Information System Success: Individual and Organizational Determinants¹

by

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Management Science

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Online Supplement

Appendix A: Meta Analysis Sample

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^a This study was excluded since it used same data set as Rai and Bajwa (1997).

^b This study did not examine IS success, but it examined relationships among the non-IS success constructs in our model.

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^c This study was excluded since it uses same data set as Doll and Torkzadeh (1990).

^d This study did not examine IS success, but it examined relationships among the non-IS success constructs in our model.

^e This study did not examine IS success, but it examined relationships among the non-IS success constructs in our model.

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^h This study did not examine IS success, but it examined relationships among the non-IS success constructs in our model.

ⁱ This study was excluded since it uses same data set as Lee, Kim and Lee (1995).

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^k This study did not examine IS success, but it examined relationships among the non-IS success constructs in our model.

^l This study did not examine IS success, but it examined relationships among the non-IS success constructs in our model.

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^m This study did not examine IS success, but it examined relationships among the non-IS success constructs in our model.

ⁿ This study was excluded since it uses same data set as Yoon and Guimaraes (1995).

Appendix B: Study Correlations Coded for Meta-Analysis

Obs# ^a	Sty# ^b	Var1 ^c	Var2	N ^d	ObsR ^e	CorR ^f	Obs#	Sty#	Var1	Var2	N	ObsR	CorR
1	1	SQ	PU	116	0.60	0.69	30	7	ATT	PU	151	0.40	EX1
2	1	SQ	PU	73	0.75	0.79	31	7	ATT	SU	151	0.17	EX1
3	1	SQ	SU	116	0.30	0.35	32	7	PU	SU	151	0.16	EX1
4	1	SQ	SU	73	0.42	0.48	33	8	TMS	FC	143	0.26	0.35
5	1	PU	SU	116	0.35	0.41	34	8	TMS	ATT	143	0.46	0.62
6	1	PU	SU	73	0.44	0.48	35	8	TMS	US	143	0.37	0.46
7	2	SQ	SU	73	0.49	0.57	36	8	FC	ATT	143	0.04	0.05
8	3	SQ	PU	76	0.72	0.83	37	8	FC	US	143	0.05	0.06
9	4	EXP	TRG	230	-0.01	-0.02	38	8	ATT	US	143	0.44	0.52
10	4	EXP	ATT	230	0.16	0.19	39	9	PART	US	52	0.43	0.48
11	4	EXP	SQ	230	0.24	0.28	40	10	FC	US	614	0.07	0.08
12	4	EXP	PU	230	0.19	0.21	41	10	TRG	US	614	0.10	0.12
13	4	TRG	ATT	230	0.08	0.10	42	10	ATT	US	614	0.14	0.16
14	4	TRG	SQ	230	0.00	0.01	43	10	SQ	US	614	0.26	0.31
15	4	TRG	PU	230	0.09	0.11	44	11	FC	EXP	506	0.27	0.31
16	4	ATT	SQ	230	0.87	1.02	45	11	FC	ATT	506	0.51	0.60
17	4	ATT	PU	230	0.76	0.85	46	11	FC	SU	506	0.14	0.17
18	4	SQ	PU	230	0.60	0.66	47	11	FC	US	506	0.15	0.17
19	5	SQ	PU	288	0.55	0.60	48	11	EXP	ATT	506	0.26	0.30
20	6	TRG	ATT	71	0.11	0.13	49	11	EXP	SU	506	0.16	0.18
21	6	TRG	SQ	71	0.13	0.15	50	11	EXP	US	506	0.17	0.19
22	6	ATT	SQ	71	0.60	0.67	51	11	ATT	SU	506	0.19	0.22
23	7	TMS	FC	151	0.39	0.53	52	11	ATT	US	506	0.32	0.36
24	7	TMS	ATT	151	0.23	EX1 ^g	53	11	US	SU	506	0.18	0.21
25	7	TMS	PU	151	0.25	0.35	54	12	EXP	US	133	0.03	0.03
26	7	TMS	SU	151	0.76	EX1	55	12	TRG	US	133	0.17	0.20
27	7	FC	ATT	151	0.11	EX1	56	12	US	SU	133	0.00	0.00
28	7	FC	PU	151	0.15	0.18	57	14	TMS	FC	69	0.25	0.29
29	7	FC	SU	151	0.25	EX1	58	15	PU	US	46	0.28	0.30
							59	15	PU	SU	46	0.04	0.04
							60	15	US	SU	46	0.01	0.01
							61	16	PART	SQ	75	-0.01	-0.01
							62	17	PART	SU	200	0.28	0.34
							63	17	PART	US	200	0.18	0.19
							64	17	US	SU	200	0.28	0.33
							65	18	FC	SU	38	-0.16	-0.19
							66	18	EXP	SU	38	0.11	0.13
							67	18	EXP	US	38	0.12	0.14
							68	18	PU	SU	38	0.19	0.22
							69	19	ATT	PU	77	0.67	0.72
							70	19	ATT	PU	175	0.74	0.76
							71	19	ATT	US	77	0.80	0.86
							72	19	ATT	US	175	0.80	0.83
							73	19	PU	US	77	0.55	0.58
							74	19	PU	US	175	0.68	0.70

^a Observation#: Unique identifier for each of the 630 findings coded from 121 studies in our sample.

^b Study#: Unique identifier for the 130 studies in our sample. Same as what is used in Appendix A of the online supplement.

^c Var1 and Var2: Constructs represented in a given relationship. Identifiers same as what is used in Table 2 of the paper.

^d N: Sample size reported by the study for a given relationship.

