

Mobile Operator Supports Refugees and Disabled in Georgia

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Collapse of USSR and declaration of independence by Georgia was followed by ethnic conflicts provoked by Russia, and de-facto loosing of South Ossetia and Abkhazia, with about 300,000 internally displaced persons (IDPs). New wave of tens of thousands IDPs - mainly from South Ossetia and Shida Kartli - have emerged since recent Russian occupation of Georgian territories in August 2008. Refugees, considering their economical and psycho-social problems, are needy for communication as cell phones often remain a main hope for establishing contacts and new social networking. One of the major mobile operator (MO) – Geocell introduced during 4 months special tariff for refugees – 0, 09 GEL (0,044€) per min – 70% reduction of basic rate. Around 56% of refugees have used that emergency relief measure. MO also helps deaf-mute persons by providing special SMS rate – 0, 02 GEL (1/3 of usual) and supporting computer center where it educates such disabled with future employment prospects (7 persons – at MO office).

Keywords: Georgia, Georgian-Russian war, refugees, internally displaced persons (IDP), mobile communication, mobile tariffs, needy, disabled, social responsibility.

1 Georgia – from Ancient to Modern Times

1.1 Georgia – ancient history

Georgia is situated in South Caucasus between Black Sea, Russia, Azerbaijan, Armenia and Turkey. Caucasian major Mountain range and other smaller and hillocks capture 80% of Georgian territory. Georgia has been part of *Silk Road* - a trade and transit corridor between Europe and Asia.

Georgia is home to one of the oldest civilization on the Earth. Here, near town Dmanisi, was found the remainder of the fossil human (*Homo ex gr. erectus*) the age of which is Plio-Pleistocene (approximately 1,8 million years). Nowadays this is the oldest fossil man in West Eurasia [1]. The term “Georgia” might be asso-

ciated either with Greek “georgicos” meaning “agricultural”, or with cult of St. George, worshiped by Georgians. Georgians call themselves *Kartvelebi* (ქართველები), their land *Sakartvelo* (საქართველო), and their language *Kartuli* (ქართული). According to legend, the ancestor of the Kartvelian people was Kartlos, the great grandson of the Biblical Japheth. Ancient Greeks (Strabo, Herodotus, Plutarch, Homer, etc.) and Romans (Titus Livius, Cornelius Tacitus, etc.) referred to early eastern Georgians as Iberians and western Georgians as Colchians [1, 2]. Western Georgian kingdom - Kolkheti is mentioned in the myth about Argonauts and Medea, who was Georgian princess.



Fig. 1a. John William Waterhouse. Jason and Medea, 1907 (from www.freebase.com)

Fig. 1b. Georgian fine jewelry artwork from 1200-500 BC

Unique Georgian alphabet, one of 14 existing in the World, was developed in the 5th century B.C.

at King Pharnavaz time.

Table 1. Georgian alphabet and its vocabulary

ა	ბ	გ	დ	ე	ვ	ზ	თ	ი	კ	ლ	მ	ნ	ო	პ	ჟ	რ
a	b	g	d	e	v	z	th	I	k'	l	m	n	o	p'	zh	r
ს	ტ	უ	ფ	ქ	ღ	ყ	შ	ჩ	ც	ძ	წ	ჭ	ხ	ჯ	ჰ	
s	t'	u	ph	q	gh	q'	sh	Ch	ts	dz	ts'	ch'	kh	j	h	

Georgian Apostolic Autocephalous Orthodox Church, one of the oldest Christian churches in the World, was founded by Apostle Andrew in the 1st century. In 337 AC Christianity became a state religion in Georgia.

The strongest countries and tribes, including Romans, Arabs, Mongols, Turks and Persians, had been trying to conquer Georgia's territories for ages, what made Georgian history a drama of heroic stance and painful annexations.

