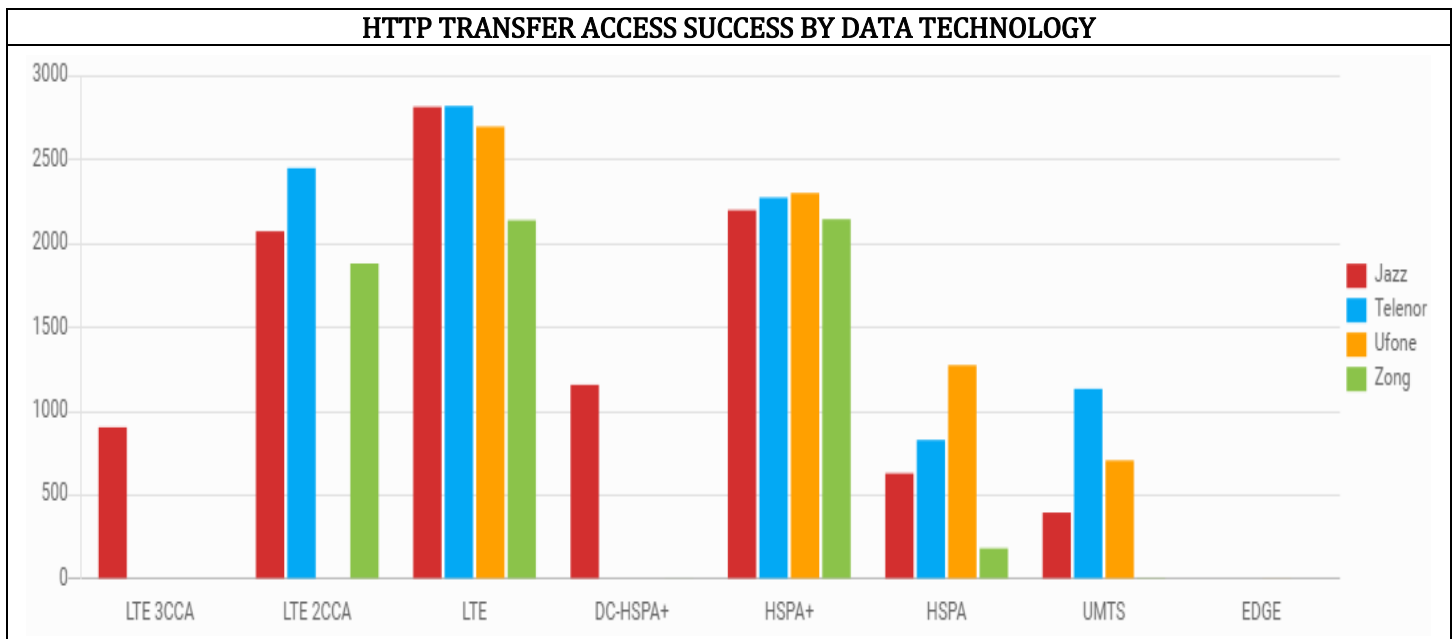| City	4G User Data Throughput (Mbps)				Operator Position			
	Jazz	Telenor	Ufone	ZonG	Jazz	Telenor	Ufone	ZonG
Jaccobabad	16.50	3.24	3.10	14.97	First	Third	Fourth	Second
Dadu	8.57	2.37	19.73	12.75	Third	Fourth	First	Second
Tando Allah Yar	13.84	4.21	9.92	10.78	First	Fourth	Third	Second
Sialkot	9.16	3.84	18.31	15.23	Third	Fourth	First	Second
Gwadar	3.86	2.35	2.09	7.32	Second	Third	Fourth	First
D.I Khan	12.27	2.04	7.90	16.80	Second	Fourth	Third	First

Table4.2.1: 4G User Data Throughput in Pakistan ≥ 2 Mbps

4.3. **3G USER DATA THROUGHPUT.** As per Next Generation Mobile Service (NGMS) licenses awarded, licensees are required to meet <u>the threshold of minimum of 256Kbps of 3G User Data Throughput.</u> The results of Data Service QoS KPI i.e. User Data Throughput is shown in **Table 4.3: 3G User Data Throughput in Pakistan ≥ 256Kbps.**

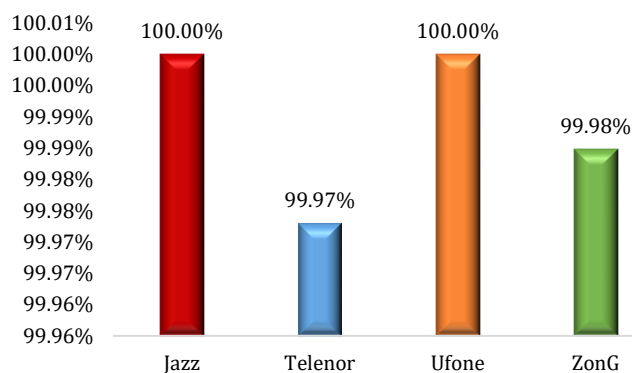| City	3G User Data Throughput (Kbps)				Operator Position			
	Jazz	Telenor	Ufone	ZonG	Jazz	Telenor	Ufone	ZonG
Khanpur	3069.50	3810.87	3566.99	1944.04	Third	Second	First	Fourth
Sadiqabad	3213.56	4789.25	3656.23	2046.48	Third	First	Second	Fourth
Kharian	1677.81	1836.83	3685.05	2031.25	Fourth	Third	First	Second
Wazirabad	1249.90	2083.82	5159.92	2332.42	Fourth	Third	First	Second
Kotri	1298.83	2923.11	5706.80	1376.28	Fourth	Second	First	Third
Jaccobabad	4119.01	2539.55	2225.21	1057.98	First	Second	Third	Fourth
Dadu	3074.27	2285.97	3856.25	1196.27	Second	Third	First	Fourth
Tando Allah Yar	1054.34	2686.46	2817.79	961.31	Third	Second	First	Fourth
Sialkot	2098.40	2677.96	3386.38	1879.95	Third	Second	First	Fourth
Gwadar	2527.18	3871.15	2756.26	763.26	Third	First	Second	Fourth
D.I Khan	2054.03	939.90	2638.49	2127.99	Third	Fourth	First	Second

