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Working Party No. 2 on Competition and Regulation

VERTICAL SEPARATION IN REGULATED INDUSTRIES

-- Mexico --

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EXPERIENCE WITH SEPARATION IN REGULATED INDUSTRIES

Mexico

This paper addresses some relevant issues of the Mexican experience on the following industries: natural gas, railways, telecommunications and airports. The last section (V) describes some general features on the policy applied to specific regulated sectors.

I. Natural Gas Industry

1. In 1995, the Mexican government introduced far-reaching reforms in the natural gas sector. One key objective was to enhance competitiveness of domestic industry through the availability of a sufficient, timely and competitive supply of a cost-effective fuel, such as natural gas. The industry's structure was redefined distinguishing between strategic and non-strategic activities:

- exploration and production, processing and first-hand sales were considered strategic activities reserved to Petróleos Mexicanos (Pemex, the national State-owned oil company);
- transportation, distribution, storage, and marketing, including foreign trade, became non-strategic activities in which the private sector could participate.

2. The Energy Regulatory Commission (CRE) has a clear mandate to regulate the activities of both public and private operators in the gas industry (as well as in electricity) and promote market contestability. The CRE is empowered to regulate first hand sales, transportation, storage, and distribution of natural gas. The CRE grants permits, authorizes rates, approves terms and conditions for the provision of natural gas services, issues directives, resolves disputes, requests information and imposes penalties, among others.

3. It can be said that according to the Natural Gas Regulation (NGR) commercialisation and storage are competitive activities, whereas distribution and transportation could be considered less exposed to competition forces and therefore subject to a more rigorous regulation.

4. Mexico´s natural gas regulations are aimed at developing contestable markets, particularly in competitive activities (e.g. gas marketing), while regulating those activities exclusively performed by the State through Pemex (such as first-hand sales) as well as those having natural monopoly characteristics (e.g. transportation, distribution).

5. Permits for gas distribution and transportation are granted by the CRE for an initial term of 30 years and may be renewed for one or more additional 15-year periods. The same person may hold licenses for both activities, but vertical integration is not allowed, so one economic agent cannot hold distribution and transportation permits in one geographic zone. An exception to this prohibition may be granted whenever the CRE determines that vertical integration would result in efficiency gains.

6. All transportation and distribution permit holders are subject to the principle of open access and non discriminatory service. In fact, article 64 of the NGR establishes mandatory interconnection to all permit holders, provided that there is available capacity and the interconnection is technically feasible according to CRE regulation.

Provisions regarding non-competitive activities

Transportation

7. Competition between transmission pipelines is promoted. In fact the CRE may issue several permits for the same route.

8. Transportation permits are granted upon application, and the ultimate decision to build the pipeline depends on the permit holder's ability to secure demand. The obligation to allow rival pipelines to connect to the permit holders' pipelines is established in the NGR and in the terms and conditions of each pipeline, which in turn are jointly negotiated with the regulator. Access prices are referred to transmission and distribution rates.

9. The pipeline's capacity is allocated on a first come-first served basis. When a permit holder denies access to its pipeline, it needs to demonstrate the lack of capacity. The regulatory framework allows users to file complaints before the CRE regarding discrimination on the allocation of capacity at peak times.

Distribution

10. According to the NGR the first distribution permit confers a twelve-year exclusivity period on the construction of the system and the receipt, transmission, and delivery of gas within a newly defined geographic zone. This is known as simple distribution service. Distribution permits for existing firms confer a five-year exclusivity period to allow tariff stabilization. Physical bypass is permitted for large users and distribution permits do not confer exclusivity rights to market gas within a geographic zone because permit holders are obliged to provide open access to their systems (commercial by-pass). Following the expiration of the exclusivity period, the CRE can grant new permits within the same geographic zones, but these permits will not confer any additional exclusivity.

11. The market power conferred by these exclusivity rights is limited by the free access enjoyed by resellers and by the granting of self-supply permits in the concession area.

12. According to the NGR, a distribution permit holder cannot be granted a transportation permit to serve the same geographic zone, unless the CRE authorizes it for efficiency reasons or lack of interest from third-parties. No such authorization has been granted yet.

Provisions regarding competitive activities

Gas production and imports

13. Natural gas exploration and production activities exclusively reserved to the Mexican State are carried out by Pemex. Although legislation allows imports to be made by any market participant and are promoted by a import duty exemption, Pemex still remains the main gas importer.

Commercialisation services

14. Natural Gas commercialisation is considered a competitive activity, and therefore no regulation applies to this activity. However, commercialisation services provided by vertically integrated distribution companies are subject to certain regulations related to access to the distribution network. Thus, distribution permit holders are subject to open access conditions and to non discriminatory principles. Hence, they cannot refuse to provide service to rival commercialisation companies, provided that there is available capacity in their system.

Is the non-competitive activity state-owned?

Transmission

15. The CRE has granted 16 permits to both international and local companies, however only 6 of them are operating. Pemex owns the main pipeline system in the country, which is 8,704 kilometres long; as well as of two other relatively small local pipelines in the Northwest border: Naco-Hermosillo and Gasoductos de Chihuahua (339 and 38 kilometres, respectively).