^e Observed R: Effect size reported by the study for a given relationship.

^f Partially corrected R: Observed effect size corrected for measurement errors only (using reliabilities).

^g EX1 refers to Exclusion Reason 1, i.e., when reliability for either variable in the bivariate relationship was below 0.60.

Obs#	Sty#	Var1	Var2	N	ObsR	CorR	Obs#	Sty#	Var1	Var2	N	ObsR	CorR
75	20	ATT	SU	40	0.26	0.30	122	36	EXP	US	79	0.03	0.03
76	21	SQ	US	126	0.36	0.41	123	37	US	SU	170	0.26	0.30
77	22	FC	ATT	408	0.31	EX1	124	38	EXP	ATT	69	0.18	0.22
78	22	FC	SQ	408	0.14	EX1	125	39	TMS	FC	252	0.80	0.96
79	22	FC	PU	408	0.39	EX1	126	40	TMS	EXP	118	0.15	0.18
80	22	ATT	SQ	408	0.18	0.25	127	40	TMS	TRG	118	0.33	0.40
81	22	ATT	PU	408	0.59	0.77	128	40	TMS	PART	118	-0.10	-0.11
82	22	SQ	PU	408	0.09	0.11	129	40	TMS	PU	118	-0.06	-0.07
83	23	US	SU	79	0.23	0.27	130	40	EXP	TRG	118	0.16	0.20
84	24	TMS	EXP	634	0.23	0.38	131	40	EXP	PART	118	0.13	0.15
85	24	TMS	SQ	634	0.25	0.36	132	40	EXP	PU	118	0.15	0.18
86	24	TMS	PU	634	0.42	0.61	133	40	EXP	US	118	0.16	0.19
87	24	TMS	SU	634	0.23	0.36	134	40	TRG	PART	118	0.10	0.12
88	24	EXP	SQ	634	0.22	0.32	135	40	TRG	PU	118	0.15	0.19
89	24	EXP	PU	634	0.40	0.57	136	40	TRG	US	118	0.14	0.17
90	24	EXP	SU	634	0.36	0.53	137	40	PART	PU	118	0.25	0.29
91	24	SQ	PU	634	0.35	0.46	138	40	PART	US	118	0.06	0.07
92	24	SQ	SU	634	0.24	0.32	139	40	PU	US	118	0.48	0.58
93	24	PU	SU	634	0.50	0.69	140	41	EXP	TRG	228	-0.13	-0.16
94	25	TMS	SU	101	0.05	0.06	141	41	EXP	PART	228	0.34	0.39
95	25	TMS	US	101	0.01	0.01	142	41	EXP	SQ	228	0.33	0.37
96	25	PART	SU	101	0.37	0.41	143	41	TRG	PART	228	0.48	0.55
97	25	PART	US	101	0.35	0.39	144	41	TRG	SQ	228	0.54	0.61
98	26	EXP	TRG	165	-0.13	-0.16	145	41	PART	SQ	228	0.74	0.80
99	26	TRG	SU	165	-0.18	-0.22	146	43	TMS	ATT	114	0.23	0.30
100	27	SQ	PU	184	0.64	0.68	147	43	TMS	PART	114	-0.06	-0.07
101	27	SQ	SU	184	0.45	0.52	148	43	TMS	SQ	114	0.34	0.39
102	27	PU	SU	184	0.63	0.71	149	43	TMS	PU	114	0.28	0.35
103	28	SQ	PU	107	0.17	0.19	150	43	TMS	SU	114	0.25	0.29
104	28	SQ	SU	107	0.20	0.23	151	43	ATT	PART	114	0.21	0.27
105	28	PU	SU	107	0.68	0.79	152	43	ATT	SQ	114	0.07	0.09
106	30	PART	US	564	0.32	0.35	153	43	ATT	PU	114	0.18	0.26
107	31	PART	US	618	0.31	0.33	154	43	ATT	SU	114	0.43	0.59
108	32	US	SU	370	0.71	EX1	155	43	ATT	US	114	0.19	0.26
109	33	FC	SQ	341	0.17	0.27	156	43	PART	SQ	114	-0.05	-0.06
110	33	FC	PU	341	0.00	0.00	157	43	PART	PU	114	0.31	0.37
111	33	SQ	PU	341	0.29	0.33	158	43	PART	SU	114	0.09	0.10
112	34	FC	PART	118	0.09	0.10	159	43	PART	US	114	0.20	0.23
113	34	FC	PU	118	-0.01	-0.02	160	43	SQ	PU	114	0.41	0.52
114	34	PART	PU	118	0.29	0.32	161	43	SQ	SU	114	0.35	0.42
115	35	EXP	PU	279	0.04	0.05	162	43	SQ	US	114	0.37	0.44
116	35	EXP	PU	240	0.06	0.07	163	43	PU	US	114	0.22	0.29
117	35	EXP	SU	279	0.16	0.19	164	43	PU	SU	114	0.36	0.47
118	35	EXP	SU	240	0.10	0.12	165	43	US	SU	114	0.50	0.61
119	35	PU	SU	279	0.31	0.36	166	44	TMS	FC	185	0.06	0.08
120	35	PU	SU	240	0.31	0.36	167	44	TMS	SQ	185	-0.14	-0.17
121	36	EXP	US	108	0.15	0.17	168	44	FC	SQ	185	-0.22	-0.26

