

DEVELOPMENT & VALIDATION OF QUALITY OF WORK LIFE SCALE IN THE IT SECTOR

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ABSTRACT

The growth, development, efficiency, and effectiveness of an organization depend on how effectively the human resources are managed. Competent, skilled, and efficient human resource is very crucial for the functioning of the organization. It is in this context the significance of this paper arises. This paper gives a detailed view about the development and validation of the scale measuring the quality of work life of the employees working in the IT sector. The exploratory and confirmatory factor analysis using SEM and Partial least square approach is done to confirm the validity and reliability of the scale. The analysis reveals the legitimacy of the quality of work life scale through its factor loadings and reliability.

KEYWORDS: Reliability, Validation, Legitimacy, Disparagement, Prevailing, Intrinsic.

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Appendix

1. Results of Exploratory Factor Analysis through SPSS 20:

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.929
Approx. Chi-Square	12911.251
Bartlett's Test of Sphericity Df	1176
Sig.	.000

Source: SPSS FA Output

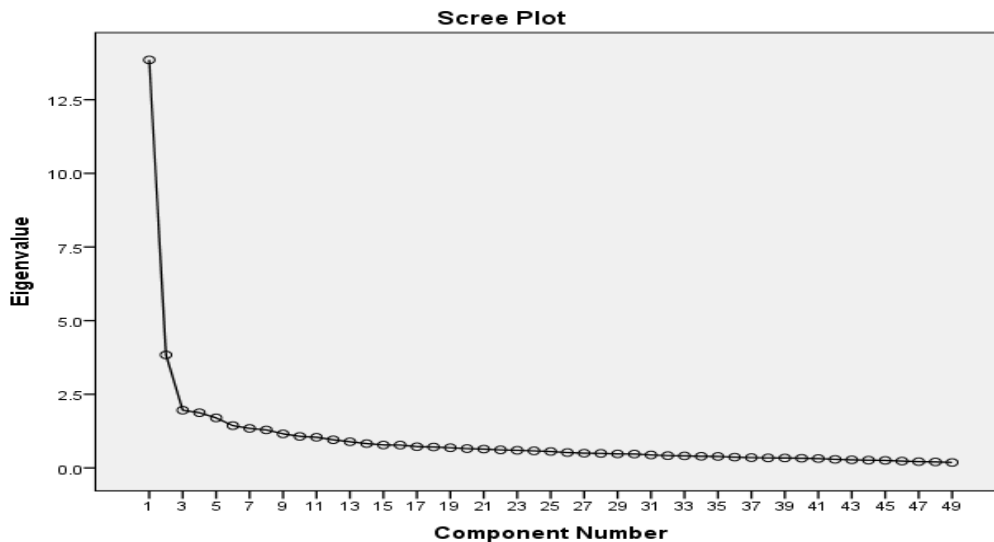
Table Total Variance Explained - QWL

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	13.852	28.269	28.269	13.852	28.269	28.269	5.940	12.122	12.122
2	3.837	7.830	36.099	3.837	7.830	36.099	5.381	10.982	23.104
3	1.959	3.997	40.096	1.959	3.997	40.096	4.020	8.204	31.308

4	1.874	3.824	43.920	1.874	3.824	43.920	2.94 6	6.012	37.319
5	1.698	3.466	47.386	1.698	3.466	47.386	2.77 5	5.663	42.983
6	1.435	2.930	50.315	1.435	2.930	50.315	2.54 6	5.197	48.180
7	1.341	2.737	53.053	1.341	2.737	53.053	1.72 5	3.521	51.701
8	1.291	2.635	55.687	1.291	2.635	55.687	1.55 8	3.180	54.881
9	1.086	2.360	58.047	1.156	2.360	58.047	1.55 1	3.166	58.047
10	1.071	2.185	60.232						
11	.941	2.024	62.355						
12	.915	1.950	64.305						
13	.888	1.813	66.117						
14	.825	1.684	67.801						
15	.779	1.590	69.391						
16	.776	1.583	70.974						
17	.721	1.472	72.446						
18	.710	1.449	73.895						
19	.685	1.398	75.293						
20	.656	1.339	76.632						
21	.640	1.306	77.938						
22	.612	1.249	79.187						
23	.598	1.220	80.408						
24	.578	1.180	81.588						
25	.558	1.138	82.726						
26	.522	1.066	83.792						
27	.499	1.018	84.810						
28	.493	1.006	85.816						
29	.476	.971	86.786						
30	.470	.959	87.745						
31	.440	.897	88.643						
32	.417	.851	89.493						
33	.408	.832	90.326						
34	.396	.808	91.133						
35	.389	.794	91.927						
36	.366	.746	92.673						
37	.349	.713	93.386						
38	.341	.695	94.081						
39	.337	.688	94.769						
40	.328	.670	95.439						
41	.317	.648	96.087						