16. The second largest transmission pipeline, Energía Mayakan, is controlled by TransCanada, while the remaining pipeline projects under construction belong primarily to U.S. companies, namely Tejas Gas, Williams International Ventures, Sempra Energy and KN Energy.

17. There is currently no competition among gas pipelines. However, there is a permit granted to Midcon-KN Energy to build up a 150-kilometer pipeline to link the Northeast part of the country with the US. It is expected that in the following years, similar projects will be developed and therefore, Pemex will be facing competition from other suppliers in this key region.

Distribution

18. The natural gas distribution business is not a state-owned activity. Distribution systems are primarily controlled by foreign companies, with Mexican companies as local partners in some cases. The total investment commitments to the 5th year of operation are 920.9 million dollars. The major foreign investors in distribution are Gas Natural of Spain and Gaz de France, with both companies having more than 50% of coverage commitments as of January 2000. Texas Utilities, Sempra Energy and Tractebel are other major foreign investors in distribution.

Is the non-competitive activity subject to rate-of-return or price-cap regulation?

19. Transportation and distribution rates are regulated under an incentive-type methodology, and particularly under an average revenue formula, which includes some elements of cost of service regulation. This method aims to offer permit holders the necessary flexibility in developing new markets while allowing them the opportunity to achieve an appropriate return on their assets and encouraging the expansion of gas supply to a wide customer base. Additionally, the method is designed to provide transporters and distributors with an incentive to improve efficiency.

20. The CRE sets an annual revenue cap for a five-year period which is subject to further review at the end of this period. The formula includes the following elements:

- The base value of the revenue yield cap adjusted by the change in the inflation index and an efficiency factor X;
- The pass-through costs, and
- The correction factor K applied to ensure compliance with the revenue yield cap in a determined year.

21. For those distribution permits granted through competitive bidding, the initial base value of the revenue yield is determined according to the winning bidder’s proposal. In the case of transportation and distribution permits granted by application, the revenue cap is proposed by the applicant, subject to detailed analysis by the CRE.

22. The maximum average revenue is adjusted for inflation and fluctuations in the exchange rate. This adjustment is usually done annually, but the CRE may authorize a quarterly or monthly adjustment if deemed necessary. The inflation factor reflects historic annual changes in the Mexican Consumer Price Index and the Consumer Price Index in the USA.

23. The CRE reviews all the parameters of the maximum revenue formula every five years. This review takes into account the new business plan for the next period, including investments, operating and maintenance costs, and gas flows, among other factors.

24. First-hand sales, transmission and distribution are subject to both price and quality of service regulation. Pemex as a first-hand seller, as well as any transmission or distribution permit holder, must present to the CRE their General Terms of Service (GTS) for approval. In every case, the regulator seeks to secure that the GTS offer minimum quality standards.

25. First-hand sales, that is, Pemex's sales of domestic gas production to end-users (other than Pemex) are subject to price and conditions of service regulation. The CRE uses an international reference and a netback methodology in order to reflect the opportunity cost of Mexican gas with respect to the North American market. However, it should be noted that the NGR opens the possibility to lift first-hand sales regulation if the Federal Competition Commission (Comisión Federal de Competencia- CFC) determines that there are effective competitive conditions in the marketplace. In principle, a reason for determining this situation could be a significant inflow of gas imports made by agents other than Pemex in a certain region.

26. The final price of natural gas to end-users is determined taking into account the first-hand sales price, the transportation tariff, the distribution tariff, other services, and taxes. Since the first-hand sales price is based upon international reference, the final gas price reflects the opportunity cost with respect to relevant markets in the US.

27. Regarding inter-fuel competition in Mexico, the natural gas industry is incipient, so competition is feasible with alternative fuels such as LPG, diesel, gasoline, fuel oil and others in the short to medium term.

28. Commercialisation services are not subject to price regulation.

Has the ownership, accounting or operation of the non-competitive activity been separated from the ownership, accounting or operation of the competitive activity ?

29. The 1995 reform of the natural gas industry consisted in unbundling of transportation, distribution, marketing and storage activities and first-hand sales. This accounts for vertical separation of operations which intends to introduce competition through private participation even in transmission and distribution activities, generally considered to be non-competitive activities. The only constraint imposed on agents relative to their participation in several activities refers to the NGR provision establishing that a distribution permit holder may not be granted a transportation permit to serve the same geographic zone, unless the CRE authorizes it for efficiency reasons. The CRE has also implemented specific accounting procedures within each activity in order to prevent internal cross-subsidisation.

30. Permit holders must keep separate accounts for each of the following activities:

Transport services

- Revenues and expenditures related to pure transportation service;
- Revenues and expenditures related to the provision of connections, and
- Penalty revenues

Distribution services

- Revenue and expenditures relative to the acquisition of gas, storage and transportation;
- Revenue and expenditures relative to the provision of pure gas distribution services (e.g. gas delivery);
- Revenue and expenditures from the provision of non-standard connections, disconnections and reconnections, as well as penalty revenues.

31. These accounting procedures must be filed on an annual basis to verify that there are no cross-subsides among different businesses lines, services, or regions.

What is the primary objective of separation in each case?

