

To Examine the Effectiveness of Media Channel- ICT and Agent of Change As Factors Influencing Customers' Adoption of Islamic Bank in Indonesia

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Abstract

The sluggish of market penetration of the Islamic Bank in Indonesia needs to be examined considering the huge of the population of Muslim is about , 241.7 million or 0.87% of the total population (DataIndonesia.id, Monavia Ayu Rizati et al. 2023) but currently registered customers is only about 30-millions (Hery Gunardi CEO BSI n.d.). There are several factors that must be studied, especially the extent to which Islamic Banks utilize Media Channel - Information Communication Technology (ICT) (Blackburn, 2011) and community leaders as Agents of Change (AC) in attracting adoption (Sahin and Rogers, 2006). The survey in the form of Goggle Form has been distributed to 450-samples who are resident of Java with the expectation of 384 maximum number sizes as theory of Determining Sample Size (KREJCIE, 1970) and it have been returned satisfactorily. The analysis is using PLS SEM software to answer the hypothesis of H-1 for ICT and H-2 for Agent of Change that have proved in attracting customer's adoption

Hadits HR Bukhari:

آيَةٌ وَلَوْ عَنِّي بَلَّغُوا

Hope this study beneficial to the rate of adoption of Islamic Bank in Indonesia.

Keywords: Information Communication Technology (ICT), Agents of Change (AC), Adoption, Islamic Banking

Introduction

It is undeniable that the rapid development of information technology (ICT) in various platforms is a means of communication if used properly.

The increased number of internet users in Indonesia as of January 2023 was recorded at 212.9 million out of the total population of 276.4 million, meaning that internet penetration in Indonesia currently reaches 77 percent.

That can be accessed via mobile phone with an average of 7 hours 42 minutes per day. Their active social media accounts reach 167 million people, or about 60.4 percent of the total population (Meltwater DataReportal, 2023 2023).

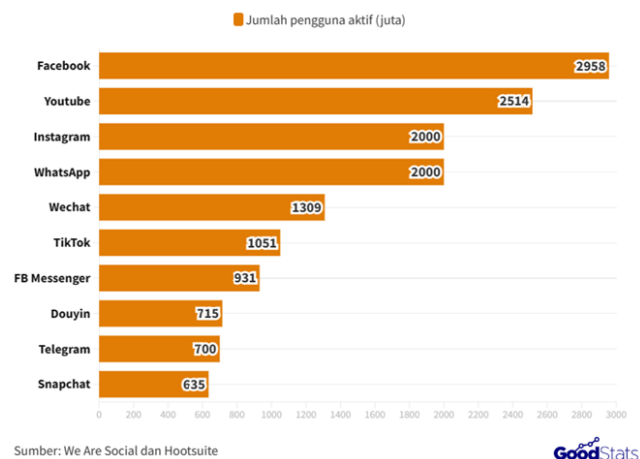


Those active users mostly are accessing media platforms as follow

Likewise, the existence of community leaders, especially *ulema*, *ustadz*, preachers as Key Opinion Formers, which continues to increase due to the regular yearly graduation of Muslim students who become potential influencers or role model. They can act as Agent of Change for the industries that have target market with multi levels of educational backgrounds and little on religion’s knowledge.

Those two potential elements look like match pairs to help Islamic banking increasing their small market share of 7.2% of total Islamic finance (Antara, 2022). The ICT is connoted as 'containers' and the Agent of Change as source of information,

Daftar platform media sosial dengan pengguna aktif terbanyak
Januari 2023



Indonesia Islamic Bank Situation Analysis

The first Islamic Bank is Bank Muamalat which is established in November 01, 1991 (Febrina, 2018 n.d.) and currently has grew to become 13 active Islamic Banks which include three state Islamic Banks have been merger in 2021.

The aiming of merger is to lead the Islamic Bank sector in Indonesia and to position to be the top ten of globally Islamic Bank base on market capitalization and center of gravity of Islamic economy and finance in the world with total asset range of 220 - 250 trillion (CNN Indonesia, 2020).

In 2022, Financial Asset was able to grow 13.8% (yoy), Islamic Finance market share was also grew by 13.94% (yoy) but the market penetration keep faltered (Idx Channel 25052022 2022). In its operation, Islamic banks are required to have an internal Islamic Supervisory Board (DPS) who carries out Islamic supervisory and advisory functions, assessing, ensuring and overseeing the compliance of the operations and products offered by the Islamic bank. To help in increasing market share, a top down strategy is needed because the support from the government and the Indonesian *Ulema* Council (MUI) which have the capacity to issue FATWA will be more powerful.

