CHAPTER 2

IMPACTS OF ENVIROMENTAL FACTORS AND COMPETITIVENESS ON THE PAYPHONES INDUSTRY

In order to gain an understanding on payphones industry, we need to look at the environmental fundamentals affecting the business. In doing so we shall look into two main factors, namely the external environmental factors and competitiveness factors of the industry. In external environment analysis, we shall look at a broader landscape, i.e. technology, legality, economy, etc. which influence the industry and the players. From the industry competitiveness factors, the analysis will look at the aspects which are related to the industry's entrants, suppliers, consumers, product substitutions, as well as the level of the industry competitiveness which have a direct impact on the payphones operators. (Hitts, Ireland and Hoskinsson; 1999)

2.1 EXTERNAL ENVIRONMENTAL IMPACTS

Since the nature of the payphones business deals directly to the interest of public, external environment plays an important role in affecting the industry. Receptiveness of the public upon payphones service, the role of policy makers in providing the catalyst to the industry, the current and future trend of economics outlooks and current rate of technological advancement in telecommunication industry, shall have substantial impacts on the business. We shall look into detail on those factors, namely technology, legality, economy and social aspects.

2.1.1 Technological Factors

When speaking of technology and its effects on firms' survivability, perhaps the most affected ones are companies that operates in telecommunication industries. It all started with the explosive growth and rapid changes in computer technologies. Computer technologies changes the way we do things, from producing a type written letter and documents; to the way we store information and to the way we gather information. In fact, the government of Malaysia has given full emphasize on the importance of capturing computer knowledge which lead to the importance of information technology (IT). When talking about information technology, we cannot run away from touching the subject of communications. In fact, IT and communication technologies are the two terms which complement each other. In order to capture information efficiently and effective, we need high speed of communication, whereby data and message can be transmitted in huge amount over a split second period. In fact, one second is still considered as a very long process delay according to the current standard. Thus, craving for higher and higher speed of communication means with more and more convenience and value added services are continuously sought after.

With all of those happenings, as we can see today, there are various kinds of communication gadgets available in the market, from traditional fixed-line telephone, to mobile phones which enable people to access and be accessed almost anywhere and any times, exchanging all sort of messages and information. Up to a certain extend, people can transmit their on-line life video picture across the continent in no time at all at reasonably low cost.

Therefore, with all of those communication technological advancement, one big question prevails – where does the traditional payphones industry fits in? To have an insight into this big question, we need to look at current products which fall under the same category – to provide communication service while being away from homes and offices. The following products were recognized under the same product group available in Malaysian market which impose a great deal of threats to payphones business (Citifon; 2001, Telekom Malaysia; 2001):

- Mobile phone, and
- Calling Card Service (CCS)

2.1.1.1 *Mobile Phone*

Malaysian mobile telecommunication industry started to explode in the early nineties which gave great impact on the payphone market. Initially, in late eighties, cost to consume mobile phone services were still high, thus not many consumers can afford the service and depends on payphones as a mean of communicating while being away. Payphones industry growth rate was considered stable during the period. As mobile cost declined in later years especially in the mid nineties, payphone consumers tend to divert their preference to the former, resulting in a shrinking payphone market. These reductions originally took place amongst the more affluent social class groupings, and later to those middle age group, both groups which were the target of the mobile companies, and consequently became the early adopters of the technology (McElhiny; 2001).

At a global scale, in the UK, mobile growth has had a significant impact on the public payphone customer base, with those claiming to have used a payphone in the last month declining from 38% in 1991 to 30% by 1997 (British Telecomms; 1999). The indications are that this figure has slipped even further to around 26% in the first quarter of 1999. In the US, since 1996, the average number of local calls made on individual payphones has dropped from 449 per month to an estimated of 109 – a reduction of almost three-quarter (Feldner; 2001).

With the latest development in telecommunication industry, it is obvious that mobile sector has a great impact on payphones industry not only in developed countries, but in Malaysia as well. In Malaysia, payphones operators are still in tact, even though there were some reports claiming that they are operating at a loss. In US, the scenario was not so well as a number of payphones operators were forced to wind down. According to Vince Townsend, president of the North Carolina Pay Phone Association, two-thirds of the payphones today were being operated by companies that are either bankrupt or are in serious financial distress and he believed that the industry was in its a state of crisis. More than 1,000 independent payphone service providers in the US have gone out of business since 1986. Townsend believed that the major factor which contributes to this scenario was the explosion of wireless telephones, which offer hundreds of minutes with inexpensive monthly fees which scooped up most of the payphones customers (The Associated Press, Philadelphia; 2000). According to the American Public Communications Council (APCC), number of wireless customers is increasing at 25 percent every year, while calls at pay phones have dropped 30 percent since 1998. (Ducart; 2001)

2.1.1.2 ***Calling Card Services***

Rapid changes in Information and Communication Technology (ICT), coupled with explosive growth in the computer technology over the past twenty years, have resulted in more and more sophistication in the way we communicate to exchange messages, data and information. Telecommunication companies around the globe continuously offer a wide range of value added services with variety of offers and catches. Some claims that by opting to what they have to offer shall save cost as high as 50% from the traditional way. Out of wide varieties of offers, Calling Card Services (CCS) was recognized as a new trend which offers low cost service while at the same time provide convenience to customers. CCS operates by using any types of telephones, i.e payphones, house phones, as well as mobile phones. The modus operandi is simple - buy a CCS card with a pass code number printed on it and when you want to call someone, just dial a toll free number fixed by CCS operator from any types of phone. By dialing the pass code number, you were given a communication access for you to call anywhere you wish , which includes international call. The operators claim that by using their service, the rate could be reduced as low as 50% to 70%. According to a study, the tariff was really low as claimed compared to traditional fixed line call. According to a telecommunication engineer from TM, CCS ability to provide low rate was due to the way they transmit messages from a phone. By using computerized digital technology, signal message is sent over a platform known as Voice Over Internet Protocol (VOIP) platform. This voice signal is transmitted in digital data form, the same way fax or E-mail messages are transmitted. The new services are made possible by the use of digital computerized technology and has become a threat to payphones industry for the past three years. Not only the call tariff rate is lower than payphones but the call can even be made from payphones sets itself without any revenues obtained by payphones operators as the CCS access numbers are a toll free number (Telekom Malaysia; 2001, Citifon; 2001).

