

出國報告（出國類別：國際會議）

2013 年經營與資訊國際學術研討會(BAI2013)

服務機關：國立政治大學

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出國期間：102 年 7 月 7 日至 102 年 7 月 9 日

報告日期：102 年 12 月 31 日

摘要

國際經營與資訊研討會(BAI2013)是一國際級年會研討會，今年有來自各國的 718 篇論文投稿，並有來自世界三十八國家、超過 450 名學者與會。本研討會是由國際經營學會(International Business Academics Consortium, iBAC)所主辦，今年並由台灣資訊系統研究學會(Academy of Taiwan Information Systems Research, ATISR)協辦。

此一會之主旨在於提供國際上企業經營及資訊管理專業學者的論壇，今年此研討會的重點議題之一是企業管理與策略、電子商務和資訊管理，另一重點議題則是創新資訊系統與資訊科技，這些均與國科會管理學門二及本校商學院服務創新研究中心息息相關。

出國報告人此次所發表之論文題目為：EXPLORING EFFECTS OF FREE-TRIAL TO THE DIFFUSION OF MOBILE APPLICATIONS。其內容主要涉及”創新資訊科技與服務創新”及”智慧型行動通訊”等領域，除了希望透過本研討會發表相關研究成果，也相信必能透過此次國際產學專家的論壇得到最新的相關發展趨勢和新知識，此次研討會攜回資料主要係：BAI2013 Proceedings (CD-ROM)，這對於申請人的教學研究工作有很大的助益。本研討會之議程如附件。

本研討會今年有來自三十八國家的 718 篇論文投稿。錄取的大會論文及會被賦予 ISSN 編號出版，並收錄於 Contemporary Management Research (CMR, ISSN: 1813-5498)。親自於大會發表的論文並有機會後續發表於 International Journal of Business and Information (IJBI, ISSN: 1728-8673)或 Emerging Markets Finance and Trade (EMFT, ISSN: 1540-496X) 等 SSCI 期刊，這對我國及申請人個人在國際論文評比上均有很大的助益，並有利提昇我們的研究能量。

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壹、目的

參與本會議大會之主旨在於發表本人之研究成果及與國際上企業經營及資訊管理專業學者進行論壇。今年此研討會的重點議題之一是經營管理與策略、電子商務和資訊管理，另一重點議題則是創新資訊系統與資訊科技，這些均與國科會管理學門二及本校商學院服務創新研究中心息息相關。

出國報告人此次所發表之論文題目為：“EXPLORING EFFECTS OF FREE-TRIAL TO THE DIFFUSION OF MOBILE APPLICATIONS”。其內容主要涉及”創新資訊科技與服務創新”及”智慧型行動通訊”等領域，除了於本研討會發表相關研究成果，亦能透過此次國際產學專家的論壇得到最新的相關發展趨勢和新知識，這對於申請人的教學研究工作有很大的助益。

貳、過程

一、行程

此次出國行程包含下列三部份：

1. 七月六日：啟程搭華航班機飛抵研討會地點，印度尼西亞巴厘島
2. 七月七日至九日：參加 BAI2013 研討會及發表論文
3. 七月十日：搭乘華航班機飛返台北

此次出國除了參加 BAI2013 研討會並未安排進行其他參訪活動。

二、七月七日至九日研討主題和心得建議如下：

日期	時間	場次	主題	主要內容
7/7 日	10:30-14:00		Registration and Opening	
	15:00-17:00	Session PO	Post Sessions and Presentation Preparation	
7/8 日	08:30-10:00	Session A4	Management Information Systems	<ul style="list-style-type: none">● Effects of Scale Display Formats, the Number of Variables Per Display and Styles of Grid Lines on Line Graph Visualization in Response to Difficult Questions● Incremental Ontology Design in Emergency Knowledge Management
	心得建議	如何更深刻的了解到消費者的購買與運用行為，並進一步轉化為不同方案當中最關鍵的特點，以增加轉為購買的轉換率		
	10:30-12:00	Session B4	Management Information Systems	<ul style="list-style-type: none">● The Effect of Electronic Word-of-Mouth on Perceived Service Quality and Price: The Moderating Role of Involvement● Usability of Social Networking Services

				in Jakarta: A Case Study of LinkedIn
	心得建議	在評估影響力時，應該納入不同的評估點來看對購買意圖的影響力，其中有趣(Perceived enjoyment)亦該納入重點考量		
	13:30-15:00	Session C4	Management Information Systems	<ul style="list-style-type: none"> ● Incorporating Artificial Neural Networks and Evolution Strategies on Financial Distress Rules Extraction ● A Personalized Restaurant Recommendation System for Mobile Devices Based on Situations in Social Networks
	心得建議	在具有相關的研究模式中提到的Social System (社會體系)構念，此概念引借自創新擴散理論		
	15:30-17:00	Session D4	Management Information Systems	<ul style="list-style-type: none"> ● Towards an Understanding of Student Acceptance of E-Learning System ● CEP-Mine: Mining Closed Frequent Itemsets in Ubiquitous Data Streams
	心得建議	對於個人參與構念來估評是否能提升使用者的滿意應有助益，但是卻不明顯，因此只能瞭解到對開發者而言，讓使用者覺得有用、享受是重要的設計		
7/9 日	08:30-10:00	Session E4	Management Information Systems	<ul style="list-style-type: none"> ● Understanding Online Community Citizenship Behaviors through Social Support and Social Identity ● Members' Continuance Intention in Virtual Communities: The Role of social Identity and Organizational Citizenship Behaviors
	心得建議	在與本研究中的免費 App 試用問題項目包含易用與實用性，其中化約了 TAM 中的 PEOU 和 PU，然後在文獻有提到檢視 hedonic factor，因此其應有加入研究模式的必要		
	10:30-12:00	Session F4	Management Information Systems	<ul style="list-style-type: none"> ● Exploring the Belonging of Social Networks Users: Evidences from Facebook ● A Framework for Organizing and Discovering Social Business Intelligence
	心得建議	在找到 App 開發者目前的銷售方式中，目前以 In Apps Purchase 逐漸增多，且成為一個銷售的替代方式，在評估後認為應該將此點包含於往後的研究範圍中		
	13:30-15:00	Session G4	Management Information Systems	<ul style="list-style-type: none"> ● Integration of Content-Based Approach and Hybrid Collaborative Filtering for Movie Recommendation ● Transaction Assurance Seal Effects on

				Trust and Prurchase Intention of Consumers
心得建議	如何瞭解消費者的購買與行為動機，可參考不同模型及概念，並發展出行影響購買意願之模型，探討消費者的涉入深度、類似的購買經驗等因子如何影響最終的購買決策，並進行模型檢驗			
15:30-17:00	Session H4	Marketing (Paper Presentation)	<ul style="list-style-type: none"> ● Web-Based Ptt Indcent Discourse Survey and Evaluation ● Factors Affecting Consumers to Use E-Banking Services: The Moderating Effects of Trust and Culture 	
心得建議	意見領袖的因素在影響擴散應該不能被忽視，且在其他相關理論如理性行動理論也皆提到主觀規範因素，就是個人從事某一行為的意圖會受到重要關係人的影響			

叁、心得及建議

此次出國發表論文及研討之主旨在於確認免費試用行動應用軟體(APPs)之採用狀況，藉此提升我國開發及擴散行動應用軟體之能力。我們參考科技接受度(technology acceptance model)、創新擴散(diffusion of innovation model)、參與度(involvement)等模型及概念，發展出行動應用軟體試用影響購買意願之模型，探討消費者的涉入深度、對產品的態度、類似的購買經驗等因子如何影響最終的購買決策，並利結構化方程式模型(SEM)及路徑分析(Path Analysis)進行模型檢驗。本研究提出之模型能夠對行動應用的創新研發與推廣者能夠針對消費者對行動應用的購買與運用行為有更深刻的了解，進而轉化為是否提供免費下載試用、以及下載試用方案當中最關鍵的功能與特點，以期增加試用到購買的轉換率。