SWOT Analysis

The Strength

The operation of Islamic Bank is based on Islamic principles that have no element of usury, *gharar*, *maysir*, unlawful and injustice objects.

Their branches are scatter across the country and equip with technology and skilled Muslim staffs who communicate in Islam's cultures.

Each branch is usually in an environment with Muslim communities that community leaders who can be agents of change.

The Weakness

In general, public's knowledge is still categorized as very basic; they need information about operation and principles of Islamic banking such as profit sharing, financing transaction and the advantages from religious values.

The average level of economic segmentation is below moderate that causes people easily influenced by promotions from conventional banks

The Opportunity

Big Muslim population is the opportunity to be the new adopters.

The development of variety of social media's platforms and increasing number of the users of mobile phone,

The availability of *Ulama* and Community Leaders can be as influencers and to become Agent of Change.

The Threat

The conventional bank is very aggressive in promoting products and services.

The availability of their branches cover in cities of 17,500-islands with updating technology, the flexibility of services for any type of business and financing any type of transaction for any type religious local and overseas.

Problem Statement

The Islamic finance industry growth was so slow. In fact Islamic Bank has the strength and opportunity to support increasing consumers such as the development of social media with various platforms that has high public's reach and *Ulama* or Community Leader who have capacities to become spoke persons.

Base on the above identifications, the problem can be stated as follow:

1. The existence of Information Communication Technology has not been fully utilized by Islamic banks as a Media Channel in disseminating information.

2. The public needs someone such *ulama* or public figures as model or Agent of Change who can provide information or education about Islamic Bank.

عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ

He teaches men what he didn't know. (Al-Quran – 96:5)

Islamic Banking Asset Statistics - Jan. 2022 (in Billion)

	2019	2020	2021	Jan-22
Islamic General Banking (BUS)	350.363,545	397.072,971	441.788,835	443.380,442
Business Units (UUS)	174.200,154	196.875,017	234.946,626	217.641,715
Total Asset BUS & UUS	524.563,698	593.947,988	676.735,460	661.022,157

Source: Indonesia Economic Report 2021, processed; (OJK Report 2022 n.d.)

Research Questions

The role of research question is to guide the direction of preparing hypotheses and instruments that are distributed to respondents.

1. Does the Information Communication Technology can be an effective tools to transferring information needed by public and reaching new adopters in the state of Java?
2. Does public who domicile in Java needs in-depth information and persuasion from trusted persons or key opinion formers or called Agent of Change such as *ulama* in adopting Islamic Banks?

The Research Objectives

The study in the particular factors is to ensure as follow:

1. To study if the ICT is an effective tool to transfer information and approach public who domicile in Java
2. To study that Agent of Change has important role in delivering messages and best influencers to persuade new adopters of Islamic Bank in the state of Java.

Literature Review

The literatures to support the research are as illustrated in the frame work theory and the findings of previous researchers as follow

1. **Adoption** is a process of accepting new ideas or innovation in the form of information (Everett Rogers 1995) through communication channels in various platforms at any time in the social system flowing from source to adopter.
The journey of innovation to adopter is named diffusion takes place through five stages, namely knowledge, persuasion, decision, implementation and information (Sahin and 2006 & Rogers 1995 2006).
2. **The Media Channel – ICT** or Information Communication Technology is a medium to convey messages from source to audiences (Schramm 1955), it is also mentioned by Roger who emphasized as diffusion information to reach the adopter (Blackburn 2011)

It can be in the form of mass media such as print, electronic, film, video, including various platforms of internet base called social media for instance FB, instagram, tweeter, telegram, podcast etc. that present face in live (R Roger Fernando Daniel 2017).

In fact when discussing Media Channel – ICT, it touches technology which in the Acceptance Model Theory (TAM) (Davis 1989) it facilitates the process of transferring messages to adopters.

ii **Agent of Change**, they can be Muslim leaders, *ulama*, Islamic School Teachers and Students, Key Opinion Leaders/Formers who are trusted, potentially acting as information source, Public Relations Officers, spoke person, transmitter messages, motivators, persuaders for Muslim communities to adopt Islamic Banks (Sahin, 2006; Rogers, 1995; 2006).

They must be credible person, good in communication and listener, have strong self-confident, knowledgeable, good leadership, understand social structure, and have empathy and humanist.

