



**CUSTOMERS' PERCEPTION TOWARDS MOBILE
SERVICES AND THEIR INFLUENCING FACTORS
IN THE CHOICE OF SERVICE PROVIDERS**

BY

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ABSTRACT

Given the importance of customers' perception in telecommunication business and the recent development of cellular phone business in Malaysia, a critical research agenda have arisen that requires attention of understanding the perception of consumers towards operators and the factors those are influencing in the choice of the providers. The research has set as its objective in the discovery of the influencing factors of customers' perception in their decision-making towards purchasing mobile phone line, to determine services information for formulating customers' perception of the mobile phone operators. To accomplish the objectives this research has explained the related concepts and theories; revealed and synchronized literature on consumer behaviour and developed a research framework grounded on a strong theoretical and literature review background. The empirical study was conducted in major cities in Malaysia where the emergency is required for this type of research to understand the customers' perception of mobile phone operators. The target population of this study were general customers' (N=400) of three main operators in Malaysia form significant cities where hand phone users are proportionately significant compared with other cities in Malaysia. The survey instruments included with demographic survey, and service quality, advertising and promotion, brand image, corporate image, customer satisfaction and service provider's price with seven point rating scale. The proposed research model described the direct relationships of service quality, advertising and promotion, brand image, corporate image, customer satisfaction and service providers' price towards customers' perception. These paths were related to causal processes. Thus structural equation modeling approach is necessary to examine these variables in this research. The data analysis of this study was organized into four stages (Stage I – Descriptive Analysis; Stage II – Exploratory Factor Analysis; Stage III – Confirmatory Factor Analysis; Stage IV – Structural Equation Modeling). Data were coded and analyzed by using the Statistical Packages for Social Sciences (Statistical Package for the social Science Version 15 SPSS Inc., Chicago, IL) and AMOS7(Analysis of Moment Structure Version). The research findings are based on perceptions of customers' about mobile phone operators. The study produced mixed result from the statistical outcomes; some of these results were expected and some, although obvious were interesting. Finally, it is proposed that, brand image is considered to be significant factor that influences customers' perception towards an operator, effect of advertising and promotion on customers' perception towards an operator is significant, there is a positive relationship existed between customer satisfactions toward customers' perception towards mobile phone operators, price or call rate of an operator is considered a substantial factor that influences customers' perception towards an operator, effect of service quality on customers' perception towards an operator is significant. Interestingly the effect of corporate image is not significant with customers' perception towards an operator. The findings of this research are valuable asset for mobile phone operators in Malaysia those who are struggling to implement a successful strategy for retaining consumers. Academicians, practitioners, researchers, policy-makers can also benefit from this research and its findings.

ملخص البحث

نظرا لأهمية تصور العملاء في مجال الأعمال التجارية المتعلقة بالاتصالات السلوكية واللاسلكية، والتطور الحديث في تجارة الهواتف المحمولة بماليزيا، حيث أنشأت أجندة في البحوث الانتقادية التي تتطلب اهتماما كبيرا في فهم تصورات العملاء تجاه الشركات المشغلة، والكشف عن العوامل التي تؤثر في اختيار مزود الخدمات. ويحدد البحث أهدافه في اكتشاف العوامل المؤثرة لتصور العملاء في صناعة قراراتهم من أجل شراء خطوط الهواتف المحمولة، وتحديد خدمات المعلومات لتشكيل تصورات العملاء لمشغلات الهواتف المحمولة. ولتحقيق تلك الأهداف يقوم هذا البحث على توضيح المفاهيم والنظريات ذات الصلة، وكشف الدراسات السابقة والمتزامنة عن سلوك العملاء، وتطوير إطار عمل للبحث، يتركز على خلفية نظرية قوية ودراسات سابقة. وأجريت هذه الدراسة التجريبية في مدن ماليزية رئيسية، حيث يتطلب في هذه النوعية من الدراسة حالات الطوارئ لفهم تصورات العملاء لمشغلات الهواتف المحمولة. واستهدف البحث عينة العملاء بشكل عام (N=400) لثلاثة شركات مشغلة في أهم المدن الماليزية، والتي تقع فيها نسبيا شريحة كبيرة من مستخدمي الهواتف المحمولة، مقارنة بالمدن الأخرى في البلاد. وشملت أدوات الدراسة على المسح الديموغرافي، وجودة الخدمات، والإعلانات والترويج، وصور العلامات التجارية، وصور الشركات، ورضى العملاء، والأسعار أو أسعار المكالمات، مع سبعة نقاط قياسية تصنيفية. ووصف نموذج البحث المقترح مباشرة إعلان الجودة والخدمة والترقية، وصور العلامات التجارية، وصور الشركات، ورضى العملاء، وأسعار مزود الخدمات نحو تصورات العملاء. حيث ترتبط هذه المسارات بالعمليات التعليلية. وبالتالي، فإن ذلك يثبت ضرورة استخدام المنهج النموذجي لهيكل المعادلة، وذلك لفحص المتغيرات في هذا البحث. وقد نظم تحليل البيانات لهذه الدراسة على أربع مراحل (المرحلة الأولى-التحليل الوصفي، والمرحلة الثانية-تحليل عامل الاستكشاف، والمرحلة الثالثة-تحليل عامل التأكيد، والمرحلة الرابعة-نمذجة الهيكل المعادلة). وقد تم ترميز البيانات وتحليلها باستخدام برنامج التحليل الإحصائي للعلوم الاجتماعية SPSS، في نسختها الخامسة عشر، والصادرة من شيكاغو، وايل، وبرنامج تحليل الهيكل التطبيقية AMOS5. واستندت نتائج البحث على تصورات العملاء حول مشغلات الهواتف

