

# Analyzing the Usage of Internet of Things among Indonesian pharmaceutical Customers: Role of Social Media related Determinants

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## ABSTRACT

The aim of the current study was to know the impact of socializing on actual use of IOT, the impact of informational social support on actual use of IOT and the impact of information privacy on actual use of IOT. The study took perceived value of IOT and words of mouth about IOT as a mediator. The study started with the critical review of the literature present on the previous relevant researches and studies. The study also proposed some hypothesis and to test them for their validity, the researcher collected data through a survey from the Indonesian Pharmaceutical Customers and the number of individuals for sample taken were 323. The data collected was then analyzed using SPSS and AMOS, results of the analysis showed that, the impact of socializing on actual use of IOT is insignificant, the impact of informational social support on actual use of IOT is insignificant and the impact of information

privacy on actual use of IOT is significant. The study took perceived value of IOT and words of mouth about IOT as a mediator which mediated significantly except for that words of mouth about IOT did not significantly mediate between informational social support and actual use of IOT. The study has implications in practical, theoretical and policy making sectors, yet, is limited where it comes to the sample size.

**Keywords:** Usage of Internet of Things, Indonesian, Pharmaceutical, Customers, Social Media Related Determinants

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## INTRODUCTION

The evolution of Internet of Things has captivated the policy makers, top management, and executives with its wonders. It referred to the employment of information technology is the diffusion and productions of services and goods (Lee & Ahn, 2016; Wortmann & Flüchter, 2015). The use of internet and online services has penetrated deep almost in all wall of life ranges. It is projected that the wonders of internet of things will be dispersed in all aspects of business and pharmaceutical industry is no exception to this. The rapid development and dispersion of IOT, the adoption of internet in business operations has become

more frequents. Moreover, the use of IOT has revolutionized the business performances by facilitating the efficient delivery of goods and services (Caniëls, Lenaerts, & Gelderman, 2015; Islam et al., 2018; Soto-Acosta, Popa, & Palacios-Marqués, 2016; Saengchai & Jermsittiparsert, 2019 ). Moreover, the use of IOT in particular industry is not mere limited to business operations but it is widely used by the customers and users of the products. Moreover, the usefulness and perceived value of IOT is further stimulating the users' to adopt the continuous usage of internet of things. Below figure presetting the market of IoT Semiconductors;

