8th World Telecommunication/ICT Indicators Meeting (Geneva, 2010)

Information Documents

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8th World Telecommunication/ICT Indicators Meeting (WTIM-10)
Geneva, Switzerland, 24 - 26 November 2010

Information document

Document INF/1-F
15 November 2010

French

SOURCE: Centre national de la statistique et des études économiques (CNSEE), Congo (Rép. du)

TITLE: Situation des statistiques des TIC en République du Congo

Réunion mondiale sur les indicateurs statistiques des TIC,

Genève, 24-26 Nov.2010

SITUATION DES STATISTIQUES DES TIC EN REPUBLIQUE DU CONGO

Exposé fait par M. Théophile BASSISSILA

Réunion mondiale sur les indicateurs statistiques des TIC,

Genève, 24-26 Nov.2010

Plan de l'exposé

1. Contexte et justification
2. Situation des activités statistiques des TIC auprès des:
   a. ménages;
   b. administrations publiques et privées (entreprises).
3. Evolution de quelques indicateurs des TIC
4. Contraintes, défis à relever et prochaines activités de collecte des données sur les TIC

Réunion mondiale sur les indicateurs statistiques des TIC,

Genève, 24-26 Nov.2010

1. Contexte et justification (1)

a. Adhésion du pays à la déclaration du millénaire et engagement du Gouvernement dans l'IPPTE;

b. Elaboration du diagnostic statistique du système statistique national (SSN) en 2004 , ayant mis en exergue des *faiblesses structurelles du SSN dans la production des données complètes, fiables, …;*

c. Rédaction et mise en œuvre du document intérimaire de stratégie de réduction de la pauvreté (DSRP-I) en 2006: *constat de disfonctionnement du mécanisme de suivi & évaluation à cause des faiblesses de l'appareil statistique;*

d. Atteinte du point de décision de l'IPPTE en novembre 2006;

Réunion mondiale sur les indicateurs statistiques des TIC,

Genève, 24-26 Nov.2010

1. Contexte et justification (2)

e. Rédaction du DSRP en mars 2008 et mise en œuvre sur la période 2008-2011;

f. Elaboration de la Politique nationale de développement des technologies de l'information et de la communication en République du Congo (Cyber stratégie, 2009-2015);

g. Persistance des difficultés de suivi des indicateurs des OMD, du DSRP liés aux TIC et ceux de la cyber stratégie;

h. Rédaction des rapports de suivi des politiques nationales et internationales pauvres en données statistiques;

i. Mise en place au CNSEE du **Service des méthodes et mécanismes de suivi du développement humain, chargé des statistiques des TIC en fin 2009.**

Réunion mondiale sur les indicateurs statistiques des TIC,

Genève, 24-26 Nov.2010

2. Situation des activités statistiques des TIC auprès des ménages (1)

a. Existence de quelques enquêtes qui traitent à des degrés divers des points liés aux TIC (ECOM 2005, EDS 2005, RGPH 2007, ESISC 2009, Enquête 1 & 2, 2010,…) mais elles ne sont pas intégrées;

b. Ces enquêtes collectent particulièrement des données d'accès des ménages et des particuliers aux TIC (HH1, HH2,HHR1,….);

c. Les données peuvent être désagréger selon le sexe du chef de ménage ou des individus, le milieu de résidence (urbain et rural) et selon l'espace géographique.

d. Mais les comparaisons géographiques ne pas possibles qu'au plan national, la stratification des échantillons de ces enquêtes n'étant pas toujours la même.

Réunion mondiale sur les indicateurs statistiques des TIC,

Genève, 24-26 Nov.2010

2. Situation des activités statistiques des TIC auprès des administrations (2)

d. La modernisation et l'ouverture au monde des administrations publiques et privées par les TIC est un domaine inexploité dans tous les secteurs (la santé, l'éducation,…);

e. La mesure de la pénétration des TIC au sein des administrations publiques et privées pose de sérieux problèmes. Par exemple,
   - ✓ *Où faut-il s'arrêter lorsqu'on traite de l'administration publique : à l'administration centrale, décentralisée ou déconcentrée ?*
   - ✓ *Doit t- on prendre en compte les ONG, les associations, les entreprises du secteur informel?*

f. Actuellement, il faut utiliser des sources alternatives telles que les interviews des inspections des enseignements pour suivre la pénétration des TIC dans le secteur de l'éducation.

Réunion mondiale sur les indicateurs statistiques des TIC,

Genève, 24-26 Nov.2010

2. Situation des activités statistiques sur le marché des TIC (3)

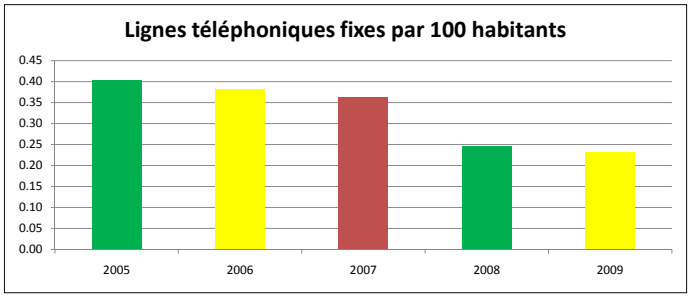
a. Le marché des TIC au Congo est placé sous le contrôle d'une autorité de régulation=Agence de régulation des postes et des communications électroniques (ARPCE);
b. ARPCE joue le rôle de l'Observatoire du marché des télécommunications au Congo;
c. Elaboration des outils et des indicateurs du suivi du marché des TIC au Congo;
d. Réalisation d'une enquête sur la pénétration des TIC sur le marché congolais par le groupe OTF;
e. Publication de l'Etat des lieux du secteur des TIC a été faite en avril 2009.

Réunion mondiale sur les indicateurs statistiques des TIC,

Genève, 24-26 Nov.2010

3. Evolution de quelques indicateurs des TIC (1)

a. Accès et infrastructures (1)

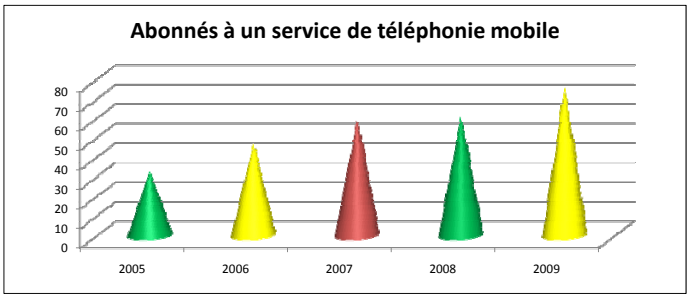


Réunion mondiale sur les indicateurs statistiques des TIC,

Genève, 24-26 Nov.2010

3. Evolution de quelques indicateurs des TIC (2)

a. Accès et infrastructures (2)

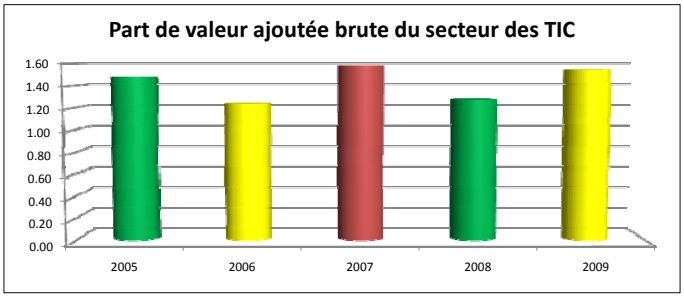


Réunion mondiale sur les indicateurs statistiques des TIC,

Genève, 24-26 Nov.2010

3. Evolution de quelques indicateurs des TIC (3)

b. Secteur des TIC (1)

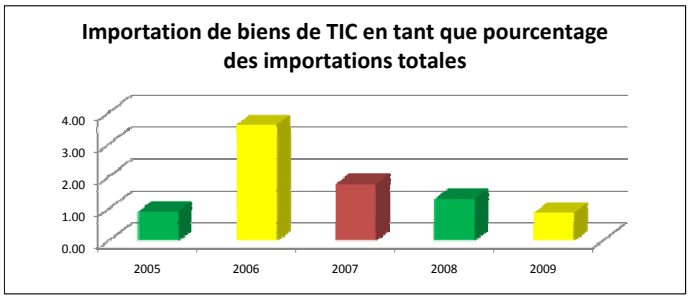


Réunion mondiale sur les indicateurs statistiques des TIC,

Genève, 24-26 Nov.2010

3. Evolution de quelques indicateurs des TIC (4)

b. Secteur des TIC (2)



Réunion mondiale sur les indicateurs statistiques des TIC,

Genève, 24-26 Nov.2010

3. Evolution de quelques indicateurs des TIC (5)

c. Accès aux TIC et leur utilisation par les ménages et particuliers

Années et sources	2005 (EDS)	2006	2007 (RGPH)	2008	2009 (ESISC)
Proportion de ménages disposant d'un poste de radio	57,3		51,1		61,8
Proportion de ménages disposant d'un poste de télévision	25,1		31,9		38,2
Proportion de ménages disposant du téléphone	34,3		50,6		77,3
N'importe lequel (Fixe ou portable)	34,3		50,6		77,3
Fixe seulement	1,2		0,2		1
Portable seulement	33,7		49,7		76,7
Fixe et Portable	0,6		0,6		0,5
Proportion de ménages disposant d'un ordinateur	1,4		1,5		3,1
Proportion de ménages disposant de l'électricité	33,8		35,7		37,1

Réunion mondiale sur les indicateurs statistiques des TIC,

Genève, 24-26 Nov.2010

4. Contraintes, défis à relever et prochaines activités de collecte des données sur les TIC (1)

a. Faible prise en compte des préoccupations TIC dans les politiques sectorielles;
b. Méconnaissance des statistiques des TIC par les acteurs sectoriels ;
c. Existence d'autres partenaires techniques intervenant dans le domaine des TIC et manque de concertation entre ces différents acteurs ;
d. Insuffisante formation des cadres du CNSEE en matière des statistiques des TIC;
e. Planification d'au moins trois enquêtes auprès des ménages au CNSEE entre 2011 et 2012

Réunion mondiale sur les indicateurs statistiques des TIC,

Genève, 24-26 Nov.2010

4. Contraintes, défis à relever et prochaines activités de collecte des données sur les TIC (2)

f. Enrichir les questionnaires d'autres enquêtes par des préoccupations liées aux TIC (possibilité de s'endosser aux enquêtes trimestrielles de conjoncture)
g. Renforcer des collaborations techniques avec les autres administrations chargées des TIC pour :
   - ✓ *Définir des statistiques des TIC liées au genre (MPTNTC), au handicap (MASAHS);*
   - ✓ *Réaliser les enquêtes auprès des entreprises et des administrations publiques (MPTNTC);*
   - ✓ *Réaliser l'enquête de quantification du phénomène des multiples Sim (ARPCE);*
   - ✓ *Mesurer l'impact des TIC sur la consommation des ménages (TIC & pauvreté) ainsi que la qualité des services des TIC aux particuliers;*
h. Systématiser la production du rapport annuel des statistiques des TIC, à partir de l'année courante.

Réunion mondiale sur les indicateurs statistiques des TIC,

Genève, 24-26 Nov.2010

Merci pour votre aimable attention!

8th World Telecommunication/ICT Indicators Meeting (WTIM-10)
Geneva, Switzerland, 24 - 26 November 2010

Information document

Document INF/2-F
15 November 2010

French

SOURCE: Agence des Télécommunications de Côte d'Ivoire, Côte d'Ivoire

TITLE: Situation de la collecte et diffusion de statistiques sur les TIC en Côte d'Ivoire

Situation de la collecte et diffusion de statistiques sur les TIC en Côte d'Ivoire

• Collecte des données

L'ATCI collecte mensuellement un ensemble de données techniques et financières auprès des opérateurs de télécommunications en activité sur le territoire national. Ces données concernent principalement la téléphonie fixe, le mobile et l'Internet. En effet, des questionnaires ont été élaborés pour chacun des trois domaines cités. Ainsi, les indicateurs jugés pertinents ont été retenus et figurent sur des tableaux comprenant la liste exhaustive des informations souhaitées.

Chaque vingt cinq (25) du mois, l'ATCI envoie à chaque opérateur un courrier de demande d'informations statistiques. Le courrier est transmis aux opérateurs suivant le circuit hiérarchique en vigueur. Il est annexé au courrier le questionnaire conçu à cet effet. Les opérateurs doivent au plus tard le dix (10) du mois suivant, transmettre à l'Agence, les informations sollicitées.

Il faut toutefois noter que cette collecte de données ne se fait pas sans difficulté. En effet, les opérateurs se montrent de plus en plus réticents dans la transmission de leurs chiffres sans doute à cause de l'environnement très concurrentiel qui caractérise le secteur des télécommunications en Côte d'Ivoire. Ainsi, les données sont communiquées soit partiellement ou pas du tout. Particulièrement, les fournisseurs d'accès Internet ne communiquent presqu'aucune donnée depuis quelques années. L'autre difficulté est la fiabilité des informations livrées par les opérateurs. L'ATCI n'ayant pas encore la possibilité de vérifier toutes les informations reçues, certains opérateurs peuvent de ce fait communiquer des données erronées.

- **Diffusion de statistiques**

Dès réception des informations, un comité de validation vérifie la fiabilité et la conformité d'un certain nombre d'informations. La sous direction des statistiques procède alors à l'enregistrement des chiffres dans une base de données conçue à cet effet. Les données sont ensuite traitées et analysées par le service des statistiques qui produit chaque année deux types de rapport statistiques: des rapports trimestriels en cours d'année et un rapport annuel en fin d'exercice. Ces différents rapports contiennent des tableaux de synthèse, des graphiques, des pourcentages ainsi que les commentaires nécessaires à une bonne compréhension des tendances du marché ivoirien des télécommunications.

Ces informations sont ensuite restituées et diffusées à différents niveaux. D'abord en interne, la direction de la communication et de l'international transmet les différents rapports à la direction générale de l'ATCI ainsi qu'aux différentes directions qui la composent. Ensuite, les données sont restituées à des structures externes telles le ministère de l'économie et des finances, le ministère en charge des TIC, l'institut national des statistiques, ainsi qu'aux opérateurs du secteur ; des particuliers peuvent aussi en formuler des demandes et recevoir des informations sur le secteur : c'est le cas de certains bureaux d'étude, des investisseurs ou même d'étudiants. Au plan international des organismes reçoivent des informations sur le secteur des télécommunications en Côte d'Ivoire : c'est le cas de l'UIT, la CEDEAO, l'UEMOA, et autres.

8th World Telecommunication/ICT Indicators Meeting (WTIM-10)
Geneva, Switzerland, 24 - 26 November 2010

Information document

Document INF/3-S
15 November 2010

Spanish

SOURCE: Instituto Dominicano de las Telecomunicaciones (INDOTEL), Rep. Dominicana

TITLE: Indicadores Estadísticos de Telecomunicaciones en República Dominicana

Indicadores Estadísticos de Telecomunicaciones en República Dominicana

Larissa Rodríguez Velázquez
INDOTEL, República Dominicana

8va Reunión Mundial sobre Indicadores de Telecomunicaciones/TIC
Unión Internacional de Telecomunicaciones (UIT)

Ginebra, Suiza
24 - 26 de noviembre de 2010

Agenda

- Conociendo el país
- Sector Telecom y sub-sectores regulados
- Marco legal para Indicadores
- Mecanismo de recolección, validación y análisis de los Indicadores Estadísticos del Sector
- Manual de Indicadores del país
- Usos y compromisos sobre Indicadores
- Retos y próximos pasos

Conociendo al país

- Nombre: República Dominicana
- Ubicación: Mar Caribe, Antillas Mayores
  Norte-Océano Atlántico, Sur-Mar Caribe, Este-Canal Mona, Oeste- Haití
- Extensión: 48,381 km^2
- Población: 9.7 millones de habitantes
- Idioma: Español
- Gobierno: Democracia representativa
- Moneda: Peso Dominicano (RD$)
- Religión: 95% católica
- Industrias: Turismo, caña de azúcar, minería (oro y ferroníquel), textil, cemento, tabaco, café

Sub-Sectores Regulados

- En el sector de las telecomunicaciones el **INDOTEL** regula los siguientes sub-sectores:
  - **Telefonía** (voz y data)
  - **Radio (AM y FM)**
  - **TV (UHF y VHF)**
  - **Difusión por Suscripción**

Marco Legal para Indicadores

Indotel

✓ Ley General de Telecomunicaciones No. 153-98

✓Resolución No. 097-03 dictada por el Consejo Directivo del **INDOTEL**
✓Resolución No. 066-08 dictada por el Consejo Directivo del **INDOTEL**
✓Resolución No. 105-09 dictada por el Consejo Directivo del **INDOTEL**

✓ Desarrollo de iniciativas con instituciones internacionales de la región:

- Unión Internacional de las Telecomunicaciones (UIT)
- Foro Entes Reguladores de Telecomunicaciones (REGULATEL)
  - Sistema Regional de Indicadores de Telecomunicaciones (SIRTEL)
- Comisión Económica para América Latina (CEPAL)
- Observatorio Sociedad Información en América Latina y Caribe (OSILAC)

✓ Objetivos

- Nacionales
  - Recolectar, validar, generar, administrar información estadística
  - Soporte para la toma de decisiones y elaboración de políticas regulatorias
- Internacionales
  - Armonizar indicadores comparables para la región
  - Ampliar listado de indicadores claves para contribuir a la normalización de las estadísticas para mejorar el análisis y las comparaciones entre prestadoras de servicios de telecomunicaciones y entre países.

Recolección Indicadores

Indotel

✓Tarea necesaria para disponer de informaciones confiables y oportunas sobre el sector, con la finalidad de formular políticas regulatorias y tomar de decisiones que incentiven el desarrollo de las telecomunicaciones.

✓ De manera periódica y sistemática (mensual, trimestral, semestral y anual) de información renovada con indicadores que contribuyan con la exactitud, coherencia y pertinencia de las decisiones políticas, procurando una mayor competencia en el mercado.

✓ El rol de las prestadoras es trascendental para que el órgano regulador construya indicadores con valiosas series históricas tendentes a contribuir con el diseño de iniciativas que sirvan como análisis doméstico y comparativos internacionales a nivel de la región.

Estadísticas

Indotel

- ✓ Mantener al Consejo Directivo informado sobre la situación actual de los indicadores estadísticos del sector y su tendencia, mediante la entrega de informes y análisis periódicos.
- ✓ Recolectar, validar, analizar y administrar los datos estadísticos del sector telecomunicaciones, con la finalidad de convertirlos en indicadores asociados.
- ✓ Publicar y difundir los indicadores estadísticos del sector de las telecomunicaciones en los diversos medios.
- ✓ Actualizar oportunamente las bases de datos estadísticas de los organismos e instituciones nacionales e internacionales y participar en sus foros presenciales y virtuales.

- ✓ Revisar las últimas recomendaciones de la UIT en materia de indicadores estadísticos, incorporándolas a nuestro Manual de Indicadores según corresponda.

Manual de Indicadores

Indotel

Líneas Telefónicas

Líneas Fijas
- Líneas Residenciales
- Líneas de Negocios
- Wireless Local Loop
- Líneas Públicas

Líneas Móviles
- Móviles Prepago
- Móviles Postpago

Internet

Cuentas Residenciales
- Dial - Up
- xDSL (banda ancha)

Cuentas de Negocios
- Dial – Up
- xDSL (banda ancha)

Otras Cuentas
- Internet Móvil
- Internet Satelital
- Cable Modem
- Internet Dedicado

Manual de Indicadores

Indotel

Tráfico

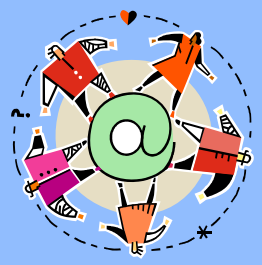
- Tráfico Total
- Telefonía Fija
- Telefonía Móvil
- Larga Distancia Nacional
- Larga Distancia Internacional

Ingresos

- Ingresos Totales
- Telefonía Fija
- Telefonía Móvil
- Internet
- Larga Distancia Nacional
- Larga Distancia Internacional

Inversión

- Inversión Total
- Telefonía Fija
- Telefonía Móvil
- Internet
- Larga Distancia Nacional
- Larga Distancia Internac.



Usos y compromisos

Indotel

- La recolección, administración y manejo de los indicadores e informaciones estadísticas son tareas necesarias que deben implementar las administraciones de la región, especialmente los órganos reguladores de las telecomunicaciones, quienes deben contar con información confiable del sector para la formulación de políticas regulatorias y toma de decisiones que incentiven el desarrollo de las telecomunicaciones.

- Es vital disponer de manera periódica (mensual, trimestral, semestral y anual) de información renovada con indicadores que contribuyan con la exactitud, coherencia y pertinencia de las decisiones políticas, no obstante una mayor competencia en el mercado implique una menor regulación del mismo.

- El rol desempeñado por las prestadoras de servicios públicos de telecomunicaciones suministrando oportunamente datos estadísticos veraces es trascendental para que los órganos reguladores construyan indicadores valiosos tendentes a mejorar la toma de decisiones y que sirvan como análisis doméstico y comparativos internacionales a nivel de la región.

Retos

Indotel

- Fortalecer el sistema de indicadores del sector de las telecomunicaciones mediante aprobación de nueva Norma

- Renovar técnicas de recolección, administración, manejo y publicación de los datos estadísticos

- Definir nuevos indicadores claves, tomando en consideración la tendencia de desarrollo de las tecnologías de nueva generación, así como el avance experimentado por el mercado tanto en el país como en el resto del mundo

- Sofisticar el mecanismo de actualización de los indicadores utilizando herramientas informáticas que permita interactuar (regulador-prestadoras-usuarios)

Indotel

¡Gracias por su atención!

Larissa Rodríguez Velázquez
lprodriguez@indotel.gob.do

Instituto Dominicano de las Telecomunicaciones (INDOTEL)
Avenida Abraham Lincoln No. 962
Edificio Osiris, Ensanche Paraíso
Santo Domingo, D. N. 10126
República Dominicana

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Information document

Document INF/4-E
15 November 2010

English

SOURCE: Ghana Statistical Service, Ghana

TITLE: ICT household statistics

ICT HOUSEHOLD STATISTICS

BY

ERNESTINA HOPE TURKSON

(GHANA)

THE GLOBAL VISION OF GHANA

- To improve the quality of life of the people of Ghana by enriching their social, economic and cultural well-being through the modernization of the economy and society" and out of it was carved the ICT vision.
- To improve the quality of life of the people of Ghana by significantly enriching their social, economic and cultural well-being through the rapid development and modernization of the economy and society using information and communication technologies as the main engine for accelerated and sustainable economic and social development

GOVERNMENT AGENCY RESPONSIBLE FOR TELECOMMUNICATION/ICT

- In Ghana, the Ministry of Communication is the government institution which is mainly responsible for ICT policy formulation and implementation at all levels. However, the sector ministry collaborates with key providers of ICT in ensuring that desirable results are achieved.

- Under the Ministry, a National Communications Authority (NCA) has been established and mandated to authorize or license any ICT operator in the country. Subsequently no service provider in this country can operate without NCA's permission. As part of its mandate, it provides guidelines for ICT providers and institutions conform to all its rules and regulations. The NCA keeps records on all institutions working with them and gets regular updates.

DATA COLLECTION

- In terms of data collection, the sector ministry and other providers collects routine administrative data to facilitate their work. However, when it comes to official statistics, the Ghana Statistical Service is the only institution which has been mandated by law to conduct census and surveys relating to social, economic, demographic, transport and other issues in the country. In compliance with its mandate, the Service has a special section called the Transport and Communication Statistics which is mainly responsible for the collection of data on transport and ICT.

Ghana Living Standards Survey (round 5)
2005 - 2006

- Questions asked:
  - Does the household have access to
  - Does the household use
  - Items include:
    - Fixed line phone
    - Mobile phone network
    - Personal computers
    - Internet (other use)
    - E-commerce
    - Paid cable network

ICT Indicators Being Analysed Under GLSS 5 Survey

- percentage of households owning tv
- percentage of households owning telephone (fixed line)
- percentage of households owning mobile phones
- percentage of households owning computers
- percentage of households with internet access
- percentage of households owning radio

CWIQ Survey 2003

- Question asked:
  - Does the household own any of the following?
    - (Include items only if they are in working condition)
      - TV
      - Video deck
      - Cassette player/radio
      - Stereo system
      - Personal Computer
      - GT fixed line
      - Westel phone
      - Capital Telecom
      - Mobile
      - One touch
      - Spacefon
      - Mobitel
      - Celltel
      - Fan

Percentage distribution of households who subscribe to or own ICT related items – CWIQ 2003

Region	Sample size(n)	GT fixed line	GT onetouch	Spacefon	Mobitel	TV	Personal computer
Western	5,265	2.4	0.4	2.2	0.2	24.4	0.7
Central	4,860	1.7	0.7	2.0	0.3	22.2	0.4
Greater Accra	4,455	9.8	3.7	13.1	2.4	56.1	2.8
Volta	4,859	1.0	0.3	0.3	0.0	13.6	0.3
Eastern	6,075	1.0	0.6	1.0	0.2	19.4	0.3
Ashanti	8,505	1.8	0.8	4.8	1.2	33.8	0.5
B/A	5,265	0.9	0.4	0.6	0.1	16.5	0.2
Northern	5,265	1.1	1.4	0.7	0.4	14.9	0.2
Upper East	2,430	1.6	0.2	0.9	0.3	8.7	0.5
Upper West	2,024	0.6	0.1	1.0	0.2	9.6	0.5

ICT Capacity Building

- Training of personnel in the ICT specific field

PLAN 2010 CENSUS
Special module would be created to compile ICT data

- Business
  - Percentage of businesses with computers
  - Percentage of businesses with internet access
  - Percentage of businesses with a web site
- Education
  - Percentage of students enrolled in tertiary education having internet access for students for study purposes
  - Enrolled student-to-personal computer ratio (in primary and secondary schools and tertiary education)
  - Percentage of ICT qualified teachers in primary and secondary schools (of total number of teachers)

Indicators continued

- Government
  - Ratio of availability of personal computers to number of staff
  - Percentage of government offices internet access
  - Percentage of government offices and agencies with a web site
- Agriculture
  - Percentage of agricultural population and extension workers involved in the exploitation and deployment of ICTs to the sector
  - Number of local web sites and databases with agricultural information and content

Indicators continued

- Health
  - Percentage of health institutions using ICTs (by type of health institution: e.g. private clinic, government etc)
  - Regional distribution of health institution with computers, telephones and internet connectivity
  - Percentage of health professional that use ICTs for medical purposes

Challenges Associated with collection and collation

- Non-response
- Equipment
- Training

Way forward for stakeholders

- Publicity and sensitisation of the public
- Procurement of the needed equipment
- Training of personnel in the ICT specific field
- Nacpus -Teaming up with other institutions like NCA to get regular data supply
- To involve management
- Need for Enterprise-based survey

Thank you

8th World Telecommunication/ICT Indicators Meeting (WTIM-10)
Geneva, Switzerland, 24 - 26 November 2010

Information document

Document INF/5-F
15 November 2010

French

SOURCE: Ministère de la Communication des Nouvelles Technologies de l'Information et de la Culture, Niger

TITLE: Présentation du secteur des Télécommunications/Tics au Niger et le processus des collecte de données dans le secteur des télécommunications/Tics

REPUBLIQUE DU NIGER

Fraternité Travail Progrès

MINISTERE DE LA COMMUNICATION,
DES NOUVELLES TECHNOLOGIES DE
L'INFORMATION ET DE LA CULTURE

DIRECTION DES STATISTIQUES

Présentation du secteur des Télécommunications/Tics au Niger et le processus des collecte de données dans le secteur des télécommunications/ Tics

Présenté par : Zoubeirou Hassana

Octobre 2010

I- Présentation du secteur des télécommunication / TICs au Niger

Le concept «*Nouvelles technologies de l'information et de la communication*» (NTIC), est souvent utilisé et compris comme synonyme d'Internet avec tout ce que cela suppose: l'utilisation d'ordinateurs et de divers réseaux de télécommunications permettant de relier les utilisateurs entre eux, et de les relier à l'information.
Certes, les technologies qui supportent et permettent le développement d'Internet sont aujourd'hui au cœur des NTIC mais ces dernières ne se limitent pas à Internet. Le concept de NTIC doit être ici entendu comme recouvrant l'ensemble des outils et techniques résultant de la convergence des télécommunications, de l'informatique et de l'audiovisuel avec comme dénominateur commun l'utilisation de données numériques. Il n'exclut donc pas les services «classiques», tels que la radio et la télévision dont la diffusion peut désormais être faite sur les mêmes supports numériques.

D'une superficie de 1.267.000 km^2 et avec une population de 14 millions d'habitant le Niger a connu plusieurs réformes sectorielles qui sont les suivantes :

1996: Amorce à la libéralisation du secteur par l'adoption de l'ordonnance 96-31 du 11 juin 96

1999: Poursuite de la libéralisation progressive du secteur par l'

- ✓ adoption d'une Déclaration de Politique sectorielle
- ✓ adoption d'un nouveau cadre réglementaire

2003 : Politique nationale de Communication pour le Développement (PNCD)

01/2004 : Plan NICI

31/12/2004: Libéralisation totale du secteur

07/2007: Adoption d'une Stratégie d'accès universel

II- Les acteurs intervenants dans le secteur des télécommunication /TICS au Niger

Ministère en charge des Télécommunications

- ☞ Préparation textes législatifs et réglementaires ;
- ☞ Définition de la politique de développement ;
- ☞ Délivrance et suspension des licences
- ☞ Représentation de la République du Niger

Autorité de Régulation Multisectorielle

- Veiller à l'application des textes législatifs et réglementaires;
- Protéger les intérêts des utilisateurs et des opérateurs;
- Promouvoir le développement efficace du secteur;
- Mettre en œuvre les mécanismes de consultation des utilisateurs et des opérateurs;

Observatoire National de la Communication

- Organe constitutionnel
- Régulation du secteur de l'audiovisuel

Haut Commissariat aux NTIC

- Administration de mission
- Mise en œuvre de l'e-stratégie nationale

Opérateurs

- Fixe
- Mobile
- Internet

Fournisseurs Internet (ISP)
Internet

III- Enquêtes réalisées au Niger s'intéressant aux questions sur les Tics

Au Niger aucune enquête n'a été réalisées dans le but de collecter spécialement les indicateurs fondamentaux des Tics ; cependant des enquêtes incluant des questions s'intéressant aux Tics ont été réalisées auprès des ménages, il s'agit de :

- LA troisième Enquête Nationale sur le Budget et la Consommation des Ménages NIGER-2007, Troisième enquête ENBC Avril 2007- Avril 2008
  Périodicité : Chaque 5ans
  Cette enquête a été réalisée sur toute l'étendue du territoire, c'est une enquête nationale
  Lien : http://www.ins.ne/nada/?page=catalog

- L'enquête sur l'impact de la téléphonie mobile sur les conditions de vie des utilisateurs et des intervenants du marché

  Population urbaine de Niamey et deux (2) communes rurales que sont Hamdallaye et Torodi.

En effet, à noter que les questions intervenant dans le cadre de ces enquêtes portent surtout sur l'existence, l'accès et l'utilisation des NTIC par les membres du ménage âgés de plus de 7 ans.

Les principales questions sont :

- Est-ce qu'un membre du ménage âgé de plus de 7 ans a utilisé un téléphone mobile au cours des 30 derniers Jours précédant l'enquête ;
- Est-ce qu'un membre du ménage âgé de plus de 7 ans a utilisé un ordinateur au cours des 12 derniers mois ?
- Est-ce qu'un membre du ménage âgé de plus de 7 ans a utilisé l'Internet (tous les lieux de connexion confondu au cours des 12 derniers mois;
- Si non pourquoi :
    1. Ne connaît pas ;
    2. Pas d'Internet sur place ;
    3. Coût élevé ;
    4. Pas besoin du service

- Si oui quels sont les lieux d'utilisation ?
    1. Domicile ;
    2. Lieu de travail ;
    3. Etablissement d'enseignement ;
    4. Domicile d'un particulier ;
    5. Centre public d'accès gratuit ;
    6. Cyber café ;
    7. Centre public d'accès gratuit

- Si oui pour quels buts utilisé vous Internet plusieurs (réponses possibles)
    1. Obtenir des informations sur les biens et services ;
    2. Obtenir des informations sur la santé et les services de santé ;
    3. Navigation générale sur le Web ;
    4. Pour communiquer (Chat, mail, téléphone) ;
    5. Services bancaires ;
    6. Téléchargement, jeux, etc.
    7. Autres services récréatifs
    8. Enseignement scolaire et recherche
- Quelle a été la fréquence d'utilisation au cours des 12 derniers mois ?
    1. Au moins une fois par jour ;
    2. Au moins une fois par semaine ;
    3. Au moins une fois par mois ;
    4. En moyenne moins d'une fois par mois.

IV-Perspectives d'enquêtes sur le domaine des TICS au Niger

Le Ministère de la Communication des Nouvelles Technologies de l'Information et de la Culture avec l'appui de l'Institut National de la Statistique se propose de réaliser en 2010 une enquête sur **l'audience des médias**
Par ailleurs, à noter que cette enquête sera circonscrite à la seule région de Niamey la capitale, les objectifs et la méthodologie qui sera utilisée dans le cadre de cette enquête sont les suivantes :

1- CONTEXTE ET JUSTIFICATION

En général, le développement ne dépend pas uniquement de la quantité des offres de services en matière de soins, d'enseignement, de protection, ou d'alimentation, mais il est tributaire aussi de la satisfaction de ces offres dont la pertinence engage à plus de compréhension et d'ouverture.

Il va sans dire que l'adhésion ne saurait être sans une sensibilisation et une mobilisation effective des bénéficiaires aux objectifs, enjeux et finalités des actions qui, dans leur totalité, doivent favoriser les conditions nécessaires et suffisantes à l'émergence d'un véritable changement des comportements et des mentalités.

A cet égard, les moyens de communication doivent jouer un rôle de premier ordre dans une dynamique de développement qui ne peut s'inscrire dans la durée autrement qu'en s'adaptant aux besoins et exigences des différents qui en subissent les effets.

Au Niger, la mesure d'audience reste et demeure encore un phénomène inexistant puisque, à ce jour, aucune étude n'a été réalisée dans ce domaine.

Cette mesure d'audience des différents moyens de communication est un outil d'autant plus nécessaire, qu'elle fournit des indicateurs et des données exhaustives pouvant permettre d'asseoir les bases d'une communication efficace ; de fiabiliser les actions de sensibilisation et de prendre la juste mesure des changements significatifs de comportement des publics.

Dans le but de mettre à la disposition des décideurs et des utilisateurs des données complètes, le Ministère de la Communication, des Nouvelles technologies de l'information et de la culture se propose de réaliser une enquête sur l'audience des médias en 2010 ; enquête qui sera circonscrite aux utilisateurs des médias de la seule région de Niamey.

2. OBJECTIFS

2.1 Objectif général

Recueillir des données pertinentes sur la connaissance de l'audience des différents moyens de communication et le degré de fiabilité de leurs effets sur les changements significatifs de comportement de la population.

2.2 Objectifs spécifiques

- Créer un système d'information (Base de données) sur l'audience des différents moyens de communication ;
- Déterminer les moyens de communication les plus appropriés à la diffusion des messages de sensibilisation et de mobilisation sociale pour le changement de comportement en vue du développement social ;
- Evaluer l'accessibilité des médias et des sources d'information aux populations ainsi que la satisfaction vis-à-vis des services offerts ;
- Identifier les moyens de communication les plus efficaces pour transmettre les messages ;
- Comparer l'audience d'un titre de publication à un autre ;
- Fournir des indicateurs sur la diffusion des programmes ainsi que les moyens humains, matériels et logistiques dont disposent les médias ;
- Fournir des indicateurs sur les professionnels des médias selon leur profil à l'embauche, leur qualification, leur formation et leur expérience en matière de prestations ;
- Faire un recensement des professionnels des médias ;
- Fournir des indicateurs sur le taux d'utilisation des Tics par les ménages et les médias.

3- METHODOLOGIE

L'enquête sur l'audience sera une enquête par sondage portant sur un échantillon de 1200 ménages. La base de sondage est le fichier des zones de dénombrement (ZD) du Recensement Général de la population et de l'habitat de 2001 (RGP/H_2001). Une zone de dénombrement est un territoire géographique bien délimité. En milieu urbain, c'est un ensemble d'îlôts et, en milieu rural, c'est un village ou un groupe de villages voisins.

3.1. Echantillonnage *«Utilisateurs des médias»*

Un tirage systématique aléatoire de 30 ménages sera effectué sur l'ensemble des ménages d'une zone de dénombrement donnée et dans chacune, une opération de dénombrement sera effectuée pour obtenir le nombre exact de ménages qui y résident au moment de l'enquête.

Dans chaque ménage échantillon, un membre âgé de douze ans et plus, sera tiré au hasard et le questionnaire *«Utilisateur des médias»* lui sera administré.

3.2. Echantillonnage *«Professionnels des médias»*

Les professionnels des médias seront enquêtés par catégorie dans les structures des médias échantillons de grande taille. Une fraction de sondage sera déterminée à l'avance pour permettre à toutes les catégories d'agents de médias d'être représentés dans l'échantillon. Lorsque la fraction de sondage sera fixée, les agents seront choisis par allocation proportionnelle à leur taille (en terme de nombre) parmi l'ensemble des professionnels des médias.

En revanche, dans les structures de médias échantillon de petite taille, tous les professionnels seront enquêtés.

3.3. Echantillonnage *«Structures des médias»*

Toutes les structures de médias privés et publics seront concernées par l'enquête. Il s'agit principalement de la télévision, de la radio et de la presse écrite.

La région de Niamey compte six chaînes de télévision qui seront intégrées au corpus de l'échantillon.
L'espace médiatique de la région de Niamey comporte 14 chaînes de radios qui seront toutes inclues dans l'échantillon.

Il en sera de même pour les 2 radios communautaires

- La presse écrite

L'enquête ne touchera que les journaux qui sont à périodicité fixe et ceux qui paraissent occasionnellement.

3.4. Recensement des journalistes

Le recensement des journalistes se fera par voie administrative

4-DOCUMENTS DE COLLECTE

Dans le cadre de cette collecte, quatre instruments de collecte vont être utilisés :

- le questionnaire *ménage ;*
- le questionnaire *Professionnel de médias* ;
- le questionnaire *Structure de médias ;*
- le questionnaire recensement des journalistes

4.1. Le questionnaire ménage

Ce questionnaire est adressé à tout individu âgé de douze ans et plus. Il permet de recueillir auprès de lui, des informations sur les caractéristiques sociodémographiques (nom, âge, sexe, niveau d'instruction) et économiques (activités économique). Le questionnaire permet également d'identifier le taux d'écoute, le moyen de communication le plus utilisé, ainsi que la satisfaction par rapport aux services offerts, etc.

4.2. Le questionnaire *Professionnel des médias*

Il est adressé aux professionnels des médias principalement à ceux de la presse, de la télévision et de la radio. Il permet de recueillir des informations sur le profil des journalistes, leur qualification, leur formation et leur expérience en matière de prestation……

4.3. Le questionnaire *Structure de médias*

Il est adressé aux responsables de toutes les maisons de médias principalement celles de la radio, de la télévision et celles de la presse. Il permet de recueillir des informations sur l'évaluation des programmes, les moyens humains, et logistiques mais aussi de faire un recensement de professionnel selon leur statut……

4.4. Le questionnaire *Recensement des journalistes*

Il vise à recenser les journalistes, les données seront collectées de manière administrative.

5- PERSONNEL

Une équipe technique sera constituée, et elle travaillera sous la supervision de la Direction des statistiques du ministère de la communication, des Nouvelles Technologie et de la Culture.

Cette équipe bénéficiera de l'appui technique de l'Institut National de la Statistique pendant toutes les phases de l'opération.

Cette équipe se chargera de :

- l'élaboration des documents méthodologiques de l'enquête ;
- la conception des documents techniques ;
- la formation des agents enquêteurs ;
- suivi des activités de collectes, de saisie, du traitement ; et,
- l'analyse des résultats.

- En perspective, notons aussi que le Ministère toujours avec l'appui de l'Institut National de la Statistique se propose de réaliser une enquête sur les indicateurs fondamentaux des Tics dans les années à venir

Dans le cadre de cette enquête des indicateurs sur

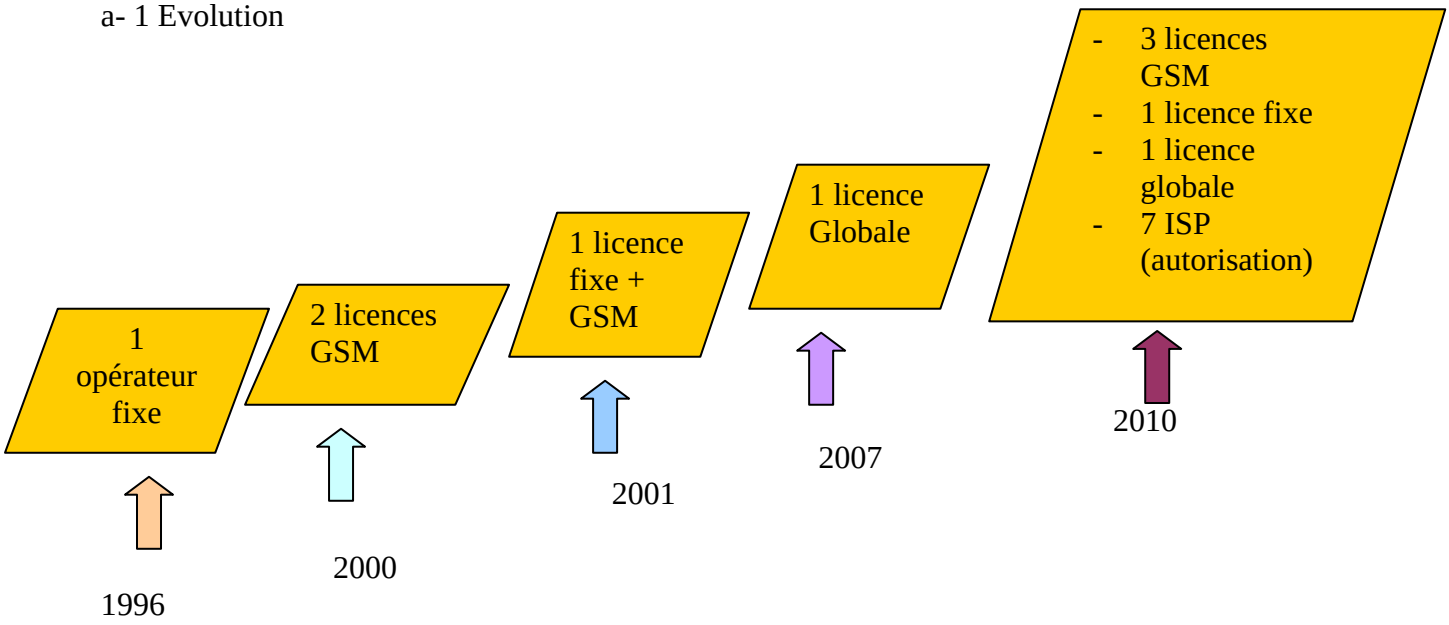
- l'accès aux Tics et leur utilisation par le ménage et les particuliers ;
- l'utilisation des Tics par les entreprises Nigériennes ;
- le secteur productif des Tics ;
- le commerce international de biens de Tic ;
- l'utilisation des Tics dans l'éducation ;

seront obtenus.

V- Quelques indicateurs dans le secteur des télécoms / Tics :

a. Les télécommunications en chiffre

a- 1 Evolution



Le secteur de la télécommunication au Niger a connu une véritable évolution. Ainsi en 1996, le pays ne disposait que d'un seul opérateur fixe, mais en 2000 celui se voit doté de 2 licences GSM ; en 2001 il acquiert une licence fixe plus GSM. En 2007 ; il se dote d'une licence globale. A la date d'aujourd'hui le pays compte 3 licences GSM, 1 License fixe, une License globale et finalement 7 Internet Service Provider (ISP) ou fournisseurs d'Internet.

1-b. Les technologies de l'information en chiffre

1- Taux d'utilisation (%) du téléphone mobile par milieux de résidence, par région administrative et par sexe

Selon le rapport sur les indicateurs sociaux de l'enquête nationale sur le budget et la consommation des ménages (III) 2007/2008 ; très peu de nigériens âgés de 15 ans et plus (19,9%) ont accès au téléphone portable.

Le taux d'utilisation en milieu urbain est de 54,0% dans les communautés urbaines et 46,4% dans les autres centres urbains.

Le milieu rurale ou vit la majorité des nigériens ne compte que 13,0% d'utilisateurs de téléphone portable.

Les régions de Niamey (57,8%) et Agadez (54,1%) sont celles ou le téléphone portable est le plus utilisé.

L'utilisation du téléphone mobile par les hommes (28,2%) est plus importante que celle des femmes (12,8%).

Ensemble	19,9
Milieu de résidence	
Rural	13,0
Autres centres urbains	46,4
Communautés urbaines	54,0
Région de résidence	
Agades	54,1
Diffa	18,9
Dosso	17,2
Maradi	10,9
Tahoua	23,1
Tillabéri	18,7
Zinder	10,8
Niamey	57,8
Sexe de la personne	
Masculin	28,2
Feminin	12,8

source ME/F/INS/ENBCIII_2007:/2008

2- **Taux d'utilisation (%) de l'ordinateur par milieux de résidence, par région administrative et par sexe**

L'ENBC III a permis d'apprécier l'utilisation de l'ordinateur par le biais d'une question qui cherchait à savoir si les individus se trouvant dans chaque ménage ont utilisé un ordinateur durant les douze derniers mois ayant précédé l'enquête . Il en ressort qu'au Niger seul 1,5% de la population âgée de 15 ans et plus en a utilisé.