32. The reforms introduced in the natural gas sector had three main objectives:

- To promote contestability and competition in the natural gas industry;
- To avoid the extension of substantial market power from non-competitive activities to competitive activities; and
- To prevent cross-subsidisation and abuse of market power.

Is the separation requirement effectively enforced?

33. Compliance with vertical separation of transmission and distribution activities has been effectively enforced. There is only one case where a distribution undertaking was granted a transportation permit in the same defined geographic zone.

34. No formal cases regarding anticompetitive practices (abuse of a dominant position) have been filed before the CFC as regards the natural gas sector. Given the present structure of the natural gas market, the current regulation has been adequate to effectively control abuse by agents with a dominant position.

35. Some concern has arisen regarding Repsol's increasing participation in natural gas distribution. Recently, the CFC blocked Repsol's participation in the auction of Guadalajara distribution zone.

36. Prior to the 1995 reform, Pemex was a vertically-integrated firm, with control of most transmission and commercial control of the main distribution systems. However, over the past few years it has completely withdrawn from distribution and consequently, its distribution assets have been sold to private investors.

II. Railways

37. The Mexican railway service was restructured to allow private investment based upon the Regulatory Law on Rail Service (RLRS) enacted in 1995. This law sets out the proceedings for granting private parties concessions and permits to render public railroad transportation services. Concessions are required to (i) build, operate and exploit railroads and (ii) to operate trains, and may be granted either bundled or unbundled . Permits are needed to render auxiliary services (terminals, maintenance facilities, etc.) build access points, crossroads and bridges, among other. Thus, vertical integration is allowed, but the law also allows for the provision of infrastructure and railroad services by different companies. The SCT is empowered to grant third parties concessions to operate trains on the facilities of a vertically integrated concessionaire.

38. The Mexican Railroads privatisation scheme involved the regional separation of assets and operations, in setting up a number of route-based companies. Under this scheme, vertical integration of the different functions or services (infrastructure construction and maintenance, traffic control and operation) that make railroad transportation possible is preserved.

39. The RLRS promotes railroad development under conditions that enhance free competition among different transportation means . Following this ruling the Mexican privatisation model incorporated several factors that promote competition among railroads or that enhance competition with road or water carriers in the provision of cargo or passenger transportation:

- Competition with road transport is enhanced by removing the possibility of cross subsidies between railroad routes and by stimulating the efficiency of the network.

- The three main routes were designed so as to promote a "source competition" that may protect shippers in the absence of end-to-end railroad competition in a particular route. In other words, though there's no competition for example in the route Laredo-Monterrey (US-Mexico border)covered by the North-eastern railroad, freight coming from the USA may be transported to Monterrey also through Piedras Negras using the track of the North-Pacific railroad. In the same way, shipments arriving from the Far East may be delivered at different ports at the Pacific coast and transported alternative by the Northeast or North Pacific railroads to Mexico City.

- Source competition is enhanced through the imposition of trackage and haulage rights (further described in the next section).

- Furthermore, the concessions do not hinder other companies from operating the same routes, whenever they are willing to invest in parallel tracks, once the exclusivity period granted in the concession has expired.

- Different regional railroad concessions may not be granted to the same company (trunk line operators may only hold a 5 percent share of another concession).

- Railway tariffs shall be freely set up and must be registered at the Secretaría de Comunicaciones y Transportes (further on, SCT, the Ministry of Communications and Transports). However, when the SCT or any of the affected parties presume that there is no effective competition, the FCC will be asked for its opinion and, when necessary, tariffs shall be regulated by the SCT. Regulation provides additional protection against the abuse of monopoly power.

40. Trackage and haulage rights are included by law, in order to grant a railway concessionaire access to other railway's licensed tracks, upon payment of a fixed fee. Although the privatisation scheme allows the original concessionaire the exclusive use of the existing railway network in a region, compulsory trackage and haulage rights in specific stretches where access to other concessionaires is necessary for efficiency purposes are stipulated from the beginning in the concession titles. It should be pointed out that the Law provides the possibility that concessionaires voluntarily and at their own convenience negotiate additional trackage and haulage rights with other concessionaires of the railroad system. In this case, the authorities would intervene only to review the agreements entered into.

41. Additional compulsory trackage or haulage rights may be imposed in stretches that have not been previously specified, following a 30 year exclusivity period and whenever there is no effective competition.

42. The concessions to construct and operate a railway cover a long period of time over which the transportation circumstances and economy in general may vary significantly. Thus, the transported cargo volume may in the future permit the coexistence of more than one carrier. Therefore, a more flexible mechanism for the assignment of trackage and haulage rights was sought. Such mechanism should not discourage investment but rather allow the imposition of trackage and haulage rights whenever necessary and in the absence of effective competition. Hence, the SCT may grant concessions to third parties, in order to provide transportation services (cargo or passengers) in a licensed track, after a specific exclusivity period, which is specified in the concession's title, and whenever monopolistic practices have been engaged into by the concessionaire. Previous opinion from the Federal Competition Commission is required. In this case, the trackage or haulage rights which can be imposed do not include the right to serve intermediate points at the route subject to those rights and shall apply only for the transportation of a product or products for which feasible alternative transportation does not exist and for which the petition was made. Compulsory rights imposed by the authority shall enter into force a year after the corresponding resolution.

