

# **WRITING A FRGS PROPOSAL**

**SHARING SESSION WITH ASSOC.  
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**SBM**

**7 FEBRUARY 2023**

# FRGS

## Fundamental Research Grant Scheme( 2-3 YEARS)

- A research which will result new theory, concept or new idea.
- Answer the questions of “WHY?” and “HOW?”.

# TRGS

## Trans-disciplinary Research Grant Scheme

- Fundamental research across AT LEAST 3 disciplines
- EG. 3 FACULTIES/SCHOOLS.



**DANA PENYELIDIKAN KPT**  
Working for Malaysia

# LRGS

## Long-term Research Grant Scheme

- Fundamental research which needs more than 3 years.

# PRGS

## Prototype Development Research Grant Scheme

- **CREATION** of a product but not up to commercialization level.

# **CURRENT FRGS RESEARCH TOPICS IN 2022 / 2023**

- INNOVATION/SMART SCM/LOGISTICS MODELS
- NEURAL- SCM APPLICATION
- ARTIFICIAL INTELLIGENCE (AI) RELATED TOPICS
- INTERNET OF THINGS/EVERYTHING (IOT/IOE)
- CYBER-RELATED TOPICS
- DRONES TECHNOLOGY
- ROBOTICS TECHNOLOGY
- 3-D PRINTER TECHNOLOGY RELATED
- APPLICATION OF BLOCK CHAIN TECHNOLOGY
- FOOD SECURITY

# FRGS EVALUATION

<b>Very Poor</b>	<b>Poor</b>	<b>Acceptable</b>	<b>Good</b>	<b>Very Good</b>
<b>1 - 2</b>	<b>3 - 4</b>	<b>5 - 6</b>	<b>7 - 8</b>	<b>9 - 10</b>

# FRGS: EVALUATION CRITERIA

## 1. Title (5%)

Specific in nature reflecting fundamental issues to be resolved/novelty

Brief and reflects the content of the proposal

## Examples of winning Titles

1. A New Adoption Intention Model of Drone Application and Usage in Food Delivery Services (2022) (RM70,000)
2. Developing a Model for Customer Acceptance Behavior of Smart Technologies in Retail Sector Services (2020) (RM68,300)
3. Developing A Framework For Inclusive Community-driven Rural Tourism Through Resident's Citizenship Behaviors (2020) (RM68,300)
4. A New Model of Sustainable Revisit Behaviour to Enhance Food Safety Management System in Local Halal Full Service Restaurants in Malaysia (2020) (RM65,000)

# FRGS: EVALUATION CRITERIA

## 1. Title (5%) (Cont...)

Specific in nature reflecting fundamental issues to be resolved/novelty

Brief and reflects the content of the proposal

5. Development of a New Re-Patronage Model for Syariah Compliance E-lodging Industry: The Mediating Effect of Artificial Intelligence (2019) (RM80,300)

6. Developing a New Model for Cyber Security Behavior of E-Hailing Services (2018) (RM63,200)

7. Developing The Model of Social Media Marketing And Consumer–Brand Relationships (CBR) Towards SMEs Brand Equity (2018) (RM55,000)

8. Developing a New Safety and Quality Assurance Model in Malaysian Child Care Centres (2017) (RM57,240)

# FRGS: EVALUATION CRITERIA

## 1. Title (5%) (Cont...)

Specific in nature reflecting fundamental issues to be resolved/novelty

Brief and reflects the content of the proposal

**9. Constructing a Model of Consumption Pattern for Malaysian Consumers (2014) (RM70,000)**

# FRGS: EVALUATION CRITERIA

## 2. Executive Summary (10%)

Problem statement

Objectives

Methodology

Expected output/outcome/implication

Significance of output

## Examples of a winning ES

E-hailing industry is a new concept in the taxi services whereby private cars can register with online transport agencies such as Uber and Grabcar. Uber is an international e-hailing worth USD70 billion in 2017 while Grabcar is worth USD3 billion. It is a major concern for the public due to increasing security and safety issues both to the passengers and the drivers themselves. In Malaysia, there were criticisms regarding hit and run accident in Klang, passenger was robbed in Serdang and Petaling Jaya, woman raped by grabcar driver in Serdang and Penang, sexual harrassment (touching by drivers) of e-hailing car service, rude drivers, grab driver scams (back door services). The study intends to investigate the predictors of cyber security behaviors of e-hailing services in Malaysia. Hence, the main objective is to develop a new cyber security behavior model among e-hailing passengers and drivers. The research method used are quantitative and qualitative research design. The sampling technique is to collect data from 800 passengers and 300 drivers of ehailing services. The measurement of the data consists of twelve main variables. The data will be collected using self-administered survey and is analyzed using SMART PLS 3.0. The expected outputs are a new cyber security behavior model for Malaysia, 1 PhD/Master student, 2 Scopus journals, 2 Conference proceedings (Scopus/ISI) and 1 book chapter. The significance of the output is to provide new inputs for e-hailing regulation and policy improvement in line with Industrial Revolution 4, new suggestions for e-hailing market segmentation according gender and generation gaps, enhancement of the existing applications according to research findings and set new guidelines on the development of similar application.



