8 Regulation and Competition in the Turkish Telecommunications Industry: An Update

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Abstract

This chapter provides an overview of the state of liberalization, competition and regulation of major segments of the telecommunications industry in Turkey. It shows that the competitive stance of the regulatory authority and the development of actual competition has been uneven across segments. Specifically, the degree of competition has been higher in the mobile segment relative to fixed telephony or broadband. The chapter also discusses the new Electronic Communications Law and argues that although not perfect, it provides a coherent basis on which the regulatory authority can pursue competitive objectives in a more even manner. However, the actual development of competition will depend a lot on how the law and the ensuing secondary legislation are actually implemented.

1 Introduction

Liberalization in the Turkish telecommunications industry has a history of about 15 years in the mobile segments and at least 7 years in the fixed segments.[2] Developments in different sectors have been asymmetric with competition more prevalent in mobile than in fixed segments, where competition is seriously lagging behind. A new Electronic Communications Law (ECL) was enacted in 2008, and this was followed by the issuance of a large number of secondary legislation.

The purpose of this chapter is to provide an overview and update on the state of liberalization, regulation and competition in the Turkish telecommunications industry. The chapter is organized as follows: The next section reviews the legal framework and discusses the new law. The chapter than looks at the developments in major segments. The final section concludes.

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[2] For the history of and background on the Turkish telecommunications industry see Atiyas (2005), Atiyas and Doğan (2007, 2010) Renda et. al (2009), Togan et. al. (2010).

2 General background and the new legal framework

Liberalization of telephony services started with the launch of mobile phone services in 1994 through to operators, Turkcell and Telsim which had revenue sharing agreements with the incumbent fixed line operator, Türk Telekom. Turkcell and Telsim were awarded licenses in 1998, a move which rendered the two operators independent from Turk Telekom and which initiated genuine competition in the mobile segment. Liberalization in fixed line telephony started after the adoption of law No. 4502, which established an independent regulatory authority, the Telecommunications Authority (TA), with powers to regulate prices, interconnection and access. Initially the authority to issue licenses remained in the Ministry of Transport, but that was also subsequently delegated to the TA. Law No. 4502 also stated that monopoly rights of Turk Telekom would be terminated at the end of 2003.

The framework developed in Law No. 4502 was inspired by the 1998 regulatory framework in the European Union. It relied on an individual licenses regime and the identification of operators with significant market power (SMP) and the regulatory obligations that can be imposed on them were not designed as an exercise carried out on the basis of competition law, as was the case in the 2002 EU framework.[3] The TA itself moved in the direction of the 2002 framework in its efforts to define markets and identify operators with SMP. Finally with the adoption of Law No. 5809 in 2008 (the ECL), the regulatory framework became much more compatible with the 2002 EU framework.

The ECL changed the name of the national regulatory authority to Information Technology and Communications Authority (ITCA).[4] Overall, the law brings the Turkish regulatory framework closer to the EU 2002 framework, especially in the area of authorizations. Some of the salient features of the law are as follows:

Art. 5 of the ECL lists the duties of the Ministry of Transport, which includes determining strategy and policy for electronic communications services that use scarce resources such as numbering, satellite positions and frequencies. It also authorizes the Ministry to determine the principles and policies for the promotion of competition in the electronic communications industry and take supportive measures. This is in line with the general approach adopted in the liberalization of network industries where the Ministry takes on responsibility for general formulation of policy and strategy for the industry and an independent regulatory authority is given the responsibility for the formulation and implementation of regulations.

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[3] See Cave (2004) for a comparison of the 1998 and 2004 regulatory frameworks for electronic communications in the EU.

[4] Both TA and ITCA will be used in this chapter, depending on the period under consideration.

Indeed, the law mentions the following among the competencies of the ITCA (art. 6)

- To undertake regulations so as to install and protect competition and to prevent activities that prevent or distort competition, and to impose remedies on operators with significant market power (SMP) and on other operators if necessary
- To undertake market analysis and determine operators with SMP
- To undertake frequency, satellite position and numbering planning and allocation
- To maintain Board decisions, along with justifications and procedures, on matters of interest to operators and consumers open to public
- To approve as necessary, tariffs and reference access offers.