They can be people from inside or outside the organization who have the ability to influence, convey or disseminate information, solve problems, and carry out their duties in a professional manner to persuade innovation decisions in accordance with the direction of the organization Wani (2015); Tann (2021); and master in Persuasion Model Devito (2013) and Elaboration

Review Previous Studies

Media Channel – ICT

It looks like that not much researcher study on the Media Channels (Mustaffa and Asyiek 2017).

Those who mention Communication channels is (Thambiah, 2012; Yahaya, 2016; Sahin and 2006; Rogers, 1995 2006).

(Arham, 2012) who did study about the Empirical Analysis of Marketing Activities in Indonesia Islamic Banking.

His frame work consist of determining adoption, marketing mix, facilities and service using theory of STEP (Social, Technology, Economic and Politic) (Gray et al., 2016)

Aziz and Afaq (2018) had findings from his research that Marketing manager should develop comprehensive marketing information and communication (ICT) campaign including advertising and social media to enable attract and retain potential customers.

Butt et al (2018) in his research findings on Determinant of low adoption of Islamic Banking in Pakistan; had clearly mentioned that the management need to develop a better understanding of each segments in various information and communication (ICT) messages and the role of media channels in building awareness and running public education.

Sahin (2006); Rogers (1995; 2006) in his study of Diffusion of Innovation Theory and Educational Technology mentioned that the process of diffusion innovation is involving participants who create and share information to reach mutual understanding.

This communication occurs through channels between sources who deliver messages to audiences

Ratheeswari (2018) in his research title of Information Communication Technology in Education mentioned that ICT is a catalyst for change that could improve teaching and learning through various platforms and easy accessing ICT through internet.

Wani (2015), studied about Innovation Diffusion Theory Review & Scope in the Study of Adoption of Smartphones in India mentioned that technology facilitates almost all forms of communication now-a-days be it vocal, written or multimedia.

Davis (1989) in his Acceptance Model Theory (TAM) introduced two assessment that is Perceived of Usefulness in which person feel that the system gives benefit to certain tasks and Perceived Ease of Use is perception of person feels easy to do without effort.

Okundaye et al (2019) in his study on The Impact ICT on SME (Small to Medium Sized Enterprises) in Nigeria confirming that the role of ICT for SME is a vital support to the development of socio economic.

ICT needs to keep up innovation to contribute improvement and achievement of competitiveness advantage of the organization and increase customer satisfaction (Niebel, 2018; Rahayu and Day, 2017; Okundaye et al., 2019)

Leader in the development countries who keep basic ICT and do not utilize the benefit of high tech of ICT will face the adoption of innovation remain slow (Jones et al. 2017) p:18

Agent of Change

Aziz and Afaq (2018) mentioned in his study Adoption Islamic Banking in Pakistan that to build public awareness and positive attitude, it needs someone i.e. religious scholar, economic experts, sibling, friends, colleagues, models who could explain more about Islamic banks product, services and operation.

Thambiah (2012), in the research of Study on Consumer Adoption of Islamic Retail Banking Services in Malaysia which one of the findings mentioned that customer needs more explanation and guidance from Community Leaders such as *ulama* who could satisfy them and adopt it.

Tann (2021) had study about Agent of Change in Innovation which mentioned that Agent of Change can be hired from internal and external sources.

Gerrard and Cunningham (1997) did study with title Islamic Banking a Study in Singapore which has minor Muslim communities.

The research suggestion is addressed to Muslim Bodies to recruit Opinion Formers to be the Agent of Change who provides in-depth explanation all about product and concept of Islamic Banking to their followers.

Ellsworth (2000) in his study about Surviving Change: a Survey of Education Change Model highlighted the most critical benefit of Roger's model is the innovation attribute. When practitioners are involved in the actual development of innovations or deciding how to adapt innovations to meet local needs, reciprocal relationships and dynamic exchanges are needed between components in the change system through the agent of change. Ito and Shintani (1997) in the report from study about Persuasion among Agents: "An Approach to Implementing a Group Decision Support System Base on Multi Agents Negotiation" provided persuasion mechanism for negotiation and implement a Group Choice Design Support System and the success of persuasion of Agent of Change requires the compliance of that agent's users.

Research Method

The choice for this study is Quantitative Method.

