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About

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INSIGHT Journal focuses on social science and humanities research. The main aim of INSIGHT Journal is to provide an intellectual forum for the publication and dissemination of original work that contributes to the understanding of the main and related disciplines of the following areas: Accounting, Business Management, Law, Information Management, Administrative Science and Policy Studies, Language Studies, Islamic Studies and Education.

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FOREWORD BY DEPUTY RECTOR OF RESEARCH, INDUSTRIAL LINKAGES & ALUMNI

Since 2018, the INSIGHT JOURNAL (IJ) from Universiti Teknologi MARA Cawangan Johor has come up with several biennial publications. Volume 1 and 2 debuted in 2018, followed by Volume 3 this year as well as Volume 4 with 19 published papers due to the great response from authors both in and out of UiTM. Through Insight Journal, lecturers have the ability to publish their research articles and opportunity to share their academic findings. Insight Journal is indexed in MyJurnal MCC and is now an international refereed journal with many international reviewers from prestigious universities appointed as its editorial review board members.

This volume 5 as well as volume 6 (which will be published in 2020) are special issues for the 6th International Accounting and Business Conference (IABC) 2019 held at Indonesia Banking School, Jakarta. The conference was jointly organized by the Universiti Teknologi MARA Cawangan Johor and the Indonesia Banking School Jakarta. Hence, the volumes focus mainly on the accounting and business research papers compiled from this conference, which was considered a huge success as over 66 full papers were presented.

Lastly, I would like to thank the Rector of UiTM Johor, Associate Professor Dr. Ahmad Naqiyuddin Bakar for his distinctive support, IJ Managing Editor for this issue Dr. Noriah Ismail, IJ Assistant Managing Editor, Fazdillah Md Kassim well as all the reviewers and editors who have contributed in the publication of this special issue.

Thank you.

ASSOCIATE PROF. DR. SAUNAH ZAINON
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Universiti Teknologi MARA Cawangan Johor

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Measuring Intention to use IP-Belt among Pregnant Mothers using TAM Model: Technology-Based Innovation in Road Safety

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Abstract

This study presents the behavioural intention to use an innovation of a safety belt specially developed for pregnant mothers, named IP-Belt. This newly developed innovation aims to enhance the safety of these pregnant mothers when they are behind the wheel, or as passengers; and this research is done as an extension to the development of this innovation. Technology Acceptance Model (i.e. TAM) was adopted in predicting the behavioural intention to use the IP-Belt. A survey was conducted among pregnant mothers to see their intention to use the said innovation. The data was analysed using the Structural Equation Modelling technique with Partial Least Square estimation theory. The analysis indicated that Perceived Ease of Use and Perceived Usefulness had a positive significant influence towards Attitude and Trust, whereas all other variables (i.e. Perceived Ease of Use, Perceived Usefulness, Attitude, and Trust) also significantly influenced behavioural intention to use the IP-Belt. In addition, the study indicated that Attitude and Trust had a partial mediating effect towards the relation of Perceived Ease of Use and Perceived Usefulness towards behavioural intention to use the IP-Belt.

Keywords: Pregnancy Safety Belt, IP-Belt, TAM Model, PLS-SEM, Mediating analysis.

1. Introduction

Road traffic injuries are known as one of the causes of death worldwide. World Health Organization (WHO) in the Global Status Report on Road Safety (2018) stated that the number of death on the road all around the world is estimated at 1.35 million people each year, while millions number of lives sustained serious injuries and/or having an adverse consequence to their health and life due to being involved in road accidents.

Malaysia is one of the countries with high traffic fatality rates (Abdelfatah, 2016; Zulhaidi, Mohd Hafzi, Mohd Rasid, Azmi & Norlen, 2016). In Malaysia itself, in average there are around 6,430[1] reported traffic fatalities yearly where total traffic fatalities in 2018 was 6,284 and traffic fatalities as at March 2019 was 1,483 (Road Safety Department of Malaysia,

[1] Calculation is based on total fatalities due to road accidents from 1997-2018

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2019). This statistic indicates that on average, 17 to 18 fatalities/deaths are reported due to road traffic accidents each day in our country. The dataset in Table 1 highlighted the number of deaths by road user category. Most of the number of fatalities (62%) comes from riders of motorised 2 or 3 wheelers while 23% are those who drive 4-wheeled cars and light vehicles.