This list may deserve several comments: First, unlike in the previous regime, there is an explicit reference to market analyses to determine operators with SMP but the link between obligations and market analyses is rather weak. Art. 7 states that "The Authority may identify the operators with significant market power in the relevant markets as a result of conducting market analyses. The Authority may also impose obligations on operators with significant market power with the aim of ensuring and promoting an effective competition environment." It is further stated that obligations can be differentiated across operators with SMP.

Second, the requirement that ITCA has to publish its decisions with justifications is a major improvement in terms the transparency and the accountability of the authority.

One of the most important features of the 2002 regime in Europe is that many regulatory obligations may only be imposed on operators with SMP, which are determined on the basis of market analyses. This is also the case in the ECL. For example, art. 13 states that in the case of operators with SMP, "the Authority shall be entitled to determine the procedures regarding the approval, monitoring and supervision of tariffs as well as the upper and lower limits of the tariffs and the procedures and principles for implementation" and also to take measures to prevent anti-competitive pricing behavior such as predatory pricing or price squeeze. Similarly Art. 21 states that ITCA may impose accounting separation obligation on operators with SMP. However, there are also some divergences between the ECL and the EU. Art. 33 states that ITCA may impose carrier selection (CS) and pre-selection (CPS) on any operator, whereas under the EU regulations these remedies can only be imposed on operators with SMP (Renda et. al, 2009: 33).[5]

Regarding ex-ante and ex-post regulation, Art. 6/b states that the ITCA inspects and imposes enforcements against breaches of competition in the electronic communications industry in violation of this law (i.e. law No. 5809) or of regulations based on this law. From this wording it appears that violations of the competition

[5] Renda et. al discuss other instances of divergences from the EU legislation.

law that are not at the same time violations of ECL are not under the authority of the ITCA. The same article also requires ITCA to seek the opinion of the Competition Authority (CA) "in situations envisaged by laws". It seems the wording does not preclude the competition authority from investigating or adjudicating actions that are alleged to violate the competition law and ECL at the same time, though the practice of the competition authority so far has been not to investigate alleged infringements of competition if such actions are in an area regulated by the NRA. Art. 7, titled "Provision of Competition" uses a more general wording and states that the ITCA is authorized to investigate actions that restrict or prevent competition and impose remedies, suggesting a scope that may include anti-competitive activities that do not necessarily violate the ECL. Art. 7/b requires the CA to obtain the opinion of ITCA and take into consideration ITCA regulations in its cases in the electronic communications industry, including merger and acquisition cases. Art. 7/c states that ITCA, as a result of market analyses may identify operators with SMP and may impose obligations on them in order to secure and protect an effective competition environment. In short, then, it can be said that the ECL does not provide for a clean divide between the jurisdiction of ITCA on the one hand and the Competition Authority on the other. There have been instances where the degree of cooperation between the two agencies has been low and there has been some disputes regarding the respective scopes of the two agencies (Atiyas, 2005; Ardıyok and Oğuz, 2010).

The new law introduces two types of authorizations: Notification and Rights of Use. According to Art. 9 of the law, any operator that wishes to provide electronic communications service or establish and operate electronic communications network or infrastructure notifies the ITCA. If the service in question does not require a resource such as a number, frequency or satellite position, then authorization is provided through the notification. Otherwise authorization requires the provision of a right of use. The ITCA determines which services require a right of use and which among those requires a limited number of rights of use. The number of rights of use can only be limited in cases where resources need to be used by a limited number of operators and to achieve efficient use of resources. For those services which the ITCA has determined no limitation in number of authorization is required, the ITCA provides the right of use in 30 days. In case the number of rights of use will be limited, there are two cases: When the authorization entails a satellite opposition or a nationally designated bandwidth, then the conditions of authorization (such as starting date, duration, number of operators) are determined by the Ministry of Transport, but the authorization is done by ITCA. In other cases the Ministry does not get involved in the authorization procedure (except of the determination of minimum fees, see below). Right of use that are limited in number are allocated through auctions.

Authorization fees consist of administrative fees and fees for right of use. The ITCA collects administrative fees from operators (not exceeding 0.5 percent previous year sales) in order to meet its administrative expenses. Minimum fees for rights of use are determined by the Cabinet of Ministers.