First successful unification of Georgian Kingdom

- in 1008-1010 by Bagrat the 3rd Bagrationi. The great King David the 4th, called the Builder (1089-1125), has liberated Tbilisi from Arabs and united the country in the XIIIth century. His and his granddaughter's – King Tamar's (1184-1213) government became Golden Age of state development and cultural renaissance. In 12th c. Georgian culture has produced its best jewel – the poem "A Knight in Tiger's Skin" by Shota Rustaveli.

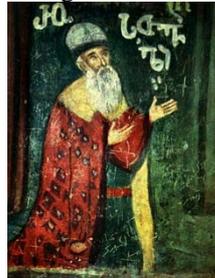


Fig. 2. Svetitskhoveli (1010-1029) and Sameba (Holy Trinity, 1995-2004) Cathedrals, Shota Rustaveli and his *The Knight in Tiger's Skin* coverpage

Since 100 years of Mongol domination in XIII-XIV c. Georgia had only short relatively peaceful times, one of the best ones during King George the 5th Brilliant (1314-1346). Since XV c. the Kingdom of Georgia turned into an isolated, fractured Christian enclave, a relic of the faded East Roman epoch surrounded by Muslim, predominantly Turco-Iranian-Arabic world. As a result, Georgian kingdoms has never since then reached the full re-integration. Until late XVIII century Georgia has balanced between Ottoman and Persian empires which were influencing Western (Imereti, Samegrelo) and Eastern (Kartli, Kakheti) Georgian kingdoms [1].

1.2 Georgia and Russia - false start

After centuries of mainly Turkish and Persian domination, Erekle II, king of Kartli-Kakheti turned towards Russia for protection against Ottoman and Persian attacks. In 1783 Erekle signed the Treaty of Georgievsk with Russia, according

to which Kartli-Kakheti was to receive Russian protection. But when another Russo-Turkish War broke out in 1787, the Russians withdrew their troops from the region for use elsewhere, leaving Erekle's kingdom unprotected. In 1795, the Persian shah, Agha Mohammed Khan, invaded the country and burnt the capital, Tbilisi, to the ground. At this time, Russian government decided to annex East Georgia. In 1799 Russian armies entered Georgia again. And after the death of King Giorgi XII, in 1801, Russian Emperor, Alexander I declared his manifesto on abolishment of Kartli-Kakheti Kingdom and its annexation with Russia. Manifesto hypocritically said, that this Act was dictated with only the care of the interests of Georgian people [1].

Georgia spent 200 years as a part of Russian Empire, at first as a Russian province, then – Soviet Republic. After Russian revolution (1917) Georgia obtained independence for 3 years (1918-1921) only, but without having substantial inter-

national support from the League of Nations, it was re-occupied by Soviet Red Army in 1921.

1.3 Georgian independence and Russian reaction – from the *Big Brotherhood* to the [not-so] *Cold War*

In 1991 Georgia declared independence from the USSR. In 1992 Georgia had become 179th member of the UN.

Since the collapse of Soviet Union, Georgia – the country once called a “Paradise Island in Communist Hell” - has gone through numerous humanitarian and economical disasters. Ethno-political conflicts provoked by Russia and civil

war in 1991-93 have left country with uncured wounds – two separatist regions – Abkhazia and South Ossetia out of central government control and over 270,000 refugees/IDPs (internally displaced persons – refugees inside the country of residence). In 1993 over 300,000 people were forced to displace to abroad or other parts of the country.

Georgia also has sheltered Chechen/Ingush refugees from Russian Federation – currently - 1100. Their number has declined significantly since 2002, as they moved to third countries (mainly – Turkey) or some returned home [3].

