A study of youth's pro-environmental behavior: Participation in the Earth Hour 60 Environmental Campaign

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Declaration

I hereby declare that:

(1) This MKMA25706 Research Project is the end result of my own work and that due acknowledgement has been given in the references to all sources of information be they printed, electronic, or personal.
(2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.
(3) The word count of this research report is 21150.

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Abstract

This research project adopt the participation of youth in a Global Environmental Campaign, Earth Hour 60 (EH60), as a case study for Youth's Pro-Environmental (PEB) Behavior. The intention to switch off non-essential light of household, as requested by the organizer of the campaign, is correlated with determinants of the Theory of Planned Behavior (TPB), which posit that the intention is determined by Attitude, subjective Norms and the Perceived Behavioral Control towards switching off for the campaign. Other determinants of PEB include Past Behavior, Organizational Influence, Altruism and Self-identity of respondents, are pooled from the review of about seventy related literatures and incorporated into the TPB model, to generate an Integrated model (IM) for this study.

Survey data is collected right after the 2013's EH60 from 278 university students of two private universities in the Klang Valley. Respondents are divided into two groups based on the survey data; 115 participants and 163 non-participants. Demographics and behavioral indicators among these two groups are compared to identify the role of demographics on actual behavior.

Survey data is then fitted into the IM first using Multiple Regression analysis as exploratory mode, and then with Structural Equation Modeling analysis as confirmatory mode. The final model is able to explain 60.5% of the variance in intention, with Attitude as the major predictor, followed by Past Behavior and Subjective Norms as predictors in decreasing importance. Predictive powers of the determinants are interpreted and are adopted for suggestions to improve participation. Several suggestions for future research in this topic are discussed, to extend the model to predict actual participation. Findings of this research could benefits communication of environmental campaign to the youth population.

CHAPTER 1

INTRODUCTION

As Malaysia develops towards a more prosperous society, we demand a higher standard of living; more meat in our diet, more fuel in commuting to our workplace in single occupant vehicle, more electricity to power our home air conditioner….. This list of demand is in-exhaustive to make our life more comfortable. At the same time we need to be mindful that our planet has a limit in its carrying capacity, whether it is population, pollutants in the air, sea and lands. As the earth carry more population, and with our unlimited quest for better lifestyle, we are getting nearer to the threshold where our planet could no longer sustain the demand of natural resources by the human race.

The effect of climate change due to excessive release of Greenhouse gas to the atmosphere is especially alarming, prompting us to decrease environmentally destructive behaviours such as excessive vehicle use, take excessive meat and wasteful consumption of home energy. Table 1 shows that on per capita basis, Malaysian generated more CO2 (a major Green House gas) than Thailand and the World Average, much higher than the Asia Average of 1.49 MT per person. On a per GDP basis, the CO2 generated by Malaysian is on par with our neighbouring Indonesia and Thailand, but 3 times higher than Singaporean. There is still room for our fellow Malaysian to improve, in reducing the amount of CO2 generated, either by capita or by GDP basis.

Table 1: Energy consumption of ASEAN countries in 2010

	Population (million)	GDP (Bn 2005 USD)	GDP/ ppp (Bn 2005 USD)	TPES (Mtoe)	CO_2 emission (Mt of CO_2)	Electricity Consumption (TWh)	Per capita			Per GDP ('000 2005 USD)		
							TPES (toe)	CO_2 (Mt)	Elect. cons. (KWh)	TPES (toe)	CO_2 (Kg)	Elect. Cons. (KWh)
Indonesia	239.87	377.3	930.7	207.9	410.9	153.8	0.87	1.71	641	0.55	1.09	408
Malaysia	**28.4**	**171.8**	**375.3**	**72.7**	**185.0**	**116.9**	**2.56**	**6.51**	**4118**	**0.42**	**1.08**	**681**
Singapore	5.08	168.4	263.8	32.8	62.9	42.2	6.45	12.39	8301	0.19	0.37	250
Thailand	69.12	210.1	117.4	117.4	248.5	155.1	1.70	3.59	2243	0.56	1.18	738
World							1.86	4.44	2892	0.25	0.60	
Asia							0.86	1.49	806	0.27	1.04	

Note: CO2 emission from fuel combustion only.
Total Primary Energy Supply (TPES) is made up of production + imports - exports -international marine bunkers - international aviation bunkers ± stock cange

Note. IEA (2012)

On a per capita basis, Malaysian consumed the highest amount of electricity, only second to Singapore, almost twice the amount of electricity consumed in Thailand. Again there is room to improve for Malaysians in the reduction of electricity consumption.

Table 2: Growth of world population, CO_2 emission and electricity consumption since 1973

	CO_2 emission (Mt of CO_2)	Electricity Consumption (Mtoe)	Population (million)
1973	15637	439	3937
2010	30326	1936	6825
Increased	93.9%	341.0%	73.4%

Note. From Key World Energy Statistics 2012. International Energy Agency. Downloaded from www.iea.org on the 05 Feb 2013.

Table 2 shows that while the world population has grown by 73% since 1973, CO_2 emission from fuel burning has increased by 94%, whereas electricity consumption has increased by 340%. The growth rate of CO_2 emission and particularly electricity consumption, has greatly outstripped population growth, indicating that the not only population growth, but increasing affluence of our society, our demand for better living comfort and convenience, play a major role in unsustainable growth of our power consumption.

Who bear the responsibility to protect the environment by conserving resources and behaving environmental friendly? Misled by the amount of resources used and the pollution generated by organizations, many point fingers to the Industries, Government or Institutions. Individual effort to conserve the environment is weak, by looking at the number of household in my living community that takes part in the Earth Hour 60 environmental campaign (EH60). The campaign requires its participants to switch off non-essential light for an hour on the last Saturday of March, every year, to show the World that we care for the resource depletion and the resulting climate warming. The researcher has been observing this campaign with his family since 2009. The researcher felt that participation for the 2012's EH60 is at best, luke-warm. Intrigued by the dismal local participation in this global environmental event, the research uses this research opportunity to explore the degree of participation, and the determinants of intention to participate.

1.1 PRO-ENVIRONMENTAL BEHAVIOR (PEB)

Kollmuss, & Agyeman, (2002) define pro-environmental behaviour as a deliberate action that seeks to minimise the negative impact on the environment. Trotman (2008) defines conservation as the preservation or restoration of the natural environment and wildlife and the preservation and repair of archaeological, historical, and cultural sites and artefacts.

Also known as Environmental Responsible Behaviour, Environmental Friendly Behaviour, Green Practice, Ecological behaviour, Sustainable Behaviour, PEB can be grouped into consumption, such as purchasing of environmental friendly product and non-consumption behavior, such as recycling, voting (Follows, & Jobbers, 1999). The researcher personally encountered more research papers on consumption behaviour, probably due to its immediate applicability of the research findings in the field of marketing of green products (Follows et al., 1999). Steg, & Vlek, (2009) stressed on changing of human behavior over technical solutions because consumption growth easily out-run technical efficiency gains resulting from, for example, energy-efficient appliances, home insulation, and water-saving devices. Furthermore, behavioral change is needed for individual to

accept environmental friendly innovation, understand them, buy them, and use them in proper ways.

Elgaaied (2012) and Staats, Harland & Wilke, (2004) considered PEB as a pro-social behaviour because these behaviour mainly benefit others, as pro-environmentally motivated behaviours are generally "future oriented and unlikely to benefit directly the person performing the behaviour". Environmental problems are ultimately created by human behaviour and have to be solved by human behaviour. This viewpoint is gaining wider recognitions in a field that was traditionally dominated by experts from the physical sciences such as chemists, biologists, and ecologists, who believe that the ultimate solution for our degrading environment lies on greener technology.

1.2 TYPE OF PEB

Stern (2005) groups individual PEB into four categories, according to the effect on environment and causal factors that cause it:

1. Committed activism, such as active involvement in organizations and political demonstrations supporting public policies related to the environment. This category of PEB best match the characteristics of EH60, as it requires participant to switch off to show their concern for the environment.
2. Non-activist support of environmentally related public policies and regulations, such as financial contributions to organizations and support for policies that affect the environment.
3. Influencing the actions of organisations to which they are involved, towards the environment, such as adaptation of green practices in manufacturing or design of product.
4. Personal PEB such as buying, usage and disposal of personal and household goods that have environmental impact. This category of PEB is the best understood and extensively studied among consumer researchers and psychologists. This type of PEB can be further divided according to the type of decision, into ;

a. Consumption behaviour such as buying of personal products and services that have significant environmental impact during their manufacturing or usage,
b. Non-consumption behavior such as setting home thermostats and participate in household waste recycling.

Fieldings, McDonald, & Louis, (2008) defined environmental activism as "purposeful engagement in behaviors to preserve or improve the quality of the environment, and increase public awareness of environmental issues". Environmental activism includes behaviors such as protesting, educating the public, lobbying government, participating in direct actions such as blockades or participating in voluntary conservation. While there are many such activities in Malaysia, they involve mainly members of NGO and only a handful of them successfully involves the public: Public protest against the setting up of a rare-earth processing plant in Kuantan in September & December of 2012; Public protest against the setup of a Thorium Waste Dump in Perak, 1982; Recycling campaign run by a Buddhist Organization called Tze Chi; The Earth Hour 60 campaign organized by the WWF. There are no many researchable environmental activities here other than the EH60.

1.3 EARTH HOUR 60 EVENT (EH60)

Started off in 2007 in Sydney, Australia, the EH60 event encourages everyone to turn their lights out for an hour to show that "they have the power to change the world they live in" (Earthhour, 2012a). In Sydney alone, more than two million individuals and two thousand businesses switched off for an hour to demonstrate their stand and willingness to take action against climate change. In 2008, EH60 moved beyond Australia, first to Canada and gradually to 35 countries, involving almost 400 cities and towns.

The EH60 event is organized by WWF Malaysia, a national conservation trust that is part of the Switzerland based WWF global network. The Malaysian chapter was established in 1973 and focused solely on wildlife conservation in its early days.

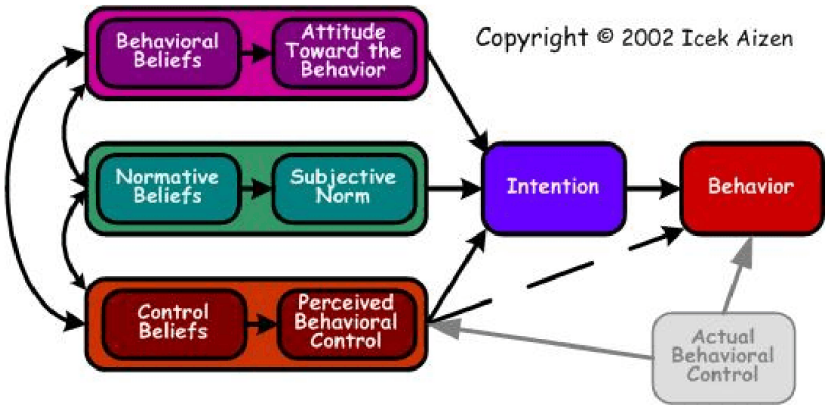
This research is inspired by the observation of weak participation in the 2012's EH60 event, among residents in the researcher's neighborhood (a middle-income gated community in Klang). The researcher is intrigued by seeing less than 10 households in the 350 homes in this community participated in the 2012's EH60. The researcher started observing this campaign from 2009, found that only a handful of household consistently switch off for this event. As the EH60 received wide coverage in the media (newspaper, online social network such as facebook, that have a large following in Malaysia), the researcher is puzzled by the indifferent attitude of this relatively affluent community toward environmental conservation. The Earth Hour campaign is supported by organizations such as Tenaga, Telekom Malaysia, KLCC, Coca Cola and numerous institutions that are a common part of our daily life. It is felt that there is a big gap of environmental responsible behavior between individual and corporation. The effort to conserve our environment is weak at individual level.

1.4 THEORY OF PLANNED BEHAVIOUR (TPB)

The Theory of Planned Behavior (TPB: Ajzen, 2002) proposed that human make rational action that is guided by three types of beliefs:

1. Behavioral beliefs: Beliefs about the potential consequence of the behavior and the evaluations of these consequences. An example is the belief of likelihood to pass an exam if a person studies an hour every day for two weeks.
2. Normative beliefs: Beliefs about the expectations of others and ones' motivation to comply with these expectations. An example is the belief that one's wife will be pleased if he consistently leaves the office for home before six pm.
3. Control beliefs: Beliefs about factors that may facilitate or hinder one from performing the behavior and the perceived influence of these factors. An example is the belief of how hard or easy it is to arrive at work early, consistently.

Figure 1: Theory of planned behavior



Note. From Ajzen, I. (2002). Constructing a TPB questionnaire: Conceptual and methodological considerations, accessed from http://socgeo.ruhosting.nl/html/files/spatbeh/tpb.measurement.pdf on the 10 Apr 2012.

Behavioral beliefs generate favorable or unfavorable attitude toward the behavior (ATT). Normative beliefs create perceived social pressure or Subjective Norm (SN) about the behavior. Control beliefs result in perceived behavioral control (PBC) in performing the behavior. These three factors of ATT, SN, and PCB in turn lead to the formation of a behavioral intention (INT) to perform the behavior. For example, if a person has a favorable ATT and SN towards switching off for EH60, and high PCB for switching off non-essential lights in the household, that person should have a strong INT to switch off as requested by the event. Finally, that person would be expected to turn his/ her intentions (INT) into actions, if a sufficient degree of PBC over the behavior arises.

Therefore, according to TPB, individuals who have strong intention to engage in PEB is expected to hold positive attitudes toward the behavior, to believe that there is normative support for them to engage in it, and believe that it is not difficult for them to conduct the behavior.

The researcher has selected TPB as the base model for this research because it has been adopted to predict a wide range of human behaviors that includes socially deviance behavior such as intentions to violate traffic regulations (Daiz, 2002) and

Binge-drinking (Elliot & Ainsworth, 2012); Consumption behavior such as fast-food (Dunn, Mohr, Wilson & Wittert, 2011) and pirated software (Yoon, 2011); Pro-environmental behavior such as Environmental Activism (Fieldings, McDonalds & Louis, 2008), recycling of solid waste in Malaysia (Mahmud & Osman, 2010) and UK (Tonglet, Phillips & Read, 2004), usage of public transport (Heath & Gifford, 2002).

1.5 RESEARCH OBJECTIVE AND SIGNIFICANCE.

This paper studies the intention of Malaysian youth to participate in the 2013's Earth Hour 60 campaign, by switching off non-essential lights of the participant's household. Being one of the few public PEB that attracts a more widespread participation, the researcher wishes that the outcome of this study on EH60 could be applied to other public PEB in Malaysia.

Research objective:

1. Explore the degree of participation of young Malaysians in Klang valley, in a public environmental event.
2. Determine the factors that influence the degree of participation.
3. Develop a model to predict the intention to participate in the event.
4. Suggest strategy to promote involvement of Malaysian youths in public environment event.

To fulfill the four research objectives above, we breakdown the requirement into six questions. The objectives of this research could be achieved by answering the questions statistically with data obtained from a survey.

Research questions:

RQ 1. What is the difference between participants and non-participants of EH60 in term of demographics and behavioral factors? (Required by Obj1).

RQ 2. How do participants know about EH60 and what is the impact of information on participation rate? (Required by Obj2).

RQ 3. Do the organization where they work or study, encourage them to participate? How effective is the organization's influence, compared to injunctive and descriptive norms? (Required by Obj3)

RQ 4. Could the intention to participate in EH60 be modeled with Theory of Planned Behavior (TPB)? (Required by Obj3).

RQ 5. Could the intention to participate in EH60 be modeled with the integrated model? Which model better predict intention? (Required by Obj3).

RQ 6. How to increase the level of participations based on the final model? (Required by Obj4).

The research questions will be answered in section 5 of this report.

Gatersleben, Steg & Vlek, (2002) states that many researches focus on PEB that do not significantly contribute to environmental problems. As a result, studies based on these measures provide little insight into factors that could be significant in reducing the environmental impact of households. Even though switching off an hour in a year may not have any material effect on the resource conservation, it is highly visible as a global effort, than individual effort to conserve resources. The visibility of this event could be one of the best ways to form a social pressure to motivate fellow Malaysian to conserve resources.

The significance of the research can be summarized into three points:

1. Identify and investigate the determinant of a public pro-environmental behaviour, at individual level.
2. Study the relationship between self-identity, group identify and intention to engage in PEB.
3. Outcome of the research shed insight in promoting event to wider prospects, in term of motivating more participants to contribute their effort in resource conservation, and knowledge of organiser in promoting pro-environmental public activity.

CHPATER 2

LITERATURE REVIEW

The critical points considered to be important to this study are: Participation in PEB, application of TPB to study and model PEB, and most importantly, predictors quoted in past researches that influence individual's participation in PEB. The literature review is thus divided into 3 sections, each section devoted to each of the three critical points mentioned. Since the study of individual's participation in PEB is the core of this research, a section is dedicated entirely to this topic. At the end of each section, the researcher will comment on the findings of the sectional review and its implication on this research, particularly if the findings could be adopted in the measuring instrument of this research.

2.1 PARTICIPATION IN PEB

Not everyone see their involvement in environmental responsible behavior as equally important. Some think that it is meaningless for individual users of limited environmental impact to protect the environment by behaving environmentally responsible. They expect the high impact users such as government institution, industrial and commercial establishment to act responsibly environmentally. A survey (Gfk, 2011a) with American adults in 2011, ranked Federal the Government first, followed by Individual Americans, then by business and Industry, in the decreasing order of environmental responsibility. Because of its larger pool of stakeholder, effort to engage participation on environmental protection could be leveraged by inviting Government to play a leading role.

With 1.4 million people under its employment (Khalib, 2012), the Malaysia Government is the biggest employer in Malaysia. Engaging the Malaysian Government in any environmental event will immediately add a sizable portion of the Malaysian population as participants.

The “no plastic bag day” is an example of PEB that is successful in Malaysia, because of Government’s involvement. It is a campaign where retailers are discouraged to issue plastic bags for free on every Saturday. Penang and Sabah state governments first launched its “No Plastic Bag Day” in 2009, followed by Selangor, the Miri (Sarawak) local council, the Sibu (Sarawak) local council and Putrajaya.

Two questions will be included in the Subjective Norms section of the questionnaire, to explore the influence of organization’s action on individual behavior. The first question asks if the school or organization that the respondent works promote or encourage switching off non-essential lights during the EH60 event. The second question asks if the organization switch off for the 2012 EH60 event. The third question will be included in the Subjective Norms of the questionnaire, asking if the respondent is expected by his/her colleague to switch off.

Davis, O’Çallaghan & Knox (2009) reported that there has been a growing realisation that large organisations is in a better position in making a significant impact on the natural environment by implementing pro-environmental and sustainable workplace initiatives.

DEFRA (2008) segregated UK population into seven categories according to their environmental attitude, namely:
Positive greens, who think it’s important that they do as much as they can to limit impact on the environment.

1. The Positively Greens who want to do as much as they can to limit their their environmental impact.
2. Waste watchers who do not want to waste resources.
3. ‘Concerned consumers’ who think that they do more than average but would stick to their current lifestyle.
4. ‘Sideline supporters’ who want to do a bit better in environmental protection, admitting that they are at time careless in conserving resources.
5. ‘Cautious participants’ who says that they will do more to protect the environment as long as they saw others doing it.

6. ‘Stalled starters’ who have to live pro-environmentally, and is looking forward to a more materialistic life.
7. ‘Honestly disengaged’ who says that they have no control over environmental issues and therefore just live they life they want to.

The category of respondent’s environmental attitude will be represented in the modified TPB model in the form of a three items self-identity construct, which is discussed in the self-identity section.

Fritze, Williamson, & Wiseman (2009) has identified ‘hard to reach’ groups that pose additional challenges to engage on climate change and climate change policy. These groups includes young people, older people, women, low income groups, people with disabilities, indigenous communities, newly-arrived migrants and refugees, wealthy, high consumption communities, households, individuals and communities who are unconvinced about climate change or are skeptical about the effectiveness of proposed actions. This research will include these criteria (Income, Gender, type of houses where the participant stay, residence status) when formulating the demographics of the questionnaire.

Winters & Koger (2004a) quoted that the prevalent environmental concern among people with more education and social class could be contributed through information or socialization, and the fact that those with less socio-economic status have more immediate concern such as crime, disease and hunger than long-term sustainability of the society. PEB are more prevalent among young people, probably because they are less integrated into our economic system, ie., likely like to be family wage earner that it is easier for them to hold a pro-environmental attitude. Urban residents are more likely to have a higher degree of concern about environmental problem than rural residents. Urbanites may have experienced environmental problem more directly (flash flood, hazy climate, hot weather, etc…) and frequently, results in them having a higher concern for our environment.

Analyzing NGOs participation in PEB, Hedjazi & Arabi (2009) showed that participation is related to a numbers of factors, such as, age, precedence in

environmental activities, information related variables, social related variables and level of education, whereas gender is not a good predictor as reported by others. This research will include these criteria (Educational level, Race, Precedence in environmental activities, dissemination of information) when formulating the demographics of the questionnaire.

Zibarras & Ballinger (2010) said the employer could have played a bigger role in encouraging their employee in improving their contribution to environmental protection. Senior and line management support and commitment is important for effective environmental practices within 86% of the organizations surveyed.

Fieldings, McDonald & Louis (2005) mentioned that environmental organizations often struggle to gather active support due to two reasons; people's perception that they cannot make a difference, and the 'free rider' effect, a common phenomena that non-participating group members will benefit from any successful outcome of collective action, even if they do not contribute to achieving it. This perception can be approximated by the subjective norms in the TPB, which measures the respondent's perception whether their best friends or colleagues will participate in the EH60 event.

2.2 THEORY OF PLANNED BEHAVIOR (TPB)

Hargreaves (2008) stated that the TPB been a mainstay of psychological work on PEB ever since, being adapted to explain recycling, energy and consumption behaviors. One of the reasons for its widespread application in the field of environment study is its openness to the addition of other predictors. Some of the predictors that has been added to TPB in recent researches are; self-identity, suggesting that "people tend to behave in ways that are congruent with their own self-image; belief salience; past behavior/habit; perceived behavioral control versus self-efficacy; moral norms, and affective beliefs".

Cleverland, Kalamas, & Laroche (1999) stated that general environmental attitudes, such as environmental concern, are poor predictors of behaviour. In fact, one of the reasons for the poor attitude-behaviour consistency of past research is; ". . . the lack of specificity of the attitudinal measures used".

Fishbein, & Ajzen (2010) stated that TPB could be a useful model for specific behaviour such as "the intention to do weight lifting exercise in the next 2 month" than general behaviour of "the intention to exercise in the next 2 months". For this reason, the researcher framed the targeted behaviour with "participate in the 2013 Earth Hour campaign by switch off non-essential light of the household" rather than merely "participating in the Earth Hour campaign".

2.2.1 SUBJECTIVE NORMS

Fishbein et al., (2010) referred subjective norms as what is acceptable or permissible behavior in a society. Winters et al., (2004b) defines personal norms are feeling of obligation to act in a particular way, whereas social norms are sets of beliefs about the behavior of others. For example, the researcher may feel guilty when he forgets to print in recycled paper because of his personal norms about wasting paper, even though he rarely see others printing in recycled paper, which would indicate a social norms.

Boudon (2003) stated that human behavior is guided by self-interest and is limited by social norms. Karlson (1992) defined norms entirely in social regularities, where people are guided by the pattern of common behavior in their social environment.

Clark-Richardson (2003) stated that past research studies with TPB have concluded that attitude and PBC correlate most strongly with behavioral intent, and subjective norm was the weakest predictor of intent. This statement is taken based on researches done in developed, Western countries, which do not have a strong collective culture as the Asian countries. Subjective norms could be a

stronger predictor that influences intention in a society with stronger collectivism culture.

Quoting the work of Chan (1998), Chaisamrej (2006) stated that mass media was found to be significant in guiding the subjective norms of Hong Kong people where communicators capitalized on this finding to tailor messages to activate individuals' normative beliefs. In Western countries whose culture is primarily individualistic, participation in recycling actions is influenced more strongly by attitudes toward the behavior. In this situation the most effective technique would be "to increase their positive perceptions and beliefs toward paper recycling and the environment".

Zibarras et al., (2010) suggested that an organisation's culture, in term of an organisation's norms, values, beliefs and goals about the environment, is likely to herald in the environmental performance of its employees. Likewise, research has shown that the best predictor of people's intention to purchase solar equipment is the number of friends who currently own solar equipment (Winters et al., 2004b). However, some behaviour, particularly those not done in the public, will be difficult to change through norms. When Mckenzie-Mohr (2000) asked household to place decals that indicate to their neighbour that they practice backyard composting, participation rate in a community backyard composting program increased.

Social status of the people communicating the message plays an important role in forming the subjective norms. We are much likely to imitate someone of a higher status than of a lower status. Winters et al., (2004b) explained that credibility of the source makes a difference, by quoting a research finding that indicated New York residents cut their electricity by 7% when asked in a letter with New York State Public Service Commission letterhead. The same request had virtually no effect when the same letter was sent Con Edison (A local utility company akin to the Tenaga Nasional Bhd) stationery. Apparently, New York residents respected or trusted the Public Service Commission more than Con Edison.

2.2.2 ATTITUDE

Winters et al., (2004a) stated that the correlation between attitude and behavior is positive, although not very strong. Attitude and behavior are more related when actual, rather than self-reported behaviors are measured. Therefore, the closer the self-reported behavior reflects actual behavior, the stronger relationship between attitude and behavior. The variables of this research are measured in the week after the 2013 EH60. The short duration between actual behavior and measurement is specifically arranged to minimize self-reporting bias

Fishbein et al., (2010) defined attitude as a latent disposition or tendency to response with some degree of favorableness or un-favorableness to a psychological object, concept or behavior, in the form of favor or disfavor, good or bad, liking or dis-liking, desirable or un-desirable, pleasant or unpleasant.

Ajzen conceptualized attitude into two aspect: Cognitive aspect and affective aspect. Cognitive aspect involves evaluation of the outcome of a behavior as wise or foolish, harmful or beneficiary. Affective aspect involves evaluation of the outcome of a behavior as pleasant or unpleasant, boring or interesting. For example, the attitude of studying hard for an exam depends on the relative rating of the cognitive aspect (is it wise or foolish to put in so much effort for the exam) and the affective aspect (is it pleasant or unpleasant to put in so much effort for the exam).

Fieldings et al., (2005) commented that although there are various definitions of attitudes, it is generally agreed that the central element of attitudes is their evaluative component. It should be noted that the attitude component of the TPB refers to an attitude to the specific behavior (e.g. environmental activism) rather than general attitudes (e.g. toward the environment), as past research has overwhelmingly shown that general attitudes do not correlate highly with specific behaviors.

The affective component in Attitude in the TPB model is normally measured with the positive emotion, ie, by asking if the respondent feel good for performing the behavior. There have been more empirical evidence to suggest that both positive and negative emotions play a significant role in motivating PEB. Russell & Griffiths (2008) reported that the inclusion of both cognitive and affective variables to predict environmental attitudes greatly improved the strength of their model predicting pro-environmental behavior, and that both positive and negative emotions serve as predictors of conservation behaviors.

Attitude towards the environment could be shaped by the industry that employed us. Del Mar (2012) stated that people working in the service sector is more likely to be sympathetic to the environment and tend to support the growing regulation on manufacturing, farming and mining activities, that seems to have little effect to their livelihood.

2.2.3 PERCEIVED BEHAVIORAL CONTROL (PBC)

Fieldings et al., (2005) commented that perceived behavioral control refers to "individuals' perceptions of the ease or difficulty of performing a particular behavior". In this sense, PBC should reflect a person's previous experiences and any perceived potential barriers to engaging in the behavior.

Fishbein et al., (2010b) defines PBC as a general sense of personal competence, or perceived ability to influence events. It is also defined as "the extent to which people believe that they have control over its performance or they are capable of performing it". Conceptually it is similar to Self-efficacy, decision freedom, perception of control, locus of control, helplessness, powerlessness and mastery autonomy.

Self-efficacy is defined in Social Cognitive Theory as the "People's belief about their capabilities to exercise control over their own level of functioning and over event that affects their live" (Fishbein et al., 2010b)

2.2.4 APPLICABILITY OF TPB

In a study on cross-cultural application of TPB, Hagger, Nikos, Barkoukis, Wang, Hein, Soos, & Karsai (2007) quoted that there is no cross-cultural difference between the Chinese and American people in bone-marrow donation. This finding supports the use of standardized psychometric measures of the theory. However, the effects of subjective norms on intentions were generally stronger among Chinese participants and the reverse was found for attitudes. The variation in the effects was attributed to the relative importance participants placed on social influences when making decisions to donate according to their prevailing cultural norm. These findings demonstrated that TPB measures tended to be consistent across cultures whereas the relative contribution of the constructs to intentions tended to vary.

Chaisamrej (2006) has shown that TPB could be used as a base to formulate an effective theoretical model in determining household waste recycling behaviors in Eastern cultural group, where attitudes is found to be the major predictor of intentions and the actual usage of recycling facilities; subjective norms were significant predictor, second to attitudes.

Having done a literature review of TPB on environmental issues, Fieldings et al., (2008) concluded that even though the TPB has been widely applied to the examination and prediction of PEB it has not been used to investigate the determinants of engaging in environmental activism.

2.3 PREDICTORS OF PEB

Kollmuss et al., (2002) categorised factors that affect PEB, into three groups;

1. Demographic factors
2. External factors (e.g. institutional, economic social and cultural factors) and

3. Internal factors (e.g. motivation, environmental knowledge, awareness, values, attitudes, emotion, locus of control, responsibilities and priorities).

(Bamberg et al., 2007) quoted the meta-analysis by of Hines et al., that performance of PEB is related to attitude, self-efficacy, moral obligation to behave in a pro-environmental way and intention to carry out such PEB.

Staats et al., (2004) noticed that different PEBs are affected by different factors, and this lack of common factors seems even to behaviors that have the same goal, such as reducing waste, and among related behaviors such as recycling aluminum cans when paper recycling is the target.

Fieldings et al., (2005) listed three additional variables may be important for environmental activism: past behaviour, self-identity and social identity. The last two variables highlighted clearly the role that identity, either in terms of our roles or in terms of the groups we belong to, help us understand engagement in environmental activism.

2.3.1 MOTIVATIONAL FACTORS FOR PEB

Different types of PEB are influenced by different motivational factors (McKenzie-Mohr 2000). Simple, repetitive, low-cost energy saving behaviors such as changing temperature setting of air-conditioner's thermostat is more effectively dealt with by changing personal norms and attitudes. High-cost behaviors such as car use (Stern, 2005) are more effectively changed by offering financial aids or incentives. Elgaaied (2012) found that some PEB are in fact performed for non-ecological reasons such as financial gains or health related motivations. For example, energy conservation might be motivated by the financial gains, purchasing of non-toxic detergents or organic food might be carried out for health-related motivations etc.

McKenzie-Mohr (2000) summarized findings of several researches that behaviors that do not have a high impact on people's daily lives (e.g., waste management,

political behavior, food purchase) are more strongly influenced by environmental attitude than behaviors with a high psychological and financial impact on our lifestyle. This finding indicates that changing environmental impact by altering our behavior can be problematic if the latter are exactly those behaviors that have a high environmental impact (normally adverse) on our daily life.

DEFRA (2008) has identified motivations to conduct PEB such as 'social norms', the 'feel good factor,' or 'being part of something' and also some of the perceived barriers to conducting these behaviors including costs, infrastructure, and time constraints.

Quoting Schwartz's norm activation model of altruistic behavior, Chaisamrej (2006) demonstrated that altruism and self-construal could explain paper recycling behavior of university students, when added to TPB. Kaplan (2000) noticed that even though a wide range of motivational factors have been identified for PEB, a substantial portion of the scholarly literature on this topic has focused on altruism. Kaplan defined Altruism as "feeling or acting on behalf of the welfare of others in cases where self-interest could not be involved". Corbett (2005) developed a Reasonable Person Model of environmentally responsible behaviour where self-interest, altruism, personal norms, among others, is the best predictors of behaviour.

Unfortunately, the requirement of receiving no benefit from performing PEB send a potentially damaging message, that it could leads to a reduction in the quality of life. Kaplan (2000) found that this unintentionally formed stereotype is not helpful in motivating people to contribute to PEB, because the hope for a better future is a characteristic of the human makeup, regardless of cultural background. Casting a negative pall on this hope is unlikely to be an effective motivational strategy.

Fishbein et al., (2010) defines attitude toward behaviour as a person's overall evaluation of performing the behaviour in question. The outcome of any behaviour could be evaluated in two components; one component is instrumental in nature, represented by such adjective pairs as valuable — worthless, and harmful — beneficial; The second component has a more experiential quality and is reflected in such scales as pleasant — unpleasant and enjoyable — unenjoyable.

In our context, the first question is: Switching off non-essential lighting in my house during the EH60 is ___, measured on a 6 point Likert scale from "valuable" to "worthless". The second question is: Switching off non-essential lighting in my house during the EH60 is ___, measured on a 6 point Likert scale from "pleasant" to "unpleasant".

To address the altruism component proposed by Chaisamrej (2006), the researcher included two questions adopted from the Self-Report Altruism Scale (Rushton et al., 1981); the first question is: I have given money to charity, measured in a 6 point Likert scale from "Very often" to "Never". The second question is: I have done volunteer work for charity, measured in a 6 point Likert scale from "Very often" to "Never".

Normally odd number Likert scale (1 and 5 on both ends of the bipolar scale) is used to measure responses in questionnaire. The researcher uses an even-point scale to make the middle option of "neither agree nor disagree" not available. A 5 point Likert scale provides a middle scale in 3, an easy way out for respondents that are unsure of themselves.

2.3.2 SITUATIONAL FACTORS

Some researchers have suggested situational variables to explain the low level of observed PEB despite increasing environmental awareness.

Borgstede (2002) reasoned that whether people have a reason to expect that others also are prepared to act for the common good or not, affect their participation in PEB. Co-operative actions are only a rational solution if a sufficient number of others are willing to co-operative as well. Expectation about others' behaviour and own behaviour correlates with each other. A person is more likely to co-operate if they believe that others will co-operate, and vice versa.

Allen et al., (1999) found that personal control that measure "the extent to which participants felt their action could benefit the environment", is positively related to

PEB. Kaplan (2000) rephrase it as "the opposite of helplessness", which indicates that people who feel helpless, who feel that their behaviour would not make a difference, are less likely to participate in ERB. Kaplan interpreted that finding of the study to conclude that any psychological approach to ERB that does not directly address the helplessness issue may have limited practical value.

Even if the social norms of a community are to keep the community clean, Aung et al., (2006) found that "individuals would internalize the social norms only if performing the activity had a positive effect on their reputation or their image". She found that majority of the people do not attend community clean-up of the town, when they are called to participate. She was told that people do not participate because they don't want to be seen working in the street that lower their self-image. Being house owner and conscious of their social status, they are more than willing to pay somebody to do these "socially degrading job", instead that doing it themselves.

The traditional TPB questionnaire measures subjective norms with Injunctive Norms and Descriptive Norms. Injunctive Norms refers to the perception concerning what others (important people) expect me to do with respect to performing a given behavior; Descriptive Norms refers to the perception that others (important people) are or are not performing the behavior. To address the situational factors raised by Aung et al., (2006) and Borgstede et al., (2002), we extend the "important person" to include family member, best friend and colleagues. As a result we will have six questions to measure the subjective norms; three questions to measure injunctive norms based on family member, colleague and best friend, another three questions to measure descriptive norms based on for family member, colleague and neighbour.

2.3.3 PAST BEHAVIOUR AND HABIT

Norman & Conner (1996) modified TPB model as including past behaviour as a predictor of intention, based on consistent empirical findings that it is a powerful predictor of intention.

Staats et al., (2004) defined habitual behaviour as "behaviour that is displayed automatically on the presence of a goal". Some studies have shown that the degree to which behaviour has been performed in the past, determines the intention's strength of influence. Intention have a smaller influence on behaviour when that behaviour has been frequently performed in the past,.

Staats et al., (2004) cautioned that although automatic execution of behaviour has important advantages, it has a less desirable effect of causing people who have established habits to pay less attention to information that might be important for changing behaviour.

Past behavior will be added into our model as a determinant to intention. Fishbein et al., (2010) defined routine behavior as a behavior that repeat itself so frequently that it is initiated with minimal conscious effort or attention. One of the important characteristics of such behavior is that intention before increasingly irrelevant as a behavior habituates. Being an annual event, the frequency of switch off is not high enough to make intention irrelevant. Since the EH60 is a yearly event, the relevant questions are modified to measure the number of times a person participated in the previous event, to determine how frequently the behavior happened in the past.

2.3.4 GROUP IDENTIFICATION & DEMOGRAPHICS

The behaviors of two people are likely to be influenced by the norms of an environmental group if both of them are members of the same environmental group (Fieldings et al., 2005). This finding is supported with the work of Kelly et al., (1995) that when a person is a member of a group, individual-level variables

(e.g. PBC) are no longer good predictors of participation. Once a person overcomes the barrier of becoming part of a group their behavior will be guided more strongly by the group and not by individual-level variables such as attitude. This finding is often used to explain why past behavior of environmental group members is a less significant determinant of intentions than non-members' past behavior.

