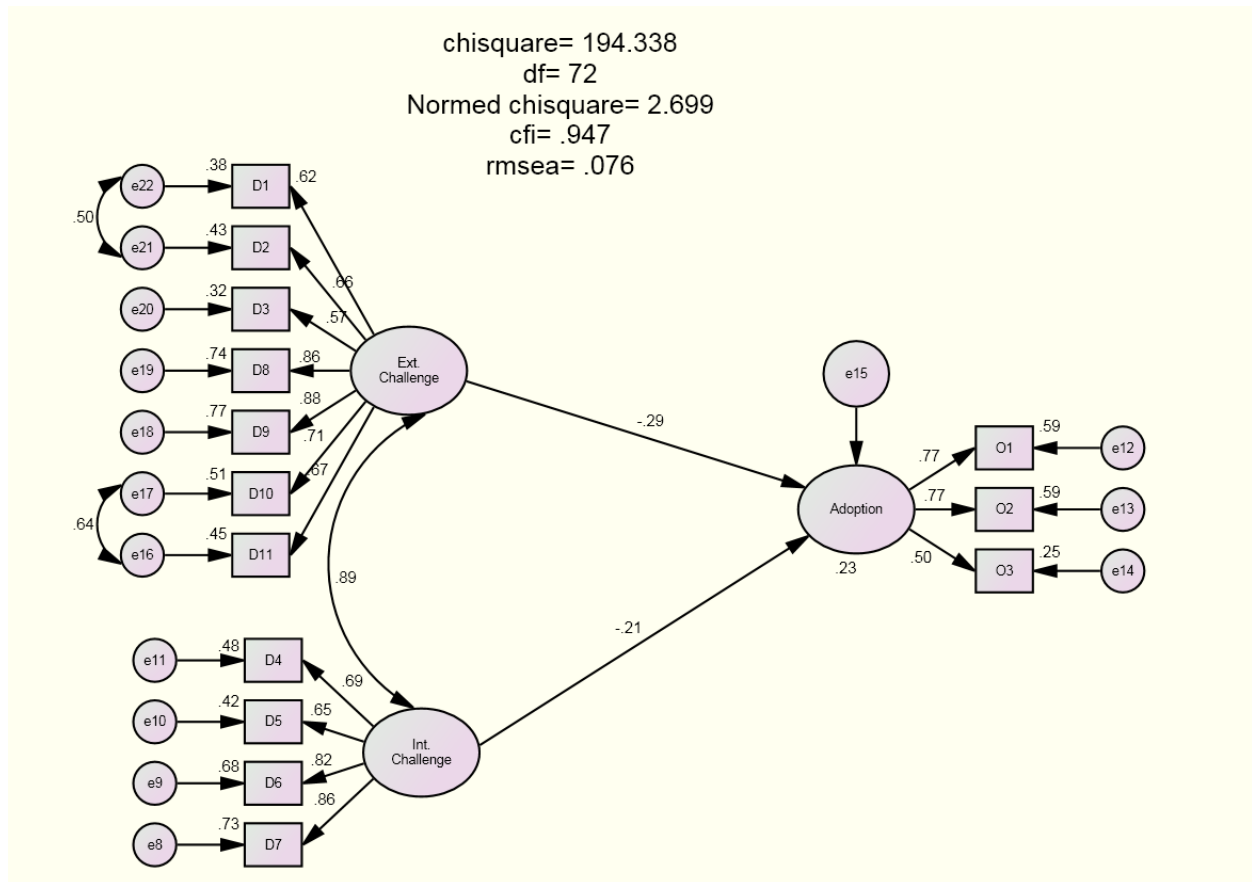


Table 5 below shows the result of the structural model.

Table 5: Results of the structural model

Hypotheses	Causal Path	Estimate	Standard Error	t-Value	P	Results
H1	Ext Chall→Adoption	-.29	.168	-1.469	.142	Not Supported
H2	Int Chall→Adoption	-.21	.145	-1.038	.299	Not Supported

DISCUSSION

The research question on the indicators of challenges of adoption of gold dinar in Kelantan was addressed based on the measurement model output. All the indicators have factor loadings from 0.5 and higher, the threshold mentioned in most literature. Furthermore, as shown in the table 5 below, all the indicators have critical ratios more than 1.96, which implies that they are all statistically significant.

Regression Weights: (Group number 1 – Default model)

		Estimate	S.E.	C.R.	P	Label
Adoption	<--- Ext._Challenge	-.247	.168	-1.469	.142	
Adoption	<--- Int._Challenge	-.150	.145	-1.038	.299	
D7	<--- Int._Challenge	1.000				
D6	<--- Int._Challenge	.952	.057	16.778	***	
D5	<--- Int._Challenge	.734	.061	12.006	***	
D4	<--- Int._Challenge	.773	.059	13.110	***	
O1	<--- Adoption	1.000				
O2	<--- Adoption	1.010	.113	8.935	***	
O3	<--- Adoption	.591	.082	7.190	***	
D11	<--- Ext._Challenge	1.000				
D10	<--- Ext._Challenge	1.024	.056	18.267	***	
D9	<--- Ext._Challenge	1.168	.089	13.065	***	
D8	<--- Ext._Challenge	1.174	.091	12.858	***	
D3	<--- Ext._Challenge	.732	.082	8.890	***	
D2	<--- Ext._Challenge	.893	.088	10.168	***	
D1	<--- Ext._Challenge	.767	.080	9.632	***	

Source: Author' computation

Looking at the factor loadings of the threat of internal challenges to adoption of gold dinar in Kelantan, fear of people fail to collect dinar, hoarding of dinar and fear of collecting fake dinar have their factor loading from highest to lowest respectively. It should be noted that the factor with highest factor loading is the fear of not getting people to transact with in gold dinar. This is very important since the essence of the new currency is for it to be used in the day to day transaction and failure to get others to accept this currency will tie down the wealth of the user. This point is also important in the face of threat by the central bank which may make people shy to away from accepting the dinar in order not to incur the wrath of the law.