42	.291	.594	96.681						
43	.275	.561	97.242						
44	.264	.538	97.780						
45	.256	.523	98.303						
46	.231	.471	98.773						
47	.212	.432	99.205						
48	.205	.418	99.623						
49	.185	.377	100.000						

Extraction Method: Principal Component Analysis. Source: SPSS FA Output



Scree Plot of Quality of work life

2. Results of Confirmatory Factor Analysis through Warp PLS 4.0:

2.1 Model fit and quality indices: Quality of Work Life Scale

Average path coefficient (APC) = 0.156, $P < 0.001$

Average R-squared (ARS) = 0.992, $P < 0.001$

Average adjusted R-squared (AARS) = 0.992, $P < 0.001$

Average block VIF (AVIF) = 1.773, acceptable if ≤ 5 , ideally ≤ 3.3

Tenenhaus GoF (GoF) = 0.753, small ≥ 0.1 , medium ≥ 0.25 , large ≥ 0.36

Sympson's paradox ratio (SPR) = 1.000, acceptable if ≥ 0.7 , ideally = 1

R-squared contribution ratio (RSCR) = 1.000, acceptable if ≥ 0.9 , ideally = 1

Statistical suppression ratio (SSR) = 1.000, acceptable if ≥ 0.7

Nonlinear bivariate causality direction ratio (NLBCDR) = 1.000, acceptable if ≥ 0 .

2.2 Path coefficients

	WE	OC	AW	ED	FT	TLS	JS	AM	AFC	QWL
WE										
OC										
AW										
ED										
FT										
TLS										
JS										
AM										
AFC										
QWL	0.107	0.164	0.206	0.179	0.168	0.162	0.151	0.180	0.085	

2.3 P values

	WE	OC	AW	ED	FT	TLS	JS	AM	AFC	QWL
WE										
OC										
AW										
ED										
FT										
TLS										
JS										
AM										
AFC										
QWL	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.012	

2.4 Standard errors for path coefficients

	WE	OC	AW	ED	FT	TLS	JS	AM	AFC	QWL
WE										
OC										
AW										
ED										
FT										
TLS										
JS										
AM										
AFC										
QWL	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	

2.5 Combined Loadings and Cross Loadings – Quality of Work Life Scale

Items	AFC	WE	OC	AW	ED	FT	TLS	JS	AM	P Value
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AFC 1	(0.857)	0.524	0.306	0.556	0.417	0.226	0.346	0.572	0.631	< 0.001
AFC 2	(0.524)	-0.489	-0.531	-0.348	-0.285	-0.353	-0.327	-0.194	-0.358	< 0.001
AFC 3	(0.745)	0.179	0.248	0.264	0.423	0.465	0.215	0.212	0.169	< 0.001
AFC 4	(0.755)	0.405	0.367	0.408	0.268	0.252	0.513	0.328	0.414	< 0.001
WE1	-0.024	(0.876)	-0.123	-0.017	-0.036	-0.186	-0.170	-0.084	-0.171	< 0.001
WE2	0.165	(0.881)	0.220	0.216	0.147	0.135	0.090	0.204	0.196	< 0.001
WE3	-0.201	(0.618)	-0.139	-0.283	-0.158	0.070	0.113	-0.173	-0.037	< 0.001
OC1	0.190	0.517	(0.826)	0.612	0.512	0.705	0.519	0.514	0.590	< 0.001
OC2	0.552	0.811	(0.818)	0.156	0.199	0.118	0.058	0.132	0.203	< 0.001
OC3	-0.896	-0.606	(0.679)	-0.097	-0.159	-0.205	-0.905	-0.188	-0.046	< 0.001
AW1	-0.701	-0.037	0.129	(0.549)	-0.594	-0.220	-0.302	-0.215	-0.665	< 0.001
AW2	-0.337	-0.426	-0.695	(0.668)	-0.136	-0.563	-0.595	-0.589	-0.385	< 0.001
AW3	0.005	-0.303	-0.335	(0.730)	-0.413	-0.577	-0.389	-0.318	-0.403	< 0.001
AW4	0.080	0.265	0.309	(0.785)	0.447	-0.508	0.391	0.341	0.511	< 0.001
AW5	0.104	0.184	0.215	(0.802)	0.348	0.413	0.154	0.235	0.226	< 0.001
AW6	0.244	0.383	0.606	(0.755)	0.676	0.046	0.581	0.704	0.509	< 0.001
AW7	0.436	0.279	0.367	(0.632)	0.255	0.068	0.331	0.226	0.076	< 0.001
ED1	-0.274	-0.077	-0.247	-0.116	(0.633)	-0.086	-0.063	-0.178	-0.166	< 0.001
ED2	-0.104	-0.035	-0.170	-0.098	(0.747)	-0.141	-0.229	-0.156	0.018	< 0.001
ED3	-0.005	0.240	0.238	0.459	(0.721)	0.472	0.280	0.246	0.408	< 0.001
ED4	0.280	0.156	0.236	0.226	(0.789)	0.264	0.326	0.213	0.267	< 0.001