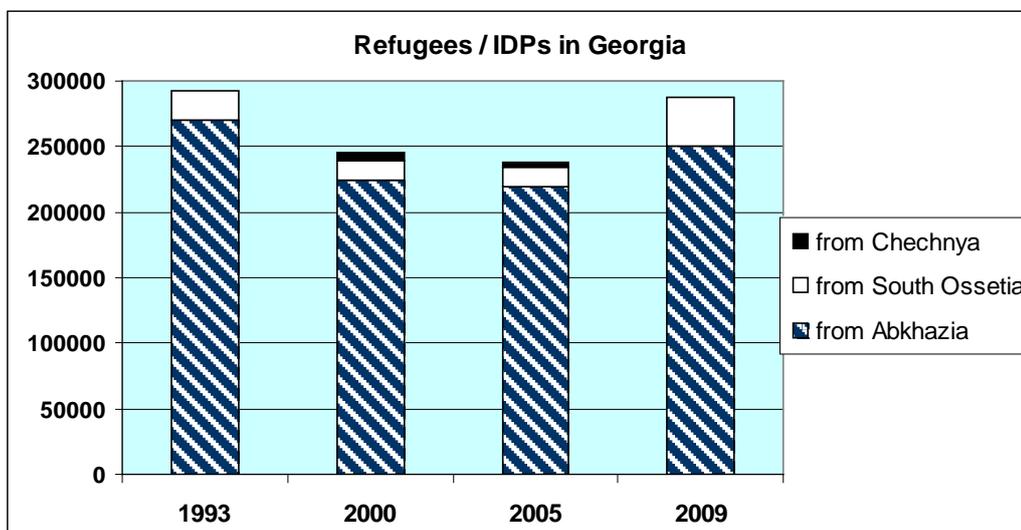


Fig. 3. Dynamics of number of Refugees/IDPs in Georgia since 1993

Progress on market reforms and democratization has been made in the years since independence, but this progress has been complicated by Russian assistance and support to the breakaway regions of Abkhazia and South Ossetia [3]. Whilst the reasons and circumstances of the beginning of the war is currently investigated by EU international commission, it is assumed by the majority of military and political analysts that Georgian army has entered in well-arranged trap confronting South Ossetian troops, after what Russia has used overwhelming force pre-stationed at border and inside South Ossetia as well. Georgian military action in South Ossetia in early August 2008 led to a Russian military response that not only occupied the breakaway areas, but large portions of Georgia proper as well. Russian troops pulled back from most occupied Georgian territory, but in late August 2008 Russia unilaterally recognized the independence of Abkhazia and South Ossetia. This action was strongly condemned by most of the world's

nations and international organizations. New wave of tens of thousands internally displaced persons (IDPs) - mainly from South Ossetia and Shida Kartli - have emerged since recent Russian occupation of Georgian territories [3, 4, 5, 6].

As the war started on night of 07.08.2008, first wave of 5,000 IDPs from Georgian villages in Gori and Tbilisi were registered already next day. Number of Refugees has overreached 100,000 for August 12 – mainly from Gori and surrounding territories, which were occupied by Russian forces for that time. As the looting of Georgian villages both inside and outside South Ossetia has increased, Major influx of refugees – 131,000 has been registered for week of August 12-16. Main IDP displacement in Tbilisi were camp city near airport, 202 public schools, over 500 kindergartens, abandoned undone buildings, research institutes, dormitories and shelters from soviet time [4, 6].

Decrease of number of IDPs started since Russians left Gori (Aug 25) and most of so-called

“buffer zones” (Oct 8). 452 IDP shelters were still in operation across the country. Camp city moved to Gori and most of secondary schools were freed for the school season, with many Tbilisi kindergartens still occupied by refugees, and their functioning was moved to some public schools. The process of returning IDPs to their homes started 10th October, when the Ministry of Refugees and Accommodation declared 48 villages to be sufficiently safe for them to return.



Fig. 4. Map of Georgia with Russian-supported separatist enclaves

Still over 50 villages inside South Ossetia and about 10 outside it are not opened for Georgians to return to homes. Majority of their homes inside South Ossetia are completely destroyed after the war actions. Georgian government has urgently build about 4,000 new houses in 4 major IDP settlements and refurbished other 1500, providing accommodation for nearly 12,000 refugees.

