Achievement of Market-Friendly Initiatives and Results Program
(AMIR 2.0 Program)

Funded by
U.S. Agency for International Development

Mobile Licensing Report

Final Report

Deliverable for ICTI Component, Workplan Activity No. 423.4.3
Consultancy Agreement No. 278-C-00-02-00210-00

September 2003

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Mobile Tender Report

1. Introduction

In accordance with the recent issuance of a new mobile competition policy by the Ministry of Information and Communications Technology (MoICT), the Telecommunications Regulatory Commission (TRC) of Jordan plans to issue a tender for an additional mobile wireless license before the end of 2003. Excluding Israel, Jordan will be the first country in the Middle East and North Africa (MENA) region to formally evolve from a duopoly to a highly competitive wireless market and, as a result, the manner in which this tender process is conducted will be closely scrutinized by Jordan's neighbors as well as its international peers.[1] Although many mobile wireless tenders have taken place globally over the last 14 years, the manner in which these tenders have been conducted, the technologies addressed by these tenders, and the global market conditions governing these tenders have all evolved dramatically.

The TRC's challenge is to launch a tender process that not only takes into account the evolving characteristics of the global telecommunications market but also satisfies the objectives of the Jordanian government with respect to social reform, economic development, international obligations and World Trade Organization (WTO) commitments. This document examines many of the fundamental elements which should be addressed in order to ensure that the bidding process not only attracts desirable operator/investors who can make a significant contribution to the Hashemite Kingdom of Jordan, but also that it proceeds in a timely and orderly fashion to a successful conclusion.

2. Current Global and National Telecommunications Conditions

2.1 Overview of Global Market Conditions

The state of the global telecommunications industry over the last 24 to 36 months has been the subject of numerous gloomy articles and analysts' reports. The enormous sums paid for many of the early third generation (3G) mobile licenses in Europe, coupled with the extremely high capital expenditures required to deploy these same 3G networks, have been cited as some of the principal causes of the telecommunications meltdown. In reality, however, the wheels were set in motion before the advent of the 3G bidding frenzy.

International operators, many of whom enjoyed monopoly or near monopoly status in their home market, had spent almost a decade pursuing international investments as their domestic markets seemingly reached saturation point. Large sums of money were raised to finance these initial international acquisitions and were then compounded by the additional financing schemes required to upgrade and expand the foreign network acquisitions. The operators' already heavy debt load was further augmented by the advent of market liberalization, which required renewed interest as

[1] The term "tender" is used in this report to refer to the public and participatory process by which the third mobile license will be issued.

well as additional infrastructure investment in the operators' domestic markets in order to effectively compete with new market entrants. The enthusiastic pursuit of 3G licenses, followed rapidly by the news that the operators would be unable to generate 3G revenues any time soon due to unavailability and incompatibility of 3G equipment, exacerbated the problems facing the industry. In addition to the debt load difficulties, many of the early international telecommunications investors had grown increasingly disenchanted by unstable or ambiguous regulatory environments that had not resolved long-outstanding issues related to areas such as interconnection and interconnection rates.

This phenomenon translated into extremely difficult market conditions for any government or regulator wishing to privatize existing telecommunications companies or to launch mobile license tenders. All of a sudden, these officials and countries were faced with investor fatigue and suspicion rather than unbridled enthusiasm. Whereas at one time, major international operators would energetically pursue numerous simultaneous investment opportunities and would be willing to contemplate significant degrees of investment risk, the governments and regulators now found themselves dealing with skittish and risk adverse Boards of Directors who were increasingly selective and who were no longer willing to approve investments without extensive analysis. Even then, the decision was likely to be negative. Consequently, many privatization and mobile bid processes were put on the back burner for indefinite periods.

Although market conditions are gradually starting to improve, investor attitude remains unchanged. Not only are investors more cautious and risk adverse, but many of the larger operators/investors have been replaced by more entrepreneurial and adventurous bidders who, although they are quite willing to pursue potentially risky investments, do not have the same financial capabilities and operating experience.

2.2 The Jordanian Telecommunications Market

Jordan has one of the most advanced telecommunications markets in MENA. Fixed line household penetration is has reached around 13 percent of the population with mobile penetration achieved by the two existing operators, Fastlink and MobileCom, even higher -- in the neighborhood of 20-25 percent of the population. In addition, a trunking license was recently awarded and the new operator, NewGeneration, is expected to launch service in April 2004. According to the incumbent fixed and wireless operators, Jordanian market demographics (e.g., high percentage of the population under 14 years of age, number of people living below the poverty line, the dispersed Palestinian refugee population, etc.), combined with the level of telecommunications penetration in the country, do not support the need for a third mobile operator. These same operators reinforce their position by citing the low Internet penetration in the country as a result of the perceived high cost of personal computers and Internet access for much of the population. Although this point of view is not surprising given the source, the Jordanian incumbents will be busy spreading this message so as to dissuade potential investors even though similar or smaller markets have supported three or more mobile operators.

2.3 How This Impacts the TRC

The TRC is charged with implementing the Ministry of Information and Communications Technologies' mobile competition policy. At the same time, the TRC recognizes that although WTO commitments play a significant role in accelerating overall market competition within Jordan, there is in any event a fundamental need to increase availability of telecommunications services and consumer choice within the country irrespective of the external commitments. In order to do so, the TRC has to anticipate and deal with the national and international market realities cited above. Furthermore, the advent of second mobile license processes in Iran, Oman and Saudi Arabia in 2004 could prove to be unwelcome competition for Jordan if the timing were to overlap. Therefore, the timing of the tender process and the structure and content of both the license and the tender will be extremely important. The following sections contain initial recommendations as to how the tender process should be conducted. In addition, issues which require further analysis and resolution are highlighted.

3. The Impact of a Third Mobile Operator in Jordan

3.1 Introduction

The International Telecommunication Union's (ITU) "Trends in Telecommunication Reform 2002"[2] reports that 78 percent of ITU Member States have some form of competition in mobile services and, of those, nearly half permit full competition in this area. According to the ITU, only 35 countries do not allow any form of competition in the mobile market (ITU 2002) and, in virtually all cases, this is attributable to an almost complete lack of liberalization across all telecommunications sectors in those particular countries. Obviously, Jordan does not fall into this latter category given that it is already at the forefront of telecommunications in the MENA region. The increased telecommunications liberalization, which will be signaled by the entry of a third mobile operator into the Jordanian market, represents a unique opportunity to rapidly promote competition in a very dynamic sub-sector of the market, to increase traffic volumes and to increase revenue flow to the government.

The impact of the introduction of a third mobile operator in the Kingdom can be examined from three principal perspectives based on what has occurred in other markets:

- Impact of increased competition on mobile penetration and overall mobile market size
- Socio-economic impact
- Overall benefits to the Jordanian consumer

These perspectives are examined in the sections that follow.

[2] International Telecommunication Union, "Trends in Telecommunication Reform 2002, Effective Regulation", ITU, Geneva 2002 (hereinafter ITU 2002).

3.2 Impact on Teledensity, Mobile Penetration and Overall Mobile Market Size

There is a strong correlation between teledensity and the rate of growth of competition in the mobile market. This was found to be much higher than the correlation between mobile teledensity and any other factors including GDP/capita[3]. According to a study presented by Carlo Maria Rosotto to the World Bank in 1999, even countries with very low GDP/capita and low population densities have experienced strong growth in their mobile penetration rates as a result of competition.

In another study, conducted by Petrazzini and Clark, the authors, state: "In liberalized markets, teledensity (the number of telephones per 100 population) has increased at least twice as fast as in non-liberalized markets, and the difference in telecommunications penetration appears to be sustainable and increasing over time"4. The impact of increased competition on subscriber growth and mobile penetration in a selected number of Organization for Economic Cooperation and Development (OECD) countries is illustrated below. This table demonstrates that the rate of mobile growth increased substantially with the introduction of a third operator. Of particular note is the fact that in these countries, the number of mobile subscribers doubled within one year of the introduction of the third operator.

Impact of Third Operator on Mobile Penetration

Country	3rd Operator Launch Dates	Duopoly Penetration Rates at Time of 3rd Operator Launch	Number of Subscribers at Time of 3rd Mobile Operator Launch	Number of Subscribers 1 Year after Launch of 3rd Mobile Operator	Current Penetration Rates (YE 2002)
Greece	March 1998	11.35%	**0.9M**	**2.1M**	76.4%
Portugal	September 1998	20.00%	**1.5M**	**3.0M**	89.1%
Belgium	January 1999	12.50%	**7.0M**	**15.0M**	83.7%
Spain	April 1999	19.49%	**1.7M**	**3.2M**	70.0%
Switzerland	June 1999	30.85%	**1.7M**	**3.1M**	79.5%
Hungary	November 1999	15.00%	**1.0M**	**3.1M**	64.4%
Czech Republic	March 2000	21.00%	**1.9M**	**4.3M**	83.5%

Source: EMC Regional Database Dec. 2002

The entry of a third mobile operator has a profoundly positive effect on the overall mobile penetration rate and market size. Growth of the overall market not only accelerates after entry of the third operator, but in addition, the level of acceleration is typically at a greater rate. Indeed, although it is to be expected that the new entrant take customers away from the incumbents through aggressive and innovative pricing of its services and an intensive marketing campaign, the incumbents will respond

[3] Rossotto, Carlo Maria, Michel Kerf, and Jeffrey Rohlfs, "Competition in Mobile Telecoms", Viewpoint Note 184, World Bank, Washington, April 1999 (hereinafter Rosotto 1999).

[4] Petrazzini, Ben A. and Theodore H. Clark, "Costs and Benefits of Telecommunications Liberalization in Developing Countries, Institute for International Economics Conference on Liberalizing Telecommunications Services", Washington D.C., 29 January 1996 (hereinafter Petrazzini 1996).

accordingly and attract new customers. Annex 1 illustrates the success of third entrants in taking market share away from the incumbents but also demonstrates that all operators end up by gaining customers. The impact of third operator entry into the cellular mobile market is the same in practically all other European, Latin American and Asian markets.

As a general rule, when the mobile market expands exponentially, there is some decline in the average revenues per subscriber because, typically, less affluent and low volume users are added to the subscriber base. This often leads to the incorrect conclusion that the combination of low end users and more competitive tariffs will result in an overall market decline in revenues. In reality, the rapid growth of the market, coupled with increased minutes of use attributable to the lower mobile tariffs, result in substantial uptake of both services and minutes and, thus, overall revenue growth. The table below illustrates that, in reality, overall revenues continue to increase significantly.

Country/ Currency	3rd Operator Launch Dates	Revenues 1998	Revenues 1999	Revenues 2000	Revenues 2001
Estonia Kroon	Dec. 1997	1.5B	1.9B	2.3B	
Greece Drachmas	March 1998	3.4TR	5.4TR	6.8TR	
Portugal Escudos	Sept. 1998	2.0TR	2.9TR	4.5TR	
Finland Finmarks	Dec. 1998	6.9B	8.9B	9.3B	
Belgium Belgian Francs	Jan. 1999	42.1B	60.7B	85.9B	
Hungary Forint	Nov. 1999	1.8TR	2.4TR	2.7TR	
Czech Republic Koruna	March 2000	24.0B	32.1B	45.0B	57.2B

***Shading indicates revenues year after launch of third operator; Source EMC Regional Database and TIW, T-Mobile Czech Rep and 2002 Eurotel 2002 annual reports**

3.3 Socio-economic Impact

Investment and Fiscal Impact

Increased competition in the telecommunications sector attracts new domestic and foreign investment. A study conducted for the World Bank[5] estimates that the multiplier effect for the telecommunications sector is 1.4 as compared, for example, with the energy sector for which the multiplier effect was found to be between 1.2 and 1.3.[6] Increased investment in telecommunications has a noticeably positive impact on the productive efficiency of other industries that depend on telecommunications. This promotes overall economic growth.

[5] Wellenius, Bjorn and Carlo Maria Rosotto, "Introducing Telecommunications Competition through a Wireless Licence, Public Policy for the Private Sector", World Bank, Washington, November 1999 (hereinafter Wellenius + Rosotto 1999).

[6] Strategic Policy Research Inc. "The US Stake in Competitive Global Telecommunications Services. The Economic Case for Tough Bargaining, Bethesda, Maryland, December 16, 1993 (hereinafter SPR).

A study conducted by DRI/McGraw-Hill in 1991[7] demonstrated that for every $1.00 spent on telecommunications, $1.64 is saved on alternative inputs such as labor, travel, mail and courier services. These results are corroborated by other studies. A 1998 study completed by the Korea Information Society Development Institute (KISDI) and the Korea Institute for Industrial Economics and Trade on the Asia-Pacific Information/Infrastructure indicated that there are substantial economic gains resulting from investment in telecommunications infrastructure.[8] Similarly, a study done at Queen's University in Belfast, Northern Ireland, concluded that transferring investment from other types of capital to telecommunications infrastructure would substantially raise overall economic output.

These conclusions are supported by other studies such as the one carried out by the Wissenschaftliche Institut für Kommunikationsdienste (WIK) for a potential entrant into the German digital trunking market (enhanced specialized mobile radio -- ESMR).[9] This study indicates that the total economic impact in terms of industry revenues, interest charges, rent, salaries, and depreciation over a seven year period is worth more than six times the amount invested by the new ESMR entrant over the same period.

In yet another study,[10] Smyth and Davis present statistics which indicate that total expenditure on telecommunications increases three times as fast as total consumer expenditure (see below); however, even if total revenue were to remain the same (through a combination of reduced monthly bills but with increased teledensity) the impact on the economy would be positive because of the multiplier effect, which generates 1.4 times as much additional revenue base for the government.

