

EXHAUSTION FROM INFORMATION SYSTEM CAREER EXPERIENCE: IMPLICATIONS FOR TURN-AWAY INTENTION

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Appendix A

Construct, Acronyms, Definitions, and Sources

Term	Acronym	Definition	Source
Affective Commitment to the IS Profession	ACISP*	An individual's positive emotional attachment to the profession.	Lee et al. 2000; Meyer and Herscovitch 2001
Autonomy	AUT	Provides individuals with the freedom to decide how to accomplish tasks.	Ahuja and Thatcher 2005
Burnout	BO	A condition in which the stress experienced exceeds an individual's ability to cope with that stress; "an extreme state of psychological strain and depletion of energy resources arising from prolonged exposure to stressors that exceed the person's resources to cope."	Cooper et al. 2001, p. 84
Career Family Conflict	CFC*	The incompatible pressures that career demands and family life can place on individuals across their experience in the IS field	Duxbury and Higgins 1991
Continuance Commitment to the IS Profession	CCISP	Derived from the perceived cost of leaving the profession.	Meyer et al. 2002
Control of Career	CTRL*	"Reflects the extent to which individuals believe they can predict and influence the direction of their careers"; involves the control over one's career path.	Ito and Brotheridge 2001, p. 410; Hartline and Ferrell 1996
Exhaustion	EXH	The key component of burnout; feeling mentally fatigued or emotionally overextended.	Maslach and Schaufeli 1993; Wright and Cropanzano 1998
Exhaustion from IS Career Experience	EISCE*	The feeling of being overextended from one's IS experience or IS career.	New

Term	Acronym	Definition	Source
Fairness	FAIR*	The perception of being treated impartially or with a lack of favoritism.	Moorman 1991
Information Systems Career Experience	ISCE	The sum of work-related experiences over an IS professional's career.	New
Information Systems Career Experience Demands	ISCE Demands	The characteristics or features of an individual's career experience in the IS profession that place demands on the individual and require mental and/or emotional effort to meet.	Mauno et al. 2007
Information Systems Career Experience Resources	ISCE Resources	Psychological, mental, or emotional features of an individual's career experience in the IS profession that aid in achieving goals, reducing demands, or stimulating personal development.	Bakker and Demerouti 2008; Demerouti et al. 2001; Mauno et al. 2007
Normative Commitment to the IS Profession	NCISP	The individual commits to the profession from negative feelings (i.e., obligation).	Meyer et al. 2002
Perceived Workload	PW*	The perceived amount of work to be accomplished in the allotted time.	Kirmeyer and Dougherty 1988
Role Ambiguity	RA	Uncertainty regarding role expectations.	Daft and Noe 2001
Role Conflict	RC	Incompatible demands from multiple roles.	Daft and Noe 2001
Turn-Away Intention	TAI*	The intention to change professions / careers as opposed to changing a job or organization.	Joseph et al. 2011
Work-Family Conflict	WFC	The incompatible pressures that work and family demands can place on an individual such that work demands spillover into family life.	Duxbury and Higgins 1991

*Indicates constructs tested and found in Figure 1.