Table4.3: 3G User Data Throughput ≥ 256Kbps

4.4. During the survey, the deployed technologies by Cellular Mobile Operators (CMOs), Success Rate of http Transfer Download Tests and Resource Block Utilization have been recorded. The details can been seen in attached graphs.
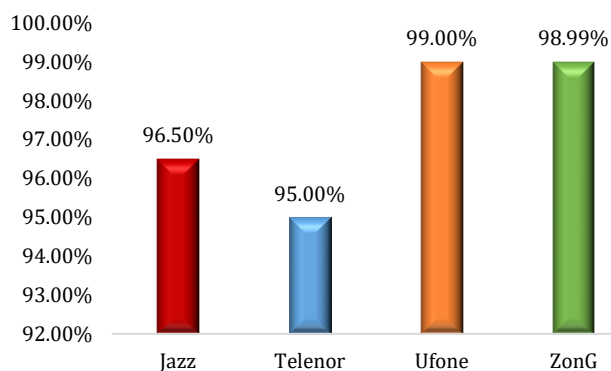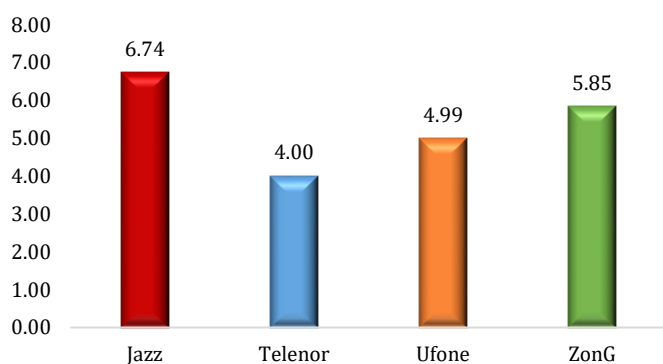

HTTP TRANSFER ACCESS SUCCESS BY DATA TECHNOLOGY

QUALITY OF SERVICE SURVEY RESULTS – KOTRI

Network Accessibility > 99%

Operator	Value
Jazz	100.00%
Telenor	99.97%
Ufone	100.00%
ZonG	99.98%

Call Setup Success Rate > 98%

Operator	Value
Jazz	96.50%
Telenor	95.00%
Ufone	99.00%
ZonG	98.99%

Call Connection Time < 7.5 Seconds

Operator	Value
Jazz	6.74
Telenor	4.00
Ufone	4.99
ZonG	5.85

Call Completion Ratio > 98%

Operator	Value
Jazz	99.48%
Telenor	97.89%
Ufone	100.00%
ZonG	97.46%

Mean Opinion Score > 3

Operator	Value
Jazz	2.85
Telenor	3.39
Ufone	3.55
ZonG	3.49

SMS Success Rate > 99%

Operator	Value
Jazz	98.50%
Telenor	98.49%
Ufone	99.50%
ZonG	100.00%
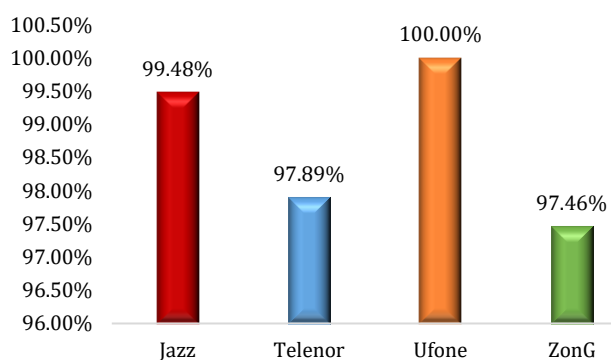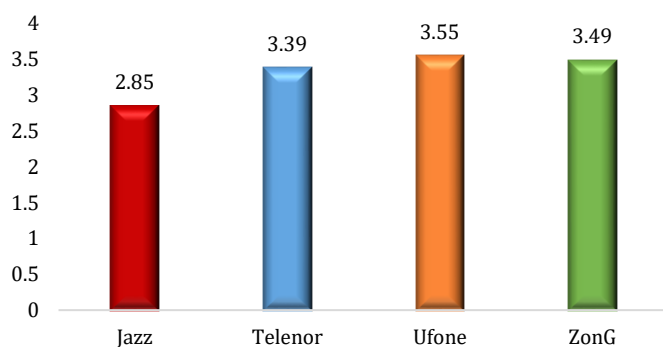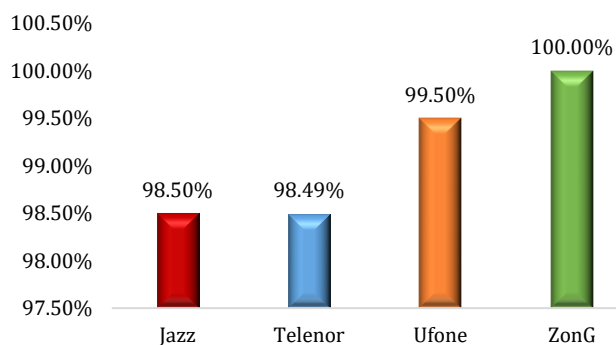
SMS End-to-End Delivery Time < 12 Seconds

Operator	Value
Jazz	3.94
Telenor	4.84
Ufone	8.16
ZonG	3.36