Fieldings et al., (2005) explained that participation of community members in environmental activism is likely to be determined by their agreement with groups that encourage similar behavior. The finding is supported by past research of Hinkle et al., (1996) that community member's participation in collective actions is strongly influenced by group identification. Quoting the work of McGarty et al, (1992), Fieldings et al., (2008) equate social groups and categories as implicit social norms.

Group identification is included into the modified TPB model as altruism, which measures if the respondent has donated money to charity, or volunteered in charity. The researcher has added another question that asks the respondents about their membership in any environmental organization. The researcher has also identified past behavior or environmental precedence as a determinant of intention to switch off for EH60. Merely asking the respondent if they belong to any environmental NGO could be a poorer predictor for the behavior of switching off, because the respondent may join the NGO for reason that is less relevant to the targeted behavior.

A large scale survey on public attitude on environment states that Generation Y is an important target group for PEB because people from this generation are generally more engaged with environmental issues (Gfk, 2011b). This is supported by the syndicated Green Gauge result which shows that Generation Y is more likely to follow the environmental records of large companies and less likely to put the economy in front of environmental issues. Since this study targets Malaysian youth, using age as a predictor is not suitable for this study. Nevertheless, age of respondent is included in the demographics section of the questionnaire.

Quoting the work of Agrawal (2006), Hedjazi et al., (2009) states that gender was not a determinant factor for participation in PEB. He also noticed that there was significant relationship between the degrees of participation and age, which has been confirmed by several studies. According to this finding, a middle age of population would thus be a positive factor in participation. He noticed that there is a significant relationship between the record of services in environmental activities and the degree of participation in environmental campaign.

Cleverland et al., (1999) summarised findings of various researchers who study effect of demographics on PEB that attitudinal variables are much better predictors of consumers' propensity to engage in PEB than demographic variables.

Aung et al., (2006) found that gender and social class is important factor in waste management because women in developing countries are generally more interested and involved in environmental activities than are men.

2.3.5 SELF-IDENTITY AND VALUE

Fieldings et al., (2008) summarized past research in the 1990's till early 2000's that self-identify have long been considered as an important predictor of behavioral intentions. Investigating the consumption of organic vegetables, a PEB, Sparks et al., (1992) argued that self-identity should influence intentions via attitudes; instead, they found that self-identity as a green consumer was an independent predictor of intentions to buy organic produce. Armitage et al., (1999) includes the construct of self-identity as a predictor of both intentions and actual behaviour.

Fieldings et al., (2008) included this dimension in his modified TPB model for environmental activism, in the form of membership in environmental group and self-identification. Self-identify is measured by asking three questions; how strongly do respondents agree that they are environment activist; if engaging in

environmental activities an important part of the respondent's life; a reversed score question that question the respondent if they are not the type of person that involves in environmental activism. In our research, three questions will be used to conceptualize the self-identity construct, based on the items of altruism, which ask respondents if they have donated or volunteered for, or have been a member of an environmental group. In our context, three questions to measure self-identity are whether the respondents have volunteered, donated for environmental body or has been a member in environmental group. The researcher follows the argument of Sparks et al., (1992) and includes self-identity in our modified TPB model as a determinant to altitude.

Although many people view themselves as "environmentalists", the self-identify do not necessary translate into PEB (Nordlund et al., 2002), primarily due to the "conflict between immediate individual and long-term collective interests in acting pro-environmentally". The negative environmental effects of modern lifestyle such as travelling by car, buying food and other products are not visible until in the future. By the same token, even though ecycling household waste is commonly accepted as an important form of solid waste management but one often considered as messy and time consuming and therefore avoided (Nordlund et al., 2002) doing it.

Bamberg et al., (2007) viewed PEB as "a mixture of self-interest (similar to pursuing a strategy that minimises one's own health risk) and of concern for others, the next generation or whole ecosystems (e.g., reduce environmental pollution that may harm others' health and/or the global climate)".

Another factor that causes indifferent attitude towards environment is that effects of environmental problems are often delayed and not necessarily visible where the problem is created. A typical example is the greenhouse effect, one of the most serious environmental problems of our time yet so difficult to solve because its effects would not be widely seen until some 50 years later. Also, it cause more damage to the un-developed parts of the world that have hardly contributed to the problem but that will be most vulnerable to the expected rise in sea level.

According to Nordlund et al., (2002), Value orientation which is measured as self-transcendence and self-enhancement, is expected to influence a person's participation rate of PEB. He quoted that people who give priority to collective values are more willing to take part in different forms of altruistic, cooperative PEB. These value orientations do not affect PEB directly, but through personal norms.

This concept is also measured by the attitude construct in the TPB model, which asks the respondent if they feel that it is valuable/ enjoyable or worthless/ unenjoyable to perform the behaviour. If a respondent have a strong moral obligation towards the environment, he/she will feel that it is enjoyable to perform the behaviour.

Quoting Schultz et al., (1995)'s research on socio-demographics characteristics of individual who held pro-environmental values, Hargreaves (2008) states that higher Generalised Environmental Value tend to be associated with young women who are well-educated, high income earners, politically liberal and live in urban areas.

Aoyagi-Usui et al., (2003) found that environmental values are linked with altruistic values in developed western countries, but with both traditional and altruistic values in oriental societies such as Japan, Bangkok, and Manila. They also found that in all surveyed countries regardless of cultural background, environmental values are contrary to egoistic and progressive values.

2.3.6 ENVIRONMENTAL KNOWLEDGE AND INFORMATION

A large scale environmental survey shows that (Gfk, 2011b) increased environmental knowledge may have contributed to a reduced sense that individual action holds the solution to environmental problems. Increased environmental knowledge of consumers results in more and more individuals believe they can at least take small steps to improve the environment, only when they see other key

players – namely, government and business – are also doing their part to protect the environment.

With better environmental knowledge, more Americans are also shifting some responsibility away from companies and towards individuals (Gfk, 2011a). This is supported by the top reason cited for environmental problems, between 1990 and 2011. In 1990, the top reasons were directed towards business and manufacturers whereas in 2011, the top reason is consumer's behaviour that values the convenience that the products provide than their environmental effect.

Quoting the enormous budget on information dissemination that resulted in only 2 to 3% energy conservation in California, Winters et al., (2004c) states that education itself does very little to change behaviour. Gardner et al., (2002) supported this view by concluded many studies that shows education alone would not change what people actually do.

The role of individual in environmental protection is measured in the subjective norms of the TPB model, by asking respondents if they expect others to switch off, or they think others will expect themselves to switch off for EH60. A respondent who give a low ranking in the subjective norms believe that he/ she is not obliged to switch off for EH60. In this situation they may feel that they are not the best person to protect the environment in this manner.

While Environmental information may increase problem awareness, they are important to different degrees for different target groups (Staats et al., 2004). Factual information is attractive to sophisticated people who could process information thoroughly. Messages that stress the affective consequences of environmental degradation may be more influential for people who are relatively lacking in ability and motivation to process information. For the average people, information that is vivid and focuses on outward behaviour is more effective than general information. Quoting the research of Winett et al., (1982) where users reduced their energy usage by 28% after being presented with information about energy conservation on a video demonstrating a person turning down a thermostat, wearing warmer cloths and using a heavier blanket, Winters et al., (2004c) states

that demonstrating appropriate behaviour is more effective than merely describing it.

Schwartz's norm activation theory posits that knowledge about the environmental problem is an important condition to induce PEB. The performance of certain PEB could only be facilitated with the relevant information and skill, for example, the information on disposal of chemical waste and composting of organic waste. Staats et al., (2004) summarised from many studies point out that the relative ease of performance is a crucial factor in the performance of PEB. Ease of performance is measured in the Perceived Behavioral Control, a standard TPB construct.

Information is useful in reducing anti-environmental habits by reminding people of what they could do to minimize impact of their actions to the environment, building up their environmental attitudes in the process. For example prompts are used to remind people not to drive fast in urban traffic, to lower thermostat settings well before going to bed. Information on the personal benefits of acting environmentally responsibly is useful in promoting PEB, particularly when there are wrong perceptions regarding their costs and benefits, for example the financial consequences of home insulation. Out-dated information is one of the reasons of wrong perception or information on the cost and benefits of PEB, particularly in the case of habitual behaviour when people who perform an action regularly pay less attention to new information. This neglect of information may, for example, discourage people from taking public transport even though travel conditions have improved greatly compared with the past.

Kaplan (2000) cautioned the side effect of excessive information. He noticed that "disappointing efforts to convince the public of the importance of ERB are often caused by eagerness to be convincing, that lead to presenting too much information". When the recipients of the information are overwhelmed, they are confused and their understanding of the issues compromised.

Staats et al., (2004) summarized the role of Information in promoting pro-environmental behavior change as;

1. Information may serve to give practical advice.

2. Information may also be used to increase awareness of the problems, which in turn can affect behaviour
3. Inform people about others ‘efforts in conducting PEB, which may increase cooperation

Feedback about performance is rarely sufficient to establish maintenance of change, even though it may increase the sense of individual and collective efficacy (Bandura, 1977).

Staats et al., (2004) summarised that information is indispensable for “implementing other interventions; in increasing acceptance for policy measures, in announcing that physical changes in the environment are forthcoming, in announcing that financial support can be received for the implementation of energy-saving measures, and so on”.

Hedjazi et al., (2009) mentioned that participation among NGO on PEB could be promoted by providing opportunities for discussion among beneficiaries regarding environmental problems, and formation of public institutions in these regard. Since news media play an important role in attracting the participation of NGOs in environment conservation, level of knowledge of NGOs’ members in this context could be promoted through presentation of courses and seminars; setting up of pertinent fairs and gatherings to highlight the hazards of pollutions initiated from garbage disposal, soil, water, air ad sound.

2.3.7 ENVIRONMENTAL AWARENESS AND CONCERN

Gatersleben et al., (2002) uses a 12-items Environmental awareness scale to correlate with the pro-environmental consumption behavior and found little correlations between these two variables. However, Halady et al., (2009) found that awareness to the climate change phenomenon, particularly the awareness to health impact of climate change, lead to significant behavioural change amongst managers in the industry.

A12-items New Ecological Paradigm scale is used to measure environmental concerns in the past two decades since its publication in 1978 (Dunlap et al., 2000). One who believes that the world is approaching the limit of the number of people it could carry, and that the world will experience a major ecological disaster soon if things continue in their present course, hold a New Ecological Paradigm (NEP). One who believes that the earth have plenty of natural resources if the human race just learn how to develop them, and human were meant to rule over the rest of nature, hold a dominant social paradigm (DSP). The DSP reflects a common belief in Western society, in "abundance, development, prosperity, faith in science and technology… ".

People with high DSP scores show less concern for the environmental problem, such as population control, pollution control, resource conservation etc… People with high NEP scores are more concern about environmental problem, believe that the world ecological issues are pressing, support pro-environmental policy etc…

The researcher do not adopt environmental concern in the model because the concern can be measured with the instrumental component of attitude, represented by such adjective pairs as valuable — worthless, and harmful — beneficial. The researcher believe that the inclusion of environmental concern into the model will not improve the prediction of attitude but make the questionnaire more complex and lengthy that respondents will be tempted to hurry through the questionnaire.

This concept of awareness is indirectly measured by the altitude construct in the TPB model, which asks the respondent if they feel that it is valuable/ enjoyable or worthless/ unenjoyable to perform the behaviour. A respondent that is aware of climate change and his/her role in reducing the impact of climate change is more likely to report a favourable attitude towards switching off for EH60.

CHAPTER 3

RESEARCH METHOD

The theory of planned behavior (TPB) is adopted along with other theoretical concepts in this cross-sectional research to investigate young people's participation in a public environmental activity, the Earth Hour 60. Known also as Cross-sectional studies, this research method involves "observation of all of a population, or a representative subset, at one specific point in time". In the context of this study, quantitative data is collected via questionnaire with questions that measures behavioral data from respondents, within a month after the targeted behavior is performed. The questionnaires are distributed to targeted sample that represent the young people population over a small period of time. The questionnaires are then collected, data analyzed to study the behavior of the sample respondents.

3.1 RESEARCH DESIGN

This research used the intention to switch off for EH60 in March 2013 as the latent dependent variable. To ensure that intention is measured as close as possible to the actual intention just before the 2013's EH60, the researcher distributed the questionnaire right after the 23 Mar 2013. Some researchers argued that intention to perform a behavior correlates better with later behavior than past behavior, some said otherwise. Ajzen summarized past researchers on TPB that intention are found to predict behavior quite well irrespective of whether the study is perspective or retrospective (Fishbein et al., 2010). Since the intention to participate is self-reported, the nearer it is measured to the actual occurrence, the more accurate is the reported intention.

This research was done in retrospective manner so that the actual participation could be compared between participant and non-participant. One of the objectives of this study was to suggest intervention to promote a wider participation of this event. Therefore it is important to understand who switch off, who did not switch off and the difference between these two groups, factors that need to be addressed when planning environmental collective actions. The literature review pointed that attitude is often the major determinant to influence PEB. For non-participants, the determinant might be inadequate subjective norms (Free-rider effect) or inadequate behavioral control (my roommate do not agree to switch off or I need to light up for other reasons) or inadequate attitude towards switching off. We studied the determinants of participant and non-participant's intention to discover if the same determinants are dominant in both cases. Kline (2011b) mentioned that there are just too many variables from the literature and the researcher must exercise his / her own judgement to include only the most crucial variable.

A questionnaire is developed to measure and record determinants of the dependent variable and demographics data of respondents. Copies of the developed questionnaire were sent to 10 classmates of the researcher, who are MBA students in a private university in the Klang valley. The researcher asked each respondent if they understood the questions and if they faced any obstacles in deciding the score to each questions, after completing the questionnaires. The questionnaire were collected back and analyzed for internal reliability, using Cronbach's alpha. Cronbach's alpha is a coefficient that indicates how well a set of items measures a concept. It indicates the internal consistency (i.e., reliability) of a cumulative set of items intended to form a scale, and is the average of the inter-item correlations among all of the items in the intended scale. Scores ranging above 0.70 were considered to indicate adequate reliability of scales in this study. Questions will be re-designed if the internal reliability does not meet the requirement of this study.

400 questionnaires were be distributed to students in two private universities in the Klang Valley, to measure 14 observed variables/indicators that define the following 5 latent variables:

1. Intention to participate – dependent variable.
2. Attitude towards participation – independent variable.
3. Subjective norms towards participation – independent variable.
4. Perceived behavioral control – independent variable, and
5. Past behavior – independent variable.

Schumacker & Lomax (2010) stated that a sample size that exceeds 200 cases could be considered large enough for the structural equation modelling (SEM) analysis. Another requirement on sample size of SEM analysis is the ratio of items measuring each construct and the sample size. Schumacker et al., (2010) suggested that the acceptable ratio of the number of observed variables/indicators to the number of cases/participants is 1:15; 1:20 or higher. Using an intermediate ratio of 1:20, at least 260 qualified set of data are needed for this study.

The researcher obtained assistance from his supervisor to recruit participants from the lecture hall of the university. The researcher supervises the questionnaire on-site within the hall or classrooms. Participants are expected to complete a self-administered questionnaire within approximately 15-20 minutes.

Demographics of respondents are measured, and analyzed for its descriptive statistics for participants and non-participants. Six latent variables are fitted into the modified TPB model (the integrated model or Model 1) and the TPB model (model 2) first with multiple linear regression (MR), with Version 19 of IBM SPSS Statistics [1] . Based on information from the model-fit with multiple regression, alternative models are then developed (if necessary) and fitted with Structural Equation Modeling (SEM) using Version 18 of AMOS[2] (Analysis of moment's structure), a MS Windows program sold by SPSS Inc., as an optional part of SPSS. The program is now known as IBM SPSS AMOS.
A model with the overall best-fit to the data will be selected and used for hypothesis testing.

[1] http://www-01.ibm.com/software/analytics/spss/products/statistics/
[2] /http://www-03.ibm.com/software/products/us/en/spss-amos

3.2 MEASUREMENT OF VARIABLES

Two types of variables will be generated and used for analysis in this research: Categorical variables mainly used to record and analyze demographics data such as gender, household income, and continuous variables for all the behavioral indicators and the variables that these indicators measure.

Categorical data is recorded and analyzed with Microsoft Excel 2003. Continuous data is recorded and analyzed with IBM Statistics SPSS v19.

3.2.1 DEMOGRAPHICS

From the literature review, the following characteristics of the respondents will be measured as demographic factors that could influence PEB:

i. Gender (X2).

ii. Monthly Household income (X7), set by the researchers into 4 groups as below;

1. RM 2,000.00 – RM 3,9990.00;
2. RM 4,000.00 – RM 5,999.00;
3. RM 6,000.00 – RM 7,999.00;
4. Above RM 8,000.00.

Household income is segregated based on the 2009 household income survey data of urban Malaysian (EPU, 2010) that indicated 30% of the population with household income between RM 1500.00 and RM 2999.00; 26% of population with household income between RM 3000.00 and RM 4999.00; 30% of the population with household income above RM 5000.00. The researcher factor in an average salary increment of 5% a year to arrive at the grouping of RM 2000.00 – RM 3999.00; RM 4000.00 – RM 5999.00; Above RM 6000.00

iii. Type of house.

One of the demographics identifies the "Wealthy, high consumption community" groups that are hard to engage in relation to climate change (Fritze et al., 2009). The type of house where students stay (X6) is used as a

yard stick for his consumption behavior. If a student stays in large living space houses such as semi-detached home or bungalow, they are identified as high consumption group.

iv. Educational level

Highest educational level (X4), set arbitrarily by the researcher into 5 groups as secondary school, diploma, degree, master degree and professional qualification. Since the majority of respondents is expected to come from a private university in the Klang Valley, this factor may not provide enough variance for data analysis. This factor could be removed from data analysis if this is found to be the case.

v. Race (X9)

Respondent choose from four choices of Malay, Indian, Chinese and non-Malaysians. Malaysia's 2010 census indicates that Citizen Population is made up of 67.4% Bumiputera, 24.6% Chinese, 7.3% Indian and 0.7% others (DOSM, 2013). The minority of Iban and Kadasan/Dusun resides primarily in Sarawak and Sabah, are not included in this survey.

vi. Awareness about EH60 (X10) and information channel about earth hour (X19) measure if the respondent heard about the earth hour and where they acquire the information from. Another question is set to measure the source of EH60 information, where the answer is to be chosen from 6 options (X13 – X18); Radio, Newspaper, Word of mouth, public display, television or from the internet.

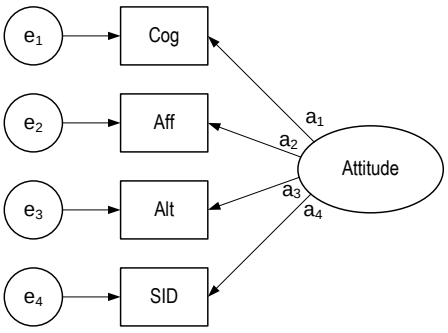
3.2.2 ATTITUDE

Ajzen (2002) stated that overall evaluation of attitude often contains two separable components. The first component is instrumental component represented by such adjective pairs as valuable — worthless, and harmful — beneficial. The second component has a more experiential quality and is represented in scales as pleasant — unpleasant and enjoyable — unenjoyable. These 4 questions are measured with a 6 point Likert scale.

Another two questions were included in the attitude measurement for the negative affective component of switching off for 2013's EH60. The 1st question asked the respondent if no switching off is pleasant — unpleasant and enjoyable — unenjoyable.

Two additional questions were included to address altruism; the first question is: I have given money to charity, measured in a 6 point Likert scale from "Very often" to "Never". The second question is: I have done volunteer work for charity, measured in a 6 point Likert scale from "Very often" to "Never".

Equation 1: Measurement model of attitude (Att1, X52)



1. Cog (X45) = a_1 x Att + e_1 (Cognitive component, 2 items)
2. Aff (X46) = a_2 x Att + e_2 (Affective component, 2 items)
3. Alt (X47) = a_3 x Att + e_3 (Altruistic component, 3 items)
4. SID (X48) = a_4 x Att + e_4 (Self identity component, 3 items)

a_1, a_2, a_3 and a_4 are coefficients in the measuring model.

e_i (error variables) represent measuring error of the indicator, Att_i

The measurement model of Attitude showed that this latent variable is measured with 4 indicators, 10 questions. The indicator/ factor may be trimmed after evaluation with result from SEM analysis to achieve the best model that fits the data.

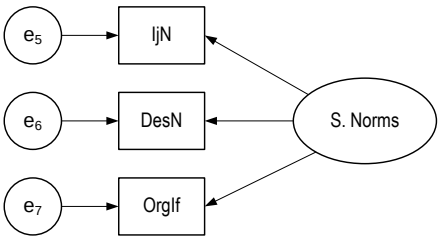
3.2.3 SUBJECTIVE NORMS

The traditional TPB questionnaire measures subjective norms in two components; Injunctive and descriptive norms (Ajzen, 2002). Injunctive Norms are measured with three questions that ask the respondents if their best friends, their most trusted family member and their colleagues want them to participate in the EH60, measured on a 6 point Likert scale from "Strongly agree" to "Strongly disagree".

Descriptive norms are measured with three questions that ask the respondents if their best friends, their most trusted family member and their colleagues switch off for EH60.

The third indicator of subjective norms measure if the organization where the respondents study or work, encourages them to switch off for EH60. This indicator is divided into two questions; if the organization encouraged respondents to switch off and if the origination participated in the EH60.

Equation 2: Measurement model of Subjective Norms (SN1, X54)



5. IjN (X49) = s_1 x SN + e_5 (Injunctive Norms, 3 items)

6. DesN (X50) = s_2 x SN + e_6 (Descriptive Norms, 3 items)

7. OrgIf (X51) = s_3 x SN + e_7 (Organizational influence, 2 items)

s_1, s_2 and s_3 are coefficients in the measuring model.

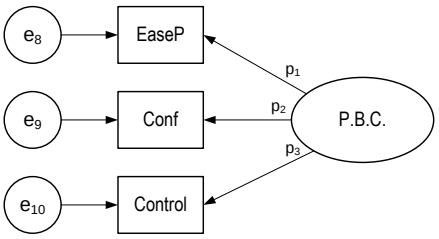
e_i (error variables) represent measuring error of the indicator, SN_i

The measuring model of Subjective Norms showed that this latent variable is measured with 3 indicators. Similar to Attitude, the indicator/ factor that contribute to Subjective Norms may be trimmed after evaluation with result of SEM analysis to achieve the best model that fits the data.

3.2.4 PERCEIVED BEHAVIOURAL CONTROL

Perceived Behavioural Control (PBC) is measured with three indicators; confidence of performing the behaviour, how easy or difficult to perform the behaviour and controllability in performing the behaviour (Azjen 2002)

Equation 3: Measurement model of Perceived Behavioral Control (PBC1, X56)



8. EaseP (X40) = p_1 x PBC + e_8 (Ease of performing, 1 item)

9. Conf (X41) = p_2 x PBC + e_9 (Confidence of performing, 1 item)

10. Control (X42) = p_3 x PBC + e_{10} (Controllability of performing, 1 item)

p_1, p_2 and p_3 are coefficients in the measurement model.

e_i (error variables) represent measuring error of the indicator, PBC_i

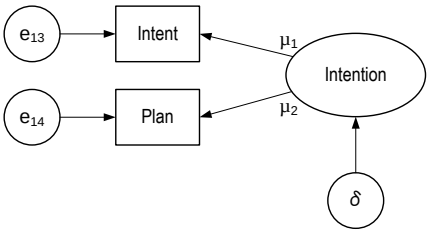
The first indicator asks respondent how confident they are that they are capable of switching off for the EH60, and measures their response in a 6 point Likert Scale from Possible to Impossible. The second indicator asks if it is easy to switch off for EH60, and measures their response in a 6 point Likert scale from very easy to very difficult. The third indicator asks respondents if they have total control over switching off for EH60, and measures their response in a 6 point Likert scale from no control to complete control.

The measuring model of Perceived Behavioral Control (PBC) showed that this latent variable is measured with 3 indicators or questions. Similar to both Attitude and Subjective Norms, the indicator/ factor that contribute to PBC may be trimmed after evaluation with result of SEM analysis to achieve the best model that fits the data.

3.2.5 PAST BEHAVIOUR AND INTENTION

Intention in this research is measured with two indicators; intention to perform the behavior and the plan to perform the behavior, by asking the respondents if they intended to switch off for the 2012 EH60, to be answered in a 6 point Likert scale from strongly agree to strongly disagree.

Equation 4: Measurement model of intention (X60)



11. Intent (X20) = μ_1 x INT + e_{11} (Intention to perform, 1 item)

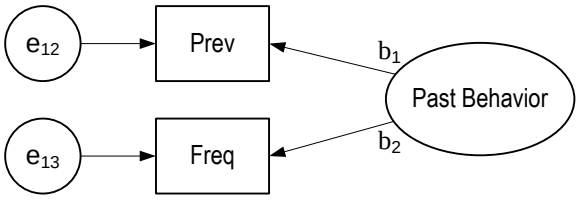
12. Plan (X21) = μ_2 x INT + e_{12} (Plan to perform, 1 item)

e_{11} & e_{12} (error variables) represent measuring error of the indicator, Int_{11} & Int_{12}

δ (disturbance) is the combined effect of all factors having an effect on the independent variable (Intention), but not being explicitly induced in the model.

Past behavior measured the frequency of previous switch off for EH60. This question is similar to the measurement of past behavior in choice of travel mode (Bamberg et al., 2003) that ask respondents how frequently they have taken each mode of transport to the campus in the last semester.

Equation 5: Measurement model of past behavior (X58)



The researcher include another question that ask the respondent if they switch off for the last EH60 that happen in 2012, as the researcher believe that the most recent past behavior should be included as another component of the past behavior variable.

3.3 DATA ANALYSIS

3.3.1 DESCRIPTIVE STATISTICS AND MULTIPLE REGRESSION (MR) ANALYSIS

Respondents are divided into those who switch off and do not switch off for the 2013's EH60. Demographics and the behavioural indicators will be analysed to identify any differences among these variables, between participants and non-participants.

MR analysis is adopted to explore the relationship between independent and dependent variables in the TPB model and the modified TPB model, prior to the structural equation modelling analysis. Result of analysis will be presented in two regression equations as per equation 6.

Equation 6: Regression equation of the original and modified TPB.

$$Int = a_0 + a_1 Att(2) + a_2 SN(2) + a_3 PBC(3), \quad \text{Original TPB}$$

$$Int = a_0 + a_1 Att(4) + a_2 SN(3) + a_3 PBC(3) + a_4 PB(1), \quad \text{Modified TPB}$$

Where Att(2) indicates variables ATT that is measured with 2 indicators… etc

3.3.2 STRUCTURAL EQUATION MODELLING

Structural equation modelling (SEM) is used to confirm if model 1 (TPB) or model 2 (Integrated model) best fit survey data in this research because it can simultaneously examine the influence of several variables on several other variables in the entire scheme of the model.

Hence, after primary relationships among variables were identified with MR analysis, SEM analyses were conducted in the confirmatory mode to examine the role of variables in predicting intentions, first in both the TPB and the integrated

model, later in any re-specified model if there is any. The SEM analyses conducted in this study employed Maximum Likelihood (ML) as the estimation method. Kline (2011) quoted that since Maximum Likelihood is the default mode in SEM analysis, estimation method other than Maximum Likelihood must be justified. The fit of the overall models was evaluated by the following fit measures (Blunch, 2008; Schumacker et al., (2010):

1. the model Chi-square ($\chi 2$ M; a significantly smaller model $\chi 2$ indicates the better fit of the model to the observed data);
2. CFI (Bentler's Comparative Fit Index; values >.90 indicate reasonably good fit, and values ≥.95 indicate superior fit);
3. RMSEA (Steiger-Lind's Root Mean Square Error of Approximation; values >.05-.08 indicate reasonable fit, and values ≤.05 indicate close approximate fit);
4. TLI (the Tucker-Lewis Index) or better known as NNFI (the Bentler-Bonett Non-Normed Fit Index; value ≥.90 is suggested to accept a model, and values ≥.95 indicate superior fit).

Based on the information from the MR analysis, the researcher re-specifies the integrated model to other alternative models, if necessary. Structural Model of these models will be analysed and the model that best fit the SEM model fit statistics and could best explain the behavioural data will be selected as the model for this research. Figure 2 shows the structural model of model 1, which is the integrated model modified from TPB.

Figure 2: Structural model of model 1 (Integrated model, IM)

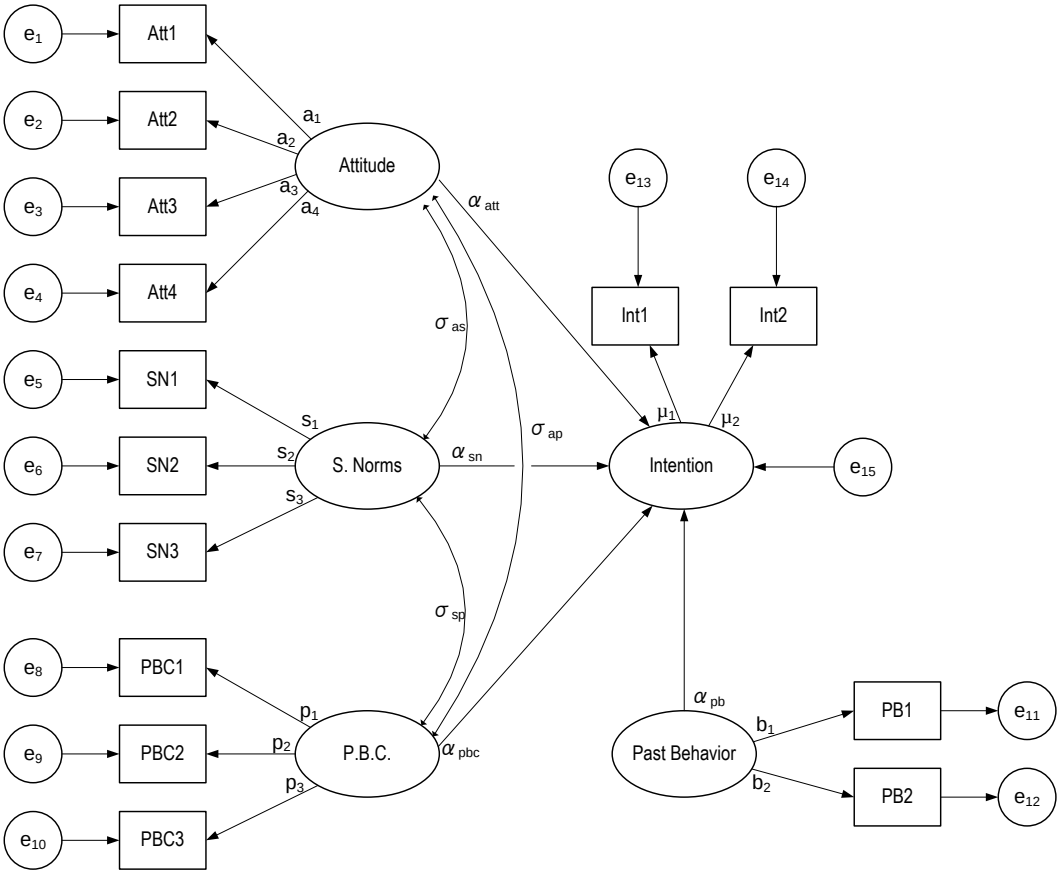
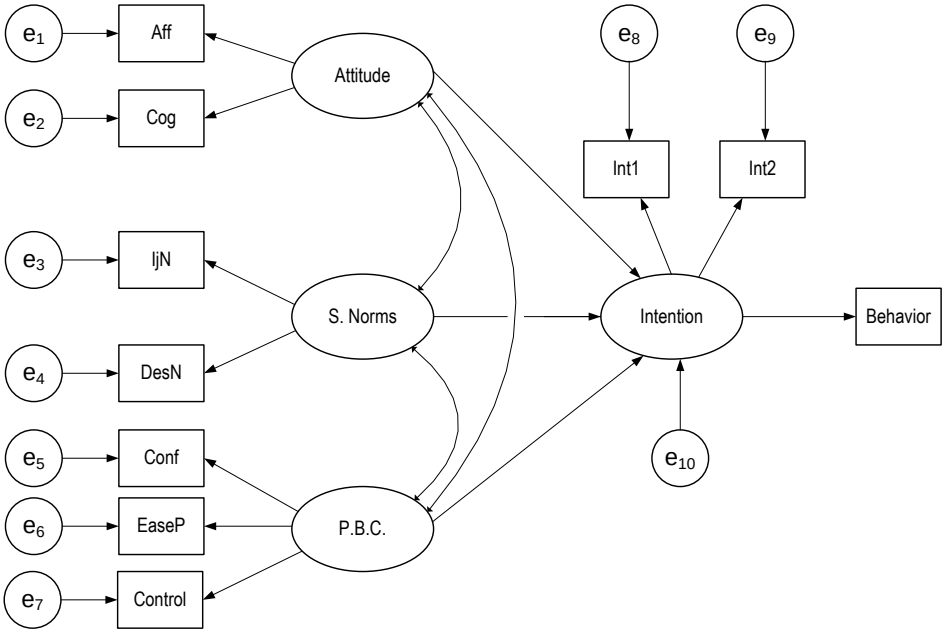


Figure 3 shows the structural model of model 2, exact replica of TPB. Most of the latent variables except intention are affected by measurement errors indirectly through indicators. The error variable of dependent variable (e15 in model 1, e10 in model2) is enclosed in a circle because it is not directly observed. Apart from representing random fluctuations in performance scores due to measurement error, it also represents a composite of age, socioeconomic status, verbal ability, and anything else on which intention may depend but which was not measured in this study. This variable is essential because the path diagram is supposed to show all variables that affect performance scores. Without the circle, the path diagram would make the implausible claim that performance is an exact linear combination of attitude, subjective Norms, perceived behavioral control and pass behavior.

Figure 3: Structural model of the model 2 (TPB)



3.3.3 HYPOTHESIS TESTING

The model selected in 3.3.2 will be used to test the following hypothesis;

H1. There is no significant difference between respondents that exhibit high and low intention to participate in the 2013 EH60. (Required by RQ1, Obj1).

H2. Organizational influence significantly affects respondent's intention to participate in 2013's EH60. (Required by RQ3, Obj3)

H3. The intention to participate in EH60 could be predicted significantly by the Theory of Planned Behavior (TPB). (Required by RQ5, Obj2).

H4. Prediction of the intention to participate in EH60 could be improved with the modified Theory of Planned Behavior (TPB). (Required by RQ6, Obj2).

H5. Attitude is the most significant predictor of intention to participate in the EH60. (Required by RQ5, Obj2).

H6. Attitude is the most significant predictor of intention not to participate in the EH60. (Required by RQ5, Obj2).

CHAPTER 4

RESEARCH RESULTS

Data collected from the questionnaire is converted into numerical value and entered into a data file in IBM statistics SPSS v19, according to Table 3, 15, 16 and 17. The data from questionnaire is divided into 2 portions; 19 demographics variables and 39 behavioral indicators or variables. These two types of data will be described and discussed in their respective sections. Both demographics and behavioral indicators of participants and non-participants compared to find out if there exist any differences between these two groups of respondents.

Table 3: Structure of demographics data, X1 to X19

	Name	Type	Width		Label	Values				Measure
1	ID	Numeric	4	0	ID	None	..	4		Ordinal
2	Gender	Numeric	2	0	Gd	{1, Male}...	..	4		Nominal
3	Age	Numeric	2	0	Age	{1, < 21}...	..	4		Nominal
4	Educational	Numeric	2	0	Edu	{1, Diploma}...	..	4		Nominal
5	Housemate	Numeric	2	0	Mate	{1, Family memb...	..	4		Nominal
6	House	Numeric	2	0	House	None	..	4		Nominal
7	Income	Numeric	2	0	Income	{1, 2000 - 3999}...	..	4		Nominal
8	MaritalStatus	Numeric	2	0	Marital	{1, Single}...	..	4		Nominal
9	Race	Numeric	2	0	Race	{1, Malay}...	..	4		Nominal
10	Awareness	Numeric	2	0	Aware	{1, Yes}...	..	4		Nominal
11	Location	Numeric	2	0	Location	{1, At home}...	..	4		Nominal
12	Participation	Numeric	2	0	Participation	{1, Switch off}...	..	4		Nominal
13	Newspaper	Numeric	2	0	Newspaper	{0, No}...	..	4		Nominal
14	Internet	Numeric	2	0	Internet	{0, No}...	..	4		Nominal
15	Radio	Numeric	2	0	Radio	{0, No}...	..	4		Nominal
16	Friends	Numeric	2	0	Friends	{0, No}...	..	4		Nominal
17	TV	Numeric	2	0	TV	{0, No}...	..	4		Nominal
18	PublicDisplay	Numeric	2	0	PublicDis	{0, No}...	..	4		Nominal
19	NumChannel	Numeric	2	0	Channel	{0, No}...	..	4		Ordinal

4.1 DESCRIPTIVE STATISTICS: DEMOGRAPHICS

Questionnaire in hard copies are distributed to university students in two locations: Sungai Long and Petaling Jaya. The students come from Faculty of Accountancy and the School of Finance, mostly in their third year of study. Sampling was done on 4 classes, where the researchers first obtained permission from the respective lecturers to distribute questionnaire in their class. On those days where the class commenced, the researchers brought blank copies of questionnaires to the class, and distribute the questionnaire to students after a brief introduction about the survey. The researcher collected completed questionnaire, counted the returned questionnaire and thanked the class and the lecturers for their participation in the survey. Table 4 shows that surveys were done within a month after the 2013's EH60, on the 23 March 2013.