2.1.2 Regulators' Policy and Legality

Currently there are two important bodies involved in regulating the payphones industry, namely the Ministry of Energy, Communication and Multimedia (MECM) and Ministry of Local Government through its Local Authorities (LA), such as Dewan Bandaraya Kuala Lumpur (DBKL), Majlis Perbandaran Petaling Jaya (MPPJ. MECM, through its agency, Communication and Multimedia Commissioner (CMC) and LA plays an important role in payphones industry as the regulatory bodies in providing the catalyst needed to promote health of the industry. From the in-depth interviews with payphones operator's management, it was revealed that there are some unresolved issues involved the two bodies which need further attention, namely issues related to installation guidelines, licensing and tariff (Telekom Malaysia; 2001, Citifon; 2001).

2.1.2.1 *Installation Guideline*

It is obvious that the nature of payphone operation deals closely with installation which involved public land, along street, side walkways, car parks, government building, etc. Since most installation locations fall under the jurisdiction of LA, the regulator plays an important role in promoting the health of the industry. However, it was revealed that the trend is otherwise, whereby of rules and regulations set by certain LA have imposed certain level of threats to payphones operators. It has been a trend lately that certain LA imposed some fees for payphones installed in areas under their jurisdiction. The argument was that payphones operators are commercialized business entities and it is the nature of any business that nothing is provided free and thus the operators must pay some token to operate the business in their jurisdiction, similar to any other business firms. Failure to comply will result in booths removal aside some amount of penalties imposed . On the other hand, payphones operators believed that paying fees to LA is not justified since they have been granted licenses to operate the business under social obligation. Moreover, upon obtaining the licenses, they have paid some amount of fees to the MECM– almost twenty thousand Ringgit Malaysia over a certain period of time. Payphones operators believe that MECM and LA are in fact under one government body even though under different ministries (Citifon; 2001). With argument by both sides, LA and MECM must align their rules and regulations in promoting the industry's health. Until today, the above issues remain unresolved even though some attempt was taken place in 1998 as reported by The Star Newspaper (The Star; March 22, 1998).

Another rule set by LA is related to specific installation location permitted. DBKL, in particular has been very stringent with regard to this issue. DBKL argued that payphone booths have tarnished the city's image and need to be relocated or totally removed so that their apparent will not be obvious to the public. There have been more than 1000 payphones in Kuala Lumpur city's areas instructed to be removed as most of them were in bad conditions and/or situated in inappropriate locations that obstruct public movement and view. Payphones operators, however argued that those booths have been there for quite some time, and the cost of removing them are quite high. They feel that LA regarded payphones as something that are irrelevant for the city and should be removed from sight. On the other hand, if most phones are removed or relocated, there shall be no phones left for the public usage in the cities at the end. Payphones operators believed that the issue is the result of lack of proper guideline and misalignment between MECM and LA. Instead of providing a healthy condition for the industry to grow, the regulators imposed threats on them instead (Citifon; 2001, The Star; 1998).

2.1.2.2 ***Social Obligations (SO)***

SO requirement has been around since the existence of payphones industry. The requirement clearly stated in operator's license that they are obliged to provide service in rural as well as urban under the ratio of 2 to 1 – for every two installations in urban areas, there must be one installed in rural area. However, this policy is not met by most operators, simply because it is unprofitability to operate in rural areas (Citifon; 2001, Telekom Malaysia; 2001). In addition, the definition of rural is quite ambiguous and difficult to justify. To some, rural areas are defined as areas which are under development by the Ministry of Rural Development, while to others rural areas are areas outside certain radius from the city's or town's limit. Nevertheless, to provide payphones services in those areas are very costly due to low usage rate which resulted in low revenue, high vandalism, and high operational cost due to far distance. So far, TMP is responding quite well to the requirement, while TRSB and CBS remained with very few installation in those remote areas. Operators also argued that under current development imposed by LA, it is quite difficult for them to imposed SO. LA treat them strictly as business commercialized entities with rules and regulation discussed earlier; while at the same time, MECM insist that they fulfill their SO – another classic example of mismatch in regulating the industry under the two bodies (Citifon; 2001).

2.1.2.3 *Licensing*

As explained earlier, there is a regulation which clearly stated that a company must obtained a license to operate a payphone business. However, over the past few years, the rule seems relaxed. Apart from the three officially licensed payphone operators (LPO), namely TMP, TRSB and CSB, there are a growing trend of other alternative payphones services (APS) which operate in a similar manner as normal LPO. With the new development, payphones operators can be subdivided into three main categories, mainly (Citifon; 2001):-

- Licenses Payphones Operators,
- Private Rented Payphones Operators, and
- Managed Payphones Operators

2.1.2.3.1 - Licenses Payphones Operators (LPO)

LPO are the official payphones operator which are licensed to operate payphones services to the public under certain rules and regulations imposed by the Government. What we normally see on the streets and rural areas are payphones operated by LPO. Usually, they are everywhere across the nation. Their main objective is to serve the public even though the location is not lucrative as long as there is a requirement under social obligation. Sometimes, there are requirements for LPO to install payphones deep in remote rural areas or islands by using wireless telecommunication as no fixed telecommunication lines available. This types of operations are usually highly very expensive to operate with few people using it. However, under social obligation, LPO obliged to provide the required services.