出國報告人希望提出模型能夠對行動應用的創新研發與推廣者對消費者行動應用軟體的購買與運用行為有更深刻的了解，並認為成果可以提升國內APPs的研發實力。

以下為此次參加BAI2013研討會發表論文及研討之心得與建議：

- (1) 相關研究模式中的社會體系(Social System)構念引借自創新擴散理論，然而Rogers (1995)在此論述三項要點：第一、社會結構：指社會體系內的人接受新事物的快慢會影響擴散；第二、社會規範：會對新事物擴散產生阻力或助力；第三、意見領袖的作用：重要關係人的意見或態度會引響潛在使用者採用的意願。故在App的擴散中，意見領袖因素應該不能忽視，且在其他預測科技使用意圖的相關理論；例如理性行動理論(Theory of Reasoned Action, TRA)、計畫行為理論(Theory of Planned Behavior, TPB)等也皆提到主觀規範(subjective norm)因素，也就是個人從事某一行為的意圖會受到重要關係人看法的影響，重要關係人的看法也會影響態度 (Ajzen & Fishbein 1980)。
- (2) 在研究模式中的手機Apps免費下載(Free Trial)構念問項僅有兩題(問「該APP的實用性」以及問「該APP的易用性」)，於此化約了TAM理論的易用性(PEOU)以及有用性(PU)兩構念，考慮可獨立出來以維持理論因素完整性與外部網絡關係。在文獻回顧中有檢視hedonic factor應增加納入所提計畫研究模式中。Apps屬於一般大眾的日常生活應用，範圍很廣，有用(PU)、易用(PEOU)、有趣(Perceived enjoyment, PE)應該皆需納入評估以看其對購滿意圖的影響力。
- (3) 在研究模式中有Personal Involvement構念，但卻缺乏相關假說。報搞人認為會對Apps的發展者有助益，但尚未能稱之明顯，僅可以告知開發者有用、實用(MIS採用的重點)、甚至享受，是重要的設計，但更具體為何?Apps是否另有其他更重要設計來給使用者產生適用或使用的愉悅感，例如視覺感受、特殊的設計特等？建議應當從設計與相關理論來發掘更新創的構念。
- (4) TAM在資管上的應用，近年來有重大的討論，尤其是Boggzi的文章: "The Legacy of the Technology Acceptance Model and a Proposal for a Paradigm Shift," Journal of the Association for Information Systems, Richard P. Bagozzi, Volume 8, Issue 4, Article 7, pp. 244-254, April 2007.指出：
"The exposition of UTAUT is a well-meaning and thoughtful presentation. But in the end we are left with a model with 41 independent variables for predicting intentions and at least eight independent variables for predicting behavior (I say "at least" because there are plausible direct

effects not tested by Venkatesh et al., 2003; see Table 17 therein). Even here, arguments can be made that important independent variables have been left out, because few of the included predictors are fundamental, generic, or universal, and future research is likely to uncover new predictors not subsumable under the existing predictors. The IS field risks being overwhelmed, confused, and misled by the growing piecemeal evidence behind decision making and action in regard to technology adoption/acceptance/rejection.”

- (5) 最近的 App 銷售方式發展，IAP (In Apps Purchase)是一個非常重要的替代方案，應該將之包涵在後續相關研究範圍。
- (6) 吾人應進一步釐清，相關研究中建立的研究模型應是程序模型(Process Model)還是以變數模型(Variance Model)為宜？社會體系(Social System)為一個概念名稱，而非一個有變異(Variance)的構念，如何能影響免費使用？
- (7) 多年來相關論文使用了科技接受度模型(TAM)，也將 TAM 中的構念衡量加以回顧。其中的 Attitude- ->Intention 為 TRA/TPB 的主軸。在真實世界裡，TPB 裡的行為準則(behavior norm)和行為控制(behavior control)都應該是比較能反映消費者的行為的（行為控制）。
- (8) 本論文在行銷面談到涉入程度(Involvement)，應該加強 ELM 相關的一些研究為基礎之論述。

肆、附錄

一、發表之論文摘要(原文)

EXPLORING EFFECTS OF FREE-TRIAL TO THE DIFFUSION OF MOBILE APPLICATIONS

ABSTRACT

The aim of this paper is to realize the acceptance of free-trial Mobile Apps and to enhance our ability of diffusion of the Mobile Apps. Mobile application is getting increasingly popular in recent years since Apple Inc. launched its App Store over the iOS mobile devices. The free mobile application download for trial becomes a popular approach that motivates consumers to purchase them after the trials. However, it's still unknown whether free-trial Mobile App download really stimulate consumers to purchase them. There're very few research works exploring into this area. In this research, we try to realize which factors of involvement, attitude, previous purchase experience and social system play the most important roles toward purchase intention. With aids of this research, the companies providing Mobile Apps may get the insight of how consumers react to those offerings of free-trial features. This provides exact spot which features and benefits should be bundled into the free-trial Mobile App packages. Based on the understanding on the consumer's behaviors with adoption of the Mobile Apps, we can enhance the ability to develop Mobile Apps with international level.

Key Words: Mobile Apps, Purchasing Behavior, Diffusion of Innovation, Technology Acceptance Model (TAM), Personal Involvement, Service Experience.

二、本研究研究結果(研討後整理自原文)

We have altogether gathered 216 questionnaires in the area of Taiwan and 200 of them are valid after the result of pretest. Structural Equation Modeling technique was employed in this study to analyze data. Table 1 shows that the fit indices of the model.

Table 1: Model Fit indices

Indices		Result	Note
Chi-Square tests	CMIN	586.262	So-called X^2 test
	CMIN/DF	5.863	So-called X^2 test/df
	NFI	.61	
	NNFI	.512	Also called TLI
Replaceable Indexes	NCP	286.262	
	CFI	.644	
	RMSEA	.157	
	AIC	692.262	
	CN	42	α 22.2

The results of the test of the measurement model demonstrated insufficient level of reliability and validity. The result of CMIN/DF should better be under 3 or at least under 5, but we have 5.863. The results for NFI, NNFI and CFI should better be larger than 0.9, however the results we get are as 0.61 for NFI, 0.512 for NNFI and 0.644 for CFI. The smaller the value the poorer fit of the model. Furthermore, the result for RMSEA should be under 0.05 or at least smaller than 0.08, but we have 0.157. The result of CN should be larger than 200, but we only get 42. The reason for this outcome could be that we have too many constructs in the model and also the sample size is too small for constructing SEM model. Instead of Conventional SEM, new SEM tools like PLS should be tried.

Table 2: Descriptive Statistical Data for the Result of each Question

Questions	Mean Value	Standard Deviation
1. I like to try all kinds of free-trial Apps	4.72	1.76
2. I like to use the free-trial APP for many times	3.93	1.79
3. I spend much time on the free-trial App downloaded	3.74	1.77
4. I like to understand the free-trial App' s content	4.61	1.78
5. While downloading a free-trial App, I will take family and friends' recommendation into considerations.	5.56	1.45
6. While downloading a free-trial App, I will take online market information on the experienced users' reviews for the App into considerations.	5.19	1.48
7. While downloading a free-trial App, I will take online market information on the billboard of the ranking and number of times the APP being downloaded.	5.39	1.56