43. Furthermore, revision of the concessions after a period of thirty years and, if appropriate, the establishment of additional trackage rights is foreseen. At that moment the SCT may impose additional trackage and haulage rights based upon economic and technical feasibility, international regulation trends and reciprocity, especially in those cases where international agreements are concerned. If so, additional rights shall be entered into force five years after the resolution has been issued.

44. Summarising, the trackage and haulage rights foreseen in the Mexican regulation framework may be classified as:

- Voluntary or negotiated. Concessionaires can agree on a voluntary basis on the haulage and trackage rights that suit them. These rights are not subject to the reciprocity principle.

- Compulsory. The SCT can impose compulsory trackage or haulage rights in specific stretches that will be designated when the corresponding titles are granted.

- Additional compulsory rights. Thirty years after the concession was granted and whenever there is no effective competition, the authorities will be empowered to impose additional compulsory trackage or haulage rights to another applicant concessionaire in stretches that have not been previously specified.

45. Based upon the RLRS, the concessions to build and operate railways and to provide transportation services were granted through an auctioning mechanism, in which the interested parties

competed both from the technical and the economic point of view. The interested parties were required a favourable opinion from the CFC regarding their participation in the auction in question.

46. Concessions may only be granted to Mexican legal persons. Foreign investment may participate up to a 49 per cent of the licensing railroad's capital. When previously authorised by the Comisión Nacional de Inversión Extranjera (National Commission of Foreign Investment) companies may attract a higher foreign participation.

47. The privatisation scheme recognises that in Mexico the main demand for rail services comes from freight carriers. So, for privatisation purposes, the Mexican railway network was split up as follows:

- four trunk lines comprising the North-Pacific railroad, North-eastern railroad; South-east railroad and the Trans-Istmian railroad; and
- short routes serving local markets and most of them connected to the main lines, among which Ojinaga-Topolobambo, Coahuila-Durango, Nacozari, and Chiapas Mayab, in addition to the Mexico City Terminal.

48. At present, 99 per cent of railroad transportation has been licensed, including three main trunk lines and four short lines, under a scheme where government maintains a minority share (of 20 percent in most cases) which is intended to be publicly offered.

49. The North-eastern railroad , the North-Pacific railroad and the South–east railroad were licensed for 50 years which may be renewed for an equivalent period. Following this period the licensed goods must be returned to the State. The federal communication ways which refer to those routes linking two states or which are located near the borderline or seacoast (or are connected to either of these) are of public domain, even if they are build by the concessionaire.

50. The Multimode Trans-Isthmian company controls the strategic Trans-Isthmian railroad and both multimode ports at the Pacific and Atlantic coasts. The government has kept control of this company and of those routes where no alternative transportation mode is available and which were not acquired by private parties.

51. Mexico City's terminal was formed into a separate company to render interconnection and services and to provide access to Mexico City. It is held by the three main railroads providing service to Mexico City, each of which owns 25 per cent of the shares, as established in their concession titles.

52. As regards passenger transport, several lines will be privatised through an auction process, which will assign the concessions to companies bidding for the lowest subsidy. This process will only be applied to routes that lack an alternative transportation mode. Hence passenger service may disappear on some routes. Cargo concessionaires are required to grant trackage rights to passenger companies.

Is the non-competitive activity subject to rate-of return or price cap regulation?

53. The SCT may be requested to intervene whenever parties are unable to agree on fees or other conditions for rendering compulsory interconnection services or trackage and haulage rights. In order to set the fees the SCT must consider maintenance costs, increased costs arising because of interference in the operation, payments related to investments on the stretch concerned, and a reasonable profit. In addition, when setting trackage, haulage or terminal rights, trackage costs are also considered.

54. As mentioned above, there is a general provision establishing that railway tariffs shall be freely determined by permit and license holders and must be registered at the SCT. These tariffs represent the

maximum charge allowed and must be applied on equivalent and non discriminatory terms to users in similar circumstances, separating the cost component originated abroad from that generated in Mexico. Concessionaires and permit holders are also free to offer discounts on these maximum tariffs as long as they do not discriminate among users.

55. However, when the SCT or any of the affected parties presume that there is no effective competition, the FCC will be asked for its opinion and, when necessary, tariffs shall be regulated by the SCT. For this purpose it shall establish a methodology that must consider the competitive tariff an efficient operator would charge for the service, and will request the FCC its opinion. The tariffs thus established shall be periodically updated according to the national consumer price index.

56. In order to help conform a safe, efficient and competitive railroad system by promoting fair and adequate business practices and separate accounting the SCT recently issued a Mexican Official Standard setting the guidelines on the supply of railroad services and business practices.

57. Its purpose is to provide a means for monitoring and ensuring compliance with government issued safety and quality standards in the supply of railroad services. The standard sets performance, quality, efficiency and productivity guidelines as well as the corresponding evaluation criteria, a uniform accounting (financial and operation) system and statistics register forms. They apply to all railroad operators and transport service concessionaires as well as to auxiliary service permit holders who must file the information on monthly, quarterly and annual basis. Concessionaires must keep separate operation accounts reporting revenues and expenditures for:

- Cargo and passenger transportation.
- Each compulsory trackage section, identifying haulage and freight incomes.
- Integrated operations with every other concessionaire, identifying trackage and haulage services, freight services, types of manoeuvres and types of vehicle, among other.