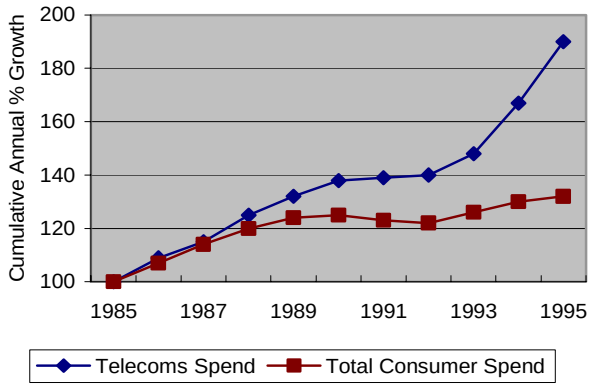
[7] DRI/McGraw-Hill, "The Contribution of Telecommunications Infrastructure to Aggregate and Sectoral Efficiency, February 1991 (hereinafter DRI).

[8] Briceño, Arturo, Kirsten M. Pehrsson, and Jeffrey H. Rohlfs, "The Fiscal Impact of Liberalization of the Telecommunications Sector", Study prepared for the Government of Morocco analyzing the fiscal impacts of various liberalization and privatization approaches, Bethesda, Maryland, March 2000 (hereinafter Briceño 2000).

[9] Wisenscha/tliches Institut für Kommunikationsdienste GmbH, "Okonomische Auswirkung der Einfürung des digitalen Bündelfunkstrandards TETRA in Deutschland, Bad Honef, 11 Juni 1998 (hereinafter WIK).

[10] Smyth, David & Robert Davis, "Prospects for Average Revenue and Penetration within the Mobile Telecommunications Market," Orange, September 1997 (hereinafter Smyth & Davis).

Growth of Telecommunications versus Total Consumer Expenditures



Source: UK Central Statistical Office; Smyth & Davis

The multiplier effect means that the Government of Jordan should be able to collect more taxes as a result of the increased investment in telecommunications. The increased tax revenues are greater for investments in telecommunications than for an equivalent amount of investment in a sector with a lower multiplier such as, for instance, the energy sector.

Promoting investment in telecommunications through increased competition is therefore highly desirable for the Kingdom. New investment in the telecommunications sector, resulting from increased competition will promote development of the all important information and communication technology (ICT) sector and will contribute substantially to Jordan's overall economic performance.

Employment

In 1995, the OECD conducted a study to determine the relationship between telecommunications development and employment.[11] The study, based on data gathered during the early years of liberalization in the markets of OECD member countries, indicates that the number of jobs in the traditional fixed line operators was declining. However, these were jobs that were related mainly to network expansion and maintenance and were being reduced because, in most cases, the incumbent telephone companies had already achieved high levels of penetration and because digitization of the network entailed lower installation and maintenance requirements.

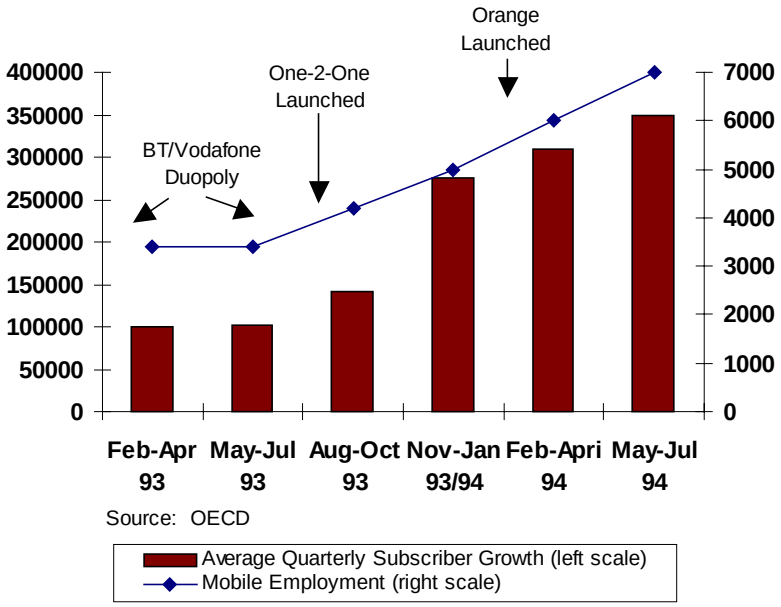
The impact on markets which are still in the development stage is somewhat different. Here, the effort to achieve higher teledensity, which is stimulated by increased competition, will create more labor intensive jobs related to the construction and build out of the network. As an example, the same OECD study quotes the Japanese Ministry of Posts and Telecommunications, which estimated that "the new jobs created by building a fiber optic network would outnumber those in the automobile industry."

[11] Organization for Economic Cooperation and Development, Working Party on Telecommunications and Information Services Policies, "Cellular Mobile Pricing Structures and Trends", DSTI/ICCP/TISP (99) 11/Final, Paris, 19 May 2000 (hereinafter OECD 2000).

At the same time, however, the study shows that despite the aforementioned, new jobs were being created in the competitive segments of the sector, which includes the long distance, mobile, and value added services markets. For example, while employment at NTT, the incumbent domestic telephone operator in Japan was declining (at the beginning of the 1990's) at a rate of about 16 percent, employment in competitive areas such as data communications, value added services, and mobile communications was growing at rates greater than 25 percent per annum. The new jobs being created were in the managerial, professional, information technology and marketing areas. These positions require higher educational qualifications and are generally better paid than the craft-based jobs that were lost as a result of technological changes rather than competition.

Evidence gathered by the OECD shows a significant increase in jobs created in the mobile market in the United Kingdom, when the third and fourth mobile operators launched their services in 1993/94. This is illustrated in the figure below:

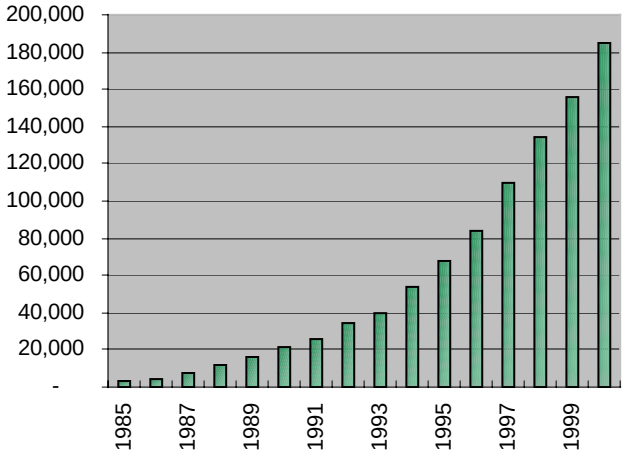
UK Mobile Subscriber and Employment Trends Post Duopoly



The Cellular Telecommunications and Internet Association (CTIA) conducts an annual survey of the wireless industry in the United States. The figure below demonstrates the evolution of the number of people directly employed by mobile and ESMR operators between 1985 and 2000. The compounded annual growth rate during that time period was 26.6 percent. These figures represent only the direct employment created; if one were to add indirect jobs created by investment in the sector, the numbers would be much higher. During this period, the number of operators per region or Basic Trading Area (BTA) increased from one to up to seven operators. A BTA corresponds to approximately 10 million people.

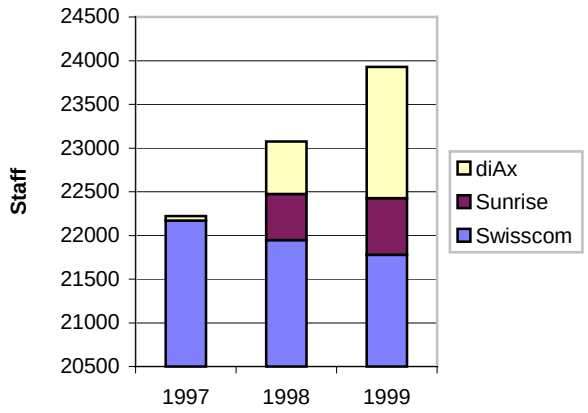
Number of People Directly Employed by Wireless Operators in the United States

Source CTIA



The figure below illustrates the increase in employment in Switzerland between 1997 and 1999 as a result of competition in both the fixed and mobile markets. The decrease in the incumbent Swisscom's employees is more than offset by the jobs created by the new entrants: diAx and Sunrise.

Employment in the Swiss Telecommunications Sector 1997 - 1999



Source: M. Minges, ITU

The WIK study mentioned earlier demonstrated that over a period of seven years, the investment required to establish a digital trunking network in Germany would create over 8,500 jobs.[12]

[12] See WIK study.

3.4 Benefits to the Jordanian Consumer

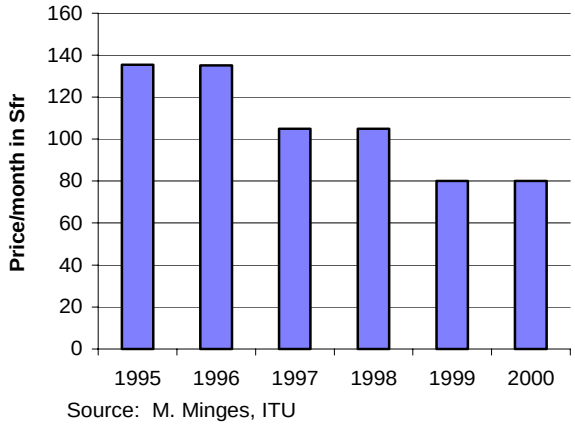
Prices and Consumer Choice

Consumers benefit through decreased prices for telecommunications services, greater choice and the rapid introduction of new services and technologies. Increased competition in the mobile market also puts pressure on the fixed-line operators to reduce their prices, increase their offers and, in general, to innovate.

The level of competition depends on the ease with which the user is able to choose between competing suppliers. In Chile, for example, where a competitive, multi-carrier system was introduced in 1993 for domestic and international long distance services, tariffs were cut almost immediately by up to 70 percent[13]. Under this system, the customer is able to choose the long distance operator on a call-by-call basis, allowing him/her to select the best price for the time and destination of the particular call.

The impact of reduced prices and increased consumer choice on the mobile market is the same. For example, competition in the mobile market began in Switzerland at the end of 1998 with the entry of Sunrise as the second operator. Orange, the third entrant, began service six months later. A fourth operator, Tele2 Mobile, started to offer service in April 2000. The impact on prices is illustrated below in the figure which shows the evolution of the incumbent's (Swisscom's) price for a basket of 100 minutes between 1995 and 2000.

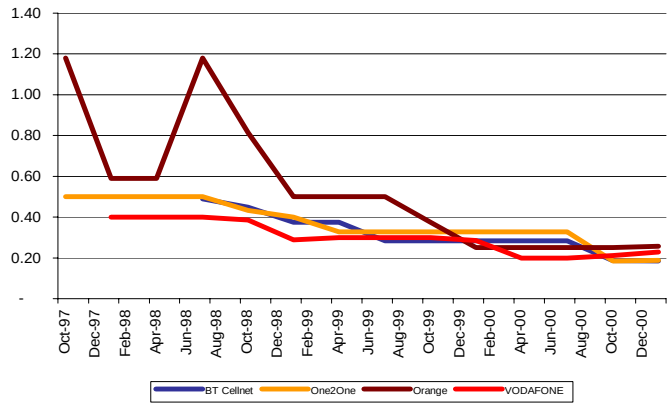
Swisscom Natel: Price of 100 Mobile Minute Basket



Statistics gathered by OFTEL, the United Kingdom's telecommunications regulator, illustrate the evolution of average prices charged by the four mobile operators in that country.

[13] Petrazzini, Ben A., Universal Services, "Employment, and PTOs in Competitive Telecom Markets" 1995 (hereinafter Petrazzini 1995).

Average Price of Cellular Mobile Calls in the UK



Source: OFTEL

In yet another example, the average mobile tariffs dropped by 40% within a year after the March 2000 launch of the third operator, Cesky Mobil, in the Czech Republic.

Using the same example of the Czech Republic, one can see the impact of increased competition on the service innovations offered to the mobile consumer. The operators were quick to realize that competition could not be solely price driven. Therefore, they accelerated network upgrades to GPRS and introduced new customer care offerings such as service order processing and handset delivery via the internet and online billing.

4. Licensing Methodologies

4.1 Introduction

The two most commonly used licensing processes associated with the award and authorization of mobile operators are auctions and comparative evaluations (beauty contests). For the purposes of this report, two other possible license award approaches, “first come, first served” (direct award) and the lottery, have not been included. The direct award system has been discounted given the anticipated level of interest in a third license in Jordan and also due to the perceived lack of transparency in applying this methodology. In the case of the lottery approach, this has been used primarily in the United States and was not viewed as a particularly efficacious or successful methodology for awarding mobile licenses. Therefore, the lottery approach is not viewed as a suitable alternative for the Jordanian mobile market environment.

4.2 Auctions

The main idea behind spectrum auctions is that spectrum is a national (and natural) resource; therefore those who use it should do so wisely and should pay for the privilege of using the national resource. The auction process has been used most widely in the United States, Western Europe, and Latin America for wireless licenses,

although it has also been applied in several Asia/Pacific countries. The auction is generally viewed as the most transparent means of license allocation given that the determining factor is highest price, thereby eliminating any possible subjectivity in the decision-making process. In addition, governments who wish to obtain substantial funds for the Treasury tend to favor the use of auctions. Some auction processes cost less to administer than beauty contests, and, depending upon the level of complexity of the pre-qualification process, some are conducted in shorter time frames than other methodologies. However, this is determined by the type of auction selected, whether a simple round (a single bid submission) or a multiple auction round is chosen and, as previously referenced, the manner in which the pre-qualification process is conducted. In the case of multiple round auctions, which tend to be quite complex, a special consultant is required to oversee the auction procedures. Although the auction may not be the most effective means of ensuring that the successful bidder is the most appropriate choice of operator, the government can require specific service or social considerations that it wishes to address through the introduction of an additional mobile operator to the market with an auction.