References

- Ahuja, M. K., and Thatcher, J. B. 2005. "Moving Beyond Intentions and Toward the Theory of Trying: Effects of Work Environment and Gender on Post-Adoption Information Technology Use," *MIS Quarterly* (29:3), pp. 427-460.
- Bakker, A. B. and Demerouti, E. 2008. "Towards a Model of Work Engagement," *Career Development International* (13:3), pp. 209-223.
- Cooper, C. L., Dewe, P. J., and O'Driscoll, M. P. 2001. *Organizational Stress: A Review and Critique of Theory, Research and Applications*, Thousand Oaks, CA: Sage Publications.
- Daft, R. L., and Noe, R. A. 2001. *Organizational Behavior*, San Diego, CA: Harcourt, Inc.
- Demerouti, E., Bakker, A. G., Nachreiner, F., and Schaufeli, W. B. 2001. "The Job Demands-Resources Model of Burnout," *Journal of Applied Psychology* (86:3), pp. 499-512.
- Duxbury, L., and Higgins, C. 1991. "Gender Differences in Work-Family Conflict," *Journal of Applied Psychology* (76:1), pp. 60-74.
- Hartline, M. and Ferrel, O. C. 1996. "The Management of Customer-Contact Service Employees: An Empirical Investigation," *Journal of Marketing* (60:4), pp. 52-70.
- Ito, J. K., and Brotheridge, C. M. 2001. "An Examination of The Roles of Career Uncertainty, Flexibility, and Control in Predicting Emotional Exhaustion," *Journal of Vocational Behavior* (59:3), pp. 406-424.
- Joseph, D., Tan, M. L., and Ang, S. 2011. "Is Updating Play or Work? The Mediating Role of Updating Orientation in Linking Threat of Professional Obsolescence to Turnover/Turnaway Intentions," *International Journal of Social and Organizational Dynamics in IT* (1:4), pp. 37-47.
- Kirmeyer, S. L., and Dougherty, T. W. 1988. "Work Load, Tension, and Coping: Moderating Effects of Supervisor Support," *Personnel Psychology* (41:1), pp. 125-139.
- Lee, K., Carswell, J. J., and Allen, N. J. 2000. "A Meta-Analytic Review of Occupational Commitment: Relations with Person and Work-Related Variables," *Journal of Applied Psychology* (85:5), pp. 799-811.
- Maslach, C., and Schaufeli, W. B. 1993. "Historical and Conceptual Development of Burnout," in *Professional Burnout: Recent Developments in Theory and Research*, W. B. Schaufeli, C. Maslach, and T. Marek (eds.), Washington, DC: Taylor and Francis, pp. 1-18.
- Mauno, S., Kinnunen, U., and Ruokolainen, M. 2007. "Job Demands and Resources as Antecedents of Work Engagement: A Longitudinal Study," *Journal of Vocational Behavior* (70:1), pp. 149-171.
- Meyer, J. P., and Herscovitch, L. 2001. "Commitment in the Workplace: Toward a General Model," *Human Resource Management Review* (11:3), pp. 299-326.
- Meyer, J. P., Stanley, D. J., Herscovitch, L., and Topolnytsky, L. 2002. "Affective, Continuance, and Normative Commitment to the Organization: A Meta-Analysis of Antecedents, Correlates, and Consequences," *Journal of Vocational Behavior* (61:1), pp. 20-52.

- Moorman, R. H. 1991. "The Relationship Between Organizational Justice and Organizational Citizenship Behavior: Do Fairness Perceptions Influence Employee Citizenship?," *Journal of Applied Psychology* (76:6), pp. 845-855.
- Wright, T. A., and Cropanzano, R. 1998. "Emotional Exhaustion as a Predictor of Job Performance and Voluntary Turnover," *Journal of Applied Psychology* (83:3), pp. 486-493.

Appendix B

Construct Mapping from the Job Context to the IS Career Experience (ISCE) Context

Job Context Construct	ISCE Context Construct
Organizational Commitment	Affective Commitment to the IS Profession
Work–Family Conflict	Career–Family Conflict
Job Autonomy	Control of Career
Work Exhaustion	Exhaustion from IS Career Experience
Fairness of Rewards	Fairness
Perceived Work Overload	Perceived Workload
Turnover Intention	Turn-Away Intention

Appendix C

Sample of JD–R Studies Exploring Relationships Between Demands, Resources, and Burnout

Relationship Findings	Source
Demands and resources influence burnout directly	Brough et al. 2013 (Chinese sample); Crawford et al. 2010; Hakanen et al. 2008; Maslach and Leiter 2008; Schaufeli et al. 2009b
Resources moderate demands–burnout relationship	Bakker et al. 2010; Brough et al. 2013 (Australian sample); van Emmerik et al. 2009
Resources moderate demands–burnout relationship and direct effect for resources	de Rijk et al. 1998; Kahn and Byosiere 1992; Koeske et al. 1993
No moderation	Xanthopoulou et al. 2007
No moderation but direct effect for resources on burnout	Bakker et al. 2004
Job resources and job demands partially mediate the relationship between person resources and burnout	Consiglio et al. 2013
Job demands mediate the relationship between person demands and exhaustion and/or burnout	Guglielmi et al. 2012; Schaufeli et al. 2009a; Taris et al. 2012
Job resources mediate the relationship between person resources and burnout	Guglielmi et al. 2012
Person resources mediate the relationship between job resources and exhaustion	Xanthopoulou et al. 2007