Table 1 Number of Traffic Fatalities in a Span of 10 years (2009-2019)[2]

VEHICLES	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019[3]	TOTAL
CAR	1,405	1,421	1,389	1,435	1,399	1,258	1,358	1,489	1,269	1,167	286	13,876
MOTORCYCLE	4,067	4,036	4,169	4,178	4,294	4,179	4,203	4,485	4,348	4,128	944	43,031
PEDESTRIAN	589	626	530	530	455	515	482	511	441	407	115	5,201
BICYCLE	224	192	172	156	159	124	107	123	162	122	46	1,587
BUS	31	77	29	32	60	29	20	29	23	39	15	384
LORRY	213	202	247	194	210	221	223	186	199	192	29	2,116
VAN	91	97	93	86	80	73	71	65	62	47	29	794
4x4	78	154	151	159	158	129	130	142	113	88	15	1,317
OTHERS	47	67	97	147	100	146	112	122	123	94	4	1,059
TOTAL	6,745	6,872	6,877	6,917	6,915	6,674	6,706	7,152	**6,740**	**6,284**	**1,483**	**69,365**

Though road traffic crashes may rely heavily on the human factor such as drivers' behaviour and current condition while driving (Cramton, 1969; Nordin, 2012; Petridou & Moustaki, 2000; Zulhaidi, Mohd Hafzi, Mohd Rasid, Azmi & Norlen, 2016) all other factors must be accounted for such as existing national law regarding to road safety.

The risk prevention and reduction measures have been implemented and improved over time to reduce the number of fatalities due to road traffic injuries. Albeit all these efforts, the enforcement of law in Malaysia about road safety (i.e. speed limit law, drink-driving law, motorcycle helmet law, seatbelt law, law on mobile-phone usage while driving) is only in the lower mid-level (4 or 5 out of 10 points), with no restriction or law with regard to child restraint/sitting in the front seat. This level of enforcement is considered as low when compared to Singapore, where the levels of enforcement for all the aforementioned are at the higher level of 8 or 9 out of 10 points (Toroyan, 2015).

Amidst all these prevention and risk reduction measures, wearing seatbelt while sitting in a car is one of the important factors in ensuring the level of criticalness in a sudden mishap. In Malaysia, seatbelt is a compulsory component in any type of 4-wheeled cars and light vehicles as wearing one while occupying a vehicle is to be adhered by all drivers (and the passengers) as regulated in the Road Transport Act 1987 (2006):

> *"…to require safety seatbelts to be fitted to such class or description of motor vehicles as may be specified, to prescribe the minimum standards of quality of material and construction with respect to road safety seatbelts and the position in which such safety seatbelts shall be fixed and to require the use of such safety seatbelts."*

[2] Statistic excepted from Report and Statistics on Road Safety (2019),
[3] Figure in 2019 is as at March 2019

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Wearing a seatbelt reduces the risk of a fatal injury up to 50% and 75% for the front seat occupants and rear seat occupants respectively (World Health Organisation, 2015). Prior to this research done by WHO, in the late 90's, a research done by Evans (1996) stated that safety belt or seatbelt is effective in preventing fatalities but not so much in preventing injuries. This research has also highlighted that though wearing a seatbelt could reduce the risk, its effectiveness is abridged when the severity of the crash escalates.

In a similar context in Malaysia, a study done by Zulhaidi et al. (2016) has also highlighted the importance of seatbelts and child safety seat in protecting the users from the force of a sudden road collision/crash. Furthermore, wearing a seatbelt has shown to significantly reduce the risk of being thrown out of the vehicle in the event of a crash (World Health Organisation, 2015).

