DOWNLOAD DATA THROUGHPUT ≥ 4Mbps								
City	Download Data Throughput [Mbps]				Operator Position			
	Jazz	Telenor	Ufone	ZonG	Jazz	Telenor	Ufone	ZonG
BAHWALNAGAR	12.78	13.35	9.35	23.74	Third	Second	Fourth	First
D.I KHAN	18.04	**2.23**	4.110	7.12	First	**Fourth**	Third	Second
LAHORE	27.65	9.62	13.61	33.21	Second	Fourth	Third	First
MARDAN	25.67	4.32	6	16.25	First	Fourth	Third	Second
SAMUNDARI	19.98	9.99	7.71	20.59	Second	Third	Fourth	First
SHIKARPUR	21.30	10.00	8.80	17.2	First	Third	Fourth	Second
HYDERABAD	28.9	9.15	13.36	25.56	First	Fourth	Third	Second
JHELUM	39.28	8.08	8.46	32.52	First	Fourth	Third	Second
KARACHI MALIR	23.72	10.19	11.93	22.94	First	Fourth	Third	Second
NAWABSHAH	9.90	7.9	9.6	11.4	Second	Fourth	Third	First
NUSHKI	N/A	5.22	**2.38**	19.49	N/A	Second	**Third**	First
QUETTA	26.26	9.2	12.32	23.61	First	Fourth	Third	Second
RAWALPINDI	28.72	5.06	6.77	18.08	First	Fourth	Third	Second
CHUNIAN	22.03	11.82	6.66	32.4	Second	Third	Fourth	First
SHARAQPUR	23.20	12.89	12.68	28.93	Second	Third	Fourth	First
KOTRI	23.81	9.83	15.42	16.3	First	Fourth	Third	Second

Table 6.2: Download Data Throughput

UPLOAD DATA THROUGHPUT ≥ 1Mbps								
City	Upload Data Throughput [Mbps]				Operator Position			
	Jazz	Telenor	Ufone	ZonG	Jazz	Telenor	Ufone	ZonG
BAHWALNAGAR	5.54	5.27	16.77	20.7	Third	Fourth	Second	First
D.I KHAN	5.49	2.14	12.59	12.51	Third	Fourth	First	Second
LAHORE	7.4	8.70	20.2	22	Fourth	Third	Second	First
MARDAN	6.87	5.05	14	18.07	Third	Fourth	Second	First
SAMUNDARI	6.15	7.40	17.56	20.31	Fourth	Third	Second	First
SHIKARPUR	6.55	4.94	20.8	18.9	Third	Fourth	First	Second
HYDERABAD	27.92	4.09	18.82	22.44	First	Fourth	Third	Second
JHELUM	24.02	8.05	14.56	21.1	First	Fourth	Third	Second
KARACHI MALIR	24.58	3.16	17.65	22.17	First	Fourth	Third	Second
NAWABSHAH	5.9	4.3	6.7	8.2	Third	Fourth	Second	First
NUSHKI	N/A	1.63	10.06	11.05	N/A	Third	Second	First
QUETTA	20.04	2.92	13.97	19.52	First	Fourth	Third	Second
RAWALPINDI	20.3	5.84	15.74	16.56	First	Fourth	Third	Second
CHUNIAN	19.55	7.41	16.15	21.21	Second	Fourth	Third	First
SHARAQPUR	21.31	7.23	18.75	16.22	First	Fourth	Second	Third
KOTRI	24.8	3.63	19.49	21.38	First	Fourth	Third	Second

Table 6.3: Upload Data Throughput

Ookla Speed Test. Ookla Speed Test was also carried out to measure Download and Upload Data Throughput. During the survey, Speed Test servers were automatically selected based on the lowest ping and geographical location of the server. Ookla Test Statistics are shown in Table 6.4: Ookla Tests Statistics while the Download and Upload Speed Results are

shown in Table 6.5: Download Data Throughput and Table 6.6: Upload Data Throughput respectively.