58. Compared to an alternative model in which infrastructure management is separated from traffic control and transport management, the vertically integrated scheme proved to offer more benefits in the case of Mexico in the light of the characteristics of the network and railway transport. In particular, the privatisation scheme based upon regional fragmentation was expected to promote more investment in infrastructure and is also compatible with the models applied by Mexico's main commercial partners (e.g. the United States). Additionally, non-integrated management of the Mexican railroad would have been difficult to implement as the critical mass needed to guarantee financial and economic feasibility for more than one operator in each region is not achieved. Furthermore, unbundled management and the simultaneous coexistence of several operators requires more and better infrastructure (such as signalling, freight yards, switching equipment and others) which the Mexican railroad system is lacking.

59. Immediate results are positive, but a concluding assessment would require a longer period to allow for evolution. Figures indicate a 23 percent increase in total cargo transported in 1998 relative to the previous year and a further 6 percent increase is estimated for 1999. Increased service quality is evident in the case of the North east railroad, Transportación Ferroviaria Mexicana, where transit times between Nuevo Laredo and Mexico City have reduced from 60 hours to 34 for internodes/car trains, while average speed has increased by 44 percent. Ferrocarril Mexicano operating on the North Pacific railroad also shows increased speed, a 283 percent productivity increase measured as ton-km per worker and a 60 percent reduction in train delays.

60. As to infrastructure, considerable investments amounting to 6750 million pesos (approximately US$680 million) have actually occurred between 1997 and 1999. These have been allocated to track and hauling equipment, telecommunications, rails, ballast, construction of freight yards, operating control systems, and for the maintenance of railways and equipment, among other.

III. Telecommunications

61. The liberalisation process implemented in the telecommunication sector since 1990 has implied a deep restructuring of this sector which had as its main axes privatisation and the promotion of competition. The first step comprised the modifications to the concession title of the privatised incumbent carrier, Telmex, which incorporated an agenda and mechanisms to switch from a monopoly to contestable markets for telephony and related telecommunication services.

62. Sector regulation enacted subsequently includes competition enhancing provisions, incorporated in the basic framework set out in the 1995 Federal Telecommunications Law (FTL) and in several particular regulations and resolutions which specify proceedings for granting diverse services, technical standards and requirements and basic operation criteria. The enactment of the Federal Law of Economic Competition, in force since 1993, also contributes to regulate this sector.

63. The telecommunications regulatory authority, Cofetel, enforces the FTL which has as one of its goals the promotion of healthy competition among providers on the basis of better services, diversity and quality. To attain this purpose it promotes transparent market mechanisms for the non-discriminatory allocation of scarce resources such as the spectrum and orbital slots, and mandates interconnection with the incumbent's network.

64. Telmex was privatised preserving vertical integration but nowadays local and long distance telephone services are opened to competition and several competitors have entered these markets.

65. Telmex is expressly forbidden to engage in monopolistic practices and to seek monopolisation of services complementary to those granted in concession. Cross-subsidisation of services rendered in competition is also prohibited, except for those services included in the controlled basic services basket, described in question 1.4.

Telmex's concession title

66. Telmex was granted a concession to build, install, maintain, operate and exploit the nation wide public telephony network for 50 years to render the public basic telephony service as well as the public (local and long distance) transmission of voice, sound, data, text and image. This concession includes both the local networks and long distance networks, but expressly excludes satellite systems. Telmex was granted exclusivity only in the long distance public telephony services, for a six-year term, which expired in January 1997. Otherwise, the SCT is entitled to grant concessions for basic telecommunication services in equal circumstances to those applying to Telmex.

67. The concession title also includes obligations aimed at network expansion and modernisation, enhancing service quality, establishing conditions for healthy competition, eliminating cross subsidisation and fostering productivity to reduce rates charged to final users. Telmex is forbidden to discriminate against certain natural and legal persons; to establish tied sales unless technical conditions require it and to condition on exclusivity terms its purchases from providers (except when patents apply).

68. Telmex is allowed to participate in competitive activities by means of subsidiaries (keeping accounting separation) including: commercialisation of telephone appliances and telecommunication

equipment; installation and maintenance of terminal equipment and cable located within users property; rural radiotelephony, radio-communication services that use the radio electric spectrum (paging and trunking among other); complementary and value added services; mobile radiotelephony (cellular) and TV signal distribution. However it is not allowed to exploit open TV services and persons involved in broadcasting activities are precluded from holding Telmex's common stock. In addition the incumbent's participation in telecommunication hardware manufacturing through subsidiaries is subject to the conditions that these subsidiaries do not operate telecommunication services and to the existence of competition conditions.

The Federal Telecommunications Law

Regulations regarding public telecommunication networks and services.