Obs#	Sty#	Var1	Var2	N	ObsR	CorR	Obs#	Sty#	Var1	Var2	N	ObsR	CorR
169	45	US	SU	168	0.28	0.33	216	52	TMS	US	187	0.21	0.25
170	46	TMS	EXP	106	-0.05	-0.06	217	52	FC	EXP	187	0.28	0.36
171	46	TMS	TRG	106	0.28	0.35	218	52	FC	TRG	187	0.26	0.34
172	46	TMS	ATT	106	0.02	0.02	219	52	FC	ATT	187	0.30	0.36
173	46	TMS	SQ	106	0.27	0.32	220	52	FC	PU	187	0.29	0.35
174	46	TMS	PU	106	0.42	0.49	221	52	FC	SU	187	0.39	0.49
175	46	TMS	SU	106	0.42	0.51	222	52	FC	US	187	0.04	0.05
176	46	EXP	TRG	106	0.02	0.02	223	52	EXP	TRG	187	0.40	0.55
177	46	EXP	ATT	106	0.36	0.43	224	52	EXP	ATT	187	0.28	0.35
178	46	EXP	SQ	106	0.12	0.14	225	52	EXP	PU	187	0.04	0.05
179	46	EXP	PU	106	-0.04	-0.05	226	52	EXP	SU	187	0.30	0.39
180	46	EXP	SU	106	0.06	0.07	227	52	EXP	US	187	0.13	0.16
181	46	TRG	ATT	106	0.15	0.18	228	52	TRG	ATT	187	0.31	0.39
182	46	TRG	SQ	106	0.49	0.59	229	52	TRG	PU	187	0.01	0.01
183	46	TRG	PU	106	0.46	0.55	230	52	TRG	US	187	0.07	0.09
184	46	TRG	SU	106	0.59	0.73	231	52	TRG	SU	187	0.40	0.54
185	46	ATT	SQ	106	0.24	0.28	232	52	ATT	PU	187	0.15	0.17
186	46	ATT	PU	106	0.02	0.02	233	52	ATT	SU	187	0.04	0.04
187	46	ATT	SU	106	0.16	0.19	234	52	ATT	US	187	0.16	0.18
188	46	SQ	PU	106	0.65	0.74	235	52	PU	US	187	0.07	0.08
189	46	SQ	SU	106	0.51	0.61	236	52	PU	SU	187	0.07	0.08
190	46	PU	SU	106	0.58	0.68	237	52	US	SU	187	0.14	0.17
191	47	TMS	US	111	0.14	0.16	238	53	FC	US	104	0.36	0.42
192	47	PART	US	111	0.17	0.19	239	53	EXP	US	104	0.26	0.32
193	47	PU	US	111	-0.22	-0.24	240	53	ATT	US	104	0.21	0.24
194	48	PART	US	93	0.05	0.06	241	53	US	SU	104	0.27	0.33
195	49	SQ	PU	585	0.61	0.66	242	54	TMS	SU	85	0.23	0.28
196	50	FC	EXP	422	0.24	0.29	243	54	FC	SU	85	0.03	0.04
197	50	FC	TRG	422	0.29	0.35	244	54	EXP	SU	85	0.18	0.22
198	50	FC	ATT	422	0.21	0.25	245	54	ATT	SU	85	0.18	0.22
199	50	FC	SU	422	0.28	0.33	246	54	US	SU	85	0.20	0.23
200	50	EXP	TRG	422	0.11	0.13	247	55	TMS	FC	225	0.55	0.65
201	50	EXP	ATT	422	0.37	0.43	248	55	TMS	FC	251	0.19	0.23
202	50	EXP	SU	422	0.35	0.42	249	55	TMS	EXP	225	0.09	0.11
203	50	TRG	ATT	422	0.11	0.13	250	55	TMS	EXP	251	0.00	0.00
204	50	TRG	SU	422	0.13	0.15	251	55	TMS	TRG	251	0.03	0.04
205	50	ATT	SU	422	0.36	0.43	252	55	TMS	TRG	225	0.08	0.10
206	51	EXP	SU	471	0.19	0.23	253	55	TMS	ATT	225	0.18	0.21
207	51	TRG	SU	471	0.10	0.12	254	55	TMS	ATT	251	0.09	0.11
208	51	ATT	SU	471	0.27	0.31	255	55	TMS	PU	225	0.24	0.29
209	51	SQ	SU	471	0.31	0.36	256	55	TMS	PU	251	0.06	0.08
210	52	TMS	FC	187	0.55	0.70	257	55	TMS	SU	225	0.11	0.13
211	52	TMS	EXP	187	0.21	0.28	258	55	TMS	SU	251	0.03	0.04
212	52	TMS	TRG	187	0.01	0.01	259	55	FC	EXP	225	0.18	0.22
213	52	TMS	ATT	187	0.24	0.30	260	55	FC	EXP	251	0.21	0.25
214	52	TMS	PU	187	0.22	0.27	261	55	FC	TRG	251	0.07	0.09
215	52	TMS	SU	187	0.24	0.31	262	55	FC	TRG	225	0.00	0.00