L'ordinateur est plus utilisé par les hommes (2,3%) que par les femmes (0,1%).

En milieu rural ou vit la majorité des nigériens, le taux d'utilisation de l'ordinateur est quasi nul (0,1%).

Ensemble	1,5
Milieu de résidence	
Rural	0,1
Autres centres urbains	2,5
Communautés urbaines	11,4
Région de résidence	

Agades	3,1
Diffa	0,6
Dosso	0,3
Maradi	0,3
Tahoua	0,3
Tillabéri	0,2
Zinder	0,3
Niamey	14,9
Sexe de la personne	
Masculin	2,3
Feminin	0,9

source ME/F/INS/ENBCIII_2007:/2008

3- **Taux d'utilisation (%) de l'Internet par milieux de résidence, par région administrative et par sexe**

Au Niger, l'Internet reste quasiment absent, en effet seuls 7 nigériens âgés de 15 ans et plus sur 1000 en utilisent.

Ensemble	1,3
Milieu de résidence	
Rural	0,0
Autres centres urbains	1,4
Communautés urbaines	10,0
Région de résidence	
Agades	1,7
Diffa	0,5
Dosso	0,2
Maradi	0,1
Tahoua	0,1
Tillabéri	0,1
Zinder	0,2
Niamey	13,3

source ME/F/INS/ENBCIII_2007:/2008

Taux (%) de possession par les ménages de téléviseur	6,8
Taux (%) de possession par les ménages de Radio/radio cassette	55
Taux (%) de possession par les ménages de lecteur CD/DVD	3,0

Source ME/F/INS/QUIBB_2005

Taux (%) de possession par les ménages de téléviseur	5,2
Taux (%) de possession par les ménages de Radio/radio cassette	37,3
Taux (%) de possession par les ménages de lecteur CD/DVD	1,2

Source EPCES_1994

8th World Telecommunication/ICT Indicators Meeting (WTIM-10)
Geneva, Switzerland, 24 - 26 November 2010

Information document

Document INF/6-E
15 November 2010

English

SOURCE: Telecommunications Regulatory Authority, Oman

TITLE: Background Paper: The State of ICT Statistics Collection and Dissemination

Background Paper: The State of ICT Statistics Collection and Dissemination

Sultanate of Oman

About the TRA

The Telecommunications Regulatory Authority (TRA) of the Sultanate of Oman was established in 2002, to liberalize and promote the telecommunications services under the Telecommunications Act which was issued under Royal Decree No. 30/2002. The TRA is committed to develop the telecommunications sector in the Sultanate by regulating telecom services, promoting the interest of telecommunications services providers and beneficiaries, and ensuring that consumers receive a world class telecommunication services, with a wide range of choices at affordable prices.

The telecom sector in Oman has come a long way after the liberalization policy was introduced in 2003. Till date, there are two integrated competitors in the mobile, fixed, and internet segments; Omantel and Nawras. The latter was granted a Class I integrated license for fixed line services in 2009, and has already launched its services in July 2010, encouraging further competition in the fixed line segment and broadband, in which Omantel previously had a monopoly on.

Competition in the mobile market gained pace in 2009, with the launch of five re-sellers of mobile services (Renna, Friendi, Mazoon, Samatel, and Injaz). This boosted penetration rates in the segment rising to reach as high as 138%, due to ownership of multiple SIM cards. As of the end of 2009, mobile services achieved coverage levels of 95% of the population in the Sultanate.

In 2009, TRA has awarded Class III licenses (leased line and private data networks) to encourage the use of telecommunication services by private entities that have capability of establishing their private networks.

The Department of Market Research & Planning:

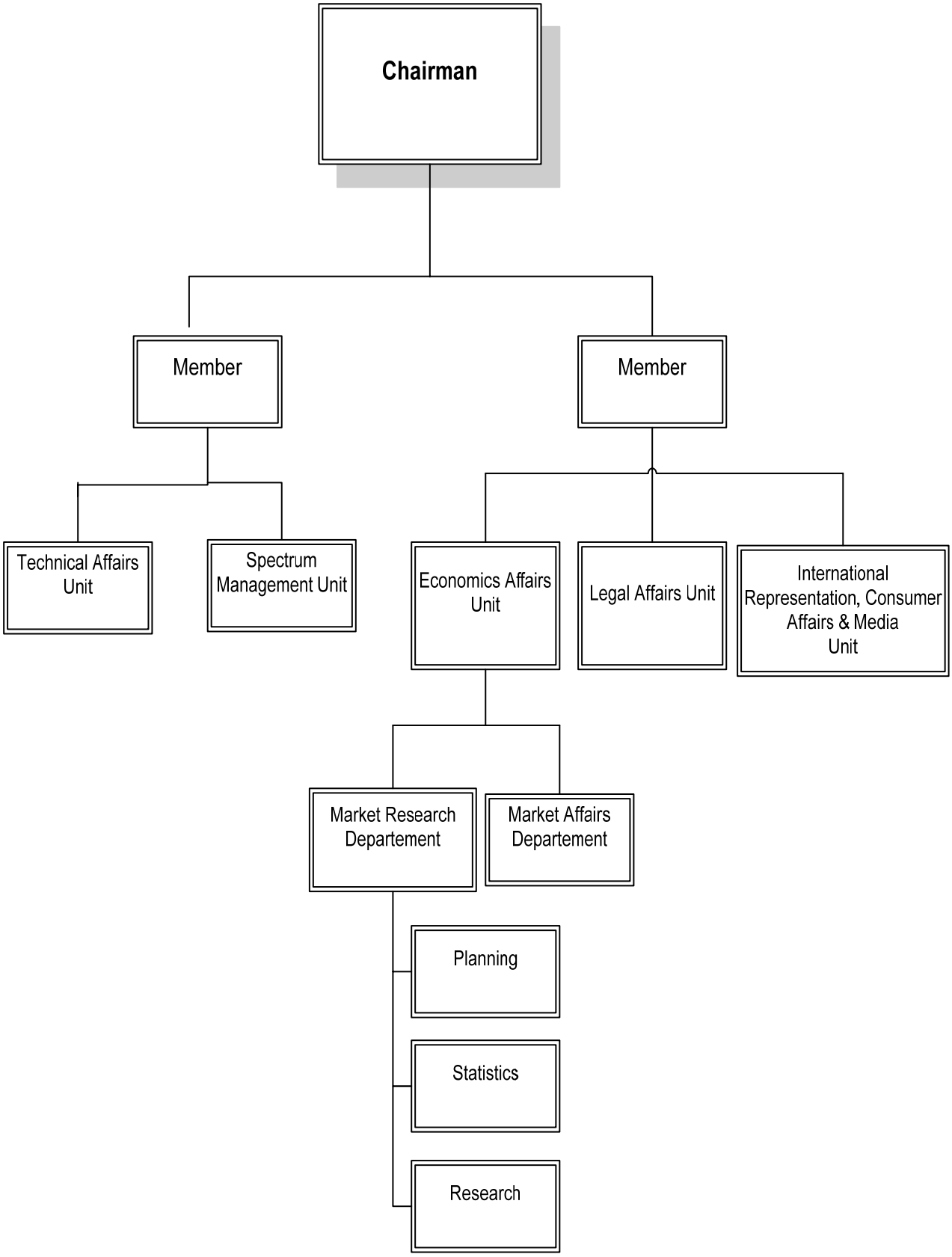
Market Research and Planning Department (MR&P) is responsible for the following functions:

1. **Statistics**: ICT data collection and disseminations, developing the data base for telecommunication key indicators, liaise with operators in collecting the periodic data, preparation of quarterly statistical reports, analysis of data and giving presentations on telecommunication industry, liaise with National Statistical Office (NSO) in providing required information for their publications and collecting of the ICT indicators, and Providing the periodical data to the ITU**.**

2. **Planning**: preparation of TRA Work Plans, compiling the units' progress reports against the work plan, and present the units' progress reports to the Authority.

3. **Research**: Assisting and providing the required ICT statistics to all units as and when they need. Participating and coordinating with other Ministries and other local institutions in different issues relevant to telecommunication sector.

TRA Organization Structure:



ICT indicators collection:

1. ***Administrative data:***

TRA collects the administrative data of the ICT indicators from all the telecom service providers as per ITU definitions in measuring ICT access, penetration, number of subscribers and use by households etc for all service categories. MR&P collects information for standard reporting to the board and public using monthly, quarterly, and annual format.

Up to date, the TRA indicators' reports cover the following indicators:

1. Connectivity/Network Indicators: including capacity, exchanges, subscribers with type of service breakdowns, and coverage.
2. Data Network: includes internet subscribers in speed breakdowns, and capacity.
3. Quality of Service Parameters: for fixed, internet, broadband, and mobile.
4. Tariff: includes business and residential wise packages details.
5. Traffic: incoming /outgoing, and national/international minutes.
6. Revenue: including all services details and breakdowns.
7. Employment: including details of full time, part time, female percentage, expatriate, technical, and managerial.

2. ***ICT data through survey:***

Up to date, there is no specific ICT survey being conducted by the MR&P. However, indicators such as estimation of internet users are collected through the Income and Expenditure Survey which was last carried out in 2007. In addition, the National Census 2010 which will be held by the end of the year will measure the following indicators for the TRA:

- Households with main telephone lines
- % households with mobile
- % of households with PC
- % of households with internet access at home.
- % of business which uses PC
- % of business which uses internet

ICT indicators dissemination & reporting:

Currently, the ICT indicators are collected manually from the service providers. TRA design standard forms to be reported by the service providers periodically on monthly, quarterly, and annually basis. TRA collects service providers' reports at a predetermined deadline.

TRA produces different telecom indicators reports which present telecom achievements and market trends. Some of those reports are used internally for the authority decision makers, while others are published for the general public, investors and researchers. Those reports include:

- Monthly sector indicators: presents monthly trend of the basic telecom indicators.
- Quarterly telecom market indicators' reports: it is published quarterly with more details for general public, operators, investors, and TRA.
- TRA Annual Report: composed of TRA activities, achievements of the telecom sector, and market trend.
- Statistical Monthly Bulletin: Selected indicators, which are more frequently, used for internal decision makers.
- ITU short/long surveys: covers the ICT indicators which are as per the ITU standard.

The Challenges of collecting the ICT indicators:

TRA faces some difficulties and challenges in ICT data collection and dissemination which are not excluded to the following:

- Lack of accurate historical data from operators and inefficiency reporting by operators.
- The quick evolvement of ICT technologies and accordingly the new definitions and standards.
- The absence of NSO role in ICT data collection and developments.

In Progress: Automation of the ICT indicators' reports:

The current manual dissemination and reporting of the ICT indicators is considered one of the challenges. TRA is in the process to auto-mate the data collection from service providers in order to expedite the process and improve the quality of data, minimize efforts and eliminate errors.

We would like to have the structure of the other Regulatory Authorities and to know how they have organized their information management.

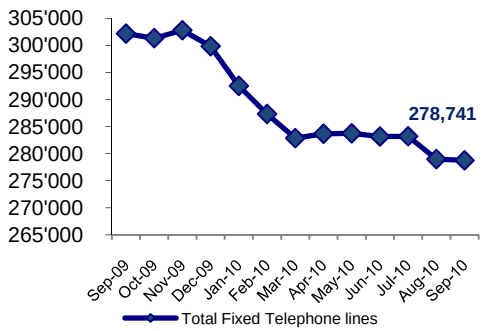
Attached: Statistical Monthly Bulletin, September 2010

Monthly Statistical Bulletin(September 2010)

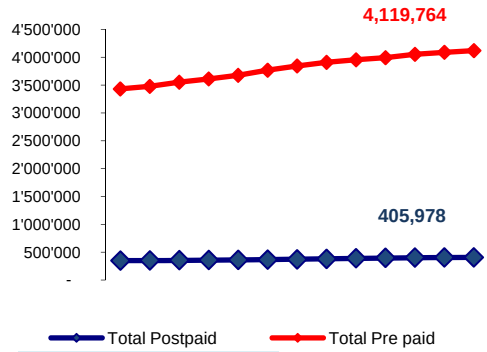
Monthly Comparison August & Sept 2010

of Service Type	*As on Sept 2010*	*As on Aug 2010*	*Change %*
FIXED LINE			
1. Main Lines in Operation: Post Paid	196,766	197,231	**-0.24%**
2. Main Lines in Operation: Prepaid (Sahl)	36,659	36,618	**0.11%**
3. Public Telephone – Payphones	6,801	6,801	**0.00%**
4. ISDN Channels (Equivalent DELs)	36,280	36,074	**0.57%**
5. Fixed Wireless	2,235	2,259	**-1.06%**
Total Fixed Telephone Lines in Operation; (1-5)	**278,741**	**278,983**	**-0.09%**
Fixed Line Penetration	***9.72%***	***9.73%***	**-0.09%**
Fixed Line Penetration Per Household[1]	***82.57%***	***82.64%***	**-0.09%**
MOBILE			
i. Mobile Postpaid: Operators wise statistics are used internally only.			
1.1 Oman mobile			
1.2 Nawras			
1. Total Mobile Postpaid Subscribers; (1.1+1.2)	***405,978***	***404,433***	***0.38%***
ii. Mobile Prepaid: Operators wise statistics are used internally only.			
2.1 Oman mobile			
2.2 Nawras			
2.3 Renna			
2.4 Friendi			
2.5 Mazoon			
2.6 Injaz			
2. Total Mobile Prepaid Subscribers; (2.1-2.6)	***4,119,764***	***4,089,003***	***0.75%***
Total Mobile Subscribers (Postpaid+Prepaid) (1+2)	**4,525,742**	**4,493,436**	**0.72%**
Mobile Penetration	***157.86%***	***156.73%***	**0.72%**
Total Telecom Subscribers (Fixed +Mobile)	**4,804,483**	**4,772,419**	**0.67%**
INTERNET			
iii. Fixed Internet			
3.1 Post paid	13,878	14,227	**-2.45%**
3.2 Pre paid	8,810	8,581	**2.67%**
3.3 Log & Surf	524	546	**-4.03%**
3.4 Dial-up Internet Subscribers; (3.1-3.3)	**23,212**	**23,354**	***-0.61%***
3.5 ADSL/Broadband	**44,546**	**43,964**	**1.32%**
3.6 Internet Leased Line Subscribers	**443**	**435**	***1.84%***
3. Total Fixed Internet Subscribers; (3.4-3.6)	**68,201**	**67,753**	**0.66%**
Fixed Internet Subscribers Penetration [2]	***2.38%***	***2.36%***	**0.66%**
4. Estimated Fixed Internet Users [3]	**395,566**	**392,967**	**0.66%**
iv. Mobile Internet: Operators wise statistics are used internally only.			
5.1 Nawras Broadband Subscribers			
5.2 Oman Mobile Broadband Subscribers			
5. Total Mobile Broadband Subscribers (5.1+5.2) [4]	**1,626,896**	**1,366,062**	**19.09%**
Mobile Broadband Subscribers Penetration	***56.75%***	***47.65%***	**19.09%**
5.3 2G Mobile Users (O.Mobile + Nawras)			
5.4 3G Mobile Users (O. Mobile + Nawras)			
6- Estimated Mobile Internet Users (5.3+5.4)	**1,182,562**	**1,162,780**	**1.70%**
Population: 2,867,000 [5]			
[1]Estimated Households as per census 2003:337579			

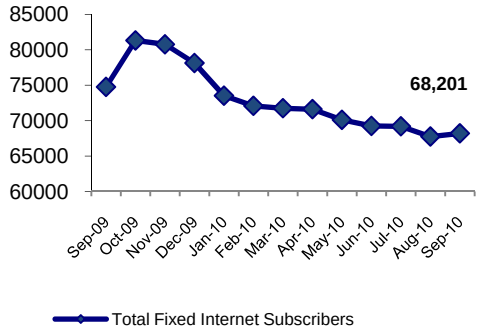
Fixed Main Telephone Lines



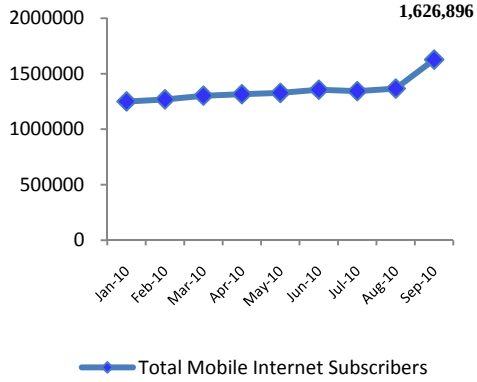
Mobile Subscribers



Fixed Internet Subscribers



Mobile Internet Subscribers



[2]Fixed internet subscribers penetration is worked out by dividing the total fixed internet subscribers by population
[3]Fixed internet users are worked out by using multiplying factor of 5.8 with total fixed internet subscribers
[4]This represents the mobile subscribers having 3G supporting handsets
[5] Source: MONE, Monthly Statistical Bulletin of July 2010 (Mid-Year Estimates for 2008)

Operators' data is shown only for internal use
Issued: Oct 17th 2010

8th World Telecommunication/ICT Indicators Meeting (WTIM-10)
Geneva, Switzerland, 24 - 26 November 2010

Information document

Document INF/7-F
15 November 2010

French

SOURCE: Autorité de Réglementation des secteurs des postes et de telecommunications (ART&P), Togo

TITLE: Collecter les indicateurs pour mesurer l'impact socio-économique des télécommunications/TIC

Ce document s'adresse à la 8ème réunion sur les indicateurs de télécommunications/TIC et **décrit la situation de la collecte et de la diffusion de statistiques sur les TIC au Togo**.

Résumé :

Aujourd'hui parler de l'incidence socio-économique des télécommunications/TIC, revient non seulement à identifier et à élaborer d'autres indicateurs en dehors des indicateurs classiques collectés auprès des opérateurs, et à diversifier les sources et méthodes de collecte et de diffusion. La situation au Togo décrit le cas habituel de la collecte et les nouvelles tendances auxquelles il faudrait impérativement tendre.

La 8ème réunion de l'UIT sur les indicateurs des télécommunications/TIC abordera les points suivants :

1. Résultats des travaux réalisés par le Groupe d'experts sur les indicateurs des télécommunications/TIC (EGTI).
2. Evolution récente en ce qui concerne la définition et la mesure du large bande.
3. Finalisation des indicateurs fondamentaux relatifs au cybergouvernement et des cibles du SMSI.
4. Mesure des incidences socio-économiques des TIC à l'aide des données recueillies dans le cadre d'enquêtes.
5. Nouvelles questions relatives à la mesure de la sécurité et de la sûreté en ligne et aux TIC vertes.

L'un des intérêts de la collecte des indicateurs des télécommunications/TIC, en dehors de la nécessité d'évaluer l'évolution des marchés, est de pouvoir mesurer les incidences socio-économiques des TIC.

Beaucoup de programmes et d'investissements sont entrepris dans tous les pays pour généraliser l'utilisation des TIC dans la vie socio-économique, aussi bien au niveau des ménages, au niveau de l'administration publique, au niveau de l'éducation, la santé et des autres secteurs de l'économie. Il est indispensable d'avoir des repères aussi bien qualitatifs que quantitatifs pour mesurer les impacts.

Notre contribution **décrit la situation de la collecte et de la diffusion de statistiques sur les TIC au Togo et** porte également sur la méthode que suggère l'Autorité de Réglementation du secteur des télécommunications améliorer cette collecte. Deux études de cas sont indiqués, l'un sur pour recueillir les données TIC par enquête en vue de mesurer les incidences socio-économiques, en particulier sur la création d'emplois, l'autre portant sur les initiatives de la CEDEAO pour collecter les données géographiques et graphiques liées à l'infrastructure des télécommunications/TIC.

1. Méthodes de collecte des indicateurs des télécommunications/TIC

La collecte et la diffusion des indicateurs de télécommunications/TIC sont depuis une décennie assurées par l'Autorité de Réglementation des secteurs de postes et télécommunications (ART&P).

La collecte s'effectue d'une manière générale à travers les questionnaires et les demandes d'information régulières (annuelles en général à la fin de chaque année) et ponctuelles que l'ART&P adresse aux acteurs du secteur, en l'occurrence les opérateurs et prestataires. Ces questionnaires portent sur divers aspects, notamment le trafic, les tarifs, les investissements, le chiffre d'affaires, le personnel, le parc d'abonnés, etc.

Il s'agit ici des indicateurs classiques ou traditionnels dont disposent en général les opérateurs.

En termes de diffusion, ces données ou informations sont diffusées dans le rapport d'activités annuelles de l'ART&P et aussi dans les publications de l'UIT.

Aujourd'hui, l'utilisation généralisée des TIC à tous les niveaux de l'activité socio-économqiue amène à ne plus se contenter de cette collecte d'indicateurs classiques, surtout si l'objectif est de réaliser les études d'impact socio-économique.

Aussi, pour beaucoup d'indicateurs TIC, la collecte devra se faire par le biais d'enquêtes ; et les acteurs auprès desquels ces informations sont disponibles ou peuvent être collectées, sont diversifiés.

Par exemple, pour le nombre de personnes formées en TIC, un questionnaire a été administré auprès d'institutions de formation pour collecter ces données. Pour le nombre de ménages ayant un ordinateur, un sondage ou une enquête auprès d'un échantillon représentatif de ménages sera

nécessaire, et pour le nombre d'utilisateurs Internet, la méthode sera mixte : collecte classique auprès des opérateurs et prestataires pour les abonnés à un accès Internet, et administration de questionnaire aux points d'accès communautaires pour évaluer les utilisateurs-visiteurs.

Plusieurs projets sont en vue pour la collecte d'indicateurs/TIC. Nous en présentons brièvement deux.

2. Etudes de cas précis

2.1 Les nouveaux métiers engendrés par le développement des télécommunications/TIC

Parmi les indicateurs du secteur des télécommunications/TIC, le seul qui est relatif à l'emploi est l'indicateur « **personnel du secteur des télécommunications à plein temps** ». Cet indicateur est visiblement conforme avec l'ancien paysage du secteur des télécommunications avec la présence sur le marché des seuls opérateurs classiques de téléphonie. En ce temps, il était facile d'évaluer le nombre d'emplois créés, car on comptabilisait juste le nombre d'employés utilisés par les opérateurs classiques. Et on savait où prendre ces données.

Aujourd'hui parler de l'incidence socio-économique du développement des télécommunications/TIC, précisement sur la création d'emplois, revient à identifier d'abord les nouveaux métiers engendrés par le développement de ce secteur, et qu'on peut considérer comme étant des métiers du secteur, et ensuite trouver les meilleures méthodes pour évaluer les emplois générés. Ces méthodes doivent être très adaptées selon les contextes des pays, car si nous considérons par exemple les pays sous développés, une bonne partie de ces personnes travaillant dans les télécommunications/TIC provient du secteur informel. La qualité et la pérennité des emplois créés sont aussi à apprécier. Le but est de savoir comment les télécommunications/TIC contribuent à la création d'emplois et comment capitaliser ce phénomène pour créer davantage d'emplois.

De ce fait, la définition même de l'indicateur « personnel du secteur des télécommunications/TIC » devra être aussi modifiée.

Pour ce faire, il est indispensable de connaître les acteurs concernés par le développement et la fourniture des télécommunications/TIC. Il s'agit entre autres de :

- monde industriel (équipementiers),
- opérateurs classiques de télécommunications mobile et fixe,
- opérateurs virtuels de télécommunications,
- régulateur du marché,
- fournisseurs d'accès Internet,
- prestataires de services Internet,
- vendeurs de terminaux,
- réparateurs de terminaux,
- développeurs de contenu (image, voix ou données)
- revendeurs de crédit de communication (système de cartes de recharge physique ou en ligne)
- installateurs de réseaux,
- exploitants de points d'accès communautaires à des services de télécommunications/TIC (cabines téléphoniques, cybercafés), etc.

Il faudra d'abord rendre cette liste exhaustive afin que la collecte des données soit fiable et harmonisée. Les données sur les emplois créés se collecteront par enquêtes.

2.2 Collecte d'indicateurs géographiques et visuels : expérience de la CEDEAO

La CEDEAO a entrepris au profit des régulateurs un projet de collecte de données géographiques et visuelles sur les infrastructures de réseaux. C'est une initiative intéressante de collecte et de diffusion d'indicateurs qu'il faudra encourager. L'ART&P met en place un système de collecte d'indicateurs avec des GPS et des logiciels mapinfo pour positionner sur des cartes les infrastructures des opérateurs.

8th World Telecommunication/ICT Indicators Meeting (WTIM-10)
Geneva, Switzerland, 24 - 26 November 2010

Information document

Document INF/8-S
15 November 2010

Spanish

SOURCE: Sistema de indicadores regional de telecomunicaciones (SIRTEL)

TITLE: Cofetel/Regulatel, Mexico

SISTEMA DE INDICADORES REGIONALES DE TELECOMUNICACIONES (SIRTEL)

Para los países miembros del Foro de entes reguladores de América Latina (REGULATEL) es fundamental acceder a la más completa información estadística sobre TIC.

La ponencia, hace la presentación del documento del SIRTEL, el cual incluye los resultados de las sesiones de trabajo del grupo de indicadores TIC de REGULATEL, sintetizando las distintas actividades realizadas para la instrumentación de un sistema informático en el que todos los países agregan y consultan información.

Se destacan los logros derivados de la utilización del sistema como una importante herramienta tecnológica para la obtención de indicadores a nivel regional y contiene una visión clara de las tendencias generales y el desarrollo de las telecomunicaciones en la región.

Se presentan las actividades del grupo de indicadores TIC de REGULATEL, encaminadas a armonizar y definir información estadística, tales como las que lleva a cabo la reunión sobre los indicadores de las telecomunicaciones/TIC mundiales.

Por ello, la importancia de los trabajos del grupo de trabajo indicadores de REGULATEL radican en:

- La integración de estadísticas comparables y confiables
- Enriquecer los estudios regulatorios de los países miembros de REGULATEL
- Comparar el desarrollo del sector TIC de los países miembros de REGULATEL entre sí y con el de otras latitudes.

Por lo anterior:

- Los indicadores de telecomunicaciones que se estudian y analizan en la UIT son y serán un objetivo constante del grupo de trabajo de indicadores por lo que su seguimiento para la adopción y actualización de indicadores es un objetivo prioritario.
- El grupo de trabajo de indicadores de REGULATEL continuará en el corto y mediano plazo con la integración de nuevos indicadores, de manera armonizada con la UIT.

SISTEMA DE INDICADORES REGIONALES DE TELECOMUNICACIONES (SIRTEL)

Octava reunión sobre los indicadores de las Telecomunicaciones/TIC mundiales de la UIT

Ginebra, Suiza
24, 25 y 26 de Noviembre de 2010

COFETEL, MEXICO

ANTECEDENTES

- ✓ La instauración del Foro de REGULATEL fue concebida en **febrero de 1998** en Cartagena de Indias, Colombia (13 países y 3 observadores).
- ✓ REGULATEL, fue creado como una **organización flexible, laxa y sin burocracia** pero eficiente.
- ✓ Basada en **infraestructuras nacionales existentes.**
- ✓ Propósito: **fomentar la cooperación y coordinación de esfuerzos y promover el desarrollo** de las telecomunicaciones en América Latina.

ANTECEDENTES

Sistema de Indicadores Regionales de Telecomunicaciones

- ✓ En el V Plenario de Presidentes de REGULATEL, en Foz do Iguaçu, Brasil en noviembre de 2002 se presentó la propuesta de incluir un **documento relativo a la creación de indicadores** regionales, del cual México se propuso como coordinador.
- ✓ En marzo de 2003, en el Primer Encuentro de Corresponsales de REGULATEL en Bogotá, Colombia, México presentó el **Plan de Trabajo para el Estudio de Indicadores Regionales**.
- ✓ En el Estudio de Indicadores, se estableció, la **creación de un sistema de actualización continua de indicadores** de telecomunicaciones, con la menor frecuencia posible.

ANTECEDENTES

Sistema de Indicadores Regionales de Telecomunicaciones

- ✓ IV Encuentro de Corresponsales de REGULATEL, en Lima Perú en enero de 2005, México expuso los **avances del Estudio de Indicadores Regionales y la transformación del mismo a un sistema** denominado Sistema Integral de Indicadores Regionales (SIIR), resaltando que con tal sistema se evoluciona de la simple recolección de datos a la integración y armonización de los mismos.
- ✓ De la presentación del SIIR, surgió la **necesidad de llevar a cabo un Taller Metodológico**, el cual con la coordinación de COFETEL, tuvo lugar en marzo-abril de 2005 en la Ciudad de México, adquiriendo el SIIR entonces la denominación de SIRTEL.

ORGANIZACIÓN

Sistema de Indicadores Regionales de Telecomunicaciones

El foro de REGULATEL esta conformado por veinte entes reguladores de América Latina:

Argentina	Bolivia	Brasil
Colombia	Costa Rica	Cuba
Chile	Ecuador	El Salvador
Guatemala	Honduras	México
Nicaragua	Panamá	Paraguay
Perú	R. Dominicana	Puerto Rico
República Oriental de Uruguay		Venezuela

ORGANIZACIÓN

Sistema de Indicadores Regionales de Telecomunicaciones

ORGANIZACIÓN

PLENARIA
20 países

PRESIDENTE
= 1
GUILLERMO THORNBERRY,
OSIPTEL,
Perú

Secretaría General
= 1
Gustavo Peña
Colombia

Comité de Gestión
= 6
INDOTEL, República Dominicana;
OSIPTEL, Perú;
MIC, Cuba;
ANATEL, Brasil;
SUTEL, Costa Rica;
CRM, Colombia

GENERALIDADES

Sistema de Indicadores Regionales de Telecomunicaciones

- ✓ El **objetivo inicial** del sistema fue establecido mediante el Informe sobre el estado del Proyecto, presentado en el Encuentro de Corresponsales celebrado en la Habana, Cuba, en marzo de 2004,

Hacer disponible a los miembros de REGULATEL información estadística de los diferentes sectores nacionales de las telecomunicaciones en América Latina, a través de una herramienta dinámica, interactiva y permanentemente actualizada.

- ✓ Para la consecución del objetivo, se conformó un **Grupo de Trabajo** en el que se determinan de forma conjunta los indicadores que constituyen el sistema, estableciendo su definición, métrica y periodicidad.
- ✓ Adicionalmente se ha trabajado para alinear los indicadores del SIRTEL a los ya existentes en el Manual de Indicadores TIC de la UIT.

SESIONES DE TRABAJO

Sistema de Indicadores Regionales de Telecomunicaciones

Taller Metodológico VirTual

- ✓ En mayo de 2004 se llevó a cabo un Taller Metodológico Virtual cuya finalidad fue acordar las métricas y metodologías comunes para la medición y recopilación de indicadores, se acordo desarrollar el Sistema en **7 Módulos** que incluyen indicadores de demanda y de oferta.

1. Indicadores Socio- Económicos
- Producto Interno Bruto
- Población Total
- Tipo de cambio USD
- Hogares que tienen línea Telefónica

2. Tráfico
- Telefonía Local Fija
- Larga Distancia Nacional
- Larga Distancia Internacional de Salida
- Larga Distancia Internacional de Entrada

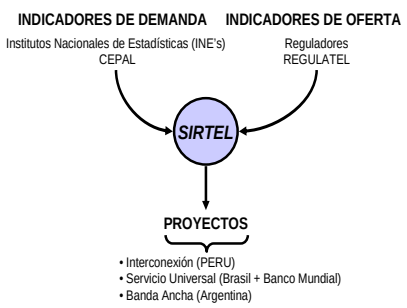
3. Infraestructura
- Líneas de Telefonía Fija
- Usuarios de Telefonía Móvil
- Suscriptores de TV de Paga
- Usuarios de Internet

4. Estructura de la Industria
- Ingresos de Telecomunicaciones
- Inversiones en Telecomunicaciones
- Hombres y Mujeres Empleados

5. Acceso Público a Internet
- Centros de Acceso Comunitarios (CCD´s)
- Computadoras en CCD´s
- Computadoras in CCD´s Rurales

6. Tarifas
- Cargo Básico de Acceso
- Tarifas por minuto de Larga Distancia Nacional

7. Calidad del Servicio
- Tiempo de espera para una nueva conexión
- Numero de fallas por cada 100 líneas al año
- Por ciento de fallas reparadas



SESIONES DE TRABAJO

Sistema de Indicadores Regionales de Telecomunicaciones

I Taller de Indicadores (marzo-abril 2005), ciudad de México

- ✓ 17 países miembros de REGULATEL, CEPAL (OSCILAC) e INEGI.
- ✓ Se acordaron las definiciones y métricas de 26 indicadores en 5 módulos y su ingreso al SIRTEL.
- ✓ Se recomendó trabajar junto con los Institutos Nacionales de Estadísticas, a fin de incorporar estadísticas socioeconómicas y de las TIC´s.

MÓDULO	INDICADORES
Tráfico	7
Infraestructura	8
Estructura de la Industria	3
Acceso Público a Internet	1
Tarifas	7
Calidad del servicio	0
Socioeconómicos	0
TOTAL	**26**

SESIONES DE TRABAJO

Sistema de Indicadores Regionales de Telecomunicaciones

II Taller de Indicadores (marzo 2007) ciudad de México.

- ✓ 14 países miembros de REGULATEL, UIT, CEPAL y España como invitado.
- ✓ Se acordaron las definiciones y métricas de otros 26 indicadores de 5 módulos y su ingreso al SIRTEL.
- ✓ Se incluyen 25 indicadores socioeconómicos.

MÓDULO	INDICADORES		
	1ER TALLER	2DO TALLER	TOTAL
Tráfico	7	7	14
Infraestructura	8	3	11
Estructura de la Industria	3	10	13
Acceso Público a Internet	1	2	3
Tarifas	7	0	7
Calidad del servicio	0	4	4
Socioeconómicos	0	25	25
TOTAL	**26**	**51**	**77**

SESIONES DE TRABAJO

Sistema de Indicadores Regionales de Telecomunicaciones

III Taller de Indicadores (octubre 2007) Cartagena, Colombia

- ✓ 13 países miembros de REGULATEL y España como invitado.
- ✓ Se concertaron las definiciones y métricas de 27 indicadores básicos en 5 módulos y su ingreso al SIRTEL.
- ✓ Se acordó incluir **23 indicadores cruzados** o derivados. Es decir, estos se obtienen con la combinación de dos o más indicadores básicos para lograr un tercer indicador.
- ✓ Los indicadores que se capturen en moneda local, se convertirán automáticamente a **valores en USD**, lo que facilita la comparación entre países.
- ✓ Se acordó el **cronograma de actividades** para la actualización periódica de los indicadores.

MÓDULO	INDICADORES			
	1ER TALLER	2DO TALLER	3ER TALLER	TOTAL
Tráfico	7	7	0	14
Infraestructura	8	3	3	14
Estructura de la Industria	3	10	3	16
Acceso Público a Internet	1	2	1	4
Tarifas	7	0	8	15
Calidad del servicio	0	4	12	16
Socioeconómicos	0	25	0	25
Cruzados	0	0	23	23
TOTAL	**26**	**51**	**50**	**127**

SESIONES DE TRABAJO

Sistema de Indicadores Regionales de Telecomunicaciones

IV Taller de Indicadores (julio 2009) Cartagena, Colombia

- ✓ 10 países miembros de REGULATEL y España como invitado.
- ✓ Se concertaron las definiciones y métricas de 8 indicadores básicos en 2 módulos y 4 cruzados y su ingreso al SIRTEL.
- ✓ Se acordó la **revisión de indicadores del SIRTEL contra el "Manual de Indicadores de la UIT"** para elaborar una propuesta del Grupo del SIRTEL y enviarla al foro electrónico del "Grupo de Expertos de la UIT".
- ✓ Se propuso elaborar un **documento** (directrices de operación) **que defina** todos **los aspectos del manejo de la información** por parte de los integrantes del Grupo **del SIRTEL**. Al respecto se creó un grupo interno encargado de definir el documento: México, Cuba, República Dominicana y la Secretaría de REGULATEL, para presentar el documento al plenario de presidentes.

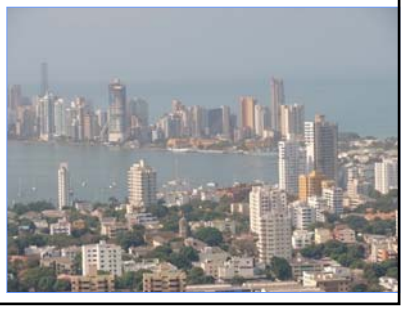
SESIONES DE TRABAJO

Sistema de Indicadores Regionales de Telecomunicaciones

IV Taller de Indicadores (julio 2009) Cartagena, Colombia

- ✓Para la revisión y consenso de los documentos, se acordó llevar a cabo **conferencias telefónicas**, mismas que quedaron programadas en el **cronograma de actividades** aprobado.
- ✓Actualmente, se tienen acordados **139 indicadores en 7 módulos**, incluyendo los cruzados.

MÓDULO	INDICADORES				
	1ER TALLER	2DO TALLER	3ER TALLER	4TO TALLER	TOTAL
Tráfico	7	7	0	4	18
Infraestructura	8	3	3	0	14
Estructura de la Industria	3	10	3	4	20
Acceso Público a Internet	1	2	1	0	4
Tarifas	7	0	8	0	15
Calidad del servicio	0	4	12	0	16
Socioeconómicos	0	25	0	0	25
Cruzados	0	0	23	4	27
TOTAL	**26**	**51**	**50**	**12**	**139**



SESIONES DE TRABAJO

Sistema de Indicadores Regionales de Telecomunicaciones

V Taller de Indicadores (agosto 2010) Antigua, Guatemala

- ✓13 países miembros de REGULATEL y España como invitado.
- ✓Se presento, reviso y aprobó el **Documento Sistema de Indicadores Regionales de Telecomunicaciones (SIRTEL)**.
- ✓Se acordó la presentación del documento del SIRTEL en la Octava Reunión sobre los Indicadores de las Telecomunicaciones/TIC mundiales de la UIT, a realizarse en Ginebra del 24 al 26 de noviembre de 2010.
- ✓Se presento y aprobó el Glosario de indicadores del SIRTEL homologado con el Manual de Indicadores de la UIT.

TRABAJOS CONTINUOS

Sistema de Indicadores Regionales de Telecomunicaciones

- ✓Conforme a lo acordado en el IV Taller Metodológico del SIRTEL, el 23 septiembre de 2009, en audio conferencia, se terminaron los trabajos de revisión de conceptos de indicadores y se envió al **foro virtual de la Unión Internacional de Telecomunicaciones (http://www.itu.int/ITU-D/ict/ExpertGroup/default_group.asp)** la propuesta del grupo de indicadores de REGULATEL para la modificación de las definiciones de algunos indicadores del "Manual de Indicadores de Telecomunicaciones de la UIT".

PARTICIPACIÓN EN EVENTOS INTERNACIONALES

Sistema de Indicadores Regionales de Telecomunicaciones

- ✓Unión Internacional de Telecomunicaciones. **Foro Electrónico del Grupo de Expertos de la UIT** sobre indicadores de TIC´s, foro en línea disponible desde marzo de 2009. Análisis de las contribuciones y propuestas de los países participantes, así como manifestación de la postura de REGULATEL con relación a las propuestas y comentarios existentes respecto de las definiciones del Manual de Indicadores de Telecomunicaciones de la UIT. **(http://www.itu.int/ITU-D/ict/ExpertGroup/default_group.asp).**
- ✓Unión Internacional de Telecomunicaciones. **Reunión del Grupo de Expertos sobre Indicadores de Telecomunicaciones/TIC**, del 29 al 31 de marzo de 2010, en Ginebra, Suiza. El propósito de participar en esta reunión fue el vigilar que los resultados obtenidos por la UIT en materia de indicadores de telecomunicaciones se adecúen al trabajo realizado a este mismo respecto en REGULATEL.

PARTICIPACIÓN EN EVENTOS INTERNACIONALES

Sistema de Indicadores Regionales de Telecomunicaciones

Reunión del Grupo de Expertos sobre Indicadores de Telecomunicaciones/TIC (EGTI)

- ✓**Organizada por la división de estadísticas e información de mercados (STAT)** de la Unión Internacional de Telecomunicaciones (UIT) en Ginebra , Suiza del 29 al 31 de marzo de 2010.

- ✓Se conto con la participación de **160 expertos**, los que enviaron sus aportaciones en línea entre marzo de 2009 y febrero de 2010.
- ✓A la **reunión presencial** del EGTI, se conto con la representación de **26 participantes** de Estados Miembros de la UIT.

PARTICIPACIÓN EN EVENTOS INTERNACIONALES

Sistema de Indicadores Regionales de Telecomunicaciones

✓ Ministerios y autoridades regulatorias:

- Dinamarca
- **República Dominicana**
- Egipto
- India
- Kenia
- República de Corea
- México (en representación de REGULATEL)
- Moldova (en representación de RCC)
- Nigeria
- España
- Suecia
- Tanzania
- Uganda

✓ Sector Privado y Organismos Internacionales:

- GSMA
- (Wireless Intellegente)
- INTEL
- EUROSTAT
- OCDE

PARTICIPACIÓN EN EVENTOS INTERNACIONALES

Sistema de Indicadores Regionales de Telecomunicaciones

El objetivo de la reunión fue: finalizar las definiciones de los indicadores y cuales deben ser colectados por la UIT.

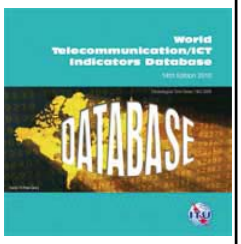
Se **discutieron más de 100 indicadores** de telecomunicaciones/TIC y sus definiciones, de los siguientes grupos:

- ✓ Telefonía fija y redes de telefonía celular móvil;
- ✓ Internet;
- ✓ Tarifas;
- ✓ Ingresos e Inversiones;
- ✓ Calidad del Servicio;
- ✓ Personal ocupado en telefonía fija, móvil y servicios de Internet;
- ✓ Indicadores de acceso comunitario
- ✓ Otros indicadores.

PARTICIPACIÓN EN EVENTOS INTERNACIONALES

Sistema de Indicadores Regionales de Telecomunicaciones

- ✓ Con la revisión final de los indicadores y sus definiciones, se agrego a la colección **12 indicadores en el cuestionario corto y 66 en el cuestionario largo**. La selección de estos indicadores se baso en la demanda de los datos.
- ✓ Los indicadores acordados por el EGTI y sus definiciones, se agregaron al cuestionario largo de la UIT, que se solicitó durante junio de 2010.
- ✓ Los resultados del EGTI se presentaran en la octava reunión sobre los Indicadores de las telecomunicaciones/TIC mundiales de al UIT, en noviembre de 2010.



PERSPECTIVAS

Sistema de Indicadores Regionales de Telecomunicaciones

PERSPECTIVAS

Sistema de Indicadores Regionales de Telecomunicaciones

- ✓ Fortalecer el uso generalizado del SIRTEL para la toma de decisiones de los entes reguladores de Latinoamérica.
- ✓ La necesidad de la inclusión, en la agenda de los trabajos del Grupo de Trabajo SIRTEL, de indicadores mensuales dependiendo de la disponibilidad de cada país, con la finalidad de aumentar la oportunidad de la información del Sistema.
- ✓ Los indicadores de telecomunicaciones que se estudian y analizan en la UIT serán un objetivo constante del Grupo de Trabajo SIRTEL por lo que su seguimiento para la adopción y actualización de indicadores es un objetivo prioritario.
- ✓ Continuar en el corto y mediano plazo con la integración de nuevos indicadores, de manera armonizada con la UIT.
- ✓ Continuar con el fortaleciendo, reconocimiento y posicionamiento internacional de REGULATEL a través del SIRTEL como un vínculo fundamental con los organismos internacionales en materia de indicadores.