In these days and age, female drivers are not rare, nor it is uncommon for pregnant mothers to be behind the wheel. Though the risk of something adverse happening due to mishap is high in any situation for these pregnant mothers, yet the leading cause of loss of lives or traumatic injuries for these pregnant mothers (either to themselves or their fetus or both) is road traffic accidents (Acar & Meric, 2017)

Numerous researches have been done looking at: the safety of pregnant drivers (Acar & Meric, 2017; Khairil Anwar & Noor Faradila, 2010; Vladutiu & Weiss, 2012), the health risk involved when pregnant mothers are driving (Goodyear, 2018; Weiss & Strotmeyer, 2002), the effect and impact of road traffic crashes to the pregnant occupant (either driver or passenger) and her fetus (Hyde, Cook, Olson, Weiss, & Dean, 2003; Klinich et al., 2008; Klinich, Schneider, Moore, & Pearlman, 1998; Motozawa, Hitosugi, Abe, & Tokudome, 2010) as well as reporting the incidence, risks, and characteristics of pregnant women in road collisions (Vladutiu et al., 2013; Weiss & Strotmeyer, 2002).

Even though these mothers knew that not buckling up is a physical peril but a substantial amount of them still choose not to wear a seatbelt, as observed by Khairil Anwar and Noor Faradila (2010). They have noted that most of the pregnant mothers who choose not to buckle up their seatbelt believed that wearing one would harm (or kill) the baby in the womb (should there be a sudden mishap on the road) and it is safer for the fetus if the mother did not wear a seatbelt when she is driving. However, this notion has no scientific evidence to support it. On the contrary to this belief, wearing a seatbelt while driving is proven to be safer for these pregnant mothers.

Some of these past researchers have highlighted the impact of motor vehicle collision to pregnant women drivers (at several stages of pregnancy) while wearing or not wearing a seatbelt. Findings on a study done by Motozawa et al. (2010) stated that seatbelt should be encouraged to be used as it protects pregnant women drivers during various types of accidents as opposed to not wearing one and Acar and Meric (2017) mentioned that risk increases significantly in pregnant woman and her fetus when no seatbelt is worn, implying that the restraint system plays an important role to the safety of the pregnant women drivers and the fetus. However, its role in providing protection may vary according to the stages of pregnancy. To sum it up, both studies stressed that buckling up is still safer than not buckling up for these pregnant women.

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A survey by Khairil Anwar and Noor Faradila (2010) has found that there are flaws in the current seatbelt design for this type of drivers (i.e. it is considered as uncomfortable, it lacks safety measures for them when they alter the position of the strap using a strap stopper, the strap restraining the body is not ergonomic and causes discomfort, and the strap exerts pressure on the womb of pregnant women). Not buckling up is not an option as it imposes a physical hazard to them and consequently it could be a catalyst for an increased risk of death or other adverse effects to these women.

With these issues raised, there is a need to create an innovation for a safety belt that could accommodate the special needs of pregnant mothers behind the wheel (or as passengers). This modern innovation of safety belt was designed to be installed separately to any type of vehicles. It was developed with enhanced safety features and a better design to provide comfort and ease of movement to the wearer. Therefore, as an extension to the development of the said innovation, this study was carried out in order to identify the behavioural intention to use it by adopting the Technology Acceptance Model (TAM), looking at the aspect of Perceived Ease of Use and Perceived Usefulness and its influence towards Attitude and Trust.

2. Literature Review

2.1 Technology Acceptance Model (TAM)

The technology acceptance model (TAM) is a widely used theory to explain acceptance behaviour of users towards a technological enhancement product and/or service. It was first introduced by Davis (1989) to identify the changes in people's behaviour. Till this day, TAM is still one of the most popular research models in predicting the acceptance and intention to use a technology-related product/service.

Earlier, this model was used to predict the use and acceptance of information technology; however, throughout the year, the model has been modified and evolved where it can be used not only for predicting the usage of an information system but also to gauge the individual acceptance behaviour towards technology enhancement products and/or services (see: Ha & Stoel, 2009; Hu et al., 2016; Park, Nam, & Cha, 2012; Punnoose, 2012; Schnall & Bakken, 2011; Shih, 2004; Shroff, Deneen & Ng, 2011; Su, Tsai & Chen, 2012; Wong, Rosma, Goh & Mohd Khairezan, 2013; Wu & Chen, 2017) which covers diverse fields such as education, healthcare, IT-related services, business and software engineering.