Obs#	Sty#	Var1	Var2	N	ObsR	CorR	Obs#	Sty#	Var1	Var2	N	ObsR	CorR
263	55	FC	ATT	225	0.29	0.32	310	57	SQ	PU	450	0.52	0.55
264	55	FC	ATT	251	0.32	0.37	311	57	SQ	SU	450	0.27	0.29
265	55	FC	PU	225	0.33	0.38	312	57	PU	SU	450	0.45	0.47
266	55	FC	PU	251	0.27	0.32	313	59	TMS	FC	105	0.52	0.61
267	55	FC	SU	225	0.27	0.30	314	59	TMS	FC	107	0.68	0.80
268	55	FC	SU	251	0.13	0.15	315	59	TMS	EXP	105	0.21	0.26
269	55	EXP	TRG	251	0.59	0.73	316	59	TMS	EXP	107	0.03	0.04
270	55	EXP	TRG	225	0.42	0.53	317	59	TMS	TRG	107	0.20	0.25
271	55	EXP	ATT	225	0.40	0.48	318	59	TMS	TRG	105	0.15	0.18
272	55	EXP	ATT	251	0.44	0.52	319	59	TMS	SQ	105	0.24	0.29
273	55	EXP	PU	225	0.51	0.62	320	59	TMS	SQ	107	0.20	0.24
274	55	EXP	PU	251	0.47	0.57	321	59	TMS	PU	105	0.15	0.18
275	55	EXP	SU	225	0.63	0.74	322	59	TMS	PU	107	0.13	0.15
276	55	EXP	SU	251	0.54	0.63	323	59	TMS	SU	105	0.29	0.35
277	55	TRG	ATT	251	0.25	0.29	324	59	TMS	SU	107	0.23	0.27
278	55	TRG	ATT	225	0.15	0.18	325	59	FC	EXP	105	0.14	0.17
279	55	TRG	PU	251	0.22	0.27	326	59	FC	EXP	107	0.09	0.11
280	55	TRG	PU	225	0.23	0.28	327	59	FC	TRG	107	0.09	0.12
281	55	TRG	SU	251	0.31	0.36	328	59	FC	TRG	105	0.14	0.16
282	55	TRG	SU	225	0.30	0.35	329	59	FC	SQ	105	0.07	0.08
283	55	ATT	PU	225	0.57	0.66	330	59	FC	SQ	107	0.31	0.39
284	55	ATT	PU	251	0.64	0.74	331	59	FC	PU	105	0.08	0.10
285	55	ATT	SU	225	0.41	0.45	332	59	FC	PU	107	0.40	0.49
286	55	ATT	SU	251	0.42	0.47	333	59	FC	SU	105	0.19	0.23
287	55	PU	SU	225	0.52	0.59	334	59	FC	SU	107	0.32	0.39
288	55	PU	SU	251	0.49	0.56	335	59	EXP	TRG	107	0.42	0.55
289	56	PART	SQ	185	0.06	0.07	336	59	EXP	TRG	105	0.36	0.43
290	56	PART	PU	185	0.45	0.49	337	59	EXP	SQ	105	0.24	0.29
291	56	PART	SU	185	0.14	0.16	338	59	EXP	SQ	107	0.28	0.36
292	56	PART	US	185	0.46	0.48	339	59	EXP	PU	105	0.19	0.24
293	56	SQ	PU	185	0.04	0.04	340	59	EXP	PU	107	0.29	0.36
294	56	SQ	SU	185	0.04	0.05	341	59	EXP	SU	105	0.45	0.56
295	56	SQ	US	185	0.07	0.08	342	59	EXP	SU	107	0.27	0.34
296	56	PU	US	185	0.63	0.68	343	59	TRG	SQ	107	0.28	0.37
297	56	PU	SU	185	0.22	0.26	344	59	TRG	SQ	105	0.24	0.28
298	56	US	SU	185	0.22	0.25	345	59	TRG	PU	107	0.33	0.42
299	57	TMS	EXP	450	0.08	0.09	346	59	TRG	PU	105	0.36	0.42
300	57	TMS	ATT	450	0.07	0.08	347	59	TRG	SU	107	0.28	0.34
301	57	TMS	SQ	450	0.14	0.16	348	59	TRG	SU	105	0.55	0.66
302	57	TMS	PU	450	0.20	0.22	349	59	SQ	PU	105	0.37	0.43
303	57	TMS	SU	450	0.11	0.12	350	59	SQ	PU	107	0.40	0.50
304	57	EXP	ATT	450	0.26	0.29	351	59	SQ	SU	105	0.27	0.33
305	57	EXP	SQ	450	0.30	0.31	352	59	SQ	SU	107	0.27	0.34
306	57	EXP	PU	450	0.22	0.22	353	59	PU	SU	105	0.39	0.47
307	57	EXP	SU	450	0.33	0.34	354	59	PU	SU	107	0.40	0.49
308	57	ATT	PU	450	0.15	0.17	355	60	TMS	PU	471	0.27	0.32
309	57	ATT	SU	450	0.14	0.16	356	60	TMS	SU	471	0.21	0.23