DESCRIPTION		Jazz	Telenor	Ufone	Zong
DOWNLOAD	ATTEMPTS	10423	10928	10551	10641
	SPEED (Mbps)	34.69	7.99	11.68	35.73
UPLOAD	ATTEMPTS	10423	10928	10551	10641
	SPEED (Mbps)	24.299	6.612	19.831	24.195

Table 6.4: Ookla Tests Statistics

OOKLA DOWNLOAD DATA THROUGHPUT ≥ 4Mbps								
City	Download Data Throughput [Mbps]				Operator Position			
	Jazz	Telenor	Ufone	ZonG	Jazz	Telenor	Ufone	ZonG
BAHWALNAGAR	24.88	18.32	11.32	29.85	Second	Third	Fourth	First
D.I KHAN	22.69	**2.03**	6.79	23.461	Second	**Fourth**	Third	First
LAHORE	35.13	10.81	4.75	42.1	Second	Third	Fourth	First
MARDAN	31.14	4.75	7.29	19.64	First	Fourth	Third	Second
SAMUNDARI	31.2	12.31	10.65	30.14	First	Third	Fourth	Second
SHIKARPUR	25.97	12.02	12.34	22.92	First	Fourth	Third	Second
HYDERABAD	36.75	10.8	17.2	30.78	First	Fourth	Third	Second
JHELUM	52.13	5.06	10.91	49.08	First	Fourth	Third	Second
KARACHI MALIR	28.96	13.32	13.79	30.76	Second	Fourth	Third	First
NAWABSHAH	20.58	9.79	14.46	34.71	Second	Fourth	Third	First
NUSHKI	N/A	8.36	**2.71**	26.67	N/A	Second	Third	First
QUETTA	50.08	10.01	16.6	31.8	First	Fourth	Third	Second
RAWALPINDI	37.6	**2.6**	9.2	25.2	First	**Fourth**	Third	Second
CHUNIAN	27.33	13.18	9.26	43.84	Second	Third	Fourth	First
SHARAQPUR	31.43	11.86	17.41	37.19	Second	Fourth	Third	First
KOTRI	30.08	11.2	14.77	26.17	First	Fourth	Third	Second

Table 6.5: Ookla Download Data Throughput

OOKLA UPLOAD DATA THROUGHPUT ≥ 1Mbps								
City	Upload Data Throughput [Mbps]				Operator Position			
	Jazz	Telenor	Ufone	ZonG	Jazz	Telenor	Ufone	ZonG
BAHWALNAGAR	27.75	5.89	20.84	23.76	First	Fourth	Third	Second
D.I KHAN	21.171	3.734	18.67	17.833	First	Fourth	Second	Third
LAHORE	26.76	7.78	21.61	29.3	Second	Fourth	Third	First
MARDAN	23.57	4.64	14.4	16.37	First	Fourth	Third	Second
SAMUNDARI	25.5	8.26	21.68	28.62	Second	Fourth	Third	First
SHIKARPUR	23.47	5.29	24.47	22.28	Second	Fourth	First	Third
HYDERABAD	27.53	6.24	23.68	30.09	Second	Fourth	Third	First
JHELUM	28.1	7	18.3	26.4	First	Fourth	Third	Second
KARACHI MALIR	23.28	7.76	20.95	28.14	Second	Fourth	Third	First
NAWABSHAH	19.14	5.22	20.96	34.78	Third	Fourth	Second	First
NUSHKI	N/A	2.72	9.95	12.8	N/A	Third	Second	First
QUETTA	20.94	6	16.7	24.6	Second	Fourth	Third	First
RAWALPINDI	21.4	5	18	21	First	Fourth	Third	Second
CHUNIAN	22.97	10.25	18.51	26.99	Second	Fourth	Third	First
SHARAQPUR	23.64	7.34	22.15	14.06	First	Fourth	Second	Third
KOTRI	26.14	4.76	19.26	23.12	First	Fourth	Third	Second

Table 6.6: Ookla Upload Data Throughput