ED5	-0.062	0.319	0.135	0.108	(0.773)	0.133	0.228	0.018	0.069	< 0.001
ED6	0.390	0.357	0.492	0.432	(0.673)	0.345	0.422	0.516	0.249	< 0.001
ED7	-0.035	-0.050	0.146	-0.085	(0.670)	0.002	-0.082	0.010	-0.045	< 0.001
ED8	-0.400	-0.206	-0.173	-0.476	(0.573)	-0.384	-0.241	-0.044	-0.179	< 0.001
ED9	0.262	0.023	0.089	0.231	(0.712)	0.188	0.080	0.161	0.099	< 0.001
FT1	0.087	0.050	0.131	0.193	0.258	(0.857)	0.091	0.138	0.176	< 0.001
FT2	0.018	-0.083	-0.068	0.056	-0.088	(0.854)	-0.085	-0.030	-0.165	< 0.001
FT3	-0.160	-0.213	-0.388	-0.419	-0.390	(0.829)	-0.304	-0.333	-0.291	< 0.001
FT4	0.053	0.256	0.355	0.168	0.222	(0.799)	0.310	0.229	0.289	< 0.001
TLS1	0.115	0.533	0.642	0.593	0.562	0.604	(0.815)	0.566	0.645	< 0.001
TLS2	0.078	-0.061	0.025	0.042	0.129	-0.008	(0.887)	0.002	-0.022	< 0.001
TLS3	0.044	-0.186	-0.149	-0.114	-0.079	-0.044	(0.869)	-0.175	-0.203	< 0.001
TLS4	-0.267	-0.288	-0.551	-0.559	-0.667	-0.591	(0.756)	-0.411	-0.437	< 0.001
JS1	0.255	0.171	0.448	0.385	0.539	0.157	0.299	(0.742)	0.430	< 0.001
JS2	0.356	0.516	0.666	0.546	0.622	0.194	0.296	(0.783)	0.511	< 0.001
JS3	-0.655	-0.592	-0.721	-0.175	-0.649	-0.161	-0.134	(0.715)	-0.168	< 0.001
AM1	0.019	0.056	0.078	0.117	-0.105	0.335	0.196	0.221	(0.731)	< 0.001
AM2	0.082	0.211	0.285	0.205	0.193	0.285	0.049	0.278	(0.765)	< 0.001
AM3	-0.066	-0.309	-0.345	-0.386	-0.123	-0.584	-0.309	0.394	(0.768)	< 0.001
AM4	-0.034	0.046	-0.012	0.070	0.031	-0.017	0.074	-0.093	(0.765)	< 0.001

2.6 Structure loadings and cross-loadings

	WE	OC	AW	ED	FT	TLS	JS	AM	QWL	AFC
WE1	0.876	0.236	0.377	0.363	0.010	0.065	0.160	0.235	0.399	0.301
WE2	0.881	0.224	0.309	0.274	-0.031	0.028	0.134	0.239	0.353	0.315