2 Refugee/IDP Problems and Communication Needs

2.1 Refugee / IDP problems

Refugee/IDPs represent complex psychology problems [7]. We provide only some most prominent ones:

- financial
- unemployment
- living conditions (water/sanitation, safety)
- food supply
- transportation
- children care, toys and education
- elderly care and home care
- family separation
- social network crash
- lack of communication means
- depression

Although there are some views that being IDP in home country is less painful than being refugee abroad, there are some aspects/issues which need thorough elaboration before drawing such conclusion. Refugees in foreign countries sometimes have more sufficient means for survival and better chances of employment or at least receiving equivalent aid from the state and/or NGOs. Whilst in countries like Georgia State's ability to support is often limited. Of course, having relatives around is the most important factor in societies like Georgian.

We have made personal observation of what IDPs have taken with them. With only about 20 households interviewed this survey has no representation strength, but it is still interesting:

- TVs – <10%
- Cars – only 10%
- food – 30%
- money – <50%
- first need clothes – >60%
- mobile phones – >60%
- ID documents – <80%

Reportedly, cell phones have been one of the most useful things which most of refugees have not forgotten to take with them even in great rash of nearing disaster.

2.2 Georgian Economics, Communication data and Needy

Georgia's economy has benefited growing investments and increase of GDP since 2004, as the legislative changes made it leader in doing business [3, 8, 9]. The main demographic and economical data are presented in table 2.

Mobile Communication started in 1997 in Georgia. In 2002 the number of mobile subscribers have passed half million. As the economic situation started to improve significantly since 2006, mobile users' numbers also “exploded” with 53% annual growth during 2006-2008. Cellular subscribers' penetration rate – 59% (2007) similar to CIA country fact book - 70%. Although there is significant imbalance among capital (>90%) and districts (20-50%) [3, 11]. Counting the subscribers data of 2009, claimed by mobile operators, one can assume that currently penetration rate overreached 90%. However, actual penetration rate – assumed to be 50-60%, as many users have >1 number subscribed and/or their SIMs are on “pause”. Regretfully there are no official data neither on activated SIM cards penetration rate, nor on mobiles number per households.

Table 2. Georgia Key Macroeconomic Indicators [3, 8, 9, 10]

Data / Years	2008
Population	4 630 000
Population growth rate	-0,325%
Net Migration rate migrant(s)/1,000 population	-4,36
Life expectancy at birth: (M/F), (years)	76,51 (73,21 / 80,26)
Nominal GDP (bln.)	\$13,28
GDP per capita	\$ 3 046
GDP PPP (bln.)	\$22,93 / €17,5
GDP PPP per capita	\$5 260 / €4 000
GDP Growth	2%
Unemployment	13,3%
Population under poverty level	23,6%
Inflation – CPI (average)	11%
Minimum subsistence income per capita/month	\$70/€3

Georgia implies Calling Party Pay (CPP) model. Basic tariff – from/to landline phone or another GSM operator – 0,288 GEL (app 0,14€) per min

with numerous schemes and club models allowing some users sometimes to have ½ rate.

Table 3. Mobile Subscribers in Georgia [3, 9, 10, 13, 14]

Mobile Subscribers in Georgia							Growth rate 2003-08 (%)
Years	2003	2004	2005	2006	2007	2008	
Mobile Subscribers (mln.)	0.64	0.99	1.17	1.70	2.60	3.98	402.0%

SMS – 0,06 GEL (app. 0,03€) per message, which seems inexpensive, but still stands higher than Skypeout long-distance call to Europe – 0,017€/min!

The *Needy* population is a new definition for selecting groups and layers of society which have

greater demand for communication despite of limited means to pay high rates for it. WG2 of COST 605 Econ@Tel project defines several groups of Needy - Poor, Homeless, Unemployed, Disabled, Isolated Individuals (lonely elderly), Migrants, etc [12].