References

- Bakker, A. B., Demerouti, E., and Verbeke, W. 2004. "Using the Job Demands Resources Model to Predict Burnout and Performance," *Human Resource Management* (43:1), pp. 83-104.
- Bakker, A. B., Van Veldhoven, M. J. P. M., and Xanthopoulou, D. 2010. "Beyond the Demand-Control Model: Thriving on High Job Demands and Resources," *Journal of Personnel Psychology* (9:1), pp. 3-16.
- Brough, P., Timms, C., Siu, Oi-ling, K. T., O'Driscoll, M. P., Sit, C. H. P., Lo, D. and Lu, C-Q. 2013. "Validation of the Job Demands-Resources Model in Cross-National Samples: Cross-Sectional and Longitudinal Predictions of Psychological Strain and Work Engagement," *Human Relations* (66:10), pp. 1311-1335.
- Consiglio, C., Borgogni, L., Alessandri, G., and Schaufeli, W. B. 2013. "Does Self-Efficacy Matter for Burnout and Sickness Absenteeism? The Mediating Role of Demands and Resources at the Individual and Team Levels," *Work & Stress* (27:1), pp. 22-42.
- Crawford, E. R., LePine, J. A., and Rich, B. L. 2010. "Linking Job Demands and Resources to Employee Engagement and Burnout: A Theoretical Extension and Meta-Analytic Test," *Journal of Applied Psychology* (95:5), pp. 834-848.
- de Rijk, A. E., LeBlanc, P. M., Schaufeli, W. B., and de Jonge, J. 1998. "Active Coping and Need for Control as Moderators of the Job Demand-Control Model: Effects on Burnout," *Journal of Occupational and Organizational Psychology* (71:1), pp. 1-17.
- Guglielmi, D., Simbula, S., Schaufeli, W. B., and Depolo, M. 2012. "Self-Efficacy and Workaholism as Initiators of the Job Demands-Resources Model," *Career Development International* (17:4), pp. 375-389.
- Hakanen, J. J., Schaufeli, W. B., and Ahola, K. 2008. "The Job Demands-Resources Model: A Three-Year Cross-Lagged Study of Burnout, Depression, Commitment, and Work Engagement," *Work and Stress* (22:3), pp. 224-241.
- Kahn, R. L., and Byosiore, P. 1992. "Stress in Organizations," in *Handbook of Industrial and Organizational Psychology* (Vol. 3), M. D. Dunnette and L. M. Hough (eds.), Palo Alto, CA: Consulting Psychologists Press, pp. 571-650.
- Koeske, G. F., Kirk, S. A., and Koeske, R. D. 1993. "Coping with Job Stress: Which Strategies Work Best?," *Journal of Occupational and Organizational Psychology* (66:4), pp. 319-335.
- Maslach, C., and Leiter, M. P. 2008. "Early Predictors of Job Burnout and Engagement," *Journal of Applied Psychology* (93:3), pp. 498-512.
- Schaufeli, W. B., Bakker, A. B., van der Heijden, F. M. M. A., Prins, J. T. 2009a. "Workaholism Among Medical Residents: It Is the Combination of Working Excessively and Compulsively That Counts," *International Journal of Stress Management* (16:4), pp. 249-272.
- Schaufeli, W. B., Bakker, A. B., and Van Rhenen, W. 2009b. "How Changes in Job Demands and Resources Predict Burnout, Work Engagement, and Sickness Absenteeism," *Journal of Organizational Behavior* (30:7), pp. 893-917.
- Taris, T. W., van Beek, I., Schaufeli, W. B. 2012. "Demographic and Occupational Correlates of Workaholism," *Psychological Reports* (110:2), pp. 547-554.
- van Emmerik, I. J. H., Bakker, A. B., and Euwema, M. C. 2009. "Explaining Employees' Evaluations of Organizational Change with the Job-Demands Resources Model," *Career Development International* (14:6), pp. 594-613.
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., and Schaufeli, W. B. 2007. "The Role of Personal Resources in the Job Demands-Resources Model," *International Journal of Stress Management* (14:2), pp. 121-141.

Appendix D

Survey Constructs and Response Scales

Construct	Based On	Response Scale	Items
Affective Commitment to the IS Profession	Allen and Meyer 1990	With respect to your own feelings about the IT profession, please indicate the level of your agreement or disagreement with each statement.	
		7	I would be very happy to spend the rest of my career in this profession.
		7	I enjoy discussing my profession with people outside IT.
		7	I think I could easily become as attached to another profession as I am to this one. (R)
		7	I do not feel emotionally attached to this profession. (R)
Career– Family Conflict	Netemeyer et al. 1996	Throughout my IT career...	
		7	The demands of my work interfered with my home and family life.
		7	The amount of time my job took up made it difficult to fulfill family responsibilities.
		7	Things I wanted to do at home did not get done because of the demands my job put on me.
		7	My job produced strain that made it difficult to fulfill family duties.
Control of Career (Control)	Bordia et al. 2004	Think about your place in the IT profession...	
		7	I feel I am in control of my future in the IS profession.
		7	*I feel I can influence the nature of change in the IS profession.
		7	I feel in control of the direction in which my career is headed.
Control of Career (Power)	Ashford et al. 1989	Think about your place in the IT profession...	
		7	I have enough power to control events that might affect my IT career.
		7	In the IT profession, I can prevent negative things from affecting my work situation.
		7	I understand the IT profession well enough to be able to control things that affect me.
Exhaustion from IS Career Experience	Maslach and Jackson 1981	Think about your entire IT career...	
		7	I have felt emotionally drained from my work.
		7	I have felt used up at the end of the workday.
		7	I have felt fatigued when getting up in the morning and having to face another day on the job.
		7	I have felt burned out from my work.
Fairness	Moorman 1991; Niehoff and Moorman 1993	Think about your entire IT career...	
		7	My work schedule has been fair.
		7	I think that my level of pay has been fair.
		7	I consider my workload to have been fair.
		7	I feel that my job responsibilities have been fair.
		7	Overall, the rewards I received have been fair.