المحمولة. وتوصلت الدراسة إلى نتائج مختلطة من نتائج الاحصائية، وبعض تلك النتائج كانت متوقعة وبعضها مثيرة للاهتمام على الرغم من وضوحها. وأخيراً، اقترح هذا البحث اعتبار صورة العلامة التجارية لتكون عاملاً مهماً تؤثر على تصورات العملاء نحو المشغلات، والتأثير المهم للدعاية والترويج على تصورات العملاء نحو المشغلات، وأن هناك علاقة إيجابية بين رضى العملاء نحو تصوراتهم في مشغلات الهواتف المحمولة، وأسعار أو معدل سعر مكالمات المشغلات يعتبر عاملاً جوهرياً مؤثراً في تصور العملاء نحو المشغلات، والتأثير المهم لجودة الخدمات في تصور العملاء نحو المشغلات. ومن المثير للاهتمام أن تأثير الصورة المؤسسية لم تكن كبيرة مع تصورات العملاء تجاه المشغلات. وأضافت نتائج هذا البحث رصيذاً قيماً لمشغلي الهواتف المحمولة في ماليزيا، وذلك في تنفيذ استراتيجية ناجحة للحفاظ على العملاء. كما يمكن للأكاديميين، والممارسين للمهنة، والباحثين، وصناع السياسات الاستفادة من هذا البحث وماتوصل إليه من نتائج.

APPROVAL PAGE

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DECLARATION

I hereby declare that this thesis is the result of my own investigations, except where otherwise stated. I also declare that it has been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

Muhammad Sabbir Rahman

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CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION

The field of consumer research has developed as an extension of the field of marketing research, focusing almost exclusively on consumer behaviour rather than on other aspects of marketing process. However, consumer behaviour not only involved the specific actions taken by individuals in buying and using products and services, but also the social and psychological factors that affect these actions as well (Carman,1990). Yet according to the study by Shwu-Ing (2003) a person's buying choices are influenced by four major psychological factors: motivation, perception, learning and beliefs and attitude and through motivation, perception and learning, attitudes are formed and consumers make decisions. Some researchers categorized influencing factors into internal and external factors (Kaufman, 2002; Shwu-Ing, 2003). However, in explaining the service quality, customer behavioural intentions, and customer retention of telecommunication service in Thailand, Sirikit (2000) indicated that customers want their expectations to be met completely and consistently. They tend to perceive the quality of a service by comparing the actual service that experienced to what their expectations were before purchasing it.

Given the importance of consumers' perception in telecommunication business and the development of cellular phone business in Malaysia, a critical research agenda that requires attention of understanding the perception of consumers towards their services and the factors influencing the choice of the providers is an important phenomenon.