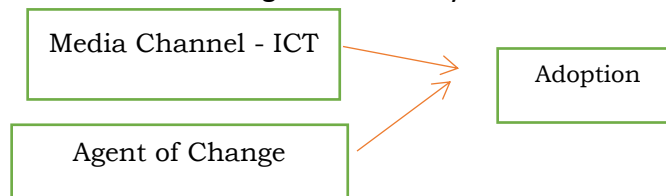
The response will be analyzed by statistic and the question will be in the form of closed ended

Research Design

The design of the research is a survey that is spread out through the Google Form which is very effective, efficient and economic.

Theoretical Frame Work

The theory of frame work is use to guide the study and it is illustrated as follow:



That both factors are underpin Innovation Diffusion Theory from Everett M. Roger (Singhal and Law 1997) and TAM of (Davis 1989)

Research Population

The population of this study was taken from individuals or units of interest at random for which most of the data were not available (Hanlon and Larget, 2011)

It is focused in Java as considered have largest number of population among other islands of Indonesia and there are many big cities in each provinces.

Sample Size

The sample is portion of individual in population.

Considering Java to date has more than > 126-million population, therefore this study will limit the respondent to 384 as the maximum number of Krejcie (KREJCIE, 1970) when the population is more than 7-million which the formula is as follow:

$$S = \frac{X^2NP(1-P)}{d^2(N-1)+X^2P(1-P)}$$

S : Required sample size

$X^2(3.841)$: The table value of Chie-square for 1-degree of freedom at the desire confidence level

N: The population size

P: Population proportion (assume to be .50 since this would provide the maximum sample size)

d: The degree of accuracy expressed as proportion (.05)

As there is an allowance to increase the instrument distribution to 30% from 384, therefore to anticipate the low number of responses and inaccurate respondents, the questionnaire has been distributed to 450 samples.

Response Analysis

Table

Response Rate

Number distribution	450
Response	432
Inaccurate respondent	38 = 8%
Accepted and Analyzed	384

Hypothesis

Media Channel - ICT

The Technology Era 4.0 has provided various conveniences, especially in terms of communication interactions and any type of education (Ratheeswari, 2018).

(Sahin and Rogers, 2006; Pearson 2003). Information Communication Technology is a media channel as part of strategy management to retain business and priority for long term success (Niebel, 2018; Rahayu and Day, 2017)

H1: *Media Channels (ICT) has positive influence to adoption of Islamic Bank among Muslim's customer in the state of Java*

Agent of Change

The role of community leaders, *ulama*, Muslim scholars are to convey religious knowledge (Thambiah, 2012). The persuasion from opinion leader is the best way to foment positive attitude (Sahin and Rogers, 2006). They potentially can be asked for helps in educating Islamic financial laws such as *riba* (usury), *gharar*, *mayshiir* and other messages about the Islamic Bank to new adopters. They are role models to whom the Muslim community trusted and real marketers Butt et al (2018) who can be recruited as spokes persons, public relations officers, convey messages through word of mouth Arham (2012) from Islamic Bank management to the public.

The taxonomy of Agent of Change has to be referred to as generator's agent of change, change implementers and change adopters who have the ability to identify those who are capable of transforming problems into perceived needs (Tann, 2021; Ottaway, 1983)

H2: *Agent of Change is potential influencer to adopting of Islamic Bank among Muslim's customer in the state of Java.*

Research Instrument

The questions are arranged in the form of statements. Each variable has eight statements that are expected to answer the hypothesis

Media Channel - ICT

1. The use of both conventional and social media channels could attract new customers for Islamic Bank's customers
2. ICT can accelerate the delivery of information about product and services of Islamic Banks to customers
3. The availability of ICT (website, eBanking) proofs that Islamic Bank keeps up with the development of technology and cares to the need of customer as an effort to attract new adopters
4. Islamic Bank should be very proactively in using social media to approach customer
5. I think social media channel is believed to be able to reach customers across the country for adoption
6. I believe media channel could establish relationship and help for adoption
7. ICT or media channel could build public perception of modern and professional Islamic Bank
8. ICT could trigger more adoption as it perceive innovation in the digital marketing and reduce cost for institution and users

Agent of Change

- 1 I need more explanation to understand about Islamic Bank from someone i.e. friends, siblings, colleagues, experts
- 2 I think ulema (religious leaders) is the best marketer of Islamic Bank and knowledgeable in describing the permission and impermissible transaction
- 3 I was persuaded and convinced by someone as outsider experts in selecting Islamic Bank
- 4 The management Islamic Bank needs to provide helpful and experiences leaders for the customer
- 5 I satisfy with the explanation and guidance from the Community Leaders
- 6 The Community Leader as Agent of Change should master in persuasion technique, able to educate; have empathy and friendliness
- 7 The Islamic finance knowledge should be disseminated to Muslim community
- 8 The *ulema* or Agent of Change need to be provided with educational materials to help accelerating the adoption of Islamic Bank