2.1.2.3.2 - Private Rented Payphones Operators (PRPO)

PRPO usually operate payphones as part of their main business, for example restaurant operators or sundry shop owners who would like to provide payphones service in their premises by renting a payphone set from phone retailers with certain monthly fees. In Malaysia, there are few retailers such as Telekom Sales and Service Sdn Bhd and Maxis Sdn Bhd (Telekom Malaysia; 2001). The retailers are obliged to provide repair and maintenance support for the PRPO who subscribes their payphones services under rental basis. Apart from renting the set, PRPO also have to obtain telecommunication line from network operators in a similar way they get lines for their own use. To provide payphone service, PRPO simply connect their rented payphone to a standard communication line. Usually the rented payphones have the ability to manually set the call tariff rate that suits the operator. The charge set normally set at higher rate than normal tariff in order to obtain marginal profit to the PRPO. PRPO is very popular in new townships where no payphones installed at initial stage. However, when payphones are installed by LPO, the operators usually cease their operations due shift of customers to LPO as the result of LPO lower tariff offered. PRPO usually are not considered as a critical threat to LPO. (Telekom Malaysia; 2001, Citifon; 2001)

2.1.2.3.3 - Managed Payphones Operators (MPO)

MPO are another type of payphones operators. Their modus operandi is very similar to LPO, with different types of equipment, usually in simpler version than LPO's. MPO's usually operate as a firm even though they are not the official licensed payphones operator. The argument given simply – since the location of their installations are not categorized as public areas which normally situated in private premises such as airports, railway stations, university campuses etc, thus there is no requirement for license. MPO install, maintain and collects revenues obtained form payphones installed in such premises. In return for their exclusive right to install payphones, MPO pay monthly rentals to premises' owners. Normally, the tariff rates are set higher than the LPO rate. However, with secured and lucrative locations under exclusive right agrement, the needy customers are left with no choice except to use the service offered. After all the tariff set are not very noticeable to them. (Citifon; 2001)

MPO in fact can be considered as a threat to normal LPO, with all secured lucrative premises under their operational areas. At the end, LPO are left with areas which are less lucrative. Initially, when there were no MPO around, lucrative premises are within LPO's reach and the high revenues generated can balance out the losses made in unprofitable areas under SO scheme. Now, under the new trend imposed by MPO, most lucrative areas are taken over by MPO who can offer higher rental fees to premise owners. As MPO's cost of entrant and exit are relatively low compared to LPO's (as MPO's equipment and operations cost is lower than LPO as well as no licensing fees), MPO can afford to bid higher rental fees to secure the desired location. Looking at the issue closely, it is quite justify to consider the business competition between between MPO and LPO as unfair – whereby most lucrative areas are secured under exclusive right by MPO with no social obligation. MPO have choices either to install or otherwise based on expected profitability from such areas. However, as for LPO's case, if there is a requirement for installation, they left with no choices except to provide the service, regardless of profitability potential in those areas. The Government through MECM ought to review the new trend seriously as the MPO status is still questionable. (Citifon; 2001)

Currently, competition in the MPO sector remains strong, with companies such as Erafon and Ezeefon in existence. Erafon has successfully managed payphones in most hospitals, hotels, higher learning institutions and many other high traffic and lucrative areas. Among them, and many other smaller MPO, they could offer wide range of products, services, and pricing arrangements. The total number of payphones under MPO operation is difficult to determine since their operations are in isolation and not regulated by any authorities. In fact they just can come and go as they wish since the cost of entrance and exit is very low. As for LPO, they are closely monitored by the Government under MECM which require LPO to report their total number of installation – urban and rural; on monthly basis. (Citifon; 2001)

2.1.2.4 *Tariff Rate*

For the last twenty years, the payphones tariff rate has remained the same. While other services' tariff rate such as electricity, water supply, public transportation were revised as frequent as twice in five years, payphone's remain stagnant since seventies (Telekom Malaysia; 2001). Nevertheless, upon the Government approval to increase the tariff, the implementation shall remain under operators' jurisdiction for strategic purposes. It is believed that tariff rate flexibility must be within the operators' scope of strategic content. The Government argued that increasing the tariff will be in aligned with the objective in providing affordable services for all social group under the spirit of SO. However, from the operators point of views – the flexibility must be there rather than setting a ceiling price and the options should lies with the operators to determine what sort of tariff to be imposed on; and let the free market to determine demand over the services. After all, with so many telecommunication services available, consumers will be able to make their choices based on their preference on price, quality etc. On the other hand, by setting ceiling price, operators will not have enough flexibility to maneuver their strategic plan based on market demand. Most operators believe that tariff re-balancing ought to be re-visited by the regulating bodies; after all, MPO and PRPO's tariffs are not regulated and far too high as compared to LPO (Citifon; 2001, Telekom Malaysia; 2001).

As being discussed above, there are some issues under regulators' policy and legality that need further attention to keep the industry relevant. Issues such as installation guidelines, social obligations, licensing and tariff are very important for the survivability of the operators. Regulatory bodies must coordinate their effort to come out with a standard and fair rules and regulations that are applicable to all. Those rules and regulation must not be too stringent for the operators to operate their services.

Under recent development, it was reported that MECM intended to introduce new policy pertaining to service quality whereby a certain penalty shall be imposed to telecommunication companies who fail to deliver a certain standard of service quality. The new policy, while offering some good to the customers, may impose threat to the industry. With shrinking market and operating at loss, payphones operators might not being able to achieve the standard set. Instead of imposing such penalties, the relevant bodies should take some initial steps to formulate a policy that can promote the industry growth. Issues that are discussed earlier must first be resolved. Some kind of re-alignment within various agencies, ministries and regulatory bodies must be given full emphasized, instead of promptly introducing new policies that might be harmful rather than helpful to the operators.

2.1.3 Economic Factors

Economic health of a nation shall give some impact on an individual firm as well as the entire industry. When discussed about economy, usually nation GDP figures are used. Sometime an industry grows side by side with GDP growth, while others may react in reverse and some might react in isolation and unaffected by the economic well-being. Some industries may follow GDP growth over a certain period and become independent thereafter. Figure 1 shows payphones growth against GDP growth trend. From the graph, it can be seen that as GDP experience constant growth within 8% to 9% during 1991 to 1994 period, payphones industry followed suit in steady growth within 21% to 38% range. In 1995, peak growth of 45.2% occurred along with 8.5% GDP growth (MECM; 1995, Ministry of Finance; 2000, CIMB; 1995). The main reason of high jump in 1995 was due to an increased in the number of payphone operators in the industry with CSB as a new comer to the industry which was initially dominated by TMP and USB. To defend their competitive edge, TMP and USB increased their rate of installations more aggressively (Citifon; 2001).

However in the following years, 1996 till present, payphone growth was declining with less installation rates. In 1998, for the first time since privatization, the industry recorded a negative growth rate in tandem with negative GDP growth rate. A year later, when the economy started to recover with a GDP growth of 7.5% in 1999, payphones installation recorded otherwise with stagnant growth rate. Subsequence years indicated even worse performance in payphone installation growth that ended up with declining rate at 12% in June 2001 (MECM; 1995, CIMB; 1995, Ministry of Finance; 2000, Telekom Malaysia; 2001).