In addition to the typical single and multiple round auctions in which bids are cast for the price of a license, some regulatory authorities have attempted to implement other innovative variations. One such case in point was the 3G license award process conducted by OFTA, the regulatory authority of Hong Kong, in September 2001.

The Hong Kong auction had a number of unique features. One of the principal objectives of the regulator, after observing the crippling effects of some of the European 3G auctions, was to use a royalty based license fee as the bid variable, payable for the duration of the license, to ease or spread the financial burden for the bidders typically generated by the upfront license payment in an auction. This was seen as a feature that would support newer entrants as the payment would be somewhat scaled to actual revenue. In addition, OFTA stated that it was extremely concerned that a traditional open auction could result in collusion among the potential mobile bidders in Hong Kong.

Taking an innovative approach to reduce the possibility of collusion, OFTA indicated that it would use the “dark room" approach in which participants would not know how many bidders there were going into the auction nor would they be aware of the number of bidders participating in any round. On auction day, each bidder would be placed in separate secret locations. For each of the four licenses available, the royalty paid by auction winners would be the bid of the last bidder to leave (so that only four remained), plus an additional 0.01 percent.

At the time of the auction, there were six mobile operators in Hong Kong. As only four bidders elected to participate, probably due to the highly competitive conditions and the requirement that licensees make 30 percent of their capacity available to mobile virtual network operators (MVNOs), the auction did not proceed and the licenses were issued at the auction reserve price. Under the terms of the license award, a minimum fee of HK$50 million is applied during the first five years of the 15 year license, after which the annual fee is the higher of the five percent royalty on annual billed revenues or an escalating minimum fee (which ends up being HK$151 million in the 15th year). This roughly translates to an annual license fee of US$30 per person in Hong Kong. The Government of Hong Kong has recently waived the

performance bonds required to cover the sixth and seventh year license fees due to the financial difficulties being experienced by the mobile operators.

Despite the aforementioned benefits of complete objectivity and potentially abbreviated time frames, the auction approach has several significant drawbacks. Auctions only work if there is more than one bidder interested in the license. In difficult market conditions, an auction is often a deterrent to potential bidders due to the uncertainty this approach generates vis à vis the unknown license cost component of the business plan. Planning an auction is also very complex with care and time needed in order to ensure that the auction developed works for the particular country and market sector. Multiple round auctions also can last for many weeks, thereby increasing administrative costs.

Furthermore, in auction processes where the government's objective has been to raise the maximum amount of revenue, if too much money paid for the license up front, it will limit the availability of additional funds for the actual implementation and rollout of the network infrastructure. This has happened with some European 3G auctions and, ironically, has caused the regulatory authorities to change policies that, in turn, have had the effect of reducing competition. There is a concern, however, especially in light of incidents over the last two or three years, that the auction can fail if bidders are unwilling or unable to meet the minimum bid, and the regulator should be prepared for such a possibility.

For the TRC, another consideration also applies. Article 32 of the amended Telecommunications Law requires that competitive bidding be approved by the Council of Ministers. Any significant delay in such approval could jeopardize the TRC's ability to conduct the licensing process in the desired timeframe.

4.3 Beauty Contests

Beauty contests, or comparative evaluations, are based on pre-defined criteria that bidders must meet or exceed in order to win the license. The beauty contest is an extremely popular method for awarding licenses, especially for governments or regulators where the key objectives include increased dissemination and availability of telecommunications services as well as contributions from the potential investors that will, in some way, support government initiatives by offering increased social or economic benefits for the general population. With respect to third and fourth mobile licenses, beauty contests have been widely used due to the significantly increased challenge in developing a financially viable business plan. In these instances, the government has determined that the overriding benefits of improved telecommunications coverage and accessibility as well as job creation are more important than the one time revenues that a government might be able to obtain via the auction process.

Beauty contests have been widely used in Latin America, Eastern Europe, the Commonwealth of Independent States (CIS) and most parts of Asia. The Scandinavian countries have also normally chosen the beauty contest approach.

Because the bidders' responses to the selection criteria must be individually evaluated, no matter how clearly structured the evaluation terms may be, the beauty contest is subjective to some degree. However, despite the typical concerns regarding perceived transparency, very few beauty contest award decisions have been challenged in the last five years. In addition, it should be noted that compared to auctions, beauty contests usually require greater expenditures of regulatory resources and longer time frames from the date that the proposals are received to the date of the issuance of the license.

4.4 The Fixed Fee Approach

In instances where the government and/or regulator wish to fulfill social and long term economic goals through the beauty contest approach and also wish to derive some more immediate financial benefits from the award of the license, a fixed fee methodology can be applied. Under these conditions, the beauty contest is still utilized to select the winning bidder but, in addition, a fixed, pre-established license fee is incorporated into the bid. If the license fee is reasonable, this approach is favorably received by prospective investors since it removes any uncertainty in the business plan process regarding the cost of the license.

One of the most recent examples of a successful fixed fee license award process is that of Bahrain. The regulator believed that the prevailing market conditions (a total population of 700,000, a well-regarded mobile monopoly service provider and a high mobile penetration rate of approximately 60 percent) were not conducive to an auction approach. Despite these unattractive conditions for a second mobile market entrant, Bahrain's process was successful with four separate bids submitted.

4.5 Rationale for Recommending the Fixed Fee Approach

Given current global market conditions as well as the market conditions within Jordan itself, a beauty contest with a fixed, up-front license fee would seem to be the most practical approach for successfully introducing a third mobile license in Jordan. There are numerous reasons for this conclusion:

- historical precedents in-country
- global investment climate
- abandoned auctions and tenders
- government objectives.

First, the existing two mobile license awards in Jordan were allocated via a beauty contest and a direct award respectively. The implementation of an auction process to award a third license could be looked upon unfavorably by potential bidders given there is no historical precedent for awarding a mobile license via auction within the Jordan. Therefore, implementing an auction process for the third mobile license may not be the best option, but an auction may be a viable option when licensing a future wireless service in Jordan.

Second, the global economic climate, coupled with the general malaise of the telecommunications industry over the last 24 to 36 months, as referred to in Section 2.0, is not conducive to an auction approach given the markedly more conservative attitude of telecommunications investors of late. The aftermath of some of the ill-conceived 3G auctions in Western Europe has resulted in extremely high debt loads for many of the major international telecom operators and investors, and although financial conditions are beginning to improve for many of these same operators, it seems likely that they will remain reluctant to return to their former investment habits and frantic auction bids of the 1990's and the year 2000. Whereas in the past, operators were inclined to pursue multiple opportunities at once, particularly within the same geographic region, there is generally a greater reluctance to do so despite the activities of a few players such as Orascom, MTC Vodafone and Batelco. In addition, the previously referenced impending second mobile license bids in Iran, Oman, and Saudi Arabia,[14] all with relatively low mobile penetration rates and more favorable demographics, may cause some investors to sit back and wait for the "big fish" rather than devoting their energies to an auction for a third license in a relatively small market such as Jordan.

The lack of success of auctions for the third or fourth license in countries such as Brazil, Bulgaria, and Latvia is an indication that Jordan could be faced with a similar outcome if it were to elect an auction process in the current investment and telecommunications climate. Although there are many diverse factors that might influence the outcome or failure of an auction, in Jordan's case, where foreign investment is needed to continue much needed economic development, it is important to avoid a process that has the potential to generate a negative perception of the investment climate.

A principal consideration supporting the use of a beauty contest (especially given the effect on timing of obtaining Council of Ministers approval) is that both the TRC and the MoICT have stated that a critical objective of the government is to encourage additional foreign investment in the telecommunications sector. An examination of mobile license bidding processes over the last three years has confirmed that beauty contests have not only attracted more bidders, but with only a few exceptions such as the Slovak Republic, these beauty contests have been successfully concluded (it should be noted that in the Slovak Republic, the third license tender was launched with unattractive terms and conditions). Beauty contests or beauty contests including fixed license fees for third or fourth operators have been successful in countries such as Bahrain, Estonia, Finland, Ireland, Luxembourg, Malaysia, Portugal, Romania, Singapore, Spain, South Korea and Sweden.

It is therefore reasonable to assume that a properly structured, third mobile license tender process, based on a beauty contest with a reasonable, fixed license fee, should attract a sufficient degree of interest from potential bidders so as to ensure a successful outcome. The reference to proper structure includes not only the methodology utilized to award the license, but also the terms and conditions included in the tender.

5. Possible Additional Selection Criteria

[14] In addition, a tender is currently being conducted Iraq for regional mobile licences in Iraq.

5.1 Overview

As referenced in Section 4 above, the beauty contest method of awarding licenses is often selected by governments or regulators wishing to stimulate specific activities or improvements in the telecommunications sector. These requirements, which would be over and above fairly typical beauty contest requirements such as speed of network deployment and rapid population coverage, are then factored into the bid evaluation criteria so as to ensure that the bidder/applicant makes a firm commitment to deliver or improve certain services either to the general population or to the telecommunications market in particular. These requirements vary greatly by country and regulatory jurisdiction and it will be necessary to carefully examine the type of contribution that would best support the objectives of the MoICT and the TRC. The following is not intended to be exhaustive, but rather, is intended to serve as a starting point for further discussions and decisions.

5.2 Contributions to Jordanian Telecommunications and Society

Over the past 10 years, in addition to the typical bid requirements of network, marketing and business plans and speedy network deployment, many beauty contests have focused on the advancement of telecommunications within a particular country. Some of the most popular elements have been:

- Contribution to universal service obligations
- Introduction of innovative network services and features (e.g., location based services)
- Establishment of local research and development facilities within the country so as to establish a national telecommunications laboratory
- Establishment of local telecommunications training programs, often in conjunction with local universities and technical colleges, to increase resident telecommunications skill sets
- Creation of local telecommunications manufacturing facilities
- Direct contribution of a percentage of gross revenues to a national R&D fund

In addition, there are various social contributions that could be factored into the beauty contest evaluation criteria. The following are some examples that have been successfully adopted in other bidding processes:

- Build-out requirements to particular segments of the population or locations within the country (e.g., mobile phone booths or kiosks in unserved areas)
- Contribution of wireless equipment and computers to schools, institutions and charitable organizations
- Joint projects with government ministries to implement e-government using wireless networks
- Overall plan to extend availability of and accessibility to the information society throughout a country (e.g., Internet access and computer terminals)
- Development of special wireless services to support the handicapped and the disadvantaged (e.g., voice recognition software, symbols and smart cards for the illiterate, etc.)

- Monetary contributions to social service funds established by the government.

The TRC will need to determine which of these contributions to Jordanian telecommunications and society should be included as part of the bid requirements for the third mobile operator.

6. Suggested Prequalification Criteria

6.1 Introduction

Prequalification criteria are established in license tender processes in accordance with the government or regulator's objectives regarding the profile and caliber of operator/investor that it wishes to attract. These criteria also tend to reflect the government's overall objectives with respect to telecommunications services and availability within the country. In addition, although it is an approach that should be very prudently and cautiously applied, prequalification criteria can be established in such a way so as to exclude certain undesirable bidders or investors. For instance, this could refer to operators who have offered poor service or have failed to meet contractual commitments in other countries in which they have invested. A more common view is that the prequalification criteria can be designed so as to ensure that only those operators with suitable experience need apply.

A recent example of criteria specifically designed to prevent the participation of specific operators could be found in the original mobile license bid announcement in Iraq: no telecommunications operator with more than five percent government ownership was eligible to participate in the bidding process. Because such a requirement excluded virtually all of the potential European telecommunications operators except for those in the United Kingdom, this decision was generally interpreted as a reflection of the bid administrators' desire to exclude certain operators such as the major carriers in France, Germany and Kuwait. Whether or not this is true, this prevalent perception resulted in an amendment to the bidding documents that limited the bidding consortium to having no more than ten percent government ownership. The original terms of the tender received much criticism and did not necessarily convey a message that the bid was structured in an open and transparent manner.

6.2 Suggested Criteria

The principal suggested prequalification criteria are listed below and are designed specifically to pre-qualify telecommunications operators and investors interested in pursuing the third mobile license. It is impractical to attempt to pre-qualify all other potential bid participants who may participate with the telecommunications operator in the form of a consortium since consortia are often not finalized until after the release of the bid terms and conditions. There will be a requirement in the bid submission to identify consortia members and financial capabilities.

The suggested prequalification criteria are not intended to be overly onerous, but rather to confirm that prospective applicants have the ability to operate mobile

wireless networks that are at least equal in size to those currently operating in Jordan. The prequalification document that will be issued will define these terms in greater detail.

- Through direct or indirect ownership of at least 20 percent,15 the applicant must demonstrate that he/she has operated at least one wireless mobile network service provider for a minimum of three years utilizing one or more of GSM, CDMA, WCDMA, ESMR or TDMA wireless technologies
- The applicant must also successfully demonstrate that he/she has been able to provide funds or obtain financing to support capital contributions commensurate with the applicant's ownership.
- The applicant must provide confirmation that he/she has never had a telecommunications operating license revoked as a result of any inability to meet pre-established license terms or been sanctioned by a regulatory authority for non-performance of license terms.
- The applicant must demonstrate that he/she has no ownership in any possible organization that may be a competing applicant in this mobile bid process.