Sistema de Indicadores Regionales de Telecomunicaciones

Indicadores que conforman el SIRTEL

Sistema de Indicadores Regionales de Telecomunicaciones

INDICADORES

Módulo Tráfico

1. Ancho de banda internacional de Internet (Mbits/s)
2. Mensajes de tráfico itinerante (al exterior de la red propia)
3. Mensajes de tráfico itinerante generado por abonados extranjeros
4. Minutos de tráfico itinerante (al exterior de la red propia) (*Roaming* saliente)
5. Minutos de tráfico itinerante generado por abonados extranjeros (*Roaming* entrante)
6. Número de SMS enviados
7. Tráfico de larga distancia internacional originado en la red de telefonía móvil (minutos)
8. Tráfico de larga distancia internacional originados en la red de telefonía móvil (llamadas)
9. Tráfico telefónico fijo a la red de telefonía móvil (minutos)
10. Tráfico telefónico fijo a la red de telefonía móvil (llamadas)
11. Tráfico telefónico fijo - fijo de larga distancia nacional (llamadas)
12. Tráfico telefónico fijo - fijo de larga distancia nacional (minutos)
13. Tráfico telefónico fijo internacional entrante (llamadas)
14. Tráfico telefónico fijo internacional entrante (minutos)
15. Tráfico telefónico fijo internacional saliente (llamadas)
16. Tráfico telefónico fijo internacional saliente (minutos)
17. Tráfico telefónico local fijo - fijo (minutos)
18. Tráfico telefónico móvil (minutos salientes)

Sistema de Indicadores Regionales de Telecomunicaciones

INDICADORES

Módulo Infraestructura

1. Abonados *Trunking*
2. Capacidad total de las centrales públicas locales de conmutación
3. Suscripciones de banda ancha
4. Suscripciones de Internet
5. Enlaces dedicados en operación
6. Líneas de teléfonos fijos
7. Líneas de teléfonos fijos residenciales
8. Porcentaje de la población que se encuentra dentro de la cobertura de una red de telefonía celular móvil
9. Suscripciones de teléfonos celulares móviles (prepago y pospago)
10. Suscripciones de teléfonos celulares móviles de pospago
11. Suscripciones de teléfonos celulares móviles de prepago
12. Suscripciones de CATV
13. Teléfonos públicos de pago
14. Total de suscripciones de TV restringida o de paga

Sistema de Indicadores Regionales de Telecomunicaciones

INDICADORES

Módulo Estructura de la Industria

1. Ingresos por el servicio fijo de telefonía de larga distancia internacional de entrada
2. Ingresos por el servicio fijo de telefonía de larga distancia internacional de salida
3. Ingresos por comunicaciones móviles
4. Ingresos por concepto de servicios de Internet
5. Ingresos por el servicio de telefonía local fija
6. Ingresos por el servicio fijo de telefonía de larga distancia nacional
7. Ingresos por mensajes de tráfico itinerante en moneda local (al exterior de la red propia)
8. Ingresos por mensajes de tráfico itinerante generado por abonados extranjeros
9. Ingresos por minutos de tráfico itinerante en moneda local (al exterior de la red propia)
10. Ingresos por minutos de tráfico itinerante generado por abonados extranjeros
11. Ingresos por servicios de televisión restringida o de paga (cable, satélite, mmds)
12. Ingresos Totales procedentes de todos los servicios de telecomunicaciones
13. Inversión Anual Total en Telecomunicaciones
14. Inversión en servicios de telefonía fija
15. Inversión en comunicaciones móviles
16. Inversión total en servicios de televisión restringida o de paga (cable, dth, mmds)
17. Número de empresas en operación por servicio
18. Personal femenino en servicios de telecomunicaciones
19. Personal masculino en servicios de telecomunicaciones
20. Todo el personal con dedicación plena en los servicios de telecomunicaciones

Sistema de Indicadores Regionales de Telecomunicaciones

INDICADORES

Módulo Acceso Público a Internet

1. Número de localidades con centros públicos de acceso a Internet (CPAI)
2. Número de localidades rurales con centros de acceso comunitarios
3. Número total de centros digitales comunitarios (CDC)
4. Terminales instaladas en centros digitales comunitarios (CDC)

Sistema de Indicadores Regionales de Telecomunicaciones

INDICADORES

Módulo Tarifas

1. Cargo de interconexión a la red fija (por minuto de uso)
2. Cargo de interconexión a la red móvil (por minuto de uso)
3. Cargo mensual promedio de acceso a Internet conmutado
4. Cargo mensual promedio de acceso a Internet de Banda Ancha
5. Cargo promedio por minuto de telefonía móvil pospago
6. Cargo promedio por minuto de telefonía móvil prepago
7. Ingreso promedio por minuto de comunicación de larga distancia internacional de salida
8. Ingreso promedio por minuto de comunicación de larga distancia nacional
9. Ingreso promedio por minuto de comunicación de telefonía móvil
10. Ingreso promedio por minuto de telefonía local fija
11. Precio promedio de instalación de telefonía local fija
12. Precio promedio del cargo básico mensual de telefonía local fija
13. Precio promedio por minuto de comunicación de telefonía local fija
14. Renta mensual acceso a Internet Banda Ancha
15. Renta mensual acceso a Internet Dial Up

Sistema de Indicadores Regionales de Telecomunicaciones

INDICADORES

Módulo Calidad

1. Cobertura Radioeléctrica para Telefonía Móvil
2. Completación de llamadas del tráfico terminado en Centros de Gestión Telefónica (CGT) del Operador
3. Completación de mensajes de texto
4. Comunicaciones interrumpidas telefonía fija
5. Comunicaciones interrumpidas telefonía móvil
6. Grado de satisfacción y percepción de la calidad
7. Número de averías anuales por cada 100 líneas principales (fijas)
8. Promedio nacional de cumplimiento de atención (CA) de centros de telegestión en redes de telefonía fija
9. Promedio nacional de cumplimiento de atención (CA) de centros de telegestión en redes de telefonía móvil
10. Proporción de llamadas establecidas con éxito en telefonía fija
11. Proporción de llamadas establecidas con éxito en telefonía móvil
12. Quejas por errores en la facturación de servicios de Internet (reclamaciones sobre facturaciones)
13. Quejas por errores en la facturación de servicios de telefonía fija (reclamaciones sobre facturaciones)
14. Quejas por errores en la facturación de servicios de telefonía móvil (reclamaciones sobre facturaciones)
15. Retardo de entrega de mensajes de texto
16. Tiempo promedio de reparación de líneas telefónicas

Sistema de Indicadores Regionales de Telecomunicaciones

INDICADORES

Módulo Socioeconómico

1. Extensión territorial (km2)
2. Hogares o viviendas particulares habitadas que disponen de computadora
3. Hogares o viviendas particulares habitadas que disponen de teléfono fijo
4. Hogares o viviendas particulares habitadas que disponen de teléfono móvil
5. Hogares o viviendas particulares habitadas que disponen de televisión
6. Hogares o viviendas particulares habitados
7. Hogares o viviendas totales
8. Índice de precios al consumidor promedio anual
9. PIB en moneda local valores constantes
10. PIB en moneda local valores corrientes
11. Población hombres
12. Población mujeres
13. Población ocupada
14. Población rural
15. Población total
16. Población urbana
17. Proporción de Alfabetismo en Adultos
18. Proporción de Matriculación adultos
19. Proporción de matriculación de educación secundaria y media
20. Proporción de matriculación de educación superior
21. Tasa Global de Matriculación en las Escuelas
22. Tipo de Cambio para Solventar Obligaciones en Moneda Extranjera Promedio del Periodo
23. Usuarios de Internet
24. Usuarios de Internet Hombres
25. Usuarios de Internet mujeres

Sistema de Indicadores Regionales de Telecomunicaciones

INDICADORES

Módulo Indicadores Cruzados

1. Ancho de banda Internacional (bit/s) por usuario de Internet
2. Consumo promedio anual de minutos de telefonía fija por línea
3. Consumo promedio anual de minutos de telefonía móvil por línea
4. Consumo promedio mensual de minutos de telefonía fija por línea
5. Consumo promedio mensual de minutos de telefonía móvil por línea
6. Ingreso por persona ocupada en telecomunicaciones (dlls)
7. Ingreso promedio anual por línea de telefonía fija (dlls)
8. Ingreso promedio anual por línea de telefonía móvil (dlls)
9. Ingreso promedio mensual por línea de telefonía fija (dlls)
10. Ingreso promedio mensual por línea de telefonía móvil (dlls)
11. Ingreso promedio por mensaje de tráfico itinerante en moneda local (al exterior de la red propia)
12. Ingreso promedio por mensaje de tráfico itinerante generado por abonados extranjeros
13. Ingreso promedio por minuto de tráfico itinerante en moneda local (al exterior de la red propia)
14. Ingreso promedio por minuto de tráfico itinerante generado por abonados extranjeros
15. Ingreso promedio por minuto telefonía local fija (dlls)
16. Ingreso promedio por minuto telefonía local móvi (dlls)l
17. Inversión por persona ocupada en telecomunicaciones (dlls)
18. Suscripciones de Internet de banda ancha por cada 100 hab.
19. Suscripciones de teléfonos celulares móviles por cada 100 habitantes
20. Penetración de telefonía pública
21. Suscripciones de TV cable por cada 100 habitantes
22. Usuarios de Internet por cada 100 habitantes
23. Producto Interno Bruto por habitante (PIB Per cápita dlls)
24. Proporción de las líneas de telefonía móvil de prepago en la líneas de telefonía móvil totales
25. Proporción de las líneas residenciales de telefonía local fija en las líneas fijas totales
26. Proporción de los ingresos de telefonía móvil en los ingresos totales
27. Líneas de teléfonos fijos por cada 100 habitantes

Sistema de Indicadores Regionales de Telecomunicaciones

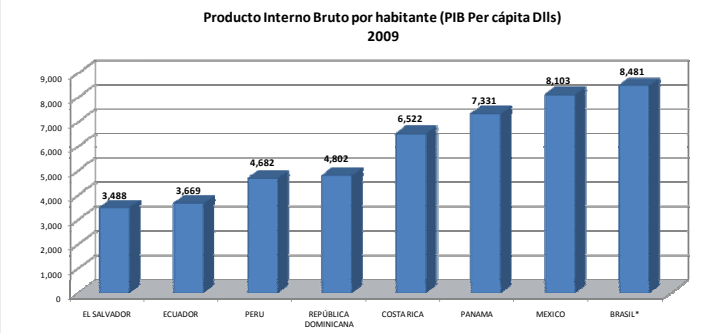
Resultados del SIRTEL

Sistema de Indicadores Regionales de Telecomunicaciones

RESULTADOS DEL SIRTEL

INDICADORES GLOBALES

Producto Interno Bruto por habitante (PIB Per cápita Dlls)										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BOLIVIA	-	-	-	-	-	998.53	-	-	-	-
BRASIL	-	-	-	-	-	-	-	-	8,481.19	-
COLOMBIA	1,980.24	2,098.41	1,853.84	1,784.28	2,165.30	2,669.70	-	-	-	-
COSTA RICA	-	-	-	-	-	-	-	-	-	6,521.61
CUBA	2,941.12	3,034.20	3,228.74	3,448.53	3,656.68	4,099.48	-	-	-	-
ECUADOR	1,323.95	1,704.40	1,952.33	2,212.13	1,952.33	2,813.98	3,114.74	3,365.51	3,961.28	3,668.97
EL SALVADOR	2,092.74	2,159.28	2,195.02	2,266.69	2,337.92	2,821.79	2,668.36	3,368.38	3,654.37	3,488.02
ESPAÑA	-	18,476.26	18,424.23	16,197.11	16,849.46	16,501.52	-	-	-	-
GUATEMALA	-	-	1,762.42	1,813.97	1,936.24	2,148.89	2,326.41	-	-	-
HONDURAS	-	-	-	-	-	-	1,119.47	-	-	-
MEXICO	5,853.23	6,178.12	6,345.53	6,167.90	7,326.95	8,158.89	8,977.40	9,653.40	10,174.56	8,102.82
PANAMA	4,644.23	4,697.91	4,628.20	4,703.72	4,802.23	5,036.39	5,218.40	5,926.64	6,828.17	7,331.43
PARAGUAY	-	-	-	-	1,149.63	1,283.13	1,700.21	-	-	-
PERU	2,056.19	2,046.03	2,120.41	2,265.57	2,533.82	2,839.87	3,275.97	3,960.05	4,207.57	4,682.19
REPÚBLICA DOMINICANA	2,805.66	2,821.45	3,014.10	2,416.87	2,426.59	3,685.07	3,844.10	4,357.14	4,765.49	4,801.75



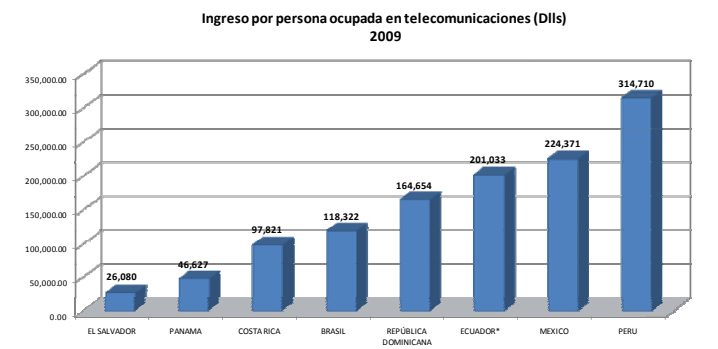
* Datos a 2008

Sistema de Indicadores Regionales de Telecomunicaciones

RESULTADOS DEL SIRTEL

INDICADORES GLOBALES

Ingreso por persona ocupada en telecomunicaciones (Dlls)										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BRASIL	-	-	57,951	64,046	77,777	-	-	-	151,335	118,322
COLOMBIA	-	-	166,878	-	-	-	-	-	-	-
COSTA RICA	-	-	-	-	-	-	99,848	94,000	93,340	97,821
CUBA	41,808	45,078	54,102	57,530	62,812	73,188	-	-	-	-
ECUADOR	-	-	-	-	-	-	176,887	199,311	201,033	-
EL SALVADOR	15,168	17,373	19,243	21,156	-	27,969	32,536	30,214	34,237	26,080
ESPAÑA	-	-	374,085	344,195	336,542	369,214	345,417	-	-	-
HONDURAS	-	-	-	-	-	-	64,266	-	-	-
MEXICO	153,910	169,566	188,551	191,281	205,652	222,279	256,401	264,953	259,769	224,371
PANAMA	87,591	83,164	83,082	86,140	88,363	94,056	92,128	41,987	44,506	46,627
PERU	-	-	-	-	-	-	214,290	282,729	285,071	314,710
REPÚBLICA DOMINICANA	-	-	-	-	-	-	-	-	-	164,654



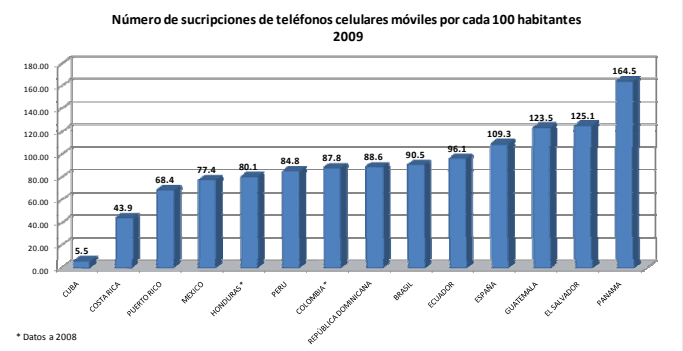
* Datos a 2008

Sistema de Indicadores Regionales de Telecomunicaciones

RESULTADOS DEL SIRTEL

INDICADORES DEL SERVICIO DE TELEFONÍA CELULAR MÓVIL

Número de suscripciones de teléfonos celulares móviles por cada 100 habitantes										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
ARGENTINA	17.49	18.14	17.50	20.71	35.35	57.41	80.86	-	-	-
BOLIVIA	-	-	-	-	-	25.69	-	-	-	-
BRASIL	13.96	16.97	20.33	26.22	36.63	46.58	53.24	53.69	78.10	90.55
COLOMBIA	5.34	7.59	10.50	13.89	22.96	47.45	68.57	78.87	87.85	-
COSTA RICA	5.67	7.86	11.44	18.55	22.06	26.49	33.16	33.95	41.62	43.94
CUBA	0.06	0.08	0.16	0.32	0.67	1.21	1.36	1.76	2.95	5.53
ECUADOR	3.92	6.88	12.33	18.67	27.21	47.27	63.28	73.06	84.70	96.07
EL SALVADOR	11.85	13.41	13.64	17.32	27.12	39.87	55.10	102.94	114.90	125.07
ESPAÑA	59.91	72.13	80.15	87.13	89.41	96.79	102.21	107.13	107.63	109.28
GUATEMALA	7.63	9.97	12.96	16.83	25.57	35.51	55.14	89.16	109.29	123.47
HONDURAS	-	-	-	-	-	-	30.22	55.58	80.08	-
MEXICO	14.19	21.61	25.39	29.06	37.16	45.14	52.59	62.65	70.30	77.36
PANAMA	13.92	15.82	17.18	22.22	39.72	54.17	66.21	90.14	115.31	164.54
PARAGUAY	-	-	-	-	30.54	31.99	54.37	-	-	-
PERU	5.16	6.81	8.62	10.79	14.86	19.98	30.94	54.13	72.73	84.79
PUERTO RICO	36.21	42.41	42.66	44.03	47.44	50.95	55.98	61.68	64.89	68.37
REPÚBLICA DOMINICANA	8.25	14.63	19.29	23.72	27.90	39.27	49.24	58.14	75.02	88.58



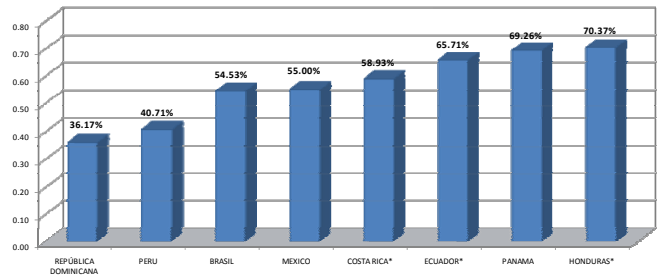
* Datos a 2008

Sistema de Indicadores Regionales de Telecomunicaciones

RESULTADOS DEL SIRTEL

INDICADORES DEL SERVICIO DE TELEFONÍA CELULAR MÓVIL

Proporción de los ingresos de telefonía móvil en los ingresos totales										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
ARGENTINA	-	-	-	-	-	-	54.89%	-	-	-
BOLIVIA	16.88%	19.39%	24.04%	27.43%	27.46%	27.12%	26.48%	-	-	-
BRASIL	-	-	46.97%	54.62%	64.33%	-	-	-	46.16%	54.53%
COLOMBIA	12.21%	12.62%	16.85%	21.81%	30.07%	42.47%	46.84%	-	-	-
COSTA RICA	-	-	-	-	59.64%	-	59.64%	57.74%	58.93%	-
ECUADOR	-	-	-	48.98%	53.12%	59.14%	62.48%	64.27%	65.71%	-
HONDURAS	-	-	-	-	-	-	59.39%	67.17%	70.37%	-
MEXICO	22.45%	28.43%	33.32%	36.68%	41.94%	45.68%	47.49%	50.07%	51.46%	55.00%
PANAMA	31.68%	33.64%	37.78%	47.31%	53.13%	59.00%	50.97%	63.34%	71.47%	69.26%
PARAGUAY	-	-	-	-	-	49.89%	59.18%	-	-	-
PERU	-	28.77%	33.51%	35.73%	38.59%	40.09%	45.30%	37.22%	39.53%	40.71%
REPÚBLICA DOMINICANA	-	-	-	-	-	-	-	-	-	36.17%



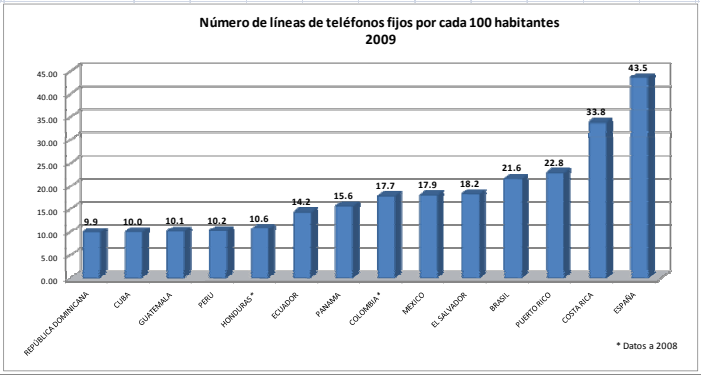
* Datos a 2008

Sistema de Indicadores Regionales de Telecomunicaciones

RESULTADOS DEL SIRTEL

INDICADORES DEL SERVICIO DE LOCAL FIJA

Número de líneas de teléfonos fijos por cada 100 habitantes										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
ARGENTINA	21.46	21.88	20.55	20.45	20.13	20.83	21.22	-	-	-
BOLIVIA	-	-	-	-	-	6.86	-	-	-	-
BRASIL	18.62	22.10	22.62	22.17	22.10	22.75	20.67	20.36	21.38	21.60
COLOMBIA	-	-	-	16.36	16.67	16.65	17.78	18.41	17.71	-
COSTA RICA	20.41	19.97	20.86	21.67	22.10	22.58	30.54	32.34	31.72	33.79
CUBA	4.40	5.15	5.96	6.47	6.84	7.56	8.66	9.28	9.82	9.96
ECUADOR	9.95	10.58	11.15	11.92	12.21	12.71	13.08	13.27	13.70	14.22
EL SALVADOR	9.97	10.16	10.24	11.34	13.14	16.06	14.82	17.85	17.81	18.17
ESPAÑA	42.23	42.64	42.16	41.57	41.52	44.12	44.43	44.67	43.93	43.50
GUATEMALA	6.03	6.57	7.17	7.81	9.14	9.83	10.41	10.59	10.59	10.08
HONDURAS	-	-	-	-	-	-	9.62	10.91	10.65	-
MEXICO	12.43	13.68	14.66	15.77	17.46	18.69	18.85	18.82	19.13	17.90
PANAMA	14.56	12.69	12.64	12.24	13.39	14.57	14.87	14.83	15.42	15.59
PARAGUAY	-	-	-	-	5.13	5.43	5.57	-	-	-
PERU	6.24	5.96	6.19	6.77	7.44	8.05	8.47	9.40	9.98	10.18
PUERTO RICO	35.92	35.92	35.73	33.65	32.39	31.52	29.02	25.70	23.95	22.83
REPÚBLICA DOMINICANA	10.45	11.00	10.31	10.16	9.94	9.71	9.59	9.56	10.26	9.91

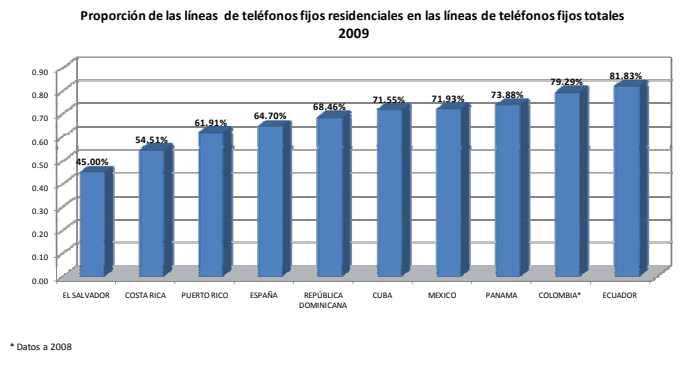


Sistema de Indicadores Regionales de Telecomunicaciones

RESULTADOS DEL SIRTEL

INDICADORES DEL SERVICIO DE LOCAL FIJA

Proporción de las líneas de teléfonos fijos residenciales en las líneas de teléfonos fijos totales										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CHILE	73.4%	71.7%	71.6%	71.2%	74.0%	74.1%	67.5%	-	-	-
COLOMBIA	-	-	-	75.9%	78.4%	77.0%	77.5%	78.7%	79.3%	-
COSTA RICA	-	-	-	-	-	-	57.5%	54.6%	55.7%	54.5%
CUBA	64.0%	66.7%	67.4%	68.9%	69.6%	71.5%	72.3%	72.7%	70.6%	71.6%
ECUADOR	82.1%	84.4%	84.8%	85.4%	85.2%	85.1%	83.3%	77.9%	81.7%	81.8%
EL SALVADOR	-	86.0%	79.0%	69.0%	62.5%	57.7%	43.0%	40.0%	46.0%	45.0%
ESPAÑA	81.6%	83.5%	83.0%	70.2%	70.0%	64.4%	64.2%	63.8%	64.5%	64.7%
MEXICO	73.3%	73.1%	73.9%	74.8%	75.6%	75.9%	75.0%	73.8%	73.2%	71.9%
PANAMA	69.6%	66.8%	66.0%	69.4%	65.1%	64.1%	60.1%	65.5%	73.1%	73.9%
PARAGUAY	-	-	-	-	-	70.5%	71.2%	-	-	-
PUERTO RICO	71.0%	70.1%	69.5%	72.2%	71.2%	68.7%	67.8%	67.4%	64.1%	61.9%
REPÚBLICA DOMINICANA	66.2%	64.5%	66.3%	66.5%	68.1%	67.8%	67.3%	67.3%	70.3%	68.5%

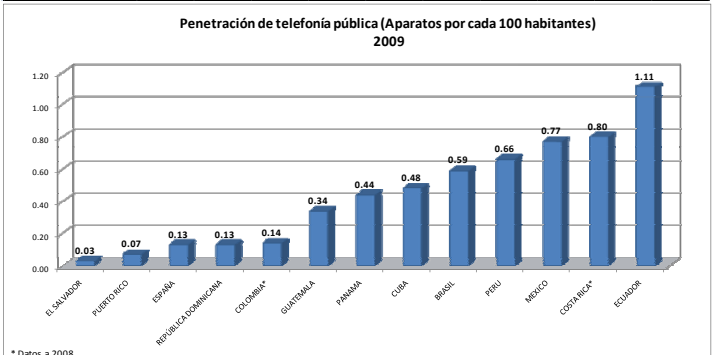


Sistema de Indicadores Regionales de Telecomunicaciones

RESULTADOS DEL SIRTEL

INDICADORES DEL SERVICIO DE TELEFONÍA PÚBLICA

Penetración de telefonía pública (Aparatos por cada 100 habitantes)										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
ARGENTINA	-	0.41	0.36	0.37	0.41	0.41	0.40	-	-	-
BOLIVIA	-	-	-	-	-	0.40	-	-	-	-
BRASIL	0.55	0.81	0.80	0.77	0.73	0.69	0.60	-	0.59	0.59
COLOMBIA	-	-	-	0.20	0.24	0.31	0.20	0.16	0.14	-
COSTA RICA	0.38	0.45	0.55	0.54	0.53	0.51	0.48	0.80	0.80	-
CUBA	0.13	0.18	0.19	0.23	0.25	0.31	0.36	0.39	0.45	0.48
ECUADOR	-	0.02	0.04	0.15	0.20	0.24	0.43	0.70	1.12	1.11
EL SALVADOR	-	0.29	0.34	0.33	0.34	0.46	0.40	0.40	0.29	0.03
ESPAÑA	-	-	0.23	0.21	0.20	0.19	0.17	0.15	0.14	0.13
GUATEMALA	-	-	-	-	0.32	0.43	0.36	0.38	0.35	0.34
MEXICO	0.57	0.64	0.66	0.66	0.72	0.75	0.80	0.76	0.76	0.77
PANAMA	0.36	0.41	0.43	0.44	0.33	0.34	0.35	0.46	0.44	0.44
PARAGUAY	-	-	-	-	0.14	0.13	0.15	-	-	-
PERU	0.33	0.36	0.43	0.48	0.52	0.54	0.60	0.60	0.68	0.66
PUERTO RICO	0.66	0.65	0.63	0.46	0.42	0.31	0.29	0.24	0.17	0.07
REPÚBLICA DOMINICANA	0.14	0.13	0.13	0.14	0.13	0.14	0.15	0.17	0.14	0.13



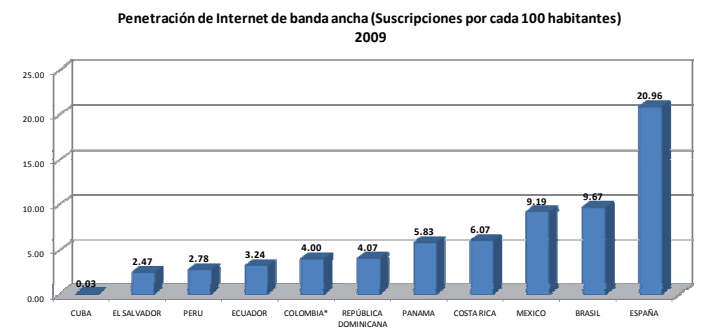
* Datos a 2008

Sistema de Indicadores Regionales de Telecomunicaciones

RESULTADOS DEL SIRTEL

INDICADORES DE SERVICIOS DE INTERNET

Penetración de Internet de banda ancha (Suscripciones por cada 100 habitantes)										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
ARGENTINA	-	0.46	0.45	0.67	1.39	2.37	3.98	-	-	-
BRASIL	0.02	0.14	0.24	0.36	1.29	1.89	2.54	-	6.36	9.67
COLOMBIA	-	-	0.08	0.14	0.28	0.69	1.45	2.80	4.00	-
COSTA RICA	-	-	-	-	0.15	0.46	1.45	1.87	2.37	6.07
CUBA	-	-	-	-	-	-	-	0.02	0.02	0.03
ECUADOR	-	-	-	-	-	-	-	-	0.25	3.24
EL SALVADOR	-	-	-	-	-	-	-	1.48	2.04	2.47
ESPAÑA	0.16	1.31	2.98	4.97	7.87	11.42	14.96	17.82	19.79	20.96
MEXICO	0.11	0.11	0.23	0.41	1.02	1.84	2.93	4.30	7.09	9.19
PANAMA	0.13	0.26	0.40	0.47	0.53	0.54	3.43	4.50	4.63	5.83
PARAGUAY	-	-	-	-	-	0.10	0.26	-	-	-
PERU	0.0042	0.03	0.14	0.34	0.76	1.24	1.67	2.06	2.52	2.78
REPÚBLICA DOMINICANA	-	-	-	-	0.40	0.69	1.16	1.62	2.35	4.07



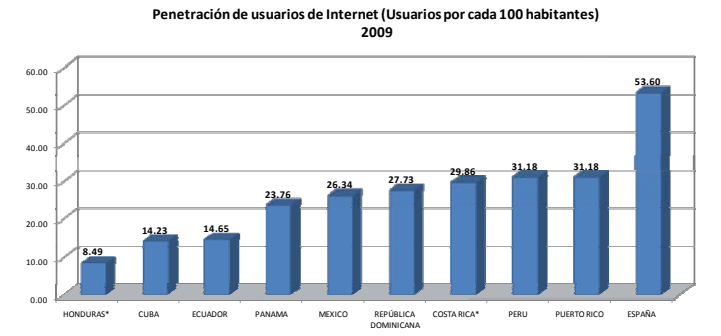
* Datos a 2008

Sistema de Indicadores Regionales de Telecomunicaciones

RESULTADOS DEL SIRTEL

INDICADORES DE SERVICIOS DE INTERNET

Penetración de usuarios de Internet (Usuarios por cada 100 habitantes)										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
COLOMBIA	-	-	0.01	0.01	0.02	0.02	0.03	-	-	-
COSTA RICA	-	-	-	-	-	-	34.45	23.68	29.86	-
CUBA	-	-	-	-	-	-	-	11.66	12.90	14.23
ECUADOR	0.47	2.00	2.23	2.84	3.13	6.14	6.14	8.47	9.49	14.65
EL SALVADOR	-	-	1.46	1.69	1.63	2.11	1.00	1.57	-	-
ESPAÑA	-	-	-	-	41.80	40.93	40.38	42.73	45.59	53.60
HONDURAS	-	-	-	-	-	-	4.55	5.63	8.49	-
MEXICO	5.10	7.05	10.50	11.47	7.05	17.21	19.52	20.81	21.71	26.34
PANAMA	6.56	6.44	8.53	10.00	8.53	11.50	15.31	22.32	22.94	23.76
PARAGUAY	-	-	-	-	-	3.39	4.37	-	-	-
PERU	-	0.46	10.04	11.59	15.57	19.44	23.13	28.08	28.96	31.18
PUERTO RICO	-	-	-	-	-	23.40	28.00	31.38	31.38	31.18
REPÚBLICA DOMINICANA	2.41	2.89	7.05	8.00	8.92	10.86	13.81	18.28	22.34	27.73



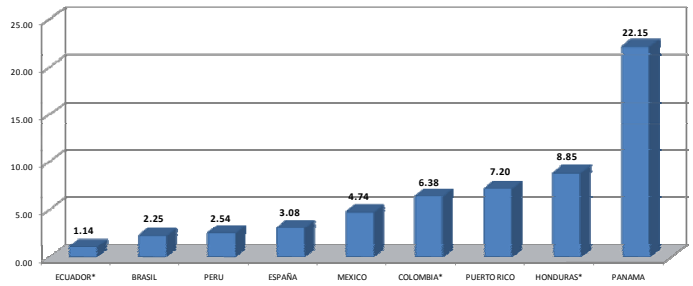
* Datos a 2008

Sistema de Indicadores Regionales de Telecomunicaciones

RESULTADOS DEL SIRTEL

INDICADORES DEL SERVICIO DE TV RESTRINGIDA POR CABLE

Penetración de TV restringida por cable (Suscripciones por cada 100 habitantes)										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BRASIL	1.16	1.22	1.21	1.20	1.27	1.36	1.51	-	1.98	2.25
COLOMBIA	-	-	-	-	-	2.94	-	4.59	6.38	-
ECUADOR	-	-	-	-	0.79	0.79	0.95	1.01	1.14	-
ESPAÑA	0.74	1.43	1.94	2.33	2.56	2.72	2.92	2.98	3.16	3.08
HONDURAS	-	-	-	-	-	-	7.52	8.46	8.85	-
MEXICO	2.24	2.48	2.48	2.57	2.85	3.26	3.77	4.08	4.50	4.74
PANAMA	17.84	17.95	17.70	18.04	18.47	19.46	20.56	22.54	22.37	22.15
PARAGUAY	-	-	-	-	-	2.16	-	-	-	-
PERU	1.37	2.09	1.31	1.67	1.31	2.09	2.36	2.45	2.54	-
PUERTO RICO	9.16	9.38	8.83	8.67	8.44	8.41	8.07	6.97	6.97	7.20



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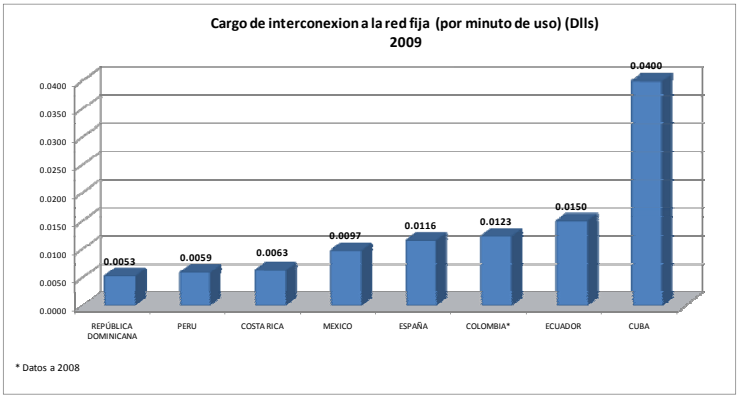
RESULTADOS DEL SIRTEL

Sistema de Indicadores Regionales de Telecomunicaciones

INDICADORES DE TARIFAS

Cargo de interconexion a la red fija (por minuto de uso) (Dlls)										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
COLOMBIA	-	-	0.0199	0.0163	0.0171	0.0164	0.0155	0.0178	0.0123	-
COSTA RICA	-	-	-	-	-	-	0.0071	0.0070	0.0069	0.0063
CUBA	-	-	-	-	-	-	0.0400	0.0400	0.0400	0.0400
ECUADOR	0.0400	0.0400	0.0400	0.0400	0.0400	0.0280	0.0170	0.0140	0.0140	0.0150
ESPAÑA	-	-	-	-	0.0156	0.0148	0.0144	0.0132	0.0120	0.0116
MEXICO	0.0338	0.0128	0.0093	0.0102	0.0097	0.0102	0.0097	0.0097	0.0097	0.0097
PERU	0.0048	0.0040	0.0040	0.0035	0.0035	0.0036	0.0038	0.0040	0.0039	0.0059
REPÚBLICA DOMINICANA										0.0053



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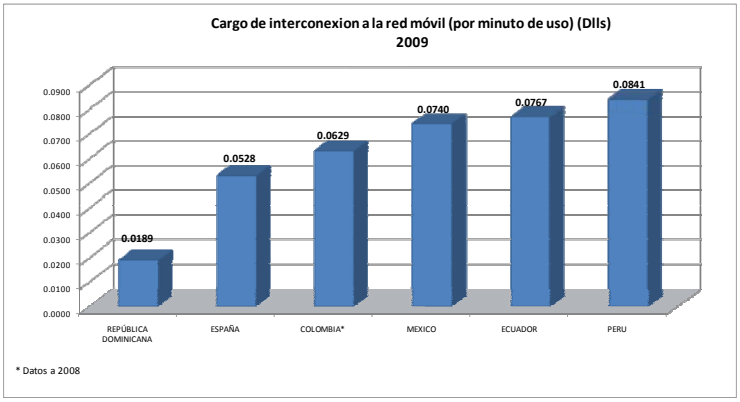
RESULTADOS DEL SIRTEL

Sistema de Indicadores Regionales de Telecomunicaciones

INDICADORES DE TARIFAS

Cargo de interconexion a la red móvil (por minuto de uso) (Dlls)										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
COLOMBIA	-	-	0.0271	0.0370	0.0654	0.1090	0.1031	0.1186	0.0629	-
ECUADOR	0.2300	0.2300	0.2300	0.2300	0.2300	0.1560	0.1030	0.0980	0.0880	0.0767
ESPAÑA				0.1511	0.1254	0.1098	0.0962	0.0792	0.0639	0.0528
MEXICO	0.2008	0.2034	0.1966	0.1761	0.1684	0.1583	0.1413	0.1226	0.1087	0.0740
PERU	0.0693	0.0689	0.0687	0.0656	0.0668	0.0621	0.0461	0.0507	0.0398	0.0841
REPÚBLICA DOMINICANA										0.0189



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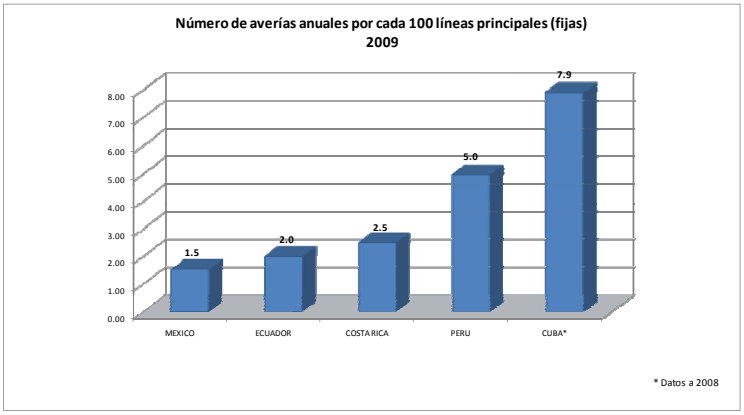
Sistema de Indicadores Regionales de Telecomunicaciones

RESULTADOS DEL SIRTEL

INDICADORES DE CALIDAD

Número de averías anuales por cada 100 líneas principales (fijas)										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BRASIL	-	-	2.00	-	-	-	-	-	-	-
COSTA RICA	-	-	-	-	-	-	4.07	4.55	3.98	2.49
CUBA	10.00	10.00	8.00	8.00	8.00	9.00	7.22	7.34	7.90	-
ECUADOR	4.57	3.77	4.40	4.27	3.29	2.88	2.46	1.92	3.14	1.98
EL SALVADOR	5.00	11.00	10.00	19.00	9.00	9.00	29.00	-	-	-
MEXICO	2.02	1.85	1.72	1.24	1.80	1.40	1.21	1.24	1.56	1.52
PARAGUAY	-	-	-	-	-	6.38	6.03	-	-	-
PERU	0.62	2.16	5.19	7.59	15.67	4.00	6.21	5.67	6.18	4.95

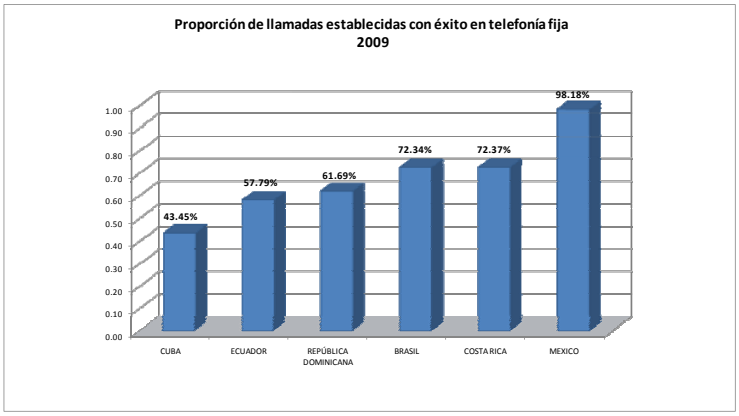


Sistema de Indicadores Regionales de Telecomunicaciones

RESULTADOS DEL SIRTEL

INDICADORES DE CALIDAD

Proporción de llamadas establecidas con éxito en telefonía fija										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BRASIL	-	-	-	-	-	-	-	-	72.25%	72.34%
COSTA RICA	-	-	-	-	-	-	70.39%	70.00%	70.00%	72.37%
CUBA	41.00%	45.00%	49.00%	51.00%	53.00%	54.00%	43.00%	41.91%	42.35%	43.45%
ECUADOR	49.07%	49.07%	57.79%	55.42%	55.92%	57.12%	58.84%	61.05%	62.09%	57.79%
MEXICO	98.59%	97.74%	97.98%	93.78%	93.82%	93.97%	97.77%	98.02%	97.94%	98.18%
REPÚBLICA DOMINICANA	-	-	-	-	-	-	-	-	-	61.69%



Sistema de Indicadores Regionales de Telecomunicaciones

GRACIAS

PUNTO DE CONTACTO
Guillermo Gonzalez Robledo
COFETEL, MEXICO
Tel: (+52) 55 50 15 40 28
E-mail: grobledo@cft.gob.mx

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SOURCE: Autorité de Régulation de la Poste et des Télécommunications du Congo, Rép. Dém. du Congo

TITLE: Projet de la contribution à la huitième réunion sur les indicateurs de télécommunications/TIC de l'UIT dans le monde

PROJET DE LA CONTRIBUTION A LA HUITIEME REUNION SUR LES INDICATEURS DE TELECOMMUNICATIONS/TIC DE L'UIT DANS LE MONDE

La contribution comprend quatre grands points, à savoir, une brève présentation de la République Démocratique du Congo, le processus de collecte des données en RDC, le statut des statistiques des télécommunications en RDC et la présentation de quelques principaux indicateurs des TIC en RDC.

1. Présentation de la République Démocratique du Congo

La RDC, pays en développement, est située en Afrique Centrale et présente les principaux indicateurs macroéconomiques ci-après :

Données macroéconomiques de la RDC (2009)	
Superficie	2.345.000 km2
Population	62.000.000 hab.
***PIB**	6.490.000.000 $ US
***PIB/ Hab.**	104 $ US

**Source : BCC*

Pour répondre au besoin en télécommunications de cette population et pour s'adapter au développement rapide des TIC, la RDC s'est dotée d'une nouvelle réglementation en matière de télécommunication depuis l'année 2002. Cette dernière a permis l'ouverture du marché des télécommunications à la concurrence et aussi la mise en place de l'Autorité de Régulation de la Poste et des télécommunications du Congo (ARPTC) par la loi n°014/2002/ du 16 octobre 2002.

2. Processus de collecte des données statistiques en RDC.

Depuis février 2010, le pays s'est doté d'une réglementation relative au Système Statistique National (SSN). Il s'agit du décret N°10/05 du 11/12/2010 relatif au Système Statistique National.

Ainsi, l'Institut National de la Statistique (INS) est l'organe chargé de la coordination de l'activité statistique. A ce titre, il constitue l'organe exécutif central du Système Statistique National.

Il est chargé notamment de la mise en place d'un Système National Intégré pour la collecte, l'analyse, la publication et la diffusion des statistiques économiques, démographiques, sociales et environnementales, en recourant soit à des recensements exhaustifs ou à des enquêtes par sondage, soit à l'exploitation des documents en provenance du secteur public ou du secteur privé.

Outre le Conseil National de la Statistique et l'Institut National, le Système Statistique National comprend les services statistiques publics et privés sectoriels, les structures régionales ou locales ainsi que les institutions de formation statistique existantes ou à créer.

C'est à ce titre que pour le secteur de télécommunications, l'ARPTC se voit collecter les données des opérateurs du secteur en s'appuyant principalement sur la matrice de l'Union Internationale des Télécommunications (UIT).
Une disposition de la loi créant l'Autorité de Régulation de la Poste et des Télécommunications du Congo en son article 4, lui permet de procéder aux visites des installations, de mener des enquêtes et des études, de réaliser des expertises ainsi que de recueillir les données nécessaires requises à cette fin pour lui permettre d'exercer son pouvoir effectif de contrôle.

Sur base des indicateurs définis et actualisés au cours des réunions mondiales sur les indicateurs de l'UIT, l'ARPTC a mis en place un

formulaire et l'envoi à chaque opérateur, selon son segment de marché, un formulaire (trimestriel, semestriel ou annuel) à retourner dûment rempli dans un délai bien précis.

Ce qui permet de collecter des données fiables et comparables par rapport aux autres pays de la sous-région.

L'article 2 du décret sur les statistiques, précise que les statistiques et les recensements d'intérêt national sont des matières de la compétence exclusive du Gouvernement Central sous la responsabilité scientifique et technique de l'Institut National de la Statistique.
Par conséquent, les enquêtes nationales, en rapport avec l'intégration des TIC dans les ménages, chez les particuliers et dans les institutions (publiques et privées), seront organisées en étroites collaborations avec l'INS.

3. Statut des statistiques des télécommunications en RDC

D'une manière générale, les statistiques des TIC sont soumises à un régime de déclaration de la part des opérateurs du secteur et sont classées parmi les statistiques sociodémographiques.

Cependant, l'Institut Nationale de la Statistique (INS) a été chargé de mettre en place la Stratégie Nationale de Développement de la Statistiques (SNDS), qui est un cadre de cohérence de toutes les activités statistiques et de tous les programmes d'assistance bilatérale et multilatérale au pays en matière de statistiques afin d'améliorer les données pour une Gestion Axée sur les Résultats.

C'est au cours de déroulement des travaux d'élaboration de la SDNS, qu'il a été proposé de revoir le statut des statistiques des TIC en tenant compte des aspects économique et financière, vu le rôle important des TIC, comme moteur de développement du pays.