8.	While downloading a free-trial App, I will take media advertisement or media exposure into considerations.	4.61	1.62
9.	While downloading a free-trial App I will take previous Experience on buying the products of the same brand into account.	3.91	1.59
10.	While downloading a free-trial App, I will take previous experiences on buying the products of the same type into account.	4.06	1.60
11.	In selecting App, I would care as to which one I choose	4.50	1.58
12.	In selecting App, I think most of them are alike.	4.00	1.61
13.	In selecting App, I think it is important to make the right choice	4.63	1.55
14.	In selecting App, I would concern about the outcome of my choice	4.59	1.41
15.	While purchasing an App, I would see if the APP is easy to understand.	5.67	1.27
16.	19. While purchasing an App, I would see if the APP is easy to operate	5.93	1.27
17.	While purchasing an APP, I would see if the App is friendly to use	5.74	1.32
18.	19. While purchasing an App, I would see if it is easy to learn to use the App	5.61	1.31
19.	While purchasing an App, I would see if the APP provided flexibility	5.43	1.27
20.	While purchasing an App, I would see if the APP is helpful.	5.74	1.39
21.	While purchasing an App, I would see if The APP makes my life and work more effective.	5.44	1.46
22.	While purchasing an App, I would see if The	5.50	1.42
23.	While purchasing an App, I would see if The app increase the quality of my life and work	5.56	1.44
24.	While purchasing an App, I would see if The APP makes my life and work easier	5.46	1.48
25.	While purchasing an App, I would see if the APP is easy to use	5.80	1.19
26.	While purchasing an App, I would see if the APP is fun to use	5.61	1.31
27.	I pay and buy App frequently	2.33	1.86
28.	I would pay and buy the App if it is good.	4.04	2.06
29.	I would recommend good apps to friends	5.63	1.46
	Total	4.89	1.50

From the results of the path analysis depicted in Table 2, we have found some significance factors that

influence the consumers' decision to download the trial or to purchase it. When deciding to download the trial, customers tend to be influenced by recommendation from friends, the number of times the App have been downloaded, the APP' s ranking and comments about it. Interestingly, previous buying experience does not seem to matter that much. After downloaded the App, the frequency of being used is according to PEOU and the PU of the App. When deciding to purchase the App, the customer considers the usefulness of the App, and the decision made is also be effected by how the customer perceives the App.

Furthermore, we found by the demographic analysis that genders and the age of the customers make some differences. For most of the time, females are influenced more than males (Table 3). By considering the differences between ages, the number of factors considered by the customers increases as the age of the customer increases. Another thing to notice is that younger generations tend to be influenced by their friends or even solely depend on their friend' s recommendation (Table 4).

Table 3: Demographic Analysis: Difference between genders

Significant Factors	Male	Female	Diff.
The intention to download the APP is influenced by the recommendation of friends	5.83	6.01	0.27
The intention to download the APP is influenced by the information on the number of times of downloading the APP.	5.52	5.57	0.05
The intention to download the APP is influenced by the records of experienced users' ranking and reviews.	5.31	5.65	0.33
Frequency and time to try the free-downloaded APP are influenced by the perception that its functionalities are "useful" .	5.34	5.74	0.21
Frequency and time to try the free-downloaded APP are influenced by the perception that it is "ease-of- use" .	5.31	5.32	0.01
Ppurchasing decision is influenced by the perception of understanding the insides of the APP.	5.18	5.53	0.36
Purchasing decision is influenced by the perception of The usefulness of the APP' s functionalities.	5.46	6.07	0.60

Table 4: Demographic Analysis: Differences between Age

Significant Factors	15-19	20-24	25-29	30-39	40-49	Over 50
intention to download the APP is influenced by the recommendation of friends		v	v	v		v
intention to download the APP is influenced by information on the number of times of downloading the APP.					v	v

The intention to download the APP is influenced by the records of experienced users' ranking and reviews.						v
Frequency and time to try the free-downloaded APP are influenced by the perception that its functionalities are "useful" .				v		v
Frequency and time to try the free-downloaded APP are influenced by the perception of "ease-of-use" .				v	v	v
purchasing decision is influenced by the perception of understanding the insides of the APP.			v	v	v	v
Checks were marked for those significant impacts (over 5.50).						

三、重要發現(研討會後整理)

Mobile Apps are getting increasingly popular in recent years since Apple Inc. launched their App Store over iPhone devices. More and more companies and freelancers are engaging into the development of Mobile Apps. The free App download for trial becomes a popular approach to motivate consumers to purchase after trials. However, it's still unknown that if free-trial Mobile APP download really stimulate consumers to purchase them. The goal of this study is to realize the acceptance of the free-trial Mobile APPs and then to enhance our ability of diffusion of the Mobile Apps.

To obtain the understanding of the customers' behavior, we have constructed a research framework based on the assumption that the social system, involvement, attitude towards purchase and previous purchase experience are the factors influencing final purchase intention. We include these components as constructs into our research model. In this study, we further explore how deep the involvement will be after the extent of trial. Following the aforementioned model, the level of involvement will also impact on the purchase decision. Besides, the extent of free-trial also contributes to the attitude toward purchasing.

According to Technology Acceptance Model (TAM), such attitude also affects the purchase intention. Within the TAM theory, PEOU and PU both affect attitudes construct. We have adopted part of the operational definition as survey items to test the antecedents and moderators of the online purchasing behaviors.

Within the Innovation Diffusion model, social system is defined as a set of interrelated units that are engaged in joint problem solving to accomplish a common goal. We include three elements into our model, i.e. general media exposure, information provided by application store and friends referral.

According to the descriptive statistics and the result of path-Analysis, we have found some significance factors that influence peoples' decision to download the trial or to purchase it. When deciding to download the free-trial, people tend to be influenced by the recommendation from friends, the number of times the APP have been downloaded, the APP's ranking and comments about it. Interestingly, previous buying experience does not seem to matter that much. After downloaded the App freely, the frequency of it being used is according to PEOU and the PU of the App. When deciding to purchase the App, people often consider PU of the App, and the decision made is also be effected by how the customer perceives the App.

Drawing on the research derived, we have constructed six hypotheses. In the proposed model, we ignore the direct link between social system and personal involvement because the impact of social system will directly contribute to free-trial downloads of the App. The level of involvement will be affected by the extent of trial. Personal interest may be impacted by social system. And personal interest may also contribute into level of involvement. However, personal interest is not the focus in our study till now so that we can consider this as extraneous variable. As a plan for the further, the factor of "involvement" can be considered as a mediate fact.

Furthermore, we found by the demographic analysis that genders and the age of the customers make some differences. For most of the times, females are influenced more by the factors than males (Table 4). As for the differences between ages, the number of factors considered by the customers increase as the age increases. Another evidence to notice is that younger generations tend to be influenced by their friends or even solely depend on their friend's recommendation (Table 5). So, we suggest that the Mobile Apps developers should enhance the on-line store's social network functionalities.

Through this investigation, the companies or developers of mobile Apps get the insight of how consumers react to their offer of free trial. They can have sharp focus on the exact offering into their free-trial package to get the most purchase volumes. Further research should be conducted into the influence factors via free-trial Mobile Apps offering contribute to the purchase intention in terms of product category such as Games, Books, Entertainment, Education, Lifestyle applications. It may give a closer look on the interactions of influence factors and Apps' product segments.

四、建議改善之英文論文稿：

A Research into the Diffusion Effects of Free-Trial to Mobile Applications

Abstract

Since Apple Inc. launched its App Store and empowers the free-trials of various digital products, the way of selling products by e-Commerce has been drastically changed. Free-trial isn't a variant of traditional development instrument with α -Test or β -Test but a new approach that motivates consumers to purchase the products after the free-trials. However, it's still unknown whether free-trial download of Mobile App really stimulate consumers to purchase them. The aim of this paper is to realize the diffusion effect of free-trial and further to enhance our ability of diffusion of the Mobile Apps. For this purpose, we have studied the theories of Technology Acceptance Model (TAM), Attitude and Intention towards Online Purchasing, Diffusion of Innovations and Involvement. Based on the study, we build a framework to exam which factors of involvement, attitude, previous purchase experience and social system play the most important roles toward purchase intention, whereas we conducted a survey to test the hypotheses and used Structural Equation Models for data analysis. The descriptive statistics and path-analysis reveal some significance factors that influence peoples' decision to download the trial and to purchase it. Furthermore, we found by demographic analysis that gender and age of the customers make some differences. With aids of this research, the companies providing Mobile Apps may get the insight of how consumers react to those offerings of free-trial features. This provides exact spot which features and benefits should be bundled into the free-trial Mobile App packages.