Obs#	Sty#	Var1	Var2	N	ObsR	CorR	Obs#	Sty#	Var1	Var2	N	ObsR	CorR
357	60	PU	SU	471	0.40	0.46	404	64	EXP	SQ	63	0.30	0.39
358	61	TMS	FC	379	0.44	0.53	405	64	EXP	PU	63	0.31	0.38
359	61	TMS	EXP	379	-0.02	-0.02	406	64	EXP	SU	63	0.28	EX1
360	61	TMS	TRG	379	0.13	0.16	407	64	TRG	PART	63	0.18	0.23
361	61	TMS	PU	379	0.35	0.41	408	64	TRG	SQ	63	0.08	0.10
362	61	TMS	SU	379	0.24	0.29	409	64	TRG	PU	63	0.04	0.05
363	61	TMS	US	379	0.27	0.31	410	64	PART	SQ	63	-0.12	-0.16
364	61	FC	EXP	379	0.04	0.05	411	64	PART	PU	63	0.23	0.29
365	61	FC	TRG	379	0.22	0.27	412	64	PART	SU	63	0.09	EX1
366	61	FC	PU	379	0.27	0.31	413	64	SQ	PU	63	0.39	0.49
367	61	FC	SU	379	0.09	0.11	414	64	SQ	SU	63	0.31	EX1
368	61	FC	US	379	0.32	0.37	415	64	PU	SU	63	0.36	EX1
369	61	EXP	TRG	379	0.36	0.44	416	65	PART	US	306	0.43	0.46
370	61	EXP	PU	379	0.22	0.25	417	66	ATT	PART	111	-0.08	-0.09
371	61	EXP	SU	379	0.18	0.22	418	66	ATT	SQ	111	0.52	0.57
372	61	EXP	US	379	0.11	0.13	419	66	ATT	PU	111	0.57	0.65
373	61	TRG	PU	379	0.12	0.14	420	66	PART	SQ	111	-0.08	-0.08
374	61	TRG	US	379	0.13	0.15	421	66	PART	PU	111	0.13	0.15
375	61	TRG	SU	379	0.20	0.25	422	66	SQ	PU	111	0.29	0.34
376	61	PU	US	379	0.36	0.40	423	67	TMS	FC	57	0.23	0.28
377	61	PU	SU	379	0.27	0.32	424	68	FC	US	324	0.65	0.75
378	61	US	SU	379	0.22	0.26	425	68	SQ	US	324	0.54	0.61
379	62	PU	US	371	0.48	0.51	426	69	FC	US	226	0.66	0.75
380	62	PU	SU	371	0.37	0.40	427	69	SQ	US	226	0.53	0.59
381	62	US	SU	371	0.39	0.42	428	70	PART	US	146	0.24	0.28
382	63	TMS	FC	358	0.27	0.29	429	70	PART	US	146	0.34	0.37
383	63	TMS	TRG	358	0.08	0.08	430	71	TRG	ATT	290	0.08	0.09
384	63	TMS	SQ	358	0.08	0.09	431	71	ATT	SQ	290	0.08	0.09
385	63	TMS	PU	358	0.30	0.32	432	72	SQ	PU	177	0.47	0.54
386	63	TMS	SU	358	0.20	0.23	433	72	SQ	SU	177	0.09	0.11
387	63	FC	TRG	358	0.18	0.20	434	72	PU	SU	177	0.42	0.48
388	63	FC	SQ	358	0.07	0.07	435	73	PART	US	29	0.25	0.29
389	63	FC	PU	358	0.16	0.17	436	75	PART	US	91	0.28	0.30
390	63	FC	SU	358	0.13	0.15	437	75	PART	US	91	0.33	0.35
391	63	TRG	SQ	358	0.10	0.10	438	75	PART	US	31	0.10	0.11
392	63	TRG	SU	358	0.17	0.20	439	75	PART	US	31	0.20	0.21
393	63	SQ	PU	358	0.47	0.50	440	76	EXP	PU	259	0.03	0.03
394	63	SQ	SU	358	0.44	0.50	441	76	PU	SU	259	-0.03	-0.04
395	63	PU	SU	358	0.42	0.48	442	77	FC	EXP	97	0.10	0.12
396	64	TMS	EXP	63	0.10	0.14	443	78	TMS	US	96	0.42	0.54
397	64	TMS	TRG	63	0.12	0.17	444	78	TMS	US	59	0.54	0.69
398	64	TMS	PART	63	0.04	0.06	445	78	PU	US	96	0.26	0.28
399	64	TMS	SQ	63	0.20	0.29	446	78	PU	US	59	0.36	0.39
400	64	TMS	PU	63	0.18	0.24	447	79	EXP	SU	311	0.18	0.22
401	64	TMS	SU	63	0.34	EX1	448	80	TMS	US	53	0.31	0.37
402	64	EXP	TRG	63	0.10	0.13	449	81	ATT	SU	236	0.38	0.46
403	64	EXP	PART	63	0.13	0.17	450	81	ATT	US	236	0.47	0.55