4. Quelques indicateurs importants des télécommunications en RDC

Indicateurs financières et démographiques des TIC dee la RDC (2009)	
Chiffre d'affaires des opérateurs	653.697.443
Contribution Télécoms au PIB (2009)	10,07%
Investissements des opérateurs	186.907.000
Effectifs des abonnés mobiles	9.458.557
Parc global (fixe + mobile+Internet)	9.700.877
Taux de pénétration Globale (télédensité)	15,64%

Source : BCC, ARPTC, Opérateurs

Téléphonie fixe : 3 opérateurs (2009)	
Parc total	**42.320**
Parc d'abonnés et part de marché OCPT fixe	237
Parc d'abonnés et part de marché SOGETEL fixe	2.083
Parc d'abonnés et part de marché STD fixe	40.000
Taux de croissance du parc	13,39%
Taux de pénétration (télédensité) du fixe	0,07%

Source : Opérateurs, ARPTC

Téléphonie mobile : 5 opérateurs en situation de concurrence (2009)	
Parc total	9.458.557
Parc d'abonnés et part de marché VODACOM	3.412.608
Parc d'abonnés et part de marché TIGO	1.449.158
Parc d'abonnés et part de marché CCT	1.000.000

Parc d'abonnés et part de marché ZAIN	3.556.558
Parc d'abonnés et part de marché SUPERCELL	40.233
Taux de pénétration (Télédensité) mobile	15,25%
ARPU en $Usd	5,62 $
Taux de croissance parc abonnés	- 4,82%
Couverture du territoire national	20%
Couverture de la population	50%

Source : Opérateurs, ARPTC

Internet : 30 FAI (au 31/12/2009)

Parc total	+/- 200.000
Nombre opérateurs FAI	+/- 30
Chiffre d'affaires	6.246.533 $ US
ARPU	5,5 $ US

5. *Source : ARPTC, Opérateurs*

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ICT SECTOR STATISTICS IN INDIA – CURRENT STATUS
(as on September 2010)

1. Introduction

1.1 Information and Communication Technology can be broadly viewed under two sectors, Information Technology and Communication. In India, the growth of both these sectors is very significant in the past two decades. Indian IT industry has built up an enormous confidence for itself in the global markets. IT industry in India comprises of software industry and information technology enabled services (ITES), which also includes business process outsourcing (BPO) industry. India is considered as a pioneer in software development and a favourite destination for IT-enabled services. The Indian software and services exports including ITeS-BPO exports is estimated at US $ 49.7 billion in 2009-10, as compared to US $ 47.1 billion in 2008-09, an increase of 5.5 per cent. The IT services exports is estimated to be US $ 27.3 billion in 2009-10 as compared to US $ 25.8 billion in 2008-09, showing a growth of 5.8 per cent. ITeS-BPO exports is estimated to grow from US $ 11.7 billion in 2008-09 to US $ 12.4 billion in 2009-10, a year-on-year (Y-o-Y) growth of 6 per cent.

1.2. On the Other hand, the growth of Telecommunications is also alarming. In recent times, country has emerged as one of the fastest growing telecom markets in the world. Indian telecom has become the second largest wireless network in the world after China. The future progress of telecom in our country is very encouraging. The current addition of about 15 million connections per month puts the telecom sector on strong footing. The target of 500 million connections by 2010 has been achieved in September 2009 itself.

1.3. Measuring the impact of ICT is critical to better understanding the role of ICT for economic and social development. With the rapid growth of the ICT sector in India, there is an important demand from the research community and policy makers for better data to ensure that research findings are representative for the entire country or the state in order to inform policy makers about ICT developments and its impact and have meaningful interpretations of policies. In particular, there is a real need to measure the digital divide in the country, including the urban-rural and gender divides, and the use of community Internet access centers and mobile phone applications by low-income users.

1.4. In India, much work on measuring the impact of the IT industry on economic growth and employment has been carried out. The Government of India has been making sustained efforts to improve the availability of ICT data for policy making and research. Certain data in particular data on the telecommunication sector, the IT industry and business process outsourcing (BPO), data on the information society at large, are produced on a regular basis, A significant amount of data exists on the ICT service industry, collected by National Association of Software and Services Companies (NASSCOM), reflecting their members' data. Similarly, data on ICT manufacturing is captured by another private body, the Communication and Manufacturing Association of India (CMAI).

1.5. However, there is a clear need to collect more ICT data in India in a comprehensive and comparable fashion, particularly on the use of ICT by individuals, households and businesses. While some of these data are produced through surveys in a limited manner,

official statistics representing the entire sector in a regular manner are still limited. **The current proposed paper attempts to identify the existing data system / data present in the field of ICT statistics in India, particularly with reference to the Basic Core Indicators (Annex) identified and recognised at international level under the four categories viz.(a) Infrastructure and Access (b) Access to and use of ICT by households & Individuals (c) Use of ICT by businesses (d) ICT sector and Trade in ICT goods. Apart from the core-indicators, the paper also presents an outlook of the e-readiness reports used in India to motivate the provincial / state governments in implementing the e-Governance programmes / projects.**

2. Core indicators on ICT infrastructure and access

2.1. The first three indicators A1, A2 and A3 viz Fixed telephones per 100 inhabitants, Mobile telephones per 100 inhabitants'; and computers per 100 inhabitants, are regularly maintained month wise by the department of telecommunication under the ministry of information and communication technology. The latest information available **till July 2010** on these three indicators are depicted in the following charts.

Chart 1: No. of telephones per 100 inhabitants

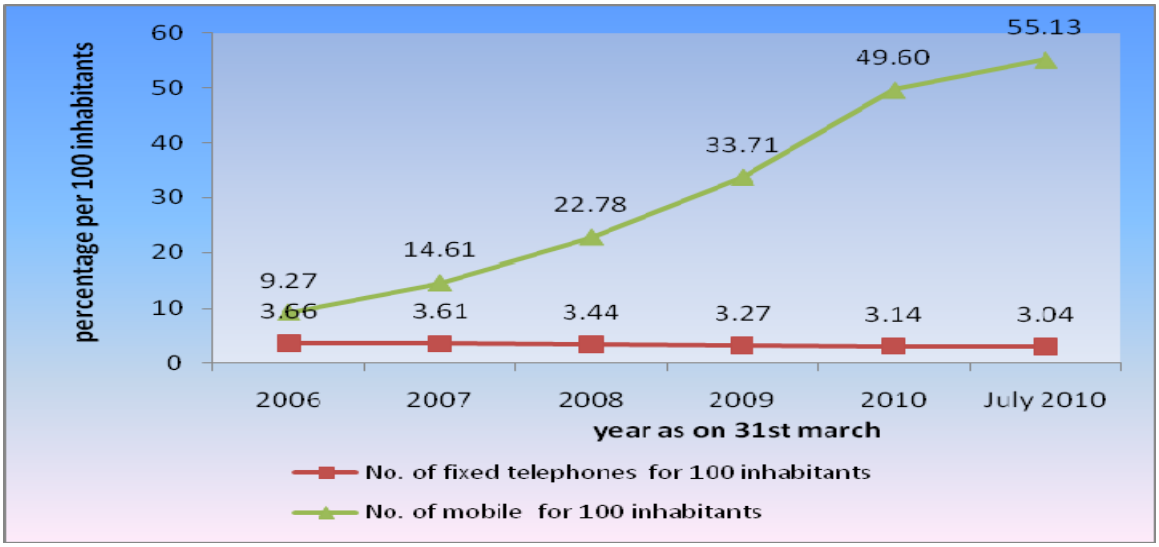
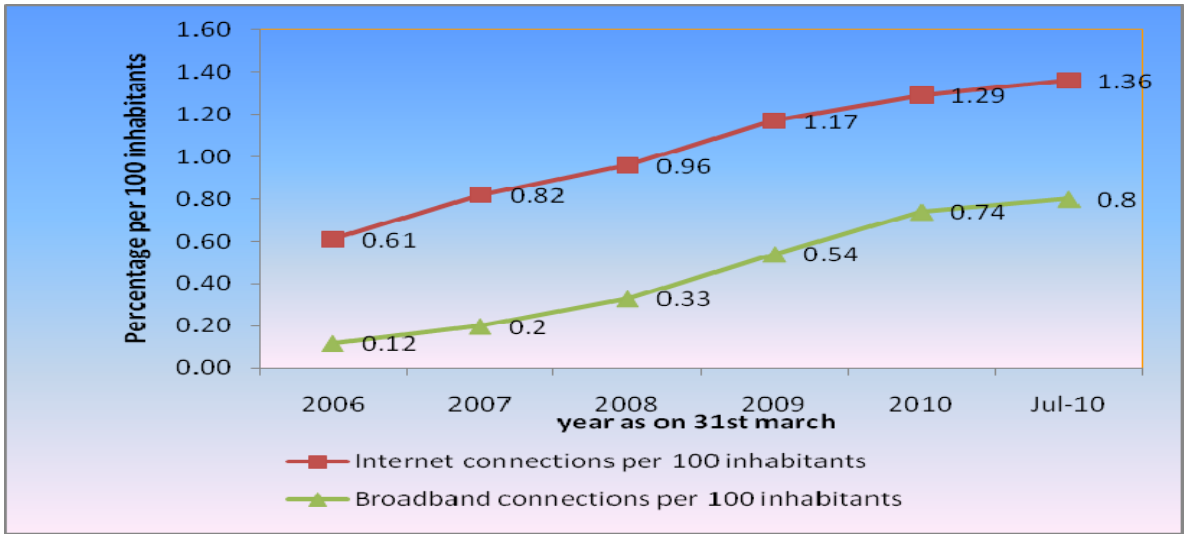


Chart 2:No. of Internet connections per 100 inhabitants



2.2. The data on certain indicators of this category like percentage of population covered by mobile cellular telephony(A7) are available in a very crude format. i.e The number of localities interms of villages in each state with the facility of mobile telephony are available, which can be converted to A7 by putting little more extra efforts by the state governments by adding the population of all these villages . Similarly the data on tariffs is availble with the distributors of the internet connections under different packages offered. Thus the tariff rates are to be disaggregated under ech pakage and per hpu rate is to be arrived at. In a nutshell, the data on the remaining indicators related to infrastructure and access indicators is yet to be maintained in a systematic fashion in India.

3. Core indicators on access to, and use of, ICT by households and indviduals

3.1. National Sample Survey Office (NSSO) of the Ministry of Statistics and Programme Implementation conducts multi-subject integrated sample surveys all over the country in the form of successive rounds relating to various aspects of social, economic, demographic, industrial and agricultural statistics in successive rounds, each round covering subjects of current interest in a specific survey period. The subject coverage of Socio Economic (SE) inquiries for different rounds is decided on the basis of a 10 year time frame. In this cycle, 1 year is devoted to land and live stock holdings, debt and Investment; 1 year to social consumption (education and health care, etc.), 2 years to quinquennial surveys on household consumer expenditure, employment & un-employment situation and 4 years to non-agricultural enterprises, namely, manufacturing, trade and services in un-organized sector. The remaining two years are for open rounds in which subjects of current/special interest on the demand of Central Ministries, State Governments and research organizations are covered.

3.2 Each survey extends over a period of six months or a year which is termed a round. At present each NSS round covers, at the all India level, about 12,000 to 14,000 villages and urban blocks in the Central sample (covered by the Central government agency NSSO) and an independent sample of about 14,000 to 16,000 villages and blocks in the State sample (covered by the Governments of various states and union territories). The Socio-Economic Surveys cover the whole of the Indian Union except for a few inaccessible and difficult pockets.

3.3. The information related to the core indicators on access to and Use of ICT is available from the quinquennial surveys of Consumer Expenditure. The latest survey was conducted

during the periods 2004-05. As per this survey the information of core indicators is depicted in the following table.

Table 1: Estimates of % of household in rural and urban India
(a) Possessing radio and (b) Possessing television

Year	% households possessing radio (HH1)		% households possessing television (HH2)	
	Rural	Urban	Rural	Urban
2004-05	26.3	33.6	25.6	66.1

3.4 The indicator HHR1, estimate of proportion of households using electricity as primary source of energy for lighting is available for 2004-05 to 20076-08. The estimates are as under.

Table 2: Estimates of % of households using electricity for lighting

Year	% households using electricity for lighting*	
	Rural	Urban
2004-05	54.9	92.3
2005-06	56.3	92.0
2006-07	56.1	92.7
2007-08	60.2	93.8

*As primary source of energy for lighting

3.5 Information on HH3 to hh13 is not available in India. However, the information on the number of household using computers (HH5) is being introduced in the next survey of NSSO.

4. Core indicators on use of ICT by businesses

4.1**.** The Annual Survey of Industries (ASI) is the principal source of industrial statistics in India. It provides statistical information to assess and evaluate, objectively and realistically, the changes in the growth, composition and structure of organised manufacturing sector comprising activities related to manufacturing processes, repair services, gas and water supply and cold storage. The data is collected through a comprehensive questionnaire, which includes a query related to the use of ICT whether the business is using the computer. The survey covers all factories registered under Factories Act, 1948 employing 10 or more workers using power; and those employing 20 or more workers without using power. Apart from these, certain servicing units and activities like water supply, cold storage, repairing of motor vehicles and other consumer durables like watches etc. are covered under the Survey

Thus the core indicator B1 compiled from the Annual Survey of Industries for the last three are shown in the table below.

Table 3: ICT usage indicators (by no. of employees)

Year	Total estimated no.	% of enterprises using computer	% of enterprises using computer with no. of employees

	of factories/ enterprises								
		Rural	Urban	Total	0-9	10-49	50-49	250+	Total
2005-06	140160	59.21	70.31	65.83	30.75	62.05	78.67	92.82	65.83
2006-07	144710	61.50	74.72	69.26	36.04	64.37	79.60	94.31	69.26
2007-08	146385	67.26	77.71	73.21	37.05	68.57	81.93	94.76	73.21

The above table indicates that the usage of computers in rural areas has increased from 59% in 2005-06 to 67% in 2007-08 whereas in urban areas it has increased from 70% in 2005-06 to 78% in 2007-08. Also it may be seen that about 95% of large enterprises having above 250 employees are using computer. However, only 37% of businesses with less than 10 employees are using computers in 2007-08.

4.2. Moreover, the data in the survey is collected as per the National Industrial Classification which is comparable with International Standard Industrial Classification till four digit level. Thus the information on Value added and employment (by gender) related to the manufacturing industries of ICT (included in the definition of ICT sector, recognised by UN) are available through the Annual Survey of industries.

4.3. Apart from the Annual Survey of Industries described above, In India, large scale sample surveys on households and enterprises are carried out regu larly to estimate the workforce, Gross value Added and various other related characteri stics. These surveys are conducted by National Sample Survey Office (NSSO) , an official agency of the Government of India under the Ministry of Statistics and Programme Implementation specializing in sample surveys. While household surveys are generally carried out every year, enterprise surveys are conducted with a gap of 4/5 years. Latest few enterprise surveys and their coverages were

63 rd round (July 06 - June 07) – Services sector excluding trade
67th round (July 10 - June11) _ Manufacturing sector and Services sector

5. Core indicators of the ICT sector and Trade in ICT goods

5.1 In India, the indicators ICT1 to ICT4 related to workforce, value added, imports & exports respectively are not strictly measured as per the International Standard Industrial Classification (ISIC). However, the information related to workforce & exports for this sector is maintained in National Association of Software and Services Companies (NASSCOM) for the IT-BPO sector.

5.2 NASSCOM is a premier trade body as well as the Chamber of Commerce of IT-BPO sector in India. It is a not-for-profit organisation and has emerged as an authentic voice of this industry in India. It publishes an annual edition of its strategic review to disseminate the latest status of the industry based on the survey of large companies of this sector. As per the NASSCOM results, the estimated number of business sector workforce involved in the ICT sector - IT-BPO direct employment for the financial year 2009-10 is 2.3 million and the ICT goods exports as percentage of total exports- IT-BPO services as a percentage of total exports for the year 2009-10 is 27.3%.

5.3 Gross Domestic product related to Communication sector and Computer related services is available in the Ministry of Statistics and Programme implementation from their publication National Accounts Statistics. The figures for the last five years as shown in table below indicates that the total share of GDP at 2004-05 prices in these two sectors has increased from 3.9% in 2004-05 to 6.1% in 2008-09.

Share of Gross Domestic Product (GDP) by Economic Activity to total GDP (At 2004-05 prices)

Sl.No	Economic Activity	2004-05	2005 - 06	2006-07	2007 - 08	2008-09
1.	Communications	1.66	1.85	2.12	2.49	2.93
2.	Computer relating services	2.25	2.61	2.93	3.18	3.21
	Total (1 +2)	3.91	4.46	5.05	5.67	6.14

5.4 The data related to production, exports and imports of this sector is also maintained by the Ministry of Communication and Technology in terms of electronic hardware, computer software etc. The information of production, imports and exports are shown in table 4 and table 5 below.

Table 4: Trend in production and growth of the Hardware and Computer Software Sector

Year	Production (Rs. Billion)			Growth
	Electronic hardware	Computer software	Total	(% increase over previous year)
2003-04	438.0	744.9	1182.9	21.9
2004-05	505.0	1019.2	1524.2	28.9
2005-06	565.6	1337.0	1903.0	24.9
2006-07	660.0	1780.0	2440.0	28.3
2007-08	844.1	2114.1	2958.2	21.2
2008-09	946.9	2735.3	3682.2	24.5

Source: Department of IT, Ministry of Communication and IT

Table 5: Growth of Exports in IT-ITES/BPO sector

Sl.No.	Year	Exports (USD billion)	Growth (%)
1	2004- 05	17.7	37.2
2	2005- 06	23.6	33.3
3	2006-07	31.1	31.8
4	2007-08	40.4	29.9
5	2008-09	46.3	14.6

Source: The Ministry of Communication and Information Technology

5.5 The Ministry of Commerce & Industry maintains the Imports/exports data of transportable goods as per the Indian Trade Classification ITC (HS) Classification which is an 8-digited Classification; the first six digits are comparable in toto with the HS

Classification. The imports/exports details for the ICT Manufacturing industries are as below:

Table 6: Percentage of exports / imports of ICT manufacturing goods to total manufacturing exports / imports

Year	Exports	Imports
2004-05	1.05	4.01
2005-06	0.96	3.77
2006-07	0.87	3.63
2007-08	0.80	2.90
2008-09	2.84	7.85
2009-10(P)	2.45	8.10

(P) : provisional
Source: Ministry of Commerce & Industry

Survey on Software & Information Technology Services Exports: 2008-09

5.6 The Reserve Bank of India recently introduced a quarterly sample surveys on Software and ITES/BPO Services Exports for the quarters April-June, July- September and October-December 2008 and also conducted the third comprehensive annual survey for the period 2008-09. The second annual software export survey was conducted with reference period 2007-08. The survey collected the information on the computer services exports, as defined in Balance of Payments Manual [BPM5 (1993)] and Manual on Statistics of International Trade in Services [MSITS (2002)] as well as on ITES/BPO services exports.

5.7 The survey results are based on the data collected through the quarterly sample surveys for the quarters April-June, July-September and October- December 2008 and also a comprehensive annual survey for the period 2008-09. The data are collected as per BPM5 guidelines. For the quarterly sample survey, 200 companies were selected, of which 187 companies responded. The sample of 200 companies covered all 93 large companies (software export size of 100 crore i.e about US$ 22 million and above) and 107 small companies (export size of less than Rs. 100 crore i.e about US$ 22 million). The sample of small companies was selected using simple random sampling from the frame of small companies. It was ensured that selected companies covered all the four major groups of activities, viz., IT services, BPO services, engineering services and software product development services. The large companies covered almost 80 per cent of total software export business in 2007-08. For the comprehensive annual survey for the reference period 2008-09, a total of 916 companies responded to the survey. Exports done by the non-respondent companies have been estimated using median exports. For estimating the quarterly software services exports, observed sample proportions of quarterly software services exports, based on the quarterly survey were used

Main Findings

- Total Computer Services and Information Technology Enabled Services (ITES)/ Business Process Outsourcing (BPO) services exports of India during 2008-09 were estimated at Rs.1,67,240 crore (US$ 36.4 billion), of which computer services exports was Rs.1,21,956 crore (US$ 26.6 billion).

- Quarterly survey results revealed that export from India on account of software services in Q1 was 21 per cent of total global software services exports in 2008-09, increasing to 25 per cent and 26 per cent in Q2 and Q3, respectively.
- The share of software export in the last quarter of 2008-09 was the highest at 28 per cent. Of the total software exports (Computer and ITES/BPO services), around 72 per cent was through offsite services while onsite software exports accounted for 28 per cent.

6. e-Readiness in Indian States

6.1 The Department of Information Technology and the National Council of Applied Economic Research have collaborated in producing the India e-Readiness reports since 2003 in an attempt to evaluate the e-Readiness of State Governments. This e-Readiness report thus presents the evolution in the ranking of States according to to their Government's e-Readiness. e-Readiness is a multidimensional concept. It measures the state's ability to participate in an increasingly networked world. It can be viewed as the ability to pursue value creation opportunities facilitated by ICT. Therefore, it is not simply a matter of the number of computers, internet connections, telephones and mobiles, etc., in the state but also the ability or readiness to use technology skilfully at the level of the individual, business and the Government.

6.2 The Report employs the use of composite indicators. To measure e-Readiness, the following three main sub-indicators are used:

- the environment that promotes the spread and usage of ICT;
- the readiness of different stake holders of the economy (the government - both the initiatives of the central government and the response of the state governments, businesses and the individual) to use ICT; and
- The degree of usage of ICT by the three stakeholders.

The data for computing these indices is obtained from both secondary and primary sources. Secondary sources included the Department of Telecommunication Annual Statistics, Statistical Abstracts of India, Economic Survey, Census publications and various Governments of India websites. Primary data collection was through a survey of the various departments of the state governments using a well-structured questionnaire. e-Readiness composite index is basically a weighted average of a large number of quantitative and qualitative indicators organised into their basic categories.

6.3 A regional comparison shows that states in southern India are clear leaders. The Eastern region performs consistently, with all the states being either the 'aspiring leaders' or 'expectants'. Within the North-East region most of the states are in the bottom categories. The Western region demonstrates a highly disparate performance.

6.4 e-Readiness is an important factor in promoting e-Governance. The former provides capabilities, while the latter is an indicator of implementation. One of the important differences is that while e-readiness has three actors, i.e, Government, business and individuals, the responsibility of effective implementation of e-Governance projects and services is the sole responsibility of the Government. However, the effectiveness of e-Governance increases if the citizens are moe e-literate and aware, as this enables them to take benefits of e-Governance.

6.5 For the first time, the report provides an assessment of Indian states /UTs in the area of e-Governance. The e-Governance part of the questionnaire administered in all the states contained certain questions as basic filters for capturing hierarchy in e-Governance.

6.6 Comparing the e-Readiness and e-Governance rankings, the report finds that not all states/U.Ts in a leading position of e-Readiness perform well in terms of e-Governance. On the other hand, many states /UTs that are less e-Ready are still using their ICT capabilities much efficiently for providing e-Governance.

7. Recent Developments in India

A project on "Statistical Compilation of ICT sector Statistics in India"

7.1 Recently Govt. of India, Ministry of Statistics and programme Implementation (MOSPI) has signed an MOU to participate in the project on "Statistical Compilation of ICT Sector and Policy Analysis" undertaken by Orbicom, the network of UNESCO Chairs in Communication. In this project an attempt has been made to compile data on the contribution of ICT sector to the Gross Domestic Product (GDP) and employment to the Indian economy following internationally accepted and harmonized definitions and concepts emerging form the OECD and United Nations. The value added has been compiled from the existing data holdings of the MOSPI.

7.2 Since the ICT sector spreads over both organized and unorganized segments of manufacturing and services sectors, the value added has been compiled from the Annual Survey of Industries for organized manufacturing sector. For the unorganised manufacturing sector it was found that the contribution was negligible. For the services sector as a whole the value added has been estimated at two digit level of NIC from the National Accounts Statistics of India, the official publication released by Central Statistics Office of the Ministry of Statistics and Programme Implementation. The definition of ICT sector / sub-sectors as defined under ISIC Version 4.0 and the corresponding derived National Industrial Classification 2008 (NIC-2008) has been used for compilation of the data. The high lights of the report are:

- Estimated GDP (at 2-digit level of NIC) for total ICT has increased from Rs. 656 billion in 2000-01 to Rs. 2530 billion in 2007-08 with Compound Annual Growth Rate (CAGR) of 21.3%.
- Estimated share (at 2-digit level of NIC) of ICT services to total ICT GDP is about 90% and that of ICT manufacturing sector to total ICT GDP is about 10%.
- Estimated share (at 2-digit level of NIC) of ICT services GDP to Service sector GDP has increased from 6% in 2000-01 to 10% in 2007-08.
- Estimated share of ICT services to total GDP has increased from 3% in 2000-01 to 6% in 2007-08

Index of Telecommunication sector as a part of Services Sector Index

7.3 In view of the growing importance of the service sector in the Indian economy, in terms of its contribution to Gross Domestic Product (GDP) about 55% of total GDP as well as absence of short term indicators to measure the dynamics of this vital sector it was decided

by the Govt. of India to compile service sector indices for the major source activities. Telecom sector is one of the services sectors which need to be measured on urgent basis. The work is in progress in the development of methodology and identification of the variables. The variables under consideration are fixed telephone services, mobile telephone services and provision of internet access.

8. Conclusions

8.1 In India, the data pertaining to Core indicators are maintained at different sources in different formats for the purpose of internal policy decisions and investment purposes. A stand alone survey of enterprises and households will be of great help for business indicators and household indicators. The performance of e-Governance is monitored through the regular e-readiness reports released from time to time by the Ministry of Information and Technology & National Council for Applied Economic Research. **Given the vastness of the country both in size and population, It takes time to establish the mechanism fully for international comparability of data for this sector according to ISIC definition,**

9. Acknowledgements

9.1 The author is thankful to the National Accounts Division of CSO, CSO (IS Wing), Survey Design and Research Division (SDRD) of NSSO, The Ministry of Communication and Information Technology, Ministry of Commerce and Industry , NASSCOM, for furnishing the information related to ICT sector which was required for this study.

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4. Report No. 509 of the 62nd round survey of National Sample Survey Office
5. Reports of Annual Survey of industries for different years (2005-06, 2006-07,2007-08)
6. Reports on Export Import Statistics from Ministry of Commerce and Industry
7. Monthly report of Reserve Bank of India Bulletin
8. e-Readiness Reports of Ministry of Communication & Technology & National Applied Economic Research

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Annex

Core list of ICT indicators

Core indicators on ICT infrastructure and access

Basic core

A1 Fixed telephone lines per 100 inhabitants
A2 Mobile cellular subscribers per 100 inhabitants
A3 Computers per 100 inhabitants
A4 Internet subscribers per 100 inhabitants
A5 Broadband Internet subscribers per 100 inhabitants
A6 International Internet bandwidth per inhabitant
A7 Percentage of population covered by mobile cellular telephony
A8 Internet access tariffs (20 hours per month), in US$, and as a percentage of *per capita* income
A9 Mobile cellular tariffs (100 minutes of use per month), in US$, and as a percentage of percapita income
A10 Percentage of localities with public Internet access centres (PIACs) by number of inhabitants (rural/urban)

Extended core

A11 Radio sets per 100 inhabitants
A12 Television sets per 100 inhabitants

Core indicators on access to, and use of, ICT by households and individuals

Basic core

HH1 Proportion of households with a radio
HH2 Proportion of households with a TV

HH3 Proportion of households with a fixed line telephone
HH4 Proportion of households with a mobile cellular telephone
HH5 Proportion of households with a computer
HH6 Proportion of individuals who used a computer (from any location) in the last 12 months
HH7 Proportion of households with Internet access at home
HH8 Proportion of individuals who used the Internet (from any location) in the last 12 months
HH9 Location of individual use of the Internet in the last 12 months: (a) at home; (b) at work; (c) place of education; (d) at another person's home; (e) community Internet access facility (specific denomination depends on national practices)4; (f) commercial Internet access facility (specific denomination depends on national practices)5; and (g) others
HH10 Internet activities undertaken by individuals in the last 12 months·

Extended core

HH11 Proportion of individuals with use of a mobile telephone
HH12 Proportion of households with access to the Internet by type of access: Categories Should allow an aggregation to narrowband and broadband, where broadband excludes slower speed technologies, such as dial-up modem, ISDN and most 2G mobile phone access. Broadband will usually have an advertised download speed of at least 256 kbit/s.
HH13 Frequency of individual access to the Internet in the last 12 months (from any location): (a) at least once a day; (b) at least once a week but not every day; (c) at least once a month but not every week; and (d) less than once a month.

Reference indicator

HHR17 Proportion of households with electricity

Core indicators on use of ICT by businesses

Basic core

B1 Proportion of businesses using computers
B2 Proportion of employees using computers
B3 Proportion of businesses using the Internet
B4 Proportion of employees using the Internet
B5 Proportion of businesses with a Web presence
B6 Proportion of businesses with an intranet
B7 Proportion of businesses receiving orders over the Internet
B8 Proportion of businesses placing orders over the Internet

Extended core

B9 Proportion of businesses using the Internet by type of access: Categories should allow An aggregation to narrowband and broadband, where broadband excludes slower

Speed technologies, such as dial-up modem, ISDN and most 2G mobile phone access. Broadband will usually have an advertised download speed of at least 256 kbit/s.

B10 Proportion of businesses with a Local Area Network (LAN)
B11 Proportion of businesses with an extranet
B12 Proportion of businesses using the Internet by type of activity

Core indicators on the ICT sector and trade in ICT goods

Basic core

ICT1 Proportion of total business sector workforce involved in the ICT sector
ICT2 Value added in the ICT sector (as a percentage of total business sector value added)
ICT3 ICT goods imports as a percentage of total imports
ICT4 ICT goods exports as a percentage of total exports

----------X----------

8th World Telecommunication/ICT Indicators Meeting (WTIM-10)
Geneva, Switzerland, 24 - 26 November 2010

Information document

Document INF/11-E
16 November 2010

English

SOURCE: Communications Regulatory Commission, Mongolia

TITLE: ICT sector development policy and status of measuring the information society in Mongolia

ICT sector development policy and status of measuring the information society in Mongolia

Mr. T. Naranmandakh
Director
Legal, Information and Administration Department
Communications Regulatory Commission
MONGOLIA

8-th ITU World Telecommunications/ICT Indicators Meeting
24-26 November 2010
Geneva, Switzerland

Content of the presentation:

- Sector development policy and regulatory frameworks
- ICT/Telecommunications infrastructure and market
- Measuring the information society (data/indicators)
- Conclusions

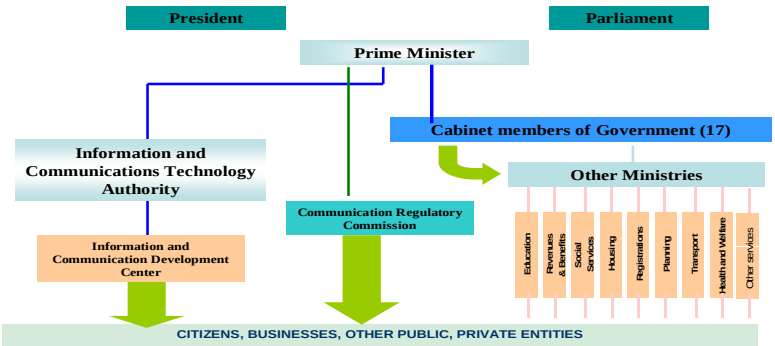
2

Introduction of Mongolia

- Area: 1.5 mln. sq. km
- Population: 2.77 mln. (2010)
  In Ulaanbaatar (capital city):1'100'000
- Geography: Northeast Asian Region.
  Between Russian Federation and China,
  mountains, forest, steppe, desert
- Political system: President
  Great Hural (Parliament, 76 seats)
- Administration: Ulaanbaatar and 21 provinces
- GDP per capita: 3200 US $ (Source: Index Mundi)
- Membership: UN, ASEM, ESCAP, UNCTAD, WTO, WHO, ILO, ITU, UPU, APT, APPU, and etc.,

3

Governmental structure for ICT sector policy and regulation



4

ICT sector legal framework

- Law on Communications, 1996 and 2001;
- Law of Radio wave, 1999;
- Postal Law, 2004 and 2007;
- Other laws: Civil code, Anti-Monopoly Law, Customer Protection Law, Company and Entity Law, Fair competition Law, and etc;
- Amendment of "Laws on Custom" tax-free for computer and its accessories and VAT exception for software products, 2005;
- Law on Governments' Special Funds (USO Fund-2% of all operators' gross revenues), 2006;
- Draft package law on ICT (Basic IT Law, Digital signature Law, e-Commerce Law, e-Governance Law), 2010;

5

Policy and Strategy

- Mongolian Telecom Master Plan up to 2010, Ministry of Infrastructure-MOI, 1994;
- ICT Vision up to 2010, Parliament of Mongolia, 2000
- Telecommunications Sector Mid-term Policy, MOI, 2001;
- Medium Term Strategy and Frameworks for ICT sector, MOI, 2002;
- "E-Government Master Plan" Study (2005-2010), ICTA and KIPA of ROK, 2005;
- "E-Mongolia" National Program 2005-2012, ICTA, CRC, 2005;
- Policy and Regulatory guideline on GSM, 3G, WLL, CDMA-450 business in Mongolia, ICTA/CRC, 2006-2008;

6

Vision of e-Mongolia

This policy aims at establishing the information society and founding the knowledge-based society in Mongolia by enhancing extensive applications of ICT in all sectors of society. By 2012, Mongolia will become one of the top ten ICT developed countries per inhibitants in ^sia.

- Legal and Regulatory Framework
- Infrastructure development
- Leadership and Reform
- Interoperability and Applications
- ICT-enabled Economic Growth
- Public Awareness and Participation
- ICT Skills and Human Resources Development

Implications

- Designing and implementing new businesses such as e-Commerce, e-Tax, e-Custom, e-Payments, e-Procurement, e-Health, and e-Learning
- Establishment of an electronic system to expand civil participations
- Establishment of a unified Information exchange network among Gov. agencies
- Requirement for the leadership at all levels of e-Government execution
- Requirement for legislating laws and regulations on ICT
- Need to build high speed transmission networks throughout Mongolia
- Establishment of nation-wide Digital Community Centers for business
- Reduction of the Internet connection fees

7

Regulatory frameworks and activities

- Establishment of the Communications Regulatory Council under the Ministry of Infrastructure (MOI), 1995;
- Liberalization of international and domestic telephone service, cellular mobile market, 1999;
- Amendment of Law on Communications, 2001 (Established the Communications Regulatory Commission of Mongolia-CRC as independent body from policy making authority) www.crc.gov.mn;
- Chairman and 6 Commissioners of the CRC appointed by the Prime Minister of Mongolia;

8

Regulatory frameworks and activities

Main functions of CRC, Mongolia include:

- Issuing telecommunications/ICT licenses (including TV and radio broadcasting, postal services, frequency, special number)
- Approving/monitoring the general terms of interconnection, between networks;
- Allocating and monitoring radio frequencies and planning;
- USO Fund administration and management;
- Approving accounting methodologies for the setting of tariffs and price;
- Approving and monitoring tariffs of dominant operators in the market;
- Developing and implementing a nationally integrated numbering plan;
- Settling disputes between license holders and customers;
- Telecom/ICT sector basic data/information collection and reporting to the related Government organizations such as ICTPA, NSC and others;

9

ICT/Telecommunications infrastructure

Name of biggest company, operator	Service, number of Subscribers	Transmission network, [km]	Comment
Information and Communications Network Company , 2007	Backbone network asset management	Optical fiber-8500+ Digital MW-1,400+ Analog MW-524.7+ VSAT-350	State owned backbone network 21 province center and 360+ districts
Mongolia Telecom Joint Stock Company, 1994	50,100 NGN, CDMA 2000 1X 161,200 Fixed telephony	-	Fixed telephone /WLL service 21 province center and 300+districts
MobiCom Corporation, 1996	1,050,200 GSM GPRS 11,800 WLL CDMA	Optical fiber-3100+ Digital MW-2100	(International open tender) 315 sites
Skytel company, 1999	310,600 CDMA-2001xEVDO	Optical fiber-340 Digital MW-1700 VSAT-50	(International open tender) 300+ sites
Unitel company, 2006	250,000 GSM	VSATs, Digital MW	(International open tender) 200+ sites
G-Mobile company, 2007	120,000 CDMA-450	Digital MW	(International open tender) 150+ sites

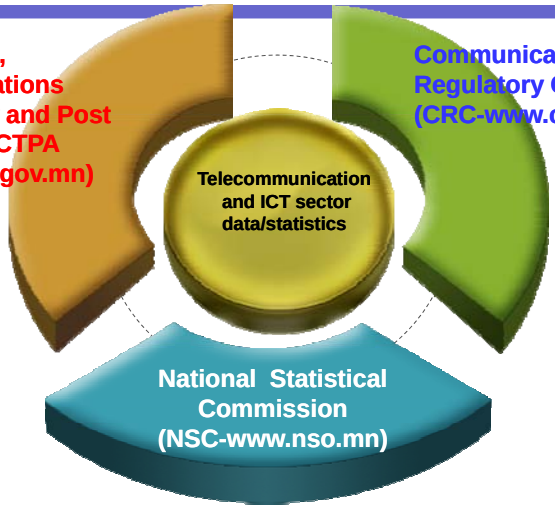
10

ICT/Telecommunications infrastructure

Монгол Улсын дамжуулах байгууламжийн нэгдсэн сүлжээ

11

Government bodies related to the telecom/ICT sector statistics



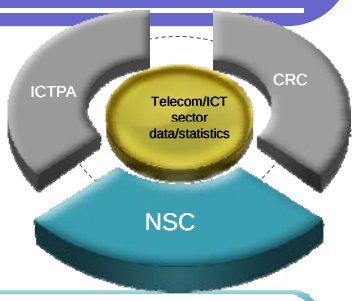
Information, Communications Technology and Post Authority -ICTPA (www.ictpa.gov.mn)

Communications Regulatory Commission (CRC-www.crc.gov.mn)

12

Government bodies related to the telecom/ICT sector statistics

Established: 1924
Employees: 120+
Main functions: Implementation of laws, formulation of statistics policy, census
Homepage: www.nso.mn



National Statistical Commission

- To implement related laws ("Law on Statistics", "Law on the Population and Housing Census", and other laws);
- To formulate policy and coordination of statistical data collection and statistics information dissemination;
- To organize and conduct population and housing census;
- Report to the Parliament and Government of Mongolia;

13

Government bodies related to the telecom/ICT sector statistics

Main functions of NSC, Mongolia include:

- Implementation of national statistics related laws. For example, Law on Statistics of Mongolia (1997, 2004), Law on the Population and Housing Census (2008);
- Annual and mid-annual population and housing census in Mongolia;
- Approving and monitoring of national and sector statistics methodologies for the census;
- Statistical data collection and dissemination of statistical information (monthly and quarterly bulletin);
- International cooperation (ITU, UNESCAP, UNSD, UNCTAD, … NSO);

Note: Nationwide annual census 2010 year (Mongolia)

14

Government bodies related to the telecom/ICT sector statistics

(Law on the Population and Housing Census, 2008)

Article 11. Census data

11.1.The following major data collected by the census:

11.1. 1 . demographic and social indicators:

-clan name, surname and name,
-date of birth,
-age and sex,
-ethnicity/nationality
-citizenship,
-education and literacy,
-religion,

11.1.2 Geographic and migration data place of birth:

-place of usual residence and residence on census days,
-duration of residence,
-place of residence five years ago from the census period,

11.1.3 economic indicators:

a. employment status,
b. occupation,
c. types of industry,
d. unemployment and its reasons,

11. 1.4 data on housing conditions:

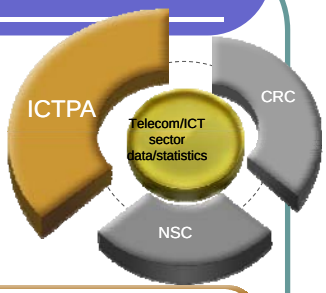
a. type and ownership of dwelling,
b. number of rooms and floor space,
c. kitchen,
d. water supply, bathroom and shower,
e. waste disposal, toilet
f. electricity, heating and telephone/communication

11.2. The National Statistical Commission can include additional indicators, which required to demographic, migration, socio-economic and housing condition survey except of indicators specified in 11.1 of this law to census data regarding to particular situation.

15

Government bodies related to the telecom/ICT sector statistics

Established: 2004
Employees: 40+ (4 Departments)
Main functions: ICT sector development policy & strategy
Homepage: www.ictpa.gov.mn



Information, Communication Technology and Post Authority

- **To formulate ICT/Telecommunications sector; development policy and strategy;**
- **To provide policy guidance for ICT/Telecom statistics data collection and reporting to the Government;**
- **To contribute ICT/Telecom related statistical programs;**

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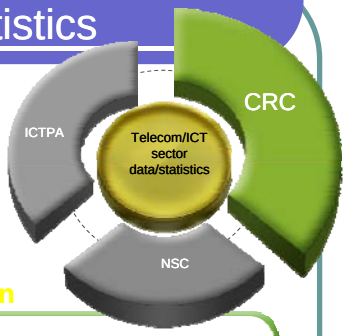
Government bodies related to the telecom/ICT sector statistics

Established: 1995
Employees: 50+ (4 Department)
Main functions: ICT sector regulations and issuing licenses (including postal and broadcasting sector)
Homepage: www.crc.gov.mn



Communications Regulatory Commission

- **To issues license and regulatory frameworks;**
- **To collect ICT/Telecom sector data/statistics from licensed operators (subscribers, market and demand) and to report to the ICTA and Government;**
- **To make lists and formats of the required new statistical data and indicators in sector with ICTA and NSC;**

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Government bodies related to the telecom/ICT sector statistics

CRC is collecting the following the Telecommunications and ICT data and statistics from licensed operators and report to the ICTA/NSC:

1. Telecommunications (including postal and broadcasting):

a. Number of subscriber, density and sites (telephone, mobile, FM, TV sets, CATV);
b. Incoming and outgoing international/domestic traffics (fixed, mobile);
c. International and domestic postal market information;

2. Information technology:

a.Types of internet subscribers and users (internet, ADSL, VDSL, wireless access, broadband);
b.Market information (ISPs, share market);
c.Number of PCs (office and house);

3. Finance and HRD information:

a. Investment and finance information (revenue, cost, investment);
b. Tariff and price information;
c. Human resource development information (employees, average salary);

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International partnership on measuring ICT for development

Partnership and development on Measuring ICT for Development:

- Basic ICT infrastructure & access indicators (ITU);
- Indicators on access to, and use of, ICT by households and individuals (ITU);
- Indicators on use of ICT by businesses (UNCTAD);
- Indicators on the ICT sector and trade in ICT goods (UNCTAD);
- core indicators for Measuring ICT in education (UIS);
- ITU-WTI and Regional events on ICT Standardization: ITU World Telecommunication /ICT Indicators Meeting, Egypt, 2008
- ITU-T Research project-Measuring and Reducing the Standards Gap, 2009
- IDI-ICT Development Indicator, ITU, 2009

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Cooperation between the ITU/other organizations and Mongolia

- ITU Membership in 1964: Mongolia
- Pilot and consulting projects: Numbering planning, SMS4D software, NGN network study (2010) and HRD,
- ITU-T Research project-**Measuring and Reducing the Standards Gap**, 2009: National Standards Assessment Case Studies-Mongolia included the report,
- UNSD Statistical Databases and ITU indicators: Undata and ITU-ICT indicator database,
- UNDP/ESCAP-SIAP/UNFPA support and Government of Mongolia: **2010 Population and Housing-Mongolia**, November 11-17, 2010 (According to Law of Census information on total number of 49 major indicators will be collected by the Census)

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Future Objectives

- To develop and implement an integrated policy and guidelines of the sector on international cooperation and national statistics/ICT core indicators and IDI;
- To create reliable ICT/Telecom database of statistics and broadband technologies including wireless (3G, WiMax, Digital and IPTV);
- To implement the "Recommendations on Bridging the standardization gap report" (ITU, 2009) and measure/guidelines of ITU-IDI in national level;
- To improve the qualitative and quantitative metrics for ICT statistics and assessing standards capability parameters;
- To improve cooperation with Government/Public organizations and NGOs in data collection/dissemination of statistical data, promote their activities in line with public interest and access to knowledge policy;
- International organization and regional cooperation;
- HRD and capacity building;

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Conclusions

Key challenges:

- Specific problems for Mongolia (nomadic lifestyle and population diversity, terrain and natural conditions, lack of basic infrastructure such as road, energy);
- Appropriate legal and regulatory environment, specially IT applications, frequency allocation and pricing, interconnection and tariff, network security, e-commerce and etc.,
- Limited availability and processing of data, and reliability of data sources;
- Lack of compatibility to use of ICT/Telecom core data/indicators and IDI in national level;
- Digital divide and USO fund operation;
- Lack of investment to introduce new ICT/Telecom business and need to improve data format and collection process;
- Lack of HRD and capacity building ICT/Telecom data collection and processing;

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Conclusions

Key Success Factors:

- Strong Political & Governmental Leadership;
- Improvement of legal and regulatory environment (fair, transparent regulation, One window approach, Government portal, web information on statistics/data);
- Technology neutral policy and improvement of data collection/processing;
- Bridging Digital Divide and Government special programs, for example “PC for All Children”, “Rural internet connection” program, “Rural mobile coverage project”, “IT literacy”;
- Strengthening of international cooperation and use of internationally recognized statistical data format and core indicators in national level (ITU, UNCTAD, World Bank...);
- Investing Human resource development/capacity building;
- Partnership with Private Sector and Civil Society;

23

Thank you for attention

Contact address:
T.Naranmandakh
Director
Legal, Information and Administration Department
Communications Regulatory Commission of Mongolia (CRC)
Metro Business Center, 5-th Floor
Sukhbaatar Street-13, Ulaanbaatar 14201
MONGOLIA
Tel/Fax: 976-11-300237, 327720
E-mail: naran@crc.gov.mn
http: www.crc.gov.mn

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Geneva, Switzerland, 24 - 26 November 2010

Information document

Document INF/12-S
16 November 2010

Spanish

SOURCE: Superintendencia de Telecomunicaciones, Costa Rica

TITLE: Indicadores de Telecomunicaciones en Costa Rica

sutel | SUPERINTENDENCIA DE TELECOMUNICACIONES

Walther Herrera Cantillo

Suplente Consejo SUTEL

José Gonzalo Acuña González *QDG*

sutel | SUPERINTENDENCIA DE TELECOMUNICACIONES

Indicadores de Telecomunicaciones en Costa Rica

San José, Noviembre 2010

Antecedentes

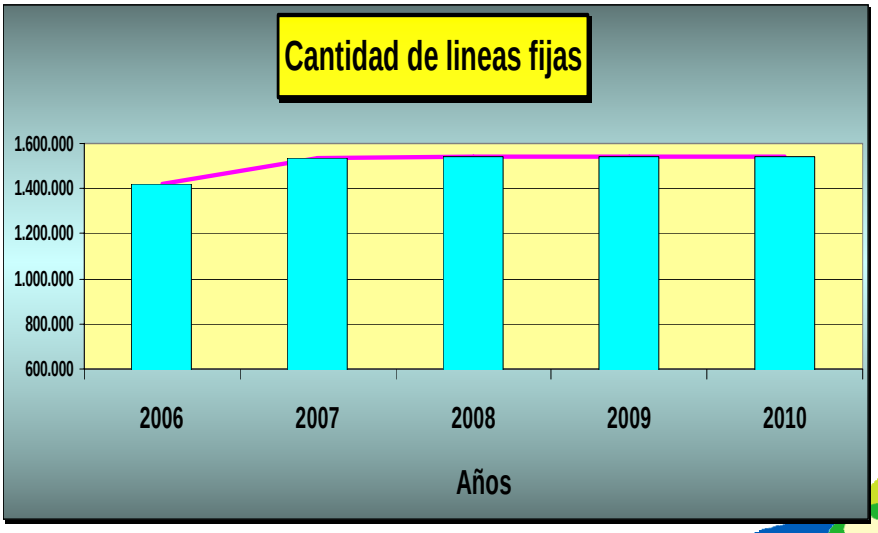
- **Área**-Total — 51,100 km2
- **Población** — 4.691.553 Hab.