Table 4: Source of respondents

Place	Date	Non-participants		Participants		Sub-total
Sg Long	27-Mar-13	26	55%	21	45%	47
PJ	10-Apr-13	20	45%	24	55%	44
PJ	11-Apr-13	37	57%	28	43%	65
Sg Long	17-Apr-13	80	66%	42	34%	122
	Total	163	59%	115	41%	278

Out of 278 respondents in this survey, 115 or 41% switched off for the 2013's EH60 (Participants), another 163 respondents or 59% of respondents do not switch off for the 2013's EH60 (Non-participants). **The participating rate (switching off for 2013' EH60) ranged from 34% to 55% over the 4 classes, average out at 41% over the entire 278 samples.**

Table 5: Location of respondents (X11) vs actual participation (X12)

Behavior of Respondents	Respondent at home		Respondent not at home		Total Respondent	
	Count	%	Count	%	Count	%
Switch off for EH60	88	66%	27	19%	115	41%
Do not switch off	46	34%	117	81%	163	59%
Total	134	100%	144	100%	278	100%

Table 5 shows that most of the non-participants (117 or 81% of non-participants), were not at home from 8:30 pm to 9:30 pm on the 23 March 2013, therefore unable to participate in the switching off for EH60. Most of the participants (88 or 66% of participants) were at home that allows them to switch off for EH60.

From another perspective, 66% of the respondents who were at home, switched off, where 34% of respondents that were at home do not switch off. The presence of respondents at home is an important determinant of switching off for EH60. About 48% of the respondents were at home which explained the lower than 50% participation rate for EH60. For those respondents not at home, only 19% or 27 respondents indicated that someone else at home switched off for EH60. In short, **the presence of respondents at home increased participation rate from 19% to 66%.**

Table 6: Awareness (X10) vs. actual participation (X12)

Behavior of Respondents	Respondent unaware of		Respondent aware of switching off		Total Respondent	
	Count	%	Count	%	Count	%
Switch off for EH60	21	31%	94	45%	115	41%
Do not switch off	46	69%	117	55%	163	59%
Total	67	100%	211	100%	278	100%

A special group of 7.5% of respondents (21 people) who are not aware of the request to switch off, reported that they switched off. Even though not shown in Table 6, 17 out of the 21 respondents were at home, indicating that very likely some of their family member decided to switch off for the event. Majority of the respondents (117/211 = 55%) never switch off even when they know the requirement. 45% of the respondents (94/211) are aware of the requirement and switched off accordingly. Even though the EH60 have been carried out in Malaysia since 2009 as an annual event, 24% of the respondents (67 people) claimed that they are unaware of the requirement to switch off for this event. **Personal awareness to switch off only increased participation rate increased from 31% to 45%.**

Table 7: Number of media channel (X19) vs actual participation (X12)

Behavior of Respondents	Number of channel where respondents know EH60												Total
	1		2		3		4		5		6		
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	
Switch off for EH60	74	43%	17	31%	15	52%	4	36%	4	57%	1	25%	115
Do not switch off	98	57%	38	69%	14	48%	7	64%	3	43%	3	75%	163
Total	172		55		29		11		7		4		278

Media has an inconsistent effect on the rate of switching off for EH60. Message of the EH60 and the request for us to participate by switching off, is conveyed through the following media; Newspaper, Internet, Radio, Words of mouth, Television and Public display. Table 7 shows that those who know EH60 through single, three and five media channels, have a better switching off rate of above 43%. Respondents who get the message of EH60 through two, four and six media channel have a lower switching off rate of below 36%. **Higher exposure to message about EH60 through multiple media channels do not generate a higher switching off rate.** Table 8 shows that **those who know the event through televised program reported the higher switch off rate (47%).** Respondents who know the event through print media, internet and radio have same switch off rate of about 40%. Televised program is the most effective tool to convey the message to switch off.

Table 8: Type of media channel (X13 – X18) vs. actual participation (X12)

Behavior of Respondents	Print		Internet		Radio		Word of Mouth		TV		Public Display	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Switch off for EH60	31	41%	68	40%	20	40%	29	37%	30	48%	16	42%
Do not switch off	45	59%	100	60%	30	60%	49	63%	32	52%	22	58%
Total	76	100%	168	100%	50	100%	78	100%	62	100%	38	100%

47 % of males respondents switched off (44 people), higher than the 39% of female respondents who switched off (71 people). This survey is distributed to respondents either at the end of the class or the middle of the class, and the response rate is almost 100%. Table 9 shows that m**ore male students switch off for the 2013's EH60 than female students.** Literature reviews shows that either PEB is more prevalent among female, or there is no effect of gender on PEB. This

factor was analyzed further by breaking down gender according to their location during the event, as per table 10.

Table 9: Gender (X2) vs. actual participation (X12)

Behavior of Respondents	Male		Female		Total Respondent	
	Count	%	Count	%	Count	%
Switch off for EH60	44	47%	71	39%	115	41%
Do not switch off	50	53%	113	61%	163	59%
Total	94	100%	184	100%	278	100%

Table 10 shows that more male respondents were at home (61%) compared to only 42% of female respondents who were at home. **The higher reported switch off rate of male respondents is related to the fact that more male were home.**

Table 10: Respondents' location (X11) vs. Gender (X2)

Respondents who were	Male		Female		Total	
	Count	%	Count	%	Count	%
Not at home	37	39%	107	58%	144	52%
At home	57	61%	77	42%	134	48%
Total	94	100%	184	100%	278	100%

Table 11 shows that about 40% of respondents who stay with their family member switched off for EH60, whereas about 43% of respondents who stay with their classmates do so. **There is insignificant difference in participation rate between respondents who stay with family and classmates.** Respondents are divided almost equally between staying with family and friends, contrary to the researcher's belief that most of the respondents were non-residents in Klang Valley.

Table 11: People whom respondents live with (X5) vs. actual participation (X12)

Behavior of Respondents	Respondents who live with						Total
	Family		Classmates		Alone		
	Count	%	Count	%	Count	%	
Switch off for EH60	57	40.4%	58	43.0%	0	0%	115
Do not switch off	84	59.6%	77	57.0%	2	100%	163
Total	141		135		2		278

House value could be ranked as flat, apartment, condominium terrace house, semi-detached home and finally bungalow, in ascending order, where semi-detached home and bungalow are generally more expensive, hence exclusive, than the first four types of houses (affordable homes). Table 12 shows that about 91% (253 people) of the respondent lives in the affordable houses, 9% (25 people) of the respondents live in the exclusive houses. About 40% and above of respondents who live in affordable houses, switched off for EH60. Only less than 25% of respondents who stay in more exclusive houses such a semi-detached homes or bungalow, switched off for EH60. **Respondents who stay in relatively affordable homes such as flat, apartment, condominium and terraced house have a higher switch off rate** than respondents who stay in more expensive houses such as semi-detached house and bungalow.

Table 12: Respondent's dwelling (X6) vs. actual participation (X12)

Behavior of Respondents	Respondent who live in,										Total
	Flat/ Aapartment		Condominium		Terrace house		Semi-detached house		Bungalow		
	Count	%	Count	%	Count	%	Count	%	Count	%	
Switch off for EH60	9	45%	58	45%	42	40%	4	24%	2	25%	115
Do not switch off	11	55%	71	55%	62	60%	13	76%	6	75%	163
Total	20	100%	129	100%	104	100%	17	100%	8	100%	278

Table 13 shows that switching off for EH60 is more prevalent among lower income household (Monthly income of less than RM 4000). About 63% of the respondents come from this category, the only category with a switch off rate (45%) that is higher than the average 41%. **The rate of participation declines as the household income increase.** This is in line with the researcher's observation

where participation rate is very low in the middle income neighborhood where he stays.

Table 13: Household income (RM 000/month, X7) vs. actual participation (X12)

Behavior of Respondents	2 - 3.99		4 - 5.99		6 - 7.99		> 8		Total	
	Count	%	Count	%	Count	%	Count	%	Count	%
Switch off for EH60	79	45%	24	36%	8	36%	4	29%	115	41%
Do not switch off	97	55%	42	64%	14	64%	10	71%	163	59%
Total	176	100%	66	100%	22	100%	14	100%	278	100%

Table 14 shows the relationship between frequency of Past Behavior and actual switch off rate. Except those who never switched off since 2009, the number of times a person switch off in previous EH60 is related to the switch off rate for 2013's EH60. **Those who switched off more than 2 times reported higher than average switch off rate.** 4 out of 278 respondents never switch off in the previous EH60. The switch off rate in this 'Never' category may not be reliable due to its small sample size.

Table 14: frequency of Past Behavior (X44) vs. actual participation (X12)

Behavior of Respondents	Number of times a respondents switch off since 2009										Total
	Never		1 times		2 times		3 times		4 times		
	Count	%	Count	%	Count	%	Count	%	Count	%	
Switch off for EH60	2	50%	9	15%	46	42%	43	51%	15	75%	115
Do not switch off	2	50%	51	85%	63	58%	42	49%	5	25%	163
Total	4	100%	60	100%	109	100%	85	100%	20	100%	278

The impact of other demographics factors such as age, marital status, race and educational level could not be assessed because the survey is done solely with university students made up of majority Chinese. The effect of education level can be indirectly inferred from the switch-off rate of participant's location (Table 5). As the respondents are all undergraduate students, 66% switch off rate when they are home and 19% switch-off rate when they are not at home (assuming those at home had lower educational level) shows that educational level plays an important role in participation of EH60. It also indirectly shows that subjective norms at

home towards switch off for EH60 are generally not high, inline with the observation in table 24 and 25.

4.2 DESCRIPTIVE STATISTICS: BEHAVIORAL INDICATORS

13 Behavioral indicators such as Intention, Cognitive component of attitude, .. and their component, are entered into the same data file in IBM SPSS statistics v19, as the demographics variables. Table 15 to 17 shows the structure of 40 of these variables or indicators.

Table 15: Data Structure of observed behavioral variables (X20 to X39)

	Name	Type	...	...	Label	...	...	...	...	Measure	Role
20	Intent	Numeric	2	0	Intent	..	...	4		Scale	Input
21	Plan	Numeric	2	0	Plan	..	...	4		Scale	Input
22	Cognitive1	Numeric	2	0	Cog1	..	...	4		Scale	Input
23	Cognitive2	Numeric	2	0	Cog2	..	...	4		Scale	Input
24	Affective1	Numeric	2	0	Aff1	..	...	4		Scale	Input
25	Affective2	Numeric	2	0	Aff2	..	...	4		Scale	Input
26	Altruism1	Numeric	2	0	Alt1	..	...	4		Scale	Input
27	Altruism2	Numeric	2	0	Alt2	..	...	4		Scale	Input
28	Altruism3	Numeric	2	0	Alt3	..	...	4		Scale	Input
29	SelfIdentity1	Numeric	2	0	SID1	..	...	4		Scale	Input
30	SelfIdentity2	Numeric	2	0	SID1	..	...	4		Scale	Input
31	SelfIdentity3	Numeric	2	0	SID1	..	...	4		Scale	Input
32	InjunctiveN1	Numeric	2	0	IjN1	..	...	4		Scale	Input
33	InjunctiveN2	Numeric	2	0	IjN2	..	...	4		Scale	Input
34	InjunctiveN3	Numeric	2	0	IjN3	..	...	4		Scale	Input
35	DescriptiveN1	Numeric	2	0	DesN1	..	...	4		Scale	Input
36	DescriptiveN2	Numeric	2	0	DesN2	..	...	4		Scale	Input
37	DescriptiveN3	Numeric	2	0	DesN3	..	...	4		Scale	Input
38	OrgInfluence1	Numeric	2	0	OrgIf1	..	...	4		Scale	Input
39	OrgInfluence2	Numeric	2	0	OrgIf2	..	...	4		Scale	Input

Scale meaurement indicates that these varaibles are not Ordinal or Nominal. The input role states that this variables are independent varaibles.

Table 16: Data structure of observed behavioral variables (X40 – X51)

	Name	Type	...	...	Label	...	...	...	...	Measure	Role
40	EasePerform	Numeric	2	0	EaseP	..	...	4		Scale	Input
41	Confidence	Numeric	2	0	Conf	..	...	4		Scale	Input
42	Control	Numeric	2	0	Control	..	...	4		Scale	Input
43	Previous	Numeric	2	0	Prev	..	...	4		Scale	Input
44	Frequency	Numeric	2	0	Freq	..	...	4		Scale	Input
45	Cognitive	Numeric	5	3	Cog	..	...	8		Scale	Both
46	Affective	Numeric	5	3	Aff	..	...	8		Scale	Both
47	Altruism	Numeric	5	3	Alt	..	...	8		Scale	Both
48	SelfIdentity	Numeric	5	3	SID	..	...	8		Scale	Both
49	InjunctiveN	Numeric	5	3	IjN	..	...	8		Scale	Both
50	DescriptiveN	Numeric	5	3	DesN	..	...	8		Scale	Both
51	OrgInfluence	Numeric	5	3	OrgInf	..	...	8		Scale	Both

The variables listed in Table 17 play dual roles, both as independent variables and dependent variable. X60 is the only variable that play dependent variable role.

Table 17: Data structure of unobserved latent variables (X52 – X60)

	Name	Type	...	...	Label	...	...	...	...	Measure	Role
52	Attitude1	Numeric	5	3	Att1	..	...	8		Scale	Both
53	Attitude2	Numeric	5	3	Att2	..	...	8		Scale	Both
54	SubjectiveNor...	Numeric	5	3	SN1	..	...	8		Scale	Both
55	SubjectiveNor...	Numeric	5	3	SN2	..	...	8		Scale	Both
56	PBC1	Numeric	5	3	PBC1	..	...	8		Scale	Both
57	PBC2	Numeric	5	3	PBC2	..	...	8		Scale	Both
58	PastBehavior1	Numeric	5	3	PB1	..	...	8		Scale	Both
59	PastBehavior2	Numeric	5	3	PB2	..	...	8		Scale	Both
60	IntOff	Numeric	5	3	Int	..	...	8		Scale	Target

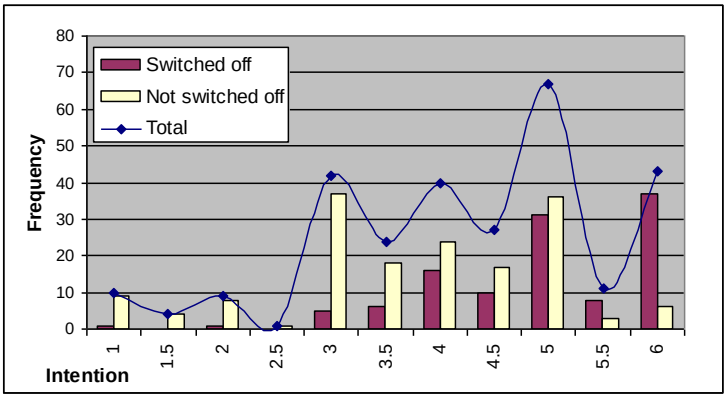
Cronbach Alpha is used an indicator to measure the reliability of the unobserved variables (X52 to X60). Table 18 shows that indicator of all but Past Behavior meets the minimum score of at least 0.60. As the second question of the past behavior measures only up till the 4th previous EH60 by asking respondents switch off for the past four times, the maximum score for the second question is 4, but the maximum score of the 1st question is 6. The research does not standardize the maximum score of both questions as it will not have a material effect on the regression. The researcher accept the lower reliability score of the construct past behavior, that arise from this unique question. Cronbach Alpha scores of all 5 constructs indicated that they are measured consistently.

Table 18; Reliability statistics of the five constructs

	construct	Component	Cronbach' Alpha
1	Intention	2	0.926
2	Attitude	10	0.853
3	Subjective Norms	8	0.923
4	Perceived Behavioral Control	3	0.905
5	Past Behavior	2	0.586

Table 19 shows that reported intention for non-participant (means of 3.76) is considerably lower than participants (means of 4.95). The graph below shows that a higher percentage of non-participants reported intention of below 5, whereas more participants reported intention of above 5. **There is significant difference in intention towards switching off, between participant and non-participant.** The line graph shows that intention is normally distributed and is skewed to the higher score.

Table 19: Intention (X60) vs. actual participation (X12)

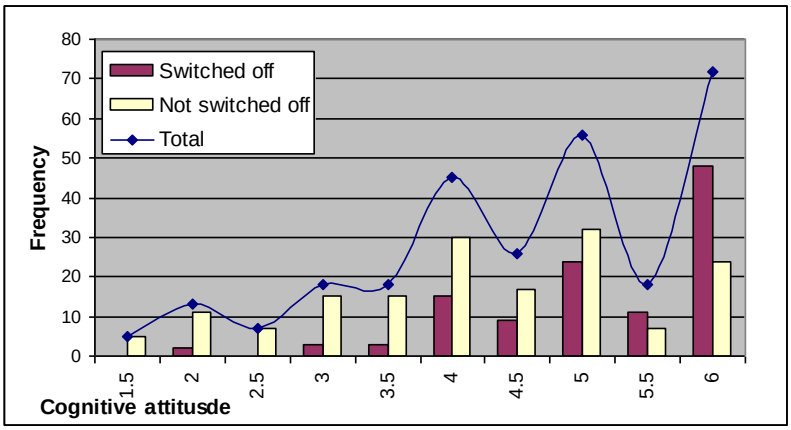


Sample Means 4.25, Std Error 0.077

Intention	Do not switched off	Switched off
Mean	3.758	4.948
Standard Error	0.096	0.094
Median	4	5
Mode	3	6
Standard Deviation	1.225	1.007
Sample Variance	1.501	1.015
Kurtosis	-0.254	1.195
Skewness	-0.465	-0.981
Range	5	5
Minimum	1	1
Maximum	6	6
Sum	612.5	569
Count	163	115

The Cognitive component of attitude measures the evaluation of the outcome of switching off for EH60, as wise or foolish, harmful or beneficiary. Table 20 shows that the cognitive component of participants (Means of 5.15) is much higher than those of non-participants (Means of 4.2). Respondents who report cognitive component of higher than 5 are more likely to switch off. **There is a significant difference between cognitive component of participants and non-participants.** Cognitive component is normally distributed, highly skewed towards higher score.

Table 20: Cognitive Component (X45) vs. actual participation (X12)

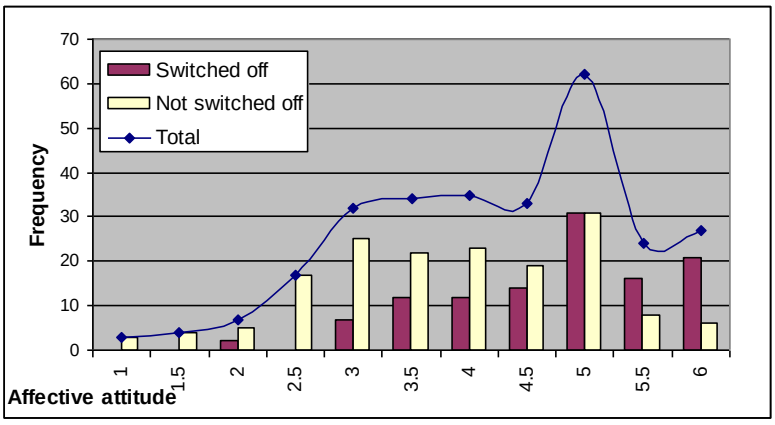


Sample Means 4.59, Std Error 0.073

cognitive Component, Attitude	Do not switched off	Switched off
Mean	4.193	5.152
Standard Err	0.098	0.088
Median	4	5.5
Mode	5	6
Standard Dev	1.246	0.946
Sample Var	1.553	0.895
Kurtosis	-0.670	0.807
Skewness	-0.336	-1.073
Range	4.5	4
Minimum	1.5	2
Maximum	6	6
Sum	683.5	592.5
Count	163	115

Affective component of attitude measures the evaluation of the outcome of switching off for EH60 as pleasant or unpleasant. Table 21 shows that **non-participant's affective attitude (means of 3.84) is much lower than that of participant (4.76).** Higher Cognitive attitude than the Affective attitude shows that switching off for EH60 is generally perceived to be beneficially, but not pleasant or interesting to do. Table 21 shows that more participants reported above 5, more non-participants reported below 5, similar to the cognitive attitude. Affective component is normally distributed, skewed slightly towards higher score.

Table 21: Affective component (X46) vs. actual participation (X12)

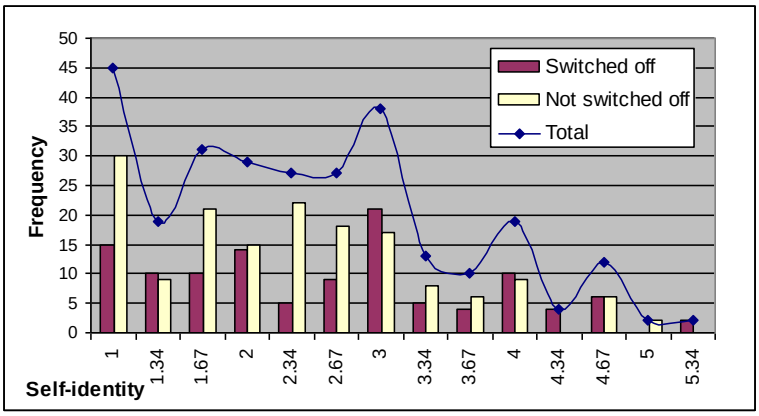


Sample Means 4.22, Std Error 0.07

Affective Component, Attitude	Do not switched off	Switched off
Mean	3.840	4.757
Standard Erro	0.090	0.090
Median	4	5
Mode	5	5
Standard Dev	1.150	0.967
Sample Varia	1.323	0.936
Kurtosis	-0.527	-0.217
Skewness	-0.234	-0.608
Range	5	4
Minimum	1	2
Maximum	6	6
Sum	626	547
Count	163	115

Self-identity indicator measures a person's self-image as pro-environment by asking if the respondents have volunteered, donated for environmental body or has been a member in environmental group. Table 22 shows that the self-identity of non-participants (means of 2.33) and participants (means of 2.6) are quite similar, indicating that **reported self-identity as pro-environment is generally low, and that there is no apparent difference between participants and non-participants**. Only 20 respondents report self-identity of above 4. Most of the responses ranged from 1 to 3, indicating that the measurement for self-identity is not suitable. A proper measurement offers the highest variance possible in the indicator. Self-identity is normally distributed, highly skewed towards low score.

Table 22: Self-identity (X56) vs. actual participation (X12)

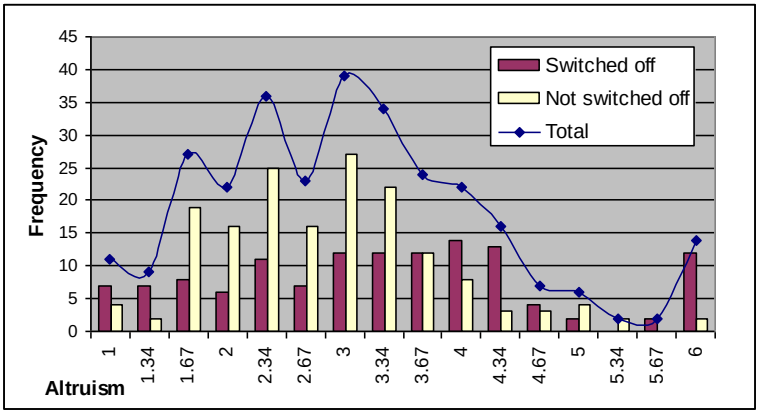


Self-identity	Do not switched off	Switched off
Mean	2.334	2.602
Standard Error	0.081	0.107
Median	2.34	2.67
Mode	1	3
Standard Dev	1.035	1.153
Sample Var	1.071	1.329
Kurtosis	-0.332	-0.789
Skewness	0.549	0.335
Range	4	4.34
Minimum	1	1
Maximum	5	5.34
Sum	380.43	299.27
Count	163	115

Sample Means 3.60, Std Error 0.065

Altruism measures the feeling or acting on behalf of the welfare of others in cases where self-interest could not be involved. Similar to self-identity, it is measured by asking if the respondent has donated money to charity, volunteered in charity or have been a member of a charity organization. Table 23 shows **a small difference between non-participants (means of 2.82) and participants (means of 3.02), indicating that reported altruism is generally low, even though it is slightly higher than self-identity** as pro-environment. It also indicates that Altruism cannot be used as a factor to divide visually, participant from non-participant. Altruism is normally distributed, slightly skewed towards low score.

Table 23: Altruism (X47) vs. actual participation (X12)

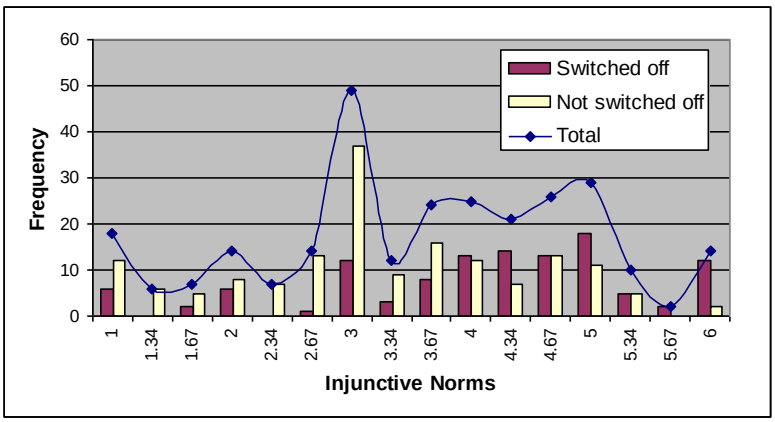


Sample Means 2.90, Std Error 0.060

Altruism	Do not switched off	Switched off
Mean	2.821	3.021
Standard Err	0.072	0.102
Median	2.67	3
Mode	3	4
Standard Dev	0.91	1.09
Sample Var	0.83	1.19
Kurtosis	0.08	-0.99
Skewness	0.45	-0.28
Range	4.34	4
Minimum	1	1
Maximum	5.34	5
Sum	459.86	347.39
Count	163	115

As a component of the Subjective Norms, Injunctive Norms measures the respondents' perception concerning what others expect them to do with respect to switching off for EH60, by asking if person that have a strong influence on them (example their parents, close friends) expect them to switch off. There is a strong difference between participants (means of 4.11) and non-participants (3.24). Line graph shows that Injunctive Norms is normally distributed. It is visually apparent in Table 24, that there are more non-participants score below 3.67, and more participants score above 3.67.

Table 24: Injunctive Norms (X49) vs. actual participation (X12)

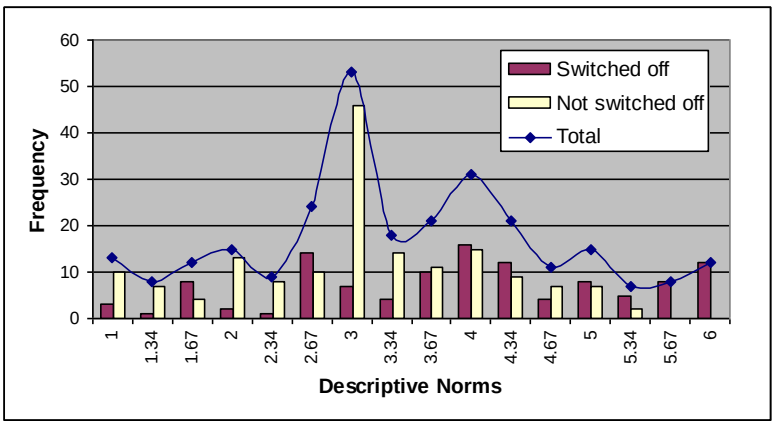


Sample means 3.6, Std Error 0.079

Injunctive norms	Do not switched off	Switched off
Mean	4.112	3.240
Standard Err	0.121	0.094
Median	4.34	3
Mode	5	3
Standard Dev	1.30	1.20
Sample Var	1.68	1.45
Kurtosis	0.09	-0.55
Skewness	-0.72	-0.06
Range	5	5
Minimum	1	1
Maximum	6	6
Sum	473	528
Count	115	163

Descriptive Norm measures the respondent's expectation for others to participate in EH60, by asking of they expect person that is important to them (parents, close friends, colleagues) to switch off. Table 25 shows that participants report higher Descriptive Norms (Means of 3.92) than non-participants (3.07). There is **significant difference between descriptive Norms reported by participants and non-participants. The generally lower score on Descriptive Norms compared to Injunctive Norms indicate that respondents tend to believe that others expect them to switch off** rather than they expect others to switch off. Descriptive Norms is normally distributed.

Table 25: Descriptive Norms (X50) vs. actual participation (X12)



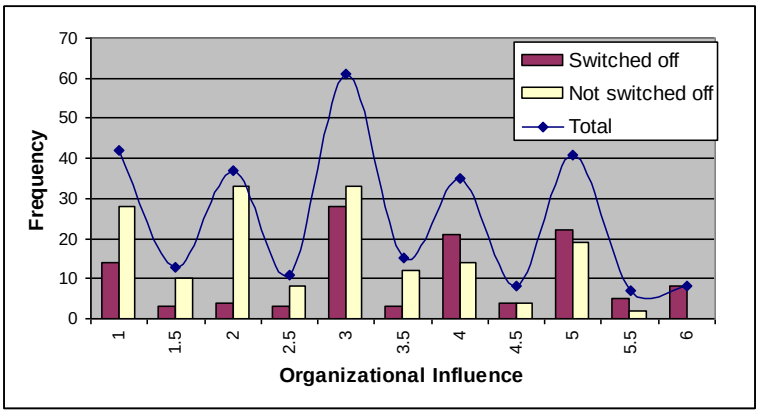
Descriptive Norms	Do not switched off	Switched off
Mean	3.068	3.924
Standard Err	0.082	0.127
Median	3	4
Mode	3	4
Standard Dev	1.05	1.37
Sample Var	1.11	1.87
Kurtosis	-0.37	-0.76
Skewness	-0.10	-0.21
Range	4.34	5
Minimum	1	1
Maximum	5.34	6
Sum	500.04	451.3
Count	163	115

Sample Means 3.42, Std Error 0.076

Organizational influence measures respondent's perception of organizational support by asking them if the organizations where they work expect them to switch off, and if the organizations switch off for EH60. Table 26 shows that **there is significant difference between reported organizational influence of participants (means of 3.62) and non-participants (means of 2.76).**

Generally respondents who report organizational influence higher than 3.5 is more likely to switch off. Respondents who report organisational influence below 3.5 is less likely to switch off. The generally lower score on Organizational Influence compared to both Injunctive and Descriptive Norms indicates that **close friends or parents exert a stronger influence on the respondents than the universities where they study**, as most of the respondents are university students. Line graph shows that Organizational influence is normally distributed.

Table 26: Organizational Influence (X51) vs. actual participation (X12)

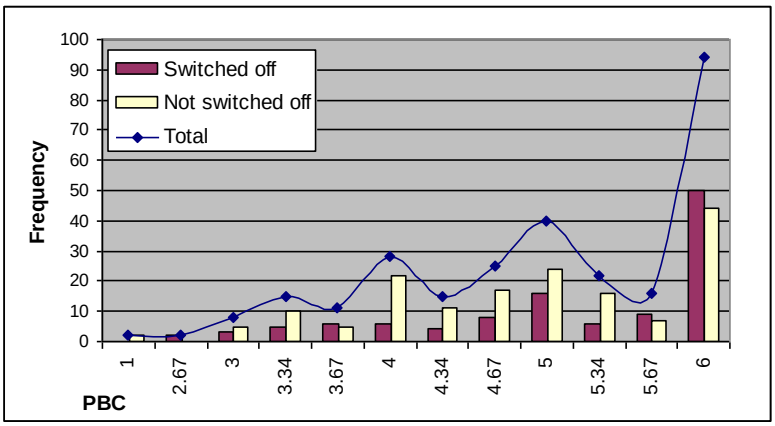


Organization-al Influence	Do not switched off	Switched off
Mean	2.761	3.617
Standard Err	0.102	0.137
Median	3	4
Mode	3	3
Standard Dev	1.30	1.47
Sample Var	1.70	2.15
Kurtosis	-0.90	-0.78
Skewness	0.34	-0.29
Range	4.5	5
Minimum	1	1
Maximum	5.5	6
Sum	450	416
Count	163	115

Sample Means 3.12, Std Error 0.086

Perceived Behavioral Control (PBC) measures individuals' perceptions of the ease or difficulty of switching off for EH60, by asking if the respondents find it easy to switch off, is it within their control to switch off and how confident they are in switching off. **The difference between non-participants (4.86) and participants (Means of 5.17) is small**. Apart from indicating that PBC is not a good indicator to divide between participants and non-participants, the high score across the board shows that switch off for EH60 is generally considered an easy task to do. Line graph in Table 27 shows that **PBC is highly skewed towards high score, similar to cognitive component**.

Table 27: PBC1 (X56) vs. actual participation (X12)

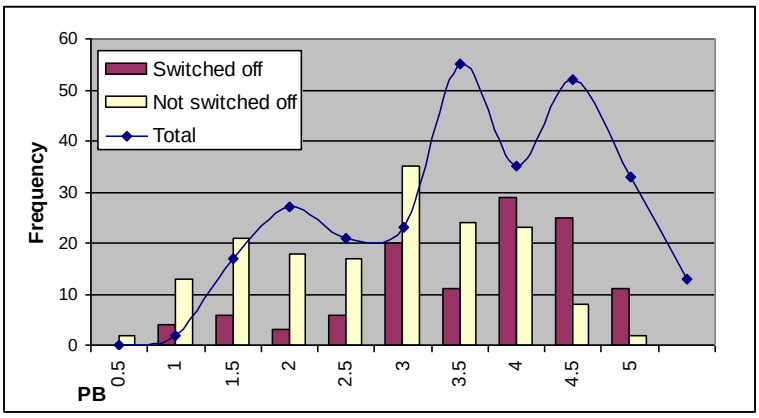


Perceived Behavioral Control	Do not switched off	Switched off
Mean	4.865	5.173
Standard Err	0.079	0.090
Median	5	5.67
Mode	6	6
Standard Dev	1.00	0.97
Sample Var	1.01	0.94
Kurtosis	1.12	-0.26
Skewness	-0.85	-0.95
Range	5	3.33
Minimum	1	2.67
Maximum	6	6
Sum	793	595
Count	163	115

Sample Means 5.0, Std Error 0.065

Past behavior measures the past record of respondent's switching off for previous EH60, by asking if they switched off for the 2012's EH60, and how many times they switched off since 2009. Table 28 shows that there is a **clear difference between reported past behavior of participants (Means of 3.62) and non-participants (Means of 2.77).** There are more participants in score above 3.5 and more non-participants in score below 4. Line graph in Table 28 shows that past behavior is normally distributed, slightly skewed towards high score.

Table 28: past behavior1 (X58) vs. actual participation (X12)



Past Behavior	Do not switched off	Switched off
Mean	2.767	3.617
Standard Err	0.083	0.097
Median	3	4
Mode	3	4
Standard Dev	1.05	1.04
Sample Var	1.11	1.07
Kurtosis	-0.87	0.12
Skewness	-0.16	-0.86
Range	4.5	4
Minimum	0.5	1
Maximum	5	5
Sum	451	416
Count	163	115

Sample Means 3.12, Std Error 0.080

To summarize the findings in this section, the means of non-participants, participants and of the whole sample is tabulated in Table 29. There are very significant difference in intention, subjective norms and past behavior, between participants and non-participants. There is significant difference, albeit lesser magnitude, among the attitude of participant and non-participants. There is no difference among the PBC reported by participant and non-participant.

Box-plot in Appendix L shows that apart from significant difference in three components of subjective norms among participant and non-participants, all three are similarly aligned. In this aspect the three components are valid measurement of subjective norms.

Box-plot in Appendix P shows that both components of past behavior exhibit significant difference among participants and non-participants. Visual judgment from Box-plots of other behavioral indicators in Appendix M, N, O shows that biggest difference among participants are observed in both Subjective Norms and

Past Behavior. Subtle differences are observed with Self-identity and Controllability.

Table 29: Variables, participants vs. Non-participants

	Constructs	non-participants	Partici-pants	Overall	Relationship	Remarks
1	Intention	3.76	4.95	4.25	Dependent	Significant difference between participants and non-participants
2	Attitude	3.15	3.67	3.36	Independent	Difference between participants and non-participants
3	Subjective Norms	3.05	3.92	3.41	Independent	Significant difference between participants and non-participants
4	PBC	4.86	5.17	3.32	Independent	No significant difference between participants and non-participants
5	Past Behaviour	2.77	3.62	3.12	Independent	Significant difference between participants and non-participants

These five constructs or latent variables are measured by 14 indicators. The differences among participants and non-participants, in term of indicators are tabulated in Table 30.