# FRGS: EVALUATION CRITERIA

3. Research Background (15%)		
Elaboration of title		
Clarity of problem statement and research question/hypothesis/theoretical framework (if applicable)		
Cited most recent (last 5 years) related references (Literature Review)		
In line with government policy, national agenda and global aspiration (can help alleviate problem at local, national or world level)		

## Example of Title Elaboration

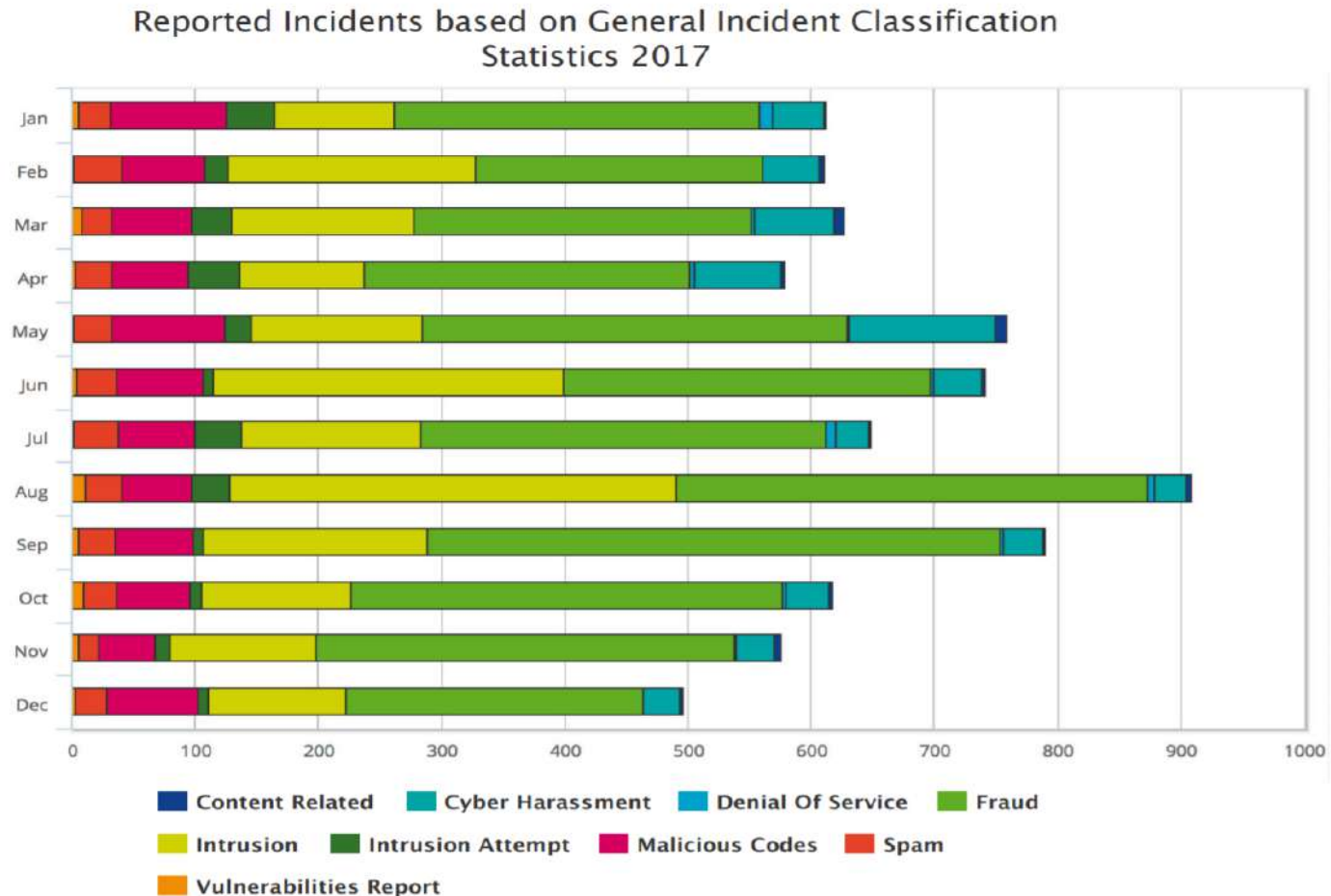
The topic is about cyber security behavior issues pertaining to Malaysian e-hailing services such as Grabcar users and drivers.

## Example of Problem Statement/RQ/Hypothesis/ Research Framework

According to statistics collected from CyberSecurity Malaysia's website, the reported incidents of cyber crime recorded by Cyber999 in Malaysia increased from 3,564 cases in 2009 to 8,090 cases in 2010. As of November 2017, 560 cases of cyber harassment and 3821 number of fraud cases were reported. This shows cyber crimes are increasing at an alarming rate (refer figure 1 and 2). There were also incidence of rude drivers (Figure 3)

# Evidence of research problem

## Figure 1



# Evidence research problem

## Figure 2

■ Content Related   
 ■ Cyber Harassment   
 ■ Denial Of Service   
 ■ Fraud  
■ Intrusion   
 ■ Intrusion Attempt   
 ■ Malicious Codes   
 ■ Spam  
■ Vulnerabilities Report

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Content Related	2	5	9	2	9	2	1	4	2	2	5	3	46
Cyber Harassment	41	45	64	71	119	39	27	25	32	36	31	30	560
Denial of Service	11	0	3	3	1	3	8	6	2	2	1	0	40
Fraud	296	233	274	265	346	298	329	382	466	351	340	241	3821
Intrusion	98	201	148	101	138	284	146	363	181	121	119	111	2011
Intrusion Attempt	39	19	32	41	22	8	37	31	8	9	11	9	266
Malicious Code	94	68	65	62	92	71	62	56	64	60	46	74	814
Spam	26	38	24	30	31	32	36	30	29	26	17	25	344
Vulnerabilities Report	5	2	8	3	1	4	2	11	6	10	5	3	60
<b>TOTAL</b>	612	611	627	578	759	741	648	908	790	617	575	496	7962

# Evidence research problem

VIRAL

## Video of Rude Malaysian GrabCar Driver Poking Fun at Chinese Tourists Goes Viral



Published 8 months ago on June 14, 2017  
By Ling Kwan



Source

More

**THE Star** ONLINE

The Star










News Business Sport Metro Tech Lifestyle Opinion Videos Property Jobs Autos More

TOPICS ▶ GE14 #DaretoCare StandTogether True or Not Star Foundation

### Grab driver arrested after woman claims to have been raped

NATION

Monday, 12 Jun 2017  
12:01 PM MYT



By Jo Timbuong

SERDANG: Just over three weeks after a pregnant woman was held at knife-point by her ride-sharing driver, another similar crime has taken place in the same area, with a woman passenger claiming to have been raped.

