

S. #.	Operator	Towns	
		Count	Names
3.	Ufone	2	Abdul Hakeem, Jahangira

Table 6.4: Non-Compliance of SMS End-To-End Delivery Time ≤ 12 Seconds

SURVEY MAPS & GRAPHICAL RESULTS

7.1 The 4G/LTE Signal Strength (RSRP) samples recorded during drive test on survey routes plotted on maps along-with Voice & SMS QoS KPIs survey results in graphical form are placed at **Annex-A**, **Annex-B** & **Annex-C** for towns of Punjab, Sindh & Khyber Pakhtunkhwa respectively.

STANDING OF CMOs IN SURVEY

8.1. CMOs have been prioritized/ placed at 1st, 2nd, 3rd & 4th position in each category i.e. Mobile Network Coverage, Mobile Broadband Service, Voice Service and SMS Service, based upon the compliance level against each QoS KPI in each category in surveyed towns. The details are:

- a. **MOBILE NETWORK COVERAGE.** The categorization of CMOs as per QoS KPI i.e. Signal Strength of 4G/LTE and 3G Networks in 08 x Surveyed towns is shown in **Table 8.1: CMOs Standing in Mobile Network Coverage.**

S. #.	Operator	Compliance Level – Number of Towns		Standing
		Compliant	Non-Compliant	
1.	ZonG	15	1	1 st
2.	Jazz	15	1	1 st
3.	Telenor	15	1	1 st
4.	Ufone	14	2	2 nd

Table 8.1: CMOs Standing in Mobile Network Coverage

- b. **MOBILE BROADBAND SERVICE.** The categorization of each CMOs, as per the highest to lowest obtained User Data Throughput in 4G/LTE and 3G Networks is shown in **Table 8.2: CMOs Standing in Mobile Broadband Service.**

S. #.	Operator	Highest Throughput – Number of Cities								Standing	
		4G				3G				4G	3G
		1 st	2 nd	3 rd	4 th	1 st	2 nd	3 rd	4 th		
1.	ZonG	8	-	-	-	-	-	-	8	1 st	4 th
2.	Jazz	-	5	3	-	3	2	3	-	2 nd	2 nd
3.	Ufone	-	3	4	-	4	2	2	-	3 rd	1 st
4.	Telenor	-	-	1	7	1	4	3	-	4 th	3 rd

Table 8.2: CMOs Standing in Mobile Broadband Service

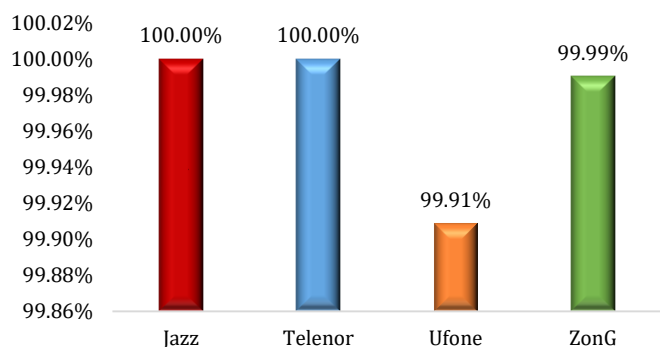
- c. **VOICE SERVICE.** The categorization of each CMOs, as per the maximum complaint Voice QoS KPIs is shown in **Table 8.3: CMOs Standing in Voice Service.**

S. #.	Operator	Voice QoS KPIs		Standing
		Compliant	Non-Compliant	
1.	ZonG	51	5	1 st
2.	Jazz	49	7	2 nd
3.	Ufone	45	11	3 rd
4.	Telenor	39	17	4 th

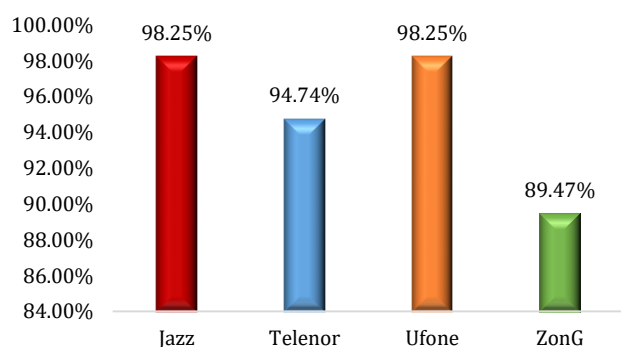
Table 8.3: CMOs Standing in Voice Service