69. The FTL is comprehensive in scope regulating the use, operation and exploitation of telecommunication networks, radio frequencies and satellite communications within Mexico which are granted through publicly auctioned concessions exclusively to Mexican agents. Foreign investment participating in concessions is limited to 49 percent, except for cellular telephony where a major share may be approved by the Foreign Investment Commission. A permit regime applies to special telecommunication services including value added services, radio-communication service stations, complementary local networks, among other . Concessionaires and permit holders are expressly precluded from engaging in monopolistic practices and their concessions or permits may be revoked for failing to provide interconnection to other telecommunication service concessionaires or permit holders.

70. The FTL establishes two broad service categories: public and private networks. The former comprises all networks over which commercial services are offered, including public telephone networks. Concessions to install, operate and exploit public telecommunication networks are granted for up to 30 years renewable terms. Unlike the latter, private telecommunication networks do not require a concession or permit unless they use frequency bands.

71. With a view to promote the development of new concessionaires and telecommunication services and to foster competition among them, public networks are required to adopt "open network architecture" configurations that facilitate non-discriminatory interconnection and interoperability among networks. To this end the SCT is empowered to settle interconnection agreements whenever parties are unable to reach mutually satisfying terms. A separate accounting provision compels these operators to charge themselves (and their subsidiary firms) unbundled, non-discriminatory tariffs or each interconnection service.

72. Public telecommunication network operators are subject to an obligation to allow concessionaires and permit holders to commercialise the capacity and services they hold and to provide public services without discriminating. Additional obligations mandate them to allow commercialisation of capacity obtained from their networks by concessionaires and permit holders; to refrain from interrupting signal transmission among interconnected concessionaires; and to provide services and information without discriminating.

73. Concessionaires, and particularly public telecommunication network operators, are prohibited from granting cross-subsidies to those services (either granted in concession or not) rendered in markets where they face competitors, directly or through their subsidiary firms. In addition, public network concessionaires are precluded from directly or indirectly holding assets of a telecommunication service commercialising firm, unless the SCT expressly approves such participation.

Concessions for satellite communications and to use the radio-electric spectrum

74. The use and exploitation of the radio-electric spectrum for given controlled purposes are also authorised through publicly auctioned concessions. These concessions cover particular regions and band widths (according to a public schedule) and are granted for 20 year renewable terms. A favourable opinion from the CFC is required to take part in any auction. The legislation distinguishes frequency bands for experimental purposes which are only granted for two years, and those intended for official use which are directly assigned. Bundled concessions are granted whenever the exploitation of the frequency band in question requires a public telecommunications network.

75. In satellite communications bundled concessions to use and exploit geo-stationary orbit positions and satellite orbits allocated to Mexico are granted to private parties through public auctions. These concessions include frequency bands and signal emission and reception rights. Rights related to foreign satellite systems may only be granted under the aegis of reciprocity agreements while international satellites may operate in Mexican territory if they have been established under multilateral agreements Mexico is part of.

76. A favourable opinion of the CFC on competition conditions is required to allow a network or radio frequency concessionaire to transfer operation and exploitation rights to another concessionaire or permit holder rendering similar services within the same zone.

77. Finally, the establishment, operation and exploitation of non-network telecommunication commercialising services are requested through a permit regime which also applies to ground transmission stations.

Is the non-competitive activity state-owned?

78. The public telephone nation-wide network is privately owned by Telmex. A regional telephone network concession has also been granted to Telnor, which operates in the northeastern states.

Is the non-competitive activity subject to rate-of-return or price-cap regulation?

79. Tariffs applied to basic telephone public services supplied by Telmex are subject to control and authorisation by the SCT. These include both residential and commercial services comprising the “basic service basket”: installation and connection, basic month rate covering an upper call limit; local calls in excess of such limit and long distance calls. The underlying criteria applied is that these tariffs must allow recovery of incremental long term costs. In the initial stage, this scheme was intended to facilitate the elimination of cross-subsidisation among services through periodical adjustments subject to price/revenue cap regulation. The introduction of a productivity factor later on will ensure income levels that allow a rate of return equivalent to average weighted capital costs. This factor will be calculated based upon incremental cost requirement estimations Telmex is obligated to submit. The aim of this tariff structure is to enhance productivity and to reduce tariffs paid by final users, while allowing the incumbent to change tariffs as long as the price cap is observed and cross-subsidisation is eliminated.

80. Interconnection rates are also regulated by means of limits on its growth rate. Its absolute level is meant to cover interconnection costs and to recover costs incurred in rendering residential services, in order to avoid an abrupt adjustment. This situation however, increases costs for competing long distance operators and hence affects competition in this market. In addition Telmex interconnection market power enables it to unilaterally establish tariffs of interconnection related services such as ports, co-ubication and links.

81. In order to prevent the situation described above, the Cofetel issued on December 1998 further resolutions on interconnection tariffs. The 58% interconnection rate applied over and above the international liquidation rate paid by long-distance operators was eliminated. In order to support the expansion of specific services and to permit rebalancing policies, interconnection rates paid by networks providing local services for both commercial and residential customers are distinguished from those paid by users that only provide commercial services. Finally, Bill and Keep agreements were introduced.

82. Generally, tariffs for telecommunication services are freely determined by concessionaires and permit holders, and must satisfy quality, competitiveness, safety and permanence conditions. In order to be authorised, tariffs must be registered before the SCT and must be applied without discriminating.