Serdang OCPD Asst Comm Megat Mohamad Aminudin Megat Alias said police had received a report from a 29-year-old woman who claimed that she was raped by a Grab driver on her way home at 4am on Sunday.

"She claims that the driver took advantage of her near her house in Bandar Putra Permai in Seri Kembangan and she couldn't fight him off because she was drunk," he said in a statement on Monday.

The woman alleged the driver sent her home after that.

The case is being investigated under Section 376 of the penal code for rape.

The Star has reached out to Grab for further information.

**TAGS / KEYWORDS:**  
Ride Sharing , E Hailing , Driver , Rape , Courts Crime

# RESEARCH QUESTIONS

1. Why e-hailing services are more preferred than the traditional taxi operators?
2. Which generation gap has the highest confidence in the e-hailing services?
3. How to improve the cyber security protection for female passengers?
4. How do the specified factors explain cyber security behavior?
5. How do the specified factors explain perceived threat of new entry?
6. How do the specified factors explain perceived threat of substitute?
7. How do perceived threat of new entry and perceived threat of substitute mediates the linkages between the specified factors and cyber security behavior?
8. Do gender and generation gap moderate the relationship between perceived threat and cyber security behavior?

# RESEARCH HYPOTHESIS

- **Direct Hypotheses**

- H1: Perceived threat of new entry is related negatively to cyber security behavior
- H2: Perceived threat of substitute is related negatively to cyber security behavior.
- H3: Perceived privacy is related to cyber security behavior.
- H4: Fraud victimization is related to cyber security behavior.
- H5: Response Efficacy is related to cyber security behavior.
- H6: Perceived Vulnerability is related to cyber security behavior.
- H7: Security Self-Efficacy is related to cyber security behavior.
- H8: Perceived Benefit is related to cyber security behavior.
- H9: Government Policy is related to cyber security behavior.

- **Indirect Hypotheses**

- H10: Perceived Threat of New Entry mediates the relationship between perceived privacy and cyber security behavior.
- H11: Perceived Threat of New Entry mediates the relationship between Fraud victimization and cyber security behavior.
- H12: Perceived Threat of New Entry mediates the relationship between Response Efficacy and cyber security behavior.
- H13: Perceived Threat of New Entry mediates the relationship between Perceived Vulnerability and cyber security behavior.
- H14: Perceived Threat of New Entry mediates the relationship between Security Self-Efficacy and cyber security behavior. .... more