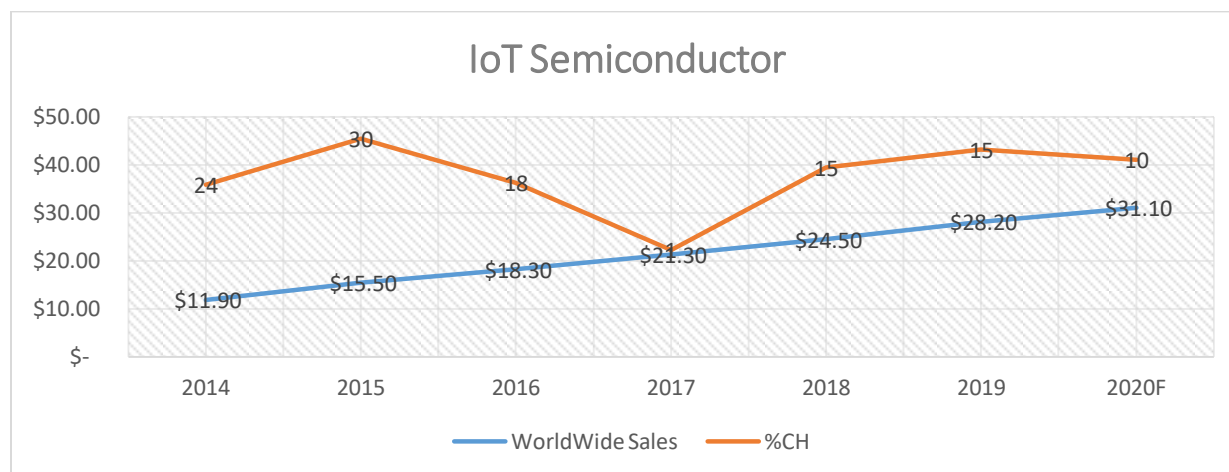


Figure 1: IoT Semiconductor Market

This study aims to empirically explore the impact of social media related determinants such as socialization, information social support, and information security on the actual usage of internet of things. Despite of the rising importance of IOT, few empirical studies has investigated the consequences of social media on the adoption of IOT(Chatterjee, 2019; El-Haddadeh, Weerakkody, Osmani, Thakker, & Kapoor, 2019). Moreover, the researcher also aims to explore the mediating impact of perceived value and word of mouth about IOM on the relationship between socialization and use of IOM, information social support and use of IOM, and information security and use of IOM. Socialization due to social media networking also influence the adoption of IOM in pharmaceutical. The reason is that social interaction particularly among the business peers, customers, and employees for information sharing, social support, business supports stimulate the adoption of internet of things. However, information security concern may restrict the users in adopting the actual use of IOT due to perceived risks. Despite of the evolving wonders and implications of internet of things, its services are not optimally executing in field of pharmaceuticals. There are many determinants of internet of things which stimulate the actual adoption of IOT in industry such as social media by promoting the positive word of mouth for adoption of internet. However, some perceived risk pertaining to IOT such as information security risk, data security risk, and privacy risk, obstruct the users in continuous adoption of IOT. Therefore, to stimulate the adoption of IOT in particular industry it is requisite to deal with the associated risk of social media and promote social support and networking through social media. This study has following objectives:

- To investigate the relationship between socialization and actual use of IOT in pharmaceutical industry of Indonesia.
- To examine the relationship between information social support and actual use of IOT in pharmaceutical industry of Indonesia.
- To explore the relationship between information security and actual use of IOT in pharmaceutical industry of Indonesia.
- To explore the mediating impact of perceived value on relationship between socialization and actual use of IOT in pharmaceutical industry of Indonesia.
- To explore the mediating impact of perceived value on relationship between information social support and actual use of IOT in pharmaceutical industry of Indonesia.
- To explore the mediating impact of perceived value on relationship between information security and actual use of IOT in pharmaceutical industry of Indonesia.

- To explore the mediating impact of word of mouth on relationship between socialization and actual use of IOT in pharmaceutical industry of Indonesia.
- To explore the mediating impact of word of mouth on relationship between information social support and actual use of IOT in pharmaceutical industry of Indonesia.
- To explore the mediating impact of word of mouth on relationship between information security and actual use of IOT in pharmaceutical industry of Indonesia.

The previous studies in literature on diffusion of internet of things have very positive and realistic policy implications (Hsu & Lin, 2015; Stewart & Jürjens, 2018; Wang & Yu, 2017; Wong, Kwok, & Lau, 2015). Those studies stimulate top management and to pay due importance in actual usage of IOT by exploring the determinants of IOT usage. In addition, the studies have expanded the scope of future research by providing strong theoretical framework. The study also aims to serve on the same lines. The arrangement of the sections are given as follows: Section two presents existing theoretical background and literature review; Section three discusses data collection and methodology in detail; Section four presents the findings of the study; and the last section based on discussion and policy recommendation.

### Literature Review and Theoretical background

The theoretical model of this study is also based on the Technology Acceptance Model of IOT. The study aims to design the hypothesis and theoretical framework by aligning the TAM model in context of this study by exploring the factors, variables, and mediators which influence the adoption of internet of thing in pharmaceutical industry of Indonesia. The technology acceptance model also proposed to explore the determinants which impact the adoption of technology (Gangwar, Date, & Ramaswamy, 2015; Mital, Chang, Choudhary, Papa, & Pani, 2018; Patil, 2016). Moreover, following the existing theoretical model on adoption of internet of things the study proposed the theoretical model of use of IOT in pharmaceuticals of Indonesia (Chatterjee, 2019; El-Haddadeh et al., 2019).