Obs#	Sty#	Var1	Var2	N	ObsR	CorR	Obs#	Sty#	Var1	Var2	N	ObsR	CorR
451	81	US	SU	236	0.29	0.33	498	99	EXP	US	41	0.11	0.15
452	82	TMS	TRG	88	-0.11	-0.14	499	99	TRG	US	41	-0.09	-0.13
453	82	TMS	SU	88	0.20	0.24	500	100	TRG	SU	70	0.44	0.54
454	82	TRG	SU	88	0.23	0.28	501	101	FC	US	4448	0.55	EX2 ^h
455	83	TMS	SQ	161	0.51	0.59	502	101	SQ	US	4448	0.62	EX2
456	83	TMS	PU	161	0.38	0.42	503	102	TMS	SU	41	0.44	0.54
457	83	SQ	PU	161	0.33	0.37	504	102	EXP	SU	41	0.32	0.39
458	84	ATT	SU	60	0.15	0.19	505	102	TRG	SU	41	0.12	0.15
459	85	ATT	PART	32	0.33	0.38	506	102	SQ	SU	41	0.40	0.48
460	85	ATT	US	32	0.60	0.69	507	103	TMS	US	132	0.39	0.45
461	85	PART	US	32	0.50	0.56	508	103	TMS	US	156	0.45	0.52
462	86	PART	US	172	0.57	0.64	509	103	TMS	US	90	0.33	0.38
463	87	FC	PART	97	0.18	0.20	510	103	EXP	US	132	0.32	0.36
464	88	FC	SU	66	0.07	0.08	511	103	EXP	US	156	0.23	0.26
465	88	FC	SU	39	-0.08	-0.10	512	103	EXP	US	90	0.28	0.32
466	88	TRG	SU	66	0.23	0.28	513	103	TRG	US	132	0.40	0.47
467	88	TRG	SU	39	0.17	0.21	514	103	TRG	US	156	0.27	0.32
468	88	US	SU	66	0.23	0.27	515	103	TRG	US	90	0.48	0.56
469	88	US	SU	39	-0.02	-0.02	516	104	TMS	PU	147	0.24	0.29
470	90	PART	US	151	0.42	0.48	517	104	TMS	US	147	0.27	0.31
471	91	FC	US	169	0.28	0.31	518	104	TRG	US	147	0.24	0.31
472	91	TRG	US	169	0.26	0.33	519	104	PART	PU	147	0.61	0.70
473	92	US	SU	158	0.18	0.23	520	104	PART	US	147	0.32	0.35
474	93	TRG	US	100	0.04	0.05	521	104	SQ	PU	147	0.28	0.36
475	93	TRG	SU	100	0.02	0.02	522	104	SQ	US	147	0.25	0.30
476	93	US	SU	100	0.20	0.23	523	105	TMS	FC	212	0.24	0.29
477	94	TMS	ATT	348	0.20	0.25	524	105	TMS	TRG	209	-0.17	-0.21
478	94	TMS	PART	348	0.19	0.23	525	105	TMS	ATT	212	0.25	0.30
479	94	TMS	SQ	348	0.37	0.45	526	105	TMS	SU	212	0.11	0.13
480	94	TMS	PU	348	0.36	0.44	527	105	FC	TRG	209	-0.06	-0.07
481	94	TRG	SQ	348	0.34	0.39	528	105	FC	ATT	212	0.11	0.13
482	94	TRG	PU	348	0.23	0.27	529	105	FC	SU	212	0.15	0.18
483	94	ATT	PART	348	0.16	0.18	530	105	TRG	ATT	209	0.14	0.17
484	94	ATT	SQ	348	0.42	0.46	531	105	TRG	SU	209	0.12	0.15
485	94	PART	SQ	348	0.18	0.19	532	105	ATT	SU	212	0.11	0.13
486	94	PART	PU	348	0.16	0.17	533	106	EXP	US	137	0.11	0.13
487	94	SQ	PU	348	0.63	0.68	534	106	TRG	US	137	0.14	0.17
488	95	EXP	US	210	0.06	0.06	535	107	PART	SQ	104	0.42	0.46
489	95	SQ	US	210	0.62	0.70	536	107	PART	PU	104	0.62	0.65
490	96	TMS	FC	210	0.41	0.47	537	107	PART	US	104	0.46	0.50
491	97	SQ	PU	274	0.48	0.51	538	107	SQ	PU	104	0.62	0.65
492	97	SQ	SU	274	0.37	0.47	539	107	SQ	US	104	0.70	0.77
493	97	SQ	US	274	0.55	0.68	540	107	PU	US	104	0.71	0.75
494	97	PU	US	274	0.61	0.74	541	108	ATT	SQ	203	0.67	0.79
495	97	PU	SU	274	0.71	0.87							
496	97	US	SU	274	0.52	0.74							
497	98	PART	SQ	123	0.35	0.44							

^h EX2 refers to Exclusion Reason 2, i.e., when sample size exceeded 500 and the reliability for at least one variable was not reported.

Obs#	Sty#	Var1	Var2	N	ObsR	CorR	Obs#	Sty#	Var1	Var2	N	ObsR	CorR
542	108	ATT	PU	203	0.53	0.62	589	122	TRG	SQ	106	-0.23	-0.28
543	108	SQ	PU	203	0.40	0.46	590	122	TRG	US	106	0.05	0.06
544	109	SQ	PU	61	0.39	0.41	591	122	TRG	SU	106	0.15	0.18
545	109	SQ	SU	61	0.21	0.24	592	122	SQ	SU	106	0.45	0.54
546	109	PU	SU	61	0.16	0.18	593	122	SQ	US	106	0.44	0.50
547	110	PU	US	538	0.16	0.19	594	122	US	SU	106	0.60	0.70
548	111	FC	ATT	212	0.13	0.18	595	123	US	SU	168	0.28	0.33
549	111	FC	PU	212	0.14	0.17	596	124	TMS	FC	111	0.41	0.51
550	111	FC	SU	212	0.11	0.15	597	124	TMS	PART	111	0.46	0.59
551	111	ATT	PU	212	0.52	0.73	598	124	TMS	SQ	111	0.28	0.35
552	111	ATT	SU	212	0.32	0.51	599	124	TMS	PU	111	0.18	0.22
553	111	PU	SU	212	0.38	0.52	600	124	FC	PART	111	0.16	0.19
554	112	FC	EXP	219	-0.16	-0.20	601	124	FC	SQ	111	0.34	0.39
555	112	FC	ATT	219	0.07	0.08	602	124	FC	PU	111	0.29	0.33
556	112	FC	PU	219	-0.04	-0.05	603	124	PART	SQ	111	0.01	0.01
557	112	FC	SU	219	-0.12	-0.14	604	124	PART	PU	111	0.03	0.04
558	112	EXP	ATT	219	0.17	0.22	605	124	SQ	PU	111	0.59	0.68
559	112	EXP	PU	219	0.31	0.38	606	125	ATT	SQ	211	0.40	0.47
560	112	EXP	SU	219	0.45	0.57	607	125	ATT	PU	211	0.53	0.61
561	112	ATT	PU	219	0.22	0.25	608	125	ATT	SU	211	0.26	0.31
562	112	ATT	SU	219	0.34	0.40	609	125	SQ	PU	211	0.45	0.51
563	112	PU	SU	219	0.51	0.59	610	125	SQ	SU	211	0.36	0.43
564	113	PART	PU	409	0.32	0.34	611	125	PU	SU	211	0.31	0.36
565	113	PART	US	409	0.30	0.32	612	126	PART	US	43	0.23	0.25
566	113	PU	US	409	0.40	0.43	613	126	PART	US	50	0.30	0.33
567	114	PART	US	282	0.60	0.66	614	127	TMS	TRG	67	0.08	0.10
568	115	FC	ATT	205	-0.06	-0.07	615	127	TMS	SU	67	0.03	0.04
569	115	FC	SQ	205	0.40	0.44	616	128	TMS	PART	69	0.17	0.19
570	115	FC	PU	205	0.11	0.12	617	128	TMS	SQ	69	0.31	0.35
571	115	ATT	SQ	205	0.35	0.39	618	128	TMS	PU	69	0.22	0.25
572	115	ATT	PU	205	0.26	0.29	619	128	TMS	SU	69	0.41	0.49
573	115	SQ	PU	205	0.35	0.38	620	128	TMS	US	69	0.27	0.32
574	116	SQ	PU	98	0.30	0.34	621	128	PART	SQ	69	0.37	0.39
575	117	SQ	PU	342	0.22	0.24	622	128	PART	PU	69	0.31	0.34
576	118	FC	ATT	215	0.18	0.22	623	128	PART	SU	69	0.12	0.14
577	118	FC	SQ	215	0.31	0.36	624	128	PART	US	69	0.34	0.38
578	118	FC	PU	215	0.19	0.22	625	128	SQ	PU	69	0.31	0.34
579	118	ATT	SQ	215	0.26	0.31	626	128	SQ	SU	69	0.34	0.39
580	118	ATT	PU	215	0.16	0.19	627	128	SQ	US	69	0.35	0.39
581	118	SQ	PU	215	0.30	0.33	628	128	PU	US	69	0.31	0.35
582	119	US	SU	310	0.04	0.04	629	128	PU	SU	69	0.21	0.25
583	121	ATT	PART	95	0.01	0.01	630	128	US	SU	69	0.54	0.64
584	121	ATT	PART	77	0.35	0.40							
585	122	TMS	TRG	106	0.41	0.51							
586	122	TMS	SQ	106	-0.03	-0.04							
587	122	TMS	SU	106	0.11	0.14							
588	122	TMS	US	106	0.15	0.18							