# RESEARCH FRAMEWORK

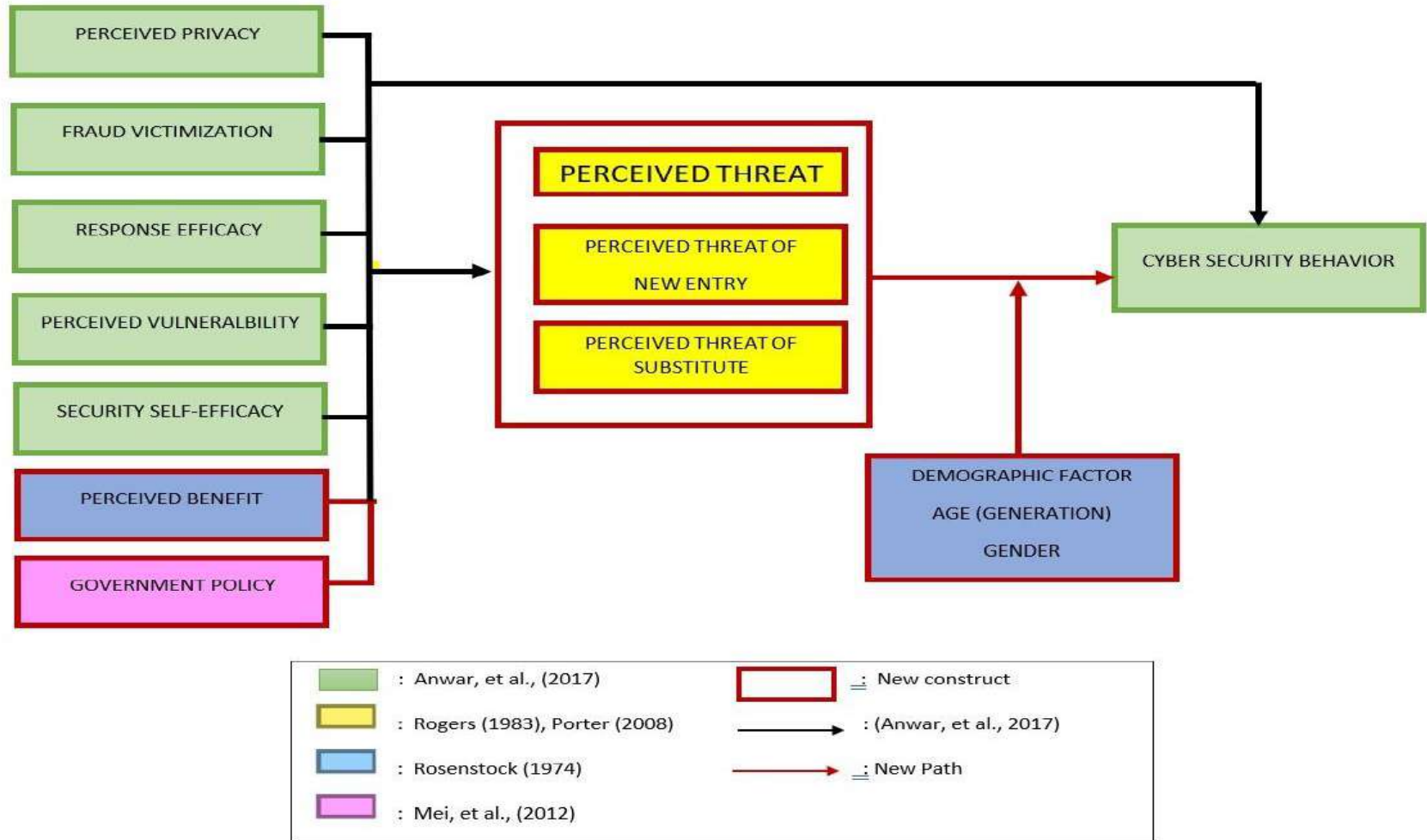


Figure 5: CYBER SECURITY BEHAVIOR PROPOSED FRAMEWORK

# PAST MODEL 1

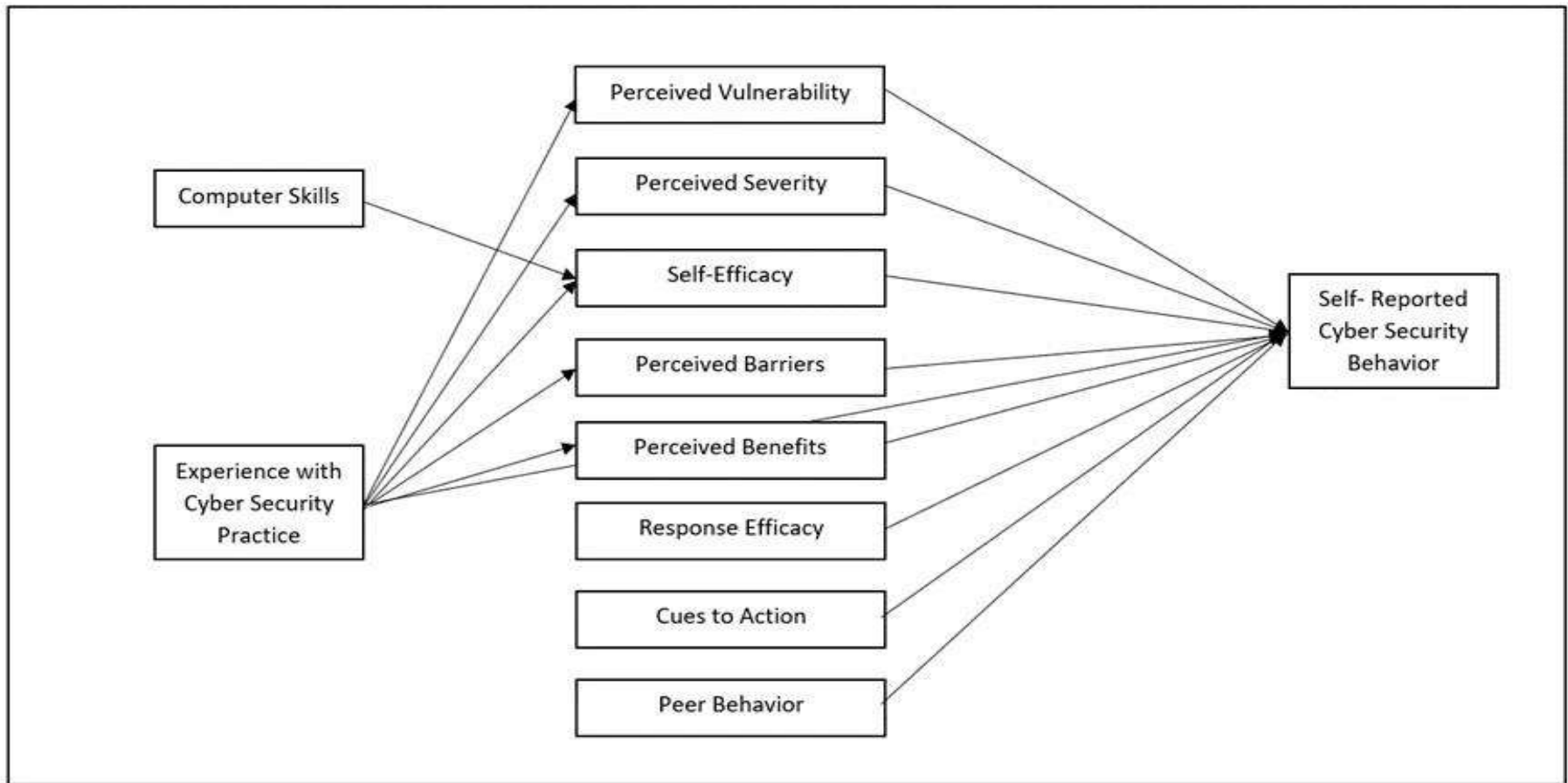


Figure 1: Model 1: Cybersecurity Behavior Model