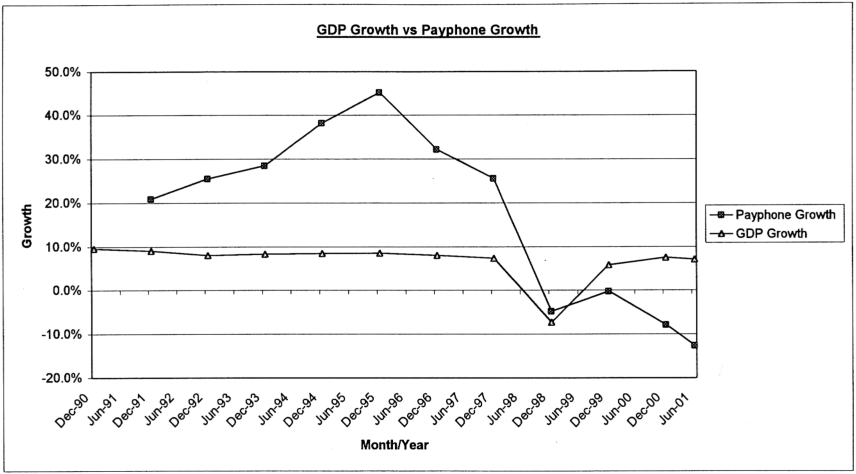
From the statistic presented in Figure 1, it clearly shows that payphones growth rates initially were in tandem with the economic condition with fairly stable payphones market. However at later on in 1999, payphone growth and economy growth were no longer compatible. The payphones market started to be significantly affected by the constantly growth of other substitute product market. It is believed that mobile growth has given deep impact on payphones installation growth as well as market demand. As we can see later, except in 1998 (economic down turn period); mobile phone market experienced peak growth between 25% to 80% yearly over ten year period starting from 1990. The impact started to become more significant as market shifted toward higher technology products as the economy recovered in 1999. In the particular period, competitiveness among mobile operators became more intense with more value added offered to consumers. As customers' purchasing power become higher due to better economy outlook, more people can afford to consume those high end products. However, besides national economic health measured in GDP growth rate, it is believed that there are other aspects that affect payphones installation growth rate as discussed next.

2.1.3.1 ***Increasing Growth in Product Substitution***

As discussed earlier, rapid technological advancement causes various ranges of new products being invented and introduced. In early eighties, computer technology was regarded as the prime concerned to many industries and in the early nineties the technology was shifted towards communication and information areas of technologies. In fact, both technologies are interrelated to one another under the latest term coined as Information and Communication Technology (ICT). With vast advancement in ICT, more and more advanced communication products introduced in the market to keep up

Figure 1: GDP Growth vs Payphones Growth

	Dec-90	Dec-91	Dec-92	Dec-93	Dec-94	Dec-95	Dec-96	Dec-97	Dec-98	Dec-99	Dec-00	Jun-01
Total Payphones Installation	26313	31807	39904	51261	70840	102864	135891	170608	162250	161800	148970	130100
Payphone Growth		20.9%	25.5%	28.5%	38.2%	45.2%	32.1%	25.5%	-4.9%	-0.3%	-7.9%	-12.7%
GDP Growth	9.5%	9.0%	8.0%	8.3%	8.4%	8.5%	8.0%	7.3%	-7.4%	5.8%	7.5%	7.0%



Source: MECM (1995), CIMB Security (1995), Ministry of Finance (2000), Telekom Malaysia (2001), Citifon SB (2001).

with the computer technology that become faster and smarter over the period of time. This lead to the introduction of mobile phones technology in early nineties which changed the way of life to most people. Since then, mobile phone has imposed threat as a substitution to payphones. In earlier section, it was mentioned that the peak growth of mobile phones occurred in 1997, a year before payphone industry started to decline. Since then, payphone industry remains in a declining stage, compared to mobile phone which displays steady growth of 6% to 7.5% yearly. Apart from mobile phones, there were also other product substitution such as CCS and MPO as described earlier. Even though, the threat level is not as high as mobile, their existence grabbed away payphone market to some extent (MECM; 1995, CIMB; 1995, Citifon; 2001)

2.1.3.2 ***Increasing Disposable Income***

Economic recovery in 1999 resulted in increment of customers' disposable income. Coupled with more value added communication services and products being offered and financial capability in hand, naturally payphone market tend to shift toward more convenience products that the latest technology had to offer. Even though, the latest product may cost higher as compared to payphones, the increased financial capability enabled many to consume the products.

2.1.3.3 ***Changes in Taste***

Changes in public taste go hand in hand with increased in financial capability. More people would be able to consume the latest product with more value added that suit their taste. Nowadays, carrying a handphone in their hands, pouches or handbags, is considered as trendy. Whoever had used a mobile phone before, will feel uncomfortable without it. To some people, mobile phone has been regarded as a basic necessity for business and pleasure. Besides mobile phone, communication over internet is also common among teenagers. Teenagers who have been regarded as the target market to payphone business and used to hang around a payphones booth in those days, now are changing to chatting over the internet, a common scene in most houses today with the comfort and convenience of living room has to offer. Chatting over internet has become increasingly popular as more people could own a computer, especially under the

Government 'one house, one computer' campaign. All those trend and changes in public taste would definitely impose a threat to the payphones industry.

Product substitutions, increase in customers' purchasing power and changes in consumer's taste have imposed a great deal of threat to payphone industry. In fact, the three factors will continuously affect the industry in a long run. As the result, payphones market keeps shrinking each day. It is believed that the future market demand on payphones shall no longer be dependent upon economic growth. Out of the threats discussed above, rapid technological changes is considered as the most influential one. Technological changes lead to product substitution which subsequently lead to changes in consumer's taste coupled with growing purchasing power. All these imposed a great threat to payphones. To deal with the scenario, payphone operators must reconstruct the industry's strategy; to re-introduce new products and services that offer more value added at reasonable cost.