Based on TAM, there are two factors deemed to be important in predicting the behavioural intention to use which are 'perceived usefulness' and 'perceived ease of use'. These two factors were proven to be reliable and strong determinants on the usage behaviour of information technology (Davis, 1989) and this model has been tested by other researchers as aforementioned and most of the studies yield reliable results and confirmed the original TAM's findings. These two factors, however, can be influenced by other external factors, such as social, cultural and political factors (Surendran, 2012) and according to Legris, Ingham, and Collerette (2003), in order for TAM to be a broader accepted model, it has to include other significant variables which relate to human and social changes (as categorised in the change of structure, behaviour, culture and value system).

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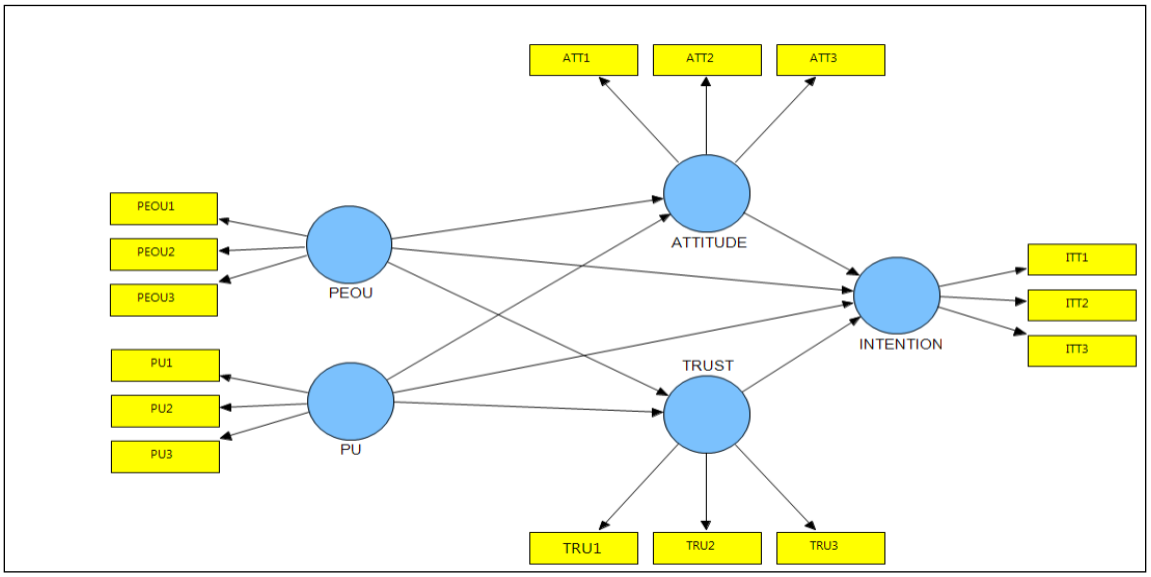

2.2 Theoretical Framework

Based on the literature reviews explained earlier, this study employed the TAM's model for measuring the behaviour intention to use IP-Belt among the respondents. Figure 1 shows the theoretical foundation of the constructs in the model.

Figure 1 Technology Acceptance Model (TAM)

Therefore, the following hypotheses were anticipated:
H1: Perceived Ease of Use (PEOU) has a significant effect towards Attitude
H2: Perceived Ease of Use (PEOU) has a significant effect towards Trust
H3: Perceived Usefulness (PU) has a significant effect towards Attitude
H4: Perceived Usefulness (PU) has a significant effect towards Trust
H5: Perceived Ease of Use (PEOU) has a significant effect towards Intention to Use
H6: Perceived Usefulness (PU) has a significant effect towards Intention to Use
H7: Attitude has a significant effect towards Intention to Use
H8: Trust has a significant effect towards Intention to Use
H9: Attitude mediates the relationship between Perceived Ease of Use (PEOU) and Intention to Use
H10: Attitude mediates the relationship between Perceived Usefulness (PU) and Intention to Use
H11: Trust mediates the relationship between Perceived Ease of Use (PEOU) and Intention to Use
H12: Trust mediates the relationship between Perceived Usefulness (PU) and Intention to Use

3. Methods

3.1 Sample and Data Collection

The respondents that participated in this study were pregnant women that have undergone pregnancy medical check-ups at three government health clinics. These health clinics,

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located at the Segamat district, which is a part of the Johor state, were chosen as a practical way of approaching the targeted respondents (i.e. Klinik Kesihatan Jementah, Klinik Kesihatan Buloh Kasap, and Klinik Kesihatan Badan Putra) and also for being near to the researchers' work in terms of location. Around 100 respondents were willing to participate in this study during the survey activities which were conducted for three months (October 2017 to December 2017). As for the data collection procedure, the researchers decided to use face-to-face interview for measuring the targeted variables since it can give a high response rate (Saunders et al., 2009). Before they filled up the questionnaire, each respondent needed to first test the IP-Belt. After that, the respondent was asked to fill the questionnaire.