Antecedentes

- *Ley General de Telecomunicaciones* (Ley No. 8642, publicada en la Gaceta el 30 de junio de 2008).
- Creación de la Superintendencia de Telecomunicaciones 13 agosto del 2008 y inicia operaciones en febrero 2009.

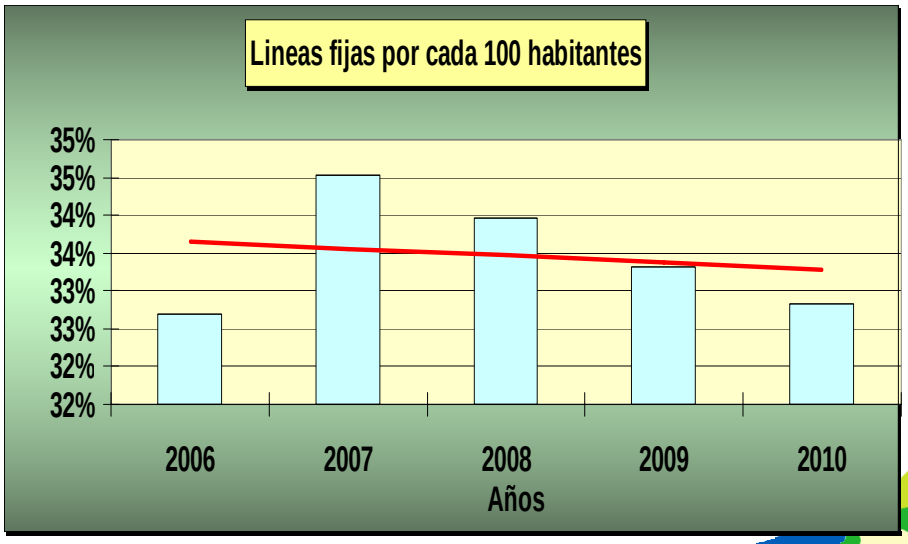
Situación actual del sector de las telecomunicaciones en Costa Rica

Telefonía fija



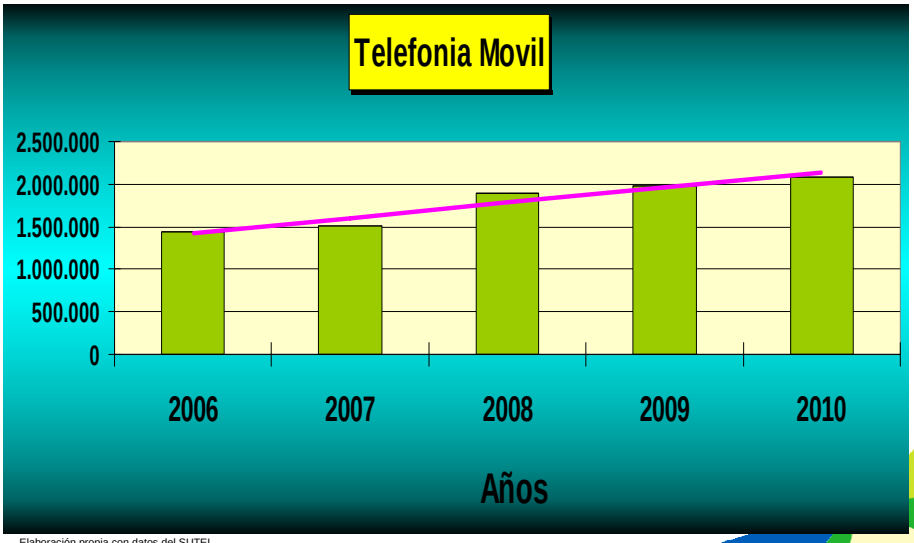
Elaboración propia con datos SUTEL

Telefonía fija



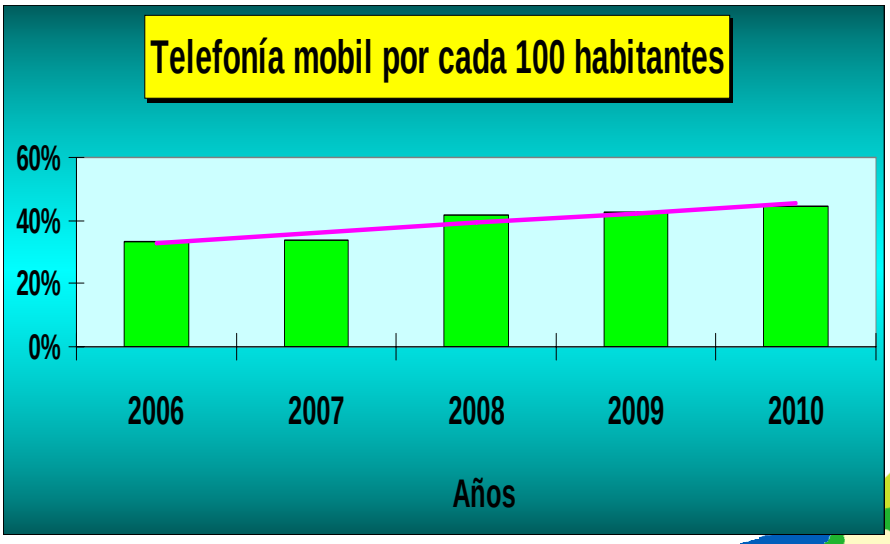
Elaboración propia con datos SUTEL

Telefonía Mobil



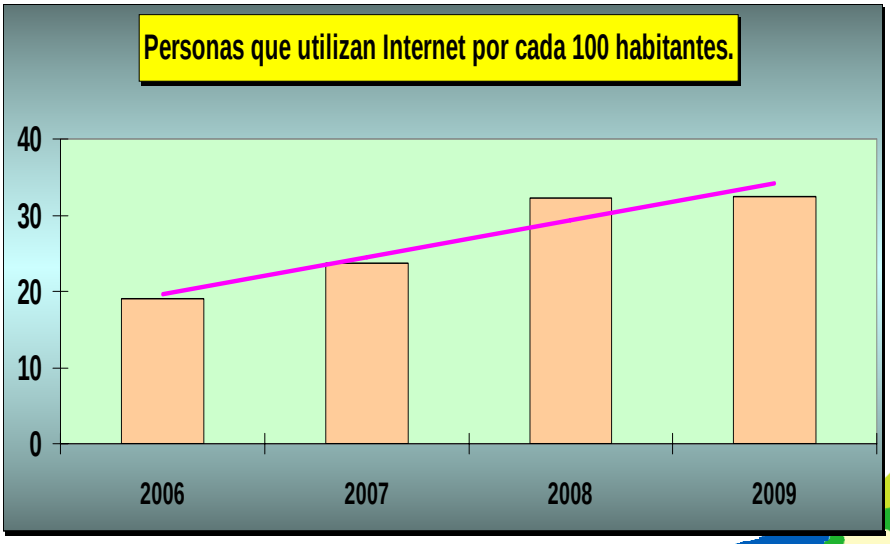
Elaboración propia con datos del SUTEL

Telefonía Mobil



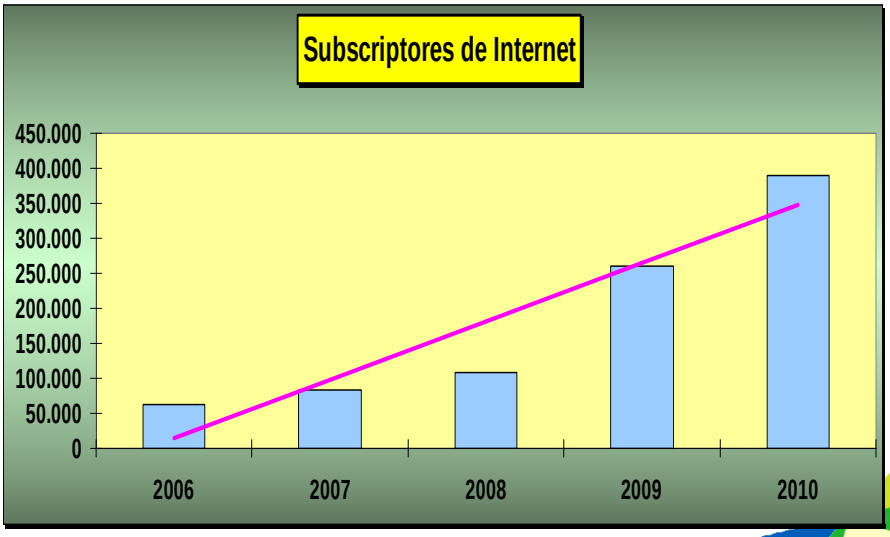
Elaboración propia con datos del SUTEL

Internet



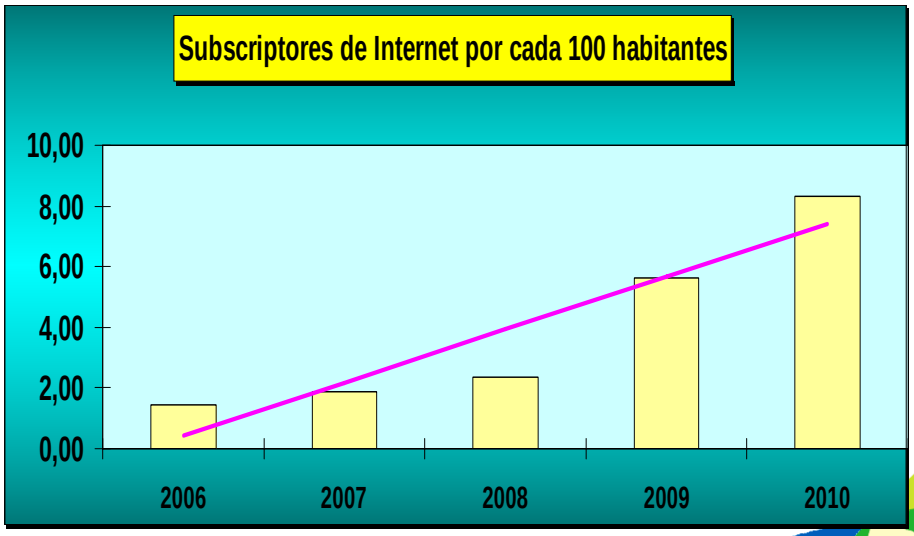
Elaboración propia con datos del INEC

Internet



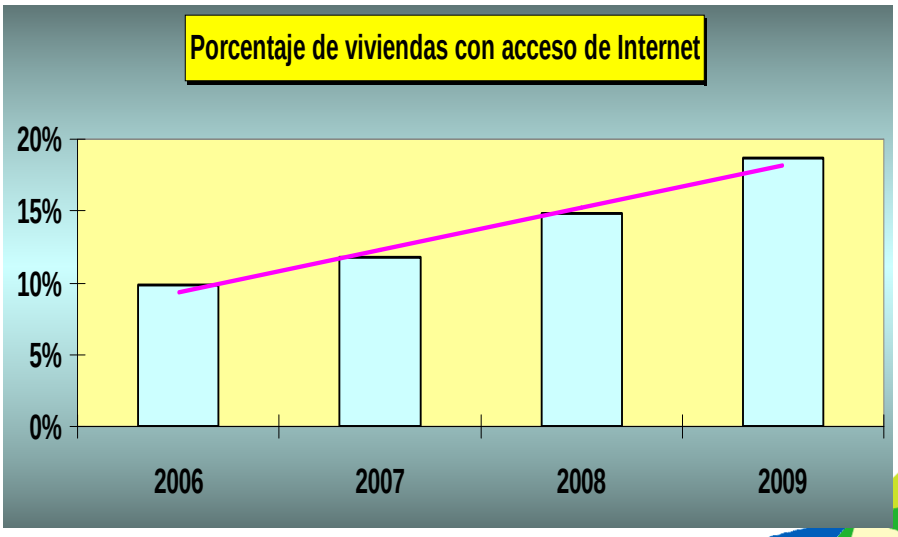
Elaboración propia con datos del SUTEL

Internet



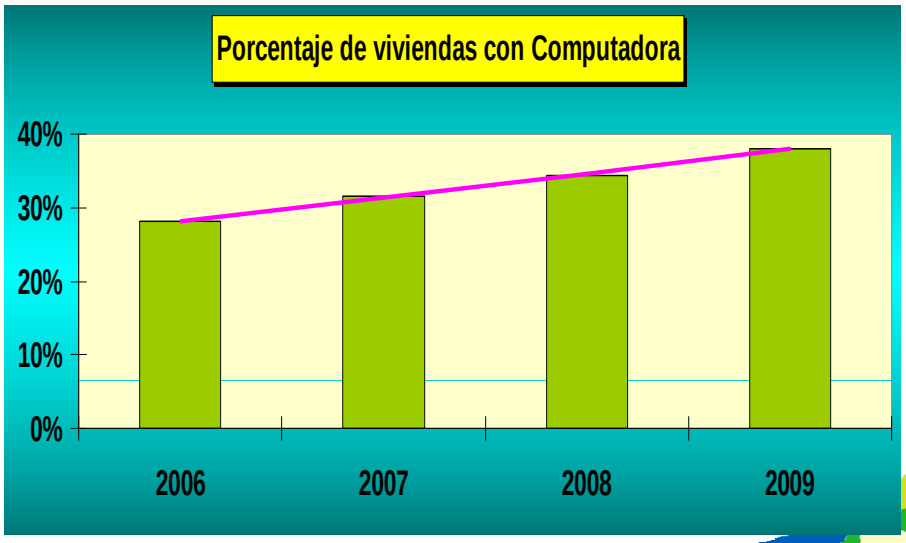
Elaboración propia con datos del SUTEL

Internet



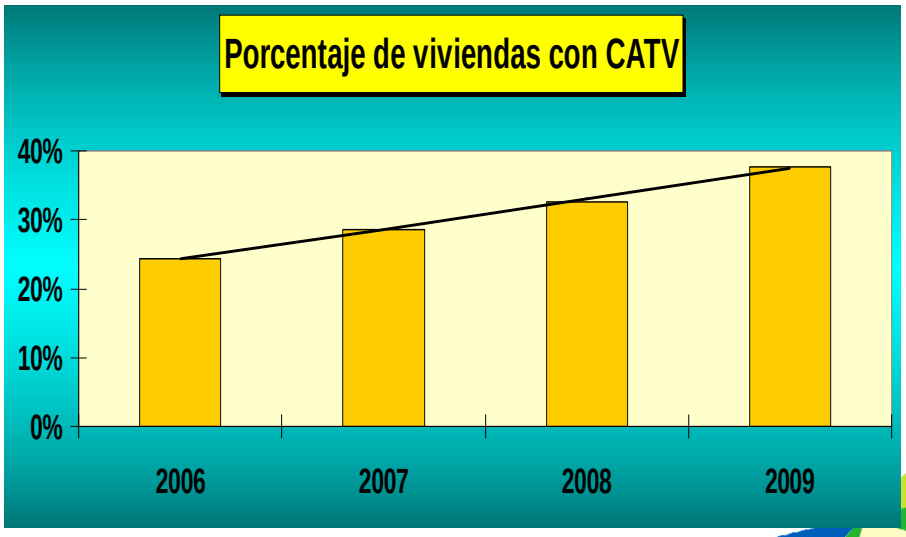
Elaboración propia con datos del INEC

Internet



Elaboración propia con datos del INEC

Internet



Elaboración propia con datos del INEC

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Geneva, Switzerland, 24 - 26 November 2010

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16 November 2010

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Commission for
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General

Collection of ICT Statistics in Ireland – Commission for Communications Regulation (ComReg)

Paper prepared for the ITU's World Telecommunications ICT Indicators Meeting Geneva, 24-26 November 2010

An Coimisiún um Rialáil Cumarsáide
Commission for Communications Regulation
Abbey Court Irish Life Centre Lower Abbey Street Dublin 1 Ireland
Telephone +353 1 804 9600 *Fax* +353 1 804 9680 *Email* info@comreg.ie *Web* www.comreg.ie

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1 Introduction

The Commission for Communications Regulation (ComReg[1]) is the statutory body responsible for the regulation of the electronic communications sector (telecommunications, radio-communications and broadcasting transmission) and the postal sector in Ireland. ComReg was formed in December 2002 to replace the Office of the Director of Telecommunications Regulation (ODTR) which was established in 1997.

ComReg collects a considerable amount of data on the Irish electronic communications sector, from both an industry and consumer perspective. ComReg's Research Unit is staffed by two analysts (with academic and industry backgrounds in economics and statistics) and a manager (with a regulatory and economic background). This paper discusses both the primary and secondary data collected by ComReg, the manner in which data is analysed and disseminated and the challenges of data collection and interpretation.

In November/December 2009, an external audit was conducted on the statistical information gathering and survey process within ComReg, which operates under the remit of the Research Unit. This was the second such audit that had been carried out over the last eight years. In its executive summary of the audit report, the auditors concluded that:

"It is apparent from our high level review and examination of documents, that ComReg has in place effective processes and control procedures which are designed to monitor statistical information gathering and survey processes and to identify whether adequate information had been provided by the operators. No matters came to our attention during the course of our audit review which would lead us to conclude that these controls are not operating effectively."

Given the external auditor's belief that ComReg's statistical processes and procedures are operating effectively, the onus remains on the Research Unit to maintain the high standard of data collection and analysis that has evolved over the last number of years and to strive for continuing improvements in its statistical methodology.

[1] http://www.comreg.ie

2 Quarterly Review data collection

2.1 Overview

ComReg's predecessor, the ODTR, began to collect primary data on the Irish telecommunications market in 1999. Prior to this date, data was collected primarily by the national statistics office - the Central Statistics Office (CSO), and the ministry responsible for policy in the area of telecommunications, now known as the Department of Communications, Energy and National Resources (DCENR). In addition the incumbent telecommunications operator, Eircom (formerly Telecom Eireann) collected primary data on its subscribers, quality of service etc., which in turn was provided to bodies such as the Organisation for Economic Co-operation and Development (OECD).

Following the publication of an annual market review[2] in November 1999, the ODTR published its first Quarterly Key Data Report on March 22nd, 2000. Since that date, ComReg has continued to collect primary statistical data from authorised operators on a quarterly basis, in order to both understand current trends in the Irish communications market and inform external users.

The Quarterly Key Data Report aims to represent at least 95% of the total electronic communications market in Ireland. Because electronic communications networks and services can be offered in Ireland without the need for a preceding licence or authorisation, not all providers of networks and services operating in the Irish market may provide data for the report. There is a €500k revenue threshold, below which operators are not required to provide data.

Historically, ComReg's Quarterly Key Data Reports have adopted a rigorous and exacting standard, both with regard to accuracy and completeness. This is notwithstanding the fact that occasionally, the available data is not as complete or accurate as ComReg would ideally wish it to be. However, ComReg is intent, on an ongoing basis, to improve its statistical standards wherever possible.

2.2 History of the Quarterly Report

As with any new data gathering process, there were some initial difficulties. A combined questionnaire was initially sent to all operators including fixed line, mobile and cable companies. With evolving market developments in telecommunications products and services, data collection from fixed line operators became more detailed and extensive, it was decided that a specific mobile questionnaire was needed to be issued to the mobile operators and a combined questionnaire to the fixed and cable companies.

Increasingly Irish mobile operators are being asked for more and more data. This is an important issue as it is incumbent on ComReg to ensure that data requests to telecoms operators are not overly burdensome. As ComReg is called upon by market

[2] Liberalisation in the Irish Telecommunications Market – one year on (ODTR document 99/71) available at http://www.comreg.ie/_fileupload/publications/odtr9971.pdf

operators, academic institutions and international organisations for data requests and the production of reports, ComReg must have in place information systems to respond efficiently. It should also be noted that ComReg tends to receive duplicative data requests which adds to the data collection burden for both telecoms operators and NRAs. There is certainly a need for standardisation among institutions in terms of data collection, e.g. the EU Commission's broadband definitions vs. OECD broadband definitions.

Responses to the questionnaires were initially low as operators were reluctant to respond due to concerns regarding confidentiality and the manner in which data submitted would be used. The ODTR worked with the industry to establish guidelines for handling commercially sensitive information. There are still some issues with data collection however as some of the operators' internal systems are not always capable of extracting the data requested or do so in an incorrect fashion[3]. However, the process has become more automated by means of:

- Building relationships with the operators and the people directly involved in collecting the information. Both the ODTR and ComReg have met operators who have queries regarding the questionnaire, and a timetable is sent to the operators at the beginning of the year outlining dates on which the questionnaire is to be issued and returned as well as the date on which the quarterly report is due to be published.

- ComReg has held a number of workshops with both the fixed and mobile operators over the last three years to discuss and work through significant changes to the questionnaire. ComReg gives the operators a number of months' notice of any questionnaire changes it intends to make. ComReg has recently met with the following operators:
    - BT
    - Vodafone
    - 3 Ireland
    - Meteor
    - Eircom
    - Magnet
    - O2
    - UPC
    - ENet

- A number of industry workshops have also been held in the ComReg offices to elicit discussion and feedback on proposed changes to both the data collected and the ways in which this data is analysed in the Quarterly Key Data Report. These workshops included:
    - Workshop on leased line data collection – June 2008
    - Workshop on mobile data collection – February 2009
    - Workshop on fixed data collection – April 2009

[3] http://www.siliconrepublic.com/comms/item/17952-mobile-operator-3-fined-for

- A database was initially established in 2000 using Microsoft Access with links to data in Microsoft Excel to enable trend analysis and accuracy checks and also to facilitate the efficient extraction of various key indicators.

- In 2004, ComReg initiated a review of its statistical data collection and as part of this review a decision was made to seek a data warehouse solution via a competitive tender launched in November 2004. A preferred supplier, Solstone Plus[4], was chosen in early 2005 and the new warehouse (built on a SQL server) for the Quarterly Key Data Report and Market Analysis data went live in the second half of 2005.

- To improve data accuracy, in 2008 the Research Unit developed a series of business checks (for example around quarterly and annual variances in data), in conjunction with Solstone Plus, within the questionnaire and while this has helped the process, various checks still take place between ComReg and the operators once the data is submitted.

- The operators have approximately one month to complete the questionnaire and ComReg has 3-4 weeks to carry out the data analysis before the report is reviewed by ComReg senior management and then published. The period of time for analysis is dependent on how soon after the due date the questionnaire is submitted.

- A recent audit of ComReg's IT systems identified management information as one of the key strategic findings:

  "There are performance, flexibility and development issues relating to the reporting tool used…the process to generate quarterly industry reports is labour intensive and not delivered in an online, integrated manner. A rationalisation exercise needs to be performed to standardise and integrate as many of the ComReg data stores as possible into the data warehouse."

2.3 Issues with Quarterly Review data collection

While ComReg can never be absolutely certain of the accuracy of the data supplied by operators, the Research Unit has put in place checks and controls to ensure that the data collected is relevant, accurate and comprehensive. ComReg also relies on constant communications with operators to ensure that any issues that arise in the data collection process are quickly resolved.

Double-counting is also an issue that is particularly evident in certain segments of the questionnaire such as Internet subscriptions (in many cases subscribers can have more than one Internet account, with one or several ISPs) and leased line circuits. Due to these limitations, certain data is not made publicly available by ComReg.

[4] http://www.solstoneplus.com/

As not all of the data collected is published, ComReg must take account of a number of considerations in deciding what data is to be made publicly available:

- The number of operators in the market; given that there is only one very large player in the Irish cable market and only four main players in the Irish mobile market a lot of data is not published for confidentiality reasons.

- National legislation; ComReg is subject to the Freedom of Information Act[5] which provides the requester with an automatic right to request access to information not found in the public domain. The implication of this is that ComReg may be required to provide information requested unless it is deemed to be commercially sensitive by telecoms operators.

- Accuracy of the data; if ComReg is not confident that the data is accurate then it will not be made public. ComReg's statistical website, ComStat[6] was launched in 2008, making the underlying data behind the Quarterly Key Data Report available to the public, and ComReg must ensure that as well as having data accurate in reports, data must be correct when uploaded to the ComStat portal.

The Quarterly Key Data Report has continued to be published four times a year by the ODTR and its successor ComReg and it is one of the most popular documents available on the ComReg website, achieving much media coverage and average quarterly downloads of between 2,000 and 3,500. In order to keep the report relevant, ComReg remains flexible in terms of modifying the data and content to reflect the rapidly changing Irish telecommunications market. The table below highlights a number of key indicators currently collected in both the mobile and fixed line questionnaires.

10 Key Mobile Indicators	10 Key Fixed Line Indicators
2G and 3G subscriptions split by prepaid & postpaid and business & non-business customers	PSTN subscriptions and access lines split residential and non-residential
Number of mobiles ported (MNP) split by ports to specific operators	Number of bundled (double-, triple-, quad-play) subscriptions split residential and non-residential
Mobile broadband subscriptions split by prepaid & postpaid, business & non-business customers, and connection speeds	Fixed telephony retail traffic in minutes and sub-categorised, for example; local, national, premium rate, international

[5] The Freedom of Information Acts, 1997 and 2003 establish a number of important legal rights for those seeking access to official information. Statutory rights under the FOI Act include 1) a legal right for each person to access information held by public bodies; 2) a legal right for each person to have official information relating to him/herself amended where it is incomplete, incorrect or misleading; 3) a legal right to obtain reasons for decisions affecting oneself; 4) the FOI Act is designed to allow public access to information held by the Commission which is not routinely available through other sources. Access to information under FOI is subject to certain exemptions and involves specific procedures and time limits.

[6] http://www.ComStat.ie/

Average Revenue per User split by prepaid, postpaid and blended	Residential and non-residential fixed telephony retail revenues
Number of Retail Minutes in a number of sub-categories including; minutes to fixed lines, off-net minutes, international outgoing minutes	Narrowband internet subscriptions and revenues split by residential and non-residential customers
Retail revenues in a number of sub-categories including; domestic traffic revenues, retail roaming revenues, connection and rental revenues	Residential and non-residential broadband subscriptions across all available platforms and connection speeds
Volumes of SMS and MMS traffic, domestically and international roaming	Number of households passed for each individual broadband technology
Churn rates by individual operator	Number of local loops unbundled (LLU); line share and full LLU
Total value of tangible assets by mobile operators	Number of leased line circuits split by bandwidth and revenues accruing to each type
Number of full time employees directly attributable to the telecom sector	Television subscriptions and revenue split by cable, satellite and IPTV technologies

3 Market Analysis data collection

ComReg is charged with assessing the relevant electronic communications markets in Ireland. This process is based on a list of markets contained in the December 2007 Recommendation on Relevant Products and Service Markets[7]. ComReg is required to review the list of recommended markets to assess the level of competition particular to those markets in the Irish State and where applicable to those markets which were removed from the recommendation in 2007. Markets must be defined and analysed in accordance with the principles set out in the Recommendation and under the Framework Directive. Where ComReg finds that there is evidence of significant market power of one or more operator, remedies must be imposed in order to address the competition problem.

During the past three years ComReg has analysed, or is in the process of analysing, a number of markets[8] based on definitions by the European Commission in its Recommendation on Relevant Markets. The process of data collection for Market Analysis typically begins with a workshop with the main telecommunications operators and is followed up with questionnaires for data that ComReg has not already collected in its quarterly questionnaire or in surveys. Some operators may experience difficulties providing certain sets of data (particularly data disaggregated to a granular level; an example of which is provided in the Appendix) for the Market Analysis process as some data required might be business sensitive and cannot be disclosed while others can have problems with providing historical data, for a number of reasons, not least information systems-related. As Market Analysis is an iterative process, problems experienced and resolved in the procedure lead to improvements going forward.

As part of the Market Analysis process, surveys (both qualitative and quantitative) can be conducted in order to collect additional, attitudinal information from both consumers and businesses. It is necessary for ComReg to take into account end-user attitudes/behaviours (among both business users and private consumers) in relation to services provided in the relevant markets including how consumers behave at the retail level and whether there are any effective retail demand side substitutes for a service.

In its Market Analysis procedure ComReg seeks to determine various aspects of retail end-user behaviour in relation to, for example, their choice and use of mobile voice services and any characteristics of such services which distinguish them from other mobile, fixed or other electronic communication services. ComReg also seeks to understand consumer sensitivities to prices and how this impacts on their choice/use of services.

Once a satisfactory level of data has been collected, follow-up discussions and consultations are conducted with main suppliers and purchasers in the market. The

[7] http://eur-lex.europa.eu/LexUriServ/site/en/oj/2007/l_344/l_34420071228en00650069.pdf

[8] Including Wholesale Terminating Segments of Leased Lines [Market 6], Wholesale Physical Network Infrastructure Access (WPNIA) [Market 4], Wholesale Broadband Access [Market 5], and Wholesale Market for termination of voice calls on individual mobile networks (the Mobile Termination Market) [Market 7]

aims are to clarify and confirm data provided; to address any anomalies between demand and supply information; and to identify any qualitative issues which impact on the Market Analysis. Going forward, ComReg will continue to more closely link the Market Analysis and Quarterly Key Data Report data collection procedures in order to reduce burden on industry operators.

4 Additional data collection

ComReg's Research Unit commissions end-user surveys on a regular basis to supplement and complement primary data collection. Both residential and business users are surveyed on their access, usage and attitudes to communications service such as fixed voice service, narrowband and broadband internet access, mobile voice and data and postal services. An example of the collected data is provided in the Appendix. The residential consumer surveys are typically based on a nationally representative sample of approximately 1,000 persons aged 15 to 74. The surveys ask consumers about their awareness and usage of ICT services and are conducted via face to face in-home interviewing. The accuracy of these surveys is typically estimated to be +/-3%. Data is weighted in order to reflect the demographic profile of the adult population in the Republic of Ireland, based on the most recent data available from the CSO.

The business user surveys are typically telephone interviews among a sample of approximately 500 Small to Medium-sized Enterprises (SME) and 50 corporate businesses. SMEs are defined by ComReg as companies with less than 100 employees. Large corporates are defined by ComReg as companies employing at least 100 employees. Quota controls are set for company size based on the total number of employees. Representative quota controls are also set for industry sector. The margin of error is typically estimated to be +/-4%. ComReg is currently in the tendering stage of changing its survey procedure and will no longer issue quarterly surveys. Instead ComReg will produce a number of regular trackers for certain key metrics on the communications market aswell as in-depth one-off pieces of qualitative research (for example on the Premium Rate Services industry and international roaming).

Over the last few years, ComReg's Research Unit has also purchased various data and analysis services from telecoms consultants and data providers (such as Teligen and Cullen International among others) to provide research and data, which allows ComReg to benchmark the Irish telecommunications market against other markets primarily, but not exclusively, in the European Union. In addition there is a need for wider research to ensure that the regulator understands the key economic, technical and commercial trends and the appropriate regulatory and legal response to such trends. Statistical data such as mobile and fixed voice subscribers, traffic volumes, mobile and fixed broadband subscribers, data on tariffs or pricing for specific telecommunications services, penetration data at household and per capita levels is provided by the telecoms consultants and data providers and this data is used by ComReg both for internal benchmarking and analysis, as well as for use in reports such as the Quarterly Key Data Report.

Regulatory data is also purchased such as news updates as well as more in-depth analysis of initiatives at a pan-European level, national level (information on work by particular National Regulatory Authorities), and globally (both by individual countries outside the EU and bodies such as the International Telecommunications Union (ITU)). Examples include information and analysis of public funding of next-generation broadband in EU countries, a look at how rules and processes for mobile

number portability have been created by other regulators and what Market Reviews have been completed by NRAs.

All of this information is required by ComReg for analysis of best practice with regard to regulation of electronic communications markets as well as to provide current awareness to ComReg staff of developments with regard to regulation at both a national and an international level. It is one of the tasks of the Research Unit to keep ComReg staff members abreast of this type of information aswell as being the "gatekeeper" to vendor websites, reports, and conferences etc.

5 Data analysis

5.1 Research Unit analytical process

The data that ComReg collects from telecoms operators in the Irish market is verified and queried rigorously, given specific time constraints. There are initial variance checks built into the questionnaire which allows the operator to sense-check its own data before submitting the questionnaire to ComReg by means of a secure-upload facility[9].

Once ComReg's Research Unit has received all questionnaires, reviewed and verified any anomalies in terms of movements outside of parameters specific to individual metrics or issues with the data, the Research Unit analysts can produce the Quarterly Key Data Report. Primarily the report focuses on quarterly and annual trends in the fixed line, mobile, internet and broadcasting markets. This is achieved through chart and text based analysis, examples of which are provided in the Appendix.

Any data provided by third party sources is verified by means of discussion with the analysts from the consultant or provider that compiled the information. Similar to the information that ComReg collects from operators in the Irish market, analysis is primarily chart-based with factual text added for commentary purposes.

For ComReg's residential and business surveys, the market research company that is commissioned to conduct the survey will be in close liaison with ComReg's Research Unit during the data collection period and will keep ComReg updated as the quotas in the survey are completed. Initially ComReg's Research Unit is provided with headline figures for review and is in constant communication with the research agency as the analysis and presentation is completed. ComReg is then provided with all background data in both Excel and SPSS[10] (Statistical Package for Social Sciences) format. This allows ComReg to conduct additional statistical analysis (demographics for example) for both internal and external stakeholders.

Ad hoc analysis and research conducted by the ComReg Research Unit using data collected across a number of sources (quarterly key data, survey data, third party data) can be produced with Excel, SPSS or Stata[11] for additional, robust econometric evidence. The Research Unit has recently conducted econometric analysis in the following areas and an example of this ad hoc research is available in the Appendix:

- Quantifying the ex-post benefits of regulation as part of an overall paper "Measuring ComReg's Economic and Social Contribution"
- An analysis of competition and investment in the European Telecommunications Market
- The effect of regulation on fixed and mobile telecommunications prices

[9] http://www.comreg.ie/_secure/home/default.asp

[10] http://www.spss.com/

[11] http://www.stata.com/

5.2 Future of data analysis process

In order to enhance ComReg's role as a key information and data source for the communications sector and the expert agency with regard to statistical data on the Irish communications sector, as well promoting ComReg internally as a Centre of Excellence which enables smarter working, a new data warehousing and reporting tool has been proposed. This would in effect be a multi-purpose Management Information System (MIS) providing a full set of metrics to ComReg management and staff. However, while there would be undoubted benefits to adoption of a new MIS, there are several barriers such as cost, complexity and level of existing in-house IT resources.

Migration to a new MIS would also allow additional data sets to be integrated with Quarterly Key Data Report statistics. This in turn would reduce the unit costs as the total cost of the data warehouse could be spread over a wider pool of users.

A fully automated warehousing and reporting system can provide specific views of data across the organisation and allow staff to generate a range of reports on demand. For example, a short summary report could be generated ahead of the publication of the Quarterly Key Data Report with key statistics for use in external and internal meeting and presentations. Responses to the various questionnaires received from organisations such as the European Commission, European Competitive Telecommunications Association (ECTA)[12], and the OECD would be quicker and less burdensome as template reports could be set up based on these standard questionnaires.

The adoption of an industry standard tool (rather than a bespoke in-house solution) would allow ComReg to benefit from a structured programme of software enhancements and development, as well as benefitting from interaction with users of such software in other public and private sector organisations.

[12] http://www.ectaportal.com/en/

6 Data publication & dissemination

6.1 Publication

The Quarterly Key Data Report is one of ComReg's key publications and is published in order to both understand current trends in the Irish communications market and inform external users. It is released on a quarterly basis with a three month lag, i.e. data as of June is published in September, data as of September published in December, and so forth[13]. In the case where erroneous data is published in the Quarterly Report, ComReg will subsequently publish an information notice[14] on its website indicating the error and highlighting what action will be taken. Typically the error is corrected and amended in the following Quarterly Key Data Report.

ComReg surveys are published in full on the ComReg website with accompanying analysis by ComReg. In 2009/2010 ComReg published the following survey-based studies among others:

- ComReg Residential ICT Services Survey H1 2010[15], which asked consumers about their awareness and usage of ICT services (July 2010)
- ComReg Business ICT Services Survey H1 2010[16]. The main purpose of the research is to gain an in-depth understanding of current usage of and attitudes to information and communication technology (ICT) among a representative sample of Irish SMEs and large Corporate businesses.
- Residential and Business Internet Connectivity - Irish and European experience[17]
- ComReg Business ICT Services Survey Wave 1, 2009 - Millward Brown IMS[18]

In 2011 ComReg's Research Unit intends to focus its survey requirements on tracking key indicators of the Irish ICT market. This will free up valuable resources and allow other areas of ComReg, including Market Analysis, to conduct detailed surveys more tailored to their needs.

ComReg also makes available on its website some external conference presentations given by its staff. A wide variety of publications including media releases, consultations and responses, decision notices and annual reports are also made available on ComReg's website[19], all of which use data gathered by the Research Unit and/or other teams within ComReg.

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[13] http://www.comreg.ie/publications/quarterly_key_data_report_q2_2010.597.103704.p.html

[14] http://www.comreg.ie/_fileupload/publications/ComReg0923.pdf

[15] http://www.comreg.ie/_fileupload/publications/ComReg_1062r.pdf

[16] http://www.comreg.ie/publications/comreg_business_ict_services_survey_h1_2010.597.103614.p.html

[17] http://www.comreg.ie/_fileupload/publications/ComReg0984.pdf

[18] http://www.comreg.ie/_fileupload/publications/ComReg0948.pdf

[19] http://www.comreg.ie/publications/latest_publications.597.0.0.2010.p.html

6.2 Dissemination

As well as the publication of data in official documents, ComReg also makes data available on its statistical website, ComStat[20]. ComStat was developed in order to act as a central portal for presentation of statistical data and analytical research on the electronic communications market and to facilitate personalised downloads of statistics. In order to publish this data to the internet, ComReg uses PX-Make[21] software, which was developed in Denmark, to create files by entering metadata and adding data from, for instance, an Excel file.

The information and statistics stored on the website are derived from a variety of sources, but are mostly reliant on data obtained from authorised electronic communications operators, as well as surveys of consumers commissioned by ComReg, and data from organisations such as the Central Statistics Office and the European Commission.

There is a two-way information link between ComReg and these domestic and international institutions. ComReg both supplies and consumes data from organisations such as the ITU, ECTA and the OECD. Data is shared with academic institutions both domestically and internationally and ComReg has recently put in place a research agreement with the Economic and Social Research Institute (ESRI).

Consumers of ComReg's data include operators, financial analysts, journalists, and academics. All of these users look to ComReg to provide additional commentary on the telecommunications market. Data and analysis supplied by ComReg are used in reports published by government departments and agencies, allowing ComReg to feed into government policy, which is essential given the emphasis the Irish government has placed on the "Smart Economy" in order to help the country out of the recent recession[22].

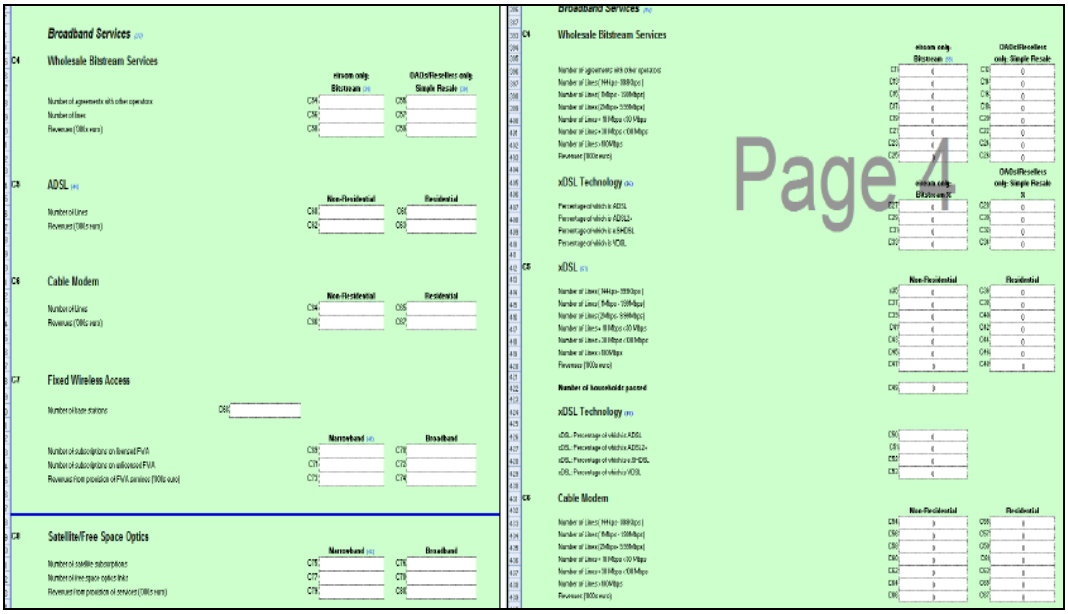
[20] http://www.ComStat.ie/

[21] http://www.dst.dk/pxmake.aspx

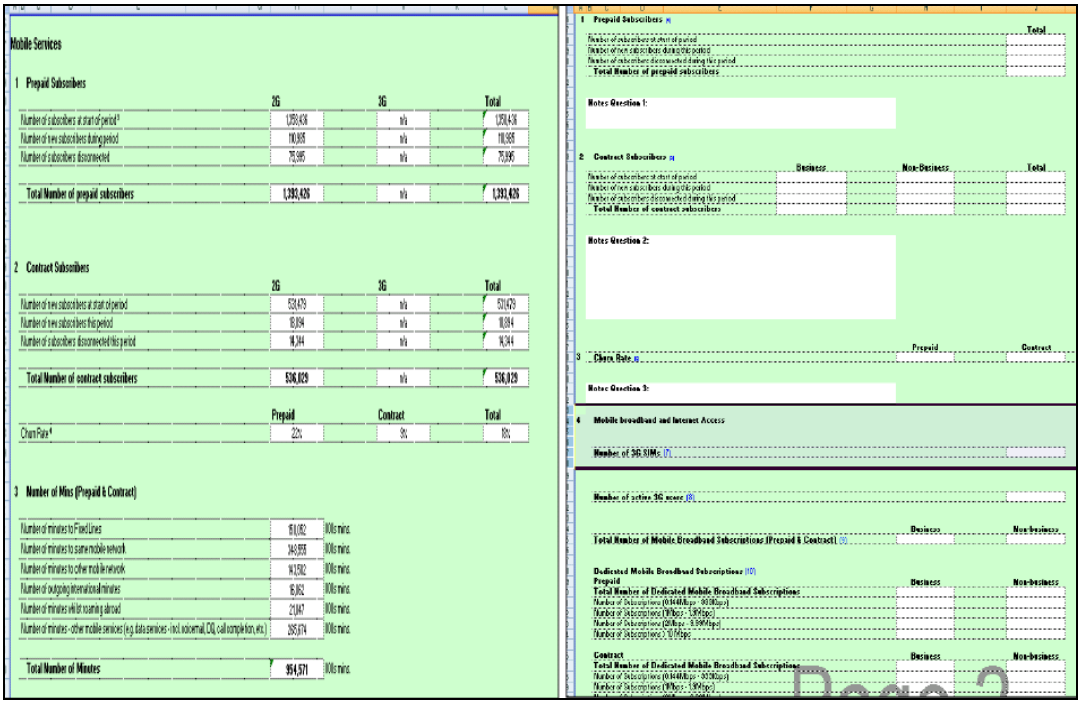
[22] http://www.taoiseach.gov.ie/attached_files/BuildingIrelandsSmartEconomy.pdf

Appendix – Examples of ComReg's data collection & analysis

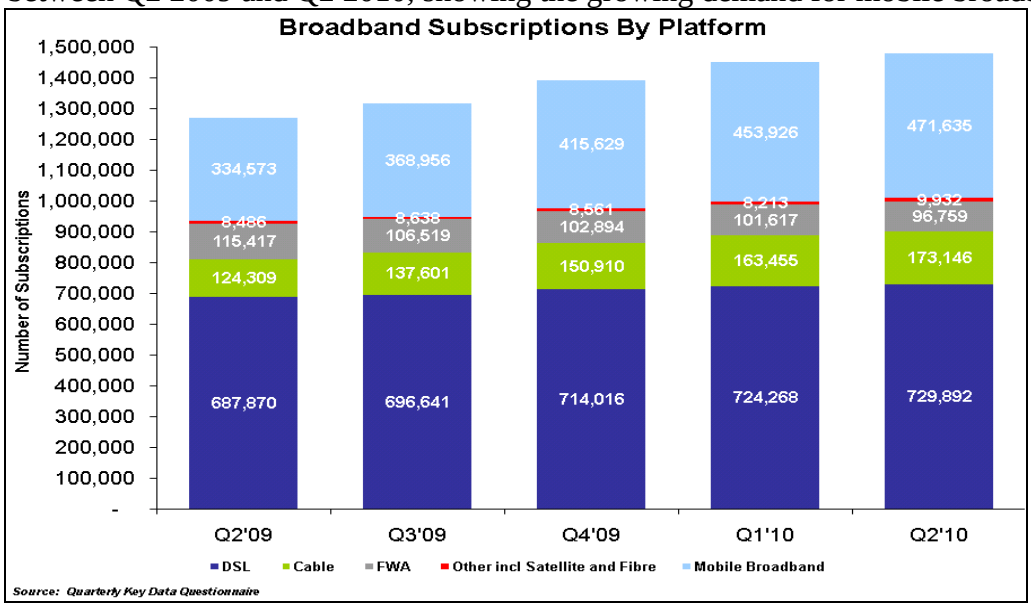
2005 (left hand side) and 2010 (right hand side) versions of the Quarterly Key Data Report fixed questionnaire; fixed broadband section. It's clear that the emphasis has shifted from subscriptions to speed categories.