Appendix C: Additional Details Related to the Meta-analysis

Accumulating Findings: Some Comments

- If a variable's reliability was not reported in a study, we used its mean reliability across all studies (Bamberger, Kluger and Suchard 1999).
- Most individual studies used 7-point scales for the variables. However, some studies employed 5-point or 10-point scales. To convert non-7-point scales to 7-point scales, we multiplied the means and standard deviations for the other scales by the ratio of the mid-point of the 7-point scale (i.e., 4) to the mid-point of that scale (e.g., 3 for the 5-point scale).

Tests of Publication Bias

A funnel plot is used as an “eye-ball” test for determining publication bias in a meta-analysis (Cooper and Hedges, 1994). When a meta-analytic study examines a single relationship of interest (e.g. system usage vs. user satisfaction) (e.g., McEvoy and Cascio 1987), a funnel plot can be used without problems. However, our meta-analysis examines 45 different relationships, and therefore the use of funnel plots is not straightforward. It requires generating one funnel plot for each relationship. Moreover, publication bias may not be the only reason for problematic funnel plots (Cooper and Hedges, 1994). It is possible that certain relationships have received less attention in the literature (e.g. user training in ISs with user participation in the development of the specific IS), including not only the published studies but the unpublished ones as well. Funnel plots should therefore be viewed with caution, and should be viewed in conjunction with other tests, such as Failsafe N and a χ^2 test of the dispersion of studies around the mean observed correlation.

We generated funnel plots for the various relationships involving the four IS success constructs, resulting in a total of 30 plots: six among the four IS success constructs and 24 between the six non-IS success constructs and the four IS constructs. The funnel plots were created using the effect size (X-axis)

and the sample size (Y-axis). The funnel plots^a did not indicate publication bias to be a problem. The studies are distributed such that the fat lower ends of the upside-down funnels are not truncated.

For each relationship, we also computed a χ^2 statistic for the dispersion of observed correlations around the mean observed correlation. We used the number of observed correlations, and the expected number of correlations, above and below the mean, to compute the χ^2 statistic. It was not significant for any of the 45 relationships, indicating that the study effect sizes are distributed evenly around the mean observed correlation for all relationships in our analysis (Cooper and Hedges 1994).

Together, these results and the Failsafe Ns given in Table 1 of the paper (e.g., the ratio of Failsafe N to the number of observations upon which the correlation for that relationship was based varied from 1.2 to 9.0, and exceeded or equaled 2.0 for all but one of the relationships) indicate that publication bias was not a significant problem in this study.

Homogeneity Tests

We conducted homogeneity tests for each relationship based on the procedures^b recommended by Hedges and Olkin (1985), Cooper and Hedges (1994), and Lipsey and Wilson (2001). We found the original sets of observations to be homogeneous for eight of the 45 relationships in the theoretical model. To obtain homogeneous sets of observations for the remaining 37 relationships, we successively dropped one observation based on the weighted deviates to identify outliers (Hedges and Olkin 1985; Brown and Stayman 1992). Using meta-analysis, we obtained two corrected correlation matrices: one for the complete set of observations and the other for the homogeneous set of observations. We next conducted a test of overall equality of these two correlation matrices, as described by Werts et al. (1976) and later used by

^a The funnel plots and the χ^2 statistics are available from the authors upon request.