### Socialization and Actual Use of IOT

Socialization is an important element of internet of things which influence the consumers to adopt the actual use of internet of things in pharmaceutical industry of Indonesia. Moreover, the interaction of business peers in clouds for important decisions about oligopolistic competitions, price setting, product supply, and demand maneuvering also reinforced the use of IOT in various manufacturing industries (Pticek, Podobnik, & Jezic, 2016). In addition, the socialization and networking of pharmaceutical business is an important marketing strategy to promote the

medicines and other products. (Syrkiewicz-Świtła, Romaniuk, & Ptak, 2016). Moreover, Shuxiang, Chu, and Zhuang (2018) in their study also empirically find the spatial distribution characteristic of pharmaceutical industry of China. The listed 168 pharmaceutical manufactures were selected for analysis of social networking density. The social networking analysis indicates that the density of china's pharmaceutical industry is 0.021 and the network is highly dispersed in Tianjin, Beijing, and Shanghai. The study also proposed that china pharmaceutical industry may further perform by promoting regional pharma manufacturers agglomeration network. Thus, based of above literature the following hypothesis is proposed:

H1: Socialization plays significant role in reinforcing the actual use of IOT in pharmaceutical industry in Indonesia.

### **Informational social support and Actual use of IOT**

The information social support plays key role in reinforcing the online social networking of businesses and customers (Maier, Laumer, Eckhardt, & Weitzel, 2015; Wellman & Gulia, 2018). This help them in exchanging the important ideas, information, and social support regarding the product usage. Wellman (2018) also proposed that customers are inclined to fetch information from social networking of thing, which are too costly and may not suited their requirements. For this they customers' take information from organization and government health care, if the product is offered by pharmaceuticals, about the efficacy of the products. Kim, Kreps, and Shin (2015) also proposed that the importance of social support in field of health and medicines in information seeking about the product. The study conducted online survey to collect the responses of 202 Korean American in USA. The results indicate that the Korean American fetch lots of information about medicine and health from social network for review and recommendation. Therefore, we can concluded that information social support is an important factor which causes the actual use of IOT. Based on above discussion the following hypothesis is built:

H2: Information Social Support plays considerable role in promoting the actual use of IOT in pharmaceutical industry in Indonesia.

### **Information Privacy and Actual use of IOT**

The individuals and businesses opted IOT for fetching the online information, however the information privacy is their top concern while using IOT (El-Haddadeh et al., 2019). Hsu and Lin (2016) also empirically investigated the users concerns of information privacy while using internet of things. The study developed a conceptual framework for motivation behind usage, externalities of IOT, and privacy concern regarding service. For this study employed primary data, collected from 508 users of IOT services. The finding of the study indicate that privacy concerns has negative but weak impact on adoption of IOT. Moreover, few studies has also indicate that information privacy concern is a key obstruction in adopting of e-commerce (Bansal & Zahedi, 2015; Malhotra, Kim, & Agarwal, 2004). Lee and Ahn (2016) also highlight the data security is an import privacy

concern of adopting Fintech and IOT services. The study empirically proposed that rising concern of information security influence the user's resistance towards use of IOT. Thus, on the basis of aforementioned literature following hypothesis is proposed:

H3: Information privacy significantly impact the actual usage of IOT in pharmaceutical industry of Indonesia.

### **Socialization, perceived value of IOT and Actual Use of IOT**

The perceived value is referred to value of product and services based on the utility offered by the product or services to the users. The perceived values of goods and services is subjective things which vary person to person. Various studies has explained perceived value of goods in the context of the study (Hsu & Lin, 2015; Sweeney & Soutar, 2001). There are few studies which has explored the relationship between perceived value and adoption of mobile applications. Hsu and Lin (2015) also empirically explored the relationship between perceived value and adoption of mobile app. The study employed survey data of 507 respondents to test the hypothesis (Heo, Kim, & Kang, 2019; Maleka, Nyirenda, & Fakoya, 2017; Ramanathan, 2018). The results proposed that perceived value and perceived satisfaction drives the adoption of mobile app. Moreover, El-Haddadeh et al. (2019) also confirmed the role of perceived value in adoption of IOT by empirically analyzing the survey data. However, the studies on the mediating impact of perceived value in the relationship between socialization and actual use of IOT is limited. This study aims to explore the relationship by proposing the following hypothesis:

H4: Perceived value of IOT has significant mediating impact on the relationship between socialization and actual use of IOT in pharmaceutical industry of Indonesia