Construct	Based On	Response Scale	Items
Negative Affectivity	Moore 2000; Watson et al. 1988	Below are a number of words that describe different feelings and emotions. Please indicate the extent to which you have felt this way during the past few months.	
		5	Scared
		5	Afraid
		5	Upset
		5	Distressed
		5	Jittery
		5	Nervous
		5	*Ashamed
		5	*Guilty
		5	Irritable
5	*Hostile		
Perceived Workload	Kirmeyer and Dougherty 1988	Think about your entire IT career...	
		7	I have felt busy or rushed at work.
		7	I have felt pressured at work.
		7	I have felt that the amount of work I've done has interfered with how well it was done.
7	I have felt that the number of requests, complaints, or problems I dealt with was more than expected.		
Turn-Away Intention	Meyer et al. 1993	Think about your place in the IT profession...	
		7	I intend to continue working in the IT profession until I retire. (R)
		7	I expect to work in a career other than IT sometime in the future.
		7	I frequently think about getting out of the IT profession.
7	It is likely that I will soon explore career opportunities outside of the IT profession.		

5 indicates use of a 5-point Likert scale with "very slightly or not at all" and "extremely" as anchors.

7 indicates use of a seven-point Likert scale with "strongly disagree" and "strongly agree" as anchors.

*Indicates eliminated item.

References

- Allen, N. J., and Meyer J. P. 1990. "The Measurement and Antecedents of Affective, Continuance, and Normative Commitment to the Organization," *Journal of Occupational and Organizational Psychology* (63:1), , pp. 1-18.
- Ashford, S. J., Lee, C., and Bobko, P. 1989. "Content, Causes and Consequences of Job Insecurity: A Theory-Based Measure and Substantive Test," *Academy of Management Journal* (22:4), pp. 803-829.
- Bordia, P., Hunt, E., Paulsen, N., Tourish, D., and Difonzo, N. 2004. "Uncertainty During Organizational Change: Is It All About Control?," *European Journal of Work and Organizational Psychology* (13:3), pp. 345-365.
- Kirmeyer, S. L., and Dougherty, T. W. 1988. "Work Load, Tension, and Coping: Moderating Effects of Supervisor Support," *Personnel Psychology* (41:1), pp. 125-139.
- Maslach, C., and Jackson, S. E. 1981. "The Measurement of Experienced Burnout," *Journal of Occupational Behaviour* (2:2), pp. 99-113.
- Meyer, J. P., Allen, N. J., and Smith, C. A. 1993. "Commitment to Organizations and Occupations: Extension and Test of a Three-Component Conceptualization," *Journal of Applied Psychology* (78:4), pp. 538-551.
- Moore, J. E. 2000. "One Road to Turnover: An Examination of Work Exhaustion in Technology Professionals," *MIS Quarterly* (24:1), pp. 141-168.
- Moorman, R. H. 1991. "The Relationship Between Organizational Justice and Organizational Citizenship Behavior: Do Fairness Perceptions Influence Employee Citizenship?," *Journal of Applied Psychology* (76:6), pp. 845-855.
- Netemeyer, R. G., Boles, J. S., and McMurrian, R. 1996. "Development and Validation of Work-Family Conflict and Family-Work Conflict Scales," *Journal of Applied Psychology* (81:4), pp. 400-410.
- Niehoff, B. P., and Moorman, R. H. 1993. "Justice as a Mediator of the Relationship Between Methods of Monitoring and Organizational Citizenship Behavior," *Academy of Management Journal* (36:3), pp. 527-556.
- Watson, D., Clark, L. A., and Tellegen, A. 1988. "Development and Validation of Brief Measures of Positive and Negative Affect: The PANAS Scales," *Journal of Personality and Social Psychology* (54: 6), pp. 1063-1070.