# PAST MODEL 2

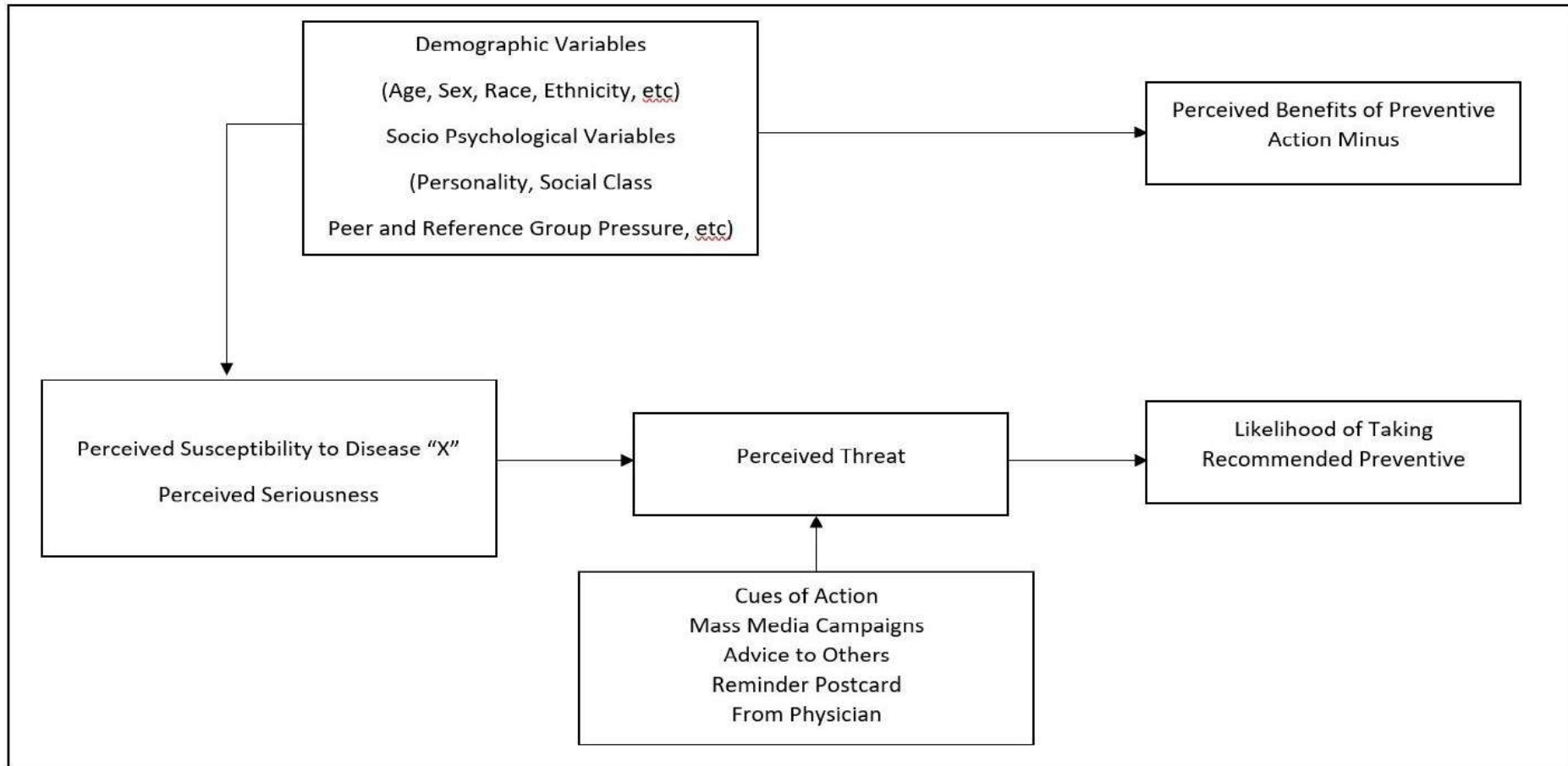


Figure 2: Model 2-Health Belief Model

Source: Rosenstock (1974)

# PAST MODEL 3

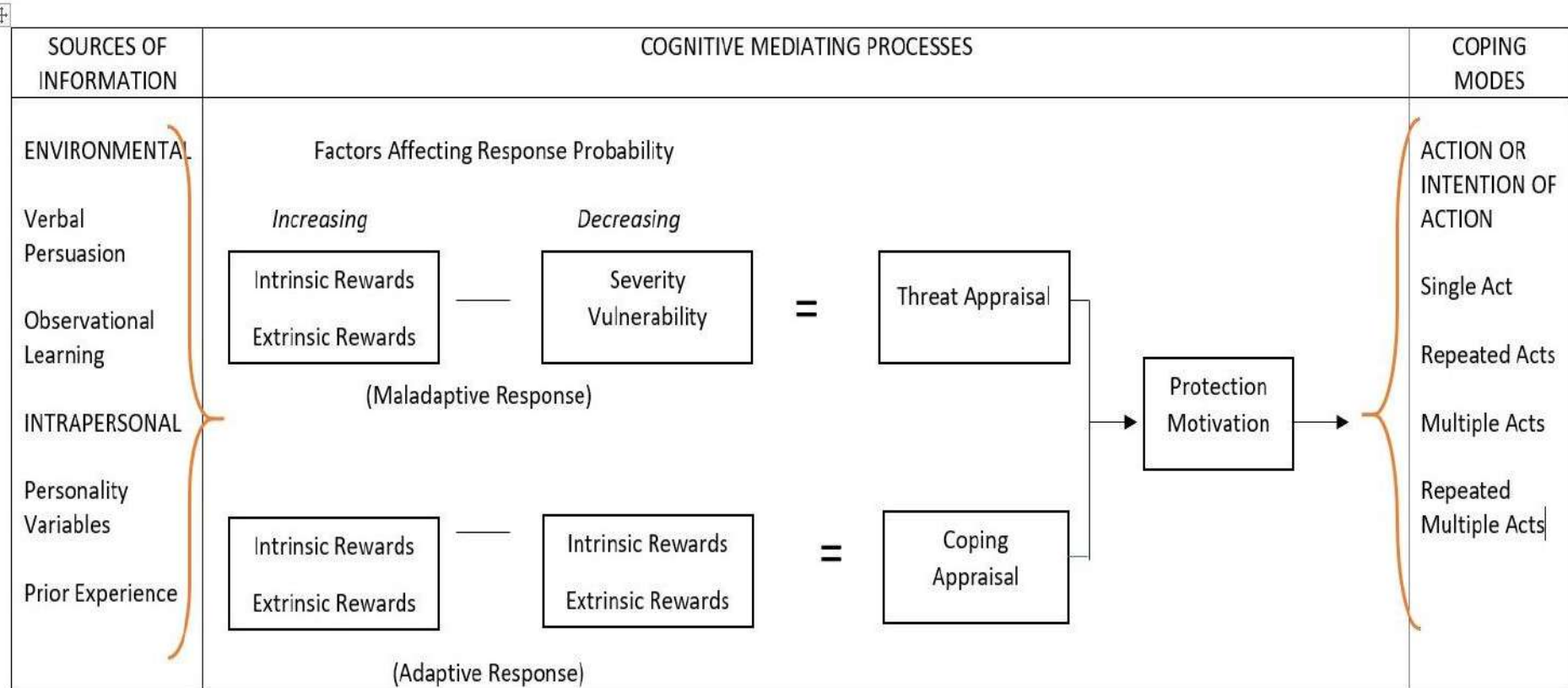


Figure 3: Model 3-Protection Motivation Theory

Source: Rogers (1983)