Table 30: Indicators, participant vs. and non-participants

	Indicators	Non-participants	Participants	Overall	Construct
1	Intention-plan	3.82	4.92	4.27	Intention
2	Intention-try	3.7	4.97	4.23	
3	Cognitive	4.19	5.15	4.59	Attitude
4	Affective	3.84	4.76	4.22	
5	Altruism	2.82	3.02	2.91	
6	Self-identity	2.33	2.6	2.45	
7	Injunctive Norms	3.24	4.11	3.6	Subjective Norms
8	Descriptive Norms	3.07	3.92	3.2	
9	Organizational influence	2.76	3.62	3.12	
10	Ease of performing	4.75	5.16	4.92	PBC
11	Confidence	4.87	5.25	5.03	
12	controllability	4.98	5.1	5.03	
13	Previous behavior	3.55	4.71	4.03	Past Behavior
14	Frequency of behaviour	1.98	2.52	2.21	

It shows that the difference among indicators generally match the difference among the construct, except for Altruism, Self-identity and Organizational influence. These three indictors show little difference between participants and

non-participants, even though the constructs (Attitude and Subjective Norms) that they measures shows otherwise.
These three indicators that do not fit the construct well will cause some difference in the regression weight between the linear regression and the structural equation modeling.

Appendix F contains the listing of every one of the forty behavioral indicators, independent latent variables and dependent latent variables that will be used in the MR and SEM analysis.

4.3 MULTIPLE REGRESSION (MR) ANALYSIS

Summarized in Equation 7, we have two models to evaluate, the integrated model modified from TPB, and the original TPB model. MR analysis will be performed using IBM SPSS Statistics version 19, on these two models to identify the model with the highest predictive power of intention, and the best overall data fit, as indicated by the highest F ratio. The model with the highest R^2 reflects higher predictive power of intention.

Equation 7: Multiple Regression analysis of two models

	Regresison equation	Origin
Model 1	$I_1 = \beta_{1a} \times Att_1 + \beta_{1b} x SN_1 + \beta_{1c} x PBC + \beta_{1e} x PB + \beta_{1d}$	Integrated Model, modified from TPB based on Literature Review
Model 2	$I_2 = \beta_{2a} \times Att_2 + \beta_{2b} x SN_2 + \beta_{2c} x PBC + \beta_{2d}$	TPB un-modified.
Where,	Att_1 = f (Cog, Aff, Alt, SID)	SN_1 = f (IjN, DesN, OrgInf)
	Att_2 = f (Cog, Aff)	SN_2 = f (IjN, DesN)

4.3.1 MR ANALYSIS OF MODEL 1 (INTEGRATED MODEL)

Table 31 shows that model 1 has an adjusted coefficient of determination of 0.52, indicating that the regression equation could explain 52% of the variance in intention of respondents to switch off for EH60.

Table 31: Coefficient of Determination of model 1 (IM)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.722[a]	.521	.514	.892613

a. Predictors: (Constant), PB, PBC, Att, SN

Table 32 shows that F ratio of 74.3 and significance of 0.000 indicates that the overall model fit is statistically significant.

Table 32: Overall regression model fit of model 1 (IM)

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	236.860	4	59.215	74.320	.000[a]
	Residual	217.515	273	.797		
	Total	454.375	277			

a. Predictors: (Constant), PB, PBC, Att, SN
b. Dependent Variable: Int

Constant and PBC will be rejected from the regression equation because their alpha values are higher than 0.05. VIF of all 4 parameters are below 2, indicates minimum multi-collinearity.

Table 33: Regression coefficient of model 1 (IM)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.380	.314		1.209	.228		
	Att	.481	.082	.296	5.849	.000	.682	1.465
	SN	.276	.058	.246	4.724	.000	.645	1.551
	PBC	.025	.062	.020	.408	.683	.760	1.316
	PB	.380	.060	.334	6.348	.000	.635	1.575

a. Dependent Variable: Int

As the p-value of the Constant (0.38) and PBC (regression coefficient of 0.025) are above 0.05, we do not include these two parameters in the regression equation. The regression equation of the integrated model can thus be written as;

$I_1 = 0.48Att_1 + 0.28SN_1 + 0.38PB$ ($R^2 = 0.521$, Integrated model)

According to this regression equation of the integrated model, the intention is influenced by Attitude, followed by PB (Past Behavior) and least by Subjective Norms.

4.3.2 MR ANALYSIS OF MODEL 2 (TPB)

A MR analysis with intention as the dependent variable, Attitude (Att_2), Subjective norms (SN_2) and Perceived Behavioral Control (PBC) as independent variables, was performed using IBM SPSS Statistics version 19.

Table 34 shows that model 2 has an adjusted coefficient of determination of 0.55, indicating that the regression equation could explain 55% of the variance in intention.

Table 34: Coefficient of Determination of model 2 (TPB)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.738[a]	.544	.539	.869269

a. Predictors: (Constant), PBC1, Att2, SN2

Table 35 shows F ratio of 109 and significance of 0.000 indicates that the overall model fit is statistically significant, and that the TPB (F ratio of 109) fit the data much better than the integrated model.

Table 35: Overall regression model fit of model 2 (TPB)

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	247.333	3	82.444	109.107	.000[a]
	Residual	207.042	274	.756		
	Total	454.375	277			

a. Predictors: (Constant), PBC1, Att2, SN2
b. Dependent Variable: Int

Constant (Regression Coefficient 0.26) and the predictor PBC (Regression Coefficient 0.09) are rejected from the regression equation as the p value are above 0.05. Minimum VIF of below 2 indicates that there is no collinearity between the predictors of Att, SN and PBC. The regression equation of the TPB model can thus be written as;

$I_2 = 0.57Att_2 + 0.29SN_2$, ($R^2 = 0.55$, TPB)

Table 36: Regression coefficient of model 2 (TPB)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.257	.293		.878	.381		
	Att2	.571	.055	.510	10.298	.000	.679	1.474
	SN2	.294	.053	.282	5.502	.000	.631	1.584
	PBC1	.089	.058	.069	1.535	.126	.812	1.231

a. Dependent Variable: Int

According to the regression equation based on TPB, the impact of Attitude on intention to switch off is about 2 times of SN's, whereas PBC have no impact on the intention, matching the conclusion from chapter 2 that Attitude is the major predictor of PEB and that PBC is not an important predictor for PEB that is easy to carry out.

4.3.3 MR ANALYSIS OF MODEL 3 (RE-SPECIFIED IM)

The regression equation of TPB model explains higher variance of intention than the integrated model (R^2 = 0.547) that has an additional predictor. With Past Behavior as an additional predictor, the integrated model is expected to have a higher predictive power than the TPB. Table 37 shows the Pearson correlation of each indicator. Three indicators stand out from the rest in having low correlations to intention; Alt (Altruism, X55) have a Pearson correlation of 0.212 to intention (X45); SID (Self-Identity, X56) has a Pearson Correlation of 0.252 to intention; Orgf (Organizational Influence, X59) has a Pearson Correlation of 0.254 to intention.

Table 37: Pearson Correlation of indicators vs intention

Correlations

		Int	Aff	Cog	Alt	SID	IjN	DesN	OrgInf	PBC1	PB
Int	Pearson Correlation	1	.669**	.649**	.212**	.252**	.578**	.558**	.254**	.357**	.609**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.000
	Sum of Squares and Cross-products	454.375	277.000	282.250	74.658	97.640	269.292	250.075	129.250	126.415	243.250
	Covariance	1.640	1.000	1.019	.270	.352	.972	.903	.467	.456	.878
	N	278	278	278	278	278	278	278	278	278	278

Note: *** denotes significance at 0.01 level, 2-tailed.

We re-specify the integrated model by removing these three indicators from the model. We repeat the Multiple Regression analysis with the re-specified model (Model 3, Table 38) and found that it explained 60.5% of the variance of intention, higher than the predictive power of both previous models.

Table 38: Coefficient of Determination of model 3 (re-specified IM)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.778[a]	.605	.601	.809141

a. Predictors: (Constant), PB, Att2, SN2

Table 39 shows F ratio of 140 and significance of 0.000 indicates that the overall model fit is statistically significant, and that the re-specified integrated fit the data better than both model 1 and 2.

Table 39: Overall Regression model fit of model 3 (re-specified IM)

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	274.985	3	91.662	140.003	.000[a]
	Residual	179.390	274	.655		
	Total	454.375	277			

a. Predictors: (Constant), PB, Att2, SN2
b. Dependent Variable: Int

Constant (Regression coefficient 0.274, p = 0.317) and the predictor PBC (Regression coefficient 0.089, p = 0.961) are rejected from the regression equation as the p value are above 0.05. Minimum VIF of below 2 indicates that there is no collinearity between the predictors of Att, SN and PBC. The regression equation of the re-specified integrated model (model 3) can thus be written as;

$I_3 = 0.49Att_2 + 0.2SN_2 + 0.35PB_1$ ($R^2 = 0.605$, Model3)

Table 40 shows that correlations between all three determinants were significant at 0.01 level, as follows; 0.512 between PB and SN2, 0.463 between PB and Att2, 0.556 between Att2 and SN2.

Table 40: Pearson Correlation between determinants, model 3

Correlations

		PB	SN2	Att2
PB	Pearson Correlation	1	.512**	.463**
	Sig. (2-tailed)		.000	.000
	Sum of Squares and Cross-products	351.083	196.802	165.021
	Covariance	1.267	.710	.596
	N	278	278	278
SN2	Pearson Correlation	.512**	1	.556**
	Sig. (2-tailed)	.000		.000
	Sum of Squares and Cross-products	196.802	420.317	216.644
	Covariance	.710	1.517	.782
	N	278	278	278
Att2	Pearson Correlation	.463**	.556**	1
	Sig. (2-tailed)	.000	.000	
	Sum of Squares and Cross-products	165.021	216.644	361.599
	Covariance	.596	.782	1.305
	N	278	278	278

**. Correlation is significant at the 0.01 level (2-tailed).

As model 3 could explain higher variance of intention could fit the data better than the TPB, the researcher select this as the final model for the MR analysis. According to the regression equation of model3, the impact of Attitude on intention to switch off is 2.45 times that of SN's, the impact of PB on intention is 1.75 times that of SN's, whereas PBC have no impact on the intention.

Table 41: Regression Coefficient of model 3 (re-specified IM)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	.283	.202		1.397	.163					
	Att2	.494	.053	.441	9.353	.000	.690	.492	.355	.648	1.543
	SN2	.200	.051	.193	3.959	.000	.595	.233	.150	.608	1.644
	PB	.348	.052	.306	6.705	.000	.609	.375	.255	.691	1.446

a. Dependent Variable: Int

According to the F ratio of 84, model 2 give a slightly better overall data fit than model 3. Model 3 is selected as the final model to predict the intention of switching off for EH60, due to its higher R^2, which indicates a higher predictive power of intention.

Equation 8: Summary of Multiple Regression analysis.

Model	Regression Equation	R^2	F ratio	Source
1	Int = 0.48 Att1 + 0.28SN1 + 0.38PB	0.52	74	Integrated model
2	Int = 0.57Att2 + 0.29SN2	0.55	109	TPB
3	Int = 0.49 Att2 + 0.2SN2 + 0.35PB	0.605	141	Re-specified IM

Att_1 = f (Cog, Aff, Alt, SID) SN_1 = f (IjN, DesN, OrgInf)

Att_2 = f (Cog, Aff) SN_2 = f (IjN, DesN)

The final model is very similar to TPB, with the removal of PBC and inclusion of PB. The inclusion of PB (Past Behavior) increases the predictive power of our model from 55% to 60% of the variance of intention.

These three models will be analyzed with Structural Equation Modeling, to confirm if model 3 has the overall best fits to data, and offers the highest predictive power to intention of switching off for EH60. When selecting the best model in SEM analysis, the ability of a model to explain the most variance in intention is given a higher priority than the overall model fit, as in the case of MR analysis.

4.4 STRUCTURAL EQUATION MODELING (SEM) ANALYSIS

Two type of estimates reported in the unstandardized output is used to mathematically describe the causal relationship between dependent latent variable (Intention) and independent latent variables (Attitude, Subjective Norms, Past Behavior and PBC); Path Coefficients or regression weight and Disturbance Variance.

In both the standardized and unstandardized solution, path coefficients are interpreted just as regression coefficient in a multiple regression. Disturbance variance represents the unexplained variance for the corresponding exogenous variable.

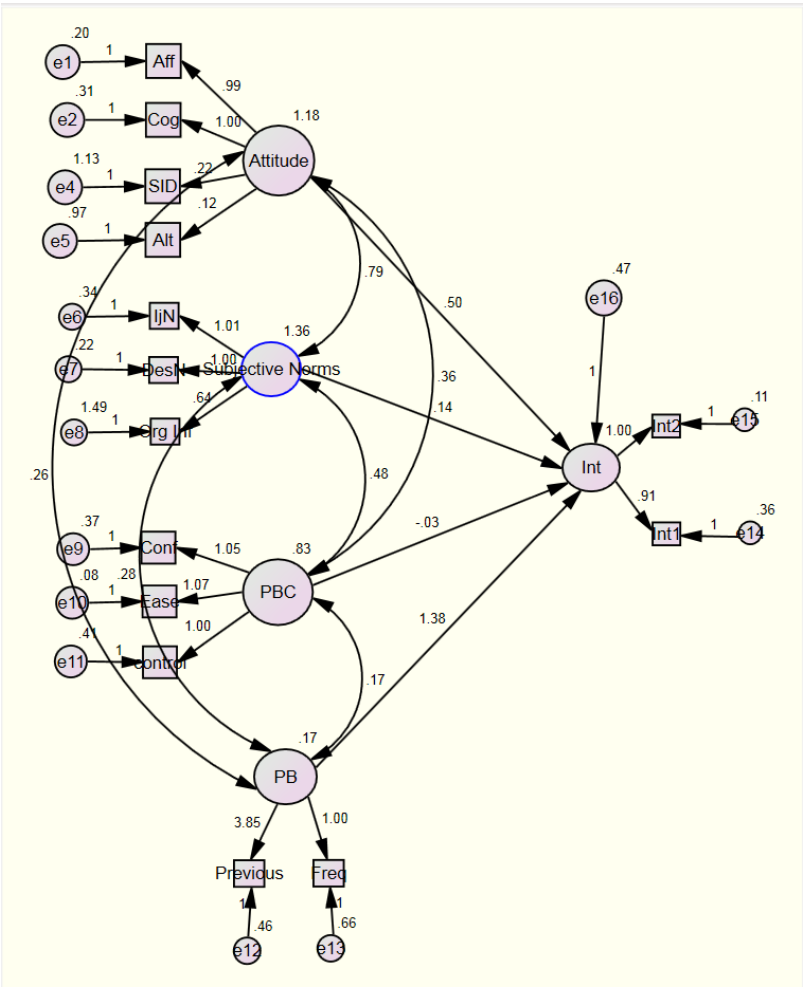
Three models are fitted with survey data with MR analysis in section 4.3. To maintain a clear analysis structure in this paper, the same model is analyzed with SEM in the same sequence, even though result of MR analysis indicated that model 3 best fits survey data. While correlations between independent variables ($1> Cor(X_n) > -1$) are reported in the MR analysis, covariance between independent variables are reported in the SEM analysis and do no necessary range between 1 and –1.

The SEM model that best fits the survey data is decided from the optimal mix of path coefficients and nine type of model-fit statistics, reported on the right hand side of each structural model.

Graphical output of the SEM analysis is present in three Path diagrams (Figure 4, 5, 6). They were generated with Amos 18, one of the few SEM applications that could display graphical output of the analysis. Text output of model fit statistics and degree of freedom were placed next to the path diagrams.

4.4.1 SEM ANALYSIS OF MODEL 1: INTEGRATED MODEL (IM)

Figure 4: Unstandardized estimates for model 1 (IM)



Sample moments: 105
Parameters estimated: 38
Df (105-38) = 67

Variance of Int explained
=1-0.47 = 0.53

Chi-square = 383
Probability level = 0.000

C_{min} (Min) = 383
C_{min}/df = 5.7
AIC (Min)= 459
RMR (< 0.05) = 0.11
GFI (> 0.9) = 0.86
CFI (> 0.9) = 0.88
TLI (> 0.9) = 0.84
NFI (> 0.9) = 0.86
RMSEA (0.05 – 0.08) = 0.13

Att predict Int
(α = 0.50, p < 0.001)

SN predict Int
(α = 0.14, p < 0.001)

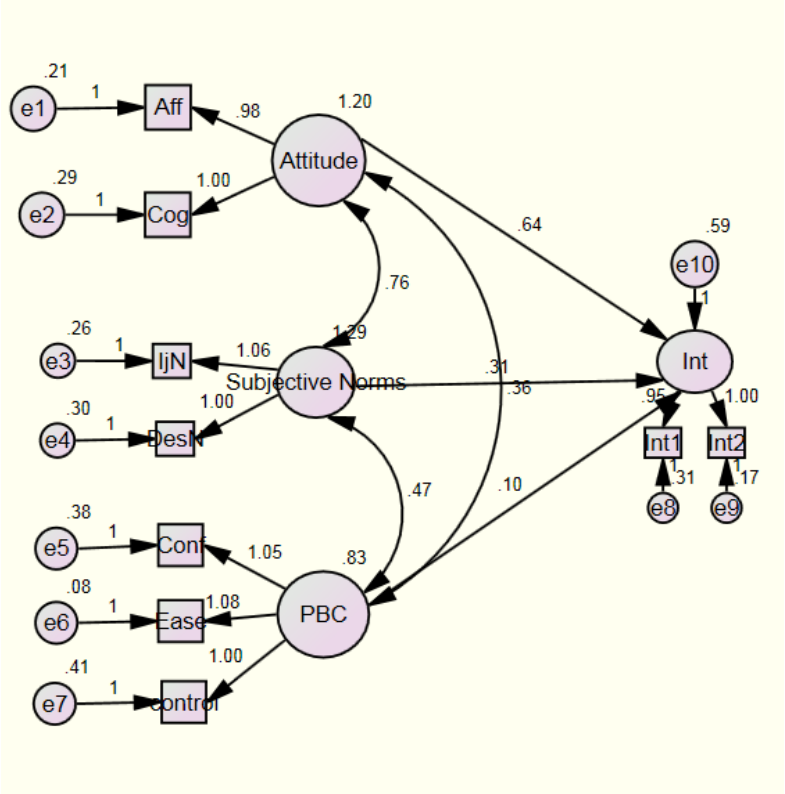
PB predict Int
(α = 1.36, p < 0.001)

PBC do not predict Int
(α = -0.03, p = 0.02)

Figure 4 shows the Structural Equation Model of the integrated model. The model explained 53% of the variance of intention (52.1% according to the regression equation). As it does not meet the requirement of all six fit indices, the model needs to be re-specified. The regression analysis returns an F ratio of 74, $p < 0.001$. The MR analysis merely indicates that it does not fit the data as well as the other models, but the overall data fit is still statistically significant. Two statistically insignificant relationships are (PBC → Int, p =0.953) and (Alt → Att, p = 0.058). The model will be re-specified by removing two indicators from the attitude variable, and by removing Organizational influence from the Subjective Norms variable, based on findings from the regression analysis.

4.4.2 SEM ANALYSIS OF MODEL 2 (TPB)

Figure 5: Unstandardized estimates of model 2 (TPB)



Sample moments: 45
Parameters estimated: 24
Df (45-24) : 21

Variance of Int explained:
1-0.59 = 0.41

Chi-square = 25.2
Probability level = 0.239

CMin (min) = 25.2
Cmin/df = 1.2
AIC (min) = 73.2
RMR (< 0.05) = 0.025
GFI (> 0.9) = 0.98
CFI (> 0.9) = 0.998
TLI (> 0.9) = 0.99
NFI (> 0.9) = 0.99
RMSEA (0.05 – 0.08) = 0.03

Att predict Int
(α = 0.64, p < 0.001)

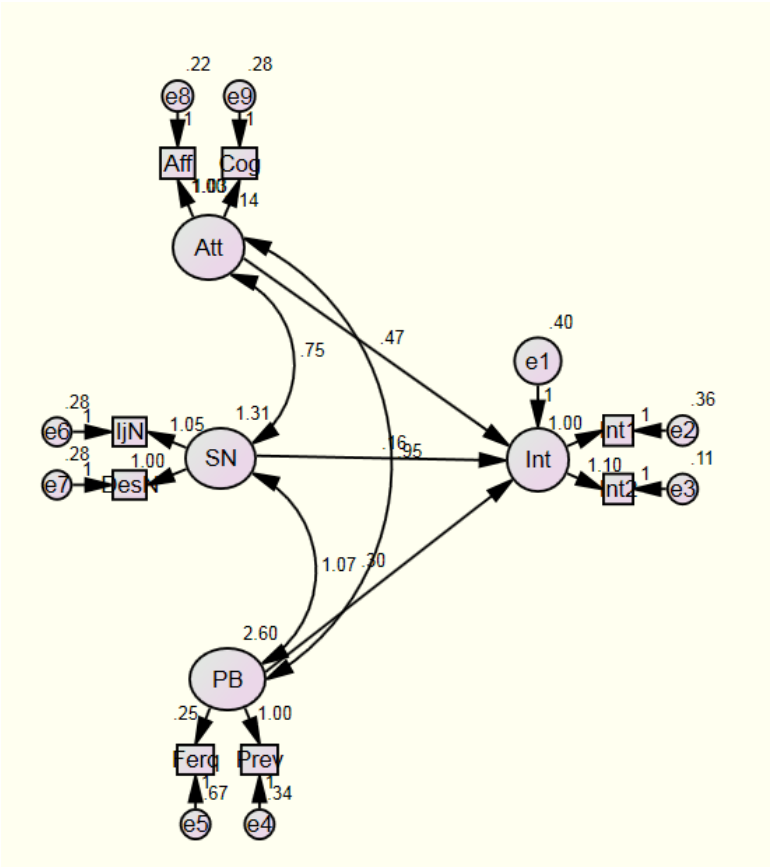
SN predict Int
(α = 0.31, p < 0.001)

PBC do not predict Int
(α = 0.10, p = 0.143)

The model explained 41% of variance in intention (55% according to the regression analysis). Meeting 5 of the fit indices, it marginally meets the RMSEA index, which indicates a close approximate fit. Apart from RMSEA, the probability level of Chi-square analysis is too high (0.239 compared to acceptable range of < 0.05). The regression analysis returns an F ratio of 109, $p < 0.001$, indicating that model 2 fit the data better than model 1 (IM) but not as good as model 3. The path coefficient of Attitude is 0.64 (0.577 in regression equation); the path coefficient of Subjective Norms is 0.31 (0.29 in regression equation). The low path coefficient of 0.1 makes PBC ($p = 0.14$) a relatively insignificant predictor that will be removed in our final model.

4.4.3 SEM ANALYSIS OF MODEL 3 (RE-SPECIFIED IM)

Figure 6: Unstandardized estimates of Model 3 (re-specified IM)



Sample moments: 36
Parameters estimated: 22
Df (36-22) = 14

Var of Int explained
=1-0.4 = 0.6

Chi-square = 23.5
Probability level = 0.052

Cmin = 23.56
Cmin/df = 1.68
AIC (min) = 67.6
RMR (< 0.05) = 0.027
GFI (> 0.9) = 0.98
CFI (> 0.9) = 0.99
TLI (> 0.9) = 0.99
NFI (> 0.9) = 0.985
RMSEA (0.08 - 0.05) = 0.05

Att predict Int
(α = 0.47, p < 0.001)

SN predict Int
(α = 0.16, p = 0.02)

PB predict Int
(α = 0.3, p < 0.001)

The model explained 60% of variance in intention (60.5% according to the MR analysis). Meeting all 6 of the fit indices, it marginally meets the probability level of Chi-square analysis (0.052 compared to acceptable range of < 0.05). The regression analysis returns an F ratio of 141, $p < 0.001$, indicating the best overall data fit among the three models. The path coefficient of Attitude is 0.47 (0.49 in regression equation); Path coefficient of Subjective Norms is 0.16 (0.2 in regression equation) and Past Behavior is 0.30 (0.35 in regression equation). There is no statistically insignificant relation in this model.

Based on the fit indices and the un-standardized variance, this model is selected as the final model in our analysis of the intention to switch off for EH60. This model will be used to test our hypothesis.

The behavioral model for prediction of intention to switch off for EH60 can be described mathematically as;

$Int = 0.47\ Att_2 + 0.30\ PB + 0.16\ SN_2 + e_1$ Path analysis of model 3, 60% of the variance in Intention explained

or

$Int = 0.49\ Att_2 + 0.35\ PB + 0.2\ SN_2$ Linear regression of model 3, 60.5% of the variance in Intention explained.

Where, Att2 = f(Cog, Aff); PB = f(freq, previous); SN2 = f (InjunctiveN, DescriptiveN).

The slight difference in regression coefficient derived from SEM and regression analysis is due to the assumption of 1:1 relationship between both factors of PB1 and PB2 in the measurement of PB for regression analysis. The mathematical equation from SEM analysis will be used for hypothesis testing. Details of model identification are listed in Appendix H to compare the complexity among model 1, 2 and 3. Details of the regression weight, covariance and variance in model 1, 2 and 3 are listed in Appendix H, I and J respectively. Estimates of major path coefficients for all three SEM models are summarized and presented in table 42.

Table 42: Path Coefficient estimates of three SEM models

SEM estimates of path coefficient	Model 1	Model 2	Model 3
Att → Int	0.532	0.64	0.465
SN → Int	0.175	0.312	0.156
PBC → Int	-0.004	0.101	0
PB → Int	1.28	0	0.298
% Int explained	53%	41%	60%

The predictive power of past behavior undergoes a major change in model 3, from being the major predictor in model 1 to a more reasonable position in model 3.

4.5 HYPOTHESIS TESTING

The 6 hypothesis from section 3.4 of this paper are tested with model 3 to find out if they are valid.

H1: There is no significant difference between respondents that exhibit high and low intention to participate in the 2013 EH60.

According to the model of switching off for EH60,

$Int = 0.47\ Att_2 + 0.30\ PB + 0.16\ SN_2$

intention to switch off for EH60 is strongly determined by attitude towards switching off, followed by past behavior of the respondents on switching off for previous EH60, and least by the respondents' subjective norms towards switching off. The impact increases almost by two-fold from the least-impact to the highest impact determinant. Based on these findings the hypothesis is rejected as there is no significant difference between respondents that exhibit high and low intention to participate in the 2013 EH60 campaign.

H2: Organizational influence significantly affects respondent's intention to participate in 2013's EH60.

The indicator Organizational influence was rejected from our model based on both multiple regression and SEM analysis. As a result, the model for switching off for EH60 does not include organizational influence as a predictor of intention to switch off for EH60. Based on this finding the hypothesis that organizational influence significantly affects respondent's intention to switch off for 2013's EH60, is rejected.

H3: The intention to participate in EH60 could be predicted significantly by the Theory of Planned Behavior (TPB)?

The Theory of planned behavior listed three variables as predictor of intention; Attitude, Subjective Norms and Perceived Behavioral control (PBC). The variable PBC was rejected from our integrated model, according to both multiple regression and SEM analysis. Based on this finding the hypothesis that the intention to participate in 2013's EH60 could be predicted significantly by the Theory of planned behavior (TPB), is rejected.

H4: Prediction of the intention to participate in EH60 could be improved with the modified Theory of Planned Behavior (TPB)?

Model 2 (TPB)'s predictive power on intention is 41% (SEM analysis) and 48% (MR analysis). When modified with the past behavior as additional predictor and the removal of PBC as predictor, the predictive power of the model 3 increased to 60% (SEM analysis) and 60.5% (MR analysis). Based on this finding, the hypothesis that prediction of the intention to participate in 2013's EH60 could be improved with the modified TPB, cannot be rejected.

H5: Attitude is the most significant predictor of intention to participate in the EH60.

The total sample was broken down into two parts of 163 non-participants and 115 participants. MR analysis is then conducted separately on these two samples to find out if attitude have a higher impact on the intention of participants. Figure 51 shows that based on the MR analysis of participants, Attitude (Regression Coefficient 0.48) is the most significant determinants of intention to switch off for 2013's EH60. Using the output of MR analysis as basis, hypothesis that attitude is the most significant predictor of intention to participate in the EH60, is not rejected.

Equation 9: MR analysis of model 3 based on participants and non-participants

Regression Statistics	*Participants*	*Non-participants*
Multiple R	0.661	0.758
R Square	0.437	0.575
Adjusted R Square	0.422	0.567
Standard Error	0.766	0.806
Observations	115	163
F	28.73	71.75
Significance F	0.000	0.000
Intercept	1.310, p 0.002	0.100, p 0.701
Att	0.482, p 0.000	0.432, p 0.000
SN	0.125, p 0.102	0.255, p 0.000
PB	0.206, p 0.013	0.400, p 0.000

We divide the sample into non-participant (NP) and participant (P). MR analysis on these two samples, based on model 3, yield the following equation;

$Int_{Np} = 0.43Att_2 + 0.4PB + 0.25SN_2$

$R^2_{Np} = 0.57$

$Int_{P} = 0.48Att_2 + 0.21PB + 0.12SN_2$

$R^2_{p} = 0.44$

H6: Attitude is the most significant predictor of intention not to participate in the EH60.

Based on the MR analysis of non-participants, both Attitude (Regression Coefficient 0.43) and Past Behavior (Regression Coefficient 0.40) are significant determinants of intention to switch off for 2013's EH60. Based on the output of MR analysis, the hypothesis that attitude is the most significant predictor of intention to participate in the EH60, is rejected. Attitude and Past behavior are equally significant predictors for intention not to participate for 2013's EH60.

According to equation 9, PB has a much higher influence on the intention not to participate in EH60. Respondent who did not take part in previous EH60 is unlikely to take part in 2013's EH60. Only highly active participation in previous EH60 results in distinctively high intention to participate in 2013's EH60.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1 DISCUSSION

The six research questions from section 1.5 were used as a guide in this section. Limitation of this research and conclusion will be presented after addressing the 6 questions.

RQ1. Is there any difference between participants and non-participants in term of demographics, behavioral factors?

More participants were home during 2013's EH60. 66% of those at home switched off while only 19% not at home switched off. Respondents were asked to switch off on a Saturday night which is also a time that is common for young respondents to catch up with friends out of their home. Some organizations such as Sunway Pyramid shopping mall help to pull respondents away from home with public celebration for EH60. By pulling people away from home, they are reducing the number of household that switch off for EH60. Presence of the respondent at home increased participation rate from 19% to 66%. As the organizer of EH60, WWF Malaysia could suggest organizations to host public celebration away from that Saturday where people switch off. WWF need to send a clear message to encourage people to stay home and switch off. Some respondents choose not to be at home to create a legitimate reason not to switch off. As more people stay home, those who do not want to switch off by hanging out with friends will find it more inconvenient to do so.

More participants are aware of the requirement to switch off. Awareness of the switch off requirement increases participation rate from 31% to 45%. The level of

awareness is quite high, with 76% of the respondents are aware of the requirement. As the organizer of EH60, WWF Malaysia could engage organizations, corporations to encourage their stakeholders to switch off.

More participants are male students. 47% of the male participants switched off, compared to only 39% of female who participate. Researchers have mixed opinion in the influence of Gender towards PEB. Researchers who found women behaving more environmental friendly attribute it to their role as the guardian of children or elderly people, which make them vulnerable to a polluted world. As the samples were drawn from university students in their early twenties, women surveyed in this study could be too young to fit into this attribution. This lower awareness may results in their lower participation in EH60.

More participants stay in relatively affordable homes. 45 - 40% of respondents who stay in affordable homes such as Flat/ Apartment/ Terrace house and Condominium, switched off. About 25% of respondents who lives in expensive homes such as semi-detached/ Bungalow switched off. Switching off non-essential light may represent security threat for those who live in expensive neighborhood, causing them to place security concern over environment, and do not switch off. Residents in such houses normally lives with air conditioning units, which lead the residents to think that switching off lights for resource conservation is futile as lighting constitute only a tiny fraction of their power consumption.

Since the samples are drawn from University students, there is no variance on demographics variables such as Age, Marital Status and Educational Level. Most of the university students belong to only one particular race, making it not possible to study the effect of race on participation rate. Most of the university's students are not married, making it not possible to study the effect of marital status on participation rate.

RQ2. How do participants know about EH60 and what is the impact on participation rate?

Most of the respondents know about this event through the internet (60%), followed by Words of mouth (28%), Print media (27%) and Television (22%). Respondents that know EH60 through televised program has the highest

participation rate of 48% over an average participation rate of 41%. Exposure to the rest of the media yields average results.

Most of the respondents learnt about EH60 through single media, mostly the internet. Another 20% of the respondents learnt about it through two media, mainly the internet and Words of mouth. This study shows that university students rely heavily on these two channels to acquire or share information. This study does not include working adults or older generation, which may have different media preference. Coupled with the findings that 76% of respondents are aware of the requirement to switch off, these two channels are very effective tools in reaching out to university students.

RQ3. How extensive and effective is organization's influence, compared to injunctive and descriptive norms?

According to frequency distribution and descriptive statistics of reported organizational influence in table 26, the means 3.11 is lower than the mid-point of 3.5. It indicates that respondents generally perceive organizational influence to be slightly negative, or do not try to influence respondents to switch off. It scores even lower than the means of two other variables related to Social Norms; Injunctive Norms (sample Means 3.6) and Descriptive Norms (sample Means 3.42). Respondents perceived most strongly that others expect them to switch off, less expect others to switch off, and least believe organizations that they study expect them to switch off. In another way, close friends or most trusted family members exert stronger influence on the respondents than the universities where they study, as most of the respondents are university students.

As the organizer of EH60, WWF needs to engage organizations to participate in the event and to encourage their members to participate, through more effective channels if necessary. Universities interact with students mainly through web based tools and lectures. Message to students to participate in EH60 is likely to be overshadowed by other information, if posted on wed site. In term of organizational influence, Public display or by the word of mouth during lecturing could be more effective than message from the internet.

According to the path diagram of model 3 in figure 6, Organizational Influence does not predict intention to switch off. Organizational influence was added into

the integrated model as a component of subjective Norms. It was rejected from the model based on the result of both MR and SEM analysis.

RQ4. Could the intention be modeled with TPB?

The Theory of Planned Behavior (TPB) is presented and analyzed as model 2 in both MR and SEM analysis, with Intention as the dependent variable, Attitude, Subjective Norms and PBC as independent variables. PBC was rejected during both analyses, leaving only Subjective Norms and Attitude, with the ability to explain 41% of variance in Intention. The addition of Past Behavior as the third predictor increased predictive power of the model to 60.5% of the variance in Intention. Behavior that needs to be modeled with care are behavior beyond one's control, behavior outside of awareness, socially relevant behavior such as smoking, behavior that is guided by previous experience, and behavior in non-Western context (Fishbein et al., 2010, Pg 303).
According to the model 3 of switching off for EH60, intention to switch off for EH60 is heavily influenced by Past Behavior.

$Int = 0.47\ Att_2 + 0.30\ PB + 0.16\ SN_2$

TPB needs to be modified to predict this behavior.

RQ5. Could the intention be modeled with the IM? Which model better predict intention?

Three indicators were rejected from the integrated model; Altruism (X47), Self-identity (X48), Organizational influence (X51) and all three indicators for Perceived Behavioral Control (X40- X42). All indicators except organizational influence were discussed here.
Altruism was proposed as a component of Attitude as proposed by Chaisamrej (2006), but was rejected in both MR and SEM analysis because of its statistically insignificant correlation to intention. Table 42 shows that altruism correlate weakly with intention (Pearson Correlation 0.212, significant at $p = 0.01$), but do not correlate with ATT2, the independent latent variable that it is supposed to

measure. Since it does not correlate with ATT2, it does not fit well into our model. Including it in our model adversely affected the predictive power of Attitude in our model. From hindsight, this variable could be better measured by asking respondents if they have conducted such altruistic behaviour lately, or in the past one year. A respondent who conduct such behaviour years ago may have changed his/her attitude which in turn affect the intention to switch off.

Table 43: Correlation of Altruism (X47) vs Att2 (X53) and Intention (X60)

Correlations

		Att2	Alt
Att2	Pearson Correlation	1	.079
	Sig. (2-tailed)		.190
	Sum of Squares and Cross-products	361.599	24.818
	Covariance	1.305	.090
	N	278	278
Alt	Pearson Correlation	.079	1
	Sig. (2-tailed)	.190	
	Sum of Squares and Cross-products	24.818	274.080
	Covariance	.090	.989
	N	278	278

Correlations

		Int	Alt
Int	Pearson Correlation	1	.212**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	454.375	74.658
	Covariance	1.640	.270
	N	278	278
Alt	Pearson Correlation	.212**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	74.658	274.080
	Covariance	.270	.989
	N	278	278

**. Correlation is significant at the 0.01 level (2-tailed).

Researchers normally employ Exploratory Factor Analysis (EFA) to search for structure among a set of variables. In our study, the role of altruism in our model could be assessed with similar approach. It can be done with IBM SPSS v19, followed with a Confirmatory Factor Analysis Principal Component Analysis with AMOS 18 to find out if Altruism could be fitted into our model in any other ways.

Self-identity measures a person's self-image as pro-environment by asking if the respondents have volunteered, donated for environmental body or has been a member in environmental group. Similar to altruism, it was proposed as a component of Attitude based on suggestion by Fieldings et al., (2005), but was rejected in both MR and SEM analysis because its inclusion into the model adversely affects the predictive power of Attitude on Intention. Self-identity is measured by asking respondents do they volunteer, donated for environmental cause or is a member of any environmental organization. It could be measured more accurately by asking if these behaviors were conducted in the past one year.