Table 4. Groups of *needy-to-communication* population in Georgia [3, 10, 14, 16]

	refugees / IDPs	unemployed	pensioners	disabled	impoverished	near poverty level	non-Needy
numbers	270,000	350,000	656,000	137,000	370,000	630,000	1,987,000
%	6.1%	8.0%	14.9%	3.1%	8.4%	14.3%	45.2%

Mobile operators average revenue per user (ARPU) has a tendency to decrease since 2000, which is a positive sign, pointing that mobile phones from the luxury items are becoming affordable for lower-income users and universal access points [13]. Considering GDP/Per Capita – 1870 € (Govern-

ment data of 2007), or even \$4400 GDP PPP, as well as very high Population-below-poverty-line index (53%-31% by different sources, 2002-2006), Georgia has one of the highest rates on mobile communication which is barely unaffordable for low income population [3, 10, 13, 14, 15].

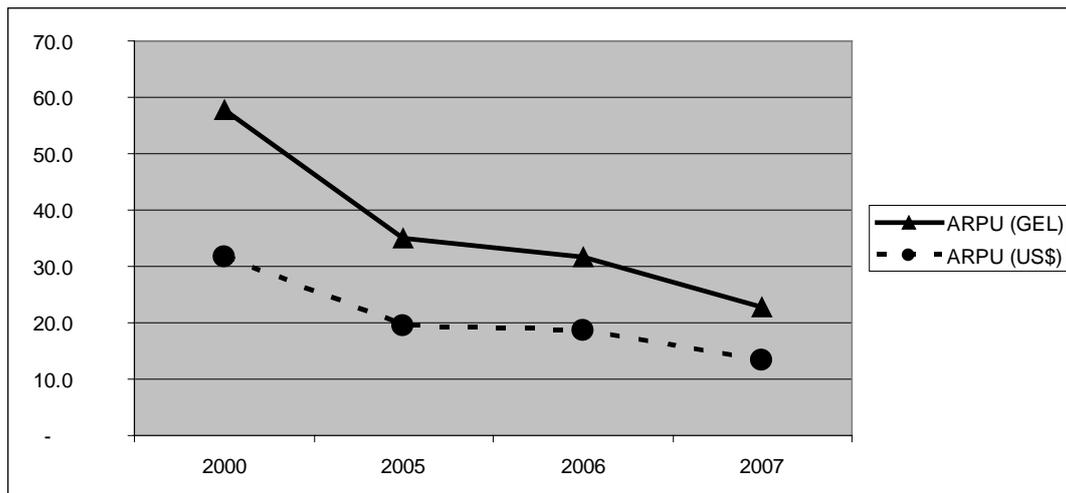


Fig. 4. Mobile Operators Average Revenue per User (ARPU)

That's why poor population is heavily using SMS or beeping model – calling and announcing themselves to possibly better-off counterpart expecting “callback” (incoming calls are free in Georgia), trying to limit their monthly GSM spending <3-10 € [14, 16]

2.3 Mobile operator provides substantial help to refugees/IDPs and disabled

Geocell (currently owned by Telia Sonera) was the first GSM operator, which was registered in 1996 and started operations in 1997. Quite soon another GSM operator – MagtiCom entered the stage in Georgia. These two companies currently share almost 95% of the market. Although MagtiCom and other operators also have some special programs, low-tariffs and benefits for their users (among them – low-income users / Needy) unlike Geocell, they don't market programs calling them targeted to “Refugees” and/or “Disabled”. That's why this paper is mainly concentrated only about one provider, though we have reflected other Mobile operators' social programs as well in our recent paper [14].