Appendix E

Model Validation

Before examining the path model, general information (means, standard deviations, and correlations) about the model constructs was evaluated in SPSS (see Table E1). In order to ensure there were no issues with multicollinearity, the variance inflation factor (VIF) values for all of the constructs were calculated and found to be well below the acceptable threshold of 10.0 (Neter et al. 1990) (between 1.14 and 1.69). For the Durbin Watson statistic ($d = 2.09$) with six regressors, a sample size of 293 and a p value of 0.01 $d_L = 1.61$ and $d_U = 1.74$. Since $d > d_U$ we conclude that the errors are not positively autocorrelated, and since $(4-d) > d_U$ we conclude that the errors are not negatively autocorrelated. We also analyzed the data for outliers and none were found. SmartPLS was used to examine the proposed path model. We began with a review of the individual items and factor structure in a confirmatory factor analysis (see Table E2). Problems with high cross loadings indicated that a few of the items should be removed (removed items are noted in Appendix D with an asterisk). These items were deleted prior to performing the remaining measurement assessments.

Reliability results are provided in Table E3. Cronbach's α for each construct was well above the recommended value of .70 (Hair et al. 2006) and ranged from 0.865 (ACISP) to 0.943 (CFC). Composite reliability ranged from 0.903 (ACISP) to 0.959 (CFC). Each construct's average variance extracted (AVE) exceeded 0.50 (Chin 1998; Fornell and Larcker 1981), and ranged from 0.623 (negative affectivity) to 0.853 (CFC), satisfying the requirement for convergent validity.

To evaluate the discriminant validity of the constructs, the approach recommended by Fornell and Larcker (1981) was utilized. Table E4 provides the data and indicates that the construct's AVE is greater than the squared correlation between each pair of constructs in the model.

"Common methods bias is the magnitude of the discrepancies between the observed and the true relationships between constructs that results from common methods variance" (Doty and Glick 1998, p. 36). To address potential common methods bias in the survey design, we included reverse-scored items to reduce compliance problems (Lindell and Whitney 2001).

Table E1. Descriptive Statistics (n = 293)

	ACISP	CFC	CTRL	EISCE	FAIR	PW	TAI	AGE	TENURE	GENDER	NA
ACISP	1										
CFC	-0.196**	1									
CTRL	0.306**	-0.106	1								
EISCE	-0.470**	0.464**	-0.327**	1							
FAIR	0.305**	-0.531**	0.297**	-0.475**	1						
PW	-0.271**	0.491**	-0.165**	0.737**	-0.419**	1					
TAI	-0.708**	0.196**	-0.213**	0.372**	-0.238**	-0.184**	1				
AGE	0.246**	0.087	-0.065	-0.042	-0.103	0.061	-0.304**	1			
TENURE	0.255**	0.133*	-0.087	-0.013	-0.127*	0.063	-0.311**	0.825**	1		
GENDER	-0.023	0.009	0.035	-0.069	-0.021	0.069	0.003	0.016	0.006	1	
NA	-0.232**	0.275**	-0.204**	0.473**	-0.206**	0.291**	0.242**	0.011	-0.042	0.105	1
Mean	4.10	3.78	3.79	4.39	5.24	4.58	3.34	39.74	14.35	1.42	1.83
SD	1.34	1.56	1.11	1.64	1.15	1.38	1.56	9.78	9.32	0.49	0.69

**Correlation Significant at .01 Level; *Correlation Significant at .05 Level.

Table Legend

ACISP = Affective Commitment to the IS Profession; CFC = Career-Family Conflict; CTRL = Control of Career; EISCE = Exhaustion from IS Career Experience; FAIR = Fairness; PW = Perceived Workload; TAI = Turn-Away Intention; NA = Negative Affectivity

Table E2. Confirmatory Factor Analysis							
	ACISP	CFC	CTRL	EISCE	FAIR	PW	TAI
ACISP1	0.8332						
ACISP2	0.7278						
ACISP3_R	0.7834						
ACISP4_R	0.8512						
ACISP5_R	0.8293						
CFC1		0.9215					
CFC2		0.9435					
CFC3		0.8976					
CFC4		0.9327					
CTRL1			0.8293				
CTRL3			0.8425				
PWR1			0.7912				
PWR2			0.8439				
PWR3			0.7898				
EISCE1				0.9109			
EISCE2				0.9135			
EISCE3				0.9219			
EISCE4				0.8924			
FAIR1					0.8001		
FAIR2					0.7379		
FAIR3					0.8759		
FAIR4					0.8805		
FAIR5					0.8078		
PW1						0.8527	
PW2						0.8802	
PW3						0.8522	
PW4						0.8049	
TAI1_R							0.8594
TAI2							0.8318
TAI3							0.8619
TAI4							0.8965

Notes: Loadings less than 0.40 were omitted from the table for clarity; _R indicates a reverse coded item.