# PAST MODEL 4

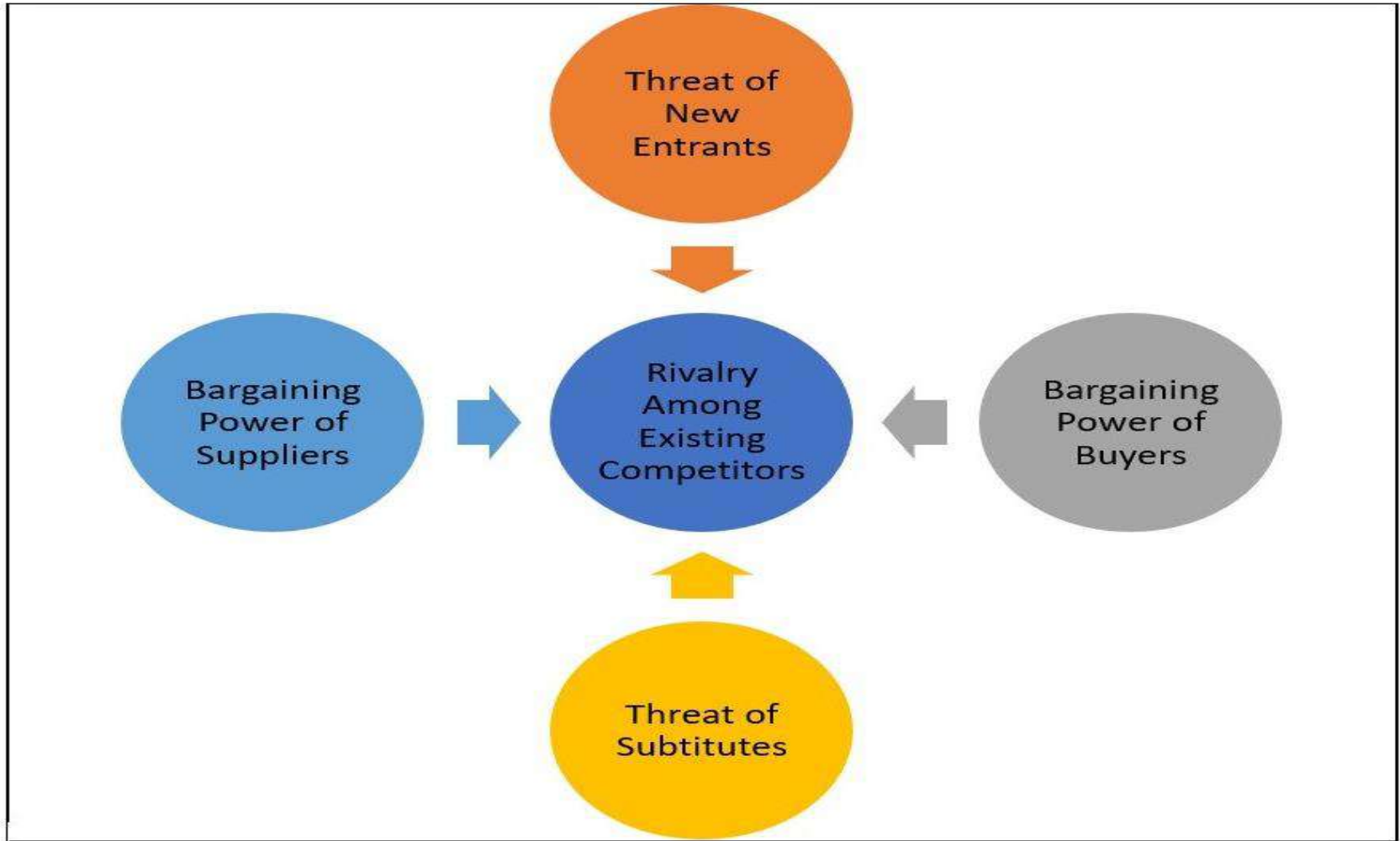


Figure 4: Model 4-Five Forces Analysis

# LITERATURE REVIEW (LR)

- 80% OF LR MUST BE RECENT **5 YEARS CITATION ONLY.**
- GO BY RELATIONSHIP AS IN HYPOTHESIS
- REVIEW OPERATIONAL DEFINITIONS & GAPS IN EACH RELATIONSHIP.
- DO NOT COPY PASTE FROM ANY PAST STUDIES (EACH PROPOSAL WILL BE TURNITIN AT KPT) BEFORE FINAL REVIEW.

# REFERENCE

- APA FORMAT.
- 5 YEARS CITED.
- COMPLETE/ THOROUGH.
- NO MISMATCH BETWEEN TEXT N REFERENCES.
- AT LEAST 20 REF OR MORE

# RELEVANCE TO GOVERNMENT POLICY

In line with government policy, national agenda and global aspiration (can help alleviate problem at local, national or world level)

1. The customers of e-hailing services (eg. Grabcar) is a new phenomena hence it is vital to enhance safety and security of Malaysian customers.
2. The finding can enhanced the law and policies regarding legal perspective on cyber security of e-hailing industry.