Keywords: e-Commerce, Mobile Apps, Purchasing Behavior, Diffusion of Innovation, Technology Acceptance Model (TAM), Personal Involvement

Exploring Effects of Free-Trial to the Diffusion of Mobile Applications

I. INTRODUCTION

Mobile Apps become popular in recent years due to the introduction of Application Store. The adoption of iPhone, Android-based smartphone, iPad and other smart handset devices are the media accelerating the booming of Mobile App development and usage. In order to pursue the Apps' market, there are many software vendors deploy their applications into Mobile App stores such as App Store, Android Market, etc. Many of those vendors provide free-trial Mobile Apps attracting those potential customers to try their products. The purpose of free-trial Apps is to make those potential customers be acquainted with the features and benefits of the Apps. These could boost the volume of purchasing Mobile Apps.

It is different from the traditional promotion activities due to the very low incremental cost of Mobile App products. Because of no physical material goods cost, the replication cost of Mobile Apps is much lower than traditional goods. That is why free-trial promotion is the most popular way for Mobile Apps selling comparing to traditional goods promotion. However, it is still unknown how effective those Mobile Apps providing free-trial comparing to traditional promotion.

In our research, we try to find out which factors would really impact on the actual purchase intention after free-trial. It could provide the insight of the most important factors to motivate purchasing intention after free-trials of Mobile Apps. This would suggest vendors which prioritized features shall be appealing to potential Mobile App buyers. Last but not least, the goal of this study is to realize the acceptance of the free-trial Mobile Apps and then to enhance our ability of diffusion of the mobile Apps.

II. LITERATURE REVIEW

2.1 Mobile Apps and the App stores

Mobile applications, also called Mobile Apps, are software applications, usually designed to run on smart handset devices, i.e. smartphones and tablet computers. They are available through application distribution platforms which are typically operated by the owner of the mobile operating system, such as Apple' s App Store and Android Market. Some Apps are free, and others have a price. Usually they are downloaded from the platform to a target device such as an iPhone or Android phone. For Apps with a price, generally a percentage of 20-30% goes to the distribution provider, and the rest goes to the developer of the App. (Siegler, MG, 2008)

Mobile Apps were originally intended for productivity including email, calendar and contact databases. Public demands caused rapid expansion into other areas such as mobile games, factory automation, GPS and location-based services, banking, order-tracking, and ticket purchases.

1. App Store

App Store is a digital application distribution platform for iOS developed and maintained by Apple Inc. The service allows users to browse and download applications from iTunes Store. Some applications are free and the others are not. 30% of the revenue from App Store goes to Apple, and 70% go to the developer of the app.

2. Android Market

Android Market is an online software store developed by Google for Android OS devices. Its gateway is an App called "Market" , preinstalled on most Android devices, and allows users to browse and download Apps published by third-party developers. Users can also search for and read detailed information about Apps on the Android Market website.

2.2 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) stands for a theory that models how users come to accept and use a technology. The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it.

TAM is one of the most influential extensions of Ajzen and Fishbein's Theory of Reasoned Action (TRA). TAM was developed by Fred Davis and Richard Bagozzi (Davis 1989, Bagozzi & Warshaw 1992). TAM replaces many of TRA's attitude measures with two technology acceptance measures - "Ease of Use" and "Usefulness" (Figure 1).

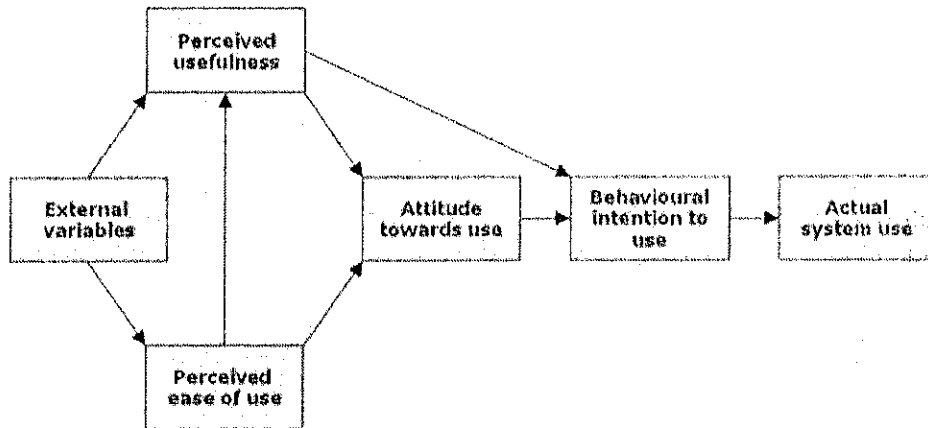


Figure 1: Technology Acceptance Model

- Perceived Usefulness (PU): This was defined by Fred Davis as “the degree to which a person believes that using a particular system would enhance his or her job performance”
- Perceived Ease-Of-Use (PEOU): Davis defined this as “the degree to which a person believes that using a particular system would be free from effort” (Davis 1989)

2.2.1 Attitude towards online purchasing

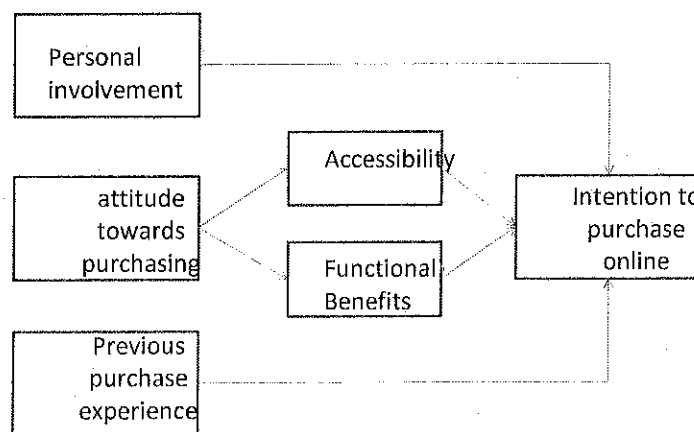


Figure 2: Intention to purchase vacation online

Attitudes towards purchase behavior are believed to be shaped by many factors such as direct experience with the product, information acquired from others, exposure to mass media, etc. The attitude towards an object or person is not always synonymous with the attitude towards behavior.

In information technology literature, a growing body of research shows that attitudes have a strong influence on a person's adoption of computer technologies and adaptation of purchasing behavior (Swanson, 1982, 1988). Klobas (1995) shows that attitude towards intention to use information technology is multidimensional, involving perceived usefulness, accessibility and quality. Jeong and Lambert (2001) indicate that customers' attitudes towards using a website together with the perceived usefulness of the website information and the information quality are the best indicators for predicting consumers'

purchasing behavior.

Park, Ekinici & Cobanoglu (2002) found that personal involvement, attitude towards purchase and previous purchase experience are significant indicators of customers' intentions to purchase vacations online (Figure 2). They categorize involvement into two types, personal involvement (uni-dimensional) and motivational involvement (multidimensional). The study suggests that personal involvement is positively related with customers' online vacation purchase behavior. Another finding is that the attitude towards purchase is multidimensional consisting of accessibility and functional benefits. Both are found positively related to customers' intention to purchase vacations online. Ward and Lee (2000) indicate "proficiency in searching the Internet increases with experience and time spent using the medium". Accordingly, previous experience with online vacation shopping seems to be a significant factor in predicting customers' purchasing behavior.

2.2.2 Intention to purchase experience goods online

Shim et al. (2001) say that intention to use the Internet to search for information was not only the strongest predictor of Internet purchase intention but also mediated relationships between purchasing intention and other predictors (i.e. attitude toward Internet shopping, perceived behavioral control, and previous Internet purchase experience). Direct and indirect relationships between two antecedents (attitude toward Internet shopping and previous Internet purchase experience) and Internet purchase intention were also found (Shim, Eastlick, Lotz, 2001). The result was shown in Figure 3 as below.