2.1.4 Social-cultural

Social cultural is concerned with different society attitudes and cultural values which formulate in a certain format of a nation. Because attitudes and values are the basis that often affect policy, legality, economic, and technological change, it may give a full impact on an industry, including payphones industry in terms of its marketability, competitiveness, etc.

So far, we have explained that payphone industry is experiencing a declining growth over the past few years due to various threats imposed by various environmental aspect. Thousands of payphones are being removed across the country due to the fact that the operators operate at loose under the environmental factors. To some extent, some international business analysts expected that their existence is no more relevant in today's technology as admitted by Patrick Essie, director of the Wisconsin Pay Telephone Association, "Payphones are dropping like flies. Some payphones are losing so much money, it isn't worth for the state getting involved." (The Associated Press, Philadelphia;

; 2000). Many believed that payphones operators' days are being counted by hours and are waiting for extinction.

However, behind sad stories about payphones, believe it or not there are still many more people who dependant on payphones. Under recent study done by American Public Communication Council (APCC), payphones consumers are mainly students, tourists, foreign workers, people without house telephone and lower income group (Dukart; 2001). Paul Francischetti, Vice President of Marketing and Business Development, Verizon stated "Payphone is still relevant. There also are people who don't have access to a phone at work, and for whom cellphones are impractical" (Melfi; 2001). Barbara Silkworth, President of the New Jersey Payphones Association, put it, "Business is not what it used to be, and not what we would like it to be. But payphones are still around." (Dukart; 2001). Elaine Meyerson, Executive Director of Shelter for Sister, a charity body, mentioned, "Payphones also are important in group home, halfway houses, rehabilitation centers, and other institutions that cannot afford to supply all their residents' communications needs." (Melfi; 2001). Based on those remarks made by the payphones interested bodies, payphones industry is still relevant, to a certain social group of people.

Based on the above argument, it is believed that the Malaysian payphones market will still remain. There is a significant payphones market if we look into social demographic composition statistic. From the recent year 2000 economic report published by the Ministry of Finance, there was an increasing trend in school and university enrollment for the pass five years. Poverty level is still at 7.5% from the total population of 23 million population. Number of tourist growth is at 43% from 1998 (5.5 million) to 1999 (7.9 million) and is expected to grow in the upcoming years. Number of foreign students studying in Malaysia are also increasing from 9,790 students in 1998 to 13,766 students in 1999 and the number is expected to grow further. Number of fixed line telephones subscribers are 4.5 million, and 25% of those are for businesses, leaving only 3.4 million houses with telephones (Ministry of Finance; 2000). Based on an average of four persons per household, then there are about 13.6 millions people in Malaysia who have telephony facilities in their houses and the remaining 9.4 millions out of 23 millions total population are without house's telephone service. Taking 50% out of the number (for marginal purposes as estimated only 50% of total household content may require telephone service), then 4.7 millions person, about 20% of total population; would require a telephone to communicate and they must depend on payphones. Adding all those figure and based on the target market group identified by APPC, there are about close to 13 million people, inclusive of tourists who requires payphones; mostly poor people as well as people who do not have house telephone facility. Thus, based on the argument, payphones market will still remain relevant.

Based on statistics from TM, Malaysia's rate of payphone availability is about 6.4 payphones for 1000 population. Compared the figure with more developed nations, i.e. the U.S and Japan, they are 8 and 16 respectively. (MECM; 1995, Telekom Malaysia; 2001) This shows that, even in developed nation where technologies are more advanced than to ours, payphones facility is still relevant. In Singapore, Starhub – a company directly involved in payphones industry believed that even though the number of payphones have decreased 30% in the last two years, payphones will continue to address a certain group of people, basically foreign workers, housewives, children and elderly who do not use mobile phone (Singh; 2001). In the United States, even though some payphones operators, e.g. Tampa PSP Inc and ETS Payphones Inc, are operating in difficulties, not all are having similar faith. For example, Phonetel Tech Inc of Cleveland, which was in a bankruptcy proceeding two years ago, has recovered and re-gain its strength (Melfi; 2001). Vincent Sandusky, president of American Public Communication Council (APCC), believed that the decline of payphones could stabilize itself, and certainly reverse itself (Melfi; 2001). According to him, only 40% of Americans have wireless products, leaving 200 million without mobile facilities. In UK, at one time BT's payphones serviceability was as low as 17%, i.e. 17% of total payphones nationwide were working at any time. BT were losing money, with poorly maintained and dirty payphones all over the nation. However, after adopting the right strategy, BT was able to turn around the company, and for the first time ever, BT's payphones business were actually making profits (British Telecomms; 1999).

Thus, based on the above facts and views, it is believed that payphones facilities are still relevant. The only question, is how to make this business survive and profitable, thus it enabling it to continuously serve the nation, especially to the needy ones who fall under right social group. To answer this question, Payphones operators ought to consider some strategies and opportunities available. We will discuss on strategies related matter in later chapter.

Nevertheless, when discussing about social value, there is one social aspect that is considered as critical to payphone operators – vandalism and fraud cases. Vandalism and fraud cases are regarded as uncontrollable phenomena and contribute to high operational cost to the operators. For the past two years, it was estimated that payphones operators have lost about 6% to 8% of their yearly revenues due to vandalism acts, excluding intangible losses due to bad images as a result of this acts. Vandalism also resulted in huge losses due to opportunity cost. High rate of faulty payphones due to vandalism reduces customers' perception of the service in general. (Citifon; 2001, Telekom Malaysia; 2001)

Fraud is another act whereby bogus callers attempt to make free call by tapping and/or tampering with the payphones system. As a result, high losses incurred by the operators to settle payment with network operators, locally as well as internationally. In addition, cost of maintenance increased as those tampered phones must be repaired. From a study, the losses due to fraudulent act was estimated at about 10% of monthly revenue. (Citifon; 2001, Telekom Malaysia; 2001)

Vandalism and fraudulent are in fact serious social unrest that need particular attention. At one extend, securing the physical aspect by operators seem ineffective. Perhaps, the Government must also play their role in educating the public through more extensive public awareness campaign to arrest this social problem. At the same time, more stringent penalty may also be introduced through certain acts and enactment by the Government to curb the unhealthy phenomena.