Table 44: Correlation of Self-Identity (SID, X48)) vs. ATT2 (X53) and intention (X60)

Correlations

		Att2	SID
Att2	Pearson Correlation	1	.169**
	Sig. (2-tailed)		.005
	Sum of Squares and Cross-products	361.599	58.512
	Covariance	1.305	.211
	N	278	278
SID	Pearson Correlation	.169**	1
	Sig. (2-tailed)	.005	
	Sum of Squares and Cross-products	58.512	329.844
	Covariance	.211	1.191
	N	278	278

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations

		Int	SID
Int	Pearson Correlation	1	.252**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	454.375	97.640
	Covariance	1.640	.352
	N	278	278
SID	Pearson Correlation	.252**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	97.640	329.844
	Covariance	.352	1.191
	N	278	278

**. Correlation is significant at the 0.01 level (2-tailed).

Table 43 shows that Self Identity correlate with intention (Pearson Correlation 0.25, significant at p = 0.01), but correlate very poorly with ATT2, the exogenous variable that is it supposed to measure. Inclusion of self-identity into model 3 does not increase predictive power of the model. Table 44 shows that the % of variance in Intention explained merely increased by 0.1% from 60.5% to 60.6%. This variable is rejected based on Parsimony principle which states that the simpler model is preferred if two models fit the same data similarly (Kline, 2011b).

Table 45: Coefficient of determination of model 3 with SID (X48) as independent variable

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.779[a]	.606	.600	.809647

a. Predictors: (Constant), SID, Att2, PB, SN2

Similar to Altruism, an EFA could be carried out in future research to find out if Self-identity could be fitted into our model in any other ways.

Perceived Behavioural Control (PBC1, X56) measures the general sense of personal competence, or perceived ability to switch off. PBC failed to predict intention despite favorable reports (samples Means of 0.65) that indicates that the switching off is generally easy to perform, can be controlled by the respondents and confidence to switch off is high. From the demographics data we learnt that

switching off is influenced strongly by the respondents being at home or not. The PBC indicators could be more reliably measured by asking the respondents if they are confident to be at home to switch off, and if they are confident that they could switch off if they were at home. Current measurement that ask if they are confident that they could switch off, did not take into consideration that respondents may have difficult staying at home rather than switching off. The researcher has tried to fit the categorical variable of Location (X11) with current PBC indicators to come up with a modulated PBC2

Table 46: Pearson Correlation of PBC1 (X56) and PBC2 (X57) to Int (X60)

Correlations

		Int	PBC1	PBC2
Int	Pearson Correlation	1	.357**	.185**
	Sig. (2-tailed)		.000	.002
	Sum of Squares and Cross-products	454.375	126.415	62.625
	Covariance	1.640	.456	.226
	N	278	278	278
PBC1	Pearson Correlation	.357**	1	.635**
	Sig. (2-tailed)	.000		.000
	Sum of Squares and Cross-products	126.415	276.615	167.589
	Covariance	.456	.999	.605
	N	278	278	278
PBC2	Pearson Correlation	.185**	.635**	1
	Sig. (2-tailed)	.002	.000	
	Sum of Squares and Cross-products	62.625	167.589	251.925
	Covariance	.226	.605	.909
	N	278	278	278

**. Correlation is significant at the 0.01 level (2-tailed).

Table 45 shows that the correlation of PBC2 to Int is even lower than that of PBC1 to Int. Due to the low correlation observed, it is meaningless to proceed with MR analysis to fit PBC2 into model 3. Empirically it is proven that even after modulation with location (if the respondents were at home?), PBC still fails to predict intention. Box-plot of PBC in appendix N shows that out of three indictors that measures PBC, significant differences among non-participants and participants are observed in the "Confidence to perform" and "Ease of performance". Measuring PBC with these two indicators results in a statistically significant, but very weak regression coefficient of PBC in model 3. The PBC was then subsequently rejected in model 3. The details of this additional analysis are not shown due to limited space in this report.

Other PEB such as taking public transport, recycling of waste that has been studied with TPB, is repeated daily or weekly. PBC may be an important determinant to the intention for such frequently recurring PEB, as it takes more determination to perform a low PBC behaviour (low controllability or confidence to perform) regularly than once a year. By the same reason, Intention for going to our over-crowded public hospital for annual medical check-up may be high, even though PBC is low, because the saving in medical cost could be achieved with only one suffering a year.

RQ6. How to increase the level of participation based on the final model?

According to our model of switching off for EH60,
$Int = 0.47\ Att_2 + 0.30\ PB + 0.16\ SN_2$

Intention is determined strongly by Attitude, followed by Past Behaviour and least by Subjective Norms, in line with McKenzie-Mohr (2000) who found that environmental attitudes are more strongly related to behaviors that do not have a high impact on people's daily lives. A unit increase in Attitude, increased the intention by the same amount that can be increased by two unis of past behaviour, and four units of Subjective Norms. To be more effective in raising participation rate, improve first the attitude of respondents towards switching off, followed by past behaviour and last, Subjective Norms. Improvement on Organizational influence was discussed in question RQ3.

Attitude depends on the evaluation of outcome of the behaviour, whether it is beneficiary or pleasant. Behaviour such as running air conditioning unit at below 20 ^{0}C could be pleasant (high affective score), but is likely to be seen as not so beneficiary to the environment (low cognitive score). Similarly studying for an eminent exams 5 days earlier may not be pleasant, but is likely to be rated highly in its benefits aspect.

Table 46 shows that both Affective and Cognitive scores for participants are considerably higher than non-participant.

Table 47: Attitude component of participant and non-participant

Component of Attitude	Affective		Cognitive	
	Means	S.Error	Means	S.Error
Participants	4.76	0.09	5.15	0.088
Non-participants	3.84	0.09	4.19	0.098
Difference	0.92		0.96	

Since we do not study the underlying behavioural beliefs that determine the attitudes, we rely on the literature to identify determinants of attitude. Kaplan (2000) mentioned that helplessness is not only an important issue in the context of PEB, it is perhaps the pivotal issue. Respondents who treat the EH60 as a resource conservation campaign may think that by merely switching off non-essential lighting do not really the issue of over-consumption, particularly when it is done only an hour in a year. Another common belief is the free-rider effect, where respondents think as long as others are seen doing it, their contribution do not matters. Respondent who perceives EH60 as an environmental awareness campaign could believe that switching off is best done by organizations that occur high rises or iconic building. Media reporting on EH60 shows only picture of darkened landmark such as the Petronas Twin-Tower could reinforce this belief. A third possible cause of low attitude towards this event is the helplessness that the earth could not be saved by turning off light an hour in a year. These three beliefs of helplessness, that switching off have a very limited impact in resource conservation, lead to low cognitive attitude among non-participants. In another way, the EH60 event could be seen in the eye of non-participants more as a social event than as an environmental event. The organizer needs to convey the message that switching off for EH60 does have its impact on resource conservation, by associating it with other environmental initiatives such as taking public transport, waste recycling and conservation programs.

Armitage et al., (1999) mentioned that behaviours are determined by one's past behaviour rather than by one's cognition. Despite having a lower attitude towards switching off than previous years, the intention to switch off may not reduce due to past behaviour. Since past behaviour is the second most impactful determinant to intention, the organizer needs to involve as many people as possible, by collaborating with organizations or institutions as we discussed in section 2.1.

5.3 LIMITATION OF THIS STUDY AND SUGGESTION FOR FUTURE RESEARCH

Having answered the above research questions, limitation of this research, and suggestion for improvement were discussed in this section.

Seven indicators are measured only with a single question. These single question indicator questions are technically not scale measurement because there is inadequate category of measurement (less than 7 in our study). More category of measurement is needed by both MR and SEM technique, even though we managed to adopt them in this study. An indicator measured by more than one question is normally more reliable because it allows the scores to be tested with Cronbach Alpha indicator. Seven indicators which include intention (2 indicators), past behaviour (2 indicators) and Perceived Behavioural Control (3 indicators) are measured only with a single question per indicator. Measurement Reliability can only be measured at the latent variable's level, not at the indicator's level. Since all five latent variables satisfied the Cronbach Alpha reliability test this study is given the Green light to proceed. These seven single measurement indicators need to have additional measurement in future research.

Inclusion of behavioural, normative and control belief that serves as the determinant of Attitude, Subjective Norms and PBC. Even though it is known that Attitude and Subjective Norms are determinants of intention to switch off, the determinant of these two variables were not studied. A complete study of the TPB includes measurement and analysis of the three aforementioned beliefs and their correlation with the TPB variables.

This study ends at prediction of intention to switch off, do not extend to include the relationship between intention and actual behavior. Holdershaw et al., (2011) found that in blood donation behavior, TPB is much less effective in predicting behavior than intentions to donate blood. This study could be extended to find out if this finding applies to the switching off for EH60. Logistic Regression analysis could be performed with one or two categorical variables (such as location variable X11 that measures if the respondent was at home during switch-off) and

intention as the independent variable, to predict behavior. Actual participation (either 0 or 1) becomes the dependent variable of the equation, to be predicted by dependent variables. Since MR analysis and SEM analysis could only be used for continuous dependent variable, they could not be used to study the correlation to categorical variable such as actual switch off.

The model developed in this study applies only to Youth studying in two Universities in Klang Valley. Working adults may exhibit different Attitude, Subjective Norms towards the same behaviour. A different model could better fit and explain survey data from working adult.

Effect of demographics such as age, educational level, marital status and race on the intention to switch off, could not studied because respondents from this survey do not offer enough variance in these variables.

5.3 CONCLUSION

Earth Hour 60 (EH60) is a global environmental campaign that requires its participants to switch off non-essential lighting on the 4th week of March to show their concern for the degrading environment, and as the first step in their action against climate change. Switching off for this event is categorized as a group of pro-environmental behavior (PEB) named environmental activism. It is not that well-researched compared to other type of PEB.

Literature review of general PEB listed behavioral factors such as Attitude, Subjective Norms, Perceived Behavioral Control (PBC), Past Behavior, Organizational Influence, Environmental Value, Altruism, Self-Identity, Knowledge, Social Norms, Habits and Demographics factors as determinants of intention to pro-environmental behavior. These factors were coded into a questionnaire as an instrument to measure the behavior of youth in two private universities in the Klang valley. Survey data is collected face-to-face from 278 respondents within a month after the 2013's EH60. 41% of the total respondents switched off. 66% of respondents who were at home switched off, showing that being at home for EH60 is one of the most important factors that differentiate non-participants from non-participants. Personal awareness, educational level,

household income, house where the participants live and past behavior are other differentiating factors.

Contrary to other commonly researched PEB such as waste recycling or taking public transport, this event is not a conservation exercise (Earth Hour faq19, 2013). Thus it shall not be viewed as another conservation exercise. Respondents who treat this event as another conversation exercise is likely to suffer from low attitude because switching off for an hour in a year only have minimal impact in reducing electricity consumption. The final model (model 3) shows that attitude of respondents towards switching off is the most important factor to predict intention. The event organizer needs to build the attitude of respondents first, by carefully conveying the objective of this event particularly to those who never switch off. Respondents who had previously switched off have a high intention to repeat this behavior, as past behavior is the second most important factor in shaping intention. Building on the well-established TPB, this study provides insight into the behavior of respondents who participate or do not participate in a global environmental campaign.

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7. APPENDICES

APPENDIX A

QUESTIONNAIRE COVER LETTER

UNIVERSITI TUNKU ABDUL RAHMAN

FACULTY OF ACCOUNTANCY AND MANAGEMENT

Dear Participants,

I am currently pursuing a Master of Business Administration (MBA) at Universiti Tunku Abdul Rahman (UTAR). I am soliciting your co-operation to participate in this research project questionnaire entitled "A study of youth's pro-environmental behavior: participation in the Earth Hour 60 campaign". The purpose of this research is to study the intention of Malaysian youth to participate in the 2013 Earth Hour campaign, the determinants of their intention to participate and to propose methods to promote a wider participation to similar environmental event, based on findings from this research.

I would be most grateful if you could complete the enclosed questionnaire based on your genuine feelings. The success of this study is highly dependent on your valuable, sincere and honest response. The questionnaire may take about 10-15minutes to complete.

Please rest assured that your responses will be used for our research purposes only. All personal information shall be treated as strictly **private** and **confidential.**

Should you have any queries regarding the questionnaires, please do not hesitate to contact the undersigned at ho_yeekee@yahoo.com.

Thank you for your precious time and participation.

Yours truly,

Ho Yee Kee

09UKM07039

APPENDIX B

QUESTIONNAIRE PAGE 1

Instruction:

The questionnaire is divided into 7 sections, namely;

1. Section A consists of questions about you.
2. Section B consists of questions on the actual participation in EH60.
3. Section C consists of questions on intention to participate in 2013's Earth Hour 60 by switching off non-essential lighting in your household for an hour on the 23 March, 2013, from 20:30 to 21:30 (Switching off for the 2013's EH60).
4. Section D consists of questions on the attitude towards switching off for the 2013's EH60.
5. Section E consists of questions on Subjective Norms towards switching off for the 2013's EH60.
6. Section F consists of questions on Perceived Behavioral Control towards switching off for the 2013's EH60.
7. Section G consists of questions on Past behavior towards switching off for the 2013's EH60.

Please answer all questions based on your current feeling. All questions require a response unless otherwise stated. Please complete the questionnaire even if you did not switch off for the 2013's EH60.

Section A: About yourself	
The following questions are asked to study the effect of demographics factor on intention to switch off for 2013's EH60. Please cross (x) on at the relevant space provided.	
A1. Gender	[ ] Male [ ] Female
A2. Age	[ ] < 21 [ ] 21 – 25 [ ] 26 – 30 [ ] 31 – 35
A3. Educational level	[ ] Diploma [ ] Bachelor's Degree [ ] Postgraduate [ ] Professional / CIMA/ ACCA/ CAP etc
A4. Who do you live with?	[ ] family member [ ] students/ colleagues [ ] Alone
A5. Type of houses that you stay in	[ ] Flat/ Apartment [ ] Condominium [ ] Terrace house/ town house [ ] Semi-detached house [ ] Bungalow
A6. Household income	[ ] RM 2,000.00 – 3,999.00 [ ] RM 4,000.00 – 5,999.00

APPENDIX C

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	[ ] RM 6,000.00 – 7,999.00 [ ] > RM 8,000.00
A7. Marital status	[ ] Single [ ] Married [ ] Married with children
A8. Race	[ ] Malay [ ] Indian [ ] Chinese [ ] Non-Malaysian

Section B: Participation in EH60.		
Note: Please complete the survey even if you do not participate in the Earth Hour 60 for 2013.		
B1. Are you aware of switching off for Earth Hour 60 (EH60) on the 23 Mar 2013?		[ ] Yes [ ] No
B2. Were you at home on the 23 Mar 2013, from 8:30 pm – 9:30 pm that allow you to participate in EH60 by switching off non-essential lighting?		[ ] Yes [ ] No
B3. Did you switch off for the EH60 that happened on the 23 Mar 2013?		[ ] Yes [ ] No
B4. How do you know Earth Hour 60?	[ ] Newspaper [ ] Internet [ ] Radio [ ] Words of mouth. [ ] TV [ ] Public display.	

Section C: Intention to participate.
These 3 questions are asked to study the intention to switch off for 2013's EH60. On a scale of six, please circle the number that best reflect your intention and actual behavior.
C1. I intended to switch off for 2013's EH60. Strongly Disagree : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Strongly Agree
C2. I planned to switch off for 2013's EH60. Strongly disagree : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Strongly Agree

Section D: Attitude towards participation, Altruism and Group-identity.
These 10 questions are asked to study the attitude towards switching off for 2013's EH60. On a scale of six, please circle the number that best reflect your thoughts.
D1. Switching off for the Earth Hour 60 is Worthless : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Valuable
D2. Switching off for the Earth Hour 60 is Harmful : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Beneficiary
D3. Switching off for the Earth Hour 60 is

APPENDIX D

QUESTIONNAIRE PAGE 3

Unpleasant : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Pleasant
D4. Switching off for the Earth Hour 60 is Un-enjoyable : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Enjoyable
D5. I have donated money to charity organization. Never : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Very often
D6. I have done volunteer work for charity. Never : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Very often
D7. I have been a member of charity organizations. Never : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Many
D8. I have donated money to environmental organization. Never : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Very often
D9. I have done volunteer work for environmental organization. Never : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Very often
D10. I have been a member of environmental organizations. Never : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Many

Section E: Subjective Norms towards participation.
These 8 questions are asked to study the Subjective Norms towards switching off for 2013's EH60. On a scale of six, please circle the number that best reflect your perception of other's expectation on you, and your expectations on others on switching off for 2013's EH60.
E1. My most trusted family member think that I should switch off for 2013's EH60 Strongly Disagree : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Strongly Agree
E2. My best friend think that I should switch off for 2013's EH60 Strongly Disagree : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Strongly Agree
E3. Colleague/ classmate that is important to me, think that I should switch off for 2013's EH60 Strongly Disagree : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Strongly Agree
E4. Colleague/ classmate that is important to me, switched off for 2013's EH60 Strongly Disagree : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Strongly Agree
E5. My most trusted family member switched off for 2013's EH60

APPENDIX E

QUESTIONNAIRE PAGE 4

Strongly Disagree : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Strongly Agree
E6. My best friend switched off for 2013's EH60 Strongly Disagree : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Strongly Agree
E7. The organization that I worked in / studied in, encourage me to switch off for 2013's EH60. Never : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Many
E8. The organization that I worked in / studied in, switched off for the Earth Hour 60. Never : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Very often

Section F: Perceived Behavioral Control towards switching off for the 2013 Earth Hour 60.
These 3 questions are asked to study the Perceived Behavioral Control towards switching off for 2013s Earth Hour 60. On a scale of six, please circle the number that best reflect your perception of other's expectation on you, and your expectations on others on performing this behavior.
F1. For me to switch off for the Earth Hour 60 is, Difficult : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Easy
F2. For me to switch off for the Earth Hour 60 is, Impossible : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Possible
F3. It is entirely up to me to switch off for the Earth Hour 60 Strongly Disagree : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Strongly Agree

Section G: Past Behavior towards switching off for the 2013 Earth Hour 60.
The 2 questions are asked to study the Past behavior towards switching off for previous Earth Hour 60. On a scale of six, please circle the number that best reflect your participation of previous Earth Hour 60 event, since 2009.
G1. I switched off for the 2012 Earth Hour that was held on the 31 March 2012. Strongly Disagree : 1 ; 2 ; 3 ; 4 ; 5 ; 6 : Strongly Agree
G2. The number of times that I have switched off for previous Earth Hour 60, since 2009, is, Never 1 ; 2 ; 3 ; 4 ; Every time

End of Survey
Please check if all questions are answered. Thank you for your patience in completing this survey.

Note: This is the last page of the questionnaire.

APPENDIX F

SUMMARY OF BEHAVIORAL VARIABLES

Var ID	Name	label	Source	Role
X20	Intention1	Int1	Question C1	Measuring instrument for X60, Equation 4
X21	Intention2	Int2	Question C2	
X22	Cognitive1	Cog1	Question D1	Measuring instrument for X45, Equation 1
X23	Cognitive2	Cog2	Question D2	
X24	Affective1	Aff1	Question D3	Measuring instrument for X46, Equation 1
X25	Affective2	Aff2	Question D4	
X26	Altruism1	Alt1	Question D5	Measuring instrument for X47, Equation 1
X27	Altruism2	Alt2	Question D6	
X28	Altruism3	Alt3	Question D7	
X29	Self-identity1	SID1	Question D8	Measuring instrument for X48, Equation 1
X30	Self-identity2	SID2	Question D9	
X31	Self-identity3	SID3	Question D10	
X32	InjunctiveNorms1	IjN1	Question E1	Measuring instrument for X49, Equation 2
X33	InjunctiveNorms2	IjN2	Question E2	
X34	InjunctiveNorms3	IjN3	Question E3	
X35	Descriptive Norms1	Des1	Question E4	Measuring instrument for X50, Equation 2
X36	Descriptive Norms2	Des2	Question E5	
X37	Descriptive Norms3	Des3	Question E6	
X38	Organizational Influence1	OrgIf1	Question E7	Measuring instrument for X51, Equation 2
X39	Organizational Influence2	OrgIf2	Question E8	
X40	Ease of Performance	EaseP	Question F1	Measuring instrument for X46, X57, Equation 3
X41	Confidence of performing	Conf	Question F2	
X42	Controllability	control	Question F3	
X43	Previous behavior	Prev	Question G1	Measuring instrument for X58, X59, Equation 5
X44	Past Freqency	Freq	Question G2	
X45	Cognitive	Cog	Measured by X22, X23	Observed variable
X46	Affective	Aff	Measured by X24, X25	Observed variable
X47	Altruism	Alt	Measured by X26, x27, X28	Observed variable
X48	Self-Identity	SN1	Measured by X29, X30, X31	Observed variable
X49	InjunctiveNorms	SN2	Measured by X32, X33, X34	Observed variable
X50	Descriptive Norms	PBC1	Measured by X35, X36, X37	Observed variable
X51	Organizational Influence	PBC2	Measured by X38, X39	Observed variable
X52	Attitude1	PB1	Measured by X45, X46, X47, X48	Independent latent variable
X53	Attitude2	PB2	Measured by X46, X47	Independent latent variable
X54	Subjective Norms1	Cog	Measured by X49, X50, X51	Independent latent variable
X55	Subjective Norms2	Aff	Measured by X49, X50	Independent latent variable
X56	Perceived Behavioral Control1	Alt	Measured by X40, X41, X42	Independent latent variable
X57	Perceived Behavioral Control2	SID	Measured by X56, X11	Independent latent variable
X58	Past Behavior1	IjN	Measured by X32, X33, X34	Independent latent variable
X59	Past Behavior2	DesN	Measured by X43, X44	Independent latent variable
X60	Intention	Int	Measured by X43	Dependent latent variable

APPENDIX G

DESCRIPTIVE STATISTICS OF BEHAVIORAL INDICATORS

Descriptive Statistics

	N	Minimum	Maximum	Mean		Std. Deviation	Variance	Skewness	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error
PB	278	.500	5.000	3.11871	.067522	1.125809	1.267	-.347	.146
Cog	278	1.500	6.000	4.58993	.073478	1.225116	1.501	-.638	.146
Aff	278	1.000	6.000	4.21942	.070026	1.167575	1.363	-.415	.146
Alt	278	1.000	5.340	2.90378	.059659	.994716	.989	.106	.146
Int	278	1.000	6.000	4.25000	.076815	1.280759	1.640	-.600	.146
Att	278	1.600	5.100	3.36475	.047301	.788671	.622	.144	.146
SID	278	1.000	5.340	2.44496	.065447	1.091225	1.191	.472	.146
IjN	278	1.000	6.000	3.60054	.078755	1.313115	1.724	-.232	.146
DesN	278	1.000	6.000	3.42209	.075721	1.262528	1.594	.106	.146
OrgInf	278	1.000	6.000	3.11511	.086021	1.434259	2.057	.125	.146
PB1	278	0	6	4.03	.103	1.717	2.948	-.460	.146
PB2	278	0	4	2.21	.055	.910	.828	.046	.146
Int1	278	1	6	4.27	.079	1.321	1.744	-.628	.146
Int2	278	1	6	4.23	.080	1.334	1.779	-.486	.146
PBC1	278	1	6	4.92	.068	1.139	1.296	-.975	.146
PBC2	278	1	6	5.03	.061	1.021	1.043	-.973	.146
PBC3	278	1	6	5.03	.067	1.117	1.248	-1.074	.146
Valid N (listwise)	278								

Note: Output from IBM SPSS Version 19.

APPENDIX H

PEASRSON CORRELATION MATRIX OF BEHAVIORAL INDICATORS

Correlations

		Int	Aff	Cog	Alt	SID	IjN	DesN	OrgInf	PBC1	PB
Int	Pearson Correlation	1	.669**	.649**	.212**	.252**	.578**	.558**	.254**	.357**	.609**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.000
	Sum of Squares and Cross-products	454.375	277.000	282.250	74.658	97.640	269.292	250.075	129.250	126.415	243.250
	Covariance	1.640	1.000	1.019	.270	.352	.972	.903	.467	.456	.878
	N	278	278	278	278	278	278	278	278	278	278
Aff	Pearson Correlation	.669**	1	.824**	.108	.212**	.507**	.525**	.315**	.344**	.446**
	Sig. (2-tailed)	.000		.000	.072	.000	.000	.000	.000	.000	.000
	Sum of Squares and Cross-products	277.000	377.615	326.514	34.770	74.917	215.177	214.468	145.978	111.310	162.509
	Covariance	1.000	1.363	1.179	.126	.270	.777	.774	.527	.402	.587
	N	278	278	278	278	278	278	278	278	278	278
Cog	Pearson Correlation	.649**	.824**	1	.044	.114	.501**	.498**	.337**	.293**	.439**
	Sig. (2-tailed)	.000	.000		.465	.058	.000	.000	.000	.000	.000
	Sum of Squares and Cross-products	282.250	326.514	415.752	14.866	42.106	223.407	213.228	164.122	99.352	167.532
	Covariance	1.019	1.179	1.501	.054	.152	.807	.770	.592	.359	.605
	N	278	278	278	278	278	278	278	278	278	278
Alt	Pearson Correlation	.212**	.108	.044	1	.742**	.141*	.049	.111	.141*	.241**
	Sig. (2-tailed)	.000	.072	.465		.000	.018	.414	.064	.018	.000
	Sum of Squares and Cross-products	74.658	34.770	14.866	274.080	223.002	51.111	17.122	44.044	38.944	74.775
	Covariance	.270	.126	.054	.989	.805	.185	.062	.159	.141	.270
	N	278	278	278	278	278	278	278	278	278	278
SID	Pearson Correlation	.252**	.212**	.114	.742**	1	.248**	.246**	.180**	.162**	.323**
	Sig. (2-tailed)	.000	.000	.058	.000		.000	.000	.003	.007	.000
	Sum of Squares and Cross-products	97.640	74.917	42.106	223.002	329.844	98.486	93.932	78.176	48.916	109.896
	Covariance	.352	.270	.152	.805	1.191	.356	.339	.282	.177	.397
	N	278	278	278	278	278	278	278	278	278	278
IjN	Pearson Correlation	.578**	.507**	.501**	.141*	.248**	1	.830**	.439**	.401**	.480**
	Sig. (2-tailed)	.000	.000	.000	.018	.000		.000	.000	.000	.000
	Sum of Squares and Cross-products	269.292	215.177	223.407	51.111	98.486	477.623	381.254	228.893	145.736	196.652
	Covariance	.972	.777	.807	.185	.356	1.724	1.376	.826	.526	.710
	N	278	278	278	278	278	278	278	278	278	278
DesN	Pearson Correlation	.558**	.525**	.498**	.049	.246**	.830**	1	.508**	.394**	.501**
	Sig. (2-tailed)	.000	.000	.000	.414	.000	.000		.000	.000	.000
	Sum of Squares and Cross-products	250.075	214.468	213.228	17.122	93.932	381.254	441.532	255.038	137.834	197.076
	Covariance	.903	.774	.770	.062	.339	1.376	1.594	.921	.498	.711
	N	278	278	278	278	278	278	278	278	278	278
OrgInf	Pearson Correlation	.254**	.315**	.337**	.111	.180**	.439**	.508**	1	.282**	.245**
	Sig. (2-tailed)	.000	.000	.000	.064	.003	.000	.000		.000	.000
	Sum of Squares and Cross-products	129.250	145.978	164.122	44.044	78.176	228.893	255.038	569.817	111.846	109.701
	Covariance	.467	.527	.592	.159	.282	.826	.921	2.057	.404	.396
	N	278	278	278	278	278	278	278	278	278	278
PBC1	Pearson Correlation	.357**	.344**	.293**	.141*	.162**	.401**	.394**	.282**	1	.418**
	Sig. (2-tailed)	.000	.000	.000	.018	.007	.000	.000	.000		.000
	Sum of Squares and Cross-products	126.415	111.310	99.352	38.944	48.916	145.736	137.834	111.846	276.615	130.369
	Covariance	.456	.402	.359	.141	.177	.526	.498	.404	.999	.471
	N	278	278	278	278	278	278	278	278	278	278
PB	Pearson Correlation	.609**	.446**	.439**	.241**	.323**	.480**	.501**	.245**	.418**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	Sum of Squares and Cross-products	243.250	162.509	167.532	74.775	109.896	196.652	197.076	109.701	130.369	351.083
	Covariance	.878	.587	.605	.270	.397	.710	.711	.396	.471	1.267
	N	278	278	278	278	278	278	278	278	278	278

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Note: Output from IBM SPSS Version 19

APPENDIX I

MODEL IDENTIFICATION

Estimated parameters	Model 1	Model 2	Model 3
Path Coefficient-Structural model	4	3	3
Path Coefficient-Measurement model	10	5	4
Variance-Error	15	10	9
Variance-Dependent Var	4	3	3
Covariance-Dependent Var	5	3	3
Total	38	24	22

Measured variables	Model 1	Model 2	Model 3
Indicator-Attitude	4	2	2
Indicator-SN	3	2	2
Indicator-PCB	3	3	0
Indicator-PB	2	0	2
Indicator-Int	2	2	2
Total	14	9	8

Measured variables	Model 1	Model 2	Model 3
Distinct value in Var-Covar matrix	105	45	36
Degree of freedom	67	21	14
Model identification	Identified		

APPENDIX J

REGRESSION WEIGHT IN SEM ANALYSIS, MODEL 1, 2 AND 3

Unstandardized estimate, Model 1			Estimate	S.E.	C.R.	P	Label
Intention	<---	Attitude	0.532	0.079	6.75	***	
Intention	<---	PBC	-0.004	0.071	-0.06	0.953	
Intention	<---	SN	0.175	0.06	2.92	0.004	
Intention	<---	PB	1.28	0.231	5.54	***	
Cognitive	<---	Attitude	1				
Affective	<---	Attitude	0.99	0.059	16.76	***	
DescriptiveN	<---	SN	1				
InjunctiveN	<---	SN	1.001	0.056	17.78	***	
controllability	<---	PBC	1				
Easeperform	<---	PBC	1.071	0.06	17.81	***	
Confidence	<---	PBC	1.051	0.065	16.11	***	
OrgInfluence	<---	SN	0.648	0.069	9.34	***	
Selfidentity	<---	Attitude	0.225	0.067	3.35	***	
Altruism	<---	Attitude	0.117	0.062	1.90	0.058	
Frequency	<---	PB	1				
Previous	<---	PB	4.373	0.903	4.84	***	
Intention1	<---	Intention	0.914	0.045	20.36	***	
Intention2	<---	Intention	1				

Unstandardized estimate, Model 2			Estimate	S.E.	C.R.	P	Label
Intention	<---	Attitude	0.64	0.071	8.97	***	
Intention	<---	PBC	0.101	0.069	1.46	0.14	
Intention	<---	SN	0.312	0.07	4.45	***	
Cognitive	<---	Attitude	1				
Affective	<---	Attitude	0.978	0.051	19.09	***	
DescriptiveN	<---	SN	1				
InjunctiveN	<---	SN	1.062	0.059	17.98	***	
Intention2	<---	Intention	1				
Intention1	<---	Intention	0.947	0.042	22.56	***	
Controllability	<---	PBC	1				
Easeperform	<---	PBC	1.076	0.057	18.80	***	
Confidence	<---	PBC	1.051	0.063	16.80	***	

Unstandardized estimate, Model 3			Estimate	S.E.	C.R.	P	Label
Intention	<---	SN	0.156	0.067	2.33	0.02	
Intention	<---	PastBehavior	0.298	0.072	4.15	***	
Intention	<---	Attitude	0.465	0.07	6.61	***	
Affective	<---	Attitude	1				
Cognitive	<---	Attitude	1.033	0.054	###	***	
DescriptiveN	<---	SN	1				
InjunctiveN	<---	SN	1.049	0.059	###	***	
Previous	<---	PastBehavior	1				
Frequency	<---	PastBehavior	0.248	0.042	5.85	***	
Intention1	<---	Intention	1				
Intention2	<---	Intention	1.098	0.046	###	***	

Note: Output from AMOS Version 18

APPENDIX K

COVARIANCE IN MODEL 1, 2 AND 3

	Covariance in model1			Estimate	S.E.	C.R.	P
C1	SN	<-->	PBC	0.328	0.069	4.757	***
C2	Attitude	<-->	SN	0.578	0.086	6.724	***
C3	Attitude	<-->	PBC	0.253	0.061	4.182	***
C4	PBC	<-->	PB	0.097	0.029	3.304	***
C5	Attitude	<-->	PB	0.131	0.036	3.61	***

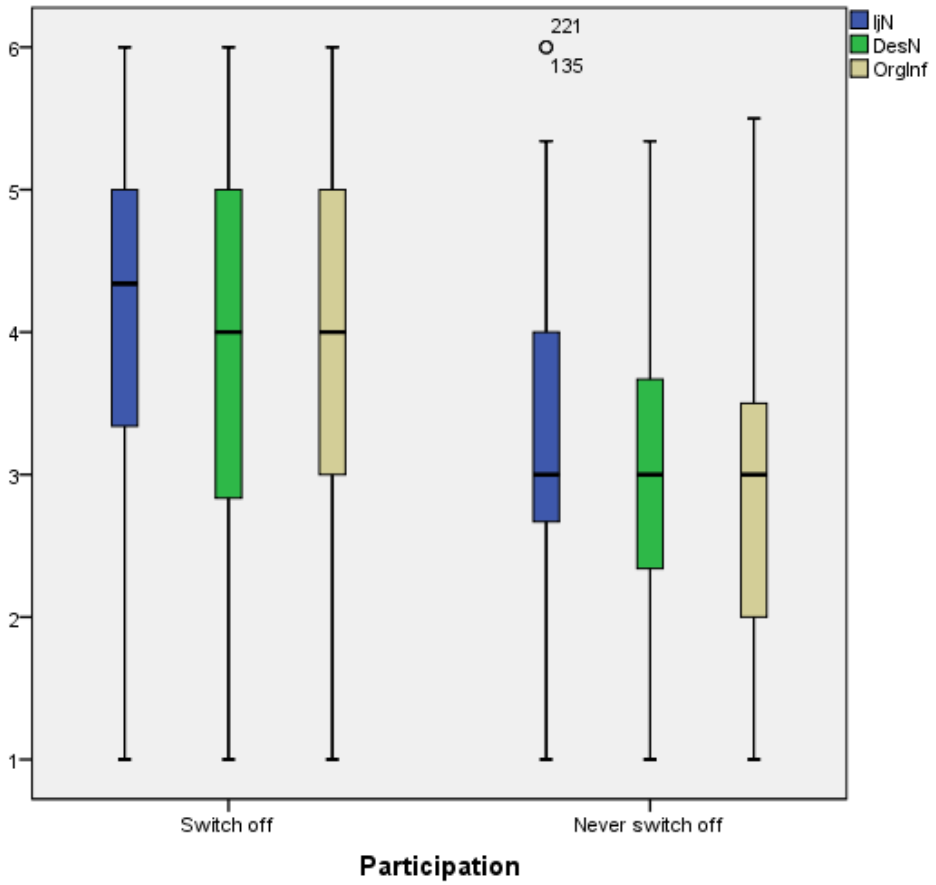
	Covariance in model 2			Estimate	S.E.	C.R.	P
C1	Attitude	<-->	SN	0.763	0.1	7.63	***
C2	SB	<-->	PBC	0.466	0.077	6.045	***
C3	Attitude	<-->	PBC	0.355	0.071	5.006	***

	Covariance in model 3			Estimate	S.E.	C.R.	P
C1	SN	<-->	PB	1.069	0.143	7.486	***
C2	Attitude	<-->	SN	0.749	0.097	7.732	***
C3	Attitude	<-->	PB	0.951	0.131	7.271	***

Note: Output from AMOS Version 18

APPENDIX L

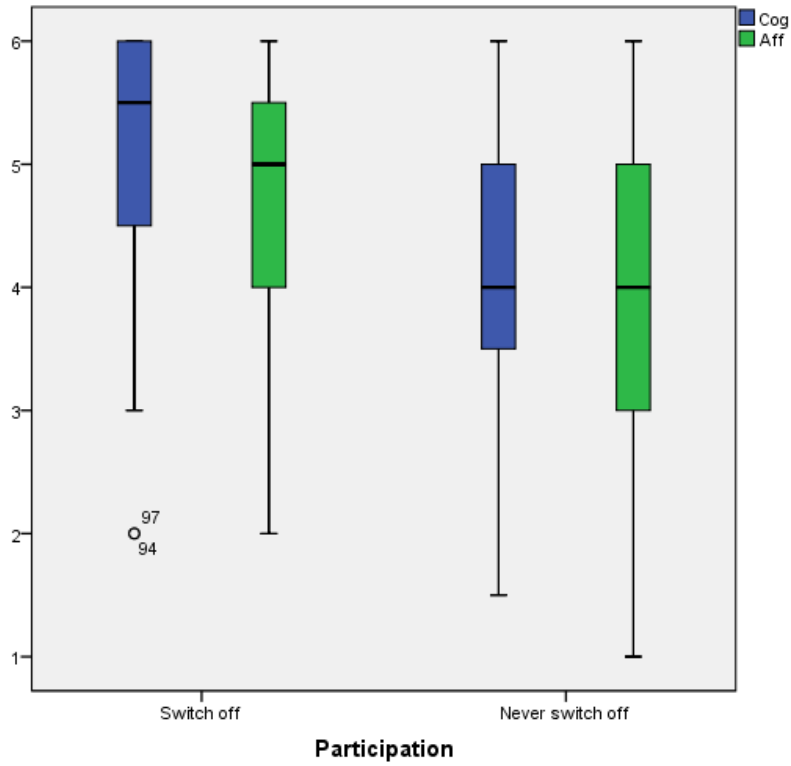
BOX-PLOT FOR BEHAVIORAL INDICTORS: SUBJECTIVE NORMS

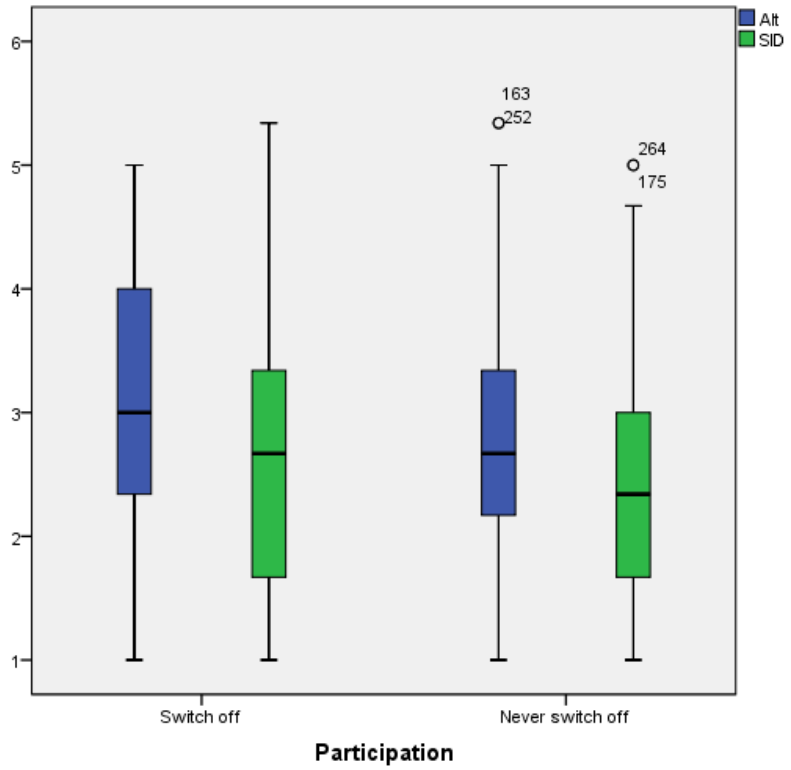


Note: Output from SPSS version 19.