The new authorization regime is a major improvement over the previous regime, and possibly with the strongest practical implications. The previous regime was cumbersome in that the authority had to come up with quite narrow definitions of separate activities and authorize each through a separate license. The old regime also allowed Türk Telekom to delay liberalizations through legal challenges. One drawback of the current regime is that it still grants the Ministry some leverage to delay authorizations by acting slowly on the determination of minimum fees as has occurred a number of times in the past (Atiyas, 2005). Another drawback of the current regime is that it does not apply to existing concession agreements held by Türk Telekom and the three mobile operators.[6]

Regarding access Art.16 states that ITCA may identify operators with access obligations and that in case the refusal of an operator to provide access prevents the development of competition or creates a situation that is against the consumers' interests then the ITCA may force that operator to accept other operators' access demands. On operators with access obligations, the ITCA may impose obligations of equality, non-discrimination, transparency, clarity, orientation towards costs and reasonable profit and the requirement that access service be provided on same conditions and quality as provided to own partners, participations of partnerships. ITCA can also require the preparation of reference offers (Art. 19). It can require operators to make changes in reference offers. Access agreements are established freely between interested parties; in case of disagreements the ITCA engages in dispute resolution. (Art. 18). The ITCA may impose on operators with access obligations that access tariffs be cost-based. In case the ITCA determines that access tariffs are not cost-based, it can set the tariffs. If necessary taking into consideration the applications in other countries (Art. 20). The ITCA may impose accounting separation on operators with SMP (art. 21).

To sum up, the primary legislation, although not perfect, and not completely aligned with that in the EU, presents a coherent framework on which to build measures to liberalize the telecommunications industry and enhance competition. Following the adoption of law No. 5809, the ITCA has been active in putting out or renewing the necessary secondary legislation. Such secondary legislation include Ordinance on Authorizations, Ordinance on Rights of Way, Ordinance on Access and Interconnection, Ordinance on the Determination of Operators with SMP and Obligations that Can be Imposed on Them, Tariff Ordinance, and Ordinance on Number Portability. Even though a detailed evaluation of the secondary legislation is beyond the scope of this chapter, overall, it can be said that most secondary legislation are consistent with their EU counterparts. Hence the legal gaps between the EU and the Turkish regime have been narrowed down. The implication is that the lack of progress in the development of competition will be due to weak implementation and enforcement rather than lack of legal instruments.

[6] This gap has also been identified in the latest progress report prepared by the European Commission (2009).

3 Developments in major segments

3.1 Competition and regulation: fixed vs. mobile

As discussed below, the development of competition in fixed telephony and internet/broadband has been extremely slow, primarily because the Ministry of Transport and the TA have been slow in adopting, implementing and enforcing the necessary secondary legislation. Atiyas and Doğan (2010) argue that Türk Telekom's influence on the Ministry and the TA's lack of independence from the Ministry are to a large extent responsible for this state of affairs. The fact that the Turkish framework allowed some residual discretion to the Ministry, especially in the area of authorizations, enhanced the scope for political influence. By contrast the TA (and indeed the Ministry) has been much more vigilant and pro-competitive in the mobile communications segments, and has used its powers (albeit not always successfully) to encourage new entry (Atiyas and Doğan, 2007). This difference in attitude, in turn, is partly explained by the fact that Turk Telekom actually is a new entrant in the mobile segment through its subsidiary Avea (formerly Aycell).

The difference in the attitudes of the regulatory authority towards fixed and mobile segments is perhaps best reflected in the regulation of interconnection. There is general agreement that on the whole incumbents prefer higher termination charges and new entrants prefer lower termination charges. In Turkey the access and interconnection regulation allows parties to reach their own interconnection agreements. If the parties cannot reach an agreement, the regulatory authority may intervene and impose an access charge on the parties. These default charges have been announced by the regulator on annual basis. Figure 1 compares the call termination rates in Turkey with EU average for mobile operators and single and double transit level for Türk Telekom. The figure shows that termination charges on calls ending on Turk Telekom's network were highly above EU averages until 2008, i.e. until 4 years after Türk Telekom's monopoly rights were terminated. This is an excessively gradual decline in termination rates. By contrast, termination rates for the largest operator in the mobile segment have always been lower than EU averages. Hence if the EU charges can be taken as a benchmark, the figure show that the regulatory authority has been more willing to encourage entry into the mobile segment relative o the fixed segment.