### **Information Social Support, perceived value of IOT and Actual Use of IOT**

The perceived usefulness and perceived value of IOT enhanced with the rising information social support get through the use of IOT. However, the studies on the relationship among these indicators are limited in literature. Prayoga and Abraham (2016) Proposed that internet of thing is capturing the attention of individuals in health care and pharmaceuticals. The study also support that perceived value of IOT in health has significant role in adoption of IOT in healthcare. The study employed the technology acceptance model to check the perceived value IOT in health for collecting information and social supports. By employing the data 186 students the study illustrates that perceived value and its utility can gauge the intention of students to use internet of things in health. Based on above discussion following hypothesis is constructed:

H5: Perceived value of IOT has significant mediating impact on the relationship between information social support and actual use of IOT in pharmaceutical industry of Indonesia

### Information Privacy, perceived value of IOT and Actual Use of IOT

The privacy concern of data is an important aspect of IOT which may influence its perceived usefulness and values for users. The information security concern influences the uses decision of actual adoption of IOT in pharmaceuticals. Stewart and Jürjens (2018) empirically explored the expectations of both users and organizations in Germany which impact the continuous usage of IOT by adopting Technology Acceptance Model. The findings of the study proposed that improve in information security will positively impact the expectations of users about technology. Thus, based on the study the following hypothesis is built:

H6: Perceived value of IOT has significant mediating impact on the relationship between information security and actual use of IOT in pharmaceutical industry of Indonesia

### Socialization, Word of mouth about IOT and Actual Use of IOT

The socialization and networking is highly promoted by adopting the continuous use of Internet of things. The good networking and socialization through IOT also tends to influence the positive word of mouth about IOT. Chatterjee (2019) also affirmed the positive association between socialization and word of mouth by exchanging information regarding the product features and experiences. Furthermore, the consumers exchange of experiences, knowledge and relevant aptitudes of product through consumption socialization reinforce the positive WOM. Delafrooz, Rahmati, and Abdi (2019) also empirically investigated the impact of socialization in Instagram on the electronic word of mouth by employing the data of 384 individuals. The sampling technique of the study was non-probable sampling technique. The results indicates that peer communication, Instagram usage, and brand relationship highly impact the manifestation of electronic word of mouth for IOT. Therefore, based on the aforementioned discussion the following hypothesis is built:

H6: Word of mouth about IOT has significant mediating impact on the relationship between socialization and actual use of IOT in pharmaceutical industry of Indonesia

### Information social support, Word of mouth about IOT and Actual Use of IOT

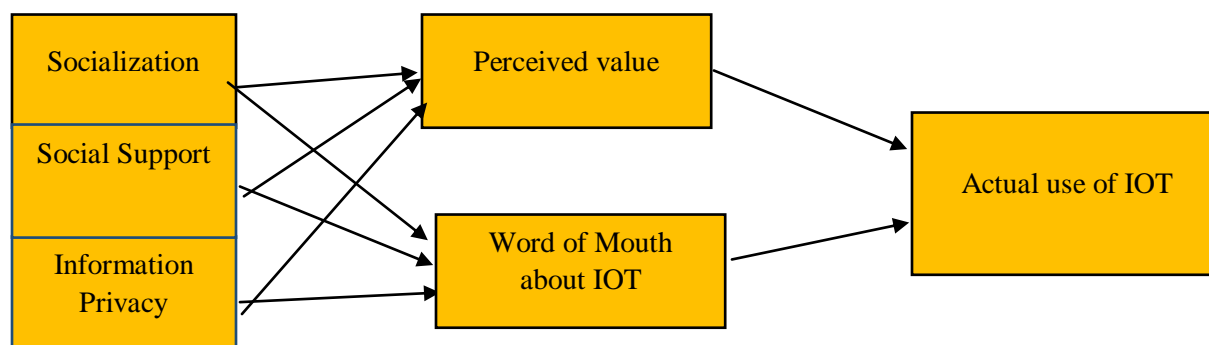
Gaining the positive social support of pharmaceutical products (about its price, working, efficacy) from using IOT highly influence the manifestation of word of mouth about IOT. Balaji, Khong, and Chong (2016) empirically examine the determinants of positive and negative word of mouth by employing the primary data of 206 respondents. For statistical analysis the study used SEM model. The study indicate that negative conversation in social networking is significantly drives negative word of mouth. Wang and Yu (2017) also proposed that social interaction embedded in social commerce by influencing the will to purchase. The social support about the purchase of medicines and pharmaceutical products positively influence the word of mouth, consequently reinforces the actual use of IOT. Therefore, based on the aforementioned discussion the following hypothesis is built:

H8: Word of mouth about IOT has significant mediating impact on the relationship between information social support and actual use of IOT in pharmaceutical industry of Indonesia

### Information Security, Word of Mouth about IOT and Actual Use of IOT

As already discussed above, the IOT users high concern is the information security. The risk of information security also effect the positive word of mouth about IOT employment in any industry including pharmaceuticals. The business peers and oligopolistic in pharmaceutical industry communicate about their marketing strategies, price strategies, and supply strategies based on the assumption of no risk to their information security. Therefore, any risk to information security will highly influence the positive word of mouth about IOT, and consequently use of IOT. Few studies support that users' perceived security about data and information likely to improves word of mouth about IOT (Nusair, Hua, Ozturk, & Butt, 2017). The literature is limited on the mediating impact of word of mouth about IOT in the relationship between information security and use of IOT. Therefore our study aims to explore the mediating relationship be proposing following hypothesis

H9: Word of mouth about IOT has significant mediating impact on the relationship between information security and actual use of IOT in pharmaceutical industry of Indonesia



Theoretical Model



## METHODOLOGY

### Population and Sampling

The purpose of the study is to empirically investigate the role of social media related determinants in actual usage of thing of internet in pharmaceutical industry in Indonesia. The most of the variables employed in the study are latent variables, therefore author has collected primary data on the variables. The purpose of choosing pharmaceutical industry for research is that: Indonesian pharmaceutical industry has recorded marvelous growth of 12-13 percent during 2018; and customers' opted the social media for exchanging the views about medicines efficacy, performance, and attributes. PT Astellas Pharma, Daewoong Pharmaceutical Company, Apex Pharma Indonesia, and Hisamitsu Pharma. The data is collected with the help of purposive sampling technique by online distributing questionnaire to 400 respondents. The technique is based on assumption that collected sample represents population data. The researcher disseminated the questionnaire by online uploading the questionnaire on Qualtrics and sent web link on emails.

### Data Collection Procedure

In order to statistically analyze the effect of social media related determinants such as socialization, information social support, and information security, the study designed survey to collect primary data. After designing the survey questionnaire, the researcher run a pilot survey to access the validity of questionnaire by dissemination sample questionnaire to 25 respondents of leading pharma companies in Jakarta. The author tries to carefully measure the each indicator by valid conceptualization and accurate theme. The author get the feedback from PHD scholars having expertise in relevant field. After getting the feedback of expert, the author disseminated 400 questionnaires to respondents. After disposing the half-filled and wring filled questionnaires, the author left with 323 valid response which made the valid sample size for analysis.

### Measures

Few empirical studies conducted research on the social media related determinants and internet of things. For opting the variables' constructs the study align the construct of past study with this particular research. Following the study of (Chatterjee, 2019; Mikalef, Pateli, & Giannakos, 2013), the researcher constructed the measures of socialization based on survey points regarding serious

and casual conversation about medicines with friend, family, and relatives, placing order of medicine for IOT enable devices. The proxy of variable information social support is constructed by eliciting response of respondents on getting online social support of product bought from friends, recommendation about product, and use of product due to recommendation of social media friends. The variable of information security is constructed by emulating the scale of (Rahman, Daud, & Mohamad, 2016) based on four survey points on five point Likert scale 1-5. The mediating variable perceived values is based on eliciting the responses on following indicators: usefulness, value addition, satisfaction, comfort. Moreover, the measure word of mouth about IOT is also constructed by emulating the scale of (Chatterjee, 2019). The dependent variable IOT is referred to the use of internet of thing in pharmaceutical industry of Indonesia which is proxied by following the scale of (Chatterjee, 2019) in context of pharma industry. The measure is based on four survey point, of which responses are recorded on five point Likert scale.