APPENDIX M

BOX-PLOT FOR BEHAVIORAL INDICTORS: COGNITIVE , AFFECTIVE, ALTRUISM, SELF-IDENTITY

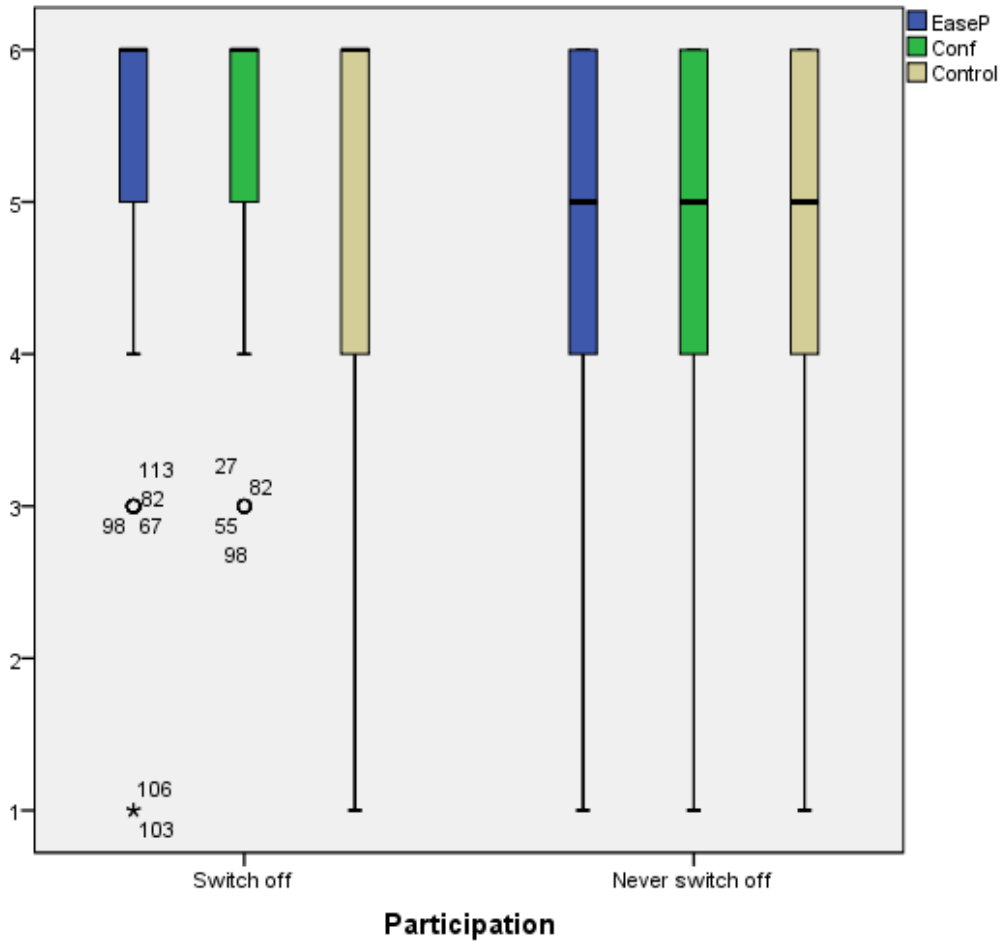




Note: Output from SPSS version 19.

APPENDIX N

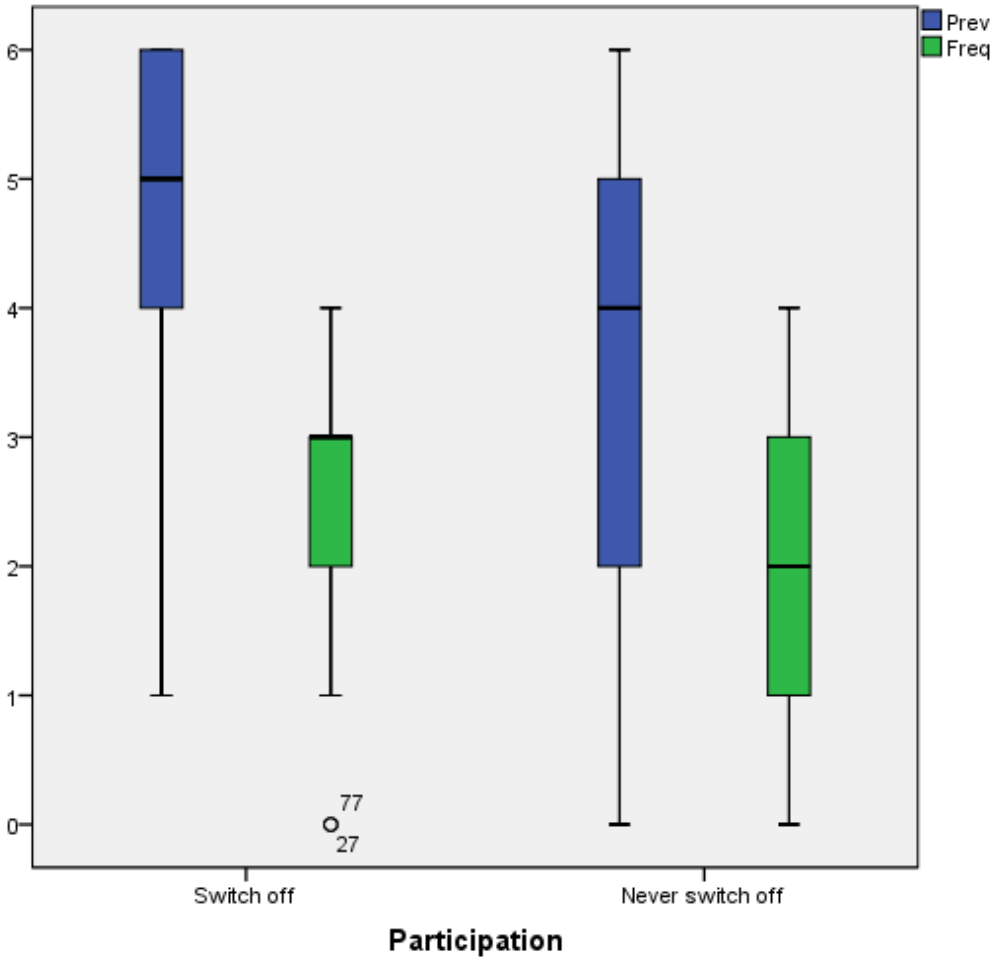
BOX-PLOT FOR BEHAVIORAL INDICTORS: PERCEIVED BEHAVIORAL CONTROL



Note: Output from SPSS version 19.

APPENDIX O

BOX-PLOT FOR BEHAVIORAL INDICTORS: PAST BEHAVIOR



Note: Output from SPSS version 19.

APPENDIX P

VARIANCE IN MODEL 1, 2 AND 3

	Variance in model1	Estimate	S.E.	C.R.	P
S1	Attitude	1.019	0.117	8.677	***
S2	Subjective Norms	1.368	0.146	9.387	***
S3	PBC	0.765	0.097	7.922	***
S4	PB	0.147	0.047	3.158	0.002
M1	e1-Affective	0.201	0.047	4.258	***
M2	e2 -Cognitive	0.315	0.052	6.023	***
M3	e4-Altruism	1.127	0.096	11.711	***
M4	e5-SID	0.97	0.083	11.75	***
M5	e7-Descriptive	0.22	0.061	3.595	***
M6	e6-Injunctive	0.347	0.066	5.291	***
M7	e8-Org influence	1.475	0.13	11.34	***
M8	e9-Confidence	0.372	0.042	8.873	***
M9	e10-EaseP	0.083	0.029	2.876	0.004
M10	e11-control	0.41	0.043	9.549	***
M11	e13-Freq	0.677	0.062	10.858	***
M12	e12-Prev	0.12	0.46	0.261	0.794
M13	e15-Int2	0.116	0.045	2.552	0.011
M14	e14-Int1	0.355	0.048	7.446	***
M15	e16- Intention	0.47	0.075	6.679	***

	Variances in model 2	Estimate	S.E.	C.R.	P
S1	Attitude	1.201	0.132	9.085	***
S2	Subjective Norms	1.292	0.143	9.016	***
S3	PBC	0.829	0.103	8.076	***
M1	e1-Affective	0.21	0.046	4.571	***
M2	e2-Cognitive	0.294	0.051	5.779	***
M3	e3-Injunctive	0.262	0.065	4.024	***
M4	e4-Descriptive	0.297	0.06	4.961	***
M5	e9-Control	0.414	0.043	9.615	***
M6	e8-EaseP	0.078	0.029	2.708	0.007
M7	e7-Confidence	0.376	0.042	8.955	***
M8	e5-Int1	0.305	0.05	6.114	***
M9	e6-Int2	0.174	0.05	3.483	***
M10	e10-Intention	0.594	0.073	8.134	***

	Variance in model3	Estimate	S.E.	C.R.	P
S1	Attitude	1.138	0.12	9.362	***
S2	SubjectiveNorms	1.308	0.14	9.065	***
S3	PastBehavior	2.602	0.41	6.359	***
M1	e2-Int1	0.36	0.05	7.758	***
M2	e3-Int2	0.11	0.04	2.564	0.01
M3	e8-Affective	0.221	0.05	4.768	***
M4	e9-cognitive	0.283	0.05	5.53	***
M5	e7-Descriptive	0.28	0.06	4.587	***
M6	e6-Injunctive	0.28	0.07	4.223	***
M7	e4-Prev	0.336	0.33	1.027	0.3
M8	e5-Freq	0.665	0.06	11.1	***
M9	e1-Intention	0.399	0.06	6.887	***

Note: Output from AMOS Version 18

APPENDIX Q

SURVEY DATA

Refer to the following pages in landscape layout (Page 117 - 130).

X1 ID	X2 Sex	X3 Age	X4 Edu	X5 Live	X6 House	X7 Inc	X8 Mar'l	X9 Race	X10 Aware	X11 Loc	X12 Off	X13 News	X14 Net	X15 radio	X16 Fr'd	X17 TV	X18 Dtsy	X19 n Ch'l	X20 Intent	X21 Plan	X22 Cog1	X23 Cog2	X24 Aff1	X25 Aff2	X26 Alt1	X27 Alt2	X28 Alt3	X29 SID1	X30 SID 2
1	2	2	2	1	3	1	1	3	0	1	0	0	0	0	0	1	0	1	6	6	6	5	5	4	3	3	4	4	5
2	2	2	2	1	4	2	1	3	0	1	0	1	1	1	0	1	0	4	6	6	6	6	6	5	4	4	4	4	4
3	2	2	2	2	3	1	2	3	0	0	0	0	1	0	0	0	0	1	5	5	5	5	5	5	4	4	4	4	4
4	2	2	2	1	1	2	1	3	0	0	0	0	1	0	0	0	0	1	4	5	6	5	6	5	2	2	1	1	2
5	1	2	1	1	3	1	1	3	0	1	1	0	1	0	0	0	0	1	4	4	3	3	3	4	4	4	3	4	4
6	1	2	2	2	2	1	1	3	1	0	0	0	1	0	0	0	0	1	3	3	3	3	3	3	3	3	3	3	3
7	1	2	2	1	3	1	1	3	0	0	1	0	1	0	0	0	0	1	2	2	3	4	3	3	2	1	1	1	1
8	2	2	2	2	5	1	1	3	1	1	0	0	0	0	0	1	0	1	5	5	4	4	4	4	4	3	4	2	2
9	2	2	2	1	5	2	1	3	0	0	1	1	1	0	1	0	0	3	3	4	4	4	3	5	2	2	1	2	2
10	1	2	2	1	3	4	1	3	0	1	0	0	1	1	0	0	0	2	6	6	5	5	5	6	2	2	1	2	1
11	1	2	2	2	2	1	1	3	0	1	0	1	1	1	1	1	1	6	6	6	6	6	6	6	5	4	4	5	4
12	2	2	2	1	3	1	1	3	0	0	0	0	1	0	0	0	0	1	6	6	6	6	6	6	4	3	3	3	2
13	2	2	2	1	3	4	1	3	0	0	1	1	1	0	1	1	1	5	5	5	6	6	4	6	3	3	3	3	3
14	1	2	2	2	2	3	1	3	0	0	0	0	1	0	0	0	0	1	5	6	6	6	6	4	4	4	4	4	5
15	2	2	2	1	3	1	1	3	0	1	0	0	0	0	1	0	0	1	4	4	4	5	5	5	3	5	5	4	4
16	1	1	3	2	2	2	1	3	0	0	0	0	1	0	0	0	0	1	5	5	5	6	5	5	4	3	3	4	4
17	1	2	2	2	2	1	1	3	0	0	0	1	0	0	0	1	0	2	4	5	4	4	3	3	4	4	5	3	3
18	2	2	2	1	1	1	1	3	1	1	1	1	1	0	0	1	0	3	2	2	2	3	2	3	4	3	2	1	1
19	2	2	2	1	4	2	1	3	1	1	1	0	1	0	0	0	0	1	5	5	5	5	5	4	2	2	3	2	3
20	1	2	2	1	3	1	1	3	0	0	1	1	0	0	0	0	0	1	3	3	3	3	3	3	3	3	3	3	3
21	1	2	2	2	2	1	1	3	0	0	0	0	1	0	0	0	0	1	6	6	6	6	6	6	4	3	2	2	2
22	2	2	2	2	3	1	1	3	1	0	1	0	1	0	0	0	0	1	4	3	5	5	5	4	4	4	3	3	3
23	1	2	2	1	3	1	1	3	0	0	1	1	1	1	0	0	0	3	1	1	4	4	3	2	3	2	2	1	1
24	2	2	2	2	2	1	1	3	1	1	1	0	0	0	0	0	1	1	3	3	2	2	1	1	3	4	5	2	2
25	1	2	2	1	4	1	1	3	0	0	0	0	0	1	0	0	0	1	6	6	6	6	6	6	1	1	1	1	1
26	1	2	2	2	2	1	1	3	1	1	1	0	1	0	0	0	0	1	3	4	5	5	3	3	3	3	2	3	3
27	2	2	2	1	3	1	1	3	0	1	0	0	0	0	0	0	1	1	6	4	4	4	5	5	4	3	3	3	4
28	2	2	2	2	2	1	1	3	0	0	0	0	0	0	0	0	1	1	6	6	6	6	6	6	3	2	1	2	4
29	2	2	2	2	2	1	1	2	1	1	1	0	0	0	1	0	0	1	3	3	3	3	3	2	4	4	3	4	3
30	2	2	2	2	2	1	1	2	1	1	1	0	0	0	1	0	0	1	1	1	1	2	1	1	4	3	2	5	3
31	2	2	2	2	2	2	1	3	0	1	1	0	1	0	0	0	0	1	4	4	5	5	6	5	3	2	2	3	3
32	2	1	2	1	3	2	1	3	0	1	1	0	0	1	0	1	0	2	4	3	2	2	2	3	2	2	2	2	2
33	2	2	2	2	2	1	1	3	0	0	0	0	1	0	0	0	0	1	6	6	5	5	3	4	5	5	5	1	2
34	2	2	2	2	2	1	1	3	0	0	0	1	0	0	0	0	0	1	6	6	6	6	6	6	3	2	3	2	3
35	2	2	2	1	3	1	1	3	1	1	0	1	0	0	0	0	0	1	5	5	4	5	5	4	4	5	5	5	5
36	2	2	2	2	2	1	1	3	0	0	0	0	1	0	1	0	0	2	4	4	4	4	4	3	1	1	1	1	1
37	2	1	2	2	2	1	1	3	1	0	1	1	0	0	1	0	0	2	6	5	6	6	4	4	2	2	1	2	2

X1 ID	X2 Sex	X3 Age	X4 Edu	X5 Live	X6 House	X7 Inc	X8 Mar'l	X9 Race	X10 Aware	X11 Loc	X12 Off	X13 News	X14 Net	X15 radio	X16 Fr'd	X17 TV	X18 Dis'y	X19 n Ch'l	X20 Intent	X21 Plan	X22 Cog1	X23 Cog2	X24 Aff1	X25 Aff2	X26 Alt1	X27 Alt2	X28 Alt3	X29 SID1	X30 SID 2
38	2	2	2	2	2	1	1	3	1	1	0	1	0	0	1	0	0	2	6	6	6	4	5	5	3	2	1	1	1
39	2	2	2	1	5	1	1	3	0	1	1	0	1	1	1	0	1	4	4	4	4	4	4	4	4	3	3	3	3
40	1	2	2	2	2	1	1	3	0	1	1	1	1	0	1	1	0	4	4	4	4	4	4	3	4	4	4	4	4
41	1	2	2	1	3	2	1	3	0	1	1	0	1	0	0	1	0	2	5	5	4	4	5	5	4	3	2	2	3
42	1	2	2	2	2	1	1	3	0	1	1	1	0	0	0	0	0	1	5	5	6	6	6	5	4	4	3	3	2
43	1	2	2	2	2	1	1	3	0	0	1	1	1	1	1	1	0	4	5	5	6	6	6	4	5	4	4	5	4
44	1	2	2	2	2	1	1	3	0	0	0	1	1	1	0	0	0	3	4	4	5	5	4	4	4	3	3	3	3
45	2	2	2	2	2	1	1	3	1	1	1	0	1	0	0	0	0	1	4	3	5	5	3	3	2	2	4	1	1
46	2	2	2	1	3	1	1	2	0	1	0	1	0	0	0	0	0	1	6	6	6	6	4	6	3	5	3	3	3
47	1	2	2	2	2	1	1	3	0	1	0	0	1	0	1	0	0	2	5	5	5	5	4	3	5	4	2	3	3
48	1	2	2	1	2	2	1	3	0	0	1	0	1	0	0	0	0	1	5	2	3	3	2	2	4	3	2	2	2
49	1	2	2	2	2	2	1	3	0	1	0	0	0	0	1	0	0	1	6	6	6	6	6	6	4	4	5	4	4
50	1	2	2	2	2	1	1	3	0	0	0	0	0	0	1	0	0	1	4	4	6	6	6	6	3	2	2	2	2
51	1	2	2	2	2	1	1	3	1	1	1	1	0	0	0	0	0	1	5	5	5	5	5	5	4	4	4	3	3
52	2	2	2	1	3	1	1	3	0	1	1	0	0	1	0	0	0	1	5	4	5	4	4	5	3	2	3	1	1
53	2	1	2	1	3	1	1	3	0	0	0	0	1	0	0	0	0	1	4	3	4	4	4	3	3	3	1	1	1
54	2	2	2	1	3	2	1	3	0	1	0	1	1	1	0	0	0	3	6	6	6	6	5	6	3	3	2	3	2
55	2	2	2	2	2	1	1	2	0	1	0	0	0	0	0	0	0	1	1	6	6	6	6	6	6	4	3	2	2	3
56	1	2	2	2	1	2	1	3	0	0	1	0	0	0	0	1	0	0	1	3	3	4	4	3	3	2	2	1	1	1
57	2	1	2	1	3	1	1	3	0	0	1	0	1	0	1	0	0	2	2	2	3	4	3	4	3	3	1	2	2
58	1	1	2	2	2	1	1	3	0	0	0	0	1	0	0	0	0	1	5	5	6	5	4	4	3	2	2	2	2
59	2	2	2	1	3	1	1	3	0	1	0	0	0	1	0	0	0	1	5	6	6	6	6	6	5	4	3	3	4
60	1	2	2	2	2	1	1	3	1	1	0	0	1	0	0	1	0	2	6	6	6	6	5	5	3	2	1	2	2
61	2	2	2	1	4	1	1	3	0	1	1	1	0	0	1	0	0	2	3	3	4	4	4	4	3	3	3	2	2
62	2	2	2	1	4	2	1	3	0	1	1	0	1	0	0	0	0	1	5	5	5	5	4	4	3	3	3	3	2
63	2	2	2	2	2	1	1	3	1	1	1	1	0	0	0	0	1	2	4	4	6	6	6	4	2	2	2	2	2
64	2	2	2	1	2	2	1	3	0	0	0	0	1	0	0	1	1	3	3	4	2	5	3	3	2	1	1	1	1
65	2	2	2	1	4	2	1	3	0	1	1	0	1	0	0	0	0	1	5	5	6	6	6	6	5	5	5	5	4
66	2	1	2	1	3	1	1	3	1	0	0	0	0	0	1	0	0	1	4	5	5	5	5	4	3	2	2	2	2
67	2	1	2	2	3	1	1	3	0	0	1	0	1	0	0	0	0	1	3	4	5	5	5	4	3	3	2	2	3
68	2	1	2	2	3	1	1	3	0	0	0	0	1	0	0	0	0	1	4	4	6	6	5	5	4	3	3	3	3
69	2	1	2	2	2	1	1	3	1	0	1	0	0	0	0	0	1	1	1	1	4	3	3	2	1	1	1	1	1
70	2	2	2	2	2	1	1	3	1	1	1	0	1	0	0	0	0	1	4	4	6	6	6	4	3	2	2	3	4
71	2	2	2	2	2	1	1	3	0	1	1	0	0	0	1	0	0	1	5	4	6	6	6	6	2	2	3	1	1
72	2	1	2	2	1	1	1	2	0	0	0	0	1	0	0	0	0	1	3	3	3	3	4	4	4	4	6	3	4
73	2	1	2	1	3	1	1	3	0	1	1	0		0	0	1	0	1	5	4	5	5	5	5	2	2	3	3	3
74	1	1	2	2	4	1	1	3	1	1	1	1	1	0	0	1	0	3	3	3	4	4	4	3	4	3	3	3	2

X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16	X17	X18	X19 n	X20	X21	X22	X23	X24	X25	X26	X27	X28	X29	X30
ID	Sex	Age	Edu	Live	House	Inc	Mar'l	Race	Aware	Loc	Off	News	Net	radio	Fr'd	TV	Dtsy	Ch'l	Intent	Plan	Cog1	Cog2	Aff1	Aff2	Alt1	Alt2	Alt3	SID1	SID 2
75	1	1	2	2	2	1	1	3	0	1	1	1	1	0	0	1	0	3	4	4	4	4	4	4	3	4	3	2	3
76	2	1	2	1	3	2	1	3	0	1	1	0	1	0	0	0	0	1	3	3	2	2	3	3	1	1	1	1	1
77	2	1	2	1	4	2	1	3	0	0	1	0	1	0	0	0	0	1	3	3	2	2	2	2	4	3	3	4	3
78	2	2	2	2	2	1	1	3	0	0	1	0	1	0	1	0	0	2	3	3	4	3	3	4	2	2	1	2	1
79	2	1	2	1	1	1	1	3	0	0	1	0	0	0	1	0	0	1	2	1	3	3	4	3	4	4	4	3	3
80	2	2	2	1	3	2	1	3	0	1	1	1	0	0	0	1	0	2	6	6	5	3	5	5	3	6	5	4	5
81	2	1	2	2	2	1	1	3	0	0	0	0	1	0	0	0	0	1	6	4	6	6	5	5	1	2	1	2	1
82	2	1	2	1	3	1	1	3	0	1	1	0	0	0	0	1	0	1	4	3	2	2	3	2	3	2	1	1	2
83	1	2	2	2	2	2	1	3	0	0	1	0	1	0	1	0	0	2	3	3	5	4	3	4	3	3	4	4	4
84	2	1	2	1	2	2	1	3	0	1	1	0	0	1	1	0	0	2	5	4	3	3	3	2	4	3	3	2	2
85	2	1	2	1	3	1	1	3	0	1	1	0	1	0	1	0	0	2	1	1	4	4	4	4	2	2	1	1	1
86	2	1	2	1	3	1	1	3	1	0	0	0	0	0	1	0	0	1	5	5	4	5	5	4	3	2	3	1	2
87	2	1	2	2	2	1	1	3	0	1	1	0	1	0	1	0	0	2	5	5	6	6	6	5	5	6	5	3	5
88	2	2	2	1	3	1	1	3	0	1	1	0	1	1	0	0	0	2	5	5	5	5	4	3	3	3	3	3	3
89	2	2	2	1	3	3	1	3	0	1	1	0	1	0	1	1	0	3	5	5	4	4	3	3	3	3	4	4	3
90	1	2	2	1	3	1	1	3	1	0	0	0	0	0	0	0	1	1	6	6	6	6	6	5	1	1	1	1	1
91	2	2	2	1	3	2	1	3	0	1	1	1	0	0	0	0	0	1	5	4	4	5	5	5	4	3	2	3	3
92	2	2	2	1	3	2	1	3	0	1	1	0	1	1	0	0	0	2	4	4	6	6	6	5	3	3	1	2	2
93	2	2	2	2	2	2	1	3	0	1	1	0	1	0	0	0	1	2	1	2	2	3	2	3	3	2	2	3	3
94	2	2	2	2	2	1	1	3	0	1	1	0	1	0	0	0	0	1	5	5	5	5	5	5	2	2	1	2	2
95	2	2	2	2	1	1	1	3	0	1	1	0	1	0	0	0	0	1	5	5	5	4	5	4	3	4	2	4	3
96	1	2	2	1	3	3	1	3	0	1	1	0	1	0	0	0	0	1	5	5	5	5	3	3	2	3	1	1	1
97	1	2	2	2	2	1	1	3	1	1	1	1	0	0	0	0	0	1	3	3	3	3	3	3	3	3	3	2	3
98	2	1	2	1	3	2	1	3	0	1	1	1	1	1	1	0	0	4	4	5	6	5	5	5	3	3	2	2	2
99	1	2	2	1	3	1	1	3	0	0	0	1	0	0	0	0	0	1	4	4	5	4	5	6	5	4	4	5	6
100	2	2	2	2	2	2	1	2	0	1	1	1	0	0	0	0	0	1	5	4	5	5	4	4	2	2	1	1	1
101	2	1	2	2	2	1	1	3	1	1	1	0	0	1	0	0	0	1	5	5	5	5	5	6	5	5	5	5	5
102	1	1	2	1	2	1	1	3	1	0	0	1	1	1	0	1	1	5	4	4	5	5	3	5	5	4	4	3	3
103	1	1		1	2	1	1	3	0	0	1	0	1	0	1	0	0	2	3	3	5	5	4	4	2	4	2	2	2
104	1	2	2	2	2	1	1	3	0	0	0	0	0	0	1	1	1	3	5	6	6	6	4	5	3	4	4	4	4
105	2	2	2	1	3	2	1	3	1	0	0	0	0	0	1	0	0	1	5	5	5	5	5	4	1	2	2	1	1
106	1	1	2	1	3	1	1	3	0	1	1	0	1	0	0	0	0	1	5	3	5	3	5	4	3	4	4	3	3
107	2	2	2	1	1	1	1	3	1	0	0	0	1	0	0	0	0	1	3	5	5	5	5	5	3	3	1	4	4
108	2	2	2	1	2	1	1	3	0	0	1	0	1	0	0	0	1	2	3	3	4	5	4	4	2	2	3	2	2
109	2	2	2	1	3	2	1	3	0	1	1	0	0	0	1	0	0	1	4	4	6	6	5	5	4	3	3	4	3
110	1	2	2	1	3	2	1	3	0	1	1	1	1	1	1	0	1	5	5	6	5	6	4	5	3	4	4	5	5
111	2	2	2	1	3	1	1	3	0	1	1	0	1	0	0	0	0	1	4	4	4	5	6	6	3	3	1	2	2

X1 ID	X2 Sex	X3 Age	X4 Edu	X5 Live	X6 House	X7 Inc	X8 Mar'l	X9 Race	X10 Aware	X11 Loc	X12 Off	X13 News	X14 Net	X15 radio	X16 Fr'd	X17 TV	X18 Dis'y	X19 n Ch'l	X20 Intent	X21 Plan	X22 Cog1	X23 Cog2	X24 Aff1	X25 Aff2	X26 Alt1	X27 Alt2	X28 Alt3	X29 SID1	X30 SID 2
112	2	2	2	1	5	1	1	3	0	0	1	0	1	0	0	0	0	1	5	5	4	4	4	4	4	3	3	3	3
113	2	2	2	2	2	1	1	3	0	1	1	0	1	0	0	0	0	1	3	3	3	4	3	2	3	2	3	1	1
114	2	2	2	2	2	1	1	3	1	1	1	0	0	1	0	0	0	1	5	4	4	3	4	3	3	3	3	2	2
115	2	2	2	2	2	1	1	3	1	0	1	0	1	0	0	0	0	1	3	3	4	4	3	3	2	2	1	2	1
116	1	2	2	3	1	1	1	3	0	0	1	0	1	0	0	0	0	1	3	3	1	3	3	3	2	3	1	1	1
117	1	1	2	2	2	1	1	3	0	0	1	0	1	0	0	0	0	1	3	3	4	5	4	4	2	2	1	2	1
118	2	2	2	2	2	1	1	3	1	0	1	0	0	0	1	0	0	1	2	2	4	4	4	3	2	2	2	3	2
119	2	2	2	1	1	1	1	3	0	0	0	0	1	0	0	0	0	1	5	4	5	5	3	3	3	3	3	3	3
120	2	2	2	2	2	1	1	3	0	1	1	1	1	0	0	0	0	2	5	5	5	5	4	3	3	3	3	3	2
121	2	2	2	1	3	1	1	3	1	1	1	1	0	0	0	0	0	1	5	3	4	4	4	3	4	3	2	2	2
122	2	1	2	2	2	2	1	3	1	1	1	0	0	1	0	1	1	3	3	4	3	2	2	3	3	4	3	4	3
123	2	2	2	1	3	2	1	3	0	1	1	1	1	1	1	1	1	6	5	5	6	6	6	4	5	4	4	3	3
124	2	1	2	1	2	1	1	3	1	0	0	0	1	0	0	1	0	3	5	5	4	4	4	4	3	3	3	3	3
125	2	2	2	2	2	1	1	3	0	1	1	1	0	0	1	0	1	3	5	4	5	4	5	4	3	2	1	1	2
126	2	2	2	1	3	4	1	3	0	0	0	0	1	0	0	0	0	1	4	6	6	6	5	6	4	4	4	4	4
127	2	2	2	2	3	1	1	3	0	0	0	0	0	0	0	1	0	1	4	4	5	5	5	4	3	3	1	2	2
128	2	2	2	2	2	2	1	3	0	1	1	0	0	0	0	1	0	1	5	5	5	5	5	5	2	2	1	1	1
129	2	2	2	1	3	2	1	3	1	0	1	0	0	1	0	0	0	1	1	1	2	2	1	1	2	3	2	2	1
130	1	2	2	2	2	2	1	3	0	1	1	0	1	0	0	0	0	1	3	4	5	4	3	3	3	4	3	1	2
131	1	2	2	1	3	1	1	3	1	1	1	0	0	0	1	0	0	1	3	3	5	5	5	4	2	2	1	2	2
132	1	2	2	1	3	1	1	3	0	0	0	1	1	0	0	1	1	4	4	5	5	4	4	4	4	2	3	2	2
133	2	2	2	1	3	1	1	3	0	0	0	0	1	0	0	0	0	1	5	4	6	5	5	5	3	3	2	2	2
134	1	2	2	1	3	1	1	3	0	0	1	0	0	0	0	1	0	1	3	3	2	3	3	3	3	2	2	2	2
135	1	1	2	1	3	1	1	3	0	0	1	0	1	0	0	0	0	1	3	3	5	5	4	3	2	3	3	2	4
136	2	2	2	1	3	1	1	3	0	1	1	0	0	0	0	1	0	1	6	6	6	5	5	4	3	3	4	5	5
137	2	2	2	1	4	2	1	3	0	1	0	1	1	1	0	1	0	4	6	6	6	6	6	5	4	4	4	4	4
138	2	2	2	2	3	1	2	3	0	0	0	0	1	0	0	0	0	1	5	5	5	5	5	5	4	4	4	4	4
139	2	2	2	1	1	2	1	3	0	0	0	0	1	0	0	0	0	1	4	5	6	5	6	5	2	2	1	1	2
140	1	2	1	1	3	1	1	3	0	1	1	0	1	0	0	0	0	1	4	4	3	3	3	4	4	4	3	4	4
141	1	2	2	2	2	2	1	3	1	0	0	0	1	0	0	0	0	1	3	3	3	3	3	3	3	3	3	3	3
142	1	2	2	1	3	1	1	3	0	0	1	0	1	0	0	0	0	1	2	2	3	4	3	3	2	1	1	1	1
143	2	2	2	2	5	1	1	3	1	1	1	0	0	0	0	1	0	1	5	5	4	4	4	4	4	4	3	2	2
144	2	2	2	1	5	2	1	3	0	0	1	1	1	0	1	0	0	3	4	3	3	3	5	5	1	2	2	3	3
145	1	2	2	1	3	4	1	3	0	1	0	0	1	1	0	0	0	2	6	6	5	5	5	6	2	2	1	2	1
146	1	2	2	2	2	2	1	3	0	1	0	1	1	1	1	1	1	6	6	6	6	6	6	6	5	4	4	5	4
147	2	2	2	1	3	1	1	3	0	0	0	0	1	0	0	0	0	1	6	6	6	6	6	6	4	4	2	3	3
148	2	2	2	1	3	4	1	3	0	0	0	1	1	0	1	1	1	5	5	5	6	6	4	6	3	3	3	3	3