Because, Lovelocks (2001) argued that understanding customer behaviour lies at the heart of marketing. Since the invention of cellular phone by Alexander Graham Bell, there has been an outstanding technology development in the telecommunication industry. The telecommunications industry has made its mark in history. It has experienced a series of dramatic changes since its inception in the 1880s. After a flourishing start, wide-ranging in form and structure, the telecommunications industry developed gradually into a public-owned industry without competition. Therefore, a better understanding of the perception of consumers may provide the mobile phone operators with information to make future strategy. Solomon (2004b) explained that understanding consumer behaviour is a good business. According to him a basic marketing concept holds that firms exist to satisfy consumers' needs. These needs can only be satisfied by the understanding of the current and prospective customers who are using their products and services which they are trying to sell. Consumer response is the ultimate test of whether a marketing strategy will succeed or not. Thus, knowledge about consumers' perception should be incorporated into every facet of a successful marketing plan. The importance of the services sector in the world economy is growing. This makes research on services increasingly important and relevant to the developing economies in Asia which have enjoyed relatively high economic growth rates in the past decade (Kueh, 2007).

Hence according to Eu (2010), the year started with uncertainties. Mobile operators are worried that the global economic slowdown would hurt consumer spending, and eventually, their earnings. In the first of half of 2010, most telecom's chief executive officers were reluctant to provide forecasts on concerns over the severity of the recession. For example, DiGi.Com Bhd recorded a quarter-on-quarter net profit and revenue declined for the quarter ended June 30 2009. But the industry

keeps on adding customers. Slowing growth used to be the worry for industry players, but this did not appear to be the case as other smaller telecom's entered the market (Eu, 2010).

This study is all about understanding of mobile phone operators' services and the dynamics behind customers' perceptions toward mobile phone operators. The focus of this study is on detailing and examining factors which have significant role in explaining and predicting the customer's perception towards operators. In addition, the present study also examines proactive solutions for mobile phone operators' so that they can understand the customers' perception. According to Linnemann and Jongen (2009) to implement consumer-orientation in products or services development, it is essential to gain insight in the perception of the consumers and translate their needs and wishes into products or services characteristics.

The proposed research briefly attempts to fill the existing gap by exploring customers' perception towards the mobile service phone operators and also the factors that influencing customers' for the selection of a particular company's services. This research focuses particularly on customers in the cell phone industry in Malaysia. Moreover, the proposed research also builds on existing consumer behaviour literature by exploring the role of specific variables that ultimately influence for the selection of operators services.

1.2 THE TELECOMMUNICATION INDUSTRY

The telecommunication industry has grown from a small industry providing a luxury services to a basic necessity to the masses. For many people, life without a cell phone is unimaginable. The evolution of the telecommunication industry has seen a paradigm shift where the focus is now on wireless or cellular. Over the last ten years,

mobile phone services have changed from being a luxury item to being an important element of many people's daily lives. People have come to rely more on mobile services and phones not just for business needs but for also personal needs.

In fact, young consumers and small businesses are increasingly dependents on their operators' mobile phone services. It is viewed as a basic living necessity and critical communications medium. In some cases, wireless is the only means of reliable communications in underdeveloped parts of the world (Geser, 2004). As wireless cellular service has grown into a powerful growth engine of the global economy; wireless users, government regulators, and society in general have increased the scrutiny of the operational performance of wireless-network systems (Davis et al., 1996).

As a consequences brief analysis of the study area as well as the background of the total industry is inevitable for the fruitful outcome of this research. The description of the study area in the subsection includes the overall telecommunication industry; the Asian circumstances and Malaysian present and future prospects of telecommunication industry.

1.3 EARLY HISTORY

The root of the development of technology in communication was motivated by the military needs. The telephone and telegraphic services were specifically introduced after the First World War to help run the government's administrative system. Later, it expanded its role to the business and industrial sectors and then for public use. During the last half of the nineteenth century was the great age of European empires. Any empire is the outcome of a variety of forces- politics, military, and economics, religious and personal. Two technologies are critical to be great empires; motive

power for machinery and communication. Any empire, which lags in communication technology, cannot be sustained. France first set up a network of line of sight optical telegraph stations between Paris and Lille-230Km in 1973. However by 1839, the UK had set up its first 21 Km of electronic telegraph. In 1896, Alexander Graham Bell filed his patent for the telephone in the USA. L.M Ericsson the founder of Ericson had his first pair of telephones left his workshop in late 1878. Since the invention of the telegraph in 1833, the intervening 150 years of conventional telephone technologies in the 1980s have seen dramatic changed. The following Table 1.1 reflects the development of telecommunications in a historical perspective (Beard & Hartmann, 1999)