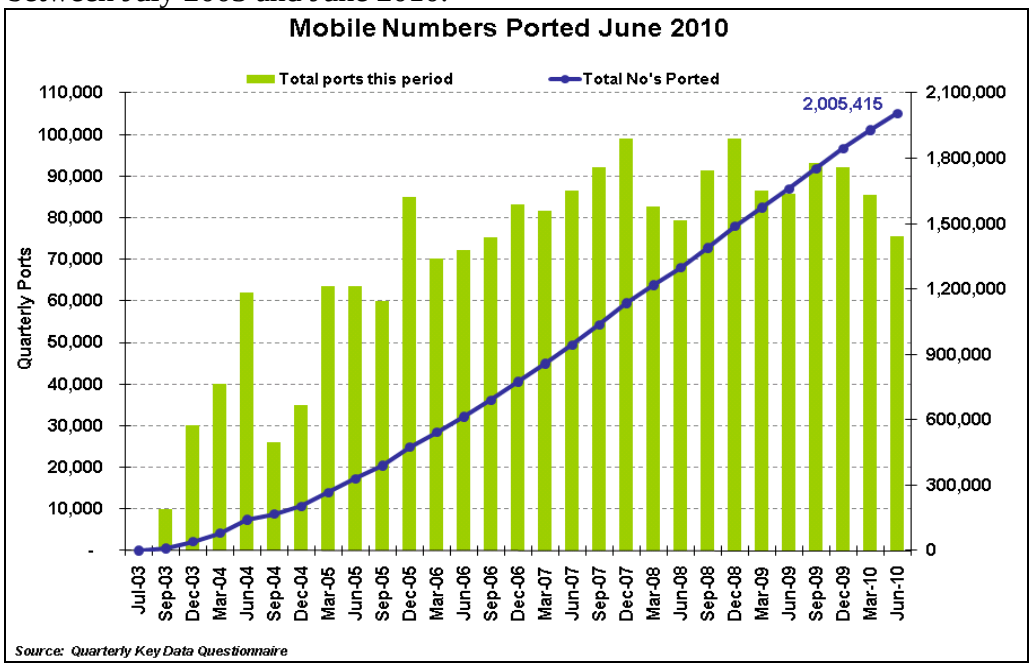
2005 (left hand side) and 2010 (right hand side) versions of the Quarterly Key Data Report mobile questionnaire; mobile subscriptions section, including mobile broadband in the 2010 version.



A graphical analysis of the quarter on quarter growth in broadband split by platform between Q2 2009 and Q2 2010, showing the growing demand for mobile broadband.



A graphical analysis of the quarter on quarter change in mobile numbers ported between July 2003 and June 2010.



Part of the questionnaire submitted to operators for a 2006 Market Analysis on the interconnection market, showing the detailed level of data required.

OAO

We accept that not all entries will be relevant to all operators
Where you are unable to break traffic down to the precise level (and/or the result would be immaterial), leave it aggregated at a higher level
All traffic should be accounted for, but only once in each of Origination, Termination and Transit

			2004				2005			
			H1		H2		H1		H2	
#	Item		Minutes	Revenue	Minutes	Revenue	Minutes	Revenue	Minutes	R
	Origination									
	Origination (originated means from an end customer phone directly connected to that primary									
1	**switch, including via a concentrator)**	= [2] + [5]								
2	**Self-provided (you own the infrastructure and have the retail relationship with the call origin**	= [3] + [4]								
3	All minutes that originated and terminated at the same primary switch without involving any other switches									
4	All other originated minutes where you have the retail relationship with the call originator									
5	**Non-self-provided**	= [6]								
6	All originated minutes where a different operator has the retail relationship with the call originator (CPS/WLR)									
	Termination									
	Termination (terminated means to an end customer phone directly connected to that primary									
7	**switch, including via a concentrator)**	= [8] + [11]								
8	**Self-provided (There is no wholesale transaction involved)**	= [9] + [10]								
9	All minutes that originated and terminated at the same primary switch without involving any other switches									
10	All other terminated minutes where there is no wholesale transaction involved									
11	**Non-self-provided**	= [12]								
12	All terminated minutes where there is a wholesale transaction involved									
	Transit									
13	**Non-switched transit conveyance**	= [14] + [15] + [16]								
14	All minutes that originated at one of your primary switches, and terminated at another directly connected primary switch of yours									
15	All minutes that originated at one of your primary switches, and terminated at another directly connected primary switch belonging to a different operator									
16	All minutes that terminated at one of your primary switches, and originated at another directly connected primary switch belonging to a different operator									
17	**Switched transit (minutes passing through at least one of your switches acting as a transit switc**	= [26] + [23]								
18	**Origination and termination fully on-net**	= [27] + [28]								
19	All **geographic number** minutes that originated at one of your primary switches, passed through one or more transit switches of yours, and then terminated at another primary switch of yours, where the call did not leave your network									
20	All **non-geographic number** minutes that originated at one of your primary switches, passed through one or more transit switches of yours, and then terminated at another primary switch of yours, where the call did not leave your network									
21	**Origination and termination either partially or fully off-net**	= Sum ([22] : [40])								
	Geographic number called, terminated at your primary switch									
22	All minutes received from a switch of a different fixed operator									
23	All minutes received from an international gateway switch									
24	All minutes received from a mobile operator									
	Geographic number called, terminated at the switch of a different operator									
25	All minutes that originated at one of your primary switches									
26	All minutes received from an international gateway switch									
27	All minutes received from a switch of a different fixed operator									
28	All minutes received from a mobile operator									
	Mobile number called									
29	All minutes that originated at one of your primary switches									
30	All minutes received from an international gateway switch									
31	All minutes received from a switch of a different fixed operator									
32	All minutes received from a mobile operator									
	International number called									
33	All minutes that originated at one of your primary switches									
34	All minutes received from a switch of a different fixed operator									
35	All minutes received from a mobile operator									
	Non-geographic number called									
36	All minutes that originated at one of your primary switches									

Page 1
Page 2

A sample of the results of a 2009 business survey, showing the depth of analysis in terms of industry type, number of employees etc.

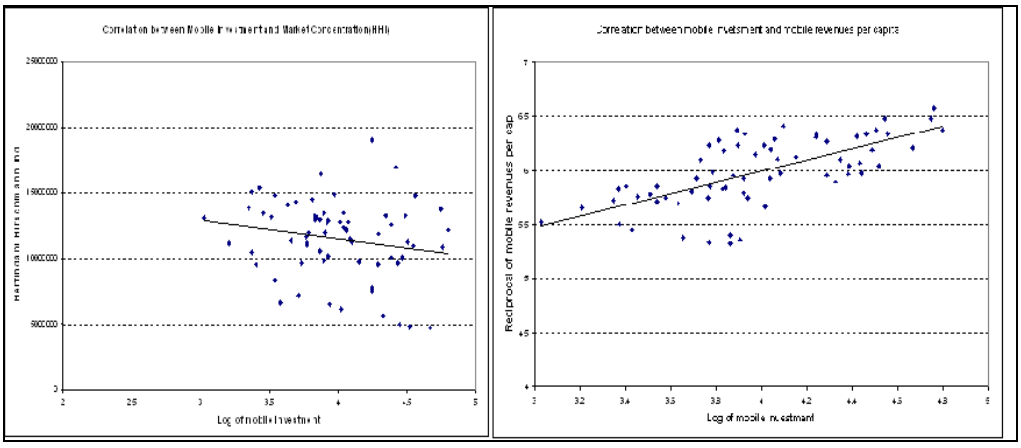
#page
MILLWARD-BROWN-LANSDOWNE
-4.1E+07
(COMREG ICT)
Table 6
Q.4 What are your reasons for choosing your main fixed line supplier for your business?
FIELDWORK : (OCTOBER) 2009
MILLWARD BROWN LANSDOWNE

		TYPE		CO. SIZE					SECTOR LEADS												REGI
	Base (wt)	SME	CORPORA	1-9	10-49	50-100	101-300	301+	Agriculture	Mining	Manufactu	Transport	Recycling	Wholesale	Retail	Hotels - R	Finance	Services	Governmer	Dubl
Base (nw)	543	480	63	202	195	83	31	32	20	53	92	41	1	46	44	35	112	87	12	
Base (wt)	541	494	47	201	196	97	23	24	31	58	77	33	6	39	39	32	77	122	28	
Effective E	468	416	58	167	176	74	29	30	20	53	90	41	1	45	44	34	111	86	12	
They offer	229	207	22	76	84	47	11	11	9	16	40	10	6	20	20	9	35	51	12	
	42	42	47	38	43	49	49	45	29	28	52	32	100	52	52	28	45	42	42	
The range	42	37	5	14	12	11	2	3	2	5	7	2	0	6	2	4	7	8	0	
	8	7	11	7	6	11	8	15	5	8	9	6	-	15	5	13	9	7	-	
Good custo	38	34	4	8	11	14	1	3	0	7	6	1	0	3	2	1	8	8	2	
	7	7	9	4	6	15	6	11	-	13	7	4	-	9	5	3	10	6	8	
Previous n	26	26	0	6	12	8	0	0	2	2	5	2	0	2	1	0	1	7	3	
	5	5	-	3	6	8	-	-	6	4	7	7	-	5	2	-	2	6	9	
To get a s	8	8	0	2	5	0	0	0	0	0	2	0	0	0	0	1	1	1	2	
	1	2	-	1	3	-	-	-	-	-	2	-	-	-	-	3	2	1	8	
Have alwa	220	201	19	102	74	25	6	12	17	30	26	14	6	10	15	15	36	45	6	
	41	41	40	50	38	26	28	51	55	51	34	41	100	26	39	48	47	37	24	
Other (ple	13	11	2	4	3	5	1	1	0	3	0	3	0	1	1	1	2	2	0	
	2	2	4	2	2	5	5	3	-	4	-	10	-	2	3	3	3	2	-	
Don't know	23	21	2	9	6	6	2	0	3	0	5	2	0	2	1	1	2	1	7	
	4	4	5	4	3	6	10	-	10	-	6	5	-	4	2	3	3	1	26	
Eircom ow	9	9	0	5	4	0	0	0	0	1	0	2	0	1	0	0	1	4	0	

A sample of the results of a 2010 residential survey, showing the depth of analysis in terms of gender, location and social type etc.

91	Dont Know	8	3	4	3	1	3	0	3	0	4	0	1	0	3	0	7	0	8	4
92		3%	4%	2%	3%	5%	2%	-	2%	-	2%	-	8%	-	2%	-	2%	-	3%	2%
93	#page																			
94	MILLWARD BROWN LANSDOWNE																			
95	41109922																			
96	COMREG CONSUMER ICT SURVEY																			
97	Table 3																			
98	Q.3 WHICH, OF THE FOLLOWING COMPANIES DO YOU USE FOR YOUR RESIDENTIAL PHONE SERVICE?																			
99	BASE: All fixed line phone owners																			
00	FIELDWORK : JUNE 2010																			
01	MILLWARD BROWN LANSDOWNE																			
02																				
03																				
04			SEX		AGE						SOCIAL CLASS							REGION		
05																				
06		Base (wt)	MALE	FEMALE	15-17	18-24	25-34	35-49	50-64	65-74	AB	C1	C2	DE	F	ABC1	C2DE	DUBLIN	RESTOFIL	MUNSTER
07																				
08	Base (nw)	722	349	373	25	72	120	236	202	67	127	246	183	111	55	373	294	233	179	182
09	Base (wt)	707	345	362	32	91	107	215	180	82	119	201	180	135	72	320	315	219	175	188
10	Effective E	669	334	335	25	70	113	229	198	56	123	238	173	104	51	360	275	219	165	166
11																				
12																				
13	Eircom	455	220	236	17	60	69	130	122	57	77	117	120	88	53	195	208	131	120	122
14		64%	64%	65%	54%	66%	64%	60%	68%	69%	65%	58%	66%	65%	73%	61%	66%	60%	69%	65%
15	BT Ireland	27	17	10	3	4	5	8	6	1	5	10	6	5	2	15	11	9	5	2
16		4%	5%	3%	9%	4%	4%	4%	3%	1%	4%	5%	3%	4%	2%	5%	3%	4%	3%	1%
17	Euphony	4	2	3	0	0	0	2	0	3	1	0	1	0	3	1	1	0	0	3
18		1%	1%	1%	-	-	-	1%	-	3%	1%	-	1%	-	4%	0	0	-	-	1%
19	Talk Talk (	8	5	3	0	0	1	2	4	2	2	1	2	2	2	2	4	2	4	1
20		1%	2%	1%	-	-	1%	1%	2%	2%	1%	0	1%	2%	2%	1%	1%	1%	2%	0
21	Chorus/UP	59	36	24	2	6	13	22	12	4	8	21	17	13	0	29	30	36	8	12

Illustration of positive and negative correlations between mobile investment and two independent variables.



8th World Telecommunication/ICT Indicators Meeting (WTIM-10)
Geneva, Switzerland, 24 - 26 November 2010

Information document

Document INF/14-E
16 November 2010

English

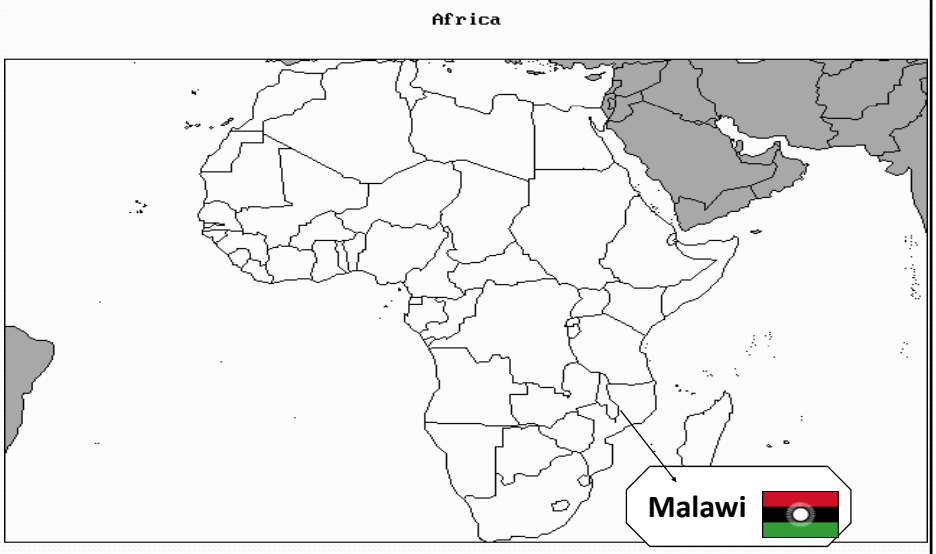
SOURCE: Malawi Communications Regulatory Authority, Malawi

TITLE: Malawi Country Report

Presentation Outline

- Introduction
- Legal Instruments
- The ICT sector performance and indicators
- Challenges
- Opportunities
- Future prospects

Introduction: Map of Africa



Map of Malawi

Introduction

- **Location of Malawi:**
- Malawi is located in South Eastern Africa and bordered by
  - Tanzania to the North East,
  - Zambia to the west
  - Mozambique to Southeast and South.

- Population: about 13.4 million
- Population Growth Rate: 1.9% per annum

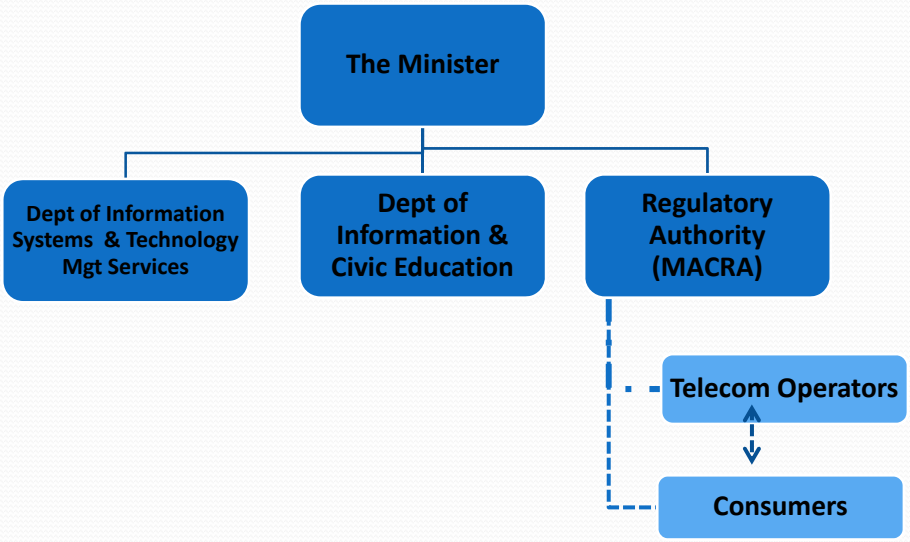
Structure of the Economy

GDP composition	2007	2008	2009
Agriculture	32.47%	32.94%	31.58%
Construction	4.61%	4.55%	3.47%
Manufacturing	7.81%	7.99%	9.89%
Financial and Professional Services	10.65%	10.51%	10.85%
Transport and Storage	3.55%	3.41%	3.45%
Information and Communication	2.49%	3.44%	4.52%
Mining and Quarrying	0.89%	0.87%	0.98%

Trade and Economic Indicators

Indicator	Percentage
Real GDP growth (2009)	7.6%
Real GDP growth (2008)	9.8%
GNP per capita (2009	US$ 289
Inflation rate (April 2010)	8.1%
Inflation rate (May 2010)	7.8%
Average Annual Inflation Rate (2009)	8.4%
Average Annual Inflation Rate (2008)	8.7%

The ICT Sector Structure



The ICT Sector

- Policy & Legal Framework
- Regulatory framework
- Telecommunication Operations

Policy & Legal Framework

- The Communications Sector Policy Statement (1998) and the Communications Act of 1998 are the prevailing legal instruments in the ICT Sector.
- Communications Sector Policy:
  - was formulated by the Government through the Ministry of Information and Civic Education (MICE);
  - The Ministry is the overall ministry that oversees the sector including providing the enabling environment for ICT development.
- The Communications Act (1998): was formulated by the government though MICE and Ministry of Justice by consulting the general public

Regulatory framework

- The Malawi Communications Regulatory Authority (MACRA) was established under section 3 of the Communications Act (1998). Operations commenced in 2000 with mandate covering the four basic communication sectors namely;
  - Telecommunications;
  - Broadcasting;
  - Postal services; and
  - Management of radio frequencies (spectrum).
- MACRA is an independent regulator

Regulatory mandate and duties

- In deriving its mandate from the Communications Act, MACRA undertakes the following duties in regulating the communications sector;
  - Ensure the provision of reliable & affordable communication services.
  - Protect the interests of consumers.
  - Promote efficiency and competition.
  - Encourage the introduction of new communications services.
  - Promote research and development.

Mandate and Duties (cont.)

- Foster the development of communications services and technology in accordance with recognised international standards.
- Promoting universal access / service.
- Regulating fair access to scarce and vital resources (e.g. radio spectrum).
- Serving as a policy advisory body to the Ministry responsible for communications.

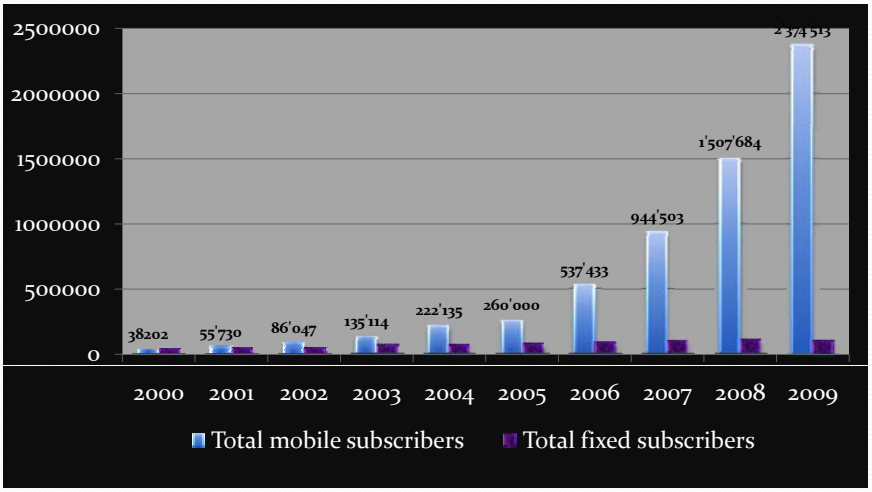
Telecommunication operations

Category	Quantity	Name of Operator	Technology
Fixed operators	2	MTL, ACL	CDMA, Optical Fibre,
Mobile operators	3	TNM, Zain, G-Mobile	GSM 900 & GSM 1800), WCDMA & HSDPA
Carrier of Carrier	1	ESCOM	Optical fibre
International Gateway Service	4	TNM, Zain, MTL, Maren	Via Satellite, optical fibre
ISP	10	Skyband, Globe, Malawi Net	Wi-Max, Wi-Fi, etc

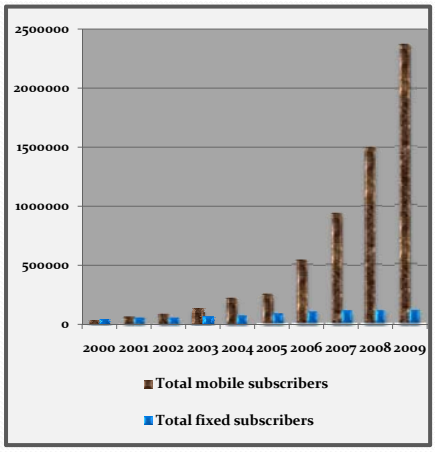
ICT Indicators

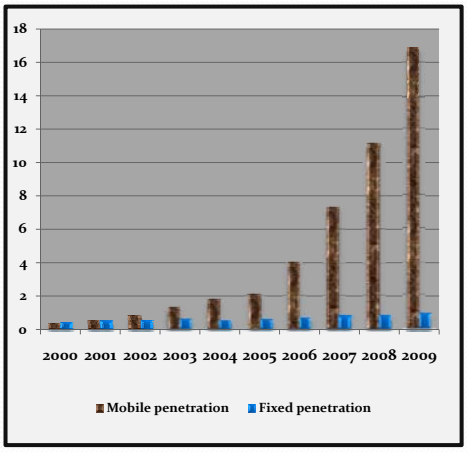
PARAMETER	STATISTICAL INDICATOR
Teledensity	18.32 %
Main Fixed Telephone Lines	111,133
Fixed Teledensity	0.83 %
Mobile Subscribers	2,362,005
Mobile Teledensity	17.5 %
Internet Subscribers	105,000
Internet Teledensity	0.7 %
Population covered by mobile signal	84 %

Subscribers (2000 to 2009)

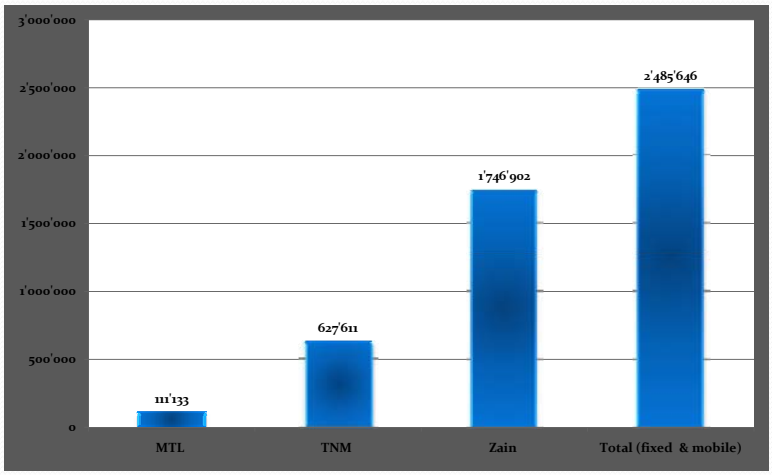


Telecommunications Growth: mobile and fixed subscribers



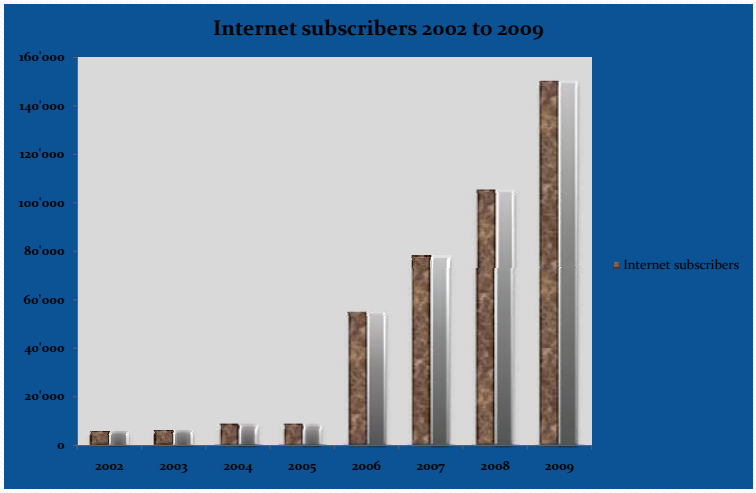


Subscriber growth 2009 (fixed & mobile)



Growth of Internet subscribers 2002 -2009

	2002	2003	2004	2005	2006	2007	2008	2009
Internet subscribers	5,717	6,055	8,051	8,197	55029	78000	105,000	150,000



Challenges

- High cost of telecom services in the country
- In availability of ICT infrastructure in most rural parts of the country
- Power failure
- Communications Act failure to govern the ICT industry

Opportunities

- Government political will
  - Generous Tax allowance on telecoms equipment
  - ICT Policy and other policies
  - Skilled labour market: Inclusion in the academia
  - Network of stakeholders: Constant consultation on national issues
- Liberalisation: Modern and higher generation services
- Availability of spectrum & numbers
- Economic growth: Stability of economic indicators

Future prospects:

- National Backbone/ Connection to the submarine: RCIPMW
- Universal Access Projects

Thank you

8th World Telecommunication/ICT Indicators Meeting (WTIM-10)
Geneva, Switzerland, 24 - 26 November 2010

Information document

Document INF/15-E
16 November 2010

English

SOURCE: Instituto Nacional das Comunicações de Moçambique, Mozambique

TITLE: Information document

MOZAMBIQUE
8th World Telecommunication/ICT Indicators Meeting 2010

Maputo, 04 of November 2010

Web-www.incm.gov.mz

- The Regulator
- Sector Policy and Vision
- The existing Infra-struture
- The Market
- Conclusion

The Regulator

- INCM was established under the Decree No. 22 of 1992 as Independent Communication Authority Body and commenced operations in 1996
- Regulates the whole communications sector in respect of Telecommunications, Postal Services, the Radio Frequency Spectrum (include Broadcasting)

The Regulator

- acts as a government advisor on policy matters pertaining to communications sector
- monitors the activities of licensees, enforce compliance with set regulations
- ensures the provision of services to under-served areas as part of the universal access and service obligations.

Communications Sector Policy

Policy objectives:

- Promote development of telecommunications infrastructure and markets;
- Support market liberalization, and competition;
- Strengthen the role of Regulator;
- Promote universal access to telecommunications services;
- Ensure consumer protection

Communications Sector Policy

Vision for the Sector:

- Expansion of industry (telecom and information services);
- Economic development and opportunity for all citizens and businesses;
- Social and cultural enrichment, including universal access to information and communication

Communications Sector Policy

The Existent Legislation of Sector

- Lei 8/04 21 de Julho "Telecomunication Law"
- Resolucao 54/06 "Estrategia das Telecomunicacoes"
- Decreto 32/01 de 06 de Novembro "The INCM Statutes"
- Decreto 33/01 de 06 de Novembro "License Regulation"
- Decreto 34/01 de 06 de Novembro "Inter"conection Regulation"
- Decreto 35/03 24 de Setembro "Numbering Regulation"
- Decreto 64/04 de 29 Setembro "C ommunications annual Fees Regulation"
- Decreto 63/04 de 29 de Dezembro "Frequency fees"
- Decreto 69/06 de 26 de Dezembro "Universal Access Fund Regulation"
- Postal Policy – Aproved in 2008
- Decreto 153/10 de 15 de Setembro "Sim Card registration"

Market Structure

Numbers of Services Providers	2009
Fixed Operator	1
Mobile Operator	2
Data Comm Providers	20
Tv - Cable	3
Value Adde Services	9
ISP´s	17
Audio Text	1
TOTAL	53

National Infra-structure

IN IMPLEMENTATION	DATA OF CONCLUSION
• Maputo – Inchope • Beira - Chimoio	2010

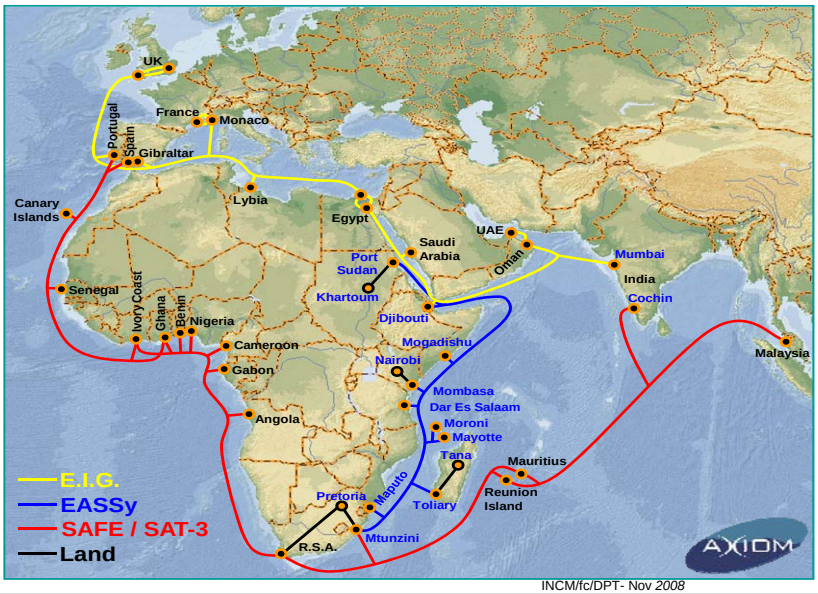
FOREC . LINKS	DATE OF IMPLEMENTATION
•Mutarara – Gurué • Lichinga – Pemba • Nampula – Angoche •Maputo – Swaziland	2011

Regional Infra-structure

- Moçambique has Tx links connected to:
  - South Africa (fibre & radio)
  - Swuziland (radio, fibre till 2011)
  - Zimbabwe (fibre – now connected upto the Machipand boarder)
  - Malawi (fibre – connected upto Zobwe boarder)
- In progress other regional initiatives SEACOM and EASTERN AFRICAN SUBMARINE CABLE SYSTEM (EASSy) -
-

Regional Infra-Structure
SEACOM

Regional Infra-Struture
EASSY

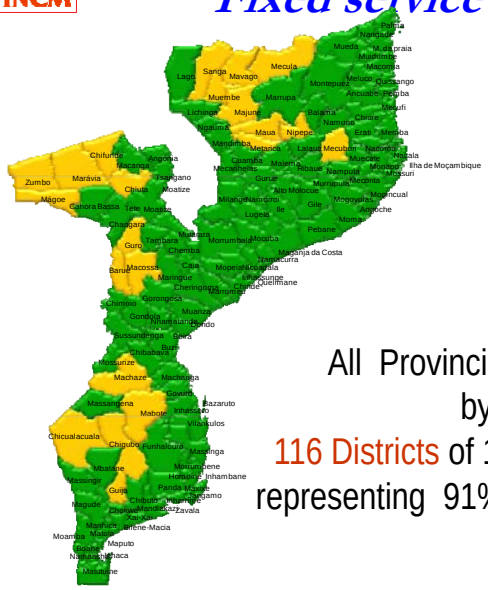


INCM/fc/DPT- Nov *2008*

Regional Infra-structure

- The SEACOM and EASSY cable, will enhance access to global ICT infrasctruture and alternative choice to regional and internacional connectivity

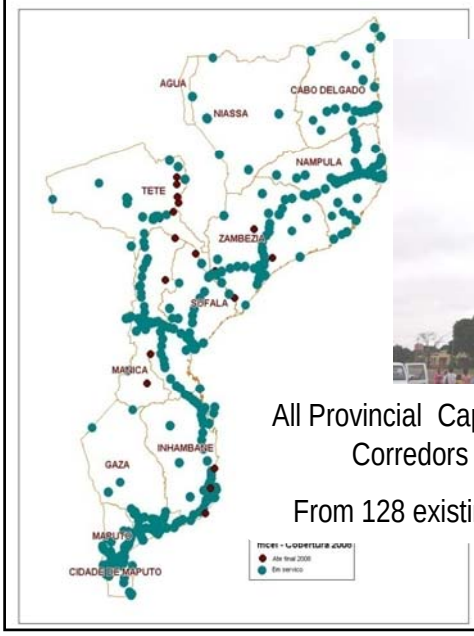
Fixed service coverge



All Provincial capital are coverged by fixed service;

116 Districts of 128 existing, are coverged, representing 91% of District center coverged

Mobile service coverge



All Provincial Capital, Municipalities and, Development Corredors are coverged by mobile service

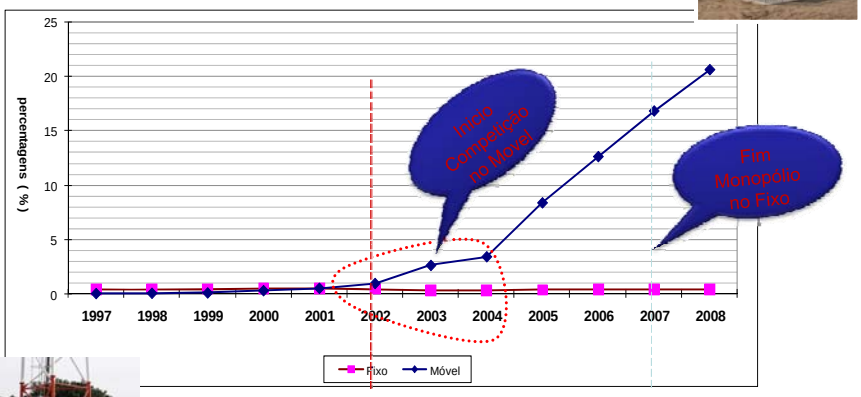
From 128 existing Districts center, all are coverged.

Internet service coverge

All Provincial Capital, and some Municipalities are coverged by Internet service

Fixed and Mobil service penetration

INCM



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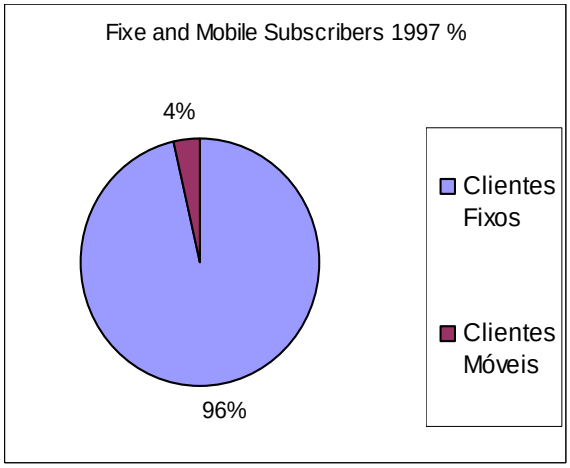
INCM

Mobile Evolution from 1997 until 2005



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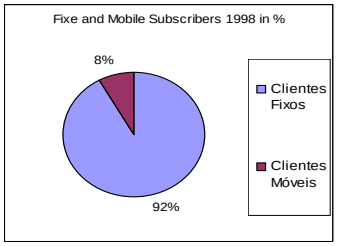
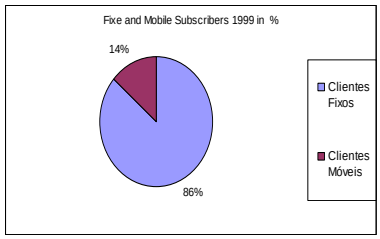
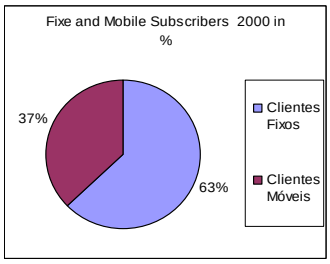
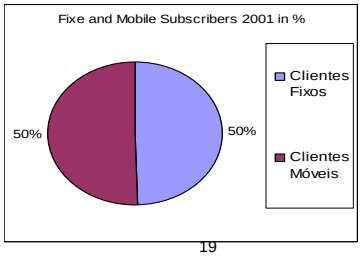
Mobile Evolution from 1997 until 2005









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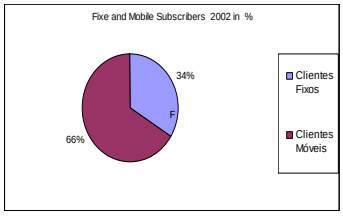
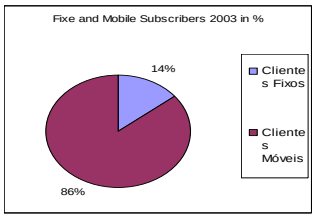
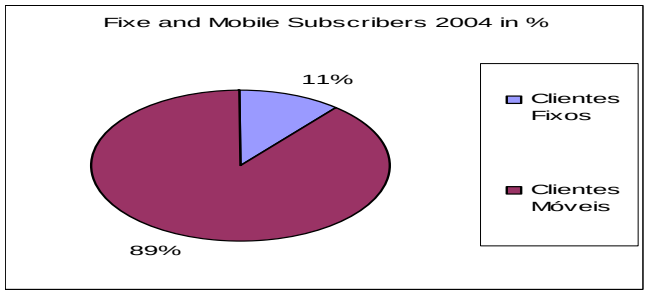
Mobile Evolution from 1997 until 2005







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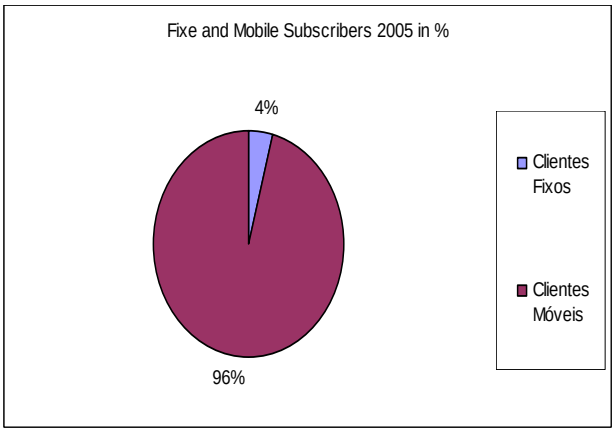
Mobile Evolution from 1997 until 2005



21

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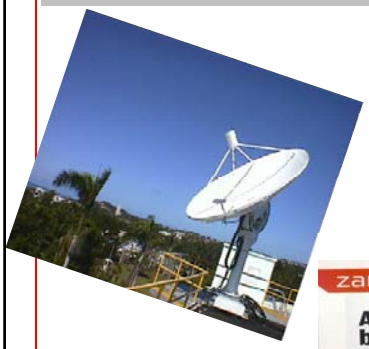
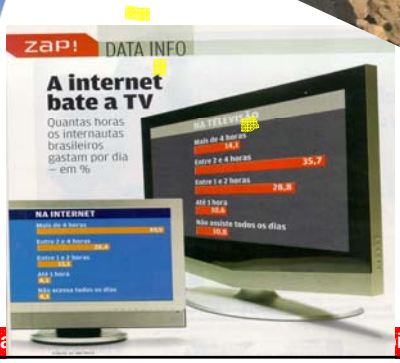
Market Liberalization / Services subject to License and Registration





22

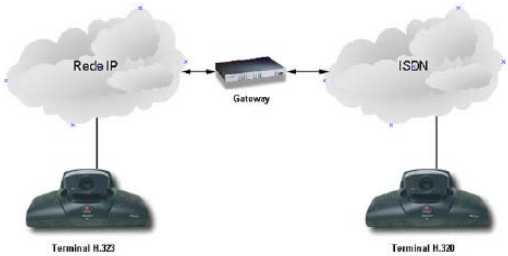
Instituto Na ique

- Mobile Service:
  - Full competition
  - subject to license through public bid, within availability of spectrum frequency;
- Data Service, Private Network and leased line:
  - Full competition
  - Licensing requirements.
  - Licenses required to provide public switched services

Instituto Nacional das Comunicações de Moçambique

23

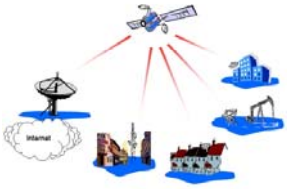
- Video Conference:
  - Open to Competition – subject to License

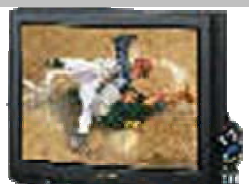


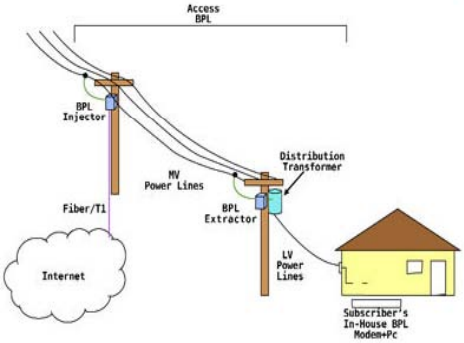
Médios e grandes grupos

24

- Serviços de TV a Cabo
  - Aberto a competição, sujeito a licenciamento







INCM

- Public Pay Phone:
  - Open to Competition – subject to Registration

Instituto Nacional das Comunicações de Moçambique

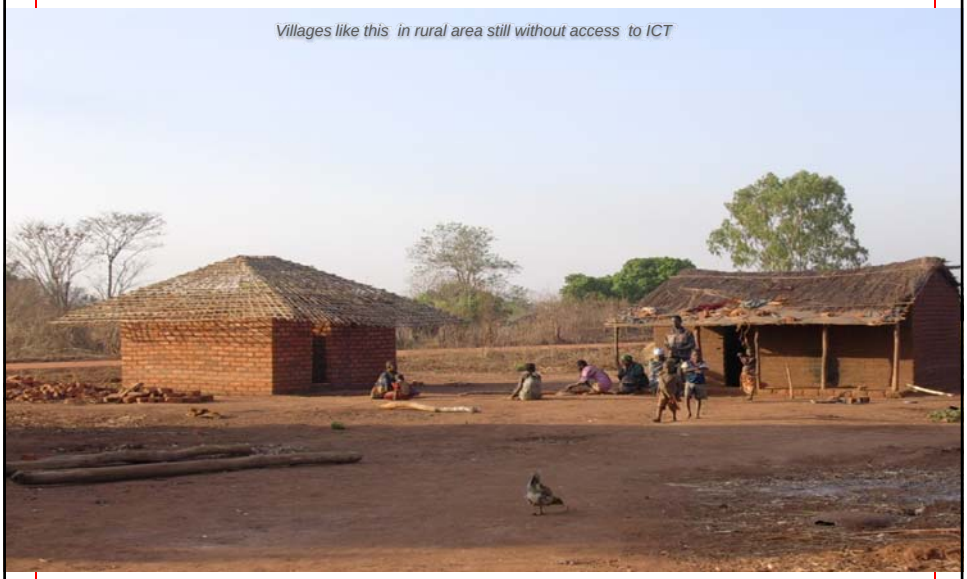
Internet Service:

- Full Competition;
- no restrictions or licensing requirements, registration only

THE ACCESS GAPE

We are still having the access gap between the urban and rural and remote area,

Villages like this in rural area still without access to ICT



Summary

- Growth of penetration from 0,53% to 29.08% between 1999 and 2009;
- Telecommunications services growth in term of District coverge in fixed and mobile services from 68 to 126 districts coveraged between 2004 and 2009 (from 75.256 to para 4.223.911 subscriber in the same period);
- Govern actively liberalize the market and encourage the participation of the private sector;
- We have about 53 public and private company in the sector

Major Opportunities

- Good will at very top of the political leadership
- Telecommunications Policy and Law in place
- Telecommunication Market full liberalized
- Good enviorment to implement new communications technologies
- ICT recognized as a cross-cutting issue and a development tool by all stakeholders

THANK YOU
MUITO OBRIGADO
24/7/2007 15:05

8th World Telecommunication/ICT Indicators Meeting (WTIM-10)
Geneva, Switzerland, 24 - 26 November 2010

Information document

Document INF/16-E
16 November 2010

English

SOURCE: Statistics Sierra Leone, Sierra Leone

TITLE: Background Paper Describing the State of ICT Statistics Collection and Dissemination in Sierra Leone

Background Paper Describing the State of ICT Statistics Collection and Dissemination in Sierra Leone

Presented By: ....., Statistics Sierra Leone

Introduction

Before 1996, all information and communication technology was purely in the hands of SIERRATEL. SIERRATEL is a merger between two national telecommunication companies. These are the Sierra Leone External Telecom which was the gateway to the outside world and Sierra Leone National Telecommunication Company which provided local telecommunication. During this time ICT was limited to fixed line telephones, broadband telephone, telex, telegraphs and fax.