### Data Analysis

In order to statistically examine the data the study employed AMOS and SPSS to estimate the empirical model and test the proposed hypothesis. Both software run different test for data analysis, descriptive statistics and estimations. The author used AMOS to estimate Structure Equation Modeling (SEM), confirmatory factor analysis and model fitness test. CFA test based on multivariate model, is designed to inspect that how well the measured variables represents the number of constructs. The structural equation model is employed to measure regression coefficient of latent variables. Moreover, researcher used SPSS to perform descriptive analysis, reliability analysis, and frequency distribution on data.

## RESULTS AND ANALYSIS

The data is collected from 323 residents of Indonesia. Among these, the share of female respondent is 47.7 percent where the share of male respondents is 52.3 percent. Besides, the share of post graduate and graduate respondents is significantly high about 43.3 percent and 12.4 percent, respectively. The high participation of educated respondents is good for this study as they are easily capable of grasping the topic and its nature. As far as age is concern, most of sample resident's fall in the age between 41-50 years having the share of 45.5 percent in total respondents.

**Table 1: Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
SC	323	1.00	5.00	3.4778	1.13409	-.719	.136
SS	323	1.00	5.00	3.5098	1.16577	-.679	.136
IP	323	1.00	5.00	3.5492	1.10937	-.765	.136
VT	323	1.00	5.00	3.5831	1.09373	-.808	.136
WT	323	1.00	5.00	3.4334	1.11012	-.273	.136

AT	323	1.00	5.00	3.4690	1.20324	-.606	.136
Valid N (listwise)	323						

Table 1 depicts the descriptive summary of indicators such as mean, maximum and minimum values. The minimum and maximum values of all the variables is 1 and 5, respectively which denotes that indicators are measured on five point Likert scale. The mean values of all the variables hovered around 3.5 which indicates that most of the

respondents are agree or neutral with the statement. In addition, the statistics of skewness confirm the normal distribution in all indicators as values of skewness lies between -1 and 1 which is thumb rule for normal distribution.

**Table 2: Factor Loading and Convergent Validity**

	IP	VT	SS	SC	AT	WT	CR	AVE
IP3	.888						0.947	0.781
IP2	.856							
IP1	.851							
IP4	.837							
IP5	.810							
VT2		.875					0.905	0.761
VT3		.826						
VT1		.819						
SS2			.842				0.929	0.815
SS3			.827					
SS1			.784					
SC3				.838			0.892	0.734
SC2				.808				
SC1				.759				
AT2					.890		0.965	0.932
AT1					.875			
WT1						.873	0.859	0.752
WT2						.825		

**Table 3: Discriminant Validity**

	WT	SC	SS	IP	VT	AT
<b>WT</b>	<b>0.867</b>					
<b>SC</b>	0.535	<b>0.857</b>				
<b>SS</b>	0.345	0.616	<b>0.903</b>			
<b>IP</b>	0.382	0.534	0.604	<b>0.883</b>		
<b>VT</b>	0.406	0.556	0.582	0.459	<b>0.872</b>	
<b>AT</b>	0.683	0.495	0.349	0.406	0.420	<b>0.966</b>

Table 2 presents the findings of component factor analysis (CFA) by depicting the rotated component matrix of variables. The findings of CFA test also affirm the validity of all measures as all the variables holding load factors higher than 0.7 which is threshold value for validity of

variable, standing on 0.89. Moreover, the issue of cross loading has also not identified. In addition, the “convergent and discriminant” test also endorse the validity of variables’ construct.