X1 ID	X2 Sex	X3 Age	X4 Edu	X5 Live	X6 House	X7 Inc	X8 Mar'l	X9 Race	X10 Aware	X11 Loc	X12 Off	X13 News	X14 Net	X15 radio	X16 Fr'd	X17 TV	X18 Dis'y	X19 n Ch'l	X20 Intent	X21 Plan	X22 Cog1	X23 Cog2	X24 Aff1	X25 Aff2	X26 Alt1	X27 Alt2	X28 Alt3	X29 SID1	X30 SID2
149	1	2	2	2	2	3	1	3	0	0	0	0	1	0	0	0	0	1	5	6	6	6	6	4	4	4	4	4	5
150	2	2	2	1	3	1	1	3	0	1	0	0	0	0	1	0	0	1	4	4	4	5	5	5	3	5	5	4	3
151	1	1	3	2	2	2	1	3	0	0	0	0	1	0	0	0	0	1	5	5	5	6	6	4	4	4	2	3	5
152	1	2	2	2	2	2	1	3	0	0	0	1	0	0	0	1	0	2	4	5	4	4	4	2	3	5	5	3	3
153	2	2	2	1	1	1	1	3	1	1	1	1	1	0	0	1	0	3	2	2	3	2	2	3	4	2	3	1	1
154	2	2	2	1	4	2	1	3	1	1	1	0	1	0	0	0	0	1	5	5	5	5	4	5	3	2	2	4	1
155	1	2	2	1	3	1	1	3	0	0	1	1	0	0	0	0	0	1	3	3	3	3	3	3	3	3	3	3	3
156	1	2	2	2	2	1	1	3	0	0	0	0	1	0	0	0	0	1	6	6	6	6	6	6	4	2	3	3	2
157	2	2	2	2	3	1	1	3	1	0	0	0	1	0	0	0	0	1	4	3	5	5	5	4	5	3	3	3	3
158	1	2	2	1	3	1	1	3	0	0	1	1	1	1	0	0	0	3	1	1	4	4	3	2	4	2	1	1	1
159	2	2	2	2	2	1	1	3	1	1	1	0	0	0	0	0	1	1	3	3	1	2	2	1	3	4	5	1	3
160	1	2	2	1	4	1	1	3	0	0	0	0	0	1	0	0	0	1	6	6	6	6	6	6	1	1	1	1	1
161	1	2	2	2	2	1	1	3	1	1	1	0	1	0	0	0	0	1	3	4	5	3	5	3	4	2	2	4	2
162	2	2	2	1	3	1	1	3	0	1	1	0	0	0	0	0	1	1	6	4	4	4	5	5	4	3	3	4	4
163	2	2	2	2	2	1	1	3	0	0	0	0	0	0	0	0	1	1	6	6	6	6	6	6	3	2	1	3	3
164	2	2	2	2	2	2	1	2	1	1	1	0	0	0	1	0	0	1	3	3	3	2	3	3	4	4	3	4	3
165	2	2	2	2	2	1	1	2	1	1	1	0	0	0	1	0	0	1	1	1	1	2	2	1	4	3	2	5	3
166	2	2	2	2	2	2	1	3	0	1	1	0	1	0	0	0	0	1	4	4	6	5	5	5	3	3	1	4	2
167	2	1	2	1	3	2	1	3	0	1	1	0	0	1	0	1	0	2	3	4	6	5	5	5	2	2	2	2	2
168	2	2	2	2	2	1	1	3	0	0	0	0	1	0	0	0	0	1	6	6	5	5	3	4	5	5	5	1	2
169	2	2	2	2	2	1	1	3	0	0	0	1	0	0	0	0	0	1	6	6	6	6	6	6	3	4	1	1	4
170	2	2	2	1	3	1	1	3	1	1	1	1	0	0	0	0	0	1	5	5	4	5	5	4	4	5	5	5	5
171	2	2	2	2	2	1	1	3	0	0	0	0	1	0	1	0	0	2	4	4	4	4	4	3	1	1	1	1	1
172	2	1	2	2	2	1	1	3	1	0	0	1	0	0	1	0	0	3	6	5	6	5	5	4	2	2	1	2	2
173	2	2	2	2	2	1	1	3	1	1	1	1	0	0	1	0	0	2	6	6	6	6	4	4	3	2	1	1	1
174	2	2	2	1	5	1	1	3	0	1	1	0	1	1	1	0	1	4	4	4	4	3	4	5	4	3	3	3	3
175	1	2	2	2	2	1	1	3	0	1	1	1	1	0	1	1	0	4	4	4	4	4	4	3	3	5	4	4	5
176	1	2	2	1	3	2	1	3	0	1	1	0	1	0	0	1	0	2	5	5	4	4	5	5	4	3	2	2	4
177	1	2	2	2	2	1	1	3	0	1	1	1	0	0	0	0	0	1	5	5	6	6	6	5	4	4	3	3	3
178	1	2	2	2	2	1	1	3	0	0	0	1	1	1	1	1	0	5	5	5	6	6	5	5	5	5	3	5	3
179	1	2	2	2	2	1	1	3	0	0	0	1	1	1	0	0	0	3	4	4	5	5	4	4	4	3	3	3	3
180	2	2	2	2	2	1	1	3	1	1	1	0	1	0	0	0	0	1	3	4	5	5	3	3	2	2	4	1	1
181	2	2	2	1	3	1	1	2	0	1	0	1	0	0	0	0	0	1	6	6	6	6	5	6	4	4	3	2	4
182	1	2	2	2	2	2	1	3	0	1	0	0	1	0	1	0	0	2	5	5	5	5	3	4	5	4	2	4	3
183	1	2	2	1	2	2	1	3	0	0	1	0	1	0	0	0	0	1	5	2	2	2	3	3	3	3	3	2	2
184	1	2	2	2	2	2	1	3	0	1	0	0	0	0	1	0	0	1	6	6	6	6	6	6	4	4	5	4	4
185	1	2	2	2	2	1	1	3	0	0	0	0	0	0	1	0	0	1	4	4	6	6	6	6	3	2	2	2	2

X1 ID	X2 Sex	X3 Age	X4 Edu	X5 Live	X6 House	X7 Inc	X8 Mar'l	X9 Race	X10 Aware	X11 Loc	X12 Off	X13 News	X14 Net	X15 radio	X16 Fr'd	X17 TV	X18 Dis'y	X19 n Ch'l	X20 Intent	X21 Plan	X22 Cog1	X23 Cog2	X24 Aff1	X25 Aff2	X26 Alt1	X27 Alt2	X28 Alt3	X29 SID1	X30 SID 2
186	1	2	2	2	2	1	1	3	1	1	1	0	1	1	0	0	0	2	5	5	5	5	5	5	6	4	2	4	2
187	2	2	2	1	3	1	1	3	0	1	1	0	0	1	0	0	0	1	5	4	5	4	4	5	3	3	2	1	1
188	2	1	2	1	3	1	1	3	0	0	0	0	1	0	0	0	0	1	4	3	4	4	4	3	3	3	1	1	1
189	2	2	2	1	3	2	1	3	0	1	1	1	1	1	0	0	0	3	2	2	1	2	2	1	2	3	2	2	2
190	2	2	2	2	2	1	1	2	0	1	1	0	0	0	0	0	1	1	2	3	2	2	3	2	2	2	2	2	3
191	1	2	2	2	1	2	1	3	0	0	1	0	0	0	1	0	0	1	3	3	4	4	3	3	2	2	1	1	1
192	2	1	2	1	3	1	1	3	0	0	1	0	1	0	1	0	0	2	2	2	3	4	3	4	3	3	1	2	2
193	1	1	2	2	2	1	1	3	0	0	0	0	1	0	0	0	0	1	5	5	6	5	4	4	3	2	2	2	2
194	1	2	2	2	2	1	1	3	1	1	1	0	1	0	0	1	0	2	6	6	6	6	5	5	3	2	1	2	2
195	2	2	2	1	3	1	1	3	0	1	0	0	0	1	0	0	0	1	5	6	6	6	6	6	5	5	2	3	3
196	1	2	2	2	2	1	1	3	1	1	1	0	1	0	0	1	0	2	6	6	6	6	5	5	3	2	1	2	2
197	2	2	2	1	3	3	1	3	0	0	0	1	1	0	1	0	0	3	5	5	5	5	5	5	4	4	4	4	3
198	2	2	2	1	3	3	1	3	0	1	0	0	0	0	1	1	0	2	6	6	5	6	5	5	4	5	5	3	3
199	2	1	2	2	3	1	1	3	0	0	0	1	0	0	0	0	0	1	5	5	5	6	5	5	5	4	3	2	2
200	2	2	2	2	2	1	1	3	0	1	0	0	0	0	0	1	0	1	6	6	6	6	6	6	3	2	2	2	2
201	2	2	2	2	2	1	1	3	0	1	0	0	0	1	0	0	0	1	5	5	4	5	5	4	3	2	1	2	1
202	2	1	2	1	1	1	1	3	0	0	0	1	0	0	0	1	0	2	5	5	4	4	5	5	4	4	4	4	5
203	2	2	2	2	2	1	1	3	0	0	0	0	1	0	0	0	0	1	5	5	6	6	5	5	2	4	2	2	3
204	2	2	2	2	2	1	1	3	0	0	0	0	1	0	0	0	0	1	5	5	6	6	5	5	4	4	4	5	5
205	2	2	2	1	3	2	1	3	0	1	0	1	0	0	0	0	0	1	6	6	6	6	6	5	1	1	1	1	1
206	1	1	2	1	3	2	1	3	0	0	0	0	1	0	0	0	0	1	6	6	4	4	4	3	2	1	1	1	2
207	1	2	2	2	2	1	1	3	0	0	0	0	1	1	0	1	0	3	5	6	6	6	5	5	2	2	1	2	2
208	1	2	2	1	2	1	2	3	0	0	0	1	0	0	0	1	0	2	6	6	5	4	4	3	1	2	1	1	1
209	1	2	2	2	2	1	1	3	0	0	0	0	1	0	1	0	0	2	1	1	6	6	6	5	2	1	1	1	1
210	1	2	2	2	1	2	1	3	0	0	0	0	1	0	0	0	0	1	2	2	2	2	2	2	4	4	3	3	3
211	1	2	2	2	1	2	1	3	0	0	0	0	1	1	0	0	0	2	6	6	6	6	6	6	2	2	2	2	2
212	2	2	2	2	2	1	1	3	0	0	0	0	1	0	0	0	0	1	5	5	5	5	4	4	4	4	3	3	3
213	1	1	2	1	3	1	1	3	0	0	0	1	1	0	1	1	0	4	4	3	2	2	2	2	5	3	3	1	1
214	1	2	2	2	4	1	1	3	0	1	0	0	1	0	0	1	0	2	3	3	4	4	4	3	4	4	3	4	4
215	2	1	2	1	2	1	1	3	0	0	0	1	0	0	0	0	0	1	6	6	5	5	4	6	3	3	3	4	3
216	2	1	2	2	2	1	1	3	0	0	0	1	1	0	0	1	0	3	5	5	6	6	5	5	4	4	4	1	2
217	2	1	2	1	2	2	1	3	0	0	0	0	0	1	0	0	0	1	5	4	6	6	6	5	4	4	1	1	2
218	2	2	2	1	3	2	1	3	0	0	0	0	1	0	1	1	0	3	6	6	6	6	6	5	3	4	3	4	3
219	2	2	2	1	4	1	1	3	0	1	1	1	0	0	1	0	0	2	3	3	4	4	4	4	3	3	3	2	2
220	2	2	2	1	4	2	1	3	0	1	1	0	2	0	0	0	0	1	5	5	5	5	5	3	3	3	3	3	2
221	2	2	2	2	2	1	1	3	1	1	1	1	0	0	0	0	1	2	4	4	6	6	6	4	2	2	2	2	2
222	2	2	2	1	2	2	1	3	0	0	0	0	1	0	0	1	1	3	4	3	2	5	3	3	2	1	1	1	1

X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16	X17	X18	X19 n	X20	X21	X22	X23	X24	X25	X26	X27	X28	X29	X30
ID	Sex	Age	Edu	Live	House	Inc	Mar'l	Race	Aware	Loc	Off	News	Net	radio	Fr'd	TV	Dis'y	Ch'l	Intent	Plan	Cog1	Cog2	Aff1	Aff2	Alt1	Alt2	Alt3	SID1	SID2
223	2	2	2	1	4	2	1	3	0	1	1	0	1	0	0	0	0	1	5	5	6	6	6	6	5	5	5	5	5
224	2	1	2	1	3	1	1	3	1	0	0	0	0	0	1	0	0	1	4	5	5	5	5	4	3	3	1	2	2
225	2	1	2	2	3	1	1	3	0	0	1	0	1	0	0	0	0	1	3	4	5	5	5	4	3	3	2	2	3
226	2	1	2	2	3	1	1	3	0	0	0	0	1	0	0	0	0	1	4	4	6	6	6	4	4	3	3	3	3
227	2	1	2	2	2	1	1	3	1	0	1	0	0	0	0	0	1	1	1	1	4	3	3	2	1	1	1	1	1
228	2	2	2	2	2	1	1	3	1	1	1	0	1	0	0	0	0	1	4	4	6	6	6	4	3	3	1	5	3
229	2	2	2	2	2	3	1	3	0	1	1	0	0	0	1	0	0	1	5	4	6	6	6	6	3	3	1	1	1
230	2	1	2	2	1	1	1	2	0	0	0	0	1	0	0	0	0	1	2	4	3	4	4	3	2	6	6	1	4
231	2	1	2	1	3	1	1	3	0	1	1	0	0	0	0	1	0	1	5	4	5	5	5	5	2	3	2	2	4
232	1	1	2	2	4	1	1	3	1	1	1	1	1	0	0	1	0	3	3	3	4	4	4	3	4	3	3	3	2
233	1	1	2	2	2	1	1	3	0	1	1	1	1	0	0	1	0	3	4	4	4	4	4	4	3	4	3	2	3
234	2	1	2	1	3	2	1	3	0	1	1	0	1	0	0	0	0	1	3	3	3	3	2	2	1	1	1	1	1
235	2	1	2	1	4	2	1	3	0	0	1	0	1	0	0	0	0	1	4	2	2	3	3	1	4	4	2	4	3
236	2	2	2	2	2	1	1	3	0	0	1	0	1	0	1	0	0	2	3	3	4	3	3	4	2	2	1	2	1
237	2	1	2	1	1	1	1	3	0	0	1	0	0	0	1	0	0	1	2	1	4	3	3	3	4	4	4	3	3
238	2	2	2	1	3	2	1	3	0	1	1	1	0	0	0	1	0	2	6	6	5	3	5	5	3	6	5	4	6
239	2	1	2	2	2	3	1	3	0	0	0	0	1	0	0	0	0	1	6	4	6	6	5	5	1	2	1	2	1
240	2	1	2	1	3	1	1	3	0	1	1	0	0	0	0	1	0	1	4	3	6	6	5	4	3	2	1	2	2
241	1	2	2	2	2	2	1	3	0	0	1	0	1	0	1	0	0	2	3	3	4	6	3	3	2	4	4	4	4
242	2	1	2	1	2	2	1	3	0	1	1	0	0	1	1	0	0	2	5	4	3	3	3	2	4	4	2	3	2
243	2	1	2	1	3	1	1	3	0	1	1	0	1	0	1	0	0	2	1	1	5	4	4	3	2	2	1	1	1
244	2	1	2	1	3	1	1	3	1	0	0	0	0	0	1	0	0	1	5	5	4	4	5	5	5	2	1	1	2
245	2	1	2	2	2	1	1	3	0	1	1	0	1	0	1	0	0	2	5	5	3	4	4	3	5	6	5	3	5
246	2	2	2	1	3	1	1	3	0	1	1	0	1	1	0	0	0	2	5	5	5	5	4	3	3	3	3	3	3
247	2	2	2	1	3	3	1	3	0	1	1	0	1	0	1	1	0	3	5	5	3	3	4	4	3	5	2	4	3
248	1	2	2	1	3	1	1	3	1	0	0	0	0	0	0	0	1	1	6	6	6	6	6	4	1	1	1	1	1
249	2	2	2	1	3	2	1	3	0	1	1	1	0	0	0	0	0	1	5	4	4	5	5	5	4	2	3	4	3
250	2	2	2	1	3	2	1	3	0	1	1	0	1	1	0	0	0	2	4	4	6	6	6	5	3	3	1	2	2
251	2	2	2	2	2	2	1	3	0	1	1	0	1	0	0	0	1	2	1	2	2	2	2	2	3	2	3	3	2
252	2	2	2	2	2	1	1	3	0	1	1	0	1	0	0	0	0	1	5	5	5	5	5	5	1	3	1	1	3
253	2	2	2	2	1	1	1	3	0	1	1	0	1	0	0	0	0	1	4	6	5	4	5	4	4	3	2	3	4
254	1	2	2	1	3	3	1	3	0	1	1	0	1	0	0	0	0	1	5	5	5	5	3	3	2	2	2	1	1
255	1	2	2	2	2	1	1	3	1	0	1	1	0	0	0	0	0	1	2	4	3	3	3	3	3	3	3	2	3
256	2	1	2	1	3	2	1	3	0	1	1	1	1	1	1	0	0	4	4	5	6	5	5	5	4	2	2	2	2
257	1	2	2	1	3	1	1	3	0	0	0	1	0	0	0	0	0	1	4	4	5	4	5	6	5	4	4	5	6
258	2	2	2	2	2	2	1	2	0	1	1	1	0	0	0	0	0	1	5	4	5	5	4	4	2	2	1	1	1
259	2	1	2	2	2	1	1	3	1	1	1	0	0	1	0	0	0	1	5	5	5	5	5	6	5	5	5	5	5

X1 ID	X2 Sex	X3 Age	X4 Edu	X5 Live	X6 House	X7 Inc	X8 Mar'l	X9 Race	X10 Aware	X11 Loc	X12 Off	X13 News	X14 Net	X15 radio	X16 Fr'd	X17 TV	X18 Dis'y	X19 n Ch'l	X20 Intent	X21 Plan	X22 Cog1	X23 Cog2	X24 Aff1	X25 Aff2	X26 Alt1	X27 Alt2	X28 Alt3	X29 SID1	X30 SID 2
260	1	1	2	1	2	1	1	3	1	0	0	1	1	1	0	1	1	5	4	4	5	5	4	5	5	4	4	3	3
261	1	1		1	2	1	1	3	0	0	1	0	1	0	1	0	0	2	3	3	5	5	4	4	2	4	2	2	2
262	1	2	2	2	2	1	1	3	0	0	0	0	0	0	1	1	1	3	5	6	6	6	4	5	3	4	4	4	4
263	2	2	2	1	3	2	1	3	1	0	0	0	0	0	1	0	0	1	5	5	5	5	5	4	1	3	1	1	1
264	1	1	2	1	3	1	1	3	0	1	1	0	1	0	0	0	0	1	5	3	5	3	5	4	3	5	3	3	3
265	2	2	2	1	1	1	1	3	1	0	1	0	1	0	0	0	0	1	3	5	1	2	2	1	3	2	2	4	4
266	2	2	2	1	2	1	1	3	0	0	1	0	1	0	0	0	1	2	3	3	4	5	4	4	2	3	2	2	3
267	2	2	2	1	3	2	1	3	0	1	1	0		0	1	0	0	1	4	4	6	6	5	5	4	3	3	4	3
268	1	2	2	1	3	2	1	3	0	1	1	1	1	1	1	0	1	5	5	6	5	6	4	5	3	4	4	5	5
269	2	2	2	1	3	1	1	3	0	1	1	0	1	0	0	0	0	1	5	3	4	5	6	6	3	3	1	3	1
270	2	2	2	1	5	1	1	3	0	0	0	0	1	0	0	0	0	1	5	5	4	4	4	4	4	3	3	3	3
271	2	2	2	2	2	3	1	3	0	0	1	0	1	0	0	0	0	1	4	2	3	4	3	2	3	2	3	1	1
272	2	2	2	2	2	3	1	3	1	1	1	0	0	1	0	0	0	1	5	4	4	3	4	3	3	3	3	2	2
273	2	2	2	2	2	1	1	3	1	0	1	1	0	0	0	0	0	1	3	3	4	4	3	3	2	2	1	2	1
274	1	2	2	3	1	1	1	3	0	0	1	0	1	0	0	0	0	1	2	4	1	3	3	3	2	3	1	1	1
275	1	1	2	2	2	1	1	3	0	0	1	0	1	0	0	0	0	1	3	3	4	5	4	4	2	2	1	2	1
276	2	1	2	2	2	4	1	3	1	1	1	0	0	1	0	1	1	3	3	4	3	3	2	3	3	4	3	4	3
277	2	2	2	1	3	2	1	3	0	1	1	1	1	1	1	1	1	6	5	5	6	6	6	4	5	4	4	3	3
278	2	1	2	1	2	1	1	3	1	0	0	0	1	0	0	1	0	2	5	5	4	4	4	4	4	3	2	3	3

X1	X31	X32	X33	X34	X35	X36	X37	X38	X39	X40	X41	X42	X43	X44	X45	X46	X47	X48	X49	X50	X51	X52	X53	X54	X55	X56	X57	X58	X59	X60
ID	SID3	IjN1	IjN2	IjN3	DsN1	DsN2	DsN3	Org1	Org2	Ease	Conf	Ctrl	Prev	Freq	Cog	Aff	Alt	SID	IjN	DsN	OrgN	Att1	Att2	SN1	SN2	PBC1	PBC2	PB1	PB2	Int
1	5	4	3	6	5	4	3	1	1	6	6	6	6	4	5.5	4.5	3.34	4.67	4.34	4	1	4.4	5	3.38	4.17	0	0.5	5	6	6
2	4	5	5	5	5	5	5	5	5	6	6	6	5	2	6	5.5	4	4	5	5	5	4.7	5.75	5	5	0	0.5	3.5	5	6
3	4	5	4	4	4	5	4	4	4	5	5	5	5	3	5	5	4	4	4.34	4.34	4	4.4	5	4.25	4.34	5	2.5	4	5	5
4	1	5	5	5	5	3	4	4	4	6	6	6	5	2	5.5	5.5	1.67	1.34	5	4	4	3.1	5.5	4.38	4.5	6	3	3.5	5	4.5
5	3	4	3	3	4	4	3	3	3	4	4	3	4	2	3	3.5	3.67	3.67	3.34	3.67	3	3.5	3.25	3.38	3.5	0	0.5	3	4	4
6	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	1.5	3	3	3
7	1	2	1	1	2	2	3	1	1	5	5	6	2	1	3.5	3	1.34	1	1.34	2.34	1	2	3.25	1.63	1.84	5.34	2.67	1.5	2	2
8	1	1	1	1	2	2	1	1	1	5	4	5	4	2	4	4	3.67	1.67	1	1.67	1	3.2	4	1.25	1.34	0	0.5	3	4	5
9	3	3	2	3	4	3	2	4	3	6	6	6	5	2	4	4	1.67	2.34	2.67	3	3.5	2.8	4	3	2.84	6	3	3.5	5	3.5
10	1	3	5	3	2	4	2	1	1	6	6	6	6	3	5	5.5	1.67	1.34	3.67	2.67	1	3	5.25	2.63	3.17	0	0.5	4.5	6	6
11	4	6	6	6	6	6	6	4	4	6	6	6	6	2	6	6	4.34	4.34	6	6	4	5	6	5.5	6	0	0.5	4	6	6
12	2	6	6	6	6	5	6	4	4	6	6	6	6	4	6	6	3.34	2.34	6	5.67	4	4.1	6	5.38	5.84	6	3	5	6	6
13	3	1	1	1	3	2	3	4	4	6	5	5	3	1	6	5	3	3	1	2.67	4	4	5.5	2.38	1.84	5.34	2.67	2	3	5
14	5	6	6	6	6	6	5	6	6	6	6	6	6	3	6	5	4	4.67	6	5.67	6	4.8	5.5	5.88	5.84	6	3	4.5	6	5.5
15	4	5	5	5	5	5	5	5	5	6	6	6	5	3	4.5	5	4.34	4	5	5	5	4.4	4.75	5	5	0	0.5	4	5	4
16	4	5	4	5	6	5	6	6	5	6	6	6	5	4	5.5	5	3.34	4	4.67	5.67	5.5	4.3	5.25	5.25	5.17	6	3	4.5	5	5
17	3	4	3	3	3	3	2	3	3	4	3	3	4	2	4	3	4.34	3	3.34	2.67	3	3.6	3.5	3	3	3.34	1.67	3	4	4.5
18	1	1	3	4	2	1	1	5	4	5	5	5	1	2	2.5	2.5	3	1	2.67	1.34	4.5	2.2	2.5	2.63	2	0	0.5	1.5	1	2
19	1	3	3	2	3	2	2	1	1	5	5	5	2	1	5	4.5	2.34	2	2.67	2.34	1	3.2	4.75	2.13	2.5	0	0.5	1.5	2	5
20	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	1.5	3	3	3
21	2	5	6	6	6	6	6	6	6	6	6	6	6	2	6	6	3	2	5.67	6	6	3.9	6	5.88	5.84	6	3	4	6	6
22	2	3	3	3	3	3	3	1	2	4	4	4	4	2	5	4.5	3.67	2.67	3	3	1.5	3.8	4.75	2.63	3	4	2	3	4	3.5
23	1	2	3	3	4	3	2	5	5	6	6	6	1	2	4	2.5	2.34	1	2.67	3	5	2.3	3.25	3.38	2.84	6	3	1.5	1	1
24	3	1	1	1	1	1	1	1	1	4	3	3	2	1	2	1	4	2.34	1	1	1	2.5	1.5	1	1	0	0.5	1.5	2	3
25	1	6	6	6	6	6	6	1	1	6	6	6	6	2	6	6	1	1	6	6	1	3	6	4.75	6	6	3	4	6	6
26	2	6	5	5	5	5	4	5	5	6	6	6	1	2	5	3	2.67	2.67	5.34	4.67	5	3.2	4	5	5	0	0.5	1.5	1	3.5
27	3	1	1	1	1	2	1	3	3	5	5	5	6	2	4	5	3.34	3.34	1	1.34	3	3.8	4.5	1.63	1.17	0	0.5	4	6	5
28	2	5	5	5	3	5	5	3	2	3	4	4	4	1	6	6	2	2.67	5	4.34	2.5	3.8	6	4.13	4.67	3.67	1.835	2.5	4	6
29	3	5	5	4	4	3	2	1	1	3	4	5	3	0	3	2.5	3.67	3.34	4.67	3	1	3.2	2.75	3.13	3.84	0	0.5	1.5	3	3
30	3	1	1	1	1	1	1	1	1	6	6	6	0	1	1.5	1	3	3.67	1	1	1	2.5	1.25	1	1	0	0.5	0.5	0	1
31	2	4	3	3	4	3	4	5	5	6	6	6	5	1	5	5.5	2.34	2.67	3.34	3.67	5	3.6	5.25	3.88	3.5	0	0.5	3	5	4
32	2	5	3	2	2	5	3	4	4	6	6	6	5	2	2	2.5	2	2	3.34	3.34	4	2.1	2.25	3.5	3.34	0	0.5	3.5	5	3.5
33	2	5	5	5	3	3	2	2	2	6	6	6	5	3	5	3.5	5	1.67	5	2.67	2	3.7	4.25	3.38	3.84	6	3	4	5	6
34	4	6	4	4	5	6	5	5	5	6	6	6	6	4	6	6	2.67	3	4.67	5.34	5	4.1	6	5	5	6	3	5	6	6
35	4	4	5	5	4	5	3	4	4	5	5	5	5	2	4.5	4.5	4.67	4.67	4.67	4	4	4.6	4.5	4.25	4.34	0	0.5	3.5	5	5
36	3	3	4	4	5	3	3	1	1	4	4	4	4	2	4	3.5	1	1.67	3.67	3.67	1	2.3	3.75	3	3.67	4	2	3	4	4
37	1	5	6	4	4	5	4	3	3	6	5	6	6	3	6	4	1.67	1.67	5	4.34	3	3	5	4.25	4.67	5.67	2.835	4.5	6	5.5

X1	X31	X32	X33	X34	X35	X36	X37	X38	X39	X40	X41	X42	X43	X44	X45	X46	X47	X48	X49	X50	X51	X52	X53	X54	X55	X56	X57	X58	X59	X60
ID	SID3	IjN1	IjN2	IjN3	DsN1	DsN2	DsN3	Org1	Org2	Ease	Conf	Ctrl	Prev	Freq	Cog	Aff	Alt	SID	IjN	DsN	OrgN	Att1	Att2	SN1	SN2	PBC1	PBC2	PB1	PB2	Int
38	1	6	5	5	5	6	4	3	3	4	5	4	6	3	5	5	2	1	5.34	5	3	2.9	5	4.63	5.17	0	0.5	4.5	6	6
39	3	4	5	4	4	3	2	5	5	5	5	5	5	2	4	4	3.34	3	4.34	3	5	3.5	4	4	3.67	0	0.5	3.5	5	4
40	4	3	3	3	3	4	3	3	3	5	4	4	4	1	4	3.5	4	4	3	3.34	3	3.9	3.75	3.13	3.17	0	0.5	2.5	4	4
41	3	4	5	5	5	4	4	2	2	5	5	6	5	3	4	5	3	2.67	4.67	4.34	2	3.5	4.5	3.88	4.5	0	0.5	4	5	5
42	2	6	6	6	3	3	3	5	3	6	6	6	6	2	6	5.5	3.67	2.34	6	3	4	4.1	5.75	4.38	4.5	0	0.5	4	6	5
43	3	4	2	3	3	4	4	3	3	6	6	4	4	2	6	5	4.34	4	3	3.67	3	4.7	5.5	3.25	3.34	5.34	2.67	3	4	5
44	2	5	4	4	4	4	4	5	5	5	5	5	4	2	5	4	3.34	2.67	4.34	4	5	3.6	4.5	4.38	4.17	5	2.5	3	4	4
45	1	1	1	1	2	1	1	1	1	2	4	4	4	2	5	3	2.67	1	1	1.34	1	2.7	4	1.13	1.17	0	0.5	3	4	3.5
46	4	6	6	6	3	4	5	6	2	6	6	6	6	3	6	5	3.67	3.34	6	4	4	4.3	5.5	4.75	5	0	0.5	4.5	6	6
47	3	3	4	4	4	1	3	4	2	5	6	6	3	3	5	3.5	3.67	3	3.67	2.67	3	3.7	4.25	3.13	3.17	0	0.5	3	3	5
48	2	3	3	3	5	3	3	3	4	5	6	6	4	1	3	2	3	2	3	3.67	3.5	2.5	2.5	3.38	3.34	5.67	2.835	2.5	4	3.5
49	5	5	5	6	6	6	6	6	5	6	6	6	6	3	6	6	4.34	4.34	5.34	6	5.5	5	6	5.63	5.67	0	0.5	4.5	6	6
50	2	3	3	3	3	3	3	3	3	4	3	3	2	0	6	6	2.34	2	3	3	3	3.7	6	3	3	3.34	1.67	1	2	4
51	1	4	4	3	1	4	3	1	1	6	6	6	6	2	5	5	4	2.34	3.67	2.67	1	3.9	5	2.63	3.17	0	0.5	4	6	5
52	1	2	2	2	1	1	1	1	2	4	6	6	5	2	4.5	4.5	2.67	1	2	1	1.5	2.9	4.5	1.5	1.5	0	0.5	3.5	5	4.5
53	1	3	3	3	2	2	1	1	2	5	5	4	1	2	4	3.5	2.34	1	3	1.67	1.5	2.5	3.75	2.13	2.34	4.67	2.335	1.5	1	3.5
54	3	3	4	5	3	2	3	6	6	6	6	6	2	3	6	5.5	2.67	2.67	4	2.67	6	3.9	5.75	4	3.34	0	0.5	2.5	2	6
55	2	6	6	6	4	4	5	5	4	6	6	6	6	3	6	6	3	2.34	6	4.34	4.5	4	6	5	5.17	0	0.5	4.5	6	6
56	1	3	2	2	2	2	2	2	2	4	4	4	3	3	4	3	1.67	1	2.34	2	2	2.2	3.5	2.13	2.17	4	2	3	3	3
57	1	3	3	3	3	3	4	3	3	4	5	4	1	1	3.5	3.5	2.34	1.67	3	3.34	3	2.6	3.5	3.13	3.17	4.34	2.17	1	1	2
58	2	5	5	5	5	6	6	6	6	6	6	6	6	4	5.5	4	2.34	2	5	5.67	6	3.2	4.75	5.5	5.34	6	3	5	6	5
59	2	5	5	5	4	4	5	2	2	6	6	6	6	3	6	6	4	3	5	4.34	2	4.5	6	4	4.67	0	0.5	4.5	6	5.5
60	1	4	5	5	4	4	4	5	5	6	6	6	6	2	6	5	2	1.67	4.67	4	5	3.3	5.5	4.5	4.34	0	0.5	4	6	6
61	1	3	3	3	3	3	3	3	3	5	5	4	4	2	4	4	3	1.67	3	3	3	3	4	3	3	0	0.5	3	4	3
62	2	3	3	5	4	3	4	3	3	4	5	6	4	1	5	4	3	2.34	3.67	3.67	3	3.4	4.5	3.5	3.67	0	0.5	2.5	4	5
63	2	4	4	3	3	3	3	5	5	4	5	5	4	1	6	5	2	2	3.67	3	5	3.4	5.5	3.75	3.34	0	0.5	2.5	4	4
64	1	1	2	2	2	2	1	3	3	3	4	4	3	3	3.5	3	1.34	1	1.67	1.67	3	2	3.25	2	1.67	3.67	1.835	3	3	3.5
65	3	1	2	2	1	3	3	5	5	6	6	6	6	2	6	6	5	4	1.67	2.34	5	5.1	6	2.75	2	0	0.5	4	6	5
66	2	2	2	2	2	2	2	1	1	5	5	5	6	2	5	4.5	2.34	2	2	2	1	3.2	4.75	1.75	2	5	2.5	4	6	4.5
67	2	4	4	4	3	3	3	3	3	4	4	4	3	1	5	4.5	2.67	2.34	4	3	3	3.4	4.75	3.38	3.5	4	2	2	3	3.5
68	3	4	4	4	4	4	3	3	3	5	5	6	6	3	6	5	3.34	3	4	3.67	3	4.1	5.5	3.63	3.84	5.34	2.67	4.5	6	4
69	1	1	1	1	1	1	1	1	1	1	1	1	0	1	3.5	2.5	1	1	1	1	1	1.8	3	1	1	1	0.5	0.5	0	1
70	3	4	3	4	4	3	2	2	2	4	4	5	3	2	6	5	2.34	3.34	3.67	3	2	3.9	5.5	3	3.34	0	0.5	2.5	3	4
71	1	4	5	4	3	4	3	1	1	4	4	4	2	2	6	6	2.34	1	4.34	3.34	1	3.4	6	3.13	3.84	0	0.5	2	2	4.5
72	1	1	1	1	1	1	1	4	3	3	4	1	3	3	3	4	4.67	2.67	1	1	3.5	3.6	3.5	1.63	1	2.67	1.335	3	3	3
73	1	3	4	4	4	4	4	5	5	4	4	4	1	2	5	5	2.34	2.34	3.67	4	5	3.4	5	4.13	3.84	0	0.5	1.5	1	4.5
74	3	3	3	3	3	3	2	2	3	6	6	6	3	3	4	3.5	3.34	2.67	3	2.67	2.5	3.3	3.75	2.75	2.84	0	0.5	3	3	3

X1	X31	X32	X33	X34	X35	X36	X37	X38	X39	X40	X41	X42	X43	X44	X45	X46	X47	X48	X49	X50	X51	X52	X53	X54	X55	X56	X57	X58	X59	X60
ID	SID3	IjN1	IjN2	IjN3	DsN1	DsN2	DsN3	Org1	Org2	Ease	Conf	Ctrl	Prev	Freq	Cog	Aff	Alt	SID	IjN	DsN	OrgN	Att1	Att2	SN1	SN2	PBC1	PBC2	PB1	PB2	Int
75	3	4	4	4	4	4	4	2	2	6	6	6	6	1	4	4	3.34	2.67	4	4	2	3.4	4	3.5	4	0	0.5	3.5	6	4
76	1	3	3	3	3	3	2	2	2	4	5	5	4	3	2	3	1	1	3	2.67	2	1.6	2.5	2.63	2.84	0	0.5	3.5	4	3
77	2	2	2	2	2	2	2	2	2	3	4	4	3	3	2	2	3.34	3	2	2	2	2.7	2	2	2	3.67	1.835	3	3	3
78	1	3	3	3	3	3	3	3	3	3	4	3	3	3	3.5	3.5	1.67	1.34	3	3	3	2.3	3.5	3	3	3.34	1.67	3	3	3
79	3	1	1	2	2	1	1	1	1	6	5	5	1	1	3	3.5	4	3	1.34	1.34	1	3.4	3.25	1.25	1.34	5.34	2.67	1	1	1.5
80	5	3	4	4	4	4	4	2	2	6	6	6	5	3	4	5	4.67	4.67	3.67	4	2	4.6	4.5	3.38	3.84	0	0.5	4	5	6
81	1	4	4	4	4	4	4	5	5	5	5	5	1	2	6	5	1.34	1.34	4	4	5	3	5.5	4.25	4	5	2.5	1.5	1	5
82	2	2	3	4	4	3	3	2	2	5	5	5	1	1	2	2.5	2	1.67	3	3.34	2	2	2.25	2.88	3.17	0	0.5	1	1	3.5
83	4	4	4	4	3	3	3	3	3	4	4	5	4	2	4.5	3.5	3.34	4	4	3	3	3.8	4	3.38	3.5	4.34	2.17	3	4	3
84	2	3	3	2	2	2	2	2	2	5	5	4	2	1	3	2.5	3.34	2	2.67	2	2	2.7	2.75	2.25	2.34	0	0.5	1.5	2	4.5
85	1	1	2	2	1	1	1	2	2	4	5	6	1	1	4	4	1.67	1	1.67	1	2	2.4	4	1.5	1.34	0	0.5	1	1	1
86	1	2	2	2	2	2	1	4	4	6	6	6	2	1	4.5	4.5	2.67	1.34	2	1.67	4	3	4.5	2.38	1.84	6	3	1.5	2	5
87	4	5	6	5	4	4	5	2	1	6	6	6	6	2	6	5.5	5.34	4	5.34	4.34	1.5	5.1	5.75	4	4.84	0	0.5	4	6	5
88	2	3	4	5	5	5	5	4	3	5	5	5	5	2	5	3.5	3	2.67	4	5	3.5	3.4	4.25	4.25	4.5	0	0.5	3.5	5	5
89	2	5	5	4	4	5	4	2	3	6	6	6	6	3	4	3	3.34	3	4.67	4.34	2.5	3.3	3.5	4	4.5	0	0.5	4.5	6	5
90	1	5	4	2	6	6	6	3	3	6	6	6	6	2	6	5.5	1	1	3.67	6	3	2.9	5.75	4.38	4.84	6	3	4	6	6
91	2	5	5	5	3	3	3	3	3	5	5	4	2	1	4.5	5	3	2.67	5	3	3	3.6	4.75	3.75	4	0	0.5	1.5	2	4.5
92	1	5	5	5	6	5	5	3	2	6	6	6	6	3	6	5.5	2.34	1.67	5	5.34	2.5	3.5	5.75	4.5	5.17	0	0.5	4.5	6	4
93	2	2	2	3	2	2	3	1	2	6	6	6	1	4	2.5	2.5	2.34	2.67	2.34	2.34	1.5	2.5	2.5	2.13	2.34	0	0.5	2.5	1	1.5
94	1	3	4	5	5	3	3	3	4	5	5	6	1	3	5	5	1.67	1.67	4	3.67	3.5	3	5	3.75	3.84	0	0.5	2	1	5
95	2	3	2	2	2	2	2	2	2	6	6	6	2	2	4.5	4.5	3	3	2.34	2	2	3.6	4.5	2.13	2.17	0	0.5	2	2	5
96	1	3	4	3	3	3	3	2	2	5	6	6	6	2	5	3	2	1	3.34	3	2	2.5	4	2.88	3.17	0	0.5	4	6	5
97	2	3	3	3	3	3	3	3	3	6	6	6	3	3	3	3	3	2.34	3	3	3	2.8	3	3	3	0	0.5	3	3	3
98	2	4	5	5	4	5	5	4	5	5	5	5	5	2	5.5	5	2.67	2	4.67	4.67	4.5	3.5	5.25	4.63	4.67	0	0.5	3.5	5	4.5
99	5	2	2	2	3	3	2	3	3	5	5	4	6	3	4.5	5.5	4.34	5.34	2	2.67	3	4.9	5	2.5	2.34	4.67	2.335	4.5	6	4
100	1	3	3	3	5	3	4	4	4	5	5	6	4	2	5	4	1.67	1	3	4	4	2.6	4.5	3.63	3.5	0	0.5	3	4	4.5
101	5	5	5	5	5	5	5	5	5	5	6	6	5	3	5	5.5	5	5	5	5	5	5.1	5.25	5	5	0	0.5	4	5	5
102	3	4	4	4	4	3	3	5	5	6	6	6	5	2	5	4	4.34	3	4	3.34	5	4	4.5	4	3.67	6	3	3.5	5	4
103	1	2	2	2	1	2	3	1	2	5	5	5	4	2	5	4	2.67	1.67	2	2	1.5	3.1	4.5	1.88	2	5	2.5	3	4	3
104	3	3	5	5	3	3	4	5	5	6	6	5	5	2	6	4.5	3.67	3.67	4.34	3.34	5	4.3	5.25	4.13	3.84	5.67	2.835	3.5	5	5.5
105	1	3	3	3	4	3	4	3	3	3	4	4	1	1	5	4.5	1.67	1	3	3.67	3	2.7	4.75	3.25	3.34	3.67	1.835	1	1	5
106	3	3	3	3	3	4	3	4	4	5	5	6	5	3	4	4.5	3.67	3	3	3.34	4	3.7	4.25	3.38	3.17	0	0.5	4	5	4
107	3	3	3	3	3	3	4	1	1	5	5	5	6	2	5	5	2.34	3.67	3	3.34	1	3.8	5	2.63	3.17	5	2.5	4	6	4
108	2	1	1	2	2	2	1	2	2	3	4	5	4	3	4.5	4	2.34	2	1.34	1.67	2	3	4.25	1.63	1.5	4	2	3.5	4	3
109	3	5	5	5	5	4	4	3	4	5	4	5	4	2	6	5	3.34	3.34	5	4.34	3.5	4.2	5.5	4.38	4.67	0	0.5	3	4	4
110	4	4	4	5	4	2	3	1	1	4	5	5	6	3	5.5	4.5	3.67	4.67	4.34	3	1	4.5	5	3	3.67	0	0.5	4.5	6	5.5
111	1	4	4	6	6	4	4	4	4	6	6	6	3	1	4.5	6	2.34	1.67	4.67	4.67	4	3.3	5.25	4.5	4.67	0	0.5	2	3	4