Place Figure 1 here

3.2 Developments in fixed telephony

The market for domestic long distance and international calls were liberalized a few months after the monopoly rights of Turk Telekom were terminated but actual entry took much more to materialize because of delays in interconnection agree-

ments and the necessary infrastructure to allow new entrants to connect to Türk Telekom's network (Atiyas and Doğan, 2010). Atiyas and Doğan (2010) also report that new entrants' capture of market share was much slower when compared with the experiences of OECD countries. In any case, competition in local calls remained impossible for a long time and was authorized three-and-a-half years after the monopoly rights of Türk Telekom were removed, in August 2007. The regulation that allowed competition in local calls actually was an amendment to the (now renewed) Authorization Regulation and covered the provision of telephony, data, internet and value added services over the fixed terrestrial telecommunications networks. This regulation was cancelled by the Council of State in January 2008 on the grounds that it was not possible to undertake more than one activity under a single license. The authorization was revised by the TA and authorization for Fixed Telephony Services (FTS) was finally published in November 2008. Licenses for FTS have been issued in May 2009.

However, the mere granting of licenses is not sufficient to ensure the development of competition in fixed telephony. One way to speed up service based competition in fixed telephony is to oblige the incumbent operator to provide wholesale line rental (WLR) services. Through WLR, alternative operators can rent access lines on a wholesale basis from the incumbent operator and resell them to subscribers. That allows alternative operators to provide access services to subscribers. In combination with Carrier Pre Selection (CPS), WLR enables the alternative operator to end the billing relationship between the incumbent operator and the customer and allows the alternative operator to provide a single bill that covers both line rental and telephone calls. It has been used as a remedy widely in the EU member states to encourage service –based competition. In Turkey, it has been promoted by Telkoder, an organization of alternative telecommunications operators in Turkey. Telkoder's main argument was that alternative operators' alternative means of developing access services, namely building their own access network or utilizing unbundled access to the local loop (UALL) provided by Türk Telekom (see below) would take a long time to develop (Telkoder, 2008).

In November 2009, the ITCA has imposed WLR as a remedy on Turk Telekom as a result of analysis of the market for access to the fixed telephone network (ITCA, 2009). As of July 2010, Türk Telekom has prepared a draft offer that has been made available for public consultation.

Another issue that has come up during implementation has to do with the assignment of call numbers. The ITCA decided in June 2009 that alternative FTS operators would be assigned area codes that are constructed by adding 1 to the existing 81 area codes (one for each province), and FTS operators would assign numbers to their subscribers under these area codes. According to Telkoder, that would have created the perception of dialing long distance calls among FTS subscribers and would have required them to memorize new area codes. Telkoder filed a petition with the Council of State to cancel these provisions of the ITCA decision. The Council of State decided to stop the execution of the decision in February 2010. A final decision is pending. The ITCA responded by announcing that it would start

assigning available numbers under the current area codes. It seems there are still disputes between FTS operators and the ITCA about what numbers are available under the current area codes.

The degree of competition in fixed line telephony is still extremely low. According to market data provided by the ITCA (2010), as of 1st quarter of 2010, the share of FTS operators in total local calls was a mere 2.3 percent. The market share of FTS operators was 10 percent in domestic long distance (inter-province) calls, 18 percent in calls to mobile and 26 percent in international calls. Overall, the share of FTS operators in total revenues is about 14 percent and the share in total telephone services revenues is about 7 percent. Needless to say these figures do not point to much effective competition in the industry.

3.3 Developments in broadband

Until recently there have been two main technologies or platforms over which broadband services have been delivered to consumers (Bouckaert et. al 2008: 8-10). The first is Digital Subscriber Line (DSL) which entails upgrading the legacy public switched telephone network (PSTN). The second platform consists of the cable-modem technology, which entails upgrading the cable-tv network.

In Turkey, as per a decision of the Competition Authority, the cable-tv network was separated from Türk Telekom when the latter was being privatized. The idea behind this separation was the hope that the cable-tv network would be privatized separately and sold to other buyers. That way the cable-tv network would also be used to provide broadband services and would serve as a basis of competition against Turk Telekom. Instead, the cable-tv network was placed under the state owned satellite company. The ownership of the network itself became the subject of many legal disputes, and effectively speaking the network never became a serious competitor to Türk Telekom or its internet subsidiary, TTNet.