2.2 INDUSTRY COMPETITIVENESS IMPACTS

Compared to the external environmental impacts, industry competitiveness environment has a more direct effect on an industry, the way firms in the industry compete within one another under the same industry in pursuing strategic competitiveness. The industry we referred to here is telecommunication industry in whole. Nevertheless, since the industry is operating under the same environmental factors, the relationship between external environmental and competitiveness impacts are inter-related. As we can see later, most factors discussed in the general environment analysis shall be re-visited.

Hitt, Ireland and Hoskisson believed that the intensity of industry competition and its potential profitability, hence survivability are the function of five competitive forces developed by Michael Porter (Hitt, Ireland and Hoskinsson; 1999). The five forces are: threat of new entrants, suppliers, buyers, product substitutes and the intensity of rivalry among operators (Porter; 1979). In analyzing the industry competitive impact, the model used will be based on the five forces model. We shall take a look at the forces with regard to the industry.

2.2.2 Threat of New Entrants

As mentioned earlier, under regulator policy and legality, entering the payphone industry is easier nowadays than in the past, with low cost and relaxed licensing requirement by the Government. The phenomena was different in the past whereby, the Government has imposed strict requirement on the licensing issue. Without strict regulation under licensing, it is relatively cheap and easy to establish a payphones business as it requires as little as one telephone and a working line to start. Barriers to entry are therefore relatively minor for new operators, particularly to expand into new geographical areas in Malaysia. Payphones shrinking market caused by new advance technological products has further shrink by low entrance barrier factor. In addition, since entrance barrier is low, new entrants have no social obligation due to lack of licensing, hence monitoring by the regulatory, viz. they just come and leave as they wish. Installation and dismantling cost is relatively low for the new entrants, as low as RM100 per phone as compared to the normal licensed operator at RM1000 per phone. (Citifon; 2001)

As mentioned earlier, there are two types of unlicensed payphones operators, namely MPO and PRPO. Between the two, MPO is similar in its operations to the licensed one. Currently, MPO have installed payphones a huge number of payphones nationwide, mainly in building premises, such as hotels, schools, universities, factories etc. MPO's total installation figure is unobtainable as they just come and go without being regulated by any regulatory bodies. There is also no official records of its operations obtained by MECM. Since MPO is unlicensed, MECM's rules and regulations could not be imposed on them. In contrast to the licensed one, MPO is not obliged to the social obligation requirement, leaving them free to exclusively target potential high revenue, secured and less vandalized prone sites. MPOs can target high profit sites, such as town centers and key users segments, such as students, factories workers and tourists. Since their existence are strictly under business sense, they are not obliged to provide service to non-profitable or low revenue areas. On the other hand, the licensed payphone operators (LPOs) are obliged to do so especially under SO requirement. This creates an imbalance between the two types of payphone operations, viz. LPO which is highly regulated with requirement to fulfill their social obligation, while on the other hand, MPO is not regulated with low level of entrance barrier, operate strictly under the orientation of business sense. This scenario may lead to an unjust competitiveness impacts created by regulators' policy and legality which need to be re-examined by such bodies. If the trend persist continuously, LPO shall end up in a difficult situation and affect its ability to survived in a long run.

2.2.3 Bargaining Power of Suppliers

Bargaining power of suppliers may affect the survivability of an industry (Hitt, Ireland and Hoskinsson; 1999). In payphones industry, there are three main suppliers to the operators, namely installation's location authorities or owners, communications network operators and payphones equipment suppliers. The level of bargaining power for each supplier varies as elaborated below.

2.2.3.1 *Installation Location Owners*

Payphones business relies heavily on the choice of locations to install payphones. In fact, the choice of locations may determine the profitability of the business. Payphones locations may be characterized into three main categories, i.e. high traffic, medium traffic and low traffic areas. High traffic areas usually referred to lucrative areas such as schools and colleges, factories, hotels, airports, etc. which normally give high average revenues per phones. Medium traffic areas referred to those areas that has medium traffic such as urban residential areas, along side walks, etc. Revenues collected from these areas usually within low to high. Low traffic referred to remote areas with less public movement, such as in rural areas. Normally, this areas contributed to low revenue per phone. (Citifon; 2001, Telekom Malaysia; 2001)

It is the nature of payphone business that all operators will compete to secure high traffic areas. Because of this nature, building owners will grant exclusive rights to install payphones to the operator that are able to offer the highest rental. Thus, in terms of installation location, payphone operators have low bargaining power to the suppliers. To secure a good location, they must be willing to incur some cost. Usually MPO is very aggressive in competing to secure lucrative locations. They are willing to pay higher rental compared to LPO. According to a study, MPO ability to pay higher rental is due to its lower cost in equipment procurement and maintenance process. The types of equipment used are much more simpler than the LPO's. MPO's cost of maintenance is lower since their areas of operations are focused within specific and limited areas. LPO on the other hand, involved in a very wide areas, including those remote areas under social obligation. Thus, LPO bargaining power to obtain a lucrative areas is very low as compared to MPO. (Citifon; 2001, Telekom Malaysia; 2001)

2.2.3.2 *Payphones Equipment Suppliers*

There are many types of payphones equipment being supplied by manufacturers around the world ranging from sophisticated to a simple one. LPO usually uses sophisticated type of equipment, in order to meet the nature of public payphones characteristics which are installed in open areas and subjected to all kinds of environmental factors including severe weather condition, vandalism and fraudulent acts. MPO usually chooses a less complicated type of equipment, since their operational areas are limited within buildings and closed surrounded premises which demand less environmental robustness. Normally, less complicated equipment costs less than the complicated one. Thus, in term of payphones equipment procurement, LPO usually loose its competitiveness edge to LPO in term of cost.

Since, there are many payphones equipment suppliers around the world, usually payphones operators have their free options to choose based on their modus operandi and specific requirement. Thus, the supplier's bargaining power is at the advantage to payphones operators.