83. Tariffs for dedicated circuit rent, complementary and value added services are not regulated, in order to promote investment, and need only be filed with the SCT.

84. Sector legislation mandates accounting separation to public network operators showing unbundled tariffs for each service, including those of their subsidiary firms. It further requires unbundling for each region, function and network component . On December 1998 further specifications were issued by the Cofetel, mandating annual submission of separate accounting reports according to an accounting separation methodology set out for this purpose which identifies ten services: Fixed local; mobile local, long distance, public telephony, rural telephony, dedicated circuit provision, trunking, paging, cable and technical equipment maintenance and commercialisation, pay TV, and other services. Telmex and Telnor must present this report on a quarterly basis.

What is the primary objective of separation?

85. The primary objective of accounting separation is to enable supervision of compliance with provisions proscribing tariff discrimination and cross-subsidisation in those services rendered under competition conditions. Accounting separation is also meant to guarantee observance of interconnection obligations to ensure network operators charge themselves and their subsidiary firms unbundled, non discriminatory tariffs for each service. The information compiled should permit a detailed knowledge of exploitation and operation features of those services granted in concession; the assessment of network firms profitability and to establish timely and consistent development policies.

Is the separation requirement effectively enforced?

86. Telmex, Telnor, Avantel and Alestra challenged the Cofetel resolution on the separate accounting methodology. As a result of that appeal the accounting method has not been applied.

87. Competition in long distance markets serving end use customers has led to changes in domestic and international long distance rates. From December 1996 to July 1997 the average rate for domestic long distance service dropped by 42.5% from an average of 2 to 1.15 pesos per minute. Likewise, the rate structure has undergone a substantial transformation by including more options for users and reflecting virtually constant costs per distance.

88. The long distance service market has registered the most significant advances in competition and offers the greatest opportunities for the purpose of this process, but is facing certain problems. Although fourteen new operators were incorporated in a relatively short period and in 1977 Telmex's competitors acquired a 30% market share, it should be pointed out that Telmex, Alestra and Avantel account for almost 100 percent of the market. The new operators' share dropped to 20% in 1998 and their financial situation appears to have deteriorated.

89. Competition concerns led the CFC to analyse the incumbent's carrier situation which resulted in a declaration, ratified in February 1998, on Telmex's substantial power in the following relevant markets: (i) local basic telephone service; (ii) access; (iii) national long distance; (iv) interurban transport and (v) international long distance. Thus, in July 1998, were set the necessary legal bases provided in Article 63 of the FTL, so that the regulatory authority could impose specific obligations on Telmex regarding rates, quality of service and information.

90. The specific regulation applied to agents having substantial market power is intended to promote and strengthen competition so as to diminish the capacity of the dominant agent to affect market development. This asymmetric regulation applies only to the dominant agent, avoiding unnecessary application of a regulatory burden to the remaining companies which, on account of their size and market position, could not affect competition.

91. From a competition point of view, the following elements should be included in the asymmetric regulation:

- Independent rate control for long distance and local services, in order to avoid cross-subsidisation.
- Adjustment of interconnection rates based on a productivity factor.
- Offering services such as ports, dedicated links, co-ubication, emergency, invoicing and charging at cost-based rates and through procedures that guarantee timely access while avoiding discrimination and refusal to deal.
- Obligation on Telmex to negotiate Bill and Keep agreements with all local service operators.
- Volume discounts on interurban transport service.
- Disaggregation of technical quality indexes of services acquired by operators from Telmex.
- Information and network operation obligations, as long as they do not strategically damage the firm.

92. Long distance service companies have expressed their concerns about the interconnection rate and other measures that may limit Telmex competitors access to the incumbent network.

93. It is important to point out that the CFC determined that Telmex has substantial market power in five relevant markets. Furthermore, based on Telmex dominance in local telephony services and its important position in telecommunication links capacity the CFC i) conditioned Telmex participation in the public auction of radio-electric spectrum for providing local basic services and ii) blocked Telmex participation in the public auction of radio-electric spectrum for providing capacity supply.

IV. Airports

94. The Airport Law pursues the development of a profitable airport infrastructure through private investment and a transparent regulation based on the efficient, competitive and non-discriminatory supply of services provided by civil airports.

95. Public service airports (those with the facilities to serve airlines) and aerodromes are obliged to provide both complementary and airport services on a regular, permanent and uniform basis, without discriminating among users as to quality, timeliness and price, following scheduled priorities. For instance, take-off and landing slots are allocated by the airport administration following Ministry of Transport guidelines (SCT) based on non-discrimination principles.

96. The Airport Law identifies three types of services:

- Airport services rendered by the airport concessionaire or permit holder, but which may be leased. These include runway use, platforms, illumination, passenger and cargo terminal facilities, mechanical boarding devises, supervision and safety services, among other;

- Complementary services comprise ground-handling services such as catering, aircraft maintenance and repair facilities, warehouses and fuel. These services may be supplied by the airport concessionaire or through a contract with the airport concessionaire by airlines. In turn these economic agents may designate third parties to operate complementary services.

- Commercial services consisting of restaurants, mail, telegraphs, car rental, banks, etc. These services may be directly rendered by the concessionaire or permit holder or may be leased to a third party.