Table E3. Convergent Validity Summary and Construct Reliabilities			
Construct	Average Variance Extracted	Cronbach's Alpha	Composite Reliability
ACISP	0.6500	0.8653	0.9025
CFC	0.8534	0.9428	0.9588
CTRL	0.6707	0.8783	0.9105
EISCE	0.8276	0.9306	0.9506
FAIR	0.6760	0.8809	0.9122
PW	0.7136	0.8658	0.9087
TAI	0.7442	0.8858	0.9208

Table Legend

ACISP = Affective Commitment to the IS Profession; CFC = Career–Family Conflict; CTRL = Control of Career; EISCE = Exhaustion from IS Career Experience; FAIR = Fairness; PW = Perceived Workload; TAI = Turn-Away Intention; NA = Negative Affectivity

Table E4. Correlations Among Latent Constructs

	ACISP	CFC	CTRL	EISCE	FAIR	PW	TAI
ACISP	0.8062	0	0	0	0	0	0
CFC	-0.1984	0.9238	0	0	0	0	0
CTRL	0.3079	-0.1260	0.8190	0	0	0	0
EISCE	-0.4748	0.4666	-0.3393	0.9098	0	0	0
FAIR	0.3136	-0.5430	0.3205	-0.4918	0.8222	0	0
PW	-0.2708	0.4914	-0.1784	0.7397	-0.4424	0.8447	0
TAI	-0.7277	0.1966	-0.2200	0.3774	-0.2445	0.1903	0.8627

Note: The diagonals are the square root of the average variance extracted (AVE) for each factor.

Table Legend

ACISP = Affective Commitment to the IS Profession; CFC = Career–Family Conflict; CTRL = Control of Career; EISCE = Exhaustion from IS Career Experience; FAIR = Fairness; PW = Perceived Workload; TAI = Turn-Away Intention; NA = Negative Affectivity

Table E5. Common Method Variance Test

Construct	Indicator	Substantive Construct Correlation	Substantive Construct Variance Explained	Common Method Factor Correlation	Common Method Variance Explained
Affective Commitment to the IS Profession	ACISP1	0.83	0.69	-0.82	0.67
	ACISP2	0.73	0.53	-0.60	0.36
	ACISP3_R	0.78	0.61	-0.66	0.44
	ACISP4_R	0.85	0.72	-0.69	0.47
	ACISP5_R	0.83	0.69	-0.68	0.46
Career–Family Conflict	CFC1	0.92	0.85	0.40	0.16
	CFC2	0.94	0.89	0.40	0.16
	CFC3	0.90	0.81	0.40	0.16
	CFC4	0.93	0.87	0.46	0.21
Control of Career	CTRL1	0.84	0.71	-0.41	0.17
	CTRL3	0.83	0.69	-0.45	0.20
	Power1	0.79	0.63	-0.20	0.04
	Power2	0.84	0.71	-0.37	0.14
	Power3	0.79	0.62	-0.29	0.09
Exhaustion from IS Career Experience	EISCE1	0.91	0.83	0.60	0.37
	EISCE2	0.91	0.83	0.56	0.32
	EISCE3	0.92	0.85	0.65	0.42
	EISCE4	0.89	0.80	0.73	0.53
Fairness	Fair1	0.80	0.64	-0.37	0.14
	Fair2	0.74	0.54	-0.39	0.15
	Fair3	0.88	0.77	-0.45	0.20
	Fair4	0.88	0.78	-0.53	0.28
	Fair5	0.81	0.65	-0.51	0.26
Perceived Workload	PW1	0.85	0.73	0.33	0.11
	PW2	0.88	0.77	0.46	0.21
	PW3	0.85	0.73	0.42	0.17
	PW4	0.79	0.63	0.47	0.22
Turn-Away Intention	TAI1_R	0.86	0.74	0.53	0.28
	TAI2	0.83	0.69	0.43	0.18
	TAI3	0.86	0.74	0.64	0.41
	TAI4	0.90	0.80	0.53	0.28
AVERAGE			0.73		0.30

We assessed the extent of common methods variance (CMV) in the data with two tests. First, we performed Harmon's one factor test (Podsakoff and Organ 1986) by including all reflective items in a principal components factor analysis. The results revealed eight factors with no single factor accounting for a majority of variance (i.e., the largest factor variance was 30.2%), suggesting no substantial CMV among the scales. We then followed the procedure recommended by Podsakoff et al. (2003) which specifies that, in addition to theoretical constructs, a common methods construct (that includes all the indicators) be used in the empirical research model. We assessed the variance explained by the common methods construct relative to the variance explained by the substantive constructs. As shown in Table E5, the average variance explained by the substantive constructs is 0.73 while the average variance explained by the common methods construct is 0.30. Taken together, these analyses indicate that common methods bias did not significantly affect our results.