^b For each relationship in the research model, we first obtained the Fisher z (z_i) statistics using the observed correlations (r_i) gathered from individual studies. We next computed the weighted mean effect size ($\bar{z}$) using the Fisher z statistics. For this purpose, the weights $w_i = n_i - 3$ where n_i is the sample size. Finally, we computed the Q statistic, asymptotically distributed as

a χ^2 distribution with $(k - 1)$ degrees of freedom:
$$Q = \sum_{i=1}^k w_i (z_i - \bar{z})^2 .$$

Brown and Peterson (1993) in a study combining meta-analysis and LISREL. This test consists of specifying a two-group confirmatory factor analysis such that the correlation coefficients are invariant across the two groups^c. The LISREL results support the model assuming that one set of correlation parameters fit the data for both groups $\chi^2/\text{degrees of freedom ratio} = 2.19$, GFI = 0.96, NFI = 0.95, RMSEA = 0.059, SRMR = 0.042), thus showing the overall equality of these two correlation matrices. We therefore used the correlation matrix based on all studies in the subsequent LISREL analysis. This approach is consistent with Brown and Peterson, and utilizes the findings across the entire research stream.

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^c The sample sizes used here were the minimum sample sizes for the two correlation matrices, i.e., 326 and 285, respectively.

Appendix D: Sensitivity Analysis

To further evaluate the robustness of our results, we tested the emergent model under five other circumstances. We applied the meta-analytic procedures on four different random sub-samples of our full sample of studies. The sub-samples were created using the following procedure. First, we arranged our study sample in a non-decreasing order^a of sample size. We dropped every tenth study (S-LH-10) and every twelfth study (S-LH-12) from this ordered sample beginning with the first study to create the first two sub-samples. Next, we arranged our study sample in non-increasing order of sample size. We dropped every tenth study (S-HL-10) and every twelfth study (S-HL-12) from this ordered sample, beginning with the first study, to create the third and fourth sub-samples. LISREL tests of the emergent model were conducted using the correlation matrices for each of these four sub-samples.

Next, instead of assuming the reliabilities of the variables as 1.00 (as was done in the testing of the theoretical model because meta-analysis corrects for reliabilities), the reliabilities of all the variables were treated as 0.90 (i.e., the paths between the latent constructs and observed variables were set to 0.95, the square root of the reliability) and the error variances were set to equal the variance of the scale multiplied by one minus reliability. These revised parameters were used in LISREL tests of the emergent model.

The results for the above five robustness tests support the emergent model. For each test of robustness, the emergent model fit the data well, with CFI, GFI, AGFI, NFI, and NNFI all exceeding 0.90, RMSEA and SRMR being both below 0.10, and $\chi^2/\text{degree of freedom}$ ratio being below 3.0. Only six t-statistics (out of 125 examined, with 25 paths in each of five models) were non-significant (at $p \leq 0.05$). Also, three of the non-significant paths were in one sub-sample (S-HL-12), wherein the minimum sample size, which was used as the sample size for the LISREL testing, had dropped from 326 to 181. No MI – out of 275 examined, with 55 excluded paths in each of the five models – was above 10.0.

^a Thus, each study had greater or equal sample size as compared to the previous study.

		N	GFI	NFI	RMSEA	χ^2	Number of Non-significant t-statistics	Number of Large (≥ 10.0) Modification Indices
		CFI	AGFI	NNFI	SRMR	$\chi^2/\text{d.f.}^b$ ratio		
MAIN	Emergent model (full sample, reliability = 1.00)	326	0.98	0.98	0.041	31.13	0	0
		0.99	0.95	0.98	0.046	1.56		
S-LH-10	Non-decreasing order, every tenth observation	285	0.97	0.97	0.062	42.14	1 (TRG -> SQ)	0
		0.98	0.92	0.96	0.052	2.11		
S-LH-12	Non-decreasing order, every twelfth observation	326	0.98	0.99	0.053	38.35	1 (ATT -> SU)	0
		0.99	0.94	0.97	0.051	1.92		
S-HL-10	Non-increasing order, every tenth observation	326	0.98	0.97	0.056	41.70	0	0
		0.98	0.93	0.96	0.054	2.09		
S-HL-12	Non-increasing order, every twelfth observation	181	0.98	0.98	0.001	17.24	3 (INV -> SQ, TRG -> SQ, TMS -> INV)	0
		0.99	0.95	0.99	0.046	0.86		
REL	Model with reliability = 0.90 instead of 1.00	326	0.98	0.98	0.031	26.32	1 (ATT -> SU)	0
		0.99	0.95	0.98	0.035	1.32		

We also tested the emergent model using harmonic mean sample size (1703) instead of the minimum sample size (326). This led to a substantial increase in χ^2 , as expected, raising the χ^2 of 163.04 with 20 degrees of freedom, and the MIs for some paths exceeded 10.0. However, all the other indicators of model fit were excellent: GFI = 0.98, AGFI = 0.95, NFI = 0.98, RMSEA = 0.065, and SRMR = 0.046. If we had used the harmonic mean sample size to test and refine the model, the emergent model would fit the data well, although some additional paths might have been added based on these MIs and theoretical considerations, and some hypothesized paths that were not supported using minimum sample size might have been supported. But these additional paths would not be significant when using minimum sample size. In contrast, all the significant paths in the emergent model based on minimum sample size are also supported using the harmonic mean sample size ($p \leq 0.001$). Thus, the use of the minimum sample size produces more conservative results, which are strongly supported using the harmonic mean sample size. Therefore, we consider these results as best representing the correlations based on the meta-analysis.

^b Degrees of freedom = 20 in each of these models.