WE3	0.618	0.399	0.434	0.422	0.441	0.482	0.375	0.426	0.618	0.175
OC1	0.257	0.826	0.363	0.382	0.423	0.325	0.298	0.328	0.553	0.136
OC2	0.251	0.818	0.396	0.469	0.441	0.383	0.398	0.382	0.619	0.226
OC3	0.286	0.679	0.382	0.443	0.283	0.211	0.234	0.291	0.513	0.285
AW1	0.427	0.421	0.549	0.442	0.255	0.287	0.217	0.294	0.520	0.280
AW2	0.343	0.350	0.668	0.313	0.443	0.403	0.369	0.330	0.567	0.186
AW3	0.364	0.346	0.730	0.449	0.289	0.233	0.288	0.383	0.558	0.357
AW4	0.310	0.354	0.785	0.482	0.428	0.367	0.353	0.476	0.624	0.178
AW5	0.390	0.336	0.802	0.499	0.263	0.229	0.288	0.392	0.568	0.250
AW6	0.208	0.368	0.755	0.451	0.527	0.396	0.402	0.442	0.624	0.154
AW7	0.227	0.262	0.632	0.441	0.313	0.217	0.212	0.359	0.476	0.196
ED1	0.297	0.389	0.473	0.633	0.423	0.399	0.373	0.361	0.585	0.130
ED2	0.375	0.391	0.489	0.747	0.312	0.219	0.319	0.433	0.588	0.290
ED3	0.301	0.439	0.553	0.721	0.481	0.386	0.395	0.464	0.657	0.181
ED4	0.304	0.416	0.460	0.789	0.363	0.314	0.329	0.385	0.609	0.382
ED5	0.430	0.429	0.472	0.773	0.332	0.327	0.300	0.327	0.596	0.211
ED6	0.303	0.351	0.360	0.673	0.217	0.197	0.277	0.220	0.472	0.330
ED7	0.232	0.398	0.353	0.670	0.283	0.190	0.268	0.270	0.476	0.198
ED8	0.147	0.314	0.280	0.573	0.202	0.149	0.295	0.281	0.410	0.198
ED9	0.261	0.352	0.450	0.712	0.317	0.223	0.297	0.335	0.539	0.366
FT1	0.117	0.444	0.477	0.467	0.857	0.518	0.438	0.446	0.662	0.167
FT2	0.117	0.430	0.485	0.408	0.854	0.523	0.440	0.376	0.640	0.168
FT3	0.107	0.374	0.388	0.354	0.829	0.515	0.396	0.395	0.590	0.126
FT4	0.098	0.413	0.349	0.323	0.799	0.532	0.392	0.367	0.566	0.062
TLS1	0.179	0.347	0.335	0.276	0.516	0.815	0.403	0.324	0.534	-0.032
TLS2	0.161	0.376	0.407	0.404	0.554	0.887	0.414	0.330	0.612	0.152
TLS3	0.085	0.306	0.337	0.312	0.554	0.869	0.350	0.258	0.533	0.122
TLS4	0.243	0.302	0.351	0.278	0.451	0.756	0.407	0.342	0.538	0.100
IJ1	0.207	0.355	0.360	0.429	0.318	0.302	0.742	0.399	0.544	0.204
IJ2	0.229	0.361	0.380	0.325	0.478	0.411	0.783	0.394	0.577	0.119
IJ3	0.130	0.181	0.225	0.254	0.317	0.339	0.715	0.225	0.407	0.003
AM1	0.171	0.309	0.384	0.268	0.485	0.408	0.427	0.731	0.559	0.171
AM2	0.283	0.347	0.392	0.354	0.344	0.214	0.356	0.765	0.540	0.246
AM3	0.328	0.346	0.442	0.496	0.270	0.228	0.304	0.768	0.575	0.379
AM4	0.283	0.302	0.429	0.360	0.346	0.289	0.300	0.765	0.543	0.236
AFC1	0.213	0.179	0.207	0.246	0.046	-0.011	0.077	0.265	0.275	0.857
AFC2	-0.003	-0.155	-0.140	-0.084	-0.209	-0.266	-0.160	-0.129	-0.156	0.524
AFC3	0.256	0.291	0.324	0.399	0.276	0.175	0.184	0.292	0.436	0.745
AFC4	0.367	0.252	0.305	0.287	0.149	0.196	0.161	0.325	0.404	0.755

2.7 R-squared coefficients

WE	OC	AW	ED	FT	TLS	JS	AM	QWL	AFC
								0.992	

2.8 Adjusted R-squared coefficients

WE	OC	AW	ED	FT	TLS	JS	AM	QWL	AFC
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0.992

2.9 Average variances extracted

WE	OC	AW	ED	FT	TLS	JS	AM	AFC	QWL
0.642	0.604	0.501	0.493	0.698	0.694	0.558	0.574	0.481	0.466

2.10 Q-squared coefficients

WE	OC	AW	ED	FT	TLS	JS	AM	QWL	AFC
								0.992	