3.2 Instrument

The questionnaire consists of two sections, which are respondent background and the behavioural intention sciences model (i.e. TAM model) which consists around 18 items (i.e. 3 items for the background section and 15 items for the TAM section). The information about TAM was collected using a seven-point Likert scale (i.e. 1 = Strongly Disagree to 7 = Strongly Agree) that was adapted from Kamarudin et al (2013) and S. Gao et al (2011). Table 2 shows the items for measuring the targeted variables in the TAM model for this study.

Table 2 TAM Measurement

Variables	Coded	Items
Perceived Ease of Use	PEOU1	I find IP-Belt easy to use without any skillful requirement
	PEOU2	I find IP-Belt is very flexible to used it
	PEOU3	I find IP-Belt ensure me to always wearing a pregnancy belt properly
Perceived Usefulness	PU1	Using the IP-Belt would alert me to wear safety pregnancy belt properly
	PU2	Using the IP-Belt make me concern about to think my pregnancy safety firstly
	PU3	Using the IP-Belt would avoid my pregnancy from the harmful
Attitude	ATT1	It is favorable to installed IP-Belt in my car
	ATT2	It is brilliant decision to have IP-Belt in my car
	ATT3	IP-Belt is the right thing to be installed in my car
Trust	TRU1	I feel confident with my pregnancy safety when I used IP-Belt
	TRU2	I feel more protected with my pregnancy safety when I used IP-Belt
	TRU3	I feel the IP-Belt is a risk-free system for the pregnancy mom's.
Intention to Use	ITT1	I intend to use IP-Belt if it is provided free
	ITT2	I will use IP-Belt if it is already installed (built-in) in a car
	ITT3	I would recommend to others pregnancy mom's to use IP-Belt

Note: All items were measuring using 7-point Likert scale (1 = Strongly Disagree to 7 = Strongly Agree).

3.3 Data Analysis

The questionnaire consists of two Structural Equation Modelling technique with Partial Least Square (i.e. PLS-SEM) estimation method was employed to explore the relationship among the targeted constructs (Astrachan et al., 2014) using SmartPLS 2.0 software. This technique allows the researchers to test the convergent and discriminant validities of the measurement model that being proposed since the sample sizes can be considered small (n = 100) (Hair et al., 2017). For measuring the significance effect of the paths, 5000

replications of samples (i.e. bootstrapping) were used by accessing the Bootstrap-t confidence level as well as t-statistics (Ong and Puteh, 2017; Hair et al., 2012).
Besides that, in order to measure the effect of mediating, the following procedure for deciding the mediating effect was used (Zhao et al., 2010; Lacobucci et al., 2007). The procedures are:

i. If the path of independent variable to dependent variable was not significant and the indirect effect is significant, hence the mediating effect was a full mediation effect.
ii. If the path of independent variable to dependent variable was significant and the indirect effect is significant, hence the mediating effect was a partial mediation effect.

4. Results and Discussions

4.1 Respondents' Profile

Table 3 shows the respondents' profile in this study. Among these 100 pregnant women, the majority of them were in the range of age between 21 to 25 years old (48.0%), whereas only 5% of them were in range of age between 36 to 40 years old. In terms of race distribution, the analysis indicated that 55% of the respondents were Malay respondents, followed by 35% and 10% of Chinese and Indian respondents. Regarding the pregnancy period, the majority of the respondents stated that currently, the age of their pregnancy was in the range of 3 - 6 months (71%).