Table 1.1:
Telecommunications: Historical Perspective

Descriptions	Year
Telegraph	1833
Telephone	1861
Radio first regular broadcasting	1923 in Germany
TV first regular broadcasting	1935 in Germany
First telecommunication satellite	1965
Teletext	1980
BTX/ Minitel	1980/1984
Modem and fax	1980-1985
Deutsche Telecom demonstrated world's first video conference	1983
C-Netz" analogous cellular telephone	1985
Direct satellite telephone and fax	1990
D-Netz" GSM cellular telephone	1992

Source: Beard and Hartmann (1999)

1.4 THE GLOBAL SCENARIO OF TELECOMMUNICATION INDUSTRY

The telecommunications sector is currently experiencing phenomenal global change, with the liberalization and privatization of the sector. This appears to be benefiting the business environment in a number of ways as information has long been considered the fourth production factor after land, labour, capital. Moreover, it has taken 150

years to connect the world's first 900 million phone lines. The next 900 million will take a mere five years (Hoare, 1997). Telecommunications are also said to be one of the most important and most competitive industrial sectors of the future. The market segments of the global telecom service revenues in 1995 were: national telephone business accounting for 63 percent of telecommunication revenue, international 10 per cent, mobile 14 per cent, others 13 per cent (Scales, 1997).

The distribution of international telephone traffic by region of outgoing calls in 1995 was Europe 43 percent, Asia 17 percent, Asia Pacific 4 percent, Americas 10 percent and USA 25 percent. The largest company in Asia outside Japan again is a telecommunication enterprise, Singapore Telekom (Internet: <http://www.singtel.com>), privatized in 1993 with the state remaining as the controlling shareholder (Beard & Hartmann, 1999). The wireless mobile phone is rapidly spreading into all areas of daily life; it touches work, play, and everything between (Palen, 2001). The number of consumers with wireless phones grew to half a billion consumers worldwide during the 1990s. By 2000, 40% of people in the United States used wireless phones (Sullivan, 2001). At year end 2006, 75% of the population in the United States had wireless phones (Campbell, 2007). Telecommunications are very large enterprises, and are often the largest corporate bodies in their country (Table 1.2). Only a handful of these companies are likely to dominate the global communications industry in the twenty-first century.

Table 1.2:
Telecommunication industry in a global industry

Ranking	Name	Country	1996 revenue (\$ billions)
1	NTT	Japan	71.1
2	AT & T	USA	52.2
3	Deutsche Telekom	Germany	40.6
4	France telecom	France	28.9
5	British Telecom	UK	24.5
6	GTE	UK	21.3
7	Telecom Italia	Italy	19.2
8	Bell South	USA	19.0
9	MCI	USA	18.5
10	Telenica	Spain	15.3

Source: Guardian (1997)

According to International Telecommunication Unit (ITU) website, the global market for telecommunication is expanding rapidly due to both demand pull and supply push. Growth is pulled by an increasing reliance on telecommunication and information technology in every human life in all sectors of economic and social activity; in government, in the provision of public services, and in the management of public infrastructures. While, the growth is also by pushed by rapid technological developments, which continuously improve the efficiency of existing products, systems and services, and provide the foundation for a continuing stream of innovation in each of this area.

Table1.3 shows the number of proportionate subscribers controlled by each company. In addition, Table 1.3 also breaks down this figure by region. Table 1.3 clearly highlights the large disparities that exist in terms of the number of proportionate subscribers controlled by each company, with the number controlled ranging from 131.263 million for Vodafone to 1.234 million for Investcom. The 39 companies control 759.509 million proportionate subscribers among them. Vodafone is almost twice the size of the second-largest Telco, Deutsche Telekom, which has 69.5 million proportionate subscribers (Whalley & Curwen, 2005).

On entering the new knowledge-based economy, telecommunication organizations face even more severe and stricter competition in the global marketplace than ever before; to Know-how, process, and practice have thus become the key sources of core competency for this industry (Seng, 2004).

In an emerging global economy the ability of the telecommunications sector to provide an internationally competitive network for transferring information has a significant implication for trade and economic growth. That is why efficient delivery of telecommunications services generates direct benefits through lower transaction costs and improved marketing information, and indirect benefits due to accelerated information diffusion (Jussawalla & Lamberton, 1982; Greenstein & Spiller, 1995).