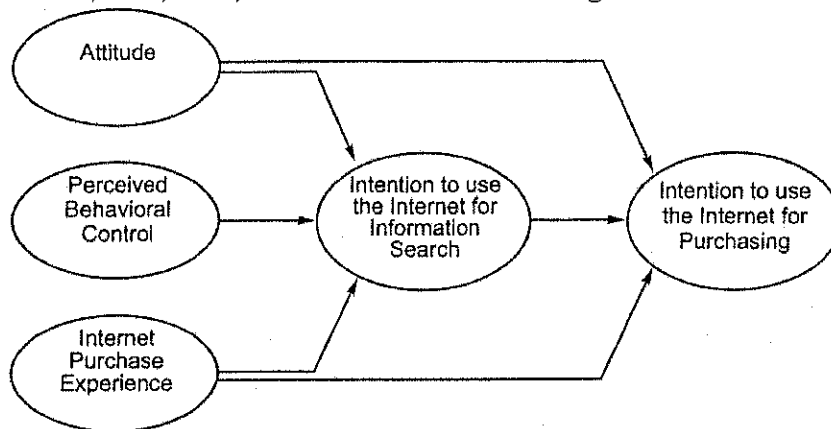


Figure 3: Online purchase intentions model

Kim et al. found utilitarian value of Internet information search, hedonic value of Internet information search, perceived benefits of Internet shopping, perceived risk of Internet shopping, and Internet purchase experience predicted online search intention well (Kim, Lee and Kim, 2004). Their finding is illustrated in Figure 4.

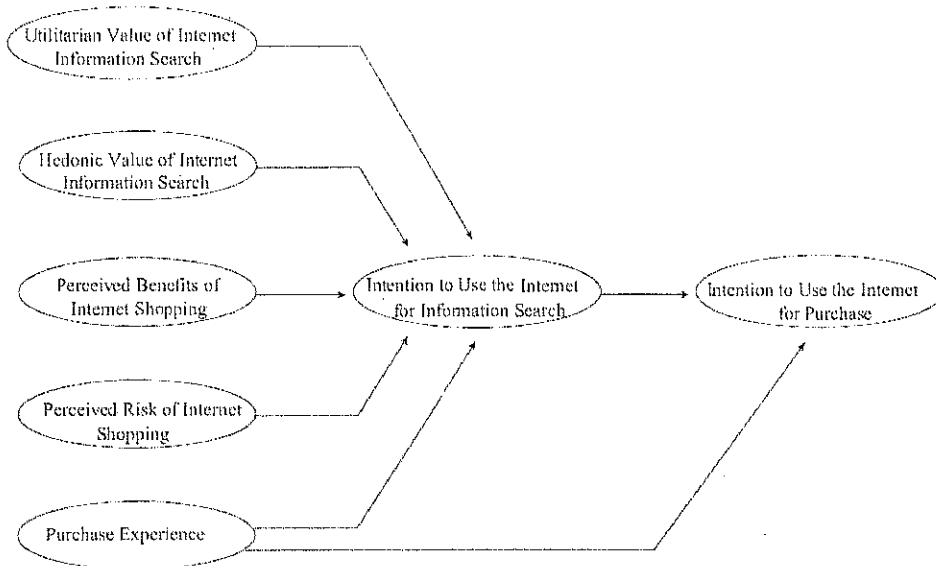


Figure 4: Factors affect Internet information search and Internet purchase intention

2.3 Diffusion of innovations

Diffusion of innovations is a theory that seeks to explain how, why, and at what rate new ideas and technology spread through cultures. Rogers, E. M. (1983) said diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system. The origins of the theory are varied and span multiple disciplines. The diagram of diffusion of innovations model is shown in Figure 5.

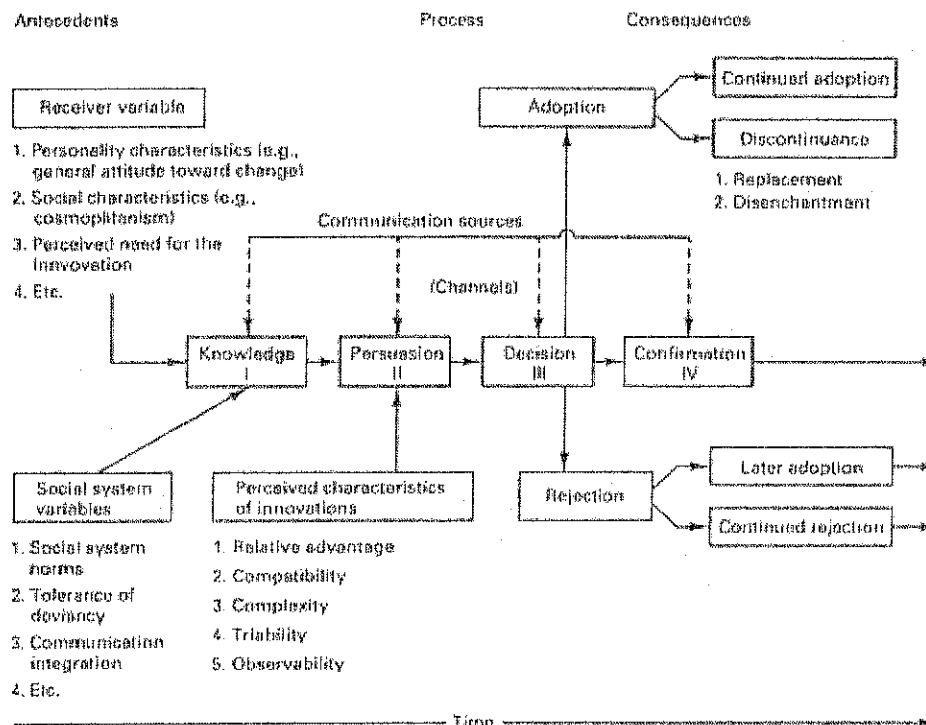


Figure 5: Diffusion of innovation model (source: Rogers, 1995)

The key elements in diffusion research are as below. (Rogers, E. M., 1983)

- Innovation: An idea, practice, or object that is perceived as new by an individual or other unit of adoption
- Communication channels: The means by which messages get from one individual to another
- Time: The innovation-decision period is the length of time required to pass through the innovation-decision process. Rate of adoption is the relative speed with which an innovation is adopted by

members of a social system

- Social system: A social system is defined as a set of interrelated units that are engaged in joint problem solving to accomplish a common goal
Diffusion of an innovation occurs through a five-step process.
- Knowledge: In this stage the individual is first exposed to an innovation but lack of information about the innovation. During this stage of the process the individual has not been inspired to find more information about the innovation
- Persuasion: In this stage the individual is interested in the innovation and actively seeks information/detail about the innovation
- Decision: In this stage the individual takes the concept of the change, weighs the advantages/disadvantages of using the innovation and decides whether to adopt or reject the innovation. Due to the individualistic nature of this stage, Rogers notes that it is the most difficult stage to acquire empirical evidence (Rogers 1964)
- Implementation: In this stage the individual employs the innovation to a varying degree depending on the situation. During this stage the individual determines the usefulness of the innovation and may search for further information about it
- Confirmation: In this stage the individual finalizes his/her decision to continue using the innovation and may use the innovation to its fullest potential.

2.4 Involvement

Engel et al. (1995) stated that “the degree of personal involvement is the most important factor that shapes the type of decision-process and the following purchasing behavior”. Empirical studies support the concept that involvement has a significant influence on the dependent variable in different research contexts. Many attempts have been made to define involvement from diverse results. Laaksonen (1994) categorizes the existing definitions into three groups: (1) the cognitively based approaches, (2) the individual-state approaches and (3) the response based approaches.

A common feature of the cognitively based definitions of involvement is that they view involvement as the perceived personal importance and relevance of an object. Bloch (1982) suggests that product involvement is a unique relationship between the consumer and the product. In particular, this relationship refers to “an unobservable state reflecting the amount of interest, arousal or emotional attachment evoked by the product in a particular individual”. In summary, these definitions refer to the strength or extent of the psychological tie between an individual and a stimulus object (which can also be a product or activity). At least two cognitive components seem to contribute in determining the level of involvement: self-concept and product-knowledge structure.