Table 3 Respondent's Profile

Profile	Frequency	Percentage
Age		
21-25 years old	48	48.0
26-30 years old	32	32.0
31-35 years old	15	15.0
36-40 years old	5	5.0
Race		
Malay	55	55.0
Chinese	35	35.0
Indian	10	10.0
Pregnancy Period		
Less than 3 months	11	11.0
3-6 months	71	71.0
More than 6 months	18	18.0

a. Measurement Model Analysis

As for assessing the quality of the measurement model, convergent and discriminant validities were performed (Ong and Puteh, 2017; Hair et al., 2017). Table 5 indicated that all indicators have passed the minimum requirement of the convergent validity, which was the factor loading values of above .70, and were also statistically significant. Besides that, each construct had an AVE value of more than .50, and the Composite Reliability and Cronbach's alpha for each construct was above .70. As for discriminant validity, the heterotrait-monotrait (i.e. HTMT) technique was performed. Table 4 indicated that each construct was totally discriminant to each other since each HTMT value was less than .90

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(Hair et al., 2017). Therefore, the measurement model can be considered to pass the minimum criterion of the convergent and discriminant validities aspect, hence the structural model from this measurement model can now be evaluated.

Table 4 HTMT Discriminant Analysis for Measurement Model

	(1)	(2)	(3)	(4)	(5)
(1)	-				
(2)	0.695	-			
(3)	0.301	0.701	-		
(4)	0.295	0.420	0.732	-	
(5)	0.345	0.635	0.606	0.498	-

Note: (1) = Perceived Ease of Use; (2) = Perceived Usefulness; (3) = Attitude; (4) = Trust; (5) = Intention to Use.

Table 5 Convergent Validity for Measurement Model

LV	Indicator	Loading	AVE	Composite Reliability	Cronbach's Alpha
Perceived Ease of Use	PEOU1	.927**	.889	.960	.938
	PEOU2	.960**			
	PEOU3	.942**			
Perceived Usefulness	PU1	.838**	.771	.910	.850
	PU2	.935**			
	PU3	.857**			
Attitude	ATT1	.727**	.641	.842	.717
	ATT2	.806**			
	ATT3	.864**			
Trust	TRU1	.913**	.800	.923	.874
	TRU2	.931**			
	TRU3	.836**			
Intention to Use	ITT1	.911**	.763	.906	.845
	ITT2	.863**			
	ITT3	.846**			

Note: LV = Latent Variable; AVE = Average Variance Explained; **p <.01.

b. Structural Model Analysis

The total variations (R2) explained for Attitude and Trust were .531 and .345. It is indicated that in a simultaneous concept, Perceived Ease of Use and Perceived Usefulness were able to explain about 53.1% and 34.5% of variance towards the Attitude and Trust constructs. Meanwhile, at the same time, Perceived Ease of Use, Perceived Usefulness, Attitude, and Trust constructs were able to explain about 66.7% of variance towards Intention to Use. Hence, it can be concluded that the structural model was able to predict a good intention to use the IP-Belt among the pregnant women since the R2 value can be considered large (Hair et al., 2017). In addition, the assessment of effect size (f2) and predictive relevance (q2) (i.e. Table 6) for each path can be considered as having moderate to large effects for each path in the structural model (Henseler & Chin, 2010).

As for the assessment of paths, the analysis indicated that Perceived Ease of Use (β = 0.555, t = 13.989, p <.01) and Perceived Usefulness (β = 0.264, t = 6.507, p <.01) had a positive significant influence towards Attitude. Hence, it is indicated that if the average levels of Perceived Ease of Use and Perceived Usefulness were high, then the levels of

Attitude will also be high. In the same way, Perceived Ease of Use (β = 0.345, t = 6.921, p <.01) and Perceived Usefulness (β = 0.327, t = 6.923, p <.01) also had a positive significant influence towards Trust. Therefore, the same conclusion can be made, which is, if the average levels of Perceived Ease of Use and Perceived Usefulness were high, then the levels of Trust will also be high.

Regarding the Intention to Use construct, the analysis indicated that Perceived Ease of Use (β = 0.123, t = 2.071, p <.05), Perceived Usefulness (β = 0.205, t = 5.745, p <.01), Attitude (β = 0.454, t = 10.379, p <.01), and Trust (β = 0.191, t = 4.379, p <.01) were found to have a positive significant influence towards Intention to Use. It is indicated that in a simultaneous concept, if the average levels of Perceived Ease of Use, Perceived Usefulness, Attitude, and Trust were high, then the levels of Intention to Use will also be high. Figures 2 and 3 show the analysis of the PLS-SEM.