6.3 Information Submission Requirements

The following is an outline of the information that must be submitted as part of the prequalification process:

- Description of the applicant:
  - Name and address of the applicant
  - Authorized representative of the company for the purpose of the prequalification (person must either be a signing officer of the corporation as evidenced by the corporate bylaws or must be designated as such through an attached power of attorney)
  - Legal form of the company
  - Proof of corporate registration by the competent commercial jurisdiction (e.g., commercial registry)
  - Registered head office of the company
  - Shareholding structure of the applicant in organization chart format that identifies shareholdings and relationships between subsidiaries and affiliates of the applicant
  - A list of any shareholders with more than a 10 percent ownership in the applicant
- Articles of incorporation and bylaws
- Last three full years (2000, 2001, 2002) of audited financial statements plus an interim report for 2003; interim report must be signed by CEO of applicant company of by the external auditor
- List of all telecommunications operating licenses held directly by the applicant or indirectly by any subsidiary or affiliate of the applicant in

[15] This will require careful and precise definition in the bid document.

which the applicant has an ownership of at least 20 percent. This list should include the following information:

- Date of issuance of each license
- Country in which the license is held and the service that is provided
- Service for which the license has been issued (e.g., mobile service and associated technology deployed international long distance, fixed service, etc.)
- Expiry date of each operating license
- Where applicable, the number of subscribers per license as of the end of June 2003

- A general overview of the telecommunications activities of the applicant over the last five years which provides an appreciation of the applicant's telecommunications operating expertise
- A list of financing activities that have been conducted in the last five years to support the applicant's pro rata contribution to capital calls for any mobile operating companies in which it has an ownership. The list should include the following details on a per financing project basis:
  - Financing amount in US dollars
  - Date financing was procured
  - Financial institution providing the funds
- Confirmation from the competent authority that the operator's licenses are in good standing.

7. Suggested Prequalification Information Package

7.1 Objectives

The prequalification stage is critical from several perspectives. As stated above, it is obviously used as a filter to screen interested parties/bidders in order to ensure that the parties have sufficient financial resources as well as adequate technical and operating competencies to launch a modern mobile network that meets or exceeds international standards. However, the prequalification stage is also the first real phase of the tender and license process that signals to the international telecommunications community the degree to which the TRC is competent, focused, well-organized and pre-disposed to working with the bidders to ensure a successful license award process. Therefore, it is most important to have a well-structured and complete prequalification package to distribute to interested parties.

7.2 Contents

At a minimum, the prequalification package should be comprised of the following:

- Overview of the bid process with an outline of the anticipated timeline for the bidding process (but listed as "tentative" to avoid any negative reaction if dates need to shift)
- Brief but informative overview of the telecommunications market in Jordan as well as an accompanying overview with respect to basic information regarding economic, demographic, social and political factors

- Clear, well-defined list of prequalification criteria with examples of information that would be submitted in response of the prequalification criteria (for illustrative purposes)
- Specific instructions regarding the actual prequalification submission:
  - To be received no later than (date and time of day)
  - Format in which the material is to be submitted (paper, electronic, etc.)
  - Any restrictions on number of pages, European format versus North American format, etc.
  - Required authorizing signatures, powers of attorney, etc.
- List of appropriate contacts with specific instructions and deadlines with respect to requesting and receiving clarifications on any items or information within the prequalification package
- Brief synopsis of the expected major terms and conditions associated with the tender and license process (very high level)
- Notification that the applicant will be required to submit a performance bond based on a percentage of the capital cost to build-out the network in Jordan
- Indication of the cost to purchase the bid documentation
- List of suggested web sites and links that may be of use to interested parties (e.g., TRC web site with existing wireless licenses and the Telecommunications Law)

8. Specific Elements to be Incorporated in the Tender

8.1 Introduction

As previously mentioned, the terms and conditions within the mobile license bid should be as attractive as possible for two fundamental reasons. First of all, attractive tender and license conditions for the prospective bidders will encourage participation from a larger group of potential regional and international investors. The combination of a larger bidding pool and attractive license conditions will increase the likelihood that the TRC will receive several serious, competitive bids for the third mobile license. Secondly, a pro-active and investor friendly approach to a third mobile license bid sends a signal to Jordan's neighbors and to the global community at large that Jordan welcomes and encourages foreign investment and the resulting job creation and technology transfer.

Ultimately, this investment climate is not only favorable for the Jordanian government, but it also generates additional benefits for the Jordanian population in general. Additional investors contribute to the overall economic well-being of the Kingdom and the attractive license conditions will encourage rapid deployment throughout the country of additional innovative wireless telecommunications services at increasingly affordable prices. The importance of creating an appropriate investment climate should not be underestimated.

Annex 2 provides a synopsis of the tender development process as well as an outline of the draft tender document.

8.2 Possible Impact of Unattractive Tender Conditions

Perhaps the most pertinent recent example of the pitfalls of ignoring an investor friendly tender approach is that of the third mobile license bid held last year in the Slovak Republic, a country which has some parallels with Jordan. Slovakia has a population of 5.4 million with approximately 50 percent of the population below the age of 30. Fixed line penetration is close to 70 percent with urban penetration being higher than rural. However, the GDP (PPP) per capita is US$10,200, indicating the probability of a larger target market than Jordan. At the time of the third license tender issuance, mobile penetration was over 40 percent.

Potential investors made it clear to the regulator that it was critical to introduce license terms that would allow a third entrant to rapidly deploy network services and would also make it easy for consumers to switch to a different mobile operator if so desired. This would permit the third operator to capture a greater market share so as to ensure a more level playing field. It was also indicated that the up front license fee needed to be reasonable in order to allocate as much funding as possible to building out the network. At an initial bidders meeting with prospective investors, the Slovakian regulator agreed that infrastructure site sharing, mobile number portability, and national roaming were critical conditions for inclusion in the tender. However, for unexplained reasons, when the tender was issued, the regulator did not include any of these initial commitments. The lack of attractive terms, coupled with what was viewed as a high license fee of US$38 million, resulted in a failed process with no third license awarded.

With these considerations and precedents in mind, and when taking into account the current level of maturity of the Jordanian mobile market, the following important terms and conditions should be considered for the tender:

- Technology neutrality
- Mobile number portability
- Infrastructure and site sharing
- Well-defined and cost-based interconnection regime
- Roadmap for domestic and international long distance liberalization
- Reduced revenue sharing requirements
- Reasonable license fee

8.3 Spectrum for the Third Operator

The choice of what spectrum and how much will be licensed for the third mobile operator is critical to the success of the tender because there must be enough interest in the spectrum band being offered to justify an investor's interest. A study was conducted on the availability of spectrum bands in Jordan in which the 450 MHz, 800 MHz, 900 MHz, 1800 MHz, 1900 MHz, and 2100 MHz bands were all analyzed. The conclusions of this study were that it would be very difficult within the timeframe of the tender to be ready to license the spectrum in the 450 MHz, 800 MHz and 2100 MHz bands due to the large number of incumbent users. Both the 1800 MHz and 1900 MHz bands would be ready for deployment of a third mobile operator with only a small number of incumbent users needing to be relocated and this can be

accomplished at a reasonable cost. (See Annex 3 for more information on the spectrum study.)

The study recommended that the TRC offer 2 x 15 MHz in either the 1800 MHz or the 1900 MHz band with the bidder deciding the band and the technology to be deployed. Allowing bidders the flexibility to choose from among the two bands will maximize the number of possible bidders, thus maximizing the chances of success of the tender.

8.4 Technology Neutrality

The use of a technology neutral approach with respect to the wireless technology to be implemented in the third mobile license is beneficial for both the TRC and prospective bidders. From the TRC perspective, it reduces the need to engage in ongoing studies on the merits of one technology versus another and it encourages market and service innovation as well as increased competitiveness on the part of operators/investors. The fallout and repercussions created by European regulators' insistence on one specific 3G technology are still ongoing and operators have been hampered by technological and manufacturing constraints. However, a technology neutral approach also means that a clear policy has to be established with respect to technology migration on the part of existing mobile operators currently confined to the GSM 900 band. Provisions should be introduced to enable the operators to migrate their existing systems to advanced technologies.

8.5 Mobile Number Portability

Service provider number portability is essential in Jordan for the third mobile entrant given the challenging market entry conditions due to the market strength of the incumbent dominant operator. By introducing mobile number portability (MNP), Jordan will outpace its regional peers and even the EU (many members were supposed to introduce number portability by 2002 and have still not done so). Although it is impractical to expect that MNP could be implemented prior to the issuance of the tender, it is essential that MNP be established within the regulatory framework and that a study be undertaken that would result in timetable for its introduction prior to the issuance of a tender for the third mobile license. The absence of MNP will generate difficulties in producing an acceptable business plan for a third mobile operator, just as it has for the second mobile operator, MobileCom. One of the more contentious issues that will need to be addressed within the context of MNP is the matter of whether the existing service provider or the new service provider assumes the cost of the number portability or whether the cost is allocated among all operators.

The importance of mobile number portability has also been discussed in AMIR reports prepared by TMG: *Economic Analysis of the Jordanian Telecommunications Market (July 2003)* and *Analysis of MobileCom Pricing Complaint (August 2003).*

8.6 Infrastructure and Site Sharing

As a third mobile entrant is introduced in Jordan's market, the issue of infrastructure site sharing will need to be addressed, especially since Fastlink and MobileCom offer access to national networks that have already fulfilled their build-out requirements. In the context of the Jordanian telecommunications environment, the question of sharing needs to be clearly understood as the traditional concept of sharing space on masts, land sites or buildings. Recently, due to the high capital costs associated with 3G site acquisition and network rollout in Western Europe in particular, the regulatory definitions of infrastructure sharing have evolved to reflect a much more extensive degree of joint facilities and infrastructure use than was customary in the past. However, the current telecommunications environment in Jordan would not appear to warrant any conditions other than the aforementioned "traditional" space sharing approach.

Site sharing may be an attractive option for the third mobile entrant as a way of reducing initial capital outlay and increasing speed of deployment. However, the TRC must balance the goal of introducing additional network competition with an operator's cost savings as well as with the potential impact on the performance of incumbent operators' network. There is a balance to be achieved between ensuring that the incumbent operators do not arbitrarily impede site sharing where it is technically and operationally feasible and making sure new entrants do not attempt to use the lack of site sharing as a convenient excuse for not meeting build-out requirements. If such a balance is achieved, then the TRC can consider site or infrastructure sharing to be a matter of commercial negotiation where parties must seek approval of the TRC with regard to the sharing proposal. At the same time, the TRC must make it clear in the tender document that a third mobile entrant will be expected to meet its build-out requirements if facilities' sharing is not feasible.

8.7 Interconnection Regime

Investor concerns regarding interconnection regimes have grown steadily over the last five years due to numerous problems encountered between mobile operators and the fixed line service providers. In the early days of competition, regulators often had difficulty in establishing adequate interconnection guidelines for mobile to fixed and mobile to mobile calls. Many investors have suffered financially as a result and are now generally very cautious with respect to ensuring that the interconnection regime is financially sound and supported by a clear regulatory position. The TRC has already made significant strides in this respect and is planning for further refinement of the interconnection regime. Therefore, it will be critical to ensure that the interconnection framework is clearly defined within the tender document and draft license in order to reassure prospective bidders in this regard. Competition and TRC adoption of Fastlink and MobileCom's Reference Interconnection Offer, as well as a stated commitment by the TRC to move towards LRAIC access pricing, will be critical evolution factors.

8.8 Long Distance Liberalization

One potential reservation that may be expressed by prospective bidders is the existing prohibition regarding the use of any backbone network facilities that are not provided by JTC to provide service to other licensed operators. Although there would appear to be nothing that can be done to change this until the introduction of fixed line competition in 2005, it is recommended that the bid include certain commitments on the part of the TRC as to the transmission facilities that the mobile operator will either be able to build or to lease from a service provider other than JTC once its monopoly ends. A specific time frame for the introduction of this change in regulatory constraints should also be spelled out. This will not only reassure prospective bidders, but it will also allow them to factor in this transition in their capex forecasts with some degree of accuracy.

8.9 Reduced Revenue Sharing Requirements

This may well prove to be one of the most contentious items of the suggested bid elements. Both incumbent mobile operators currently pay 10 percent of their billed revenues to the TRC as part of the license terms and conditions. This percentage is high based on current international benchmarks and the increasingly competitive market conditions for mobile operators. Previous attempts to lower this fee have been rejected by the Finance Ministry. In order to encourage a new entrant, as well as stimulate the market generally, it would indeed be advisable to lower this fee. However, if the fee is made lower for the new entrant, it is not unreasonable to expect that the incumbent operators would request a similar concession. In order to convince the Finance Ministry that the reduced fee would not result in decreased revenues for the government, a study, building upon the information presented in Section 3.2, should be conducted to project the growth in both the overall number of subscribers and the overall market size in order to demonstrate that revenues will be unaffected or may even increase as a result of a modified revenue sharing arrangement.

8.10 Reasonable License Fee

As has been discussed separately, there is a need to ensure that the license fee established for the third mobile license is a compromise between generating adequate revenues for the Treasury and being reasonable enough to attract a sufficient number of bidders. Although there is good availability of international benchmarks for third mobile license fees over the last several years, it has been determined that it would be prudent to obtain an independent valuation and opinion from an expert source relative to the most appropriate fee structure for this license. The process to select an independent expert is underway and it is expected that this matter will be resolved in a timely fashion in advance of the tender issuance.