The next important indicator of internal challenges from the table above is fear of people hoarding the dinar and thereby taking it out of circulation. This threat is important in the situation whereby gold dinar (good money) is circulating with paper currency (bad money). Following the Gresham law which states that bad money drives out good money, people prefer to spend bad money and to hoard good money so that they will not lose their wealth in case the fiat money collapses. In other words, people see gold dinar as a good source of investment, thereby holding on to it.

Fear of collecting counterfeit dinar had the third highest factor loading for internal challenges. Counterfeiters fake all forms of currency and gold dinar could not be an exception, most especially when the currency is still new and few people have access to determine the genuineness and purity of the precious metal. However, this concern, though significant, comes after the first two factors. This may not be unconnected with high technology deployed by the issuing body which may make it difficult to fake as well as the punishment it may attract that will prevent people from indulging in it.

In terms of external challenges of gold dinar, items related to confiscation of gold dinar by federal government, issue of paper money driving out gold dinar in circulation, volatility of dollar price of gold, proscription of gold dinar, fear of using gold dinar and legal tender law in decreasing order of significance. It is not surprising that the item with highest factor loading under external challenges is the fear of confiscation by federal government. As noted earlier, the legal tender law stipulates that Ringgit is the legal tender in Malaysia and only Bank Negara has the right to issue currency notes or coins, and those it delegates the authority. Bank Negara has the right to confiscate any form of currency circulating in Malaysia without its authority. Thus, it is understandable why this is the greatest fear people entertain towards dinar; an attempt to safeguard one's wealth should not lead to completely losing it.

The next concern people have for gold dinar is its usage in a dual currency environment, with ringgit, known to be inferior (bad money) to it. As such it may drive out the good money (gold dinar) because people will tend to hoard it. The volatility of gold price due to excessive depreciation of dollar as a result of the financial crisis which makes people to invest more in gold was the next threat people have to the use of gold dinar. The last, though the most important threat, that is the root of all others, is the issue of legal tender. It is the legal tender that enforced

the use of fiat money (ringgit). It is also the backbone of the Gresham law. Without legal tender law, good money will drive out bad money from circulation because nobody will collect it. However, the least threat to gold dinar, as rated by people though significant, is the legal tender law. This may not be unconnected with the fact that most people do not understand what legal tender was before the introduction of gold dinar and its threat is not as apparent as those of other challenges mentioned above.

In terms of path coefficients, the two paths are not statistically significant. The plausible reasons may be that there are other p-factors that affect the use of gold dinar other than those analyzed in this study. However, the two paths are practically significant and exhibit logical (negative) signs. This shows that challenges have reduce effects (inverse) on the adoption of gold dinar in Kelantan.

Conclusion

The main objective of this study was to assess the influence of challenges on the adoption of gold dinar in Kelantan state in Nigeria. Based on our findings, factors those proxies the challenges of adoption of gold dinar are statistically significant. For this reason, it may be concluded that external and internal challenges have negative effects on the adoption of gold dinar in Kelantan. However, the three most significant indicators are banning of gold dinar by federal government, people refuse to accept gold dinar and hoarding of gold dinar. The two path diagrams are also practically significant with the correct sign, indicating that the two construct explained about 50 percents of the challenges to adoption of gold dinar in Kelantan. The external challenges account for 29 percent of the threat while internal challenges account for the remaining 21 percent.

A rather surprised result is the statistically insignificant of the two paths between external and internal challenges and adoption of gold dinar. As such, it may be concluded that though these threats are present, they do not prevent people from adopting gold dinar in Kelantan. However, against the backdrop that these challenges are serious threat to eventual widely accepted and usage of the gold dinar in Kelantan, they must be taken seriously and lasting solution sought again them.

Finally, the findings of this study and the conclusion reached need to be subjected to further studies as this is one of the earliest works on gold dinar adoption in Kelantan and the authors might have omitted certain important indicators that are relevant in the study. Also, it is obvious that other factors may be present that pose threats to adoption of gold dinar in Kelantan that our study did not capture. Moreover, it will be interesting to do the invariance analysis in other to see the effects of demographic and political divides on the challenges facing adoption of gold dinar in Kelantan.

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Appendix

Pattern Matrix^a

	Component	
	1	2
I feel I could lose part of my wealth if Federal Government proscribe gold dinar	.921	
I feel apprehensive using gold dinar	.849	
I am afraid federal government may confiscate my gold dinar	.784	
I am afraid dollar price of gold dinar may make it volatile	.643	
I am afraid federal government may not allow states to use gold dinar	.642	
I am afraid paper money may drive gold dinar out of circulation	.622	
I am always afraid of legal tender law	.458	
I am afraid of collecting fake gold dinar		.899
I am afraid people will hoard gold dinar		.791
I am afraid nobody may wish to collect gold dinar from me		.682
I am scare gold dinar may run out of circulation		.517

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 8 iterations.