QUALITY OF SERVICE SURVEY RESULTS – ABDUL HAKEEM

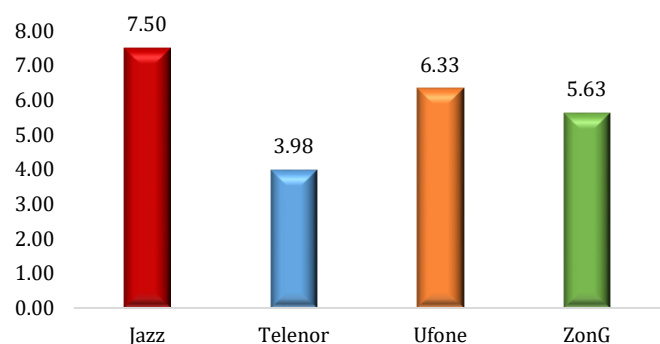
Network Accessibility > 99%



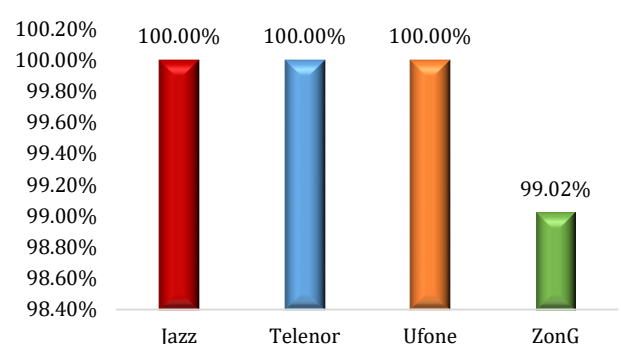
Service Accessibility > 98%



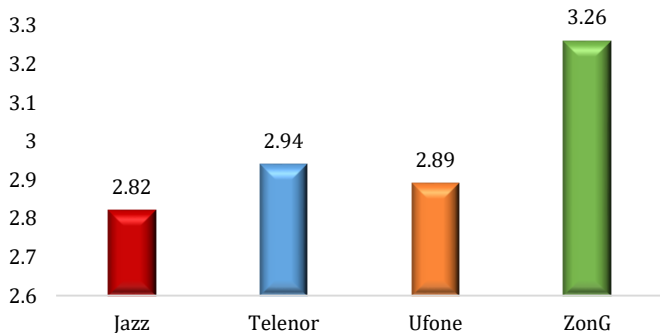
Call Connection Time < 6.5 Seconds



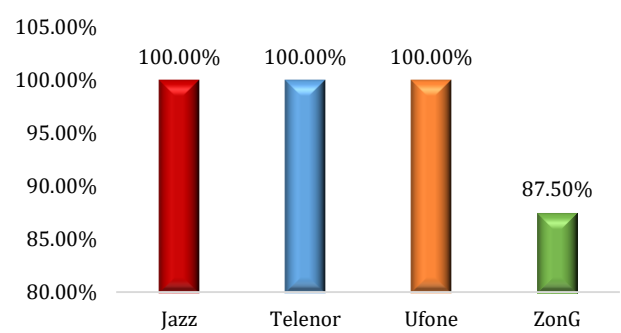
Call Completion Ratio > 98%



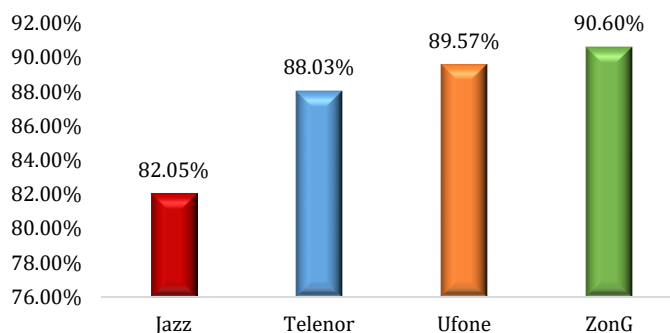
Mean Opinion Score > 3



ISHO for Circuit Switched Voice > 98%



SMS Success Rate > 99%



SMS End-to-End Delivery Time < 12 Seconds