X1	X31	X32	X33	X34	X35	X36	X37	X38	X39	X40	X41	X42	X43	X44	X45	X46	X47	X48	X49	X50	X51	X52	X53	X54	X55	X56	X57	X58	X59	X60
ID	SID3	IjN1	IjN2	IjN3	DsN1	DsN2	DsN3	Org1	Org2	Ease	Conf	Ctrl	Prev	Freq	Cog	Aff	Alt	SID	IjN	DsN	OrgN	Att1	Att2	SN1	SN2	PBC1	PBC2	PB1	PB2	Int
112	3	3	4	5	6	4	4	3	3	4	4	4	4	2	4	4	3.34	3	4	4.67	3	3.5	4	4	4.34	4	2	3	4	5
113	1	3	3	3	3	3	3	3	3	5	5	5	4	2	3.5	2.5	2.67	1	3	3	3	2.3	3	3	3	0	0.5	3	4	3
114	3	2	3	3	3	3	3	3	3	3	3	4	3	1	3.5	3.5	3	2.34	2.67	3	3	3	3.5	2.88	2.84	0	0.5	2	3	4.5
115	1	3	2	2	3	2	3	3	4	4	3	3	4	3	4	3	1.67	1.34	2.34	2.67	3.5	2.3	3.5	2.75	2.5	3.34	1.67	3.5	4	3
116	1	3	3	3	3	3	3	1	1	3	4	5	1	1	2	3	2	1	3	3	1	1.9	2.5	2.5	3	4	2	1	1	3
117	1	3	3	3	3	3	3	2	2	3	3	3	1	3	4.5	4	1.67	1.34	3	3	2	2.6	4.25	2.75	3	3	1.5	2	1	3
118	2	3	4	3	3	2	4	4	4	4	4	4	1	2	4	3.5	2	2.34	3.34	3	4	2.8	3.75	3.38	3.17	4	2	1.5	1	2
119	3	2	3	3	3	1	1	4	4	4	4	4	4	2	5	3	3	3	2.67	1.67	4	3.4	4	2.63	2.17	4	2	3	4	4.5
120	2	2	3	3	3	3	3	2	2	5	5	4	4	2	5	3.5	3	2.34	2.67	3	2	3.3	4.25	2.63	2.84	0	0.5	3	4	5
121	1	3	3	3	3	3	3	3	3	5	5	5	2	2	4	3.5	3	1.67	3	3	3	2.9	3.75	3	3	0	0.5	2	2	4
122	3	5	5	5	5	5	5	6	5	4	4	4	4	1	2.5	2.5	3.34	3.34	5	5	5.5	3	2.5	5.13	5	0	0.5	2.5	4	3.5
123	2	3	4	4	5	4	3	2	2	4	4	4	5	1	6	5	4.34	2.67	3.67	4	2	4.3	5.5	3.38	3.84	0	0.5	3	5	5
124	1	5	4	4	4	5	3	4	4	4	5	4	6	2	4	4	3	2.34	4.34	4	4	3.2	4	4.13	4.17	4.34	2.17	4	6	5
125	1	3	3	3	1	3	3	2	1	3	3	3	4	2	4.5	4.5	2	1.34	3	2	1.5	2.8	4.5	2.29	2.6	0	0.5	3	4	4.5
126	4	4	4	4	3	3	3	5	5	5	6	6	6	3	6	5.5	4	4	4	3	5	4.7	5.75	3.88	3.5	5.67	2.835	4.5	6	5
127	1	5	4	4	4	4	3	5	5	4	4	4	3	2	5	4.5	2.34	1.67	4.34	3.67	5	3.1	4.75	4.25	4	4	2	2.5	3	4
128	1	4	4	3	3	3	3	2	2	5	5	4	5	2	5	5	1.67	1	3.67	3	2	2.8	5	3	3.34	0	0.5	3.5	5	5
129	1	3	3	3	2	2	1	1	1	6	6	6	1	1	2	1	2.34	1.34	3	1.67	1	1.7	1.5	2	2.34	6	3	1	1	1
130	1	3	4	4	4	4	4	5	5	3	4	4	3	2	4.5	3	3.34	1.34	3.67	4	5	2.9	3.75	4.13	3.84	0	0.5	2.5	3	3.5
131	1	1	1	1	3	2	4	4	4	3	4	6	4	3	5	4.5	1.67	1.67	1	3	4	2.9	4.75	2.5	2	0	0.5	3.5	4	3
132	2	3	4	3	3	2	3	3	3	4	5	6	5	3	4.5	4	3	2	3.34	2.67	3	3.2	4.25	3	3	5	2.5	4	5	4.5
133	2	4	4	6	5	5	5	4	4	6	6	5	6	2	5.5	5	2.67	2	4.67	5	4	3.5	5.25	4.63	4.84	5.67	2.835	4	6	4.5
134	2	2	2	2	2	2	2	2	2	5	4	4	2	2	2.5	3	2.34	2	2	2	2	2.4	2.75	2	2	4.34	2.17	2	2	3
135	3	2	4	3	3	3	4	3	3	4	4	4	3	3	5	3.5	2.67	3	3	3.34	3	3.4	4.25	3.13	3.17	4	2	3	3	3
136	4	6	3	4	5	4	3	1	1	6	6	6	6	4	5.5	4.5	3.34	4.67	4.34	4	1	4.4	5	3.38	4.17	0	0.5	5	6	6
137	4	5	5	5	5	5	5	5	5	6	6	6	5	2	6	5.5	4	4	5	5	5	4.7	5.75	5	5	0	0.5	3.5	5	6
138	4	5	4	4	4	5	4	4	4	5	5	5	5	3	5	5	4	4	4.34	4.34	4	4.4	5	4.25	4.34	5	2.5	4	5	5
139	1	5	5	5	4	3	5	4	4	6	6	6	5	3	5.5	5.5	1.67	1.34	5	4	4	3.1	5.5	4.38	4.5	6	3	4	5	4.5
140	3	4	3	3	4	4	3	3	3	4	4	3	4	2	3	3.5	3.67	3.67	3.34	3.67	3	3.5	3.25	3.38	3.5	0	0.5	3	4	4
141	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	1.5	3	3	3
142	1	2	1	1	1	3	3	1	1	5	5	6	2	1	3.5	3	1.34	1	1.34	2.34	1	2	3.25	1.63	1.84	5.34	2.67	1.5	2	2
143	1	1	1	1	2	2	1	1	1	5	4	5	4	3	4	4	3.67	1.67	1	1.67	1	3.2	4	1.25	1.34	0	0.5	3.5	4	5
144	1	3	2	3	4	4	1	4	3	6	6	6	4	2	3	5	1.67	2.34	2.67	3	3.5	2.8	4	3	2.84	6	3	3	4	3.5
145	1	2	5	4	3	3	2	1	1	6	6	6	6	3	5	5.5	1.67	1.34	3.67	2.67	1	3	5.25	2.63	3.17	0	0.5	4.5	6	6
146	4	6	6	6	6	6	6	4	4	6	6	6	6	2	6	6	4.34	4.34	6	6	4	5	6	5.5	6	0	0.5	4	6	6
147	1	6	6	6	6	5	6	4	4	6	6	6	6	4	6	6	3.34	2.34	6	5.67	4	4.1	6	5.38	5.84	6	3	5	6	6
148	3	1	1	1	3	2	3	4	4	6	5	5	3	1	6	5	3	3	1	2.67	4	4	5.5	2.38	1.84	5.34	2.67	2	3	5

X1	X31	X32	X33	X34	X35	X36	X37	X38	X39	X40	X41	X42	X43	X44	X45	X46	X47	X48	X49	X50	X51	X52	X53	X54	X55	X56	X57	X58	X59	X60
ID	SID3	IjN1	IjN2	IjN3	DsN1	DsN2	DsN3	Org1	Org2	Ease	Conf	Ctrl	Prev	Freq	Cog	Aff	Att	SID	IjN	DsN	OrgN	Att1	Att2	SN1	SN2	PBC1	PBC2	PB1	PB2	Int
149	5	6	6	6	6	6	5	6	6	6	6	6	6	3	6	5	4	4.67	6	5.67	6	4.8	5.5	5.88	5.84	6	3	4.5	6	5.5
150	5	5	5	5	5	5	5	5	5	6	6	6	5	3	4.5	5	4.34	4	5	5	5	4.4	4.75	5	5	0	0.5	4	5	4
151	4	5	4	5	6	5	6	6	5	6	6	6	5	4	5.5	5	3.34	4	4.67	5.67	5.5	4.3	5.25	5.25	5.17	6	3	4.5	5	5
152	3	4	3	3	3	3	2	3	3	3	4	3	4	2	4	3	4.34	3	3.34	2.67	3	3.6	3.5	3	3	3.34	1.67	3	4	4.5
153	1	2	3	3	2	1	1	5	4	5	5	5	2	1	2.5	2.5	3	1	2.67	1.34	4.5	2.2	2.5	2.63	2	0	0.5	1.5	2	2
154	1	2	3	3	3	2	2	1	1	5	5	5	2	1	5	4.5	2.34	2	2.67	2.34	1	3.2	4.75	2.13	2.5	0	0.5	1.5	2	5
155	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	1.5	3	3	3
156	1	5	6	6	6	6	6	6	6	6	6	6	6	2	6	6	3	2	5.67	6	6	3.9	6	5.88	5.84	6	3	4	6	6
157	2	3	3	3	3	3	3	1	2	4	4	4	3	1	5	4.5	3.67	2.67	3	3	1.5	3.8	4.75	2.63	3	4	2	2	3	3.5
158	1	4	1	3	3	3	3	5	5	6	6	6	1	2	4	2.5	2.34	1	2.67	3	5	2.3	3.25	3.38	2.84	6	3	1.5	1	1
159	3	1	1	1	1	1	1	1	1	5	4	1	2	1	1.5	1.5	4	2.34	1	1	1	2.5	1.5	1	1	0	0.5	1.5	2	3
160	1	6	6	6	6	6	6	1	1	6	6	6	6	2	6	6	1	1	6	6	1	3	6	4.75	6	6	3	4	6	6
161	2	6	5	5	5	5	4	5	5	6	6	6	1	2	4	4	2.67	2.67	5.34	4.67	5	3.2	4	5	5	0	0.5	1.5	1	3.5
162	3	1	1	1	1	2	1	3	3	5	5	5	6	2	4	5	3.34	3.67	1	1.34	3	3.9	4.5	1.63	1.17	0	0.5	4	6	5
163	2	5	6	4	3	5	5	3	2	3	4	4	4	1	6	6	2	2.67	5	4.34	2.5	3.8	6	4.13	4.67	3.67	1.835	2.5	4	6
164	3	6	4	4	4	4	1	1	1	4	3	5	3	0	2.5	3	3.67	3.34	4.67	3	1	3.2	2.75	3.13	3.84	0	0.5	1.5	3	3
165	3	1	1	1	1	1	1	1	1	6	6	6	1	1	1.5	1.5	3	3.67	1	1	1	2.6	1.5	1	1	0	0.5	1	1	1
166	2	4	3	3	4	3	4	5	5	6	6	6	5	1	5.5	5	2.34	2.67	3.34	3.67	5	3.6	5.25	3.88	3.5	0	0.5	3	5	4
167	2	4	3	3	3	4	3	4	4	6	6	6	6	4	5.5	5	2	2	3.34	3.34	4	3.3	5.25	3.5	3.34	0	0.5	5	6	3.5
168	2	5	5	5	5	1	2	2	2	6	6	6	5	3	5	3.5	5	1.67	5	2.67	2	3.7	4.25	3.38	3.84	6	3	4	5	6
169	4	6	4	4	5	6	5	5	5	6	6	6	6	4	6	6	2.67	3	4.67	5.34	5	4.1	6	5	5	6	3	5	6	6
170	4	4	5	5	4	4	4	4	4	5	5	5	5	2	4.5	4.5	4.67	4.67	4.67	4	4	4.6	4.5	4.25	4.34	0	0.5	3.5	5	5
171	3	3	3	5	5	3	3	1	1	4	4	4	4	2	4	3.5	1	1.67	3.67	3.67	1	2.3	3.75	3	3.67	4	2	3	4	4
172	1	5	6	4	4	5	4	3	3	6	5	6	6	3	5.5	4.5	1.67	1.67	5	4.34	3	3	5	4.25	4.67	5.67	2.835	4.5	6	5.5
173	1	6	5	5	5	5	5	3	3	4	5	4	6	3	6	4	2	1	5.34	5	3	2.9	5	4.63	5.17	0	0.5	4.5	6	6
174	3	4	5	4	4	4	1	5	5	5	5	5	5	2	3.5	4.5	3.34	3	4.34	3	5	3.5	4	4	3.67	0	0.5	3.5	5	4
175	3	3	3	3	3	4	3	3	3	5	5	3	4	1	4	3.5	4	4	3	3.34	3	3.9	3.75	3.13	3.17	0	0.5	2.5	4	4
176	2	4	5	5	5	3	5	2	2	5	5	6	5	3	4	5	3	2.67	4.67	4.34	2	3.5	4.5	3.88	4.5	0	0.5	4	5	5
177	1	6	6	6	3	3	3	4	4	6	6	6	6	2	6	5.5	3.67	2.34	6	3	4	4.1	5.75	4.38	4.5	0	0.5	4	6	5
178	4	4	2	3	3	4	4	3	3	6	6	4	4	2	6	5	4.34	4	3	3.67	3	4.7	5.5	3.25	3.34	5.34	2.67	3	4	5
179	2	5	4	4	4	4	4	5	5	5	5	5	4	2	5	4	3.34	2.67	4.34	4	5	3.6	4.5	4.38	4.17	5	2.5	3	4	4
180	1	1	1	1	2	1	1	1	1	2	2	6	4	3	5	3	2.67	1	1	1.34	1	2.7	4	1.13	1.17	0	0.5	3.5	4	3.5
181	4	6	6	6	3	3	5	4	4	6	6	6	6	3	6	5.5	3.67	3.34	6	3.67	4	4.4	5.75	4.63	4.84	0	0.5	4.5	6	6
182	2	2	5	4	2	3	3	4	2	5	6	6	3	3	5	3.5	3.67	3	3.67	2.67	3	3.7	4.25	3.13	3.17	0	0.5	3	3	5
183	2	3	3	3	5	3	3	3	4	5	6	6	4	1	2	3	3	2	3	3.67	3.5	2.5	2.5	3.38	3.34	5.67	2.835	2.5	4	3.5
184	5	5	5	6	6	6	6	6	5	6	6	6	6	3	6	6	4.34	4.34	5.34	6	5.5	5	6	5.63	5.67	0	0.5	4.5	6	6
185	2	3	3	3	3	3	3	3	3	4	4	2	2	0	6	6	2.34	2	3	3	3	3.7	6	3	3	3.34	1.67	1	2	4

X1	X31	X32	X33	X34	X35	X36	X37	X38	X39	X40	X41	X42	X43	X44	X45	X46	X47	X48	X49	X50	X51	X52	X53	X54	X55	X56	X57	X58	X59	X60
ID	SID3	IjN1	IjN2	IjN3	DsN1	DsN2	DsN3	Org1	Org2	Ease	Conf	Ctrl	Prev	Freq	Cog	Aff	Alt	SID	IjN	DsN	OrgN	Att1	Att2	SN1	SN2	PBC1	PBC2	PB1	PB2	Int
186	1	5	3	3	3	4	1	1	1	6	6	6	6	2	5	5	4	2.34	3.67	2.67	1	3.9	5	2.63	3.17	0	0.5	4	6	5
187	1	2	2	2	1	1	1	1	2	5	5	6	4	3	4.5	4.5	2.67	1	2	1	1.5	2.9	4.5	1.5	1.5	0	0.5	3.5	4	4.5
188	1	3	3	3	3	1	1	1	2	5	5	4	1	2	4	3.5	2.34	1	3	1.67	1.5	2.5	3.75	2.13	2.34	4.67	2.335	1.5	1	3.5
189	1	3	4	5	3	2	3	2	3	6	6	6	2	3	1.5	1.5	2.34	1.67	4	2.67	2.5	1.8	1.5	3.13	3.34	0	0.5	2.5	2	2
190	2	2	2	2	2	2	2	2	3	6	6	6	6	1	2	2.5	2	2.34	2	2	2.5	2.2	2.25	2.13	2	0	0.5	3.5	6	2.5
191	1	3	2	2	2	2	2	2	2	4	4	4	3	2	4	3	1.67	1	2.34	2	2	2.2	3.5	2.13	2.17	4	2	2.5	3	3
192	1	3	3	3	3	3	4	3	3	4	5	4	1	1	3.5	3.5	2.34	1.67	3	3.34	3	2.6	3.5	3.13	3.17	4.34	2.17	1	1	2
193	2	5	5	5	5	6	6	6	6	6	6	6	6	4	5.5	4	2.34	2	5	5.67	6	3.2	4.75	5.5	5.34	6	3	5	6	5
194	1	4	5	5	4	4	4	4	6	6	6	6	6	2	6	5	2	1.67	4.67	4	5	3.3	5.5	4.5	4.34	0	0.5	4	6	6
195	3	5	5	5	3	5	5	2	2	6	6	6	6	3	6	6	4	3	5	4.34	2	4.5	6	4	4.67	0	0.5	4.5	6	5.5
196	1	3	6	5	6	2	4	5	5	6	6	6	6	2	6	5	2	1.67	4.67	4	5	3.3	5.5	4.5	4.34	0	0.5	4	6	6
197	2	5	5	4	4	4	4	4	3	5	5	5	5	4	5	5	4	3	4.67	4	3.5	4.1	5	4.13	4.34	5	2.5	4.5	5	5
198	3	3	3	3	3	2	2	3	3	3	3	3	5	2	5.5	5	4.67	3	3	2.34	3	4.4	5.25	2.75	2.67	0	0.5	3.5	5	6
199	2	4	5	3	3	4	6	6	5	6	6	6	6	3	5.5	5	4	2	4	4.34	5.5	3.9	5.25	4.5	4.17	6	3	4.5	6	5
200	2	5	4	4	4	5	4	4	4	6	6	6	6	4	6	6	2.34	2	4.34	4.34	4	3.7	6	4.25	4.34	0	0.5	5	6	6
201	1	4	5	5	5	4	5	5	5	6	6	4	4	3	4.5	4.5	2	1.34	4.67	4.67	5	2.8	4.5	4.75	4.67	0	0.5	3.5	4	5
202	5	5	5	4	4	6	5	1	1	5	5	5	5	3	4	5	4	4.67	4.67	5	1	4.4	4.5	3.88	4.84	5	2.5	4	5	5
203	3	5	5	5	5	4	3	5	5	6	4	3	6	3	6	5	2.67	2.67	5	4	5	3.8	5.5	4.63	4.5	4.34	2.17	4.5	6	5
204	4	5	5	5	5	5	6	5	5	6	6	6	5	4	6	5	4	4.67	5	5.34	5	4.8	5.5	5.13	5.17	6	3	4.5	5	5
205	1	6	6	6	6	6	6	5	5	6	6	6	6	4	6	5.5	1	1	6	6	5	2.9	5.75	5.75	6	0	0.5	5	6	6
206	3	5	5	6	5	5	6	6	6	5	5	5	6	2	4	3.5	1.34	2	5.34	5.34	6	2.5	3.75	5.5	5.34	5	2.5	4	6	6
207	2	5	5	5	5	4	4	5	4	5	6	6	5	3	6	5	1.67	2	5	4.34	4.5	3.3	5.5	4.63	4.67	5.67	2.835	4	5	5.5
208	1	5	4	3	3	4	4	4	5	5	6	6	6	2	4.5	3.5	1.34	1	4	3.67	4.5	2.3	4	4	3.84	5.67	2.835	4	6	6
209	1	5	4	4	5	5	5	4	5	6	6	6	3	3	6	5.5	1.34	1	4.34	5	4.5	3	5.75	4.63	4.67	6	3	3	3	1
210	3	4	4	6	4	4	6	5	5	5	5	4	2	2	2	2	3.67	3	4.67	4.67	5	2.8	2	4.75	4.67	4.67	2.335	2	2	2
211	1	5	5	4	6	6	6	3	3	6	6	6	6	4	6	6	2	1.67	4.67	6	3	3.5	6	4.75	5.34	6	3	5	6	6
212	3	4	5	4	6	4	4	3	3	5	5	4	4	2	5	4	3.67	3	4.34	4.67	3	3.8	4.5	4.13	4.5	4.67	2.335	3	4	5
213	1	1	1	1	1	1	1	1	1	5	5	5	3	2	2	2	3.67	1	1	1	1	2.2	2	1	1	5	2.5	2.5	3	3.5
214	3	4	5	4	3	2	3	2	3	3	3	4	4	3	4	3.5	3.67	3.67	4.34	2.67	2.5	3.7	3.75	3.25	3.5	0	0.5	3.5	4	3
215	3	6	5	5	5	6	5	4	4	6	6	6	6	4	5	5	3	3.34	5.34	5.34	4	3.9	5	5	5.34	6	3	5	6	6
216	2	4	4	4	4	4	4	4	4	6	6	6	6	3	6	5	4	1.67	4	4	4	3.9	5.5	4	4	6	3	4.5	6	5
217	1	5	4	3	3	5	4	3	3	5	5	4	4	1	6	5.5	3	1.34	4	4	3	3.6	5.75	3.75	4	4.67	2.335	2.5	4	4.5
218	3	4	4	6	5	5	3	1	1	6	5	5	6	2	6	5.5	3.34	3.34	4.67	4.34	1	4.3	5.75	3.63	4.5	5.34	2.67	4	6	6
219	1	3	3	3	3	3	3	3	3	5	5	4	4	2	4	4	3	1.67	3	3	3	3	4	3	3	0	0.5	3	4	3
220	2	3	4	4	4	2	5	4	2	3	6	6	4	1	5	4	3	2.34	3.67	3.67	3	3.4	4.5	3.5	3.67	0	0.5	2.5	4	5
221	2	4	4	3	3	3	3	5	5	4	5	5	4	1	6	5	2	2	3.67	3	5	3.4	5.5	3.75	3.34	0	0.5	2.5	4	4
222	1	1	2	2	2	2	1	2	4	1	5	5	3	3	3.5	3	1.34	1	1.67	1.67	3	2	3.25	2	1.67	3.67	1.835	3	3	3.5

X1	X31	X32	X33	X34	X35	X36	X37	X38	X39	X40	X41	X42	X43	X44	X45	X46	X47	X48	X49	X50	X51	X52	X53	X54	X55	X56	X57	X58	X59	X60
ID	SID3	IjN1	IjN2	IjN3	DsN1	DsN2	DsN3	Org1	Org2	Ease	Conf	Ctrl	Prev	Freq	Cog	Aff	Alt	SID	IjN	DsN	OrgN	Att1	Att2	SN1	SN2	PBC1	PBC2	PB1	PB2	Int
223	2	1	2	2	3	1	3	5	5	6	6	6	6	2	6	6	5	4	1.67	2.34	5	5.1	6	2.75	2	0	0.5	4	6	5
224	2	2	2	2	2	2	2	1	1	5	5	5	6	2	5	4.5	2.34	2	2	2	1	3.2	4.75	1.75	2	5	2.5	4	6	4.5
225	2	4	4	4	3	3	3	3	3	4	4	4	3	1	5	4.5	2.67	2.34	4	3	3	3.4	4.75	3.38	3.5	4	2	2	3	3.5
226	3	4	4	4	4	4	3	3	3	6	4	6	6	3	6	5	3.34	3	4	3.67	3	4.1	5.5	3.63	3.84	5.34	2.67	4.5	6	4
227	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3.5	2.5	1	1	1	1	1	1.8	3	1	1	1	0.5	1	1	1
228	2	4	3	4	4	3	2	2	2	3	5	5	3	2	6	5	2.34	3.34	3.67	3	2	3.9	5.5	3	3.34	0	0.5	2.5	3	4
229	1	4	5	4	5	4	1	1	1	4	4	4	2	2	6	6	2.34	1	4.34	3.34	1	3.4	6	3.13	3.84	0	0.5	2	2	4.5
230	3	1	1	1	1	1	1	6	1	1	4	3	3	3	3.5	3.5	4.67	2.67	1	1	3.5	3.6	3.5	1.63	1	2.67	1.335	3	3	3
231	1	3	4	4	4	3	5	5	5	4	4	4	1	2	5	5	2.34	2.34	3.67	4	5	3.4	5	4.13	3.84	0	0.5	1.5	1	4.5
232	3	3	3	3	3	3	2	2	3	6	6	6	3	3	4	3.5	3.34	2.67	3	2.67	2.5	3.3	3.75	2.75	2.84	0	0.5	3	3	3
233	3	4	4	4	4	4	4	2	2	6	6	6	6	1	4	4	3.34	2.67	4	4	2	3.4	4	3.5	4	0	0.5	3.5	6	4
234	1	3	3	3	3	3	2	2	2	4	5	5	4	3	3	2	1	1	3	2.67	2	1.6	2.5	2.63	2.84	0	0.5	3.5	4	3
235	2	2	2	2	2	2	2	2	2	3	4	4	3	3	2.5	2	3.34	3	2	2	2	2.8	2.25	2	2	3.67	1.835	3	3	3
236	1	3	3	3	3	3	3	3	3	3	4	3	3	4	3.5	3.5	1.67	1.34	3	3	3	2.3	3.5	3	3	3.34	1.67	3.5	3	3
237	3	1	1	2	2	1	1	1	1	6	4	6	1	1	3.5	3	4	3	1.34	1.34	1	3.4	3.25	1.25	1.34	5.34	2.67	1	1	1.5
238	4	3	4	4	4	3	5	3	1	6	6	6	5	3	4	5	4.67	4.67	3.67	4	2	4.6	4.5	3.38	3.84	0	0.5	4	5	6
239	1	4	4	4	4	4	4	5	5	5	5	5	1	2	6	5	1.34	1.34	4	4	5	3	5.5	4.25	4	5	2.5	1.5	1	5
240	1	2	3	4	4	3	3	2	2	5	5	5	1	1	6	4.5	2	1.67	3	3.34	2	3.2	5.25	2.88	3.17	0	0.5	1	1	3.5
241	4	4	4	4	3	3	3	3	3	4	4	5	4	2	5	3	3.34	4	4	3	3	3.8	4	3.38	3.5	4.34	2.17	3	4	3
242	1	3	3	2	2	2	2	3	1	5	5	4	2	1	3	2.5	3.34	2	2.67	2	2	2.7	2.75	2.25	2.34	0	0.5	1.5	2	4.5
243	1	1	2	2	1	1	1	2	2	4	5	6	1	1	4.5	3.5	1.67	1	1.67	1	2	2.4	4	1.5	1.34	0	0.5	1	1	1
244	1	2	2	2	2	2	1	6	2	6	6	6	2	1	4	5	2.67	1.34	2	1.67	4	3	4.5	2.38	1.84	6	3	1.5	2	5
245	4	5	6	5	4	4	5	2	1	6	6	6	6	2	3.5	3.5	5.34	4	5.34	4.34	1.5	4.2	3.5	4	4.84	0	0.5	4	6	5
246	2	3	4	5	5	5	5	4	3	5	5	5	5	3	5	3.5	3	2.67	4	5	3.5	3.4	4.25	4.25	4.5	0	0.5	4	5	5
247	2	5	5	4	4	5	4	2	3	6	6	6	6	3	3	4	3.34	3	4.67	4.34	2.5	3.3	3.5	4	4.5	0	0.5	4.5	6	5
248	1	4	3	4	6	6	6	3	3	6	6	6	6	2	6	5	1	1	3.67	6	3	2.8	5.5	4.38	4.84	6	3	4	6	6
249	1	5	5	5	3	3	3	3	3	5	5	4	2	1	4.5	5	3	2.67	5	3	3	3.6	4.75	3.75	4	0	0.5	1.5	2	4.5
250	1	5	5	5	6	5	5	3	2	6	6	6	6	3	6	5.5	2.34	1.67	5	5.34	2.5	3.5	5.75	4.5	5.17	0	0.5	4.5	6	4
251	2	1	2	2	3	2	2	2	1	6	6	6	1	4	2	2	2.67	2.34	1.67	2.34	1.5	2.3	2	1.88	2	0	0.5	2.5	1	1.5
252	1	4	4	4	5	1	5	5	2	5	5	6	1	3	5	5	1.67	1.67	4	3.67	3.5	3	5	3.75	3.84	0	0.5	2	1	5
253	2	3	2	2	2	2	2	2	2	6	6	6	2	2	4.5	4.5	3	3	2.34	2	2	3.6	4.5	2.13	2.17	0	0.5	2	2	5
254	1	3	4	3	3	4	2	2	2	5	6	6	6	2	5	3	2	1	3.34	3	2	2.5	4	2.88	3.17	0	0.5	4	6	5
255	2	3	3	3	3	3	3	3	3	6	6	6	3	3	3	3	3	2.34	3	3	3	2.8	3	3	3	6	3	3	3	3
256	2	4	5	5	4	5	5	4	5	5	5	5	5	2	5.5	5	2.67	2	4.67	4.67	4.5	3.5	5.25	4.63	4.67	0	0.5	3.5	5	4.5
257	5	2	2	2	2	4	2	3	3	6	4	4	6	3	4.5	5.5	4.34	5.34	2	2.67	3	4.9	5	2.5	2.34	4.67	2.335	4.5	6	4
258	1	3	3	3	5	3	4	4	4	5	5	6	2	2	5	4	1.67	1	3	4	4	2.6	4.5	3.63	3.5	0	0.5	2	2	4.5
259	5	5	5	5	5	5	5	5	5	5	6	6	5	3	5	5.5	5	5	5	5	5	5.1	5.25	5	5	0	0.5	4	5	5

X1	X31	X32	X33	X34	X35	X36	X37	X38	X39	X40	X41	X42	X43	X44	X45	X46	X47	X48	X49	X50	X51	X52	X53	X54	X55	X56	X57	X58	X59	X60
ID	SID3	IjN1	IjN2	IjN3	DsN1	DsN2	DsN3	Org1	Org2	Ease	Conf	Ctrl	Prev	Freq	Cog	Aff	Alt	SID	IjN	DsN	OrgN	Att1	Att2	SN1	SN2	PBC1	PBC2	PB1	PB2	Int
260	3	4	4	4	3	3	3	5	5	6	6	6	5	2	5	4.5	4.34	3	4	3	5	4.1	4.75	3.88	3.5	6	3	3.5	5	4
261	1	2	2	2	2	1	3	1	2	5	5	5	4	2	5	4	2.67	1.67	2	2	1.5	3.1	4.5	1.88	2	5	2.5	3	4	3
262	3	3	5	5	5	1	4	5	5	6	6	5	5	2	6	4.5	3.67	3.67	4.34	3.34	5	4.3	5.25	4.13	3.84	5.67	2.835	3.5	5	5.5
263	1	3	3	3	4	3	4	3	3	3	4	4	1	1	5	4.5	1.67	1	3	3.67	3	2.7	4.75	3.25	3.34	3.67	1.835	1	1	5
264	3	3	3	3	3	4	3	4	4	5	5	6	5	3	4	4.5	3.67	3	3	3.34	4	3.7	4.25	3.38	3.17	0	0.5	4	5	4
265	3	3	3	3	3	3	4	1	1	5	5	5	6	2	1.5	1.5	2.34	3.67	3	3.34	1	2.4	1.5	2.63	3.17	5	2.5	4	6	4
266	1	1	1	2	2	2	1	2	2	3	4	5	4	3	4.5	4	2.34	2	1.34	1.67	2	3	4.25	1.63	1.5	4	2	3.5	4	3
267	3	5	5	5	5	4	4	3	4	5	4	5	4	2	6	5	3.34	3.34	5	4.34	3.5	4.2	5.5	4.38	4.67	0	0.5	3	4	4
268	4	3	5	5	4	2	3	1	1	4	5	5	6	3	5.5	4.5	3.67	4.67	4.34	3	1	4.5	5	3	3.67	0	0.5	4.5	6	5.5
269	1	2	6	6	6	2	6	6	2	6	6	6	3	1	4.5	6	2.34	1.67	4.67	4.67	4	3.3	5.25	4.5	4.67	0	0.5	2	3	4
270	3	3	4	5	4	4	6	4	2	4	4	4	4	2	4	4	3.34	3	4	4.67	3	3.5	4	4	4.34	4	2	3	4	5
271	1	3	3	3	3	3	3	3	3	5	5	5	4	2	3.5	2.5	2.67	1	3	3	3	2.3	3	3	3	5	2.5	3	4	3
272	3	2	3	3	3	3	3	3	3	3	3	4	3	1	3.5	3.5	3	2.34	2.67	3	3	3	3.5	2.88	2.84	0	0.5	2	3	4.5
273	1	3	2	2	3	2	3	3	4	4	3	3	4	3	4	3	1.67	1.34	2.34	2.67	3.5	2.3	3.5	2.75	2.5	3.34	1.67	3.5	4	3
274	1	3	3	3	2	2	5	1	1	4	3	5	1	1	2	3	2	1	3	3	1	1.9	2.5	2.5	3	4	2	1	1	3
275	1	3	3	3	3	3	3	2	2	4	2	3	3	1	4.5	4	1.67	1.34	3	3	2	2.6	4.25	2.75	3	3	1.5	2	3	3
276	3	5	5	5	5	5	5	6	5	4	4	4	4	1	3	2.5	3.34	3.34	5	5	5.5	3.1	2.75	5.13	5	0	0.5	2.5	4	3.5
277	2	3	3	5	5	5	2	2	2	4	4	4	5	1	6	5	4.34	2.67	3.67	4	2	4.3	5.5	3.38	3.84	0	0.5	3	5	5
278	1	5	4	4	4	5	3	4	4	4	5	4	6	2	4	4	3	2.34	4.34	4	4	3.2	4	4.13	4.17	4.34	2.17	4	6	5