References

- Chin, W. W. 1998. "The Partial Least Squares Approach for Structural Equation Modeling," in *Modern Methods for Business Research*, G. A. Marcoulides (ed.), Mahwah, NJ: Lawrence Erlbaum Associates, pp. 295-336.
- Doty, D. H., and Glick, W. H. 1998. "Common Methods Bias: Does Common Methods Variance Really Bias Results?," *Organizational Research Methods* (1:4), pp. 374-406.
- Fornell C., and Larcker, D. F. 1981. "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," *Journal of Marketing Research* (18:1), pp. 39-50.
- Hair J. F., Black W. C., Babin B. J., Anderson R. E., and Tatham R. L. 2006. *Multivariate Data Analysis* (6th ed.), Upper Saddle River, NJ: Prentice Hall.
- Lindell, M. K., and Whitney, D. J. 2001. "Accounting for Common Method Variance in Cross-Sectional Research Designs," *Journal of Applied Psychology* (86:1), pp. 114-121.
- Neter, J., Wasserman, W., and Kutner, M. H. 1990. *Applied Linear Statistical Models* (3rd ed.), Boston: Irwin.
- Podsakoff, P. M., and Organ, D. W. 1986. "Self-Reports in Organizational Research: Problems and Prospects," *Journal of Management* (12:4), pp. 531-544.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., and Podsakoff, N. P. 2003. "Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies," *Journal of Applied Psychology* (88:5), pp. 879-903.

Appendix F

Mediation Test Procedure

According to Hoyle and Kenny (1999), to establish mediation in a structural equation context we need to show that (1) the independent variable (e.g., EISCE) significantly affects the outcome variable (e.g., TAI) in the absence of the mediator and (2) the direct effect of the independent variable (e.g., EISCE) on the outcome variable decreases upon the addition of the mediator (e.g., ACISP). This two-step approach to examining mediation can be used to judge whether mediation is occurring. In order to establish the mediating effect, the indirect effect must be significant; this can be determined using a Sobel Z-statistic (Helm et al. 2010).

We conducted a Sobel (1982) test of the indirect effect of EISCE on TAI via ACISP to evaluate whether the mediator carried the influence of the independent variable to the dependent variable. A Z-test of the indirect effect was conducted using a ratio of the indirect coefficient to its standard error. A significant Z value indicates that the indirect effect of the independent variable on the dependent variable via the mediator is significantly different from zero.

To assess the magnitude of the indirect effects (Helm et al. 2010), we calculated the variance accounted for (VAF). The formula for the VAF is $(\beta_{iv-m} * \beta_{m-dv}) / (\beta_{iv-m} * \beta_{m-dv} + \beta_{iv-dv})$. The numerator of the VAF is calculated as the beta of the independent variable-mediator relationship multiplied by the beta of the mediator-dependent variable relationship. The denominator of the VAF is calculated as the beta of the independent variable-mediator relationship multiplied by the beta of the mediator-dependent variable relationship plus the beta of the independent-dependent variable relationship. If the VAF is greater than 0.5, then the indirect effect is more influential on the dependent variable than the direct effect (Helm et al. 2010).

References

- Helm, S., Eggert, A., and Garnefeld, I. 2010. "Modeling the Impact of Corporate Reputation on Customer Satisfaction and Loyalty Using Partial Least Squares," in *Handbook of Partial Least Squares*, V. E. Vinzi, W. W. Chin, J. Henseler, and H. Wang (eds.), Berlin: Springer, pp. 515-534.
- Hoyle, R. H., and Kenny, D. A. 1999. "Sample Size, Reliability, and Tests of Mediation," in *Statistical Strategies for Small Sample Research*, R. H., Hoyle (ed.), Thousand Oaks, CA: Sage Publications, pp. 195-222.
- Sobel, M. E. 1982. "Asymptotic Confidence Intervals for Indirect Effects in Structural Equation Models," in *Sociological Methodology 1982*, S. Leinhardt (ed.), San Francisco: Jossey-Bass, pp. 290-312.

Appendix G

Recommended Items for Future Studies

How many organizations have you worked for as an IT professional?