In most countries incumbent operators such as Türk Telekom have been under the regulatory obligation of allowing new entrants to use the existing network to provide their own DSL services. This, in turn has taken three main forms, with varying degrees of infrastructure investment undertaken by the new entrant. Under *resale*, the new entrant buys the DSL product at wholesale prices from the incumbent operator and resells it at the retail level. This form of entry requires minimum level of investment from the new entrant. Under *bitstream access* the incumbent installs a high speed access link such as DSL to the customer premises and then makes this access link available to new entrants to enable them to provide broadband services. Under this form of access the new entrant can provide its own value added services to consumers. This is different from pure resale because the latter "does not allow new entrants to differentiate their services from

those of the incumbent".[7] *Unbundled access to the local loop* (UALL) comes in two main forms: Under *shared access* the copper pairs are shared by the incumbent and the entrant. The incumbent provides telephone services to the subscriber and the new entrant uses the high frequency channels to provide broadband service. Under full unbundling, the new entrant rents the full wire connection to the subscriber's premises. Under UALL, the incumbent provides the copper connection and the rest of the infrastructure is undertaken by the new entrant; hence this is the form in which the new entrant undertakes the highest level of investment. UALL also provides full control to the new entrant over the network.

In Turkey Türk Telekom (through TTNet) started to provide ADSL services in the early 2000s. First attempts to promote new entry occurred when the regulatory authority mandated a resale arrangement in 2003 that allowed a margin of 18 percent to alternative operators. This was followed by a decision by the TA to mandate bitstream services in 2004, which through legal challenges and other delay efforts by Türk Telekom only became available in 2007-2008. Efforts to provide access through UALL started in 2005 but the product became available only in 2009.

Broadband penetration ratio is very low in Turkey: 9 percent in fixed broadband as opposed to an average of 23-24 percent in the OECD and EU (Köksal 2010). As of March 2010, there are 7.4 million broadband subscribers in Turkey, 86 percent of which are ADSL connections.[8] Mobile broadband over 3G has developed rapidly over the last year has reached 8.6 percent of the total,[9] and cable-modem makes up only 2.4 percent. The share of TTNet in broadband subscribers is 81 percent and the share of alternative internet service providers is only 6.1 percent. The most widespread means of access of the alternative operators is bitstream. The number of UALL is quite low, a total of 14.8 thousand as of March 2010 (only 75 fully unbundled access) and access through resale is about 43 thousand. UALL prices are not particularly high in Turkey, with wholesale shared access prices in Turkey almost the same as the EU average (€2.78 as of March 2010).[10] Alternative operators mention several important barriers, including high installation charges, high charges for backhaul services and delay tactics by Türk Telekom with insufficient enforcement from the ITCA. In any case the degree of

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[7] ERG (2004). The ERG statement continues to state: "In order to be able to differentiate their services (including such services as VoIP) from those of the incumbent, new entrants must have access at a point where they can control certain technical characteristics of the service to the end-user and/or make full use of their own network (or alternative network offerings) thus being in a position of altering the quality (e.g. the data rate or other features) supplied to the customer."

[8] Data from ITCA (2010)

[9] 3G licenses were awarded as a result of a tender held in November 2008. Concession agreements were signed April 2009 and all three operators started to provide 3G services as of July 2009. The number of 3G subscribers increased quite rapidly, reaching 8.7 million as of March 2010.

[10] www.cullen-international.com

competition in broadband is very low. TTNet share in fixed broadband is 89 percent and this is much higher than EU average, which in 2009 was only 46 percent!

Moreover, broadband prices in Turkey are also very high. According to OECD data,[11] average broadband monthly price per advertised Mbit/s in Turkey (14 USD), is about 40 percent higher than the OECD average (9.6 USD). When prices are corrected for purchasing power parity, prices in Turkey are the highest third, after Mexico and Poland. OECD data also reveal that Turkey is really lagging behind in high speed connections: prices in Turkey are relatively cheaper for low speed connections and relatively more expensive for high speed connections.[12]

The low level of competition in broadband internet is also due to strategic behavior of Türk Telekom to prevent entry of alternative internet service providers in Turkey. In a landmark decision[13] taken in November 2008, the Competition Authority has imposed a fine of 12.4 million TL (about € 6.2 million) on Türk Telekom for abusing its dominance in the wholesale broadband internet market by price squeeze in the retail internet market. In its decision, the Competition Board stated that Türk Telekom and its internet subsidiary TTNet endured operating without profits for long periods of time and implemented campaigns that would not cover losses at reasonable amounts of time and that these strategies were executed in order to monopolize the sector.