**Table 4: Confirmatory Factors Analysis and KMO**

CFA Indicators	CMIN/DF	GFI	IFI	CFI	RMSEA	KMO
Threshold Value	≤ 3	≥ 0.80	≥ 0.90	≥ 0.90	≤ 0.08	0.6 – 1.0
Observed Value	2.177	0.921	0.973	0.973	0.060	0.894

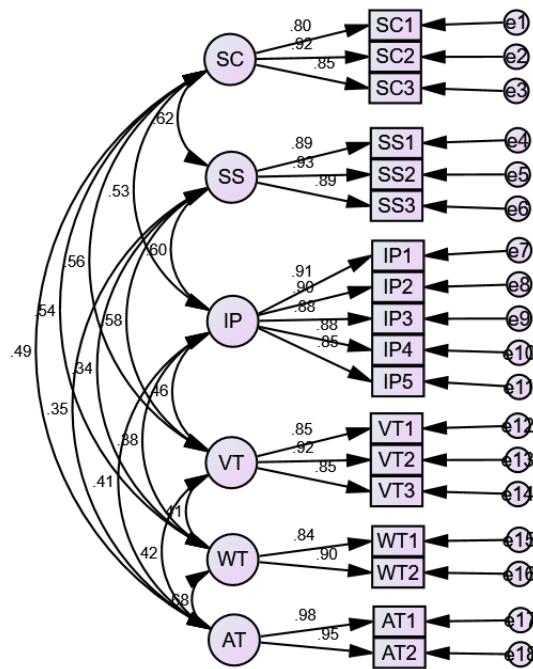


Figure 2: CFA

Table 5 represents the empirical findings of the structure equation mode (SEM). The SEM model is estimated on AMOS. The model is employed to explore the significance of relationships between dependent and independent variables. The results indicate that socialization, information social support, and information privacy have insignificant direct impact on actual use of internet of thing in Indonesian pharmaceutical industry, as p-value is higher than 0.05. However, the mediatory impact of IOT perceived value on the relationship between socialization, information social support, and information privacy, and actual use of internet of thing is significant and positive. The coefficient

indicates that one unit increase in perceived value of IOT will increase the actual use of internet of thing about 2.9 percent due to socialization. The mediation coefficient of social support indicates that 1 unit increase in perceived value of IOT will enhance the actual use of internet of thing by 4.3 percent due to socialization. The mediatory impact of word of mouth about IOT on the relationship between socialization and actual use of internet is also significant and positive. The coefficient indicates that one unit increase in word of mouth will increase the actual use of IOT about 19.3 percent due to socialization.

Table 5: Structural Equation Modeling

Hypothesis	B-Value	SE	P-Value	Decision
SC→AT	.104	.061	.071	Rejected
SS→AT	-.022	.061	.704	Rejected
IP→AT	.127	.058	.018	Accepted
SC→VT→AT	.029	.054	.000	Accepted
SS→VT→AT	.043	.056	.000	Accepted
IP→VT→AT	.015	.055	.028	Accepted
SC→WT→AT	.193	.061	.000	Accepted
SS→WT→AT	.003	.063	.904	Rejected
IP→WT→AT	.076	.062	.013	Accepted