97. Competition is fostered in complementary services by means of provisions requiring the concessionaire to ensure the availability of alternative service suppliers. When, due to space constraints, this is not possible the airport concessionaire must assign contracts to those suppliers offering the best safety, efficiency, quality and price conditions.

98. The Airport Law defines the public service nature of airports and sets out the proceedings for granting concessions and permits to manage, operate and build civil airports.

99. Concessions to manage, operate and build airports are bundled and may only be granted to Mexican firms through a public auction. However, a concession may be directly awarded to: (i) an airdrome permit holder that intends to improve the airdrome so as to upgrade it to an airport; (ii) a concessionaire requiring a complementary airport to face increased demand for efficiency reasons; (iii) a concessionaire of an airport subject to re-location and (iv) a federal government agency or a local government-owned firm. With a view to prevent monopolistic practices, participants in the public auction must obtain a CFC favourable opinion.

100. Separation of airport services from air transport service providers was implemented by limiting shares directly or indirectly held (by means of holding or subsidiary firms) by airlines to 5 percent. This restriction also applies in the opposite sense, i.e. on the participation of an airport concessionaire (or a group of them) in the shares of a firm holding an airline.

101. Following a CFC ruling on the absence of reasonable competition conditions, the SCT is empowered to set out guidelines to regulate tariff and prices for airport and complementary services. Preventive measures regarding mergers and acquisitions established in the Airport Law.

Is the non-competitive activity state-owned?

102. The privatisation program of the Mexican airport system included the 35 airports that could be integrated in four profitable regional groups. Three out of those regional groups are already operated by private firms. The corporate structure of each group includes: i) a holding company, ii) the airport

companies (concessionaires) included in the regional groups and iii) a firm in charge of the group's management services.

103. In a first stage, a 15 percent share of each holding company was divested through a public auction. The winners of these shares are entitled to operate and manage the regional airport groups. The remaining stock will be sold through the stock market to different economic agents. It is provided that the state owned airport managing entity, Aeropuertos y Servicios Auxiliares (ASA), remains in charge of the non profitable airports.

Are the non-competitive and competitive activities subject to rate-of-return or price-cap regulation?

104. Generally, tariffs for airport and complementary services must be registered before the SCT and made publicly available to users.

105. Tariffs and prices for both airport and complementary services may be subject to regulation by the SCT whenever the CFC judges reasonable competition conditions are lacking and will remain in force as long as competition conditions are not re-established. As a general rule these measures must allow the provision of services under satisfactory quality, competition and permanence conditions.

106. The CFC has already issued opinions on the inexistence of competition conditions in the services provided by the privatised airports.

107. Price cap regulation may apply for airport and complementary services. Road transport and parking services, are subject to specific tariff regulation. Price-cap must be defined for a given term and its compliance is subject to verification. A finding that incomes exceed the price-cap is subject to corrective measures and sanctions, and may lead to a down-ward adjustment of the price-cap.

108. Whenever discrimination conditions are present, the SCT is empowered to set additional specific tariffs. In such cases the SCT must consider (i) the competitive tariff, (ii) tariffs charged in other domestic or foreign airports or those charged in international markets working under similar conditions and (iii) tariffs calculated taking into account international capital and operation costs.

Are the firms in the competitive activity subject to some form of price or quantity regulation?

109. Complementary service providers are also subject to tariff regulation as described in the preceding question.

110. Airport concessionaires or permit holders are required to keep a uniform accounting system which must separately show the different costs of rendering each service as well as incomes and costs related to airport, complementary and commercial services. Whenever these services are leased to third parties, the latter must also comply with this accounting guidelines.

111. On registering maximum and specific service tariffs, aerodrome concessionaires and permit holders must separate tariffs for airport and complementary services , and must also identify the provider.

What is the primary objective of separation?

112. Accounting separation in airport services facilitates evaluation by SCT of compliance with obligations and goals included in the corresponding legislation and concession decrees, particularly on tariff regulation. It particularly allows an assessment of the performance of service providers, particularly in relation to competition concerns. Competition issues arise as well in complementary services, which are potentially competitive activities sometimes facing space constraints that may unduly justify competition

restrictions. Separate accounting also enables the regulator to overview the competitive operation of commercial service activities which are not subject to regulation.

Are there concerns regarding access to and/or expansion of the capacity of the non-competitive activity?

113. Competition concerns have also arisen, mainly referring to the lack of existence of effective competition conditions, but these have been addressed through the mechanisms the legislation foresees. At the request of the regulator, the CFC has already declared the inexistence of such conditions in markets for airport and complementary services of the privatised airport groups, which enables the SCT to implement tariff regulation.

V. General Comments

114. Generally, sector-specific legislation (airports, natural gas, railways and telecommunications) does not exclude the possibility of vertical separation. Natural gas in the only case where the Natural Gas Law specifically foresees the separation of transmission and distribution activities, although exceptions may apply on efficiency grounds.

115. Vertical integration/separation issues have been resolved on a case by case basis, taking into account both the need to protect competition and the efficiencies resulting from integrated operation of the referred industries. So far, privatisation has preserved vertically integrated public firms but competition has been fostered by means of open access obligations and regional privatisation schemes.