# RESEARCH OBJECTIVE

4. Objectives (15%)		
Specific, Measurable, Achievable, Realistic and within Time-frame (SMART)		
Relate to problem statement/research question		

1. To investigate which e-hailing services are more preferred than the traditional taxi operators.
2. To compare which generation gap has the highest confidence in the e-hailing services?
3. To determine the best ways to protect the female passengers.
4. To examine the predictors of cyber security behavior.
5. To examine the predictors of perceived threat of new entry?
6. To examine the predictors of perceived threat of substitute?
7. To determine the mediating effects of perceived threat of new entry and perceived threat of substitute on the linkages of specified factors and cyber security behavior?
8. To determine the moderating role of gender and generation gap on the relationship between perceived threat and cyber security behavior?

# COMPARE RESEARCH OBJECTIVE (RO) with RESEARCH QUESTIONS

## Research Objective

1. To investigate which e-hailing services are more preferred than the traditional taxi operators.
2. To compare which generation gap has the highest confidence in the e-hailing services?
3. To determine the best ways to protect the female passengers.
4. To examine the predictors of cyber security behavior.
5. To examine the predictors of perceived threat of new entry?
6. To examine the predictors of perceived threat of substitute?
7. To determine the mediating effects of perceived threat of new entry and perceived threat of substitute on the linkages of specified factors and cyber security behavior?
8. To determine the moderating role of gender and generation gap on the relationship between perceived threat and cyber security behavior?

## Research Questions

1. Why e-hailing services are more preferred than the traditional taxi operators?
2. Which generation gap has the highest confidence in the e-hailing services?
3. How to improve the cyber security protection for female passengers?
4. How do the specified factors explain cyber security behavior?
5. How do the specified factors explain perceived threat of new entry?
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7. How do perceived threat of new entry and perceived threat of substitute mediates the linkages between the specified factors and cyber security behavior?
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# METHODOLOGY

## 5. Methodology (25%)

Clear and detailed description of methodology (may consist of field work, sampling techniques, interview session, analysis, lab work of different phases, experimental protocol, statistical analysis)

Able to achieve research objectives

Include research design, flow chart, Gantt chart, activities and milestones

Research Design: Quantitative design- Primary Data Collection through questionnaire, unit of analysis- e-hailing customers and drivers.

Qualitative Design: Interview with Land Public Transport Commission Ministry.

Sampling Method:

- Unit of analysis: E-hailing passengers and E-hailing drivers (dyad)
- Sampling Frame: Stratified based on 5 main geographical areas in main cities: Kuala Lumpur, Selangor, Johor, Perak, Pulau Pinang.
- Population: Users of e-hailing services: Grabcar/MYCAR and Registered drivers of Grabcar/Mycar.
- Population table: Refer Table 1 and Table 2

Questionnaire Design: No of items and sources of questionnaire (author)

Statistical Analysis method:

Structural Equation Modelling (SEM) USING SMART PLS.

# METHODOLOGY-sampling techniques

Table 1: E-Hailing User's population and sample size

State	Passenger's population ('000)	Sample Size Based on Generation		
		Baby Boomers	Gen X	Gen Y
Kuala Lumpur	1,789.7	120	120	120
Selangor	6291.5	120	120	120
Johor	3651.8	120	120	120
Perak	2482.2	120	120	120
Pulau Pinang	1717.6	120	120	120
Sub Total		600	600	600
<b>Total</b>	<b>15,932.8</b>	<b>1800</b>		

Sources: <https://www.dosm.gov.my>

Table 2: E-Hailing Driver's population and sample size

E-Hailing Service Provider	Driver's Total Population	Sample size
Uber	60,000	150
Grab	170,000	150
<b>Total</b>	<b>230,000</b>	<b>300</b>

# METHODOLOGY- Questionnaire Design

**Table 3: Measurement (Instrument)**

<b>Variables</b>	<b>No. Of Items</b>	<b>Source</b>
Cyber Security Behavior	9	Anwar, et al. (2017)
Perceived Privacy	4	Rogers (1983)
Fraud Victimization	7	Anwar, et al. (2017)
Response Efficacy	4	Anwar, et al. (2017)
Perceived Vulnerability	8	Anwar, et al. (2017)
Security Self Efficacy	7	Anwar, et al. (2017)
Perceived Benefit	7	Rosenstock (1974)
Government Policy	5	Mei, et al. (2012)
Perceived Threat of New Entry	8	Rosenstock (1974), Porter (2008)
Perceived Threat of Substitute	6	Rosenstock (1974), Porter (2008)
Demographic Factor (Age, Gender)	-	Rosenstock (1974)