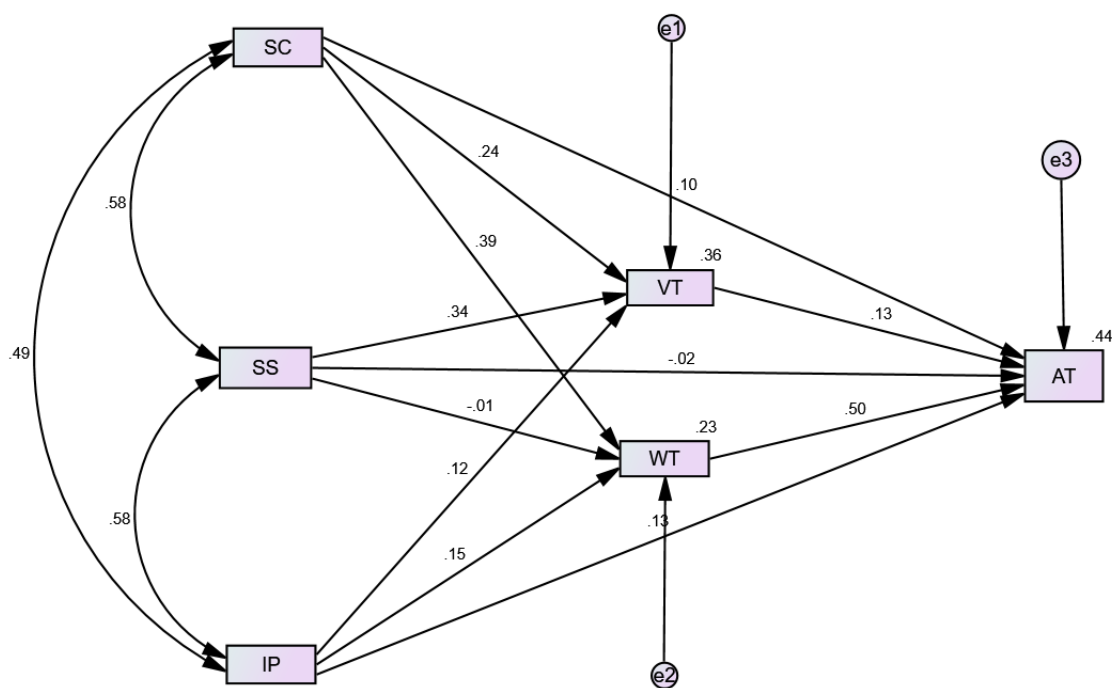


Figure 2: SEM

## DISCUSSION AND CONCLUSIONS

### Discussion

The author of this research had the motive to investigate the role of social media determinants on the usage of IOT among the customers of pharmaceutical companies in Indonesia by formulating a few hypotheses. The first two hypotheses, that stated that socializing and social support have significant direct impact on usage of IOT respectively, were both rejected by the tests. The third hypothesis stated that level of information privacy has a direct significant impact on usage of IOT and this was shown to be accepted with a 13 percent direct impact of information privacy on IOT usage by clients of pharmaceuticals. Similar studies also discuss such results (El-Haddadeh et al., 2019; Zubiaga, Procter, & Maple, 2018). The next three hypotheses discussed the mediation effects of perceived value of IOT on IOT usage through the determinants of social media and all of which were accepted with positive significance. Socializing impacts the value of IOT by 24 percent, social support by 34 percent and information privacy by 12 percent, which in turn exerts a total impact of 13 percent on the usage of IOT. The last three hypotheses discuss mediation effects of WOM, out of which the eighth hypothesis, showing impact of WOM through social support, was rejected while rest two were accepted. Socializing and information privacy have 39 percent and 15 percent impact on WOM respectively, which affects usage of IOT by 50 percent as a whole. Several studies can confirm these results (Chatterjee, 2019; Economides, 2016; El-Haddadeh et al., 2019; Yu, Roy, Quazi, Nguyen, & Han, 2017)

### Conclusion

This study considers the determinants of social media, level of socializing, privacy of information and social support for information, to study the mediating effects of word of mouth of IOT and perceived value of IOT on usage of IOT in the clients of pharmaceutical companies in Indonesia. Data was collected from Indonesian pharmaceutical companies and a sample of 323 respondents was extracted which was tested through vigorous repeated procedures to show the results that showed the impact of the selected determinants of SM on usage of IOT through mediating impacts of WOM and PV of IOT. The author has identified several theoretical, practical and policy making implications based of these results.

### Implications

The current study aims to outline the effects that the determinants of social media have on the usage of IOT in the customers of pharmaceutical companies in Indonesian market. This study has several implications in theoretical, practical and policy making contexts. It provides abundant amount of literature on the determinants and mediating variables that can be used by the other researchers or authors in their future studies. Moreover, this study will help the governments to design policies to increase usage of IOT by regulating SM variables. In addition, pharmaceuticals can design practical plans to improve their SM support for IOT capabilities that are offered.



## Limitations and Future Research Recommendations

For a better flow of information and knowledge it is important to keep adding to the various aspects of a research as no research can ever be perfect or complete, as is the case of this study which has various limitations and boundaries. These imitations can help the future researches for finding research directions and the author has presented a few recommendations in this section to improve the volume and quality of information. The first limitation in this regard is that the sample size of the data collected is very small in this study. In addition, the study has been conducted in context of Indonesia only. Tests and approaches that have been employed in this research are very limited. There is a scope for future researchers to increase the sample and population sizes and use other tests and techniques to analyze the data. Moreover, the variables are also limited, which also limits the spectrum of the research and using variables different contexts and combinations can have effective results.

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