8.11 Additional Observations

Many of the bid elements proposed in this section may be negatively received by the incumbent mobile operators. In fact, the operators may well adopt the position that these conditions give the third operator an unfair advantage. It would be prudent to

meet with the incumbent operators to explain the TRC's position on these elements prior to issuing the draft bid document for public review and commentary. Although the TRC has the authority to incorporate these elements into the bid document, obtaining buy-in from the incumbents before the draft bid is issued could allow the whole tender process to run more smoothly. The two mobile incumbents have different priorities and perhaps their priorities can be accommodated to achieve buy-in for the third license. For example:

- Fastlink would like additional spectrum assigned to it to accommodate the high usage of its network. If Fastlink were assigned an additional 2 x 2.5 MHz in the 900 MHz band (where it currently operates), it would have a total 2 x 15 MHz, which would be in line with the amount of spectrum being considered for the third mobile licensee. While MobileCom does not need additional spectrum at this time, it too could be offered an additional 2 x 2.5 MHz under the same terms and conditions as Fastlink's expansion spectrum.

- Fastlink has requested TRC intervention to resolve the international "transit" route that has been set as a "discount" from JT's retail price. The TRC has targeted moving to a cost-plus international interconnection rate by January 2004 and creating a glide path to cost-based rates by January 2005. Cooperation from JT, however, will require establishment of a TRC policy to address the access deficit.

- MobileCom has asked for regulatory relief from the TRC for Fastlink's pricing and sees number portability as essential to its future success. The TRC is already examining the on-net pricing issues and will very soon issue a decision on Fastlink's off-net pricing. Regarding number portability, while a difficult matter, the TRC should be able to issue some general principles and guidelines before the tender document is released. It is important to give prospective bidders and existing operators the general timeframe for number portability so that they can factor this into their business plans.

- Both Fastlink and MobileCom are limited by the terms of their licenses to GSM technology, which severely limits their ability to migrate to advanced technologies. If the technology restrictions listed in their licenses could be lifted and the licenses were to become technology neutral, the companies would be on a more equal footing to the new operator, which will be able to implement the newest technologies available in the market.

While interrelated, all of these issues should be taken into consideration when setting up the framework for the tender and the third mobile license.

9. Suggested Evaluation Procedures and Criteria

9.1 Introduction

It is important to precisely define the methodology used to evaluate the bid submissions early in the tender process in order to avoid possible subsequent allegations regarding the lack of transparency in the selection of the winner. This evaluation methodology should be made available to the prospective bidders in the tender documents and should also be reviewed with them during the bidders' conference to ensure that everyone understands both the evaluation criteria and the manner in it which it will be applied. As discussed in Section 4.3, there is always a degree of subjectivity in beauty contests; therefore every effort should be made to ensure that the evaluation process is as structured as possible. The recommended evaluation procedure and the suggested evaluation criteria are reviewed below.

9.2 Evaluation Procedure

For the purposes of assessing and ranking the bid submissions, the most commonly accepted approach is to form a bid evaluation committee, comprised of subject matter experts who are capable of evaluating critical components of the bid document. Critical bid components would include but not be limited to elements such as:

- Network design and implementation
- Sales and marketing plan (e.g., distribution, advertising, brand management, tariffs)
- Customer care and billing
- Business or financial plan

There are various ways in which an evaluation committee can be established and these will be discussed in a separate document.

9.3 Evaluation Criteria

There are numerous ways in which to formulate the evaluation criteria. The criteria outlined below reflect a beauty contest which is seeking to attract new, customer oriented operators/investors who will deploy a modern, state of the art wireless network and who will attempt to establish a strong presence in the Jordanian telecommunications market through the introduction of innovative and attractively priced services. In addition, in keeping with objectives articulated by the MoICT, these evaluation criteria encourage the prospective investors to make a meaningful contribution to the increased availability and accessibility of telecommunications in Jordan. It should also be noted that the evaluation criteria as outlined assume that a prequalification process has taken place prior to the issuance of the actual tender document. Where prequalification processes are not established, the point structure tends to be different as there is a requirement to factor in an evaluation of the operator's capabilities.

It is strongly recommended that a point system be utilized as part of the evaluation criteria. While there is still a degree of subjectivity in the process, a point system allows the evaluation committee to use a structured approach to asses the bid submissions. This also provides a solid, auditable reference document in the event that there are any post bid challenges regarding the selection of the winner. The evaluation criteria and the associated point structure as outlined below are intended to be a starting point for discussion. Should the TRC wish to emphasize different objectives, then the point structure can be easily altered.

Evaluation Category	**Points Range***
Quality of Marketing Plan	10 - 15
Tariff Commitment	10 - 15
Quality of Technical Plan (with up to 5 additional points for advanced wireless network deployment)	10 - 15
Network Launch and Coverage Commitment	15 - 20
Quality of Financial Plan	20
Quality of Management and Organizational Structure	10
Additional Measures to Benefit Jordan**	15 - 20
Total	**100 - 115**

* Black font indicates recommended point allocation; blue font indicates possible modifications to reflect different priorities
**Exact content to be determined as per discussion in Section 5.0

Although further elaboration of these afore-mentioned evaluation criteria is required and will be addressed in the tender writing phase of this project, a brief definition of the criteria as outlined below.

Quality of the Marketing Plan

Points shall be allocated based on (a) the viability of the plan, (b) the quality of the market research and analysis underlying the plan, and (c) the degree to which the plan addresses the specific needs of the Jordanian consumer.

Tariff Commitment

The maximum number of points will be allocated to the applicant who has the lowest total cost of tariff plan (the tariffs must be widely advertised and kept in place for 12 months). Another threshold (such as 8 points) will be allocated to the applicant with the second lowest total; a third threshold (such as 5 points) will be allocated to the applicant with the third lowest total and all other applicants will be allocated 0 points. (Note: More detailed instructions on how the tariffs would be presented would be included in the tender documentation.)

Quality of Technical Plan

Points shall be allocated based on (a) the viability of the plan, and (b) the quality of the technical research, analysis and documentation underlying the plan. In order to encourage applicants to choose the newest technologies, the bidders could be awarded up to 5 points for implementing an advanced mobile network.

Network Launch and Coverage Commitments

Equal points shall be allocated for the committed date of network launch and each of the committed dates for achieving the coverage levels specified in the tender rules. Additional points may be allocated at the discretion of the Evaluation Committee for commitments made to cover more than "XX" percent of the population. The Evaluation Committee may also decide to award 0 points in this category if it concludes that, based on the technical plan submitted by the applicant, the applicant has not established that it has a viable plan for achieving the network launch and coverage commitments that it has made in its application.

Quality of Financial Plan

Points shall be allocated based on: (a) the viability of the financial plan, (b) the quality of the research and analysis underlying the plan, (c) the clarity and coherency of the assumptions outlined in the plan, and (d) the degree to which the plan properly integrates and reflects all of the proposals, commitments and information contained in the applicant's response to both the marketing and technical plans listed above.

Quality of Management and Organizational Structure

Points shall be allocated primarily for (a) the experience of the proposed senior management team in building and operating mobile networks, and (b) the commitment of the applicant, and the viability of its plan, to recruit, develop and promote local staff

Additional Measures to Benefit Jordan

Points shall be allocated primarily on the basis of (a) the level of benefits accruing to the Jordanian people, economy and/or government as a result of the proposal, and (b) the innovativeness and viability of the proposal. (Note – this item needs to be defined in greater detail as per Section 5.0).

10. Issues to be Resolved Prior to Tender Issuance

One of the major means of ensuring a successful bid outcome is to address as many potential problem areas as possible prior to issuance of the bid document. Many tender processes have encountered difficulty and delays because the bidders have been reluctant to submit a firm bid without having a certain comfort level with respect to various regulatory and market issues. Historically, some of the most significant stumbling blocks in mobile license tenders have been the lack of an approved telecommunications law or a well-defined interconnection regime. Another major stumbling block is the lack of available spectrum or if it is encumbered, coupled with uncertainty as to when the required spectrum can be made available. Although most operators and investors recognize that it is often impossible to resolve all areas of concern prior to bid issuance, at a minimum, they expect to see a firm timetable indicating when the issues will be resolved in order to build some degree of accuracy into their respective business plans.

For the most part, Jordan does not present many of these difficulties to the potential investor given its already revised Telecommunications Law and a defined interconnection regime with plans for further revisions and enhancements to the interconnection framework. However, there are a few areas that need to be addressed. First of all, as referenced in Section 8.0, although there is insufficient time in which to finalize a mobile number portability policy prior to bid issuance, it will be critical to

commit to a date for MNP implementation pending the results of the study mentioned previously. This is not only critical to attract a third entrant, but also to ensure that Jordan keeps pace or exceeds its international peers in terms of regulatory innovation.

11. Possible Bidders

11.1 Introduction

One of the primary concerns in any mobile license tender process is whether it will attract an adequate number of interested participants. Up until 2000, this was rarely a cause for concern; however, since that time, there have been a number of tender processes that have been cancelled or postponed due to investor disinterest or fatigue. Even if the tender is not abandoned, lack of a suitable number of interested parties may result in an unsuccessful process either from the perspective of receiving proposals that fail to suitably respond to the government's social objectives or, in the case of auctions, bids that fall short of the government's revenue expectations. In some instances, there may be an adequate number of interested bidders, but from groups that lack the appropriate financial credentials or experience to permit them to be considered as suitable license candidates. In the specific case of a third mobile license tender in Jordan, given the state of the mobile market and the possible regional competition posed by pending second mobile license award processes in the MENA region, it is important to consider the possible sources and profiles of potentially interested bidders although, clearly, it is impossible to categorically predict who will actually choose to participate. Nonetheless, potentially interested parties can be grouped into several major categories:

- Major international carriers
- Mid-sized international wireless operators
- Regional operators
- Financial groups
- Jordanian telecommunications operators

11.2 Major Carriers

The term "major carriers" refers to either the large, traditional telecommunications companies that operate and invest in both fixed telephony and mobile services, or to major, large scale international wireless operators. Of the former, many of the large operator/investors are European based and still have some degree of state ownership. In the late 20th century, a number of these large telecommunications operating companies were among the most prolific and aggressive investors in international telecommunications opportunities in both fixed line and mobile markets. Although the European carriers' Asian and North American counterparts were also active internationally, most Asian based operators have traditionally demonstrated a lack of interest of major investments outside of Asia, and the North American operators focused extensively (although not exclusively) on investment in the Americas.

However, the global telecommunications downturn has caused many of the large carriers to re-evaluate and retrench from their former international investment

strategy. In addition, the fallout from the recent European 3G auctions, i.e., the associated huge capital outlays and the subsequent abandonment of many of the licenses, has left many of these carriers reluctant to undertake significant investment commitments. Furthermore, the general lack of liberalized telecommunications markets in MENA until recently, has prevented many major carriers from establishing a foothold in the region. For those with some remaining interest in international wireless investments, it is unlikely that Jordan would be their first regional investment choice since participation in the relatively untapped monopoly markets would be more appealing to the major carriers. There are two possible exceptions. The first would be a major carrier that already has some regional investment and sees the opportunity to broaden its regional presence and generate economies of scale. The second, although less likely candidate, would be a major carrier that wishes to enter the region and recognizes that Jordan, with its well-defined regulatory environment and generally favorable investment climate, would serve as a beachhead for subsequent telecommunications investments in the region.

11.3 International Wireless Investors

The mid-sized international wireless operators, most of whom are North American based, typically adopt a more entrepreneurial approach to mobile investments. In general, these operators prefer small to mid-sized markets and focus on rapid network deployments and entrepreneurial marketing practices that they adapt to local market conditions. Given their smaller size and more limited financial resources, these wireless operators/investors normally avoid auctions for two principal reasons: 1) generally, they do not have the same level of financial resources as other potential investors to sustain them through a prolonged bidding contest and 2) philosophically, these operators believe that auctions detract and impede operators from rapid deployment of high quality networks. Unless these potential investors are able to team up with wealthy financial groups, it is unlikely that many would chose to participate in an auction process. A beauty contest with modest or no up front license fees is the type of tender process favored by these organizations. The mid-sized wireless investors tend to be quite aggressive and innovative with respect to beauty contest commitments and often work closely with carefully selected local partners to address national business and marketing practices.

11.4 Regional Operators

There are several operators in the MENA region that have already been active in regional wireless telecommunications investments. In some instances, these operators are state owned or partially privatized fixed and wireless carriers. In others, they are independently owned medium-sized wireless carriers focused exclusively on investments in the MENA and sub-Saharan African regions. Given their regional presence and investment focus, these operators represent some of the more likely investors for Jordan's third mobile license. An investment in Jordan would enable them to expand their regional coverage and benefit from economies of scale in areas including, but not limited to, volume hardware/software purchases, access to trained resources, common operating and operational support system platforms and Arab language content. In addition, some of these operators are actively pursuing license

opportunities in Iraq and would likely welcome using Jordan as a springboard for network build-out activities.

11.5 Financial Groups

There are various investment funds or investment groups that either have MENA specific investment portfolios or are MENA based. Financial groups of this nature may have a particular interest in Jordan given the relative scarcity of telecommunications investment opportunities in the region. However, most of these groups would be ineligible to participate in the third mobile license tender on a stand-alone basis due to their lack of operating experience and credentials and would therefore need to team up with a prospective bidder who has the requisite skills to operate a mobile network. For the most part, financial investors in this category tend to be relatively passive in the bidding process and generally take a minority stake in the bidding and/or operating consortium. Occasionally, the financial investor will not commit to a specific operator/investor until the bid decision has been publicly announced. In these instances, the financial investor typically reaches agreement in principal with a number of participating operators prior to bid submission in order to ensure that the financial investor in question has access to as many investment options as possible.