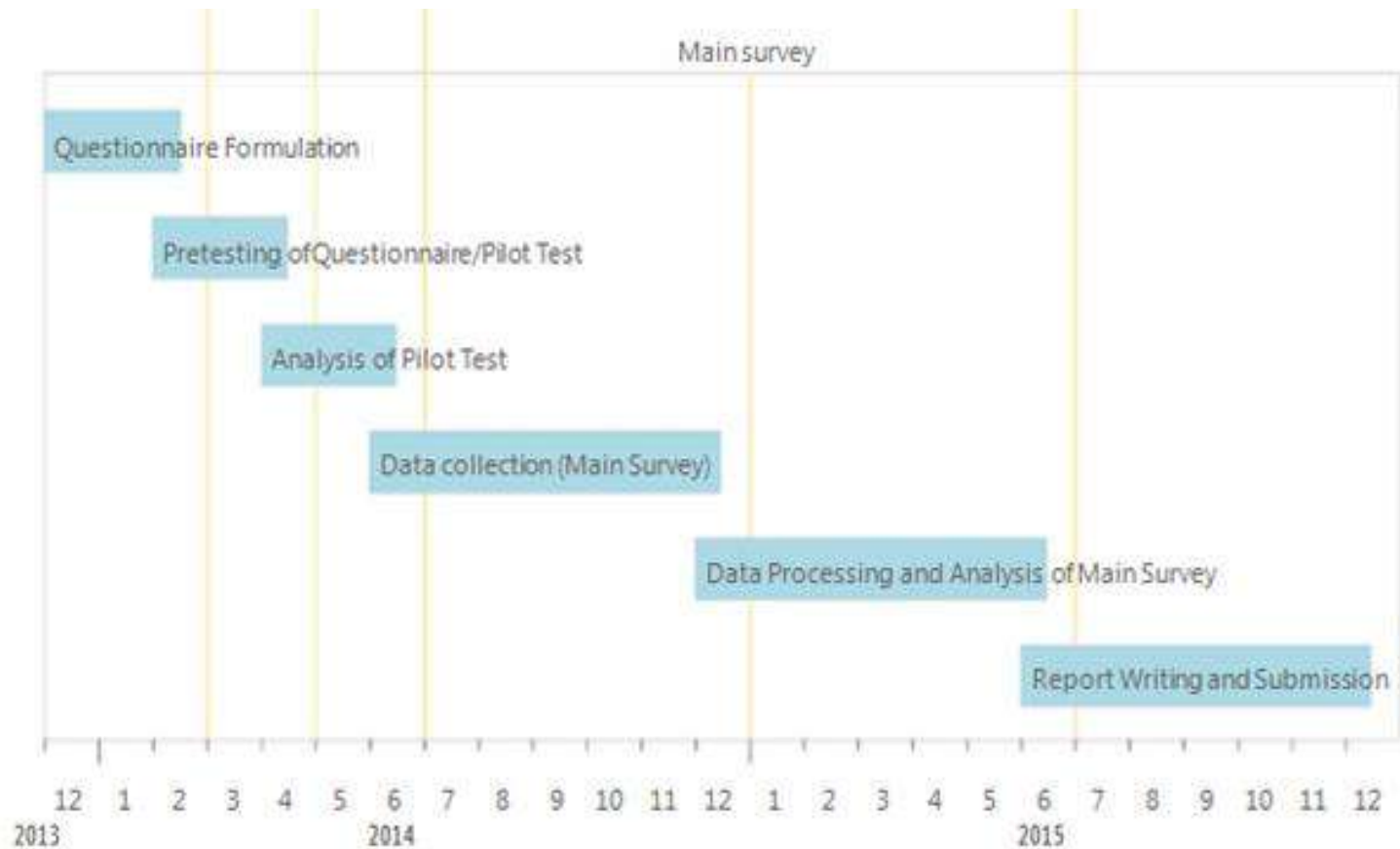
# FLOW CHART

Activity	Start Date	End Date
Questionnaire Design Development	01/01/2019	28/02/2019
Pretesting of Questionnaire/Pilot Test	01/03/2018	30/05/2019
Analysis of Pilot Test	01/06/2019	30/11/2019
Data collection (Main Survey)	01/12/2019	30/06/2020
Data Processing and Analysis of Main Survey	01/07/2020	31/03/2021
Report Writing 1&2and Submission	01/04/2021	31/12/2021

# MILESTONE

Description	Date	Cumulative Project Completion Percentage(%)
Completion of questionnaire formulation and adaptation	28/02/2019	30
Questionnaire pre-testing and pilot test	30/05/2019	40
Pilot test analysis	30/11/2019	50
Main survey	30/06/2020	70
Data processing and analysis	31/03/2021	80
Report writing 1 &2 and submission	31/12/2021	100

# GANTT CHART



# EXPECTED RESULTS

## 6. Expected Results (10%)

New theory or new findings/knowledge

Publication in indexed journals (top tier)/Intellectual property

Talents - Masters or PhD

Impact on society, economy and nation

### NEW THEORY:

1. A new model of cyber security behavior for Malaysia.
2. New inputs for e-hailing regulation and policy improvement in line with Industrial Revolution 4.
3. New suggestions for e-hailing market segmentation according gender and generation gaps.
4. Enhancement of the existing applications according to research findings.
5. New Guidelines on the development of similar application in line with industrial Revolution 4.
6. Compulsory installation of panic button in e-hailing automobile.

### Research

### Publications

1. 2 journals (scopus)
  2. 2 international conference proceedings (scopus, ISI).
  3. 1 book chapter.
- Total Number of Publications: 5

### 3. Specific or Potential Applications

1. New cyber security behavior model.
2. Improved regulations and policy in e-hailing services.
3. Enhanced guidelines in cyber security for new e-hailing applications

Total Number of Applications: 3

### 4. Number of PhD and Masters (by research)

### Students

Number of PhD Students:

1

Number of Masters (by research) Students: Remark (if any):

# TEAM COMPOSITION

## 7. Track Record and Composition of Team (5%)

Evidence of previous successful research projects

Qualification and rank of researchers

Well balanced team

- TRACK RECORD OF LEADER
- EVIDENCE OF SUCCESSFUL PREVIOUS RESEARCH. (PREVIOUS FRGS MUST BE 75% DONE).
- QUALIFICATION & NO OF TEAM RESEARCHER (2-5)
- WELL BALANCED TEAM.
- DO NOT BE A LONE RANGER.



# PROPOSAL QUALITY

## 8. Quality of Proposal (10%)

Meticulous

Proper use of language (grammar, spelling, sentence construction)

Good formatting and presentation

# FRGS CRITERIA

## 9. Elements of FRGS Criteria (5%)

Novel, cutting edge, high impact

# NEW ADDED CRITERIA

<b>Patent Search (2%)</b>	
<b>Risk Assessment (1%)</b>	
<b>Collaboration (2%)</b>	

# Link Webex Recording

Webex meeting recording:

**Research Talk! Sesi Perkongsian & Tips Permohonan FRGS 2023-20230207  
0129-1**

Password: **vM3rmC7c**

Recording link:

[https://uum.webex.com/uum/ldr.php?RCID=1beeb163653d5fc3c6ef6b331a08b3  
d5](https://uum.webex.com/uum/ldr.php?RCID=1beeb163653d5fc3c6ef6b331a08b3d5)



**SEKIAN, TERIMA KASIH**  
**Thank you**