Adoption

1. I am contented with using the Islamic banking products and services
2. I got enough information about Islamic Banking products and services
3. Islamic Bank needs to consider the importance of effective and informative promotional programs
4. I think the adoption of Islamic bank is because of my Islam belief or moral value
5. I have adopted because ulema as agent of change instills the halal & haram principle
6. The availability of advance technology a part of the decision to adopt Islamic bank
7. Islamic banks need to have many Key Opinion Leaders
8. The telephone banking makes easier transaction in Islamic Bank

Research Observation

Pre-Test

The instrument has been sent to 100-repondents for pre-test purposes and evaluated using SPSS for its validity and reliability.

Media Channel - ICT

Validity	P-Value= .000 which is < 0.05
Reliability	Cronbach's Alpha = .893 or >0.7
N	8

Agent of Change

Validity	P-Value= .000 which is < 0.05
Reliability	Cronbach's Alpha = .881 or >0.7
N	8

Analysis of Research Findings

This section presents the data generated from the field research that involved 384 respondents and analyzed using two statistical software programs that are SPSS version 20 for screening data and PLS SEM version 3.0 for the structural model and path analysis.

PLS SEM is used as for limited number sample and do not necessarily have normal distribution, it uses bootstrapping method or random multiplication.

Convergent Validity

The outer loading factor value must be > 0.70.

The output of Outer Loadings Step-1

(Outer Model-Step 1) is as follow

	Media Channel (ICT)	Agent of Change (AC)	Adoption (ADO)	Notes
ICT.I	0.065			Not Valid
ICT.II	0.061			Not Valid
ICT.III	0.056			Not Valid
ICT.IV	0.074			Not Valid
ICT.V	0.040			Not Valid
ICT.VI	0.059			Not Valid
ICT.VII	0.950			Valid
ICT.VIII	0.951			Valid
AC.I		0.530		Not Valid
AC.II		0.759		Valid
AC.III		0.545		Not Valid
AC.IV		0.849		Valid
AC.V		0.809		Valid
AC,VI		0.879		Valid
AC,VII		0.745		Valid
AC.VIII		0.817		Valid
ADO.I	0.750			Valid
ADO.II	0.798			Valid
ADO.III	0.729			Valid
ADO.IV	0.711			Valid
ADO.V	0.750			Valid
ADO.VI	0.756			Valid
ADO.VII	0.743			Valid
ADO.VIII	0.729			Valid

(Source: Processed Primary Data, 2023)

There are eight indicators that must be dropped due to leading factor <0.70, they are

Media Channel - ICT

Q1: The use of both conventional and

social media channels could attract new customers for Sharia Bank’s customers

Q2: ICT can accelerate the delivery of information about product and services of Sharia Banks to customers

Q3: The availability of ICT (website, e-Banking) proofs that Sharia Bank keeps up with the development of technology and cares to the need of customer as an effort to attract new adopters

Q4: Sharia Bank should be very proactively in using social media to approach customer

Q5: I think social media channel is believed to be able to reach customers across the country for adoption

Q6: I believe media channel could establish relationship and help for adoption

Agent of Change

Q1: I need more explanation to understand about Sharia Bank from someone i.e. friends, siblings, colleagues, experts.

Q3: I was persuaded and convinced by someone as outsider experts in selecting sharia bank.

1. **The construct reliability** result is as follow

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)	Result
Adoption	0.886	0.888	0.909	0.556	Reliable
Media Chanel - ICT	0.894	0.895	0.950	0.904	Reliable
Agent of Change	0.903	0.907	0.926	0.676	Reliable

The AVE is .050 so all are reliable.