The individual-state definitions of involvement focus on the mental state of an individual evoked by a stimulus or stimuli when determining involvement. This type of involvement does not require personal relevance or the arousal of central values for its existence. Rothschild (1984) and Mittal (1989) view involvement as goal-directed – an unobservable state of motivation, arousal or interest stimulated by the inherent nature of a product or a situation. Hence the level of involvement varies according to the magnitude of motivation.

The response based approach examines involvement from the information processing point of view. Hence, involvement plays a mediating role between an incoming information message and consumers’ information processing behavior. Krugman (1965) identifies this type of involvement as “the number of conscious ‘bridging experiences’ connections, or personal references per minute that the viewer makes between this own life and the stimulus”. As involvement affects the nature of information processing, the temporal pattern of this activity is different under conditions of low and

high involvement (Laaksonen, 1994).

The concept of involvement has been researched widely in psychology, consumer behavior and leisure studies (Reid and Crompton 1993). Purchase involvement relates to the relative importance an individual places on the purchase decision (Bei and Simpson 1987). The concept has been described as a person's perceived relevance of the product or service based on inherent interests, needs, and values (Zaichowsky 1985; Gursoy and Gavcar 2003; Josiam et al. 2004). The influence of involvement in relation to purchase decisions is reflected in the amount of work an individual is willing to do in order to maximize utility (Kamis and Davem 2005). According to Beatty and Smith (2001), the amount of involvement a consumer undertakes as part of a purchase decision is based on three determinants: (1) when the product being purchased is considered risky, consumers tend to engage in a higher level of information gathering; (2) The amount of involvement is dependent on the individual's access to information related to the product; and (3) The amount of data gathered is dependent on the benefits the individual believes one can achieve from searching.

2.5 Free Trial

The distribution of free samples is a common and important promotional tool for many products (Schultz et al. 1998). Marketing scholars have noted that free samples can play an important role in creating brand loyalty and inertia (Villas-Boas 2004, Seetharaman 2004). Prior research has also demonstrated the positive effects of free samples on measures such as belief strength and attitude (Marks and Kamins 1988), perceptions of the brand (Bettinger et al. 1979, Hamm et al. 1969), and the initiation of interpersonal communication about the brand (Holmes and Lett, 1977).

Product trial is usually defined as a consumer's first usage experience with a brand or product (Kempf and Smith, 1998). Software free trial is a form of product trial and sampling approaches for marketers. Goering (1985) focused on the effects of incomplete information and consumer learning through product trial on consumer expectations and demands. The effect of consumer learning on future demand for a product depends on both the information acquired by consumers and the number of consumers who acquire information.

Jain et al. (1995) found that sampling is critical in the initial stages of a product's life because increasing the number of first adopters not only leads to a future customer base but also provides a source for product promotion by word-of-mouth. Bawa and Shoemaker (2004) examined three potential effects of free direct mail samples on sales: (1) an acceleration effect, whereby consumers begin repeat purchasing of the sampled brand earlier than they otherwise would; (2) a cannibalization effect, which reduces the number of paid purchases of the brand; and (3) an expansion effect, which induces purchasing by consumers who would not consider buying the brand without a free sample. They found that free samples can produce measurable long-term effects on sales, and the effectiveness of a free sample promotion can vary widely, even between brands in the same product category. In contrast, the effects of other consumer promotions such as coupons tend to last for short period.

III. RESEARCH METHODS

3.1 Research framework

In our model, we combine the diffusion of innovations theory and the research findings from Park et al. (2002) to explain diffusion processes of Mobile App.

Observed from Figure 5, social system belongs to knowledge stage. Involvement belongs to persuasion stage because of interest of seeking information and value to individual. During the trial, individual has better understanding about Mobile Apps in terms of PEOU and PU. Attitude towards purchase has been established in the persuasion stage after the trial. Intention towards purchase falls into the decision stage according to its definition, "individual decides whether to adopt or reject the innovation".

Also, Past online purchase experiences may have a direct impact on online purchase intentions, as demonstrated by past research findings (e.g. Eastlick, 1996; Weber & Roehl, 1999). Alternatively, the positive purchase experiences of other customers can be used to promote online booking. Because consumers are not able to see, feel or touch the product during Internet shopping, the endorsement from a trustable expert is helpful. Mobile App is an intangible product similar to leisure products, e.g. vacation. The factors influence on purchasing intension shall be quite similar.

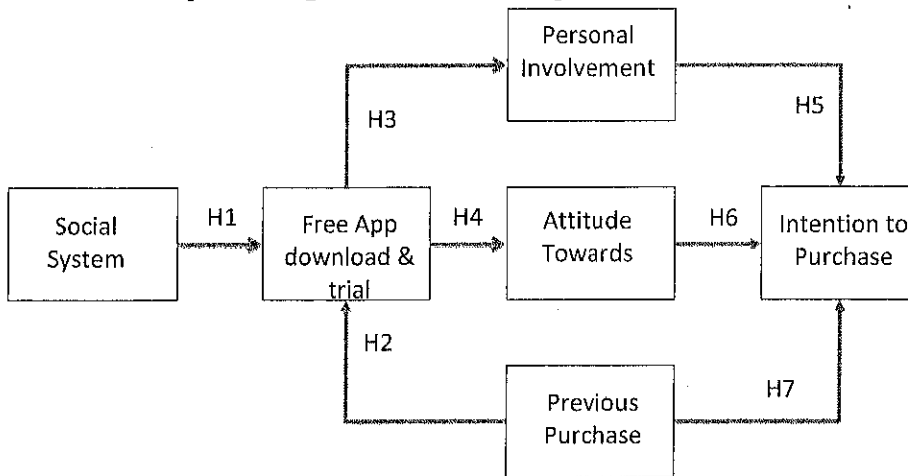


Figure 6: Proposed research framework

Therefore, we assume social system, involvement, attitude towards purchase and previous purchase experience are the factors impacting final purchase intention. We include these components as constructs into our research model. Our research framework is shown in the figure 6.

3.2 Operational Definition

For survey items, we use relative importance to consumer and understanding product information as operational definitions. We also apply PEOU and PU within technology acceptance model (TAM) for attitude constructs. Within diffusion of innovation model, we include three elements into our model – public media exposure, product market information and friend referrals. Public media exposure includes various kinds of public media such as newspapers, magazines, Internet, radios, televisions, billboards, etc. Product market information includes the information disclosed by application stores, original producers and other resellers. We classify these information types as number of downloads, rating, ranking and basic product information as described below:

- (1) Number of downloads is the volume application being downloaded in a period.
- (2) Rating is the feedback provided by other users. Consumer feedback and authoritative third-party recommendations are part of the “rating information”. According to Huang, Lurie and Mitra (2009), the presence of product reviews from other consumers and multimedia that enable consumers to interact with products before purchase has a greater effect on consumer search and purchase behavior for experience goods than search goods.
- (3) Ranking is the Mobile App ranked by application stores (marketplaces) or third parties in terms of overall categories or each application segment. However, not every application store or third parties provide the same ranking mechanism transparently.
- (4) Product information includes date of issue, publishing entity, product introduction, software version, software name, product appearance, etc.

3.3 Data Analysis: Structured Equation Modeling and Path Analysis

To validate the research framework, we conducted a survey to test the hypotheses. The survey instrument was designed to fit the scenario of Mobile Apps’ marketplace. We used Structural Equation Models for data analysis and the research process took place in four steps as shown in Figure 7.