The mid 1990s saw the use of internet with SIERRATEL as the sole internet service provider for individuals and institutions accessing the internet. In 1996 Datatel emerged using Sierratel's gateway and started providing internet service and digital pay phone service in the capital Freetown. In that same year a Scottish business man, Graham, started a mobile phone company, Mobitel which was analogue in nature.

The start of this decade saw the proliferation of ICT use in the country with many internet service providers, mobile phone networks and broadband internet and Satellite providers.

Currently, there is only one fixed telephone line provider, that is, Sierratel which has limited subscribers and coverage. Five Mobile phone companies with 60% nationwide coverage and hundreds of thousands subscribers are in operation in the country. By April this year, the national telephone company will launch its internet and mobile phone network which has to be nationwide and operate in the most remote areas of the country. Over ten internet service providers are in the country providing services to urban towns mostly. Also, the five mobile phone companies in the country which are part of the internet service providers provide remote internet service in rural areas where they have signal for the cell phone subscribers. They provide services to users residing or working in the remote parts of the country.

Mobile telephone use is high in Sierra Leone especially as land line can be unavailable; people see it as a good way of staying in touch with family, friends, colleagues, customer and clients. Gradually the internet is making research simple for students and researchers and also improving inter-institutional communication. Satellite television network is gradually making some impact on the people in urban towns as they keep abreast with the outside world.

Essentially, ICT is increasingly making positive impacts on the lives of Sierra Leoneans.

Method of Collecting ICT Statistics

Basically there is no form of collecting ICT statistics in the country. Currently, there are two surveys that are ongoing; one is the Readiness for eGovernment and the other is on ICT service provided by the various service providers in the country. The Readiness for eGovernment is at the data processing stage as the office of the Vice President in partnership with UNDP on the task, ICT service survey data collection has been completed and report writing is at an advance stage as National Telecommunication Commission (NATCOM) is collaborating with Statistics Sierra Leone (SSL) for this important survey. This can serve as a spring board in the development of a national database and form of collecting ICT data. Today, the country has a lot of internet and cell phone subscribers and they are increasing on a daily basis. It is apparent that, Sierra Leone has one of the largest mobile phone network operations among the least developed countries in Africa. The increase in ICT subscription has raised concerns for a national survey to be conducted where in the nature, scope, methodology, cost and benefit of these services to the people of Sierra Leone can be addressed.

According to officials from NATCOM, the expected outcomes from the survey include the number of users of ICT service per service provider and the spending pattern of these users. However, going through the questionnaire, part of ICT Opportunity Index can be computed. Sub indices like Networks and Uptake can be generated. The questionnaire targeted indicators like fix telephone lines, international internet bandwidth, mobile subscribers and internet users. This nationwide survey was conducted for two weeks. Questionnaires were administered to individual users of ICT service face-to-face by five teams each comprising of a supervisor and five enumerators. Two teams will administer questionnaires in the Western Area, given to it population density and greater access to ICT services and users. A team each will go to the Northern, Eastern and Southern Provinces.

The aim of the Readiness for eGovernment ICT Survey is to provide a comprehensive report on ICT services and products use by Government Ministries, Departments and Agencies (MDAs). The survey is segmented into four modules with each module in the form of a questionnaire. The questionnaires targeted four different set of respondents. These include Senior Management Officers, ICT Technicians, Private Firms Providing ICT Services to MDAs, and perceptions of the public about the use and provision of ICT service by Government. Browsing through the questionnaires, it is evident that ICT Opportunity Index for MDAs can be generated looking at key indicators like International Internet Bandwidth, Fixed Telephone Lines, Mobile Subscribers, School Enrolment, Literacy, Computers and Internet Users.

Currently, the mobile phone companies are doing some form of research which is market strategy. They collect weekly report on the sales and promotion pattern of fellow competitors. This they outsourced local and international consultancy groups.

However, the two ICT surveys that are ongoing in Sierra Leone can provide baseline indicators in monitoring and evaluating the status of ICT in Sierra Leone. It will be of great importance to Statistics Sierra Leone if ITU can give the support to the institution in collecting ICT Statistics in Sierra Leone as it can enhance communication and information in the country as the use of information and communication technology is on the increase.

Dissemination of ICT Statistics

Like the collection of ICT Statistics, dissemination of ICT Statistics leaves much to be desired. The participation of Statistics Sierra Leone to the next ICT summit is considered an eye opener in addressing the key issues on ICT. As head of the Data Archiving and Dissemination Unit, I intend presenting to the management of Statistics Sierra Leone the creation of a web page our website disseminated ICT Statistics as required by ITU/WTI. Also a national database on ICT Indicators we desire to host.

As at now, the only form of dissemination which is done by service providers is market promotion. Providing information on issues like service or equipment or subscriber per a given number of inhabitants is like a taboo. Access to information is impossible for these service providers to let you.

Conclusion

Sierra Leone has travelled a long way from a state of monopoly of ICT service by Sierratel to its current proliferation. All walks of life are benefiting in their own little way from ICT service. Commerce, research, leisure, agriculture, mining, families etc are all progressing from these services. The importance of ICT service to these people has shown the need for nationwide survey or census on ICT, development of a national database and a proper dissemination strategy.

8th World Telecommunication/ICT Indicators Meeting (WTIM-10)
Geneva, Switzerland, 24 - 26 November 2010

Information document

Document INF/17-S
16 November 2010

Spanish

SOURCE: Comisión Federal de Telecomunicaciones, Mexico

TITLE: Estadísticas de Telecomunicaciones/TIC en México

Estadísticas de Telecomunicaciones/TIC en México

La finalidad de esta ponencia radica en la presentación de la organización y planeación para la elaboración de las estadísticas de TIC que se generan en la Comisión Federal de Telecomunicaciones (COFETEL) y en el Instituto Nacional de Información Estadística y Geográfica (INEGI).

En la ponencia se presentan características generales del país, la fundamentación y organización de los procesos de generación de estadísticas TIC tanto de COFETEL como del INEGI y los principales indicadores de TIC que se elaboran en ambas dependencias.

Asimismo, se presenta también como ejemplo de la utilidad de los indicadores, el análisis explicativo del comportamiento en el tiempo de los resultados de los indicadores.

Por lo anterior, para este evento es de importancia la presentación no sólo de cómo se generan los indicadores y su resultado, sino también la relación entre ellos para la elaboración de nuevos indicadores cruzados o derivados, los que son de importancia para el análisis explicativo del comportamiento del sector de las TIC de los países de las distintas regiones, con la finalidad de obtener un mayor número de elementos para impulsar el desarrollo económico y social.

Comisión Federal de Telecomunicaciones

Estadísticas de Telecomunicaciones/TIC en México

Octava reunión sobre los indicadores de las Telecomunicaciones/TIC mundiales de la UIT

Ginebra, Suiza
24, 25 y 26 de Noviembre de 2010

Guillermo González R.

Comisión Federal de Telecomunicaciones

CONTENIDO

- Aspectos Generales
- Regulador
- Generación de Estadísticas
- Productos
- Principales Indicadores
- Instituto Nacional de Información Estadística y Geográfica

Comisión Federal de Telecomunicaciones

ASPECTOS GENERALES

2009

- Población: 107,978,956 Habitantes.
- Extensión Territorial: 1,959,248 Km^2
- PIB: 874,934.2 millones de dólares
- PIB per cápita: 8,103 dólares
- División Política: 32 Entidades Federativas
- Principales Entidades:

  Estado de México y Distrito Federal con el 22 % de la población y el 26 % del PIB

Comisión Federal de Telecomunicaciones

REGULADOR

La Comisión Federal de Telecomunicaciones (COFETEL) es un organismo desconcentrado de la Secretaría de Comunicaciones y Transportes (SCT), con autonomía técnica y operativa, el cual fue **creado el 9 de agosto de 1996**, con el objeto de regular y promover el desarrollo eficiente de las telecomunicaciones.

A través de la **Dirección de Información Estadística de Mercados (DIEM)**, se realizan las siguientes funciones:

- Integrar la estadística del sector telecomunicaciones y el Anuario Estadístico de la Comisión;
- Desarrollar y establecer procedimientos para la obtención, depuración, actualización y difusión de información estadística, económico-financiera, documental;
- Realizar análisis explicativo de la evolución y comportamiento del mercado de las telecomunicaciones nacional e internacional.

Comisión Federal de Telecomunicaciones

REGULADOR

Dirección de Información Estadística de Mercados (DIEM)

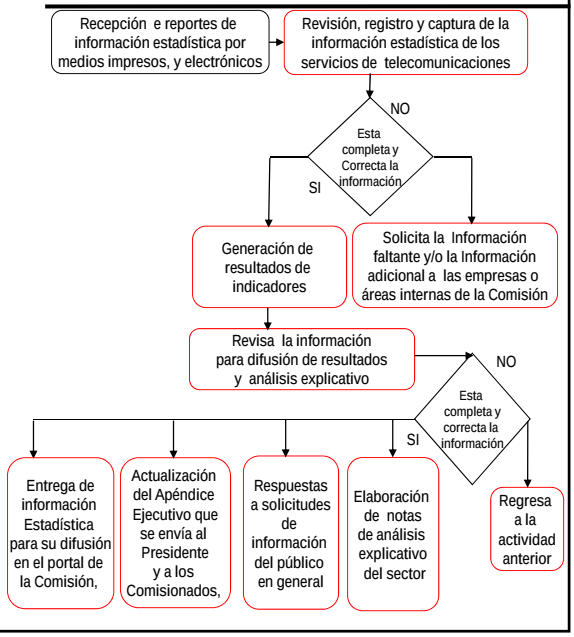
Visión: Ser la fuente de referencia, a nivel nacional e internacional, en indicadores y análisis del sector telecomunicaciones en México.

Misión: Asegurar que la información que ingresa por medios electrónicos u otros en la COFETEL por parte de los concesionarios y permisionarios de telecomunicaciones sea recibida en los tiempos establecidos para su integración en el sistema de información, para la generación de los resultados del acervo estadístico, anuario estadístico de telecomunicaciones, análisis explicativo de la evolución del sector y la difusión de indicadores para el público en general.

Comisión Federal de Telecomunicaciones

GENERACIÓN DE ESTADÍSTICAS

El proceso de recopilación, procesamiento, generación y difusión de los resultados de la información estadística del sector, se lleva a cabo a partir de la recepción de la información de registros administrativos de más de 1500 concesionarios o permisionarios que prestan servicios de telecomunicaciones, por medios impresos y electrónicos



Comisión Federal de Telecomunicaciones

PRODUCTOS

- Información que se pública en la página de Internet de la COFETEL, con periodicidad mensual, trimestral, semestral y anual:

  http://www.cft.gob.mx/es/Cofetel_2008/Cofe_estadisticas_e_informacion_de_mercados)
- Apéndice Ejecutivo de Estadísticas del Sector Telecomunicaciones, el cual incluye series históricas anuales y comparativos internacionales.
- Elaboración y Actualización de la Metodología, Cálculo y Diagnóstico del Indicador de Volumen de Producción del Sector Telecomunicaciones (ITEL).
- Diferentes productos para dar respuesta a solicitudes provenientes de organismos nacionales, internacionales, la industria y público en general.

La DIEM y la Sociedad de la Información

- Los indicadores básicos que genera la DIEM concuerdan con los propuestos en diferentes foros internacionales, entre ellos la reunión de indicadores de telecomunicaciones TIC/mundiales de la UIT y para la medición de la Sociedad de la Información en preparación del foro "Cumbre Mundial del Milenio".
- La DIEM elaboro los indicadores y el texto explicativo de los objetivos de desarrollo del milenio de la meta 8F del documento país México 2010.

Comisión Federal de Telecomunicaciones

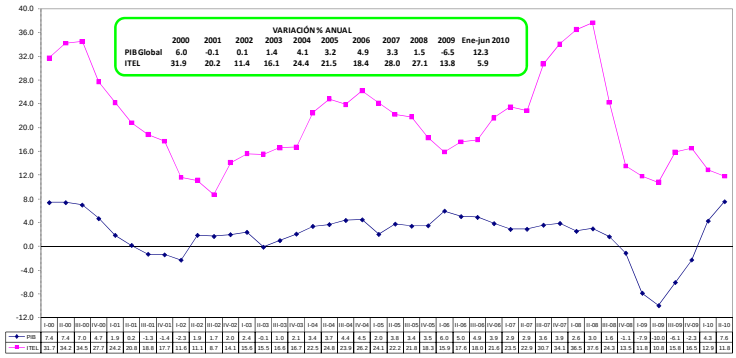
INDICADORES

- ✓ PIB e ITEL
- ✓ Crecimiento
- ✓ Inversión e Ingreso
- ✓ Red de Fibra Óptica
- ✓ Telefonía Fija y Móvil
- ✓ Televisión Restringida
- ✓ Internet

Comisión Federal de Telecomunicaciones

INDICADORES

PRODUCTO INTERNO BRUTO GLOBAL TRIMESTRAL A PRECIOS DE 2003 E INDICADOR DE VOLUMEN DE LA PRODUCCIÓN DEL SECTOR TELECOMUNICACIONES (ITEL)



p/ Cifras Preliminares a partir de 2008.
Notas: Las variaciones del ITEL fueron calculadas con base en índices 2004=1.
Las cifras del PIB fueron revisadas desde 2005 y las del ITEL desde 2007.
Fuente: Dirección de Información Estadística de Mercados, COFETEL. Con información de los concesionarios y del INEGI.

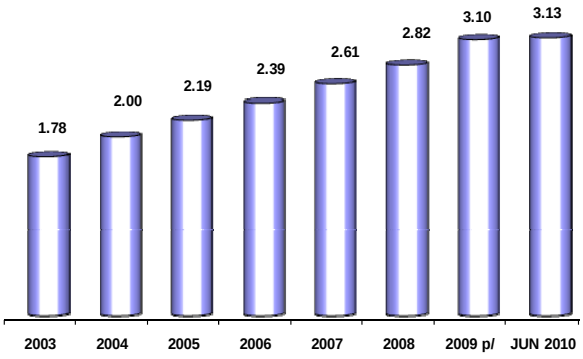
ITEL

- Es un indicador económico.
- Se genera con una periodicidad trimestral.
- Su finalidad es medir a través del tiempo la variación conjunta del volumen de producción de los servicios que componen el sector.

Comisión Federal de Telecomunicaciones

INDICADORES

PARTICIPACIÓN DE LAS TELECOMUNICACIONES EN EL PRODUCO INTERNO BRUTO GLOBAL (%)



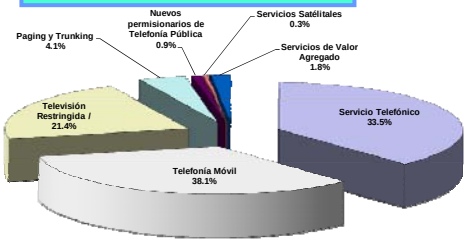
El sector telecomunicaciones se ha constituido como uno de los de mayor crecimiento en la economía, con lo que ha incrementado su participación en el Producto Interno Bruto Nacional.

p/ Cifras Preliminares a partir de la fecha que se indica.
Fuente: Dirección de Información Estadística de Mercados, COFETEL. Con información de la nueva serie del INEGI a partir de 2003.

Comisión Federal de Telecomunicaciones

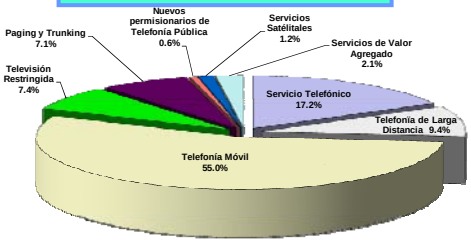
INDICADORES

Inversiones, Participación Porcentual 2009



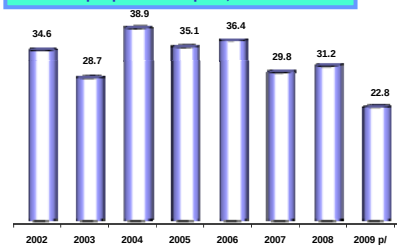
Total 2,700.0 millones de dólares (36,486.3 millones de pesos/)

Ingresos, Participación Porcentual 2009

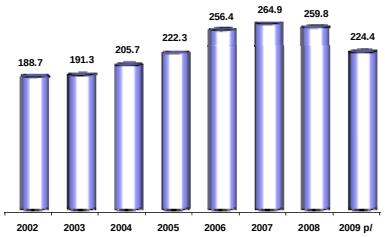


Total 359,464.4 millones de pesos (26,600.6 millones de dólares)

Inversión por persona ocupada, miles de dólares



Ingresos por persona ocupada, miles de dólares

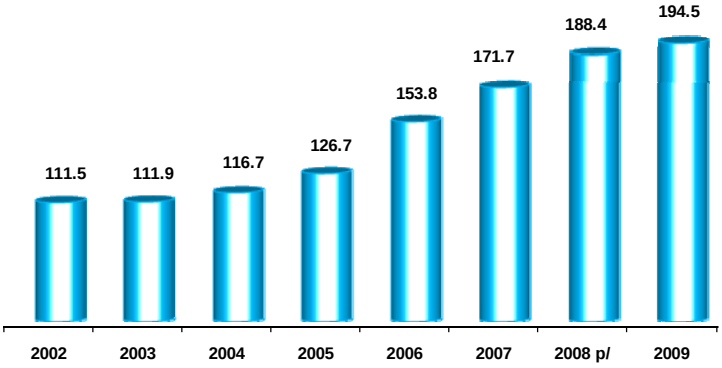


p/ Cifras Preliminares a partir de la fecha que se indica.
Fuente: Dirección de Información Estadística de Mercados, COFETEL.

Comisión Federal de Telecomunicaciones

INDICADORES

RED DE FIBRA ÓPTICA (Miles de Kilómetros)



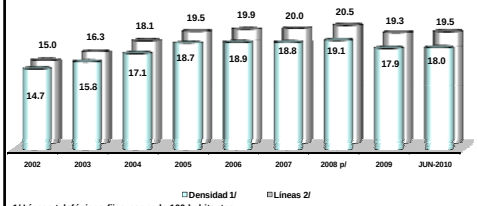
El crecimiento de la red de fibra óptica es resultado de la implementación, para el tránsito de servicios de telefonía tradicional, de la red de la Comisión Federal de Electricidad y de empresas que prestan servicio de televisión por cable.

p/ Cifras Preliminares a partir de la fecha que se indica.
Fuente: Dirección de Información Estadística de Mercados, COFETEL.

Comisión Federal de Telecomunicaciones

INDICADORES

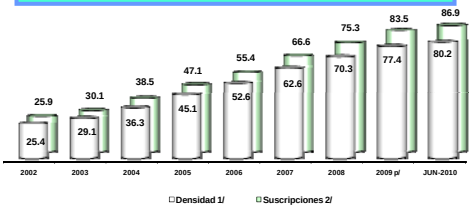
Telefonía local fija



1/ Líneas telefónicas fijas por cada 100 habitantes.
2/ Millones de Líneas.

- Este comportamiento se explica, por la migración de servicios fijos tradicionales a móviles, la depuración del principal operador para asegurar la rentabilidad de las líneas y la cancelación de líneas adicionales para uso exclusivo de la conexión a Internet por enlace conmutado que cambiaron usuarios por servicio de Internet de banda ancha.
- El mayor número de activaciones de líneas por parte de los nuevos participantes en especial las empresas cableras y la intensa competencia de los operadores al ofrecer paquetes o combos de servicios a menores tarifas, no pudo compensar la reducción en las líneas y su densidad.

Telefonía Móvil



1/ Suscripciones de teléfonos celulares móviles por cada 100 habitantes.
2/ Millones de Suscripciones.

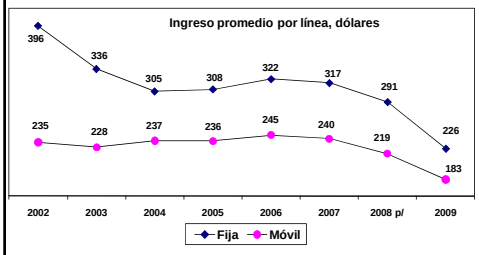
- Un factor determinante en el comportamiento de este segmento es la implementación del programa "El que llama paga nacional e internacional", modalidad que ha impulsado y seguirá impulsando el tráfico entre redes celulares, así como el de las redes de larga distancia.
- Asimismo, ha sido impulsado por las disminuciones en las tarifas y las acciones comerciales de las empresas dirigidas a estimular las recargas de minutos, principalmente para las suscripciones de prepago.
- Otro dato importante es que las nuevas tecnologías permiten el acceso a Internet de la población a través de los teléfonos móviles.

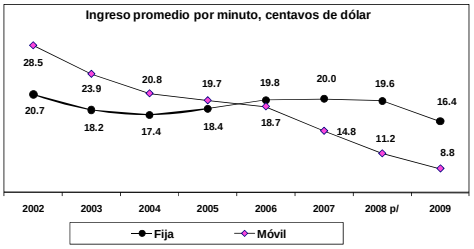
p/ Cifras Preliminares a partir de la fecha que se indica.
Fuente: Dirección de Información Estadística de Mercados, COFETEL.

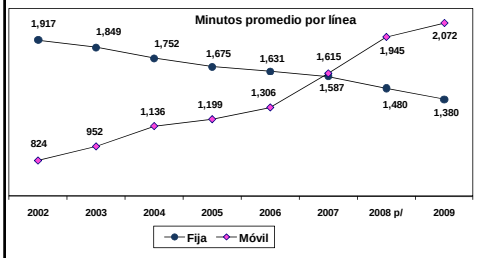
Comisión Federal de Telecomunicaciones

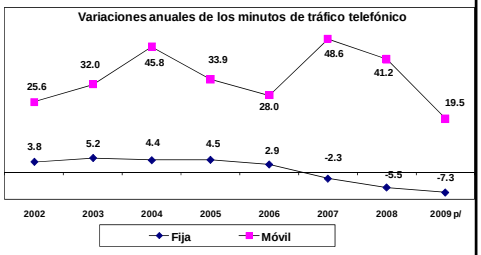
INDICADORES

Indicadores de Telefonía Fija y Móvil







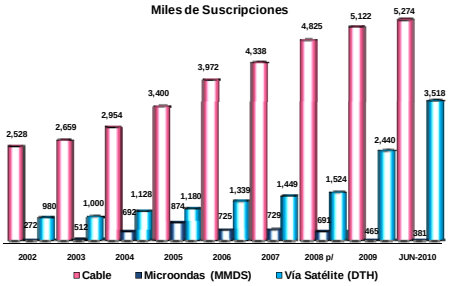


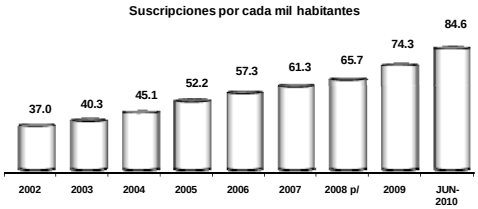
p/ Cifras Preliminares a partir de la fecha que se indica.
Fuente: Dirección de Información Estadística de Mercados, COFETEL.

INDICADORES

Comisión Federal de Telecomunicaciones

Indicadores de Televisión restringida





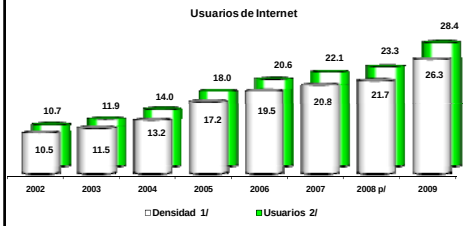
- Para el caso de TV cable, el crecimiento es resultado de la oferta de paquetes o combos de servicios a tarifas más bajas.
- Por su parte, el aumento en el servicio de TV vía satélite, fue resultado de la entrada de un nuevo participante a partir de 2008, lo que ha favorecido la oferta de planes o paquetes a menores tarifas.
- En cambio, el decrecimiento en el servicio de TV vía microondas, fue como resultado de las promociones tarifarias y de contenido que ofrecen los otros servicios de televisión restringida.

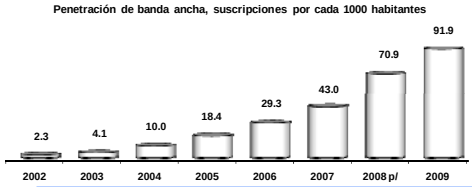
p/ Cifras Preliminares a partir de la fecha que se indica.
Fuente: Dirección de Información Estadística de Mercados, COFETEL.

INDICADORES

Comisión Federal de Telecomunicaciones

Indicadores de Internet





1/ Usuarios por cada 100 habitantes.
2/ Millones de Usuarios.

Suscripciones de acceso a Internet por tipo de tecnología

Tipo Cuenta	2002	2003	2004	2005	2006	2007	2008 p/	2009
Total	2,096,415	2,444,367	3,191,324	3,881,896	4,805,939	5,847,561	8,278,317	10,314,683
Dial Up	1,864,929	2,015,996	2,134,042	1,959,544	1,718,795	1,283,288	684,188	393,276
XDSL	78,120	213,494	695,912	1,198,725	1,960,557	3,150,190	5,663,947	7,308,791
Cable Coaxial	124,052	180,752	326,774	668,874	987,802	1,236,239	1,690,272	2,097,872
Otras*/	29,314	34,125	34,596	54,753	138,785	177,844	239,910	514,744

*/ Incluye las cuentas por tecnología ISDN, enlaces dedicados, satelital, MMDS y otros.

- El acceso a Internet constituye en la actualidad uno de los instrumentos de mayor valor para facilitar la comunicación de la población de una comunidad con el resto del mundo.
- El sistema educativo nacional está consciente de ello, y para reducir la brecha digital que existe entre los niños y jóvenes de zonas remotas del país y aquellos que viven en las zonas más desarrolladas, se está invirtiendo fuertemente en tecnología para llevar banda ancha de manera gratuita a la mayor parte del territorio.
- Con ello se espera reducir los costos de transacción de un gran número de mercados, promover mayor comercio, mayor competencia, mayores ingresos para la población.
- El incremento de la penetración del Internet en México, a nivel nacional, se explica por diversos factores, entre los que destaca la disponibilidad de diversos mecanismos de conexión, los cuales se adaptan a las necesidades y presupuesto de los usuarios.

p/ Cifras Preliminares a partir de la fecha que se indica.
Fuente: Dirección de Información Estadística de Mercados, COFETEL.

Comisión Federal de Telecomunicaciones

INEGI

El Instituto Nacional de Estadística, Geografía e Informática (INEGI), fue **creado el 25 de enero de 1983 por decreto presidencial.**
Con la promulgación de la **Ley del Sistema Nacional de Información Estadística y Geográfica (LSNIEG)** el 16 de abril de 2008, el INEGI cambió su personalidad jurídica, adquiriendo autonomía técnica y de gestión. Su nueva denominación es **Instituto Nacional de Estadística y Geografía**, pero conserva las mismas siglas (INEGI).

El **objetivo prioritario** del INEGI es lograr que el **Sistema Nacional de Información Estadística y Geográfica (SNIEG)** suministre a la sociedad y al Estado información de calidad, pertinente, veraz y oportuna, a efecto de coadyuvar al desarrollo nacional, bajo los principios de accesibilidad, transparencia, objetividad e independencia.

INEGI

INSTITUTO NACIONAL DE ESTADÍSTICA Y GEOGRAFÍA

SNIEG SISTEMA NACIONAL DE INFORMACIÓN ESTADÍSTICA Y GEOGRÁFICA

Comisión Federal de Telecomunicaciones

INEGI

Misión: Coordinar y armonizar la generación y administración de información geográfica de interés nacional de calidad acorde a la normatividad establecida por el Sistema Nacional de Información Estadística y Geográfica, conservar y promover su disponibilidad para brindar el Servicio Público de Información.
Visión: El SNIEG cuenta con un Registro de Información Geográfica, completo, vigente y accesible a los usuarios, que permite la coordinación y armonización de la actividad geográfica.

Atribuciones:
- Normar y coordinar el desarrollo del (SNIEG).
- Normar las actividades estadísticas y geográficas.
- Producir información estadística y geográfica.
- Prestar el Servicio Público de Información.
- Promover el conocimiento y uso de la información.
- Conservar la información.

- El Instituto genera estadística básica, la cual obtiene de tres tipos de fuentes: censos, encuestas y registros administrativos, así como estadística derivada, mediante la cual produce indicadores demográficos, sociales y económicos, además de contabilidad nacional.
- El INEGI ofrece acceso a la información estadística y geográfica de una gran diversidad temática y con distintos niveles de desagregación a través de productos impresos y digitales, tanto en forma gratuita como en venta. **http://www.inegi.org.mx/**

Comisión Federal de Telecomunicaciones

INEGI

Encuesta sobre Disponibilidad y Uso de Tecnologías de la Información en los Hogares (ENDUTIH)

- Desde 1992, el INEGI inició la generación de información estadística sobre la disponibilidad y uso de las tecnologías de información y comunicaciones en los hogares del país mediante la aplicación de una encuesta, planeada para aplicarse anualmente.
- Sin embargo, diversas limitaciones presupuestales solo permitieron subsiguientes levantamientos en los años 1998, 2001, 2002 y 2004.
- A pesar de esta falta de continuidad, los primeros esfuerzos permitieron el acopio de una experiencia relevante que se ha volcado en una mayor precisión conceptual y de diseño del estudio, que permite ahora una mejor integración de cifras sobre este hecho social.
- Para los años 1992 y 1998 las encuestas se denominaron "Modulo de Computación".
- En el 2001 se precisó en su denominación el carácter nacional del estudio.
- Para el 2002 tomó el nombre de "Encuesta sobre Disponibilidad y Uso de Tecnología de Información en los Hogares y a partir de 2004 el de **"Encuesta Nacional sobre Disponibilidad y Uso de Tecnologías de la Información en los Hogares (ENDUTIH),** su levantamiento es anual a partir de este año.

Comisión Federal de Telecomunicaciones

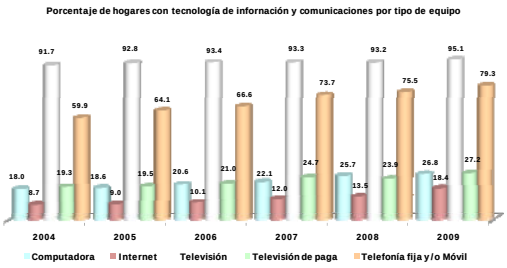
INEGI

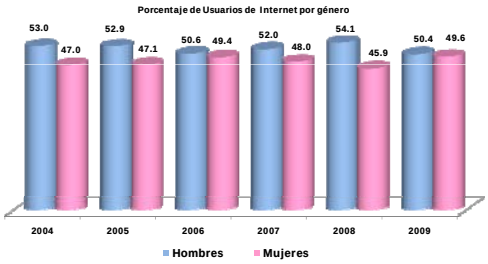
Encuesta sobre Disponibilidad y Uso de Tecnologías de la Información en los Hogares (ENDUTIH)

Objetivo:
- Generar información estadística oportuna y confiable sobre tecnologías de información en el sector social, la condición de disponibilidad en los hogares y las formas de uso entre la población.

La ENDUTIH y la Sociedad de la Información:
- Los indicadores básicos que genera la ENDUTIH concuerdan con los propuestos en diferentes foros internacionales, entre ellos la reunión de Ginebra para la medición de la Sociedad de la Información en preparación del foro "Cumbre Mundial del Milenio".

Difusión de resultados:
- Por medio de tabulados y documentos descriptivos en el sitio web del INEGI, se difunden los resultados de la encuesta.
  http://www.inegi.org.mx/Sistemas/temasV2/Default.aspx?s=est&c=19007



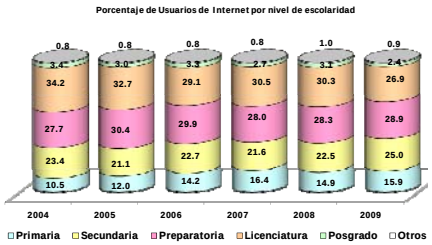


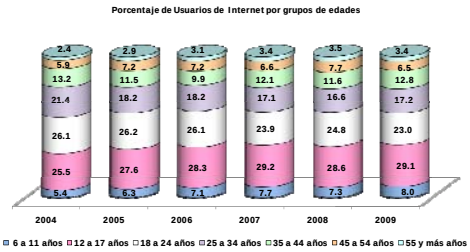
FUENTE: INEGI – ENDUTIH

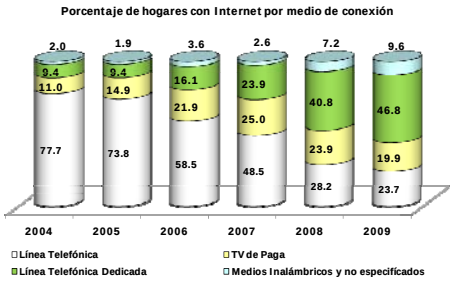
Comisión Federal de Telecomunicaciones

INEGI

Encuesta sobre Disponibilidad y Uso de Tecnologías de la Información en los Hogares (ENDUTIH)





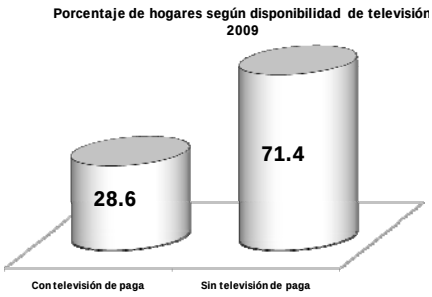


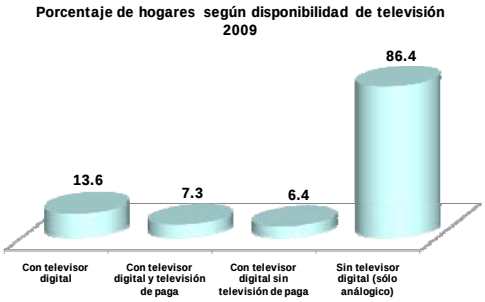
- En los gráficos de porcentaje de usuarios de Internet por grupos de edades y nivel de escolaridad, se observa la importancia de contabilizar a los menores de edad, ya que representan más del 35 por ciento de los usuarios del país.

Comisión Federal de Telecomunicaciones

INEGI

Encuesta sobre Disponibilidad y Uso de Tecnologías de la Información en los Hogares (ENDUTIH)





- De conformidad con la recomendación UIT-R M.2078 de la Unión Internacional de Telecomunicaciones, en la cuál estima que el tráfico de servicios de telecomunicaciones tenderá a triplicarse para el año 2020, por lo que se requerirán entre 1,280 a 1,720 MHz de capacidad espectral para satisfacer esta demanda de servicios, se propone llevara que el *"apagón analógico"* se realice en México al cierre de 2015.

Comisión Federal de Telecomunicaciones

GRACIAS

PUNTO DE CONTACTO
Guillermo Gonzalez Robledo
COFETEL, MEXICO
Tel: (+52) 55 50 15 40 28
E-mail: grobledo@cft.gob.mx

8th World Telecommunication/ICT Indicators Meeting (WTIM-10)
Geneva, Switzerland, 24 - 26 November 2010

Information document

Document INF/18-E
17 November 2010

English

SOURCE: Ministry of Information Technology and Communications, Moldova

TITLE: Development of Information Society and ICT sector in the Republic of Moldova

Eleonora VASILACHI
Chief of Department
Ministry of Information Technology and Communications
Republic of Moldova

Development of Information Society and ICT sector in the Republic of Moldova

Contemporary history

Republic of Moldova is a landlocked country in Eastern Europe, located between Romania and Ukraine, with a population of 3.6 million of habitants and a territory of almost 34 thousand square km. *The country is divided into 32 districts, 3 municipalities, and 2 autonomous regions.*

The country's central legislative body is the unicameral parliament, which has 101 seats, and whose members are elected by popular vote every four years. In fact, Moldova is a parliamentary democracy with a President, elected by the Parliament, as its head of State, and a Prime Minister, appointed by the President, as its head of Government.

Republic of Moldova gained its independence on August 27th, 1991 and became a member of United Nations on March 2nd, 1992. Also, in 1992 Moldova became a member of International Telecommunication Union.

Economy of the Republic of Moldova

Economy Reforms in Moldova are supported by the international specialised bodies, especially starting with 1992, after acceding to The International Monetary Fund, World Bank and European Bank for Reconstruction and Development. Also, a considerable financial support and technical assistance was offered to Moldova by such countries as USA, Germany, Japan, Sweden, Holland, Romania and Russia.

The Republic of Moldova became the World Trade Organization member on May, the 8th 2001.

Republic of Moldova is an agro-industrial country. Agriculture and Industry contribute with 37% to creation of Gross Domestic Product. The occupation of about 50.8% of active population of the country is agriculture and processing of agricultural products. Average monthly income of population is about $247.

According to the National Policy on Communication, policy elaboration and regulatory functions have been separated since 2000:
The authority that develops, promotes and realizes Government policy on electronic communications and determines development strategy of this sector is the Ministry of Information Technology and Communications.

The authority that regulates and monitories the market for electronic communications and information technology services is the National Regulatory Agency for Electronic Communications and Information Technology.

The main task of the Ministry of Information Technology and Communications is the elaboration and implementation of the policy regarding information society building.

The development of Information Society in RM

In June 2002 the Republic of Moldova signed the Declaration of Intent among the member states of Stability Pact for South - Eastern Europe, and committed itself to build an Information Society based on principles established in the UN Charter, the Universal Declaration of Human Rights and enshrined in the Okinawa Charter on the Global Information Society. Following this,

- In 2004, through Presidential Decree, building of Information Society in Republic of Moldova was declared as a national priority.
- the Government established the guiding principles about "Policies for building information society in the Republic of Moldova".
- A National Committee on Building an Information Society has been created as a multi/stakeholder mechanism to monitor the implementation of related policies.
- A package of fiscal and other facilities for ICT companies approved by the Parliament in December 2004 demonstrates is yet another proof of confidence that the Government has in moving forward towards a developed Information Society.
- The National Strategy for Building Information Society „Electronic Moldova" was approved by the Government Decision on the March 9, 2005.

The National Strategy „Electronic Moldova" expresses the Moldovan Government's commitment to building an inclusive Information Society.

According to the National Strategy for Building Information Society, the Government will take all the necessary measures to develop the Republic of Moldova as an active and competitive member of the emerging global knowledge economy to ensure its democratic path to the development and secure future economic prosperity. To accomplish this strategic goal, the Government of Moldova, with its specialized body – the Ministry of Information Technology and Communications will take a leading role in developing appropriate conditions and policies, fully harmonised with the European Information Society development framework.

Main achievements of Information Society building are:

- Creation of national institutional capacities for Information Society building;
- Developing of an European harmonized legal framework for IT&T
- Promotion of Information Society principles based on European agenda for Information Society building experience: Europe 2002, Europe 2005, and 2010

Enterprises and staff in ICT sector

In the last 10 years the Moldovan ICT sector has topped the list of the most dynamic national economy sectors and can be a major driver for increased competitiveness of the economy. ICT provides opportunities for building a competitive economy and increasing the effectiveness of the public sector.

At present more than 11 thousand employees work in ICT sector, with an average monthly salary of about $600. The highest percentage of staff with university degree is involved in the sector.

On 1st January, 2004 in Republic of Moldova the liberalization of the electronic communications services market started that led to the promotion of changes on its various segments.

Development of ICT sector in RM

In this period, most of the market segments were marked by stable tendencies of growth.

The total sales volume on the electronic communications service market increased in 2009, compared to 2005, by 55%, and showed 524 million US dollars. Average value of the electronic communications sector was estimated at 9,7% in the country's Gross Domestic Product for the last 5 years.

At the end of 2009 the number of license holders in the IT sector and telecommunications reached to 1355. 214 of which have got general authorization and total number of active companies is 1261, including:

- 656 companies in the field of information technology
- 161 companies of audiovisual services
- 19 fixed communications operators
- 3 mobile cellular communications operators

During the last 5 years, mobile telephony sector had the highest share of 52,1% of the total Electronic Communications Market Sales, followed by the fixed telephony market with 33,1%.

The share of Internet access service market is constituting 7,5%, while the share of broadcasting and retransmission of audiovisual program services maintains its level of 4,0%.

The decrease in the share of fixed telephony to be natural, as this market is close to saturation. However, the other markets, in particular the mobile and Internet access service market are developing rapidly.

The increase in the turnover was backed up by the growing volume of investments in market sectors, estimated at 158 million US dollars. The highest share of 64,8% was invested in mobile networks.

Investments in Internet access services grew by 56,2% in comparison with 2008, and constituted 13,6% of the total investments.

The saturation of fixed telephony market accounts for the reduction of investments in this sector and constituted only 19,4% in the structure of the total investments.

At the beginning of 2010, there was the following level of penetration of ICT services:

A penetration rate of 32% for fixed telephony and 78% for mobile telephony is achieved. In terms of number of users per 100 inhabitants, Internet penetration is 37%, computers penetration is 33%.

Although, the Internet access service market, especially broadband access, was the most dynamic segment of the electronic communications sector, the penetration rate of broadband Internet access is indicating only 5,2%.

According to ITU Report „Measuring the Information Society - 2010”, Republic of Moldova is placed in the „Medium average” category, with a medium level of ICT Development Index, and is on the 73d place.

After examination of e-readiness level of the Republic of Moldova, are observed general positive trends at all chapters: regulation framework is created, which establishes principles and conditions of Information Society development, different programs are financed to facilitate assimilation of ICT, number of Internet users and demand for broadband access is growing, computers become an usual tool in business process and in the day-to-day life, etc.

Certainly, all these achievements are still modest comparing with data from other developed countries. This fact imposes the necessity to strengthen the state policy in this area and to find solution to stimulate growth.

To stimulate further development of IT and electronic communications services market in the Republic of Moldova is necessary to undertake a number of actions such as:

- identification and analysis of relevant markets, designation of operators with significant market power,
- design and implementation of Methodology for calculating long-term incremental cost at the interconnection of electronic communications networks and services,
- regulatory insurance of access to the local loop,
- Finalizations of the process of rebalancing tariffs for public fixed telephony services.

In conclusion I would like to mention that taking into account all above, the ministry identified the main objectives to prepare and approve by Government of the follow strategical documents:

- ICT sector development 2010-2013
- Broadband strategy 2010-2013
- Digital television switchover
- Postal services development 2010-2013

We expect, that implementation of those initiatives will lead to:

- ICT growth incentives, such as:
  - defining a place for Moldovan ICT proposition in global value chain
  - facilitative policies to support Country Proposition
  - positioning and promotion of the national ICT sector
  - stimulating public procurement
- Infrastructure development, such as:
  - open communication market
  - broadband deployment targeting 20% penetration
- Education sector as enabler, as such:
  - to ensure ICT sector has adequate resources to grow
  - to prepare citizens for e-Government.

8th World Telecommunication/ICT Indicators Meeting (WTIM-10)
Geneva, Switzerland, 24 - 26 November 2010

Information document

Document INF/19-E
17 November 2010

English

SOURCE: Ministry of Information Technology and Communications, Moldova

TITLE: On the system of indicators on the information society development across the RCC countries

Eleonora VASILACHI
Vice-person of the RCC Commission on the Economy of communications
Chief of Department
Ministry of Information Technology and Communications
Republic of Moldova

On the system of indicators on the information society development across the RCC countries

Regional Commonwealth in Communications (RCC) is a regional organization which main purpose is to promote cooperation between CIS - states in the field of communications and information technologies. This association has the status of official observer at the International Telecommunication Union and Universal Postal Union, and develops cooperation with other international organizations and the regional unions.

One of the main areas of RCC activity starting from the very beginning of its existence is to facilitate best practices transfer between member states.

In order to assess the level of the information society building within the RCC participant countries and to involve and make use of the ICT potential for the accomplishment of the strategy tasks within the Commonwealth countries, the RCC Commission on the economy of communications jointly with the RCC Commission on informatization undertook the following measures:

➢ There were selected **standardized indicators for the information society development in the CIS member states,** within the framework of RCC R&D:

- on the elaboration of a system of indicators for the level of the information society development within the CIS countries;
- on the standardization of the indicators of statistical reporting on communications within the CIS countries.

The research and development was performed with the view of ensuring the harmonization of indicators with the recommended international organizations in ICT development (*EUROSTAT, WEF, ITU, UPU, UN Stat. division).*

At the same time, there were taken into consideration the features specific to each country, where an established terminology for communications and information backed by a national regulatory framework is in place.

The list of indicators has been worked out based on research and development to access to telecommunication networks, to data and information resources, and there were also identified the indicators of electronic development, the indicators of business climate and human resources. The state regulation in the field of ICT, as well as the "LIST of standardized statistical indicators showing the status of communications in the RCC participant countries" was also elaborated.

In the process of research implementation, recommendations were worked out with respect to the filling in technique and to algorithms of indicators' computing;

➢ The RCC Commission on the economy of communications carries out the **monitoring of the information society development in the CIS countries** according to the selected e-government indicators.

Within the framework of its meetings, the Commission evaluated the level of our countries' e-readiness with further synthesis and analysis of the results.

Most of the RCC participant countries have worked out and are implementing national strategies of information society development and state programs. A number of countries adopted and implemented action plans of achieving the national strategies of ICT sector development, of which the most important are the programs of e-government creation.

The RCC Commission on the economy of communications is also monitoring the international ratings of the countries' e-readiness for the information development and the e-government development based on composite index: Network Readiness Index – NRI, defined by WEF, ICT Development Index – IDI (ITU), e-Government Readiness Index (UNO).