The result from the discriminant validity (*Fornell-Larcker Criterion*)

	Adoption	Media Channel - ICT	Agent of Change
Adoption	0.746		
Media Channel - ICT		0.951	
Agent of Change			0.822

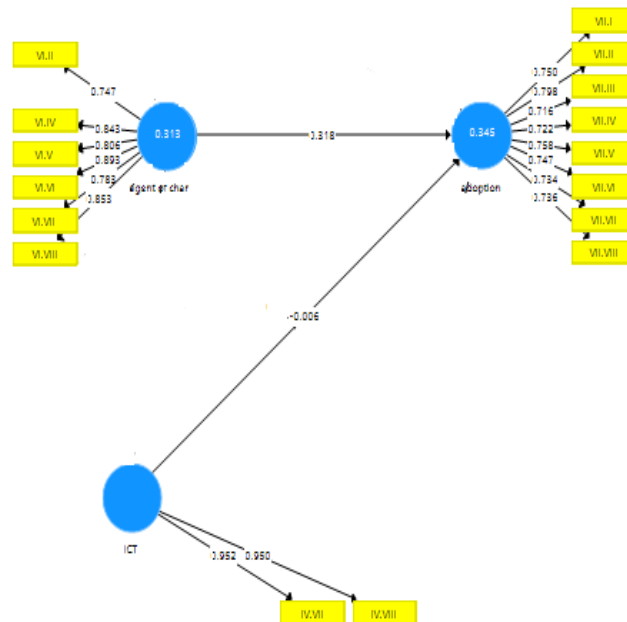
From Fornell-Larcker Criterion table above shows that AVE root value is greater than 0.70; it means good discriminant validity.

Discriminant Validity

From the test is using cross loading value to ensure all variable meet to Discriminant Validity which each variable should bigger than other variable

Discriminant Validity

	Media Channel (ICT)	Agent of Change (AC)	Adoption (ADO)	Notes
ICT.VII	0.950			Valid
ICT.VIII	0.952			Valid
AC.II		0.747		Valid
AC.IV		0.843		Valid
AC.V		0.806		Valid
AC.VI		0.893		Valid
AC.VII		0.783		Valid
AC.VIII		0.853		Valid
ADO.I	0.750			Valid
ADO.II	0.798			Valid
ADO.III	0.716			Valid
ADO.IV	0.722			Valid
ADO.V	0.758			Valid
ADO.VI	0.747			Valid
ADO.VII	0.734			Valid
ADO.VIII	0.736			Valid



The direct influence analysis using bootstrapping shows as below:

Path Coefficient Result

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Result
Media Channel - ICT	-0.006	-0.008	0.059	0.101	0.919	rejected
Agent of Change	0.318	0.318	0.052	6.115	0.000	accepted

The hypothesis can be accepted as the result values are as follow

- i The p-values is $<.05$
- ii The t statistic value is >1.96

After it is processed the path figures out as follow

From the table above it can be said that the hypothesis of as follow:

H1: *Media Channels (ICT) has positive influence to adoption of Islamic Bank among Muslim's customer in the state of Java*

From the result of Path Coefficient Result, the ICT has no significant effect on the adoption; this can be seen from the t-statistics value of $0.101 < 1.96$ and p-value which is $0.919 > 0.05$. Then it can be concluded that hypothesis is rejected.

H2: *Agent of Change is potential influencer to adopting of Islamic Bank among Muslim's customer in the state of Java.*

The result shows that statistic value is $6.115 > 1.96$ and the p-value is $0.000 <.05$, therefore the hypothesis-2 can be accepted.

Conclusion

From the findings of the study factors attracting customers' adoption of Islamic Bank in Indonesia from perspective Media Channel - ICT and Agent of change; it can be concluded as follow:

1. Factors influencing Adoption

- i. Media Channel - ICT from Diffusion Innovation Theory. The data processing of Outer Landing -1 and Discriminant Validity show there is two indicators have significant support to adoption.
- ii. Agent of Change is mandatory factor for customer in adopting Islamic Bank. Most all the result shows significant to support adoption

2. Problem Statement

The findings are also meeting to problem statements as follow:

- i) The existence of Information Communication Technology has not been fully utilized by Islamic Banks as a Media Channel in disseminating information.
While customers believe if it is managed well, the ICT can raise up profile of Islamic Bank as modern and professional bank.
In addition the ICT can be maximized as for its effectiveness, efficient and economical in term of cost of management as well as customer.

- ii) The public needs someone such *ulama* or public figures as model or Agent of Change who can provide information or education about Islamic Bank.

The statements generated from respondents show the Agent of Change is the best marketer and persuader, and help disseminate finance knowledge.

3. **Research Questions** below are also clearly answered.

- i. Does the Information Communication Technology can be an effective tools to transferring information needed by public and reaching new adopters in the state of Java?
- ii. Does public who domicile in Java needs in-depth information and persuasion from trusted persons or key opinion formers or called Agent of Change such as *ulama* in adopting Islamic Banks?

Both have been convinced through above analysis.

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