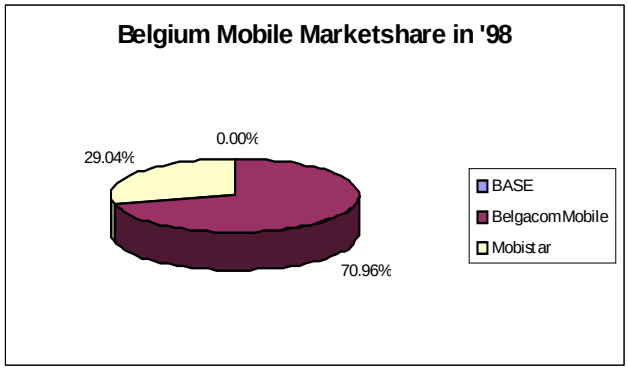
Annex 1
Three Operator Markets – Performance and Market Shares

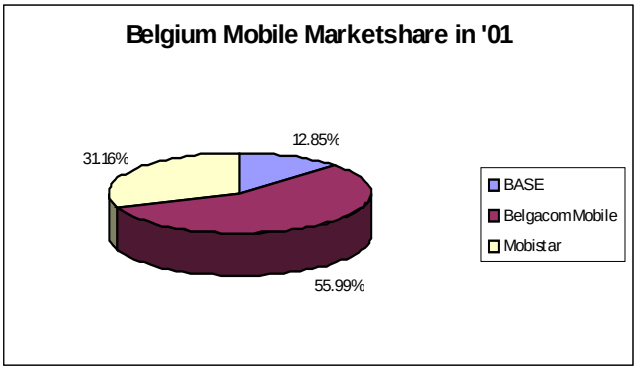
With the current exception of the Middle East and Africa, most telecommunications markets either have three or more national mobile operators or have established the regulatory framework to facilitate more than two operators in a given market. EU and WTO regulations have resulted in the presence of three or more operators in virtually every Western European country, with CEE following suit, Poland, Czech Republic, Romania and Hungary already have three mobile operators, and Albania, Croatia, Serbia and Bulgaria have all initiated or are involved in processes to award a third license.

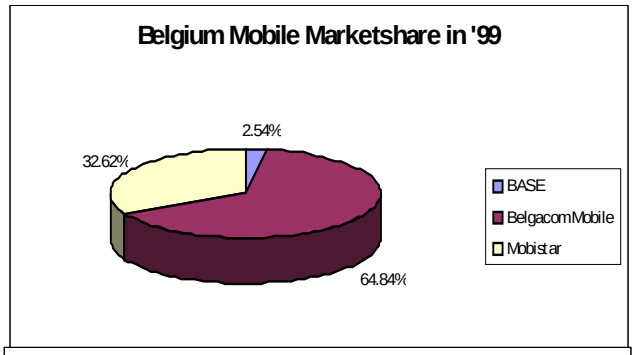
Many countries of the former Soviet Union, including the Baltic States, presently have three to six mobile operators. North American markets have multiple operators and various countries in Latin America have three or more operators including those with lower GDP's per capita than Jordan.

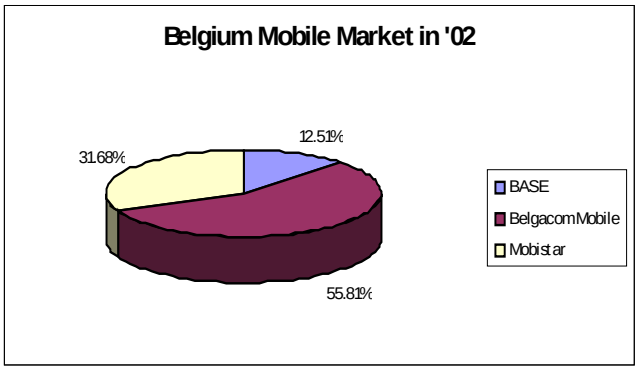
The examples presented below illustrate that not only do most mobile markets thrive when a third or fourth operators is introduced, but in addition, as illustrated by the pie charts below, the third operator is able to capture a significant market share. The EMC regional database is the source of the subscriber and market share information for each of the countries included below.

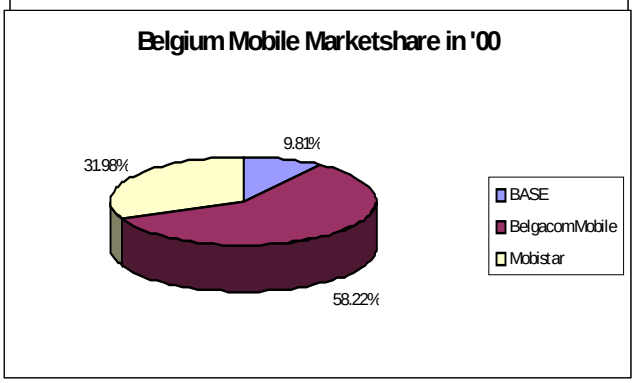
Belgium





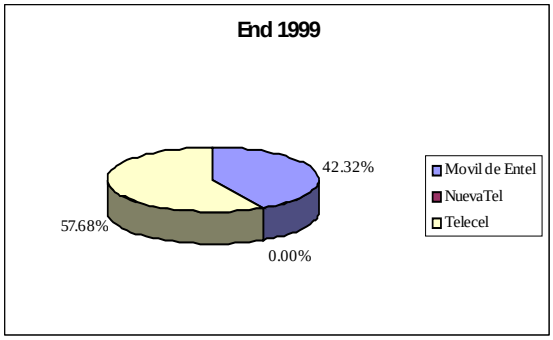


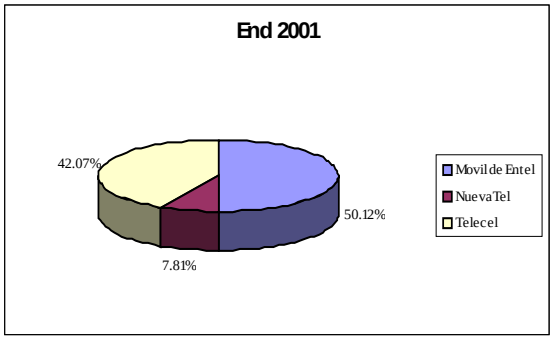


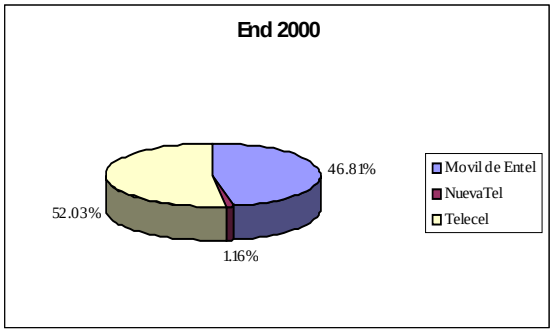


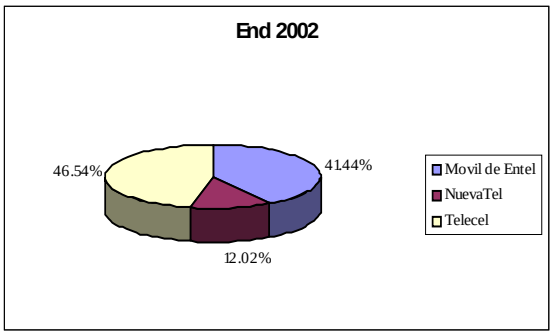
Population: 10.3M
GDP per Capita (PPP): $29000
Incumbents must provide national roaming
Mobile number portability introduced 2002
10

Bolivia



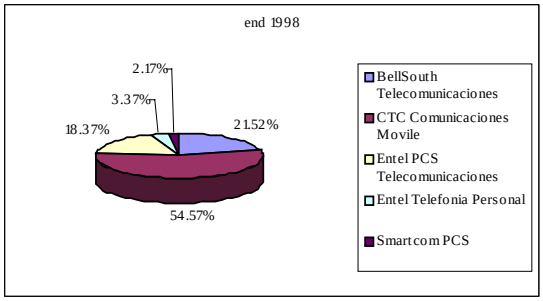


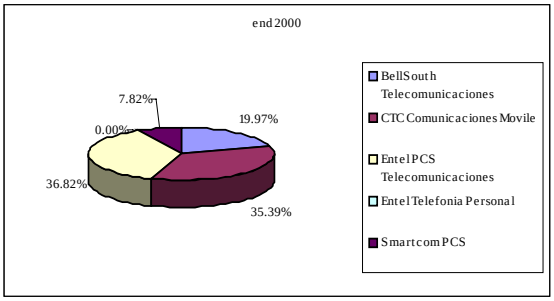


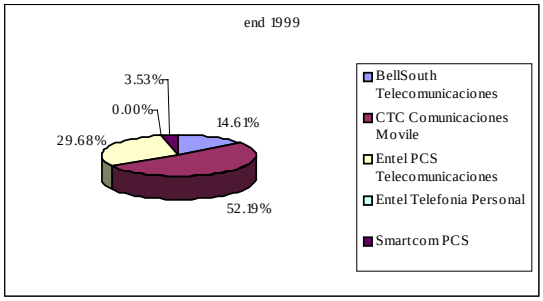


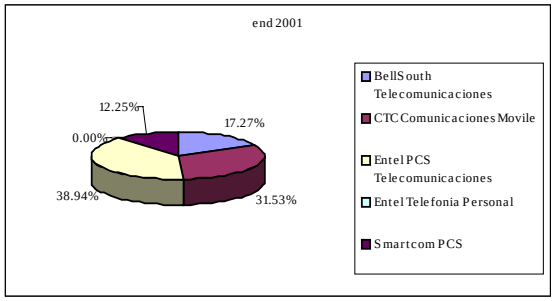
Population: 8.4M
GDP Per Capita (PPP): $2600

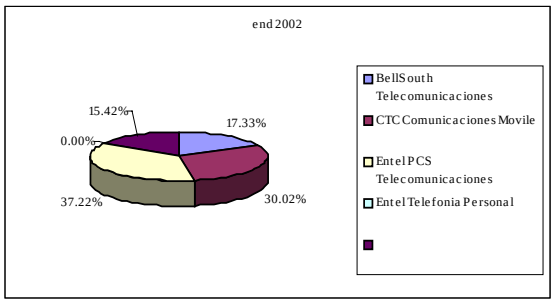
Chile





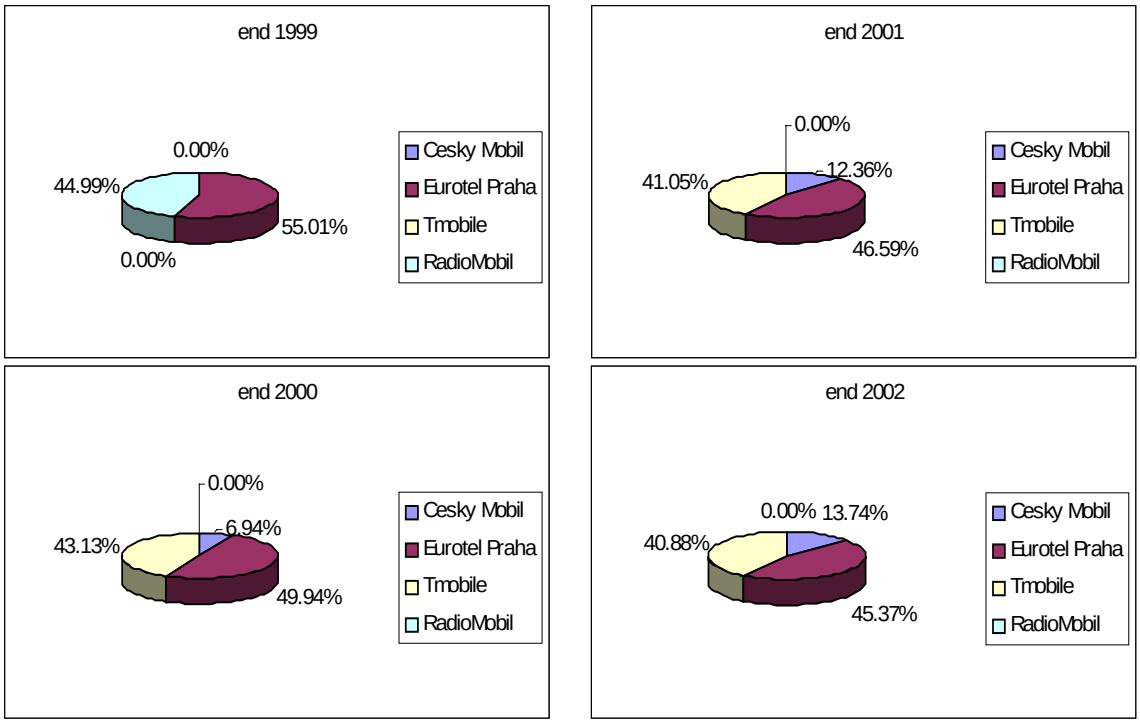






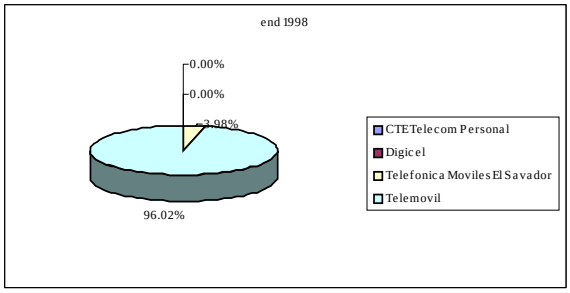
Population: 15.5M
GDP Per Capita (PPP): $10000
Shared backhaul permitted