In a recent decision[14] the Competition Authority stated that Türk Telekom should provide naked DSL services. Provision of naked DSL means that Türk Telekom can no longer bundle voice and data services together and that the subscriber can subscribe to DSL services alone, without having to pay for voice services as well. This is important for alternative internet service providers (ISPs) because as it stands a consumer who wishes to obtain broadband internet services from an alternative ISP would still need to go to Türk Telekom to obtain a fixed line and this reduces incentives to then re-direct herself to the alternative ISP in the first place. The decision further states that unavailability of naked DSL also hurts mobile operators because it slows down consumer switches from fixed to mobile telephony services. Availability of naked DSL is expected to increase broadband penetration and also demand for VOIP services. The ITCA has specified naked DSL as a remedy in its latest analysis of the wholesale broadband market.[15] Türk Telekom provided a draft reference offer however as of June 2010 the ITCA has not finalized the offer and naked DSL is not yet commercially available.

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[11] http://www.oecd.org/sti/ict/broadband
[12] ibid. Compare tables 4.l and 4.n.
[13] Decision No. 08-65/1055-411 dated 19.11.2008
[14] Decision No. 09-07/127-38 dated 18.2.2009.
[15] http://www.tk.gov.tr/srth/dokumanlar/kgid/Toptangenisbantpiyasasi.pdf

3.4 Developments in the mobile segment

The mobile communications market consists of three main mobile network operators (MNOs), Turkcell, Vodafone and Avea, the subsidiary of Türk Telekom. The main problem faced by ITCA in the mobile segment was the continued dominance of Turkcell, the largest of the three operators. Turkcell has benefited from first mover advantages in the mobile market to establish its dominance, and is believed to maintain its dominance in the market by discriminating between on-net and off-net prices and thereby exploiting tariff-mediated network externalities to its advantage (Atiyas and Doğan, 2007). Tariff mediated network externalities are thought to work in the following way: When call termination charges are high, the cost of an off-net call increases. This makes it difficult for operators to lower the retail tariffs of off-net calls. On the other hand, since on-net calls are not subject to termination charges, on-net retail tariffs can be lower. In addition, most consumers face switching costs when they would like to switch to a new operator. One widespread form of switching costs emanate from the fact that the consumer would need to inform friends about her new phone number (unless, of course, there is number portability, see below). These provide a natural competitive advantage to operators with a large subscriber base: First, consumers who have not yet subscribed to an operator would choose an operator with a large subscriber base because everything else constant, that operator would contain a larger pool of people that this potential subscriber would call, so that a larger proportion of calls would be on-net. Second, if callers get utility not only from placing but also from receiving calls (i.e. if there are so-called call externalities), then again an operator with a larger subscriber base would be more attractive. Under call externalities, the incumbent would have an additional incentive to raise off-net prices in order to make the rival less attractive since that way the rival would receive less calls (Rey and Lopez, 2009). In effect, the off-net price of an operator would be competing with the on-net tariff of the competitor (Atiyas and Doğan, 2007: 511-512).

The ITCA used a number of measures to counter the dominance of Turkcell. These are explained below:

Retail and wholesale tariff controls: In 2007 the ITCA (then the TA) issued an "Evaluation of the Results of Monitoring Regarding Turkcell Tariffs". The monitoring was undertaken in response to complaints by Avea, Vodafone, Borusan Telekom and Sabanci Telekom that Turkcell on-net tariffs are below interconnection charges, and that differences between on-net and off-net prices are disproportionate. The report found that some Turkcell on-net tariffs are below termination charges Turkcell applies to the other competitors and requires that Turkcell on-net tariffs should not be below the lowest termination charges (except for special packages designed for designated groups such as the disabled and the elderly). The report also imposed a cap of 0.66 TRY/min (about 39 Eurocents) on Turkcell off-net tariffs.