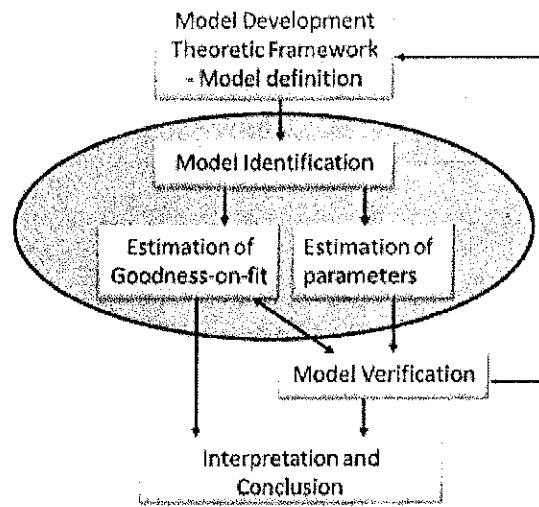


Figure 7: Execution procedure of structured equation model

1. Model development (theoretic framework model definition)

The first step is to confirm the model developed. The definitions of independent variables and independent variables are stated correctly. We will identify latent variables, observed variables, endogenous variables, and exogenous variables from the constructs of our research model.

2. Model identification

Model identification consists of “estimation of goodness-to-fit” and “estimation of parameters”. Assessment of fit is a basic task in SEM modeling. The output of SEM programs includes matrices of estimated relationships between variables in the model. Assessment of fit essentially calculates how similar the predicted data are to matrices containing the relationships in the actual data. We also consider Parsimony into our model. In addition to strengthen goodness-of-fit, the increase of parameters will affect the interaction between Parsimony and Goodness-to-fit. Therefore, we have used Amos software package because of modification index provided as confirmation of model reference.

3. Model verification

The model may need to be modified in order to improve the fit, thereby estimating the most likely relationships between variables. Many programs provide modification indices which report the improvement in fit by adding an additional path to the model. Modifications that improve model fit are then flagged as potential changes that can be made to the model. The index of goodness-of-fit between original model and the improved model is shown in table 1.

In order to verify the quality of our research model, we also take the below tests for validity and reliability:

- (1) Validity of internal consistency (Chronbach' s α)
- (2) Construct reliability (questionnaires, constructs and overall survey reliability)
- (3) Construct validity (convergent validity)
- (4) Discriminant validity

Table 1: Indexes of goodness-of-fit

Indices type and names	
Chi-Square tests	X^2 test
	X^2 test/df

Index of Goodness-of-Fit	GFI
	AGFI
	PGFI
	NFI
	NNFI
Replaceable Indexes	NCP
	CFI
	RMSEA
	AIC
	CAIC
	CN
RMP	RMR
	SRMR

IV. RESEARCH DESIGN

4.1 Hypothesis establishment

Normally, the Mobile App download is affected by price, product features and benefits. However, the incremental cost is approaching zero for Mobile App to be downloaded. The product features and benefits can be known partially through social media before trial usage. We've examined which factors within social system would impact on the desire of 'free App download. Because of no price factor to be considered in this stage, the next step of free application download is extent of trial.

- *H1: Social system has positive impact on free App download and trial*

The previous purchase experience will influence the desire of free App download if we have similar purchase experiences. The similar previous purchase experience comes from same brand we purchased or same (similar) product we purchased before.

It has been also established through past studies that prior online purchase experience may also have a direct effect on online purchase intentions (e.g., Shim et al. 2001; Weber & Roehl 1999; Eastlick 1996). That is, prior Internet purchase experience may both have a direct and indirect (through online information search intentions) impact on online purchase intentions. We can assume the previous purchase experience would impact on both Free App download as well as intention to purchase.

- *H2: Previous purchase experience has positive impact on free App download and trial*

In the research of an empirical analysis of Internet users' intention to purchase vacations online, Park et al. show that personal involvement, attitude towards purchase and previous purchase experience are found to be significant indicators of customers' intention to purchase vacations online. We can also assume the intention to purchase Mobile App will also be impacted by personal involvement, attitude towards purchase and previous purchase experience (Park, Ekinci and Cobanoglu).

Once we try the Mobile App, we have certain involvement on this product as well as attitude toward purchasing. In our research, we try to explore how deep the involvement will be after the extent of trial. Following the previous model, the level of involvement will also impact on the purchase decision. Besides, the extent of trial will also contribute to the attitude toward purchasing. According to TAM theory, such attitude will also affect the purchase intention.

- *H3: Extent of free App trial has positive impact on personal involvement*
- *H4: Extent of free App trial has positive impact on attitude towards purchase*
- *H5: Personal involvement has positive impact on intention to purchase*
- *H6: Attitude towards purchase has positive impact on intention to purchase*
- *H7: Previous purchase experience has positive impact on intention to purchase*

In our model, we ignore the direct link between social system and personal involvement because the impact of social system will direct contributes to free App download. The level of involvement will be affected by extent of trial.

Personal interest may be impacted by social system. And personal interest might also contribute into level of involvement. However, personal interest is not the focus in our study. We can view this as extraneous variable.

4.2 Questionnaire Design

We have employed questionnaire survey to examine our hypothesis. Questionnaires are designed according to operational definition of proposed hypothesis, with 7 points Likert scale varying from very agree to very disagree.

4.3 Pretest

In order to prevent from semantic misunderstanding while the survey is executed formally, we have recruited 40 participants into pretest. After pretest, we have modified wordings of our questionnaires per feedbacks collected from the pretest.

The formal test is deployed by an independent online survey company. The target participants are Internet users aged from 18 to 45. Not all online internet users have online Mobile App purchase experiences. The qualification is to be executed in the beginning of survey to filter out those respondents without Mobile App purchase experiences. The target number of examples is 200.

V. RESEARCH RESULT

We have gathered 216 questionnaires in Taiwan and 200 of them are valid after the result of pretest. Structural Equation Modeling technique was employed in this study to analyze data. Table 2 shows that the fit indices of the model.

Table 2. Model Fit indices

Indices	Result	Note
Chi-Square tests	CMIN	586.262
	CMIN/DF	5.863
	NFI	.61
	NNFI	.512
Replaceable Indexes	NCP	286.262
	CFI	.644
	RMSEA	.157
	AIC	692.262
	CN	42

The results of the test of the measurement model demonstrated insufficient level of reliability and validity. The result of CMIN/DF should better be under 3 or at least under 5, but we have 5.863. The results for NFI, NNFI and CFI should better be larger than 0.9, however the results we get are as 0.61 for NFI, 0.512 for NNFI and 0.644 for CFI. The smaller the value the poorer fit of the model. Furthermore, the result for RMSEA should be under 0.05 or at least smaller than 0.08, but we have 0.157. The result of CN should be larger than 200, but we only get 42. The reason for this outcome could be that we have too many constructs in the model and also the sample size is too small for constructing SEM model.

Table 3. Descriptive Statistical Data for the Result of each Question

Questions	Mean Value	Standard Deviation
30. I like to try all kinds of free-trial Apps	4.72	1.76
31. I like to use the free-trial APP for many times	3.93	1.79
32. I spend much time on the free-trial App downloaded	3.74	1.77
33. I like to understand the free-trial App' s content	4.61	1.78