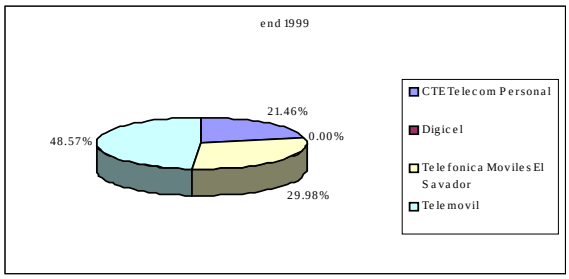
Czech Republic

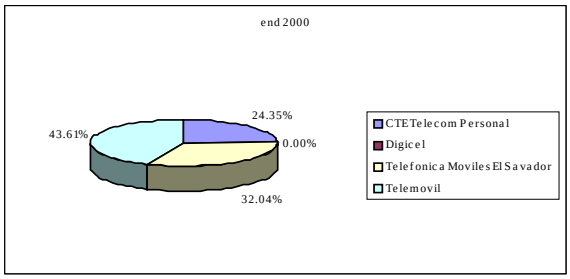


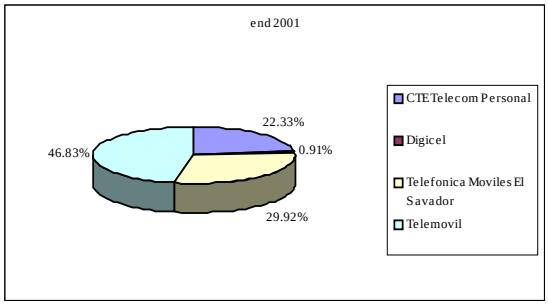
Population: 10.3M
GDP Per Capita (PPP): $15300
Resale of airtime permitted

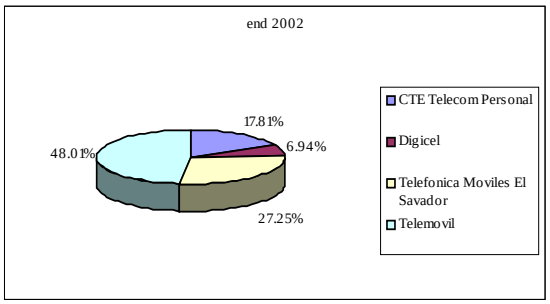
El Salvador





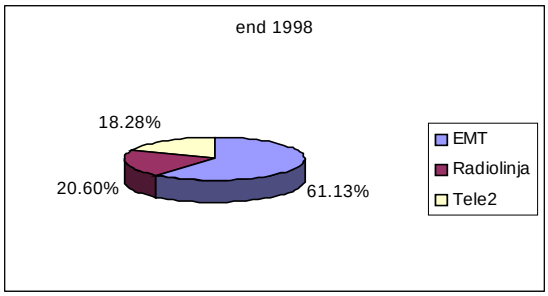


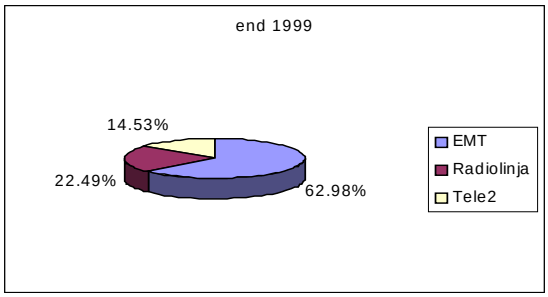




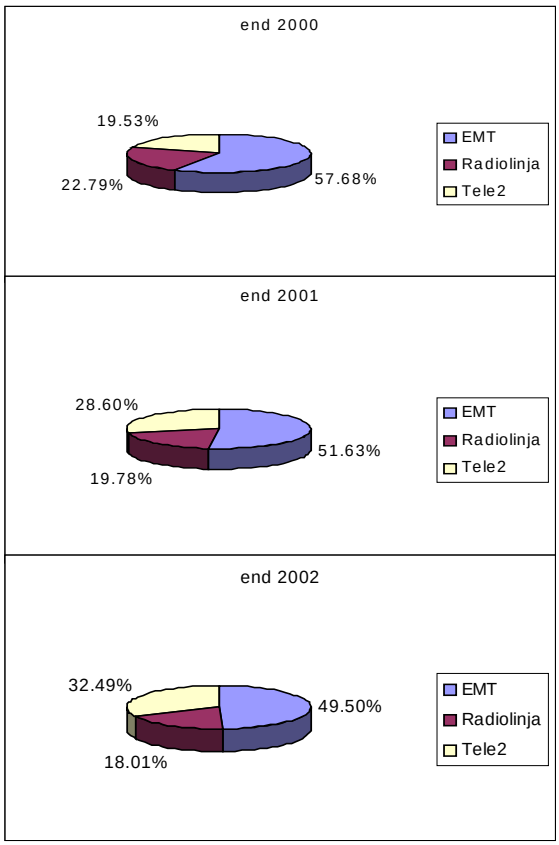
Population: 6.4M
GDP Per Capita (PPP): $4600
Resale of airtime permitted

Estonia

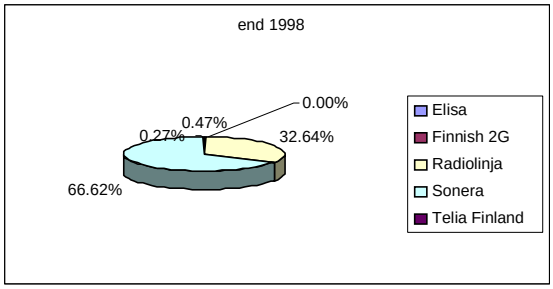


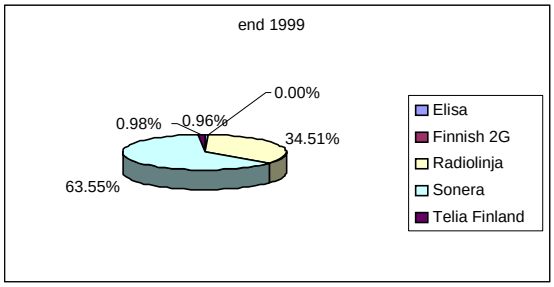


Population: 1.4M
GDP Per Capita (PPP): $10900

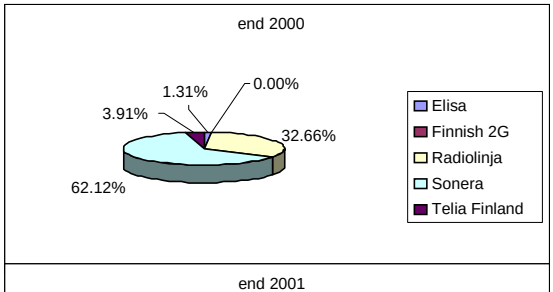


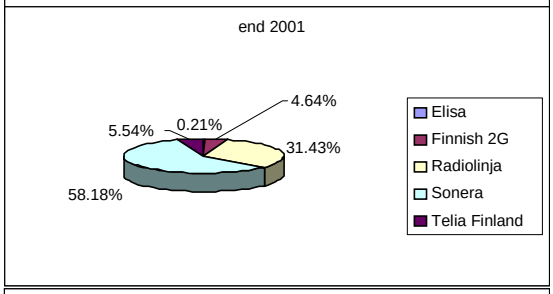
Finland

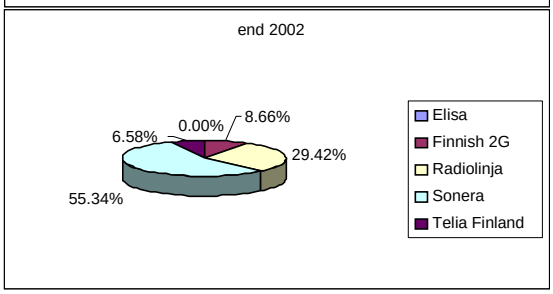




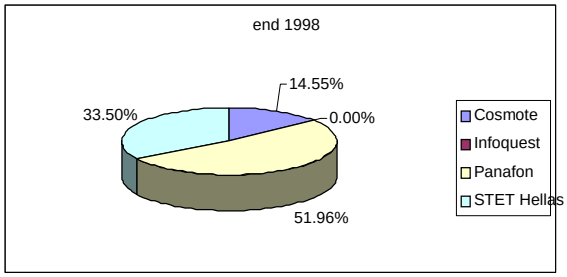
Population: 5.2M
GDP Per Capita (PPP): $26200
Mobile number portability introduced 2003
National Roaming permitted
Resale of airtime permitted

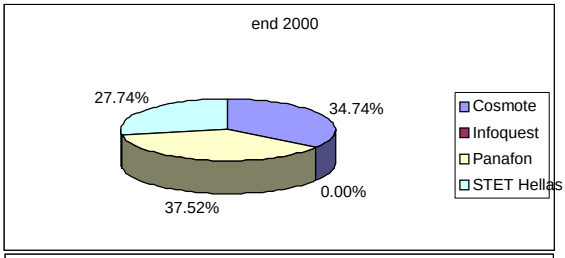


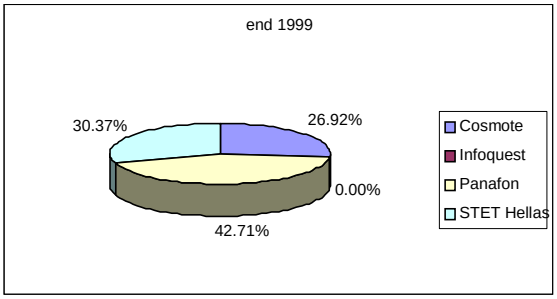


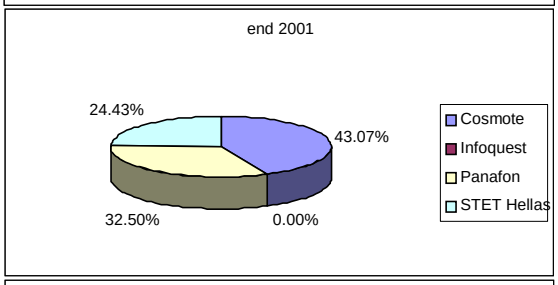


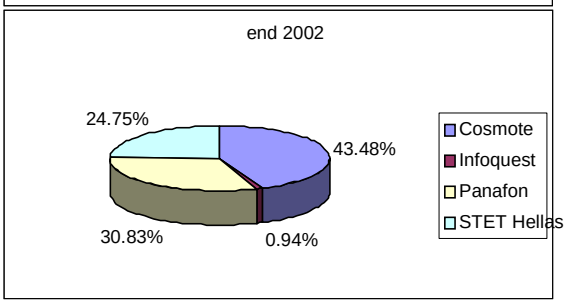
Greece





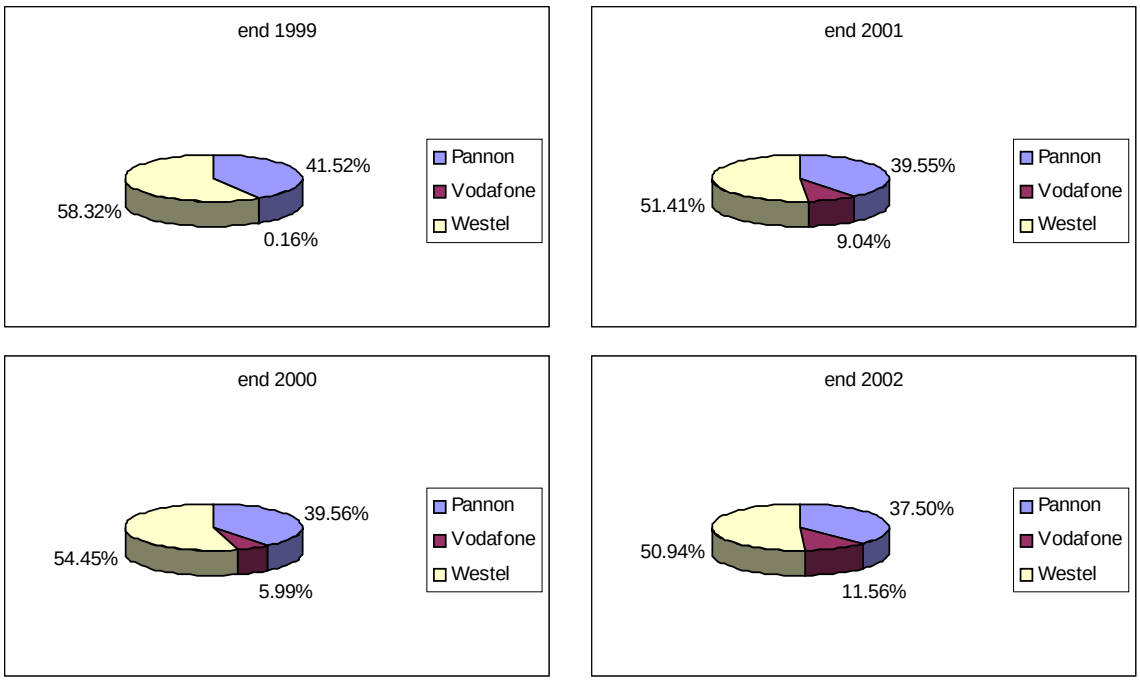






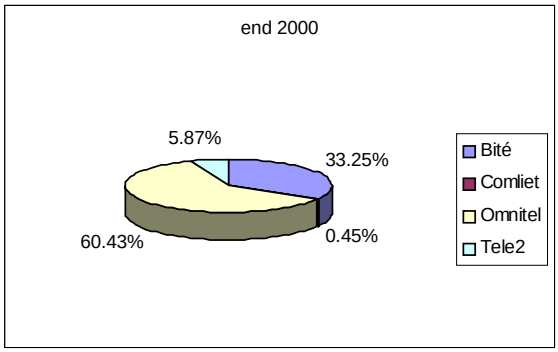
Population: 10.6M
GDP Per Capita (PPP): $19000
Mobile Number Portability introduced 2003