According to the ITU latest rating on the global information society development, the CIS states are included in the group of countries with the average level of ICT Development Index. The ITU data indicate a substantial increase in the ICT sector for the period 2002 – 2009.

The leading countries as to the level of the ICT Index are Russia, Belarus, Ukraine, Kazakhstan and Moldova.

The CIS countries' ranking for the preparedness to use e-government technologies has also recorded a gradual increase according to the UN latest rating. Six of the twelve CIS member-states display indices the value of which exceeds the world average value (0,454).

The results of the classification of our countries in the international ratings are highly dependent on the reliability and timeliness of information submitted to international organizations: ITU, EuroStat, as well as on the on-line filling in of the requested questionnaires.

- The monitoring results and the analytical assessment of the processes run by countries towards the information society development are published in annual Statistical Yearbook on the activities of the RCC Communications Administrations in the field of ICT.

The publication of the annual RCC Statistical Yearbook is regarded as a logical step towards mutual information of RCC Communication Administrations with respect to the ICT development level.

Already in 2009 there were undertaken new measures as to the coverage of the information society building. In accordance with RCC Board Decision no. 39/3-CIS dated 25.09.2008, the Compendium included in the attachment the indicators of business climate, human resources and of state regulation in the field of ICT.

On the ordinary session of the RCC Commission on the Economy of communications the results of the 7th International Meeting for the global indicators of ICT development, took place in Cairo in March 2009, were discussed.

As a result, the Commission created the Initiative Group of experts for the examination the Definitions of World Telecommunication/ICT indicators chaired by Mrs. Eleonora Vasilachi, Viceperson of the Commission.

The Group prepared the project of common contribution of RCC to the global indicators in the field ICT for ITU. The project was submitted to the Working Group of international experts of the ITU in March 2010 for discussion and inclusion of the respective definitions in the World Telecommunication/ICT indicators.

The further activity of the Group is directed towards improvement of the system of indicators and metrics for the assessment of the level of information and

communications development aims at reflecting both the dynamics of ICT sector and the penetration thereof into the society, as well as the elaboration of new-quality methodology approaches for the examination of these processes and ensuring reliable comparisons at the international level.

8th World Telecommunication/ICT Indicators Meeting (WTIM-10)
Geneva, Switzerland, 24 - 26 November 2010

Information document

Document INF/20-E
17 November 2010

English

SOURCE: Communications Regulation Commission, Bulgaria

TITLE: Data collection and dissemination process of CRC

Data collection and dissemination process of CRC

➢ *Scope and coverage of the data collection process of CRC*

For the implementation of its regulatory functions the Communications Regulation Commission (CRC) collects on a regular basis data on the national electronic communication activities.

The information is requested directly from the operators via questionnaires and the process collection could be split up in two main groups: annually data collection and data collection for the purpose of market analyses and others specific requests.

I. Annually data collection:

According to the national legislation the communications service providers shall submit annually information on the activities for provision of electronic communication networks and/or services during the previous year. For this purpose a set of questionnaires covering the following activities is used:

- ✓ Provision of fixed telephone services;
- ✓ Provision of fixed telephone servic through public payphones;
- ✓ Provision of mobile services;
- ✓ Provision of services through broa wireless access (BWA);
- ✓ Provision of leased lines;
- ✓ Provision of data transmission services and Internet access;
- sion of cable TV and communication ces through cable distribution networks;
- sion of services through „point to " networks in the fixed radio service;
- sion of services through satellite orks in the fixed radio service;
- ✓ Broadcasting services (radio and TV).

Milena Petkova, Communications Regulation Commission, Bulgaria

Regarding the current monitoring of the national market development, set of indicators defined by CRC are being followed.

On the basis of the information collected, database is maintained and updated by types of electronic communication activities.

Detailed revision of the indicators included in the questionnaires is made regularly every year in order to verify that the scope of data collected brings relevant and consistent information.

II. Data collection for the purpose of market analyses and others specific requests:

- ✓ **Need of additional information for the purposes of market definition, analysis and designation of SMP operators**

The process of market definition, analyses and assessment of the relevant electronic communications markets susceptible to ex-ante regulation supposes availability of additional and detailed information for electronic networks and services provided by operators.

This particular information on the operators' electronic communication activities is collected through special questionnaires.

- ✓ **Data collection for specific requests**

CRC provides regulatory information on the state of national electronic communications to a number of national and international organizations and institutions.

Data collection challenges

In view of the above, the CRC data collection practice should respond to some challenges:

- ✓ **Bundled offers**

The commercial offers of two or more electronic communication services in a bundle have become more popular in electronic communications.

The wide variety of bundled offers, including more than one service, supplied by the operators through different networks and technologies face the data collection process with some difficulties. In some cases it is difficult to measure the volume, in term of revenue, of the single service included in a bundle offer. With regard to this the different tariff plans (proposed in fixed and mobile telephony services) including access and a certain amount of so-colled "free" minutes should be also mentioned.

Dissemination and use of data

The information obtained from the CRC questionnaires gives grounds to identify the current market situation of the Bulgarian electronic communication sector and is being used for different purposes and disseminated as follows:

At national level:

- ✓ CRC Annual Report, as well as for performance of the specific regulatory functions
- ✓ Data provided for other organization and institutions: State Agency for Information Technologies and Communications, National Statistical Institute, Competition Protection Commission, etc.

At international level:

- ✓ Implementation Report on the Regulatory Framework for electronic communications of the European Commission;
- ✓ ITU World Telecommunication/ICT indicators data base and World Telecommunication Development Report;
- ✓ Country comparative report "Supply of services in monitoring of South East Europe - telecommunications services sector and related aspects";
- ✓ Body of European Regulators for Electronic Communications (BEREC), Independent Regulators Group (working groups and projects)]
- ✓ European Competitive Telecommunications Association (ECTA)

For additional information:

Milena Petkova
Communications Regulation Commission, BULGARIA
tel: + 359 2 949 22 63
e-mail: mpetkova@crc.bg
www.crc.bg

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TITLE: Statistical Compilation of The ICT Sector and Policy Analysis: The Case of Egypt

“Statistical Compilation of The ICT Sector and Policy Analysis: The Case of Egypt”

Background Paper

Presented by

Dr. Nagwa El-Shenawy
Director of Information Center
Ministry of Communication and Information Technology

Statistical Compilation of The ICT
Sector and Policy Analysis: The Case of Egypt

1. Introduction

The main focus of this study is to quantify Egypt's ICT sector and analyze its sectoral composition and evolution. Particular focus was placed on the contribution of ICT sector to real GDP and to employment, as Egypt's ICT sector has become an essential building block in both social and economic development. This paper also highlights Egypt's effort to measure the performance of ICT sector and how to utilize ICT indicators to support the decision making process through linking and compiling ICT statistics and policy analysis.

This study was conducted in cooperation with ORBICOM- the International Network of UNESCO Chairs in Communications- in the context of ORBICOM project for "Statistical Compilation of The ICT Sector and Policy Analysis", applied on six selective countries:: India and Malaysia from Asia, Brazil and Argentina from Latin America, and Cameroon and Egypt from Africa.

The paper confirmed that Egypt has exerted many successful efforts to move towards the knowledge economy. Following the successful implementation of the Egyptian Information Society Initiative in 2006, which focused on improving productivity, citizens' quality of life and Business Park establishment, MCIT initiated an ICT strategy covering the period from 2007 to 2010 with the objective of increasing ICT exports and Industry development. As a result Egypt is ranked in 2009 as one of the top five global destinations for outsourcing industry. Now Egypt is moving towards formulating a new strategy for communications and information technology for 2011-2014 that will focus on innovation moving Egypt to the high end of the value chain. This paper shed light on Egypt's ICT sector as a highly dynamic sector contributing positively to the economic growth and social development. Despite the effect of the financial crisis; the sector has successfully managed to maintain positive and double digit growth rates. This study confirms the economic importance of Egypt's ICT sector with respect to its contribution to real GDP growth rates, employment and overall economy.

Egypt follows the internationally agreed-upon definition of the OECD for the ICT sector, with more emphasis on ICT services. Accordingly, financial data has been compiled and indeed proven that ICT services contribute the most ICT value added and investments (estimated to range from 70 to 80%). Egypt puts a great emphasis on developing the reliable and updated indicators that reveal the economic and social contribution of the ICT sector.

2. Magnitude And Composition Of The ICT Sector:

The value added of ICT GDP at current prices reached EGP 30.9 billion (US$ 5.6 billion in 2008/2009, while the ICT value added at constant prices reached EGP 30.3 billion (US$ 5.5 billion) with an annual growth rate 14.5%. The ICT sector recorded the highest growth rate proving that it can maintain growth momentum even during times of crisis. The private sector is playing a leading role in generating the total ICT value added as it contributed with about 69 % of the total value added generated in 2008/2009.

Egypt's ICT sector shows competitive performance regarding telecommunications revenue as a percentage of GDP based on World Bank figures, which reached 3.8% in 2006, coming ahead of a number of developed and developing countries, such as Argentina, China and Germany and preceding the MENA region average. The relative importance of the ICT sector is even higher when measuring it relative to the total services sectors' real GDP as it reached about 9.4% in 2008-2009.

The ICT sector in Egypt has succeeded in attracting local and international companies to invest in different lines of business, including high value - added services and call centers. The number of ICT companies in 2009 was 18 % higher than in 2008. Consequently, the total number of direct employees in the ICT sector reached 181.734 thousand employees in 2009. Egypt's ICT sector is expecting to generate around 40 thousand new direct job opportunities in the next 2-3 years in addition to 100 thousands indirect jobs after the launch of the second investment ICT zone in Maadi.

3. Productivity:

Many macro-level studies show that ICT has considerable economic effects through the expansion of ICT-related production of goods and services as well as via capital deepening. Within this context, Egypt's ICT sector witnessed a significant increase in productivity in the last ten years. The productivity of an employee in ICT private sector increased from 8 Thousand EGP in 97/98 to 132 Thousand EGP in 07/08. The continuously compounded average growth rate of ICT productivity reached 25% in (97/98-07/08) exceeding the average productivity of other services sectors.

4. Employment Characteristics:

Egypt's large population (close to 80 million) is characterized as young population, with an average age of 24.This constitutes a strong advantage in a world in which talent needs to be built (or upgraded) at a rapid pace. Egypt is rich in talented, skilled workers who are eager to work and value multilingual abilities. Egypt has also been able to build on its familiarity with Western culture and its long-established international educational institutions (English, French, and German high schools and universities). Moreover, around 330,000 students graduate annually from universities in Egypt; The ICT sector in Egypt benefited from this strong critical mass of talented pool.

Concerning the gender analysis in ICT sector, it is notable that women in Egypt have started to play an increasing role in ICT Sector. This trend is obvious through many indicators that confirmed the diminishing of the gender gap in ICT employment. In this context females accounts for around 30-40% of the total workforce in ICT sector. Females' participation is higher in the fixed telecommunications sector reached 35%, while the females in mobile communications services account for 27% of the total employees within the sector.

Moreover, The results of a recent field survey study conducted by Information and Decision Support Center confirmed (IDSC) revealed that 72% of ICT surveyed companies have no gender preference with respect to hiring new employment. Egypt's ICT Companies are keen in general to grant their employees many incentives to attract the young and talented employees. 98% of ICT companies provide social insurance and allow their employees to have annual leaves, while 86% offer health insurance, 74% offer promotion and 70% of them ensure the right of their female employees to have maternity leaves. The average daily working hours for ICT employees reached 9.2 hour, which is higher compared to the similar average of other sectors in the Egyptian economy.

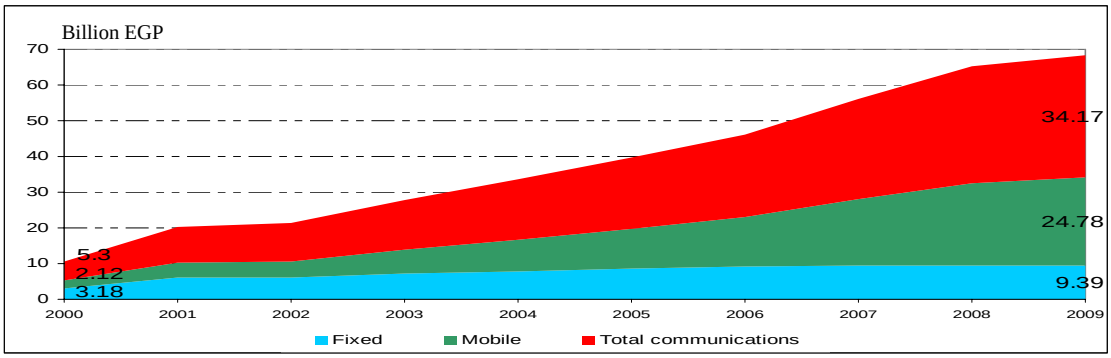
5. ICT Investments:

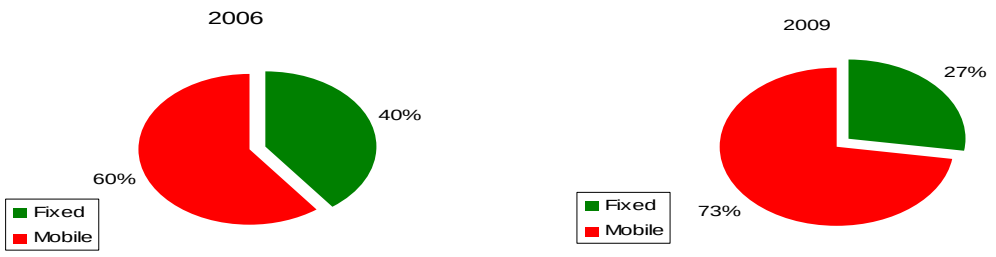
Egypt's ICT sector is highly dynamic and attractive for both local and foreign investment. The total issued capital for ICT companies reached EGP 44.37 billion (US$ 7.9 billion) in 2009 compared to EGP 38.62 billion in 2008 (US$ 7 billion) with an annual growth rate of 15%. It is worth noting that the percentage of Issued Capital of telecommunication companies reached 81.40% while it reached 16.52% for IT companies and 2.09% for IT enabled services companies.

6. Evolution of Egypt's ICT Sector :

During the past few years, Egypt's ICT sector has become one of the key drivers for economic and social development. It has also become an Egyptian role model in terms of pace and policies of deregulation and privatization, as well as a catalyst for reform in other sectors. The substantial increase in ICT usage in Egypt in the last ten years lead to a parallel increase in telecommunications revenues which rose from only EGP 5.3 billion in 2000 to 34.17 billion in 2009 with a CAGR reaching 23%. The statistics shown in this study revealed the evolution of mobile sector in Egypt during the past ten years, as the Compound annual growth rate of mobile subscribers reached 56%. Mobile revenues have witnessed an enormous increase during the past ten years, it have increased to EGP 24.8 billion in 2009 (72.5% of the total telecommunications revenues) compared to EGP 2.12 billion in 2000 (40% of the total telecommunications revenues). The following figure sheds lights on the evolution of mobile market in Egypt.

Figure (1)
The evolution of mobile market in Egypt (2000-2009)
Telecommunications revenues (Billion EGP)

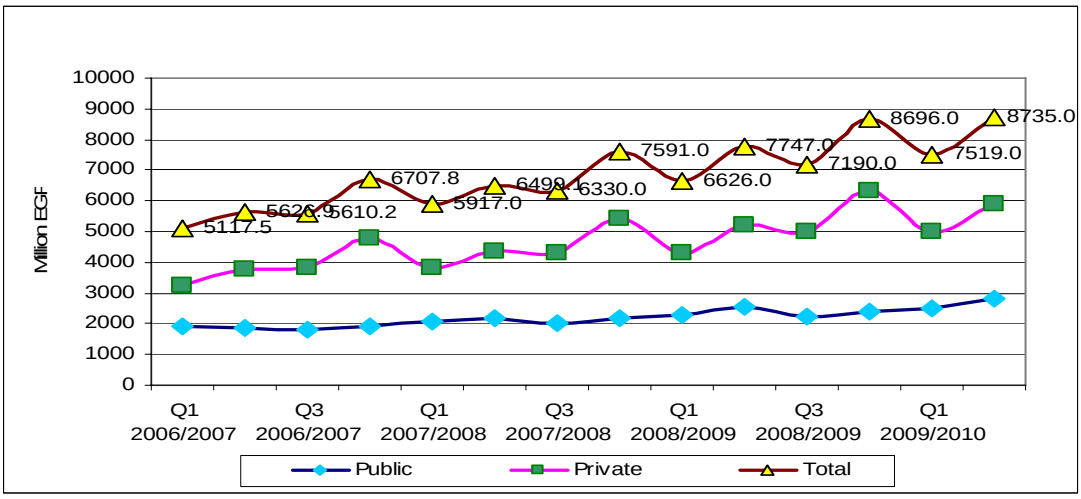




Source: Ministry of Communications and Information Technology.

The ICT sector has been contributing significantly to GDP and its growth rates in Egypt. In the year 2001/2002, the ICT sector component of GDP at current prices has reached only 6.4 billion EGP, while in 2008/2009; it reached 30.9 billion EGP. The ICT GDP at constant prices has also been increasing; as it has reached EGP 30.3 billion in 2008/2009 compared to EGP 23 billion in 2006/2007. This increase reflected the growth of ICT users and the decrease in the ICT services' prices. Using quarterly data; the ICT value added at constant prices increased from only EGP 5.1 billion in Q1 2006/2007 to EGP 8.7 billion in Q2 2009/2010. The private sector contribution in total ICT value added increased from 63% to 67% during this period. The figure below highlights the growth of ICT value added during this period.

Figure (2)
ICT value added at constant prices (Q1 2006/2007-Q2 2009/2010)



Source: Ministry of state for economic development.

Moreover, the ICT sector contribution to GDP has reached 4.2% in Q2 2009/2010 compared to 2% in Q1 2006/2007. Concerning ICT contribution to Egypt's overall GDP growth rate which had reached 6.45% in Q1 2007/2008, the sector has contributed with 0.45 pps, this contribution has increased to 0.50 pps in the second quarter of 2009/2010.

7. International Trade :

One of the principal areas of industry development for the government is creating a framework that will attract multinationals to Egypt, and foster the growth of new ICT line of businesses such as contact centers. A parallel objective is to improve the international competitiveness of existing exporters to enable them to successfully manage market-led development. Ultimately, this should result in improved export capability and penetration of new markets. Between 2004 and 2010, Egypt's exports grew from US$ 150 million to US$ 1100 million with an average annual growth rate of 90% percent. The key element that led to such growth in ICT exports was the tremendous development in offshoring business in Egypt, which enjoys high value propositions in this area. Egypt aims to achieve a target of export revenues of over US$ 2 billion by 2013.

8. Policy Relevance And Linkages:

The Government of Egypt was keen in the past ten years to continue the process of liberalization of Egypt's ICT sector, which in turn increased levels of competition between different operators. As a result of these policies, a major decline in the prices of ICT services took place in Egypt where telecommunication services prices declined by 55% through the period 2002-2009, as the communications composite price index has decreased from 214.6 point in 2002 to reach 96.3 point in 2009. The prices of ICTs in Egypt are considered very competitive compared to many countries around the globe. The study addressed the linkage between some selective ICT policies and the performance of Egypt's ICT sector within certain periods. The study attempted to analyze the effects of broadband initiative -which has been launched in 2004 to increase Broadband subscribers- on number of ADSL users using. In addition, the study tried also to analyze the effect of deregulation process of mobile market on mobile subscribers and mobile prices.

To analyze the relation between ADSL prices and ADSL users, regression model was conducted to estimate the relation between ADSL prices as an independent variable and ADSL users as a dependent variable. The study came out that the broadband initiative, which was very successful in reducing the ADSL prices led to real increase in the average number of ADSL users. In addition, the results referred that ADSL prices affect significantly number of ADSL subscribers. If price decrease by EGP 10 (US$ 1.8), number of ADSL users will increase in average by 90000 users.

Concerning the impact of the deregulation policies on mobile subscribers and prices, the study tested if there a relation between the deregulation processes and mobile prices in Egypt using non parametric test (Mann-Whitney Test) and showed that the entry of third mobile operator (Etisalat) affected significantly mobile prices, as the mobile price deflator has decreased by 162.36 point after the entry of the third GSM operator

In addition; the study also examined the effect of mobile price index on number of mobile subscribers using regression model. The dependent variable is the number of subscribers and the independent variable is mobile price index. Results referred that if mobile price deflator decreases by one point, number of mobile subscribers will increase in average by 10510 subscribers.

9. International Comparisons:

ICTs became in many aspects the main driver for economic growth and development in the world's economy. In 2007, Egypt telecommunication revenue as a percentage of GDP accounted for 4%, a rate higher than other countries in the region, such as Saudi Arabia, Syria, Algeria, Oman and United Arab Emirates (3%). This percentage was also higher than other countries such as China (3%), Indonesia and India (2%). (Worldbank, 2009)

Improved access to ICTs is necessary to narrow the digital divide and to progress towards the creation of an equitable information society. Thus, it is important to monitor the diffusion of different ICTs to access the extent of connectivity. Egypt is well positioned in comparison to almost all the Arab countries by having the highest number of subscriptions in terms of the infrastructure indicators; fixed lines, mobile and the Internet reaching 11.9 million, 41.3 million and 13.6 million respectively in 2008.

Affordability of ICTs is another key element in measuring accessibility to ICT services. In this area, Egypt proved that it has a competitive edge in terms of ICTs' affordability compared to the MENA countries and some of the comparable countries who act as observers in the OECD. For instance, Egypt offers the lowest price basket for mobile service in comparison to MENA countries at US$4 in 2007, a rate that reached US$75 in Kuwait, US$20 in Lebanon and Morocco. Egypt also enjoys competitive prices for Internet services compared to the MENA and the selected comparable OECD observers. In 2007, the price basket for Internet services was US$4/month in Egypt, compared to US$30 and US$29 in Bahrain and Brazil during the same period of time

The competitiveness of Egypt was not only witnessed by the indicators mentioned earlier, but also through composite indices. According to the Global IT Report 2009/2010 published by the World Economic Forum (WEF), Egypt was able to improve its raking in the Networked Readiness Index (NRI) by achieving the 70th position (out of 133 economies), up 6 ranks compared to last year.

Concerning Outsourcing, Egypt is recognized as an off-shoring global delivery hub and many recent reports published through 2009 by many distinguished research institutes confirm the progress that Egypt has made. An Example of this is a study conducted by the "Commonwealth Business Council and CyberMedia, **stated that Egypt is ranked as the first outsourcing destination in Africa** among the fifteen countries studied in the report. As well, in Everest Research Institute "Global Location Insights" Egypt was positioned **as one of the leading African countries in terms of the scale of direct employment in IT and BOP**.

The outsourcing unit of the London School of Economics & Political Science found that **Egypt offers one of the most attractive cost bases for outsourcing work** in its "Beyond BRIC: Off-shoring in non-BRIC countries: Egypt a new growth market" report. The 2009 A.T. Kearney Global Services Location Index in its report "The Shifting Geography of Offshoring" **ranked Egypt in the 6th position**. Egypt in this regard achieved an increase of 7 positions compared with the year 2007.

10. Conclusion:

Looking ahead, Egypt aims at introducing 4G mobile services in 2013, which expected to attract around US$ 1 billion new investments in mobile sector, and encouraging convergence between communication and media to launch interactive TV services in 2015. Moreover, the main features of MCIT new plan (2011-2015) are to: maintain high growth rates of ICT sector reached 15% annually, develop new centers for cloud computing industry and further develop the National Broadband Initiative to enhance ICT value added services and to connect 40 million Egyptians by the end of 2015 with total investments expected to reach US$ 3 billion.

Egypt's ICT exports is expected to grow to US$ 2 billion in 2013 and US$ 10 billion in 2020. Attention is being also placed on diminishing the digital divide between ICT usage in urban and rural areas through utilizing more advanced techniques like satellite connections. The modernization of the ICT infrastructure will remain the main focus of the government which looking forward to encourage investment in more submarine cables in the Mediterranean and the Red Sea benefiting from the strategic location of Egypt.

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English

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TITLE: Measuring the social and economic impacts of ICTs using survey data in Zimbabwe

MEASURING THE SOCIAL AND ECONOMIC IMPACTS OF ICTs USING SURVEY DATA IN ZIMBABWE

1. The year 2010 sees the Zimbabwe National Statistical Agency (ZIMSTAT) conducting the Survey on ICT Access by Households and Use by Individuals 2009/2010. The survey is being conducted in collaboration with the Postal and Regulatory Authority of Zimbabwe (POTRAZ). The Government of Zimbabwe has progressively shown an awareness and deep appreciation of Information and Communication Technologies (ICTs). The Ministry of Information and Communication Technology (MICT) unveiled a visionary Strategic Plan (2010-2014) which guides and consolidates the priorities to transform Zimbabwe into a knowledge society, and pulls the entire nation around a single game plan for execution. The Ministry's vision is to act as a catalyst for national socio-economic growth thereby propelling Zimbabwe into a knowledge society with ubiquitous connectivity by 2015. The Ministry's mission is to transform Zimbabwe into a knowledge-based society so as to enhance the country's competitiveness in the world in order to stimulate and sustain economic growth through the systematic application and innovative use of Information and Communication Technology (ICT). The Ministry's overall functions are to:

- Develop appropriate policies and strategies that enhance provision of information and communication technological innovations.

- Spearhead the development of appropriate regulatory frameworks that facilitate the promotion of information and communication technology.

- Champion and promote ICT literacy and utilization in the country in order to enhance regional and international competitiveness as a nation.

- Promote and coordinate national ICT research and development of software, hardware and infrastructure so that it reaches best international standards.

- Develop supportive and enabling infrastructure to ensure equitable access to ICTs by all citizens including disadvantaged groups and rural communities.

- Introduce and enforce stringent quality of service standards in the provision of ICTs.

- Create a conducive environment for investment in the areas of ICTs through public private partnerships.

2. From the Strategic Plan document, the ICT Ministry has identified projects that can be implemented in a short space of time subject to availability of financial resources.

Some of the projects are long term but can be executed in phases.

These impactive projects are:

- Ministries websites development – Development of interactive and databases enhanced websites for all Government Ministries. This will increase visibility, interaction and communication between the Ministries and their stakeholders. The exercise will form the basis of e-Government. The Ministry of ICT has set up an inter-ministerial committee on ICTs with representatives who are ICT focal points from all government ministries.

- Communications Infrastructure – There is need to develop a communications master plan to ensure reliable and efficient communication and applications development in Zimbabwe. The project covers the entire country and will be executed in phases. Access to the Internet backbone through the current gateway has serious capacity challenges and therefore development of an optic fibre link between Harare and Mutare is important in view of connecting to the undersea cables (EASSy and SEACOM) in the Indian Ocean through Beira. An alternative route is to lay an optic fibre cable from Harare to Beitbridge for the same purpose and to facilitate fast and reliable communication between our country and South Africa. The optic fibre is a cost effective solution compared to the costly VSAT communication link.

- ICT Capacity Building and ICT Government School – The project seeks to ensure adequacy of ICT infrastructure (Local Area Networks), ICT equipment, skill upgrade and general training in ICTs. Initially, the project will establish an ICT Government School that will provide civil servants with training and exposure in ICT literacy. The project will also ensure that Ministries are adequately provided in terms of ICT facilities.

- Establishment of Pilot Information Centre – The project seeks to establish comprehensive Information Centres countrywide starting with a pilot phase at an identified site. The Information Centre will provide for several ICT related services such as Internet access, e-mail services, telephone, photocopying, printing, faxing, access to newspapers, and general secretarial and ICT related

services. The project will increase ICT penetration and provide easy access to ICT services in communities nationwide.

- Provision of computers to Ministers, Permanent Secretaries and Commissioners – To accelerate communication between Ministries at the highest level, there is need to provide capacity in terms of equipment, connectivity and training for Ministers, Deputy Ministers and Permanent Secretaries. This will form the basis of e-government and video conferencing between Ministries at these levels. In addition to providing inter-ministerial communication, this service will also provide communication between Ministries and the Prime Minister's Office and between Ministries and the President's Office. The Public Service Commission is responsible for the entire government staff, and so Commissioners must be ICT enabled so as to enhance government human resource management.

- E-Government – ICTs contribute significantly towards modern day management of government business. The government of Zimbabwe seeks to be ICT enabled and is ready to integrate ICTs into its management systems to improve service delivery and for the benefit of the citizens at large. The infrastructure for Public Finance Management System (PFMS) can be further enhanced to provide an effective e-Government platform. Government Ministries' data and information will be documented and stored in accessible databases. A data centre and archive centre will be developed to cater for comprehensive and secure Government information that will be accessed by all citizens.

- One PC per Classroom: The networked world of today is in the information age characterized by knowledge based societies. ICTs have in recent years propelled economic development for other nations through systematic and focused exploitation of the power of information and communication technologies. To this end, one of the key goals of the Ministry of ICT is to ensure the upgrading of ICT literacy and availability of ICT resources at all levels of education. However, this cannot be achieved without every child in all the schools having access to a PC and the goal of MICT is to introduce a PC for each and every classroom in all schools in Zimbabwe. The PC per classroom project is however no mean project but enhances the generous donations of PCs already made by His Excellency the President of Zimbabwe and the isolated initiatives of some schools either through former students, other organisations or the Schools Development Association (SDA). The project already has a firm foundation on which to build from. With more than 3000 schools, and a population that is more than 90% literate, this strong educational base will give an enormous amount of leverage to a country that is striving to take its rightful place in the competitive global village.

- Last mile connectivity: Once network connectivity has been established through the Communications Infrastructure Backbone to cities and major towns or business centres there will be need to establish last mile connectivity to other areas of need, for example, information centres, schools, shops, offices, houses, etc. We wish to establish a pilot phase of one site per district using wireless technologies per district.

- Establishment of National Digital Archives: In Zimbabwe, most of the record keeping system is still manual. Retrieval of such records is a mammoth task as it takes ages and sometimes documents are not even found. The Ministry of ICT intends to begin by computerizing record systems in all Ministries and government departments. It is envisaged that the project will be done in phases. The first phase will include digitizing hitherto manual records that are found in all Ministries. Interactive and searchable databases will be developed for each ministry and this will be on the local area network for the ministry. The database will contain records for the entire ministry and other information about the ministry. Ministries database will be mirrored at the National Data centre created under the e-Government project. The final phase will be to computerize the National Archives of Zimbabwe. Valuable data and information about Zimbabwe across all sectors is stored at the National Archives. To enhance its preservation, modern digital technologies must be deployed. The National Archives need computerization, data capture and secure storage facilities.

- Information and Communication Technology (ICT) Committee – The role of ICTs in economic development and their contribution to GDP is now firmly recognised the world over. Cognisant of this enabling role of ICTs, the Ministry of ICT will establish an ICT Advisory Committee that reflects cross-sector representation. The committee will advise the Ministry and indeed Government on how Zimbabwe can systematically exploit the potential of ICTs and transform the country into an information society.

3. The following important national and international documents emphasize the need to harness ICT for national socio-economic development in order to alleviate extreme hunger and poverty and exploit the potential of ICT to uplift the standards of living of our societies:

a) The Nziramasanga Education Commission Report (1999),

b) The Science and Technology Policy of 2002,

c) Vision 2020

d) World Summit on the Information Society (WSIS) Declaration of Principles and Plan of Action (Geneva 2003 and Tunis 2005),

e) Industrialisation Policy (2004),

f) The National Economic Recovery Programme (NERP) (2004-2006),

g) Zimbabwe Millennium Development Goals (MDGs - 2005),

h) The Zimbabwe National ICT Policy Framework of 2007,

i) Short Term Economic Recovery Programme (STERP), and

j) Public Private Partnerships (PPPs)

4. The World Summit on the Information Society (WSIS) held in Geneva (2003) and Tunis (2005) brought together governments, civil society and the business sector to discuss a broad range of subjects related to ICT for development. In the end, governments agreed on a set of commitments and actions to foster the establishment of an inclusive information society. In particular, ten targets were identified in the Geneva Plan of Action, along with numerous recommendations based on different action lines. The targets, to be achieved by 2015, are:

- To connect villages with ICTs and establish community access points.
- To connect universities, colleges, secondary schools and primary schools with ICTs.
- To connect scientific and research centres with ICTs.
- To connect public libraries, cultural centres, museums, post offices and archives with ICTs.
- To connect health centres and hospitals with ICTs.
- To connect all local and central government departments and establish websites and e-mail addresses.
- To adapt all primary and secondary school curricula to meet the challenges of the information society, taking into account national circumstances.
- To ensure that all of the world's population have access to television and radio services.
- To encourage the development of content and put in place technical conditions in order to facilitate the presence and use of all world languages on the Internet.
- To ensure that more than half the world's inhabitants have access to ICTs within their reach.

5. The year 2010 marks the midpoint between the 2005 Tunis phase of WSIS (2005) and the deadline for achieving the WSIS targets (2015), as well as the Millennium Development Goals (MDGs).

- To eradicate extreme poverty and hunger
- To achieve universal primary education
- To promote gender equality

- To reduce child mortality
- To improve maternal health
- To combat HIV and AIDS, Malaria and other diseases
- To ensure environmental sustainability
- To develop a global partnership for development

6. In this context the Survey on ICT Access by Rural Household and Use by Individuals' findings will inform policy makers on critical areas that need urgent policy intervention. The survey will be piggy-backed to the Agriculture and Livestock Survey (ALS) 2009/2010 and will cover the six geographical agricultural sectors in eight provinces of the country.

7. It is generally agreed that data collected using an ICT household survey offer a number of advantages. First, the data provide information on access by households and use by individuals of ICTs. The data collected also provide an indication of actual use of mobile cellular phones, mobile broadband and the Internet. At the same time, it is possible to cross-tabulate user data with other variables like age, gender, education, employment, purpose of Internet use, rural-urban, technology used, etc. This will enable more detailed analysis and comparison which will prove extremely valuable for the formulation of focused and targeted policies on ICT for development.

8. The Geneva Plan of Action called for the establishment of comparable indicators, and the Tunis Agenda for the Information Society provides suggestions related to the "periodic evaluation" of the WSIS outcomes. In particular, it acknowledges the efforts of the Partnership on Measuring ICT for Development to develop a core list of indicators and to build statistical capability in developing countries in order to monitor their evolution towards becoming information societies. It also requests the United Nations General Assembly to make an overall review of the implementation of the WSIS outcomes in 2015.

9. THE INTERNATIONAL TELECOMMUNICATIONS UNION (ITU)

ITU is a specialized UN agency that collects telecommunication data annually for over 200 economies worldwide, with some data series going back as far as 1960. These series traditionally refer to telecommunication and ICT infrastructure data, such as fixed telephone lines, mobile cellular subscribers and Internet subscribers and users. The main sources for these data are national regulatory authorities and sector ministries in charge of telecommunication/ICT that collect administrative data directly from operators and service providers. ITU collects official household and individual ICT data from NSOs. Since 2005, ITU has sent annual questionnaires to all NSOs, requesting data on the core indicators on access to, and use of, ICT by households and individuals.

10. STATUS OF ICT INFRASTRUCTURE IN ZIMBABWE

Telecommunications Infrastructure	
Mobile Switching Centres	9
Fixed Network Trunk Switches	2
Base Stations	880
International Gateways	5
Radio Terrestrial 2 Fibre Optic Links To Regional Countries	5

Access Technologies Used
GSM
WIMAX
CDMA
FIBRE
COPPER BASED TECHNOLOGIES SUCH AS ASDL

Industry Structure	
Type of Operator	Number of Licensees
PSTN	1
MOBILE	3
INTERNET ACCESS	11
PUBLIC DATA OPERATORS	2
INTERNET SERVICE PROVIDERS	17

Market Structure (Fixed Network)	
Fixed Public Operator (Net One)	1
Subscribers	386 000
Digitalized Lines	92%
Fixed Lines in Harare	50%
Fixed Lines in Rural Areas	17%
Offers Local, Regional and International Voice Telephone Services	

Market Structure (Mobile Network)			
Mobile Telephone Operators			3
Mobile Operator	ECONET	TELECEL	NET ONE
Subscriber Base	4 000 000	1 000 000	500 000
Post Paid Subscriptions			3%
Digitalized Lines			100%
ECONET offers GPRS, EDGE, and 3G Services			

Internet Service Indicators	
No. of Leased Line Subscribers	53 000
No. of Internet Dial-Up Subscribers	26 000
Mobile Broadband Subscribers	20 000
Incoming International Bandwidth	290Mbps
Outgoing International Bandwidth	215Mbps
No. of PCs (estimate)	895 000
Internet Users	1 400 000

Source: POTRAZ

11. In recent years, ICTs have gained an increasing role in national development strategies in many countries, including Zimbabwe, which have put in place ICT policies in order to develop their information and knowledge societies. Zimbabwe has launched a National ICT Strategic Plan (2010 – 2014). As a result, there is an increasing need for reliable data and indicators on the access and use of ICTs, and their impact on development. Such data and indicators help governments design and evaluate ICT policies and strategies, compare their ICT developments with those in other countries, and adopt solutions to reduce the digital divide.

12. THE SURVEY ON INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) ACCESS BY RURAL HOUSEHOLDS AND USE BY INDIVIDUALS IN ZIMBABWE 2009/2010

The Survey on ICT Access by Rural Households and Use by Individuals is the first to be carried out in Zimbabwe by the Zimbabwe National Statistics Agency (ZIMSTAT) in collaboration with the Postal and Telecommunications Regulatory Authority of Zimbabwe (POTRAZ).

The objective of the survey is to collect data on household access and individual use of ICTs in order to measure the digital divide. Measuring the impact of ICT uptake is a critical input to ICT policy making. The digital divide is the gap between individuals, households, businesses and geographical areas at different socio-economic levels with regard both to their opportunities to access ICTs and to their use of the Internet for a variety of activities. The digital divide reflects various differences among and within countries in terms of access to physical infrastructure, mobile switching centres, fixed network, base stations, international gateways and fibre optic links.

13.1 Uses of the ICT Household Survey Data

The information generated is used in designing policy, planning, implementation, monitoring and evaluation of ICTs, e.g. to:

- Measure access to and use of ICTs such as radios, televisions, computers, fixed telephone, mobile cellular telephones and the Internet in rural Zimbabwe.

- Determine the mobile cellular telephone penetration, broadband and wireless Internet diffusion in rural Zimbabwe.

- Assess the developmental potential of ICTs or the extent to which the country can make use of ICTs to enhance growth and development, based on available capabilities and skills.

- Plan and evaluate ICT readiness. This reflects the level of networked infrastructure and access to ICTs.

- Monitor ICT intensity. This reflects the level of use of ICTs in the society.

- Evaluate ICT impact. This reflects the result/outcome of efficient and effective ICT use.

- Improve the availability and international comparability of statistics on access to and use of ICTs by rural households and individuals.

- Provide policy makers with a useful tool to benchmark and assess their information societies.

14. The Partnership on Measuring ICT for Development is a partnership of 10 international and regional organizations involved in ICT measurement. It was established following the Geneva phase of the World Summit on the Information Society in 2003 and officially launched in 2004. One of the main achievements of the Partnership was the identification of a core list of ICT indicators, in close consultation with other stakeholders, mainly National Statistical Offices (NSO).

14.1 Objectives of the Partnership:

- To identify a common set of core ICT indicators, to be harmonized and agreed upon internationally, that will constitute the basis for a database on ICT statistics;

- To enhance the capacities of NSOs in developing economies and to help them measure the Information Society, based on the agreed core list of indicators; and

- To develop a global database of ICT indicators and to make it available via the Internet.

14.2 CORE ICT INDICATORS

- The main purpose of the core list is to help countries that are developing ICT surveys – or adding ICT questions to existing collections – to produce high quality and internationally comparable data.

Whilst the core list is not mandatory, its use has been recommended by the United Nations Statistics Commission (UNSC). Importantly, the list is not limiting – countries will also need to respond to national policy needs and these may only be partially covered by the core list.

There are 12 ICT household indicators plus one household reference indicator. The main purpose of the core list is to assist countries to produce high quality and internationally comparable ICT household statistics.

To simplify understanding, the indicators are separated into the *access indicators* applying at the household level and the *use indicators* applying to individuals. There are 12 indicators – six on household access to ICTs and six on the use of ICTs by individuals (i.e. household members). There is also a reference indicator on access to electricity by

households. It is important to understand the difference between ICT access and ICT use as this fundamental. ICT access refers to the availability of ICTs within the home. Use of ICTs refers to use of ICTs by one or more individuals of the household, whether at home or elsewhere.

14.3 HOW THE ZIMBABWE ICT HOUSEHOLD QUESTIONNAIRE IS ORGANISED.

14.3.1 HOUSEHOLD CHARACTERISTICS:

- Household composition (HH with children and HH without children under 15)
- Household size (Number of HH members, including those outside the age scope)

14.3.2 INDIVIDUAL CHARACTERISTICS:

- Age
- Gender
- Highest education level received
- Labour force status
- Occupation

14.3.3 HOUSEHOLD ACCESS TO ICTs

Q 12 "Does the dwelling unit in which this household resides have access to electricity?"

Q 13 "What is the distance of the household to the nearest Post Office in kilometres?"

Q 14 "Did the household use postal services (ZIMPOST) to send mail/ documents during the last 12 months?"

Q 15 "How often did the household use postal services during the last 12 months?"

Q 16 "Did the household use courier services to send mail /documents during the last 12 months?"

Q 17 "How often did the household use courier services during the last 12 months?"

Q 18 "Does any member of this household have a radio at home?"

Q 19 "Does any member of this household have a television at home?"

Q 20 "Does this household have a fixed line telephone at home?"

Q 21 “Does any member of this household have a mobile telephone at home?”

Q 22 “Does any member of this household have a computer at home, regardless of whether it is used?”

Q 23 “Does any member of this household have Internet access at home, regardless of whether it is used?”

Q 24 “What type/s of Internet access services are used for Internet access at home?”

Q 25 “What are the main reasons for the household not having Internet access at home?”

Q 26 “Does this household face data/information security problems by using the Internet?”

Q 27 “What are the data/information security problems the household faced by type during the last 12 months?”

Q 28 “What data/information security measures did the household have in place by type during the last 12 months?”

Questions 13, 14, 15, 16 and 17 are about access to postal and courier services. Question 25 is about barriers that households face when they want to access the Internet. Questions 26, 27 and 28 are concerned with cyber security.

14.3.4 INDIVIDUAL USE OF ICTs

Q 29 “Has (name) used a mobile cellular telephone in the last 12 months?”

Q 30 “Have you used a computer from any location in the last 12 months?”

Q 31 “Have you used the Internet from any location in the last 12 months?”

Q 32 “Where did you use the Internet in the last 12 months?” *(Allow multiple responses)*

Q 33 “How often did you typically use the Internet during the last 12 months?” (From any location)

Q 34 “For which of the following activities did you use the Internet for private purposes in the last 12 months (from any location)” (*Allow multiple responses)*.

Q 35 “What are the reasons why (name) did not use the Internet in the last 12 months? *(Allow multiple responses)*

Question 35 is concerned with barriers that individuals face in trying to use the Internet.

15. CAPACITY BUILDING

The Partnership on Measuring ICT for Development, launched by the international community, is a multi-stakeholder initiative to improve the availability and quality of ICT data and indicators, particularly in developing countries. The (ITU) and (UNCTAD) are playing a leading role in the Partnership in developing internationally comparable ICT indicators, establishing an ICT global database, organizing workshops and seminars on ICT measurement, and helping countries through technical assistance projects. ZIMSTAT was represented at the 7th World Telecommunications/ICT Indicators Meeting in Cairo, 3-5 March 2009 and the COMESA 2nd Meeting of the Working Group on e-Readiness Assessment and Information Society Measurement, 3-6 March 2009. Two statisticians from ZIMSTAT also attended the Addis Ababa "Training Course on Measuring ICT Access and Use in Households and Businesses from 13-24 July 2009.

16. CONCLUSION

THE COMMON MARKET FOR EASTERN AND SOUTHERN AFRICA (COMESA) E- READINESS INITIATIVES

16.1 OBJECTIVE OF THE 2ND MEETING OF THE WORKING GROUP ON E-READINESS ASSESSMENT AND INFORMATION SOCIETY MEASUREMENT.

The objective of the working group was to review background documents on e-readiness assessment and information society measurement, agree on frameworks for harmonized national and regional indicators and indices and develop a roadmap for implementation of ICT e-readiness assessment, benchmarking and information society measurement in Eastern and Southern Africa (ESA). The activities of the working group were restricted to e-readiness assessment and information society measurement issues in the ESA region.

16.2 MEMBERSHIP OF THE WORKING GROUP

Membership of the Working Group included one representative from each of the following member states: Seychelles, Mauritius, Uganda, Madagascar, Zambia, Kenya, Malawi and Zimbabwe. The selection was based on members' contribution to the e-readiness assessment and information society measurement and monitoring framework during the Nairobi workshop.

16.3 TASKS OF THE WORKING GROUP

Review background documents produced by a consultant and provide input for their finalization: In SCAN-ICT Phase II, UNECA developed a comprehensive framework for the development of information society measurement indicators. A toolkit was built on the methodology developed as part of the Scan-ICT Phase I pilot project. It incorporates a framework for the development of suitable indicators for assessing the status of the development, deployment and use of ICTs in African countries. The methodology is based on the so-called 'CUT' model which classifies ICT4D indicators into three categories:

- Capacity indicators: targeted at measuring the level and the extent of development and deployment of ICT infrastructure and related resources;

- Usage indicators: aimed at assessing and measuring the extent of use of the ICT infrastructure and related resources by households, business and government entities; and

- Transformation or impact indicators: indicators targeted at measuring the social and economic impact of ICT infrastructure and use within the economy and society.

Prepared by

DOMINIC TAFIRENYIKA

ZIMBABWE NATIONAL STATISTICS AGENCY (ZIMSTAT)