Table 1.3:
Proportionate Subscribers by Countries and Territories, 31 December 2003

Company	Total subs (millions)	Number of subscribers by region (millions)						
		Western Europe ¹	Eastern Europe ²	Middle East ³	Asia ⁴	Central & South America ⁵	North America ⁶	Africa
Vodafone ⁷	131.263	88.554	1.167	-	19.285	-	16.638	5.619
Deutsche Telekom	69.500	51.638	5.062	-	-	-	12.800	-
NTT DoCoMo	51.916	0.158	-	-	47.8	-	3.958	-
France Télécom ⁸	49.754	42.253	2.249	0.283	1.104	1.010	-	2.855
América Móvil	42.898	-	-	-	-	39.999	2.898	-
Telefónica ⁹	32.286	18.715	-	-	-	12.958	-	0.613
Verizon Communications	29.007	4.829	-	-	0.904	1.643	21.631	-
AT&T Wireless	24.800	0.377	-	-	0.737	0.061	23.625	-
Telecom Italia ¹⁰	22.309	16.437	-	0.560	-	5.312	-	-
TeliaSonera	20.828	9.474	2.705	7.799	0.488	-	-	0.189
mmO ₂	20.070	20.070	-	-	-	-	-	-
Turkcell	19.496	-	-	19.393	0.129	-	-	-
Singapore Telecom	18.927	0.424	-	-	18.503	-	-	-
BellSouth	18.766	-	-	0.913	-	7.926	9.610	-
SBC Communications	18.661	3.052	-	-	-	-	14.808	0.801
SK Telecom	18.343	-	-	-	18.343	-	-	-
Mobile TeleSystems	16.926	-	16.926	-	-	-	-	-
Sprint	15.965	-	-	-	-	0.030	15.935	-
Telenor	15.486	6.152	4.767	-	4.567	-	-	-
KPN	14.681	14.569	-	-	0.112	-	-	-
Nextel Communications	13.882	-	-	-	-	0.260	13.622	-
Vivendi Universal	12.400	9.722	-	-	-	-	-	2.678
Portugal Telecom	11.658	4.887	-	-	0.064	5.837	-	0.870
Vodacom	9.651	-	-	-	-	-	-	9.651
MTN	8.062	-	-	-	-	-	-	8.062
Telekom Malaysia	6.775	-	-	-	5.514	-	-	1.261
Tele2 ¹¹	6.001	5.181	0.820	-	-	-	-	-
TDC	5.990	5.971	-	-	-	-	-	-
Hutchison Whampoa	5.081	0.454	-	0.868	3.687	0.04	-	0.032
Telekom Austria	4.658	3.465	1.193	-	-	-	-	-
OTE	4.345	2.502	1.843	-	-	-	-	-
Millicom International	3.707	-	-	-	1.609	1.739	-	0.359
Orasecom	3.405	-	-	-	1.788	-	-	1.617
Etisalat	2.995	-	-	2.941	-	-	-	0.054
MTC	2.419	-	-	2.120	-	-	-	0.299
Western Wireless	2.455	0.834	-	0.238	-	0.092	1.201	-
CelTel International	1.634	-	-	-	0.049	-	-	1.585
Cable & Wireless	1.600	0.119	0.054	0.095	0.153	1.179	-	-
Investcom	1.234	-	-	0.600	-	-	-	0.634

Notes:

1. The 25 EU current member states plus residual Western Europe.
2. The Balkans, Belarus, Russia, Ukraine.
3. Includes Azerbaijan, Cyprus (N), Georgia, Moldova, Turkey.
4. Includes Kazakhstan, Maldives, Australia, New Zealand.
5. Includes Central and Southern America along with the Caribbean.
6. Canada, Puerto Rico and the USA.
7. Network Partnership Agreements are not included within Vodafone's total.
8. Those French overseas territories where Orange is present are counted separately and not included within France.
9. Total subscribers calculated through combining the proportionate subscribers derived from Telefónica's equity stake in Telefónica Móviles (which had 32.983 million proportionate subscribers) and then adding its own directly controlled subscribers to the total.
10. Total subscribers calculated through combining the proportionate subscribers derived from Telecom Italia's equity stake in Telecom Italia Mobile (which had 34.949 million proportionate subscribers) and then adding its own directly controlled subscribers to the total.
11. Tele2 does not sufficiently separate its subscribers by country or line of business for an accurate breakdown of subscriber by country to be undertaken.

Source: (Whalley & Curwen, 2005)

1.5 ASIA PACIFIC REGION

Asia has the world largest users based of wireless phones, estimated at over 600 million users in the year 2005(<http://www.economictimes.com>). China, Hong Kong, Japan, South Korea, Taiwan, Singapore, Malaysia and Thailand have numbers of wireless phones exceeding the fixed lines (The Economist, 2001). According to Chui