Table 6 Effect size (f^2) and Predictive Relevance (q^2)

	f^2	Remark	q^2	Remark
PEOU → ATTITUDE	.564	Large	.501	Large
PEOU → TRUST	.453	Large	.467	Large
PEOU → INTENTION	.234	Moderate	.226	Moderate
PU → ATTITUDE	.387	Large	.357	Large
PU → TRUST	.416	Large	.429	Large
PU → INTENTION	.278	Moderate	.196	Moderate
ATTITUDE → INTENTION	.496	Large	.486	Large
TRUST → INTENTION	.213	Moderate	.186	Moderate

Note: PEOU = Perceived Ease of Use; PU = Perceived Usefulness; ATTITUDE = Attitude; TRUST = Trust; INTENTION = Intention to Use.

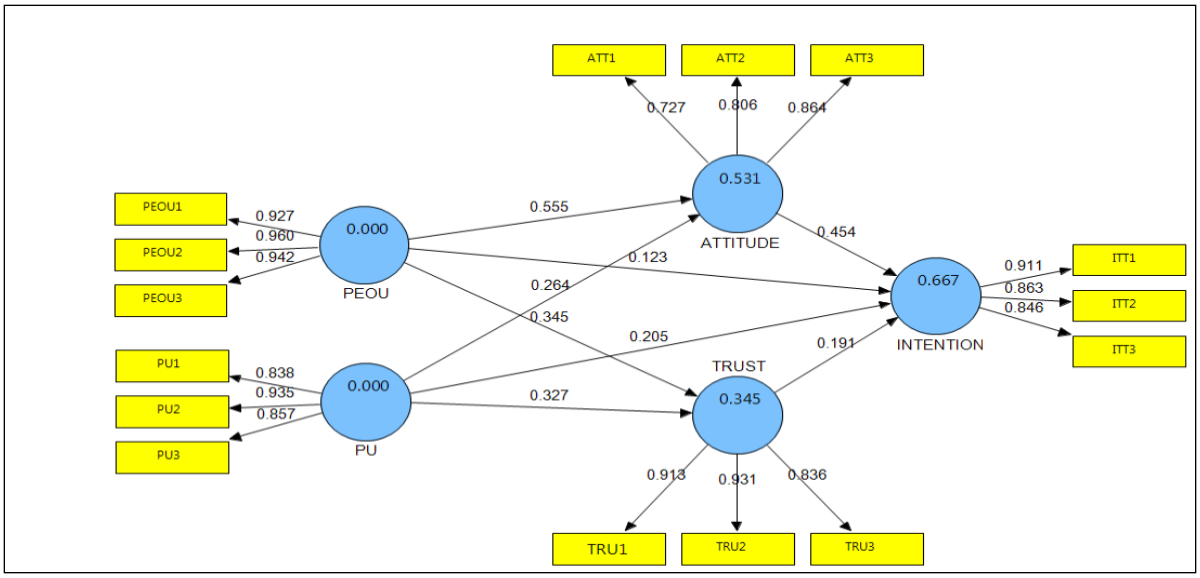

Figure 2 Assessment of the Path Coefficients Analysis

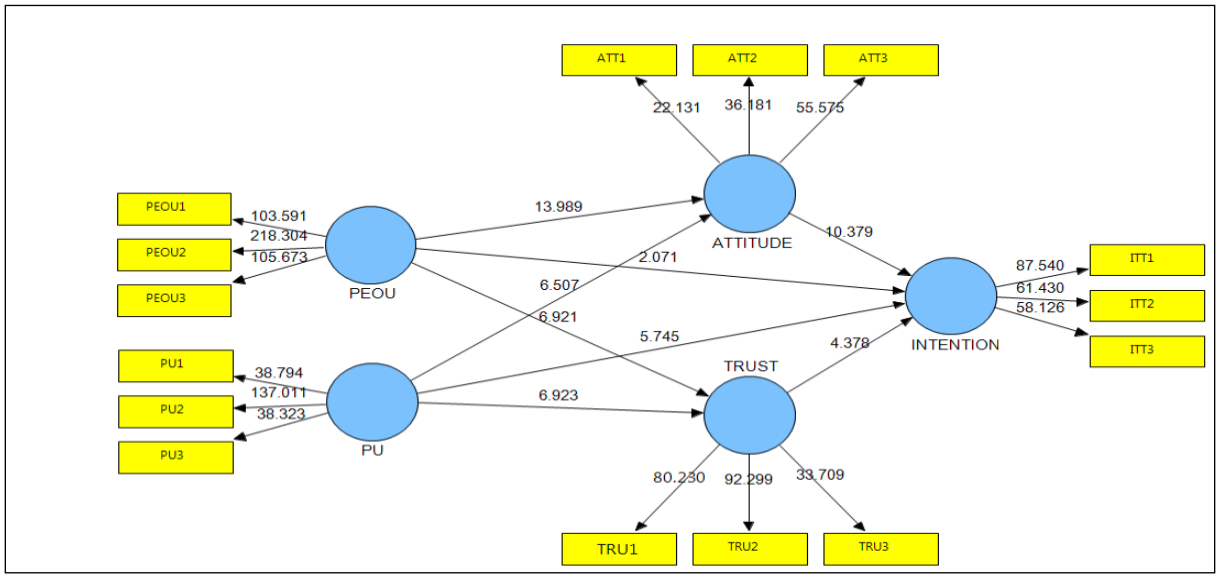

Figure 3: Assessment of the Bootstrapping Analysis

c. Mediating Analysis

The indirect effect assessment confirmed that Attitude mediated the relationship of Perceived Ease of Use → Intention to Use (Indirect Effect Coefficient = 0.252, t = 3.623, p <.01) and Perceived Usefulness → Intention to Use (Indirect Effect Coefficient = 0.120, t = 2.723, p <.01). Besides that, Trust also mediated the relationship of Perceived Ease of Use → Intention (Indirect Effect Coefficient = 0.066, t = 2.056, p <.05) and Perceived Usefulness → Intention (Indirect Effect Coefficient = 0.062, t = 2.013, p <.05). All the indirect effect analyses were also supported by the indirect analysis of bootstrapping confidence interval, where all the 95% of confidence intervals did not include zero (Refer Table 7). Therefore, the effect of Attitude and Trust can be categorised to have a partial mediating effect towards the relationships of Perceived Ease of Use → Intention to Use and Perceived Usefulness → Intention to Use, since the direct effects of Perceived Ease of Use → Intention to Use (β = 0.123, t = 2.071, p <.05) and Perceived Usefulness → Intention to Use (β = 0.205, t = 5.745, p <.01) were statistically significant.