Geocell LLC – some features

- First GSM operator in Georgia (registered – Sept-1996, started – March-1997)
- Owned (93%) by Telia Sonera
- Number of subscribers > 1,5 million (about 49% of market share)
- Services – GSM, SMS, MMS, GPRS, EDGE, WAP, 3G, Mobile Internet, different information services
- Low price roaming in Turkey and Central Asia
- Investing 315 mln GEL (>160 mln. Euros) in infrastructure with more 150 mln. GEL to be invested until 2010

- Over 4000 employees
- One of top 10 taxpayers in Georgia
- www.geocell.com.ge

In hard days of refugee disaster thousands desperate people including elders, women and children have rushed out of martyrdom, they have been accommodated in narrow and uncomfortable shelters, many lost their beloved and /or knew nothing about them, all asking for help, house and food and receiving sometimes only bread if at all, – communication was among very needed and regretfully among hardly affordable means. Therefore, special offer by Geocell Co. for refugees – for 4 months tariff reduction almost 70% – 0,09 GEL (app 0,044€) per min. was the very meaningful, timely and socially responsible decision, which has eased the drama for numerous needy people.

The service is activated on old SIMs, or new SIMs are given for free to the persons whose personal IDs are in the special list of the Ministry of Refugees and Resettlement. Over 46000 IDPs from South Ossetia/Inner Kartli and Abkhazia regions have used the offer.

During September there were over 131000 refugees. Currently many returned to homes since Russian forces withdrawal from so-called buffer-zones and subsequently their number went down to 32570. Median number of refugees is 81735. That shows that around 56% of refugees have used that Emergency relief measure. As penetration rate stands for 70%, this means that >80% of refugee GSM users have applied for Geocell's special offer.

There are Pros and Cons for this action.

Pros:

- Number of newly acquired/activated SIMs –

have exceeded 12000 (most probably includes subscribers of competitor companies switching to Geocell)

- Approximate increase on talk time – almost 5 min/daily
- Relief for refugees who lost their phones during disaster or stopped their service

Cons:

- Impossible to control if indeed refugees are using the benefits or they given their phones to somebody else
- overall decrease on company income without state support on rate reduction
- Possible seizing of contract when the offer is ended

Another special support for Disabled (deaf-mute persons) – Project “We hear you”

Project aims to help people with hearing problems (majority of them do not talk either) for whom SMS represents the main mean of communication. Through the project, the same company Geocell - provides the lowest SMS rate – 0,02 GEL (1/3 of usual rate) for deaf-mute persons. Also a special Help manual has been developed for them, and special add on gesture language was prepared. For service activation the individuals should bring the certificate from the Ministry of Labour, Health and Social care, that they are registered in the special disabler's list as deaf-mute/persons with hearing problems.

Other support for deaf-mute persons – training and employment opportunity

Formerly deaf children were educated in special school-pensions, which provided some professional toolkits/skills along with secondary education and after graduation the adults were employed on different jobs. As this system remains not so well organized since Soviet collapse, Geocell started in 2007 a special computer center, at the premises of *Georgian Union of Deaf-Mute Persons*, where it educates such adolescents and adults with future prospects to be employed. Computer center has video attached and Skype program and provides opportunity for social networking through gesture language. 7 individuals have been employed at Geocell after they have passed special training.

3 Conclusions

Usually three factors are determining the Needy's easier affordability to communications: 1) Low Price handsets, 2) low/no entry cost (free SIM cards, low initial deposit), 3) Low tariffs or special tariffs for Needy [10, 12, 14, 15, 17]. At present Georgian market provides very wide

opportunity of different range handsets, including low price and even second-hand cheap phones. SIM cards in most of the cases are free, subscribers might need to pay small fee of 1-5 GEL, which then is deposited at their account and used as first prepaid mean. Thus it is mainly tariffs, which is substantial barriers for Needy, including refugees/IDPs and disabled.



Fig. 6. Gergeti Trinity Church at Georgian-Russian border

Whilst the mobile operator's action is clearly very helpful for refugees, more concerted action from the government in tariff regulations and possible tax deductions, as well as provision of special social communication needy package would be more prominent step to secure social cohesion of refugees and disabled.

The paper has been presented at Econ@Tel COST IS605 Project WG2 workshop in Lisbon, Portugal, 24-26 November, 2008.

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