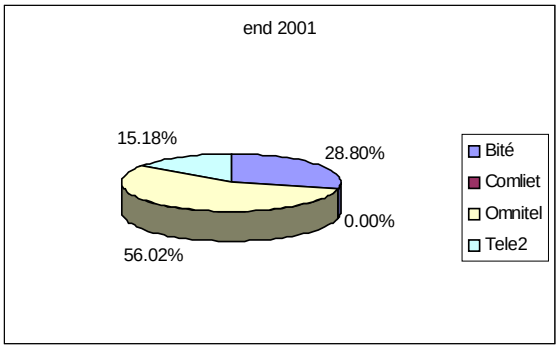
Hungary

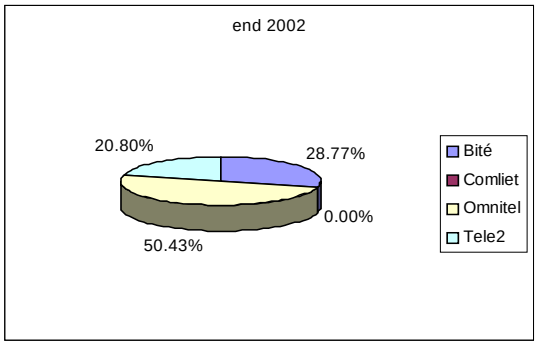


Population: 10.1M
GDP Per Capita (PPP): $13300

Lithuania

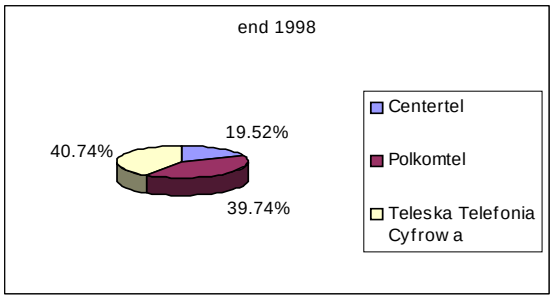


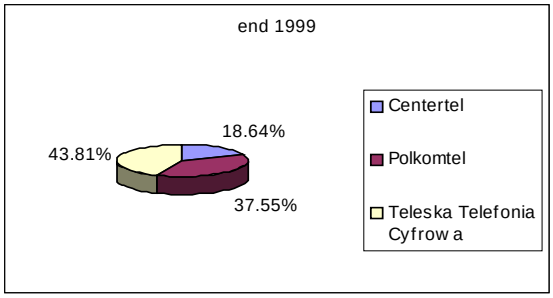




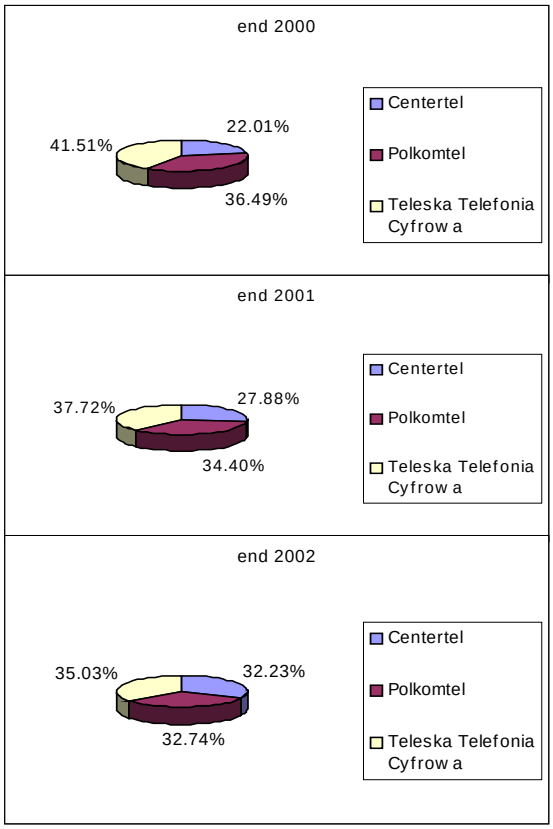
Population: 3.6M
GDP Per Capita (PPP): $8400

Poland

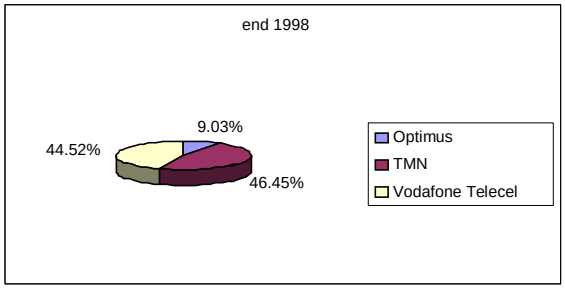


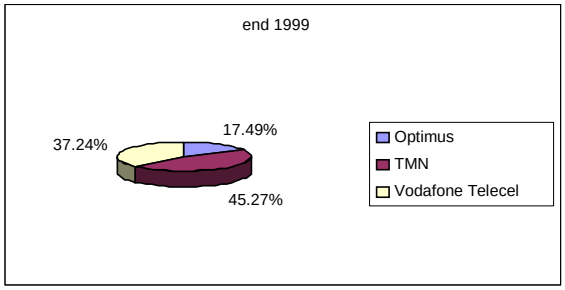


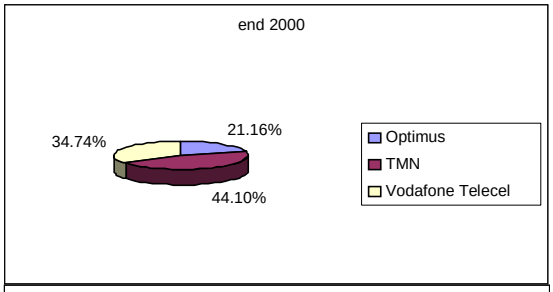
Population: 38.6M
GDP Per Capita (PPP): $9500

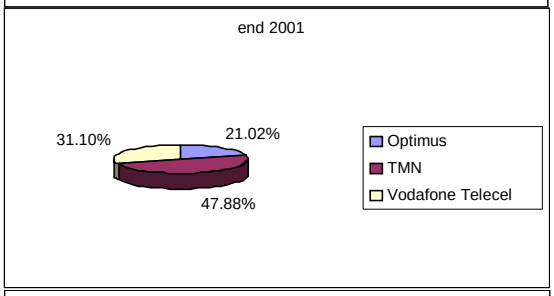


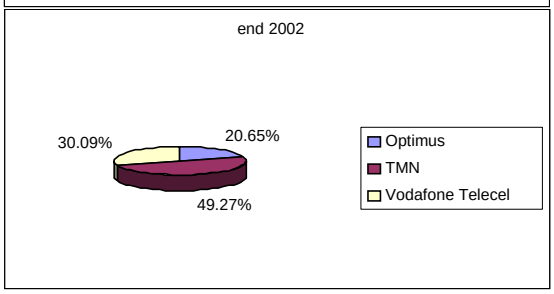
Portugal











Population: 10.1M
GDP Per Capita (PPP): $18000
Mobile Number Portability introduced 2002
National Roaming permitted
Resale of airtime permitted

Annex 2
Tender Development Process and Outline

Tender Development Process

A draft mobile license tender document is currently under development. This is being prepared based on international best practices (consultations with and references from the Americas, Eastern and Western Europe and, to a lesser extent, Asia/Pacific) as well as regional tender processes where practical. However, reviews of other beauty contest documents in the region, the most recently issued tender being Bahrain, indicate that, in general, the comparative evaluations have been loosely structured and, as such, would have been open to challenges and interventions if the bidders so chose (which has not yet been the case in MENA). The intent is that the draft tender document in preparation will serve as a basis for discussion by soliciting TRC input with respect to both the bid terms and conditions and the proposed evaluation criteria. It is expected that the more structured nature of the proposed tender document and the detailed evaluation criteria, when completed, will reduce the likelihood of disputes and challenges.

Draft Tender Outline

An outline of the proposed Table of Contents for the Mobile License Tender is outlined below:

Draft Table of Contents

Annex 3
Spectrum Options

The candidate frequency ranges and band pairings for the operation of third mobile licensee in Jordan were the following bands:

- 450 MHz band: 450-470 MHz (2 x 5 MHz)
- 800 MHz band: 824-849/869-894 MHz (2 x 10-15 MHz)
- 900 MHz band: 880-915/925-960 MHz (2 x 10-15 MHz)
- 1800 MHz band: 1710-1785/1805-1880 MHz (2 x 15 MHz)
- 1900 MHz band: 1850-1910/1930-1990 MHz (2 x 15 MHz)
- 2100 MHz band: 1920-1980/2110-2170 MHz (2 x 15 MHz)

All the frequencies within these bands are allocated globally for mobile services on a primary basis, and all bands except the 450 MHz band have been identified by the ITU for IMT-2000. In addition, these band pairings are widely used for mobile applications in various parts of the world, except for the 2100 MHz band where commercial IMT-2000 operations are just beginning, so there should be equipment to support operations in any of these bands.

450 MHz band: 450-470 MHz (2 x 5 MHz)

PRO	CON
Provides greatest coverage for least amount of infrastructure (base stations)	Encumbered with military and private sector users (600 licensees) in Jordan
Technology well-established; equipment readily available and becoming more commonly deployed	User equipment limited to 450 MHz band only; no multi-band operations
Used for evolution of first generation NMT-450 systems to IMT-2000 systems in a number of countries	In Jordan, the major advantage of first generation infrastructure being re-used for IMT-2000 migration is not available
Conclusion: Difficult due to many incumbents, but possible if had time	

800 MHz band: 824-849/869-894 MHz (2 x 10-15 MHz)

PRO	CON
Technology neutral band with GSM, CDMA and TDMA operators worldwide	Band also allocated to broadcasting on a global basis
Major cellular band in the United States with a history of evolution from 1st and 2nd generation systems to IMT-2000	Encumbered by TV broadcasters in Jordan below 863 MHz; no uplink in 824-849 MHz so any band pairing would have to be done with the 900 MHz band and would be unique to Jordan
Multi-mode handsets readily available that permit reception of different access technologies	Would require much time and money to free up required spectrum
	Multi-mode handsets to roam in region more costly than GSM-only handsets
Conclusion: Not possible due to TV operations in band	

900 MHz band: 880-915/925-960 MHz (2 x 10-15 MHz)

PRO	CON
Home to current mobile operators in Jordan • MobileCom: 890-902.5/935-947.5 MHz • Fastlink: 902.5-915/ 947.5-960 MHz	Not technology neutral - GSM band; evolution to IMT-2000 on a global basis is not likely in short term
Global GSM band	Limited spectrum available to accommodate 3rd operator in Jordan in band; military usage outside of MobileCom & Fastlink spectrum
Large economies of scope and scale for both BTS and MSU equipment	Because home to current mobile operators, best use of available frequencies may be as extension band
Conclusion: Not enough for a new operator, but could be used as an extension band for incumbent mobile operators	

1800 MHz band: 1710-1785/1805-1880 MHz (2 x 15 MHz)

PRO	CON
2 x 15 MHz can be made available within a 2 x 40 MHz bandwidth (1730-1770 MHz/1825-1865 MHz)	Not technology neutral – identified as a GSM band; evolution to IMT-2000 on a global basis not likely in short term
Costs to vacate appear to be reasonable	High probability that services would be similar or the same as current GSM operations in the 900 MHz band in Jordan
Global GSM band	
Large economies of scope and scale for both BTS and MSU equipment	
Conclusion: Available	

1900 MHz band: 1850-1910/1930-1990 MHz (2 x 15 MHz)

PRO	CON
2 x 15 MHz can be made readily available at 1865-1880/1945-1960 MHz	Multi-mode handsets to permit operation on GSM systems more costly than GSM-only sets and generally not commercial available
Costs to vacate appear to be reasonable	Band pairing not used for mobile services in the Middle East region
Technology-neutral band w/CDMA, TDMA, GSM operators world-wide	Downlink band is uplink UMTS band
Multi-band handsets readily available to facilitate roaming	
Being used in many countries as a migration band to IMT-2000 systems	
Conclusion: Available	

2100 MHz band: 1920-1980/2110-2170 MHz (2 x 15 MHz)

PRO	CON
Paired with 1910-1970 MHz is global IMT-2000 downlink band	Available frequencies in 2100 MHz band in Jordan do not permit alignment with global IMT-2000 terrestrial pairings
When paired with same amount of spectrum in the 1920-1980 MHz band is consistent with IMT-2000 pairings	Equipment not currently widely available
Will permit access to latest technologies when they become available	May be publicly perceived as more negative since licensing may be confused for IMT-2000 service
	Only frequencies available in Jordan will lead to pairing not consistent with global pairing
	Heavily encumbered by military
Conclusion: Not available at this time	