Table 7 Indirect Effect Assessment

Path	IEC	t-value	Bootstrap-t
PEOU → ATTITUDE → INTENTION	0.252	3.623**	(0.185, 0.295)
PU → ATTITUDE → INTENTION	0.120	2.723**	(0.107, 0.159)
PEOU → TRUST → INTENTION	0.066	2.056*	(0.026, 0.103)
PU → TRUST → INTENTION	0.062	2.013*	(0.022, 0.108)

Note: PEOU = Perceived Ease of Use; PU = Perceived Usefulness; ATTITUDE = Attitude; TRUST = Trust; INTENTION = Intention to Use; IEC = Indirect Effect Coefficient; the result of Bootstrap-t was based on 95% bootstrap confidence interval with 5000 replication; **p <.01; *p <.05.

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5. Conclusion

Car accidents among pregnant mothers that can sometimes kill the fetus, cannot be totally prevented but it can be avoided or minimised through protective equipment like a more protective seatbelt. Hence, a new approach is needed to overcome this issue by implementing new seat belt designs for the passengers like the IP-Belt. In fact, an interdisciplinary research applied in this study by using the TAM model confirmed that Perceived Ease of Use and Perceived Usefulness significantly influenced the intention to use this IP-Belt. In addition, Attitude and Trust also significantly influenced the respondents to use this IP-Belt. Therefore, it is indicated that all characteristics in the IP-Belt design can be considered as having a good design since it can build up a good attitude and trust from the perspective of perceived ease of use and perceived usefulness of the product. Therefore, this IP-Belt can be considered a practical seat belt design for improving the safety levels of pregnant women during their destination journey and can also be applied in other transportation modes such as buses or other public transport.

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