This decision of the authority was cancelled by the Council of State on the grounds that the authority did not have the authority to establish floors on operators' prices. On March 26, 2009, ITCA published a new decision that imposed a new wholesale remedy upon Turkcell, as well as a symmetrical retail remedy upon all MNOs. ITCA here was acting again following an investigation into the complaints formulated by the two other MNOs, Vodafone and Avea, together with the fixed incumbent Turk Telekom, on alleged anti-competitive behavior of Turkcell. In its investigation, ITCA concluded that during 2007 and 2008, several retail offerings of Turkcell included on-net retail tariffs that were below the applicable mobile termination rates (MTR) and that this practice distorted competition in the retail market. The decision imposed two remedies: The first was that the weighted average of MTR charged by Turkcell to other operators cannot be higher than the retail on-net tariffs it uses in each of its retail packages. The second remedy was that MNOs are allowed to charge the maximum retail tariff of 0.64 TRY (€0.30) per minute (including VAT and the special telecommunications tax) for calls to other mobile networks. Even though the retail remedy was placed on all operators, the real target was presumably Turkcell: possibly, believing that call externalities do exist, the ITCA wanted to prevent Turkcell from harming rivals' profits or from rendering rival operators less attractive by raising off-net prices and thereby reducing the number of calls that rivals' subscribers would receive.

It can be said that ITCA was quite vigilant in the enforcement of these regulations. In April 2010 the ITCA imposed a fine of about €400,000 to Turkcell for violating the restriction on the termination charges and a fine of €25 million for violating the cap on retail tariffs.

Mobile number portability: Number portability is seen as a major remedy to reduce switching costs (Atiyas and Doğan 2007). The number portability regulation was adopted in February 2007. Turkcell challenged the regulation and filed a petition at the Council of State for its cancellation, but the request was denied. Mobile number portability became effective in November 2008. An impact analysis carried out by ITCA (Güngör and Evren 2010) reported that by March 16, 2010 more than 11 million subscribers had transported their mobile numbers to rival operators. This amounted to 19 percent of pre-aid and 15 percent of post-paid subscribers. Between November 2008-January 2010, one operator lost a net of 1.7 million subscribers while the other two gain net 806 and 940 thousand subscribers, respectively. Hence, according to the report, introduction of mobile number portability did reduce switching costs and increased the extent of competition in the market.

Mobile call termination rates: Another important remedy at the disposal of the ITCA was, of course, interconnection charges. It was mentioned above that termination charges in the mobile segment were among the lowest in Europe. This tendency continued and in March 2010 the ITCA further reduced MTRs by about 52-53 percent, to about 1.4-1.7 Eurocents per minute. They were already reduced

by 30 percent in March 2009. As of March 2010, these were the lowest rates in Europe.[16]

While it is difficult to gauge the specific individual effects of these different measures, recent developments in the mobile markets do suggest that the measures may have had some impact. The most important impact seems to be a reduced incentive to discriminate between on-net and off-net calls. Atiyas, Doğanoğlu and Koç (2010) report that Turkcell launched in February 2009 a new package ("lemon reprieve") that entailed symmetric on—net and off-net prices. Interestingly, Turkcell started a major advertisement campaign for "lemon reprieve" possibly the first major ad campaign in Turkcell history for a non-differentiated package. This package was perhaps a response to Avea's launch of a non-discriminating package on the eve of the implementation of number portability, but Avea's strategy itself possibly reflected the impact of both the introduction of number portability and reduction of call termination charges. The tendency of Turkcell to move away from discriminatory call packages and towards packages where on-net and off-net calls are priced symmetrically was evident in other instances as well. In April 2009 Turkcell introduced a package directed at public servants that included symmetric on-net and off-net prices, presumably as a replacement or extension of a popular package directed at the same group but where tariffs were differentiated. In addition, other popular discriminatory packages were changed so as to eliminate differences between on-net and off-net retail prices.

Güngör and Evren (2010) report other interesting price data that suggest that regulatory changes may have had significant impact on pricing strategies. On the basis of the retail prices of the most popular pre-paid call packages it is reported that that Turkcell's prices declined by about 20 percent in 2008-2009 and that there was a significant convergence between the prices of the three operators, presumably reflecting a reduction in the premium that Turkcell could charge. Furthermore, between 2008-2009 there were significant increases in the volume of off-net calls per subscribers for all operators (Güngör and Evren, 2010: 53).