34. While downloading a free-trial App, I will take family and friends' recommendation into considerations.	5.56	1.45
35. While downloading a free-trial App, I will take online market information on the experienced users' reviews for the App into considerations	5.19	1.48
36. While downloading a free-trial App, I will take online market information on the billboard of the ranking and number of times the APP being downloaded	5.39	1.56
37. While downloading a free-trial App, I will take media advertisement or media exposure into considerations.	4.61	1.62
38. While downloading a free-trial App I will take previous Experience on buying the products of the same brand into account.	3.91	1.59
39. While downloading a free-trial App, I will take previous experiences on buying the products of the same type into account.	4.06	1.60
40. In selecting App, I would care as to which one I choose	4.50	1.58
41. In selecting App, I think most of them are alike.	4.00	1.61
42. In selecting App, I think it is important to make the right choice	4.63	1.55
43. In selecting App, I would concern about the outcome of my choice	4.59	1.41
44. While purchasing an App, I would see if the APP is easy to understand.	5.67	1.27
45. 19. While purchasing an App, I would see if the APP is easy to operate	5.93	1.27
46. While purchasing an APP, I would see if the App is friendly to use	5.74	1.32
47. 19. While purchasing an App, I would see if it is easy to learn to use the App	5.61	1.31
48. While purchasing an App, I would see if the APP provided flexibility	5.43	1.27
49. While purchasing an App, I would see if the APP is helpful.	5.74	1.39
50. While purchasing an App, I would see if The APP makes my life and work more effective.	5.44	1.46
51. While purchasing an App, I would see if The app makes my life and job better	5.50	1.42
52. While purchasing an App, I would see if The app increase the quality of my life and work	5.56	1.44
53. While purchasing an App, I would see if The APP makes my life and work easier	5.46	1.48
54. While purchasing an App, I would see if the APP is easy to use	5.80	1.19
55. While purchasing an App, I would see if the APP is fun to use	5.61	1.31
56. I pay and buy App frequently	2.33	1.86
57. I would pay and buy the App if it is good.	4.04	2.06
58. I would recommend good apps to friends	5.63	1.46
Total	4.89	1.50

From the results of the path analysis depicted in Table 3, we have found some significance factors that influence the consumers' decision to download the trial or to purchase it. When deciding to download the trial, customers tend to be influenced by recommendation from friends, the number of times the App have

been downloaded, the APP' s ranking and comments about it. Interestingly, previous buying experience does not seem to matter that much. After downloaded the App, the frequency of being used is according to PEOU and the PU of the App. When deciding to purchase the App, the customer considers the usefulness of the App, and the decision made is also effected by how the customer perceives the App.

Furthermore, we found by the demographic analysis that gender and age of the customers make some differences. For most of the time, females are influenced more than males (Table 4). By considering the differences between ages, the number of factors considered by the customers increases as the age of the customer increases. Another thing to notice is that younger generations tend to be influenced by their friends or even solely depend on their friend' s recommendation (Table 5).

Table 4. Demographic Analysis: Difference between genders

Significant Factors	Male	Female	Diff.
The intention to download the APP is influenced by the recommendation of friends	5.83	6.01	0.27
The intention to download the APP is influenced by the information on the number of times of downloading the APP.	5.52	5.57	0.05
The intention to download the APP is influenced by the records of experienced users' ranking and reviews.	5.31	5.65	0.33
Frequency and time to try the free-downloaded APP are influenced by the perception that its functionalities are "useful" .	5.34	5.74	0.21
Frequency and time to try the free-downloaded APP are influenced by the perception that it is "ease-of-use" .	5.31	5.32	0.01
Purchasing decision is influenced by the perception of understanding the insides of the APP.	5.18	5.53	0.36
Purchasing decision is influenced by the perception of The usefulness of the APP' s functionalities.	5.46	6.07	0.60

Table 5: Demographic Analysis: Differences between Age

Significant Factors	15-19	20-24	25-29	30-39	40-49	Over 50
intention to download the APP is influenced by the recommendation of friends		v	v	v		v
intention to download the APP is influenced by information on the number of times of downloading the APP.					v	v
The intention to download the APP is influenced by the records of experienced users' ranking and reviews.						v
Frequency and time to try the free-downloaded APP are influenced by the perception that its functionalities are "useful" .				v		v
Frequency and time to try the free-downloaded APP are influenced by the perception of "ease-of-use" .				v	v	v

purchasing decision is influenced by the perception of understanding the insides of the APP.			v	v	v	v
Checks were marked for those significant impacts (over 5.50).						

VI. SUMMARY AND RESEARCH FINDINGS

Free App download for trial becomes a popular approach to motivate consumers to purchase after trials. However, it's still unknown that if free-trial Mobile APP download really stimulate consumers to purchase them. The goal of this study is to realize the acceptance of free-trial Mobile Apps and then to enhance our ability of diffusion of the Mobile Apps.

To obtain the understanding of customers' behavior, we have constructed a research framework based on the assumption that social system, involvement, attitude towards purchase and previous purchase experience are factors influencing final purchase intention. We include these components as constructs into our research model. In this study, we further explore how deep the involvement will be after the extent of trial. Following the aforementioned model, TAM and Innovation Diffusion model, the level of involvement will also impact on purchase decision. Besides, the extent of free-trial also contributes to attitude toward purchasing.

According to the descriptive statistics and the result of path-analysis, we have found some significance factors that influence peoples' decision to download the trial or to purchase it. When deciding to download the free-trial, people tend to be influenced by recommendations from friends, the number of times the Apps have been downloaded, the APP's ranking and comments about it. Interestingly, previous buying experience does not seem to matter that much. After downloaded the App freely, the frequency of it being used is according to PEOU and PU of the App. When deciding to purchase the App, people often consider PU of the App, and the decision made is also effected by how the customer perceives the App.

Furthermore, we found by demographic analysis that gender and age of the customers make some differences. For most of the times, females are influenced more by the factors than males (Table 4). As for the differences between ages, the number of factors considered by the customers increase as their age increases. Another evidence to notice is that younger generations tend to be influenced by their friends or even solely depend on their friend's recommendation (Table 5). So, we suggest that mobile Apps developers should enhance on-line store's social network functionalities.

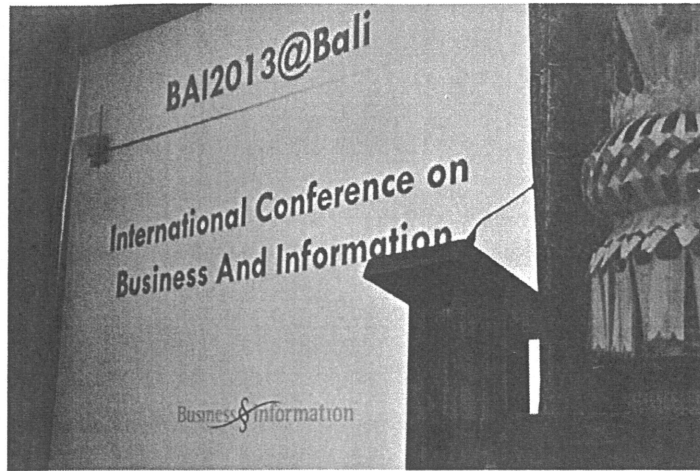
Through this investigation, the companies or developers of mobile Apps get the insight of how consumers react to their offer of free trial. They can focus on the exact offering into their free-trial package to get the most purchase volumes. Further research should be conducted into the influence factors contributing to purchase intention in terms of product category such as games, books, entertainment, education, lifestyle applications via free-trial mobile Apps. It may give a closer look on the interactions of influence factors and Apps' product segments.

五、相關連結(活動網頁、與本研討會有關之聯節)

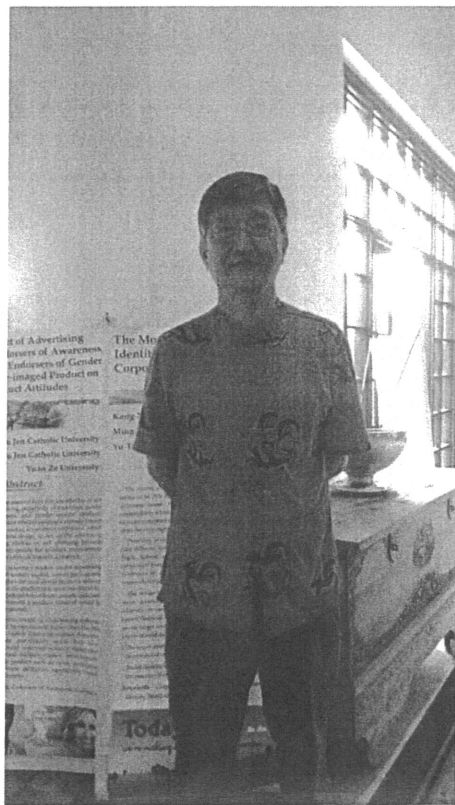
<http://ibac-conference.org/NewsUpdate.html> 附件:

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