2.2.3.3 *Communication Network Suppliers*

A payphones is useless unless it is connected to a communication network. Communication network suppliers/operators are also heavily regulated by the government, thus their bargaining power is limited to some extent. Under the new equal access policy, network operators are competing among them in terms of the best services and tariff they could offer. At present, the main fixed line operator in Malaysia is Telekom Malaysia but the scenario may changed if the wireless segment fully developed. Even though, one of the LPOs, i.e. TMP is under TM proper, the choice of payphones operator is not under the jurisdiction of the network operator. It is rather within the jurisdiction of the premise owner. Network operators' tariff is also under close supervision of the Government, with fixed ceiling price. Nevertheless, operators may reduce the tariff if they opt to, but this resulted in less revenue which affect their profitability. (Telekom Malaysia; 2001). Thus, it is believed that bargaining power of the communication network suppliers is rather negligible to the payphones operators.

2.2.4 Customers/Buyers

As discussed previously under the social cultural sections, payphones customers taste have changed over the past few years due to an increase in the level of disposable income as economy is getting better. The introduction of better and convenient product substitutes into the market coupled with higher purchasing power, customer taste are inclined towards more advance technological products that offer more value added characteristics as compared to the present payphones. Under a survey done by TM, public prefer mobile phones rather than payphones due to the service convenience offered by mobile segment; provided customers can afford one (Telekom Malaysia; 2001). Based on that, payphones operators have low bargaining power over higher income group with higher purchasing power. On the other hand, even though payphones operators may have the bargaining power over the lower income group, the advantage cannot be optimized as the industry is highly regulated by the Government. Furthermore, an increase in tariff may result in less revenues obtained. Thus, based on the above discussion, customer's bargaining power is not to the advantage of the payphones operators.

2.2.5 Products Substitutes

With rapid changes in the technological advancement, more and more innovative products are being introduced into the market. Those products, in fact, offer high level of substitution to payphone services. Products like mobile phones, calling card services as well as other types of payphone services, i.e. MPO and PRPO imposed great threat to payphones operators. Among those, as elaborated earlier, mobile phones is recognized as the highest level of product substitution to payphones. The explosion of mobile technology has removed many payphones users from the market which can be observed from the statistics presented in the Figure 2.

From Figure 2, it is obvious that just within one year from 1990 (which is the beginning year of mobile phone industry in Malaysia) to 1991, the growth rate of mobile subscribers shoot up to as high as 55.7%. At the initial stage, there is only asingle mobile operator – Cellular Communication Sdn Bhd (known as Celcom), with 77,931 subscribers in 1990. In 1993, within three years since the introduction of mobile phones, there were three new players in the industry – Binariang Sdn Bhd,(now known as Maxis Mobile), Mobikom Sdn Bhd (30% associate of TM) and Sapura Digital (now known as

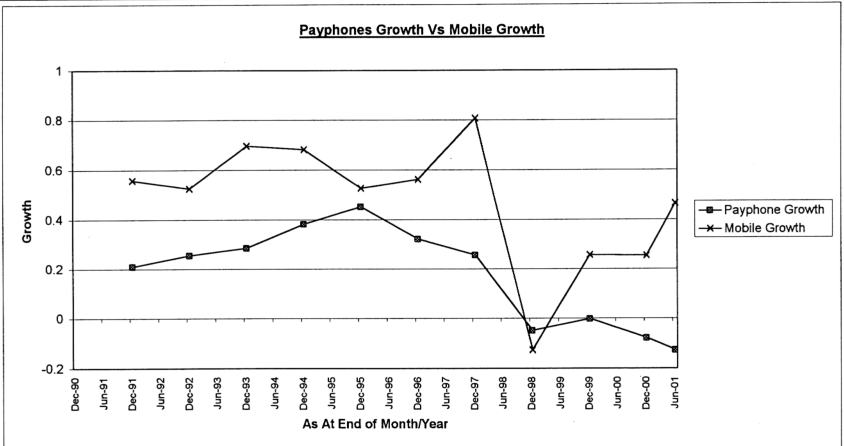
Timecell after being took over by Time DotCom, formerly known as Time Engineering). (MECM; 1995, CIMB; 1995, Telekom Malaysia; 2001)

With the increased in total number of players in mobile phone industry, growth rate shoot up to almost 70% in 1993. At the same time, payphones growth is relatively stable at a range of 20% to 30% yearly. Year 1994 saw an additional three new players in the market – Mutiara Telecommunication Sdn Bhd (currently known under brand name of Digi), MRCB Telecom Sdn Bhd (currently known as Telekom Cellullar Telecommunication Sdn Bhd, under brand of TMTouch after being taken over by TM) and Syarikat Telefon Wireless (STW, which ceased operations in 1999 due to economic down turn) (Har;1995). With seven players in mobile telecommunication industry, the competitiveness level is definitely very stiff with various strategies adopted by each company. Gaining as big market share as possible is the only ultimate target for them to stay survived. All sort of marketing strategies ranging from normal discounted monthly fees to free gifts to new as well as loyal customers and all sort of value added services offered. Those new value added offers imposed high level of product substitution to payphones with more and more customers shift their preference to mobile segment. As those activities continuously prolong, payphone market shrinks in size. From the graph above, from 1998 to June 2001, payphones industry experienced negative growth while at the same time mobile segment enjoyed healthy growth of 6% to 7.5%. (MECM; 1995, Citifon; 2001, Telekom Malaysia; 2001)

Another product substitution to payphones is calling card services (CCS) which was explained earlier in external environmental analysis. Currently there are more than 10 CCS operators across the nation and they are continuously growing in numbers. Some of CCS operators identified are namely, Time IDD, Time Contact, iTouch, Global One, Singtel, MY VIP, I-Talk, Flexicall, Chatz (Digi), World Connect (Celcom) and Ring Ring Card. With the huge numbers of CCS operators currently, the level of product substitution to payphones will remained high. (Citifon; 2001, Telekom Malaysia; 2001)

Figure 2: Payphones Growth vs Mobile Growth

	Statistics As At Month/Year											
	Dec-90	Dec-91	Dec-92	Dec-93	Dec-94	Dec-95	Dec-96	Dec-97	Dec-98	Dec-99	Dec-00	Jun-01
Total Payphones Installation	26313	31807	39904	51261	70840	102864	135891	170608	162250	161800	148970	130100
Payphone Growth		20.9%	25.5%	28.5%	38.2%	45.2%	32.1%	25.5%	-4.9%	-0.3%	-7.9%	-12.7%
Mobile Subscribers	84500	131600	200600	340000	571700	872800	1362500	2460700	2148800	2698400	3380000	4950000
Mobile Growth		55.7%	52.4%	69.5%	68.1%	52.7%	56.1%	80.6%	-12.7%	25.6%	25.3%	46.4%



Source: MECM (1995), CIMB Security (1995), Ministry of Finance (2000), Telekom Malaysia (2001), Citifon SB (2001).