First, it may be underlined that the number of subscriptions have actually declined over the last two years, from 65.8 million in 2008 to 61.6 in 2010-1. It seems that the primary reason for this decline has to do with the fact that many users are relinquishing multiple subscriptions with many operators to single subscriptions with a single operator. The main reasons for this, in turn, is that with the reduction in the degree of discrimination between on-net and off-net prices, users no longer need dual or triple subscriptions to avoid high off-net prices. Hence, according to that interpretation, the decline in the number of subscriptions is actually consistent with the view that these measures have been effective.

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[16] Cullen International, Western Europe Cross Country Analysis www.cullen-international.com

Turning to market shares, the market share of Turkcell (in terms of number of subscribers) did decline over the last decade from about 67 percent in 2001-2004 to about 55-56 percent in 2008-2010. However, there were no further declines in Turkcell's market share in terms of number of subscribers since 2008, but an increase in the market share of Aycell from 16.7 to 18.8 between 2008-1 and 2010-1 and a corresponding decrease in the market share of Vodafone (from about 27 percent to 25 percent). On the other hand, Turkcell's market share in terms of volume of traffic has declined from 49-50 percent in 2008-2 to around 42-45 percent in 2009. It seems there was a similar movement in market shares in terms of revenues. Güngör and Evren (2010: 42) interpret this as reflecting the impact of reduced prices and the consequent increase in number of call-minutes that has benefitted Avea and Vodafone more than Turkcell.

It is perhaps still too early to asses whether these are real trends or simply temporary changes but at least one can tentatively conclude that market developments are not inconsistent with expectations about the likely impact of the regulatory interventions in the mobile markets.

4 Conclusion

The legal framework for regulation and competition in the telecommunications markets in Turkey has been improved considerably in the last two or three years. The new Electronic Communications Law, even though not perfect, provides a major improvement over the previous regime and establishes a coherent basis on which to push for the development of competition in the industry. Lack of or incoherence of legal instruments did play a role in the delays in the development of competition especially in the fixed telephony and broadband segments, but unwillingness or incomplete ownership of the liberalization agenda by the Ministry and the ITCA also played a role. The ECL also is a major step towards improving the transparency and accountability of the ITCA, especially because the ITCA is now obliged to provide reasoning or justification for its decisions and make them available to the public. It will be seen whether in the near future the duality apparent in ITCA's approach to fixed vs. mobile segments will continue or whether, as a result of these changes, it will give place to a more consistently pro-competitive approach.

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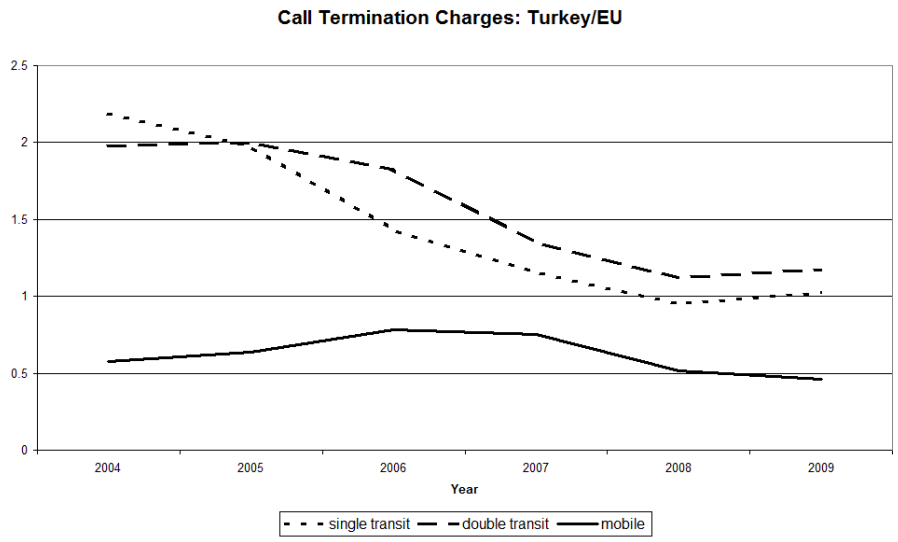
Figure 1


Call Termination Charges: Turkey/EU
2.5
2
1.5
1
0.5
0
2004
2005
2006
2007
2008
2009
Year
single transit
double transit
mobile