2.2.6 Competitive Rivalry in the Industry

In many industries, firms compete actively with one another to gain competitive edge and survivability. In payphones industry, in the earlier stage the competitiveness was very intense among the three main operators, but gradually relaxed towards the current period. The competitiveness intensity was at its peak in 1995, with installation growth rate was as high as 45%. (MECM; 1995, Telekom Malaysia; 2001) It was in the same year that CSB entered the industry to introduce its new smart card technology. To retaliate, TMP also introduced smart card in the same year, thus both companies were competing for the same target market (Citifon; 2001).

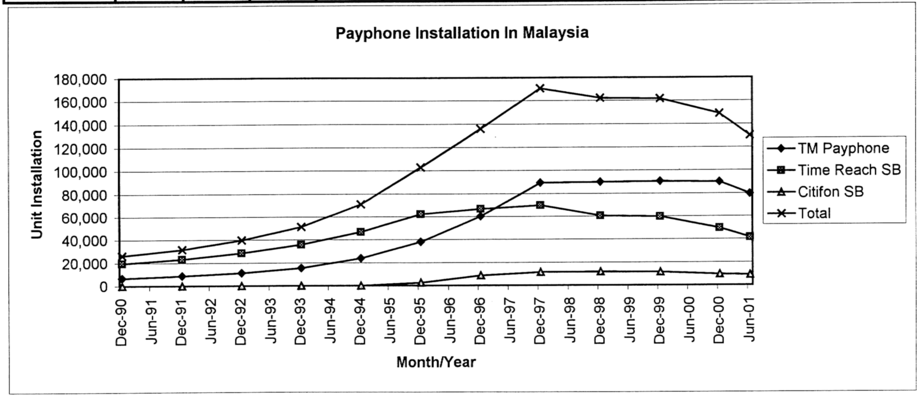
To compete with TM which is known as the big giant in the telecommunication industry, substantial capital injection was needed in order to have substantial payphone coverage. TMP and TRSB at the same time were very aggressive to blanket the whole nation with their payphones. Meanwhile, as CSB geared to retaliate with more payphones installation in attempt to counter TMP aggressiveness, economic down hit the nation. Most of the projects which was priory planned ceased. Capital injection for further development was halted. Finally, in 1999, the company was taken over by TM and thus left TM with two payphones business entities, one under wholly owned – CSB and the other one – TMP, a unit directly operating under TM proper. (Citifon; 2001, Telekom Malaysia; 2001)

Based on the latest development, competition level within operators in the industry is regarded as low (Citifon; 2001, Telekom Malaysia; 2001). This can be seen by realizing the declining trend in number of payphone installations nationwide. Based on statistics gathered from the MECM and Malaysian Economic Review, payphone business has been declining gradually since 1998 after reaching its peak installation number in 1997 (MECM; 1995, Ministry of Finance; 2000). The statistics and its relevant graphical chart presented in Figure 3 shows the declining trend in the number of installations since 1990.

From the statistical data and its graphical overview, it can been seen that the overall payphones growth increased steadily since 1990. The largest growth of 45% was in 1995 due the increasing level of competitiveness. The new player, CSB came into the industry within that particular year and at the same TMP restructured its payphones business to counter the shrinking market due to increasing number of players. In attempt to keep up with the new threat, TRSB, which was originally being the largest operator with the biggest number of payphones, took steps to increase its growth rate to the level of almost 50% growth, larger than TMP. The following year saw a constant growth for TRSB, but TMP and CSB aggressively increase their installation rate. Finally, in 1997 TMP overtook TRSB to become the largest payphones operator in Malaysia. In 1997, even though economic turmoil hit the nation, this phenomena was not affecting TM as the installation growth was still significant in that particular year. (MECM; 1995, Ministry of Finance; 2000, Telekom Malaysia; 2001, CIMB; 1995). However in 1998, when the economy started to recover coupled with explosive growth in mobile industry which in turn resulted in declining sales and decreasing payphones market growth, all three players began to decrease their payphone installations. TMP was almost constant in number of installation for the next three years with some reduction in 2001. TRSB was noticed to reduce the number of payphones in 1998, while CSB remained constant throughout the 3 years period (MECM; 1995, Ministry of Finance; 2000, Telekom Malaysia; 2001, CIMB; 1995). Clearly, with the decreasing number of installations among the three major operators, the degree of competitiveness in the industry is not substantially significant. In terms of revenue, based on a study conducted, TMP's sales revenue was declining as low as 14% in monthly average revenue for the last one year, while Citifon's seems even worst – at 30% declining rate for the last one year and TRSB incurred 5% declining rate. As for average revenue per working unit (ARPWU), all players experienced declining trend of 5% to 30% over the last one year period (Telekom Malaysia; 2001). Because of declining trend in revenue stream, payphones operators were forced to remove many of their payphones in attempt to reduce operational costs. However, from the trend reduction in installation does not improve ARPWU figure, instead declining it further. This phenomenon can be regarded as the cause of shrinking market. In short - due to lesser number of people use payphone service, reducing the number the payphones do not increase the revenue per working set.

Figure 3: Payphones Installation In Malaysia

	Dec-90	Dec-91	Dec-92	Dec-93	Dec-94	Dec-95	Dec-96	Dec-97	Dec-98	Dec-99	Dec-00	Jun-01
TM Payphone	6,798	8,658	11,268	15,305	23,892	38,182	60,288	89,320	90,100	90,500	90,070	79,500
Time Reach SB	19,515	23,149	28,636	35,956	46,948	62,182	66,819	69,757	60,500	59,700	49,500	41,600
Citifon SB	-	-	-	-	-	2,500	8,784	11,531	11,650	11,600	9,400	9,000
Total	26,313	31,807	39,904	51,261	70,840	102,864	135,891	170,608	162,250	161,800	148,970	130,100



Source: MECM (1995), CIMB Security (1995), Ministry of Finance (2000), Telekom Malaysia (2001), Citifon SB (2001).