Perceived Workload (PW)

1. Considering the various jobs I have had and organizations that I worked for over my IT career, I experienced a persistent feeling of being busy or rushed at work as an IT professional. (Seven-point Likert scale: strongly disagree/strongly agree)
 - 1a. Of the total number of organizations for which you have worked as an IT professional, in how many of those did you experience a persistent feeling of being busy or rushed at work?
 - 1b. Of those experiences, what was the frequency with which you felt busy or rushed at work? (Likert frequency scale: never, seldom, sometimes, often, very often)
2. Considering the various jobs I have had and organizations that I worked for over my IT career, I experienced a persistent feeling of pressure at work as an IT professional. (Seven-point Likert scale: strongly disagree/strongly agree)
 - 2a. Of the total number of organizations for which you have worked as an IT professional, in how many of those did you often experience feeling pressure at work?
 - 2b. Of those experiences, what was the frequency with which you felt pressure at work as an IT professional? (Likert frequency scale: never, seldom, sometimes, often, very often)
3. Considering the various jobs I have had and organizations that I worked for over my IT career, I experienced a persistent feeling that the amount of work I've done as an IT professional has interfered with how well the work was done. (Seven-point Likert scale: strongly disagree/strongly agree)
 - 3a. Of the total number of organizations for which you have worked as an IT professional, in how many of those did you feel that the amount of work to be done interfered with how well you were able to do the work?
 - 3b. Of those experiences, what was the frequency with which you felt the amount of IT-related work to be done interfered with how well you were able to do the work? (Likert frequency scale: never, seldom, sometimes, often, very often)
4. Considering the various jobs I have had and organizations that I worked for over my IT career, I experienced a persistent feeling that the number of requests, complaints, or problems I dealt with as an IT professional was more than expected. (Seven-point Likert scale: strongly disagree/strongly agree)
 - 4a. Of the total number of organizations for which you have worked as an IT professional, in how many of those did you feel that the number of requests, complaints, or problems you dealt with as an IT professional was more than expected?
 - 4b. Of those experiences, what was the frequency with which you felt that the number of requests, complaints, or problems you dealt with as an IT professional was more than expected? (Likert frequency scale: never, seldom, sometimes, often, very often)

Exhaustion from IS Career Experience (EISCE)

1. Considering the various jobs I have had and organizations that I worked for over my IT career, I experienced a persistent feeling of being emotionally drained from my work as an IT professional. (Seven-point Likert scale: strongly disagree/strongly agree)
 - 1a. Of the total number of organizations for which you have worked as an IT professional, in how many of those did you experience feeling emotionally drained from your work?

- 1b. Of those experiences, what was the frequency with which you felt emotionally drained from your work? (Likert frequency scale: never, seldom, sometimes, often, very often)
2. Considering the various jobs I have had and organizations that I worked for over my IT career, I experienced a persistent feeling of being used up at the end of the workday as an IT professional. (Seven-point Likert scale: strongly disagree/strongly agree)
 - 2a. Of the total number of organizations for which you have worked as an IT professional, in how many of those did you experience feeling used up at the end of the workday?
 - 2b. Of those experiences, what was the frequency with which you felt used up at the end of the workday? (Likert frequency scale: never, seldom, sometimes, often, very often)
3. Considering the various jobs I have had and organizations that I worked for over my IT career, I experienced a persistent feeling of fatigue when getting up in the morning and having to face another day on the job as an IT professional. (Seven-point Likert scale: strongly disagree/strongly agree)
 - 3a. Of the total number of organizations for which you have worked as an IT professional, in how many of those did you experience feeling fatigued when getting up in the morning and having to face another day on the job?
 - 3b. Of those experiences, what was the frequency with which you felt fatigued when getting up in the morning and having to face another day on the job? (Likert frequency scale: never, seldom, sometimes, often, very often)
4. Considering the various jobs I have had and organizations that I worked for over my IT career, I experienced a persistent feeling of being burned out from my work as an IT professional. (Seven-point Likert scale: strongly disagree/strongly agree)
 - 4a. Of the total number of organizations for which you have worked as an IT professional, in how many of those did you experience feeling burned out from your work?
 - 4b. Of those experiences, what was the frequency with which you felt burned out from your work? (Likert frequency scale: never, seldom, sometimes, often, very often)

Fairness

1. Considering the various jobs I have had and organizations that I worked for over my IT career, I experienced a persistent feeling that my work schedule has been fair. (Seven-point Likert scale: strongly disagree/strongly agree)
 - 1a. Of the total number of organizations for which you have worked as an IT professional, in how many of those did you experience feeling that your work schedule was fair?
 - 1b. Of those experiences, what was the frequency with which you felt your work schedule was fair? (Likert frequency scale: never, seldom, sometimes, often, very often)
2. Considering the various jobs I have had and organizations that I worked for over my IT career, I experienced a persistent feeling that my level of pay has been fair. (Seven-point Likert scale: strongly disagree/strongly agree)
 - 2a. Of the total number of organizations for which you have worked as an IT professional, in how many of those did you experience feeling that your level of pay was fair?
 - 2b. Of those experiences, what was the frequency with which you felt your level of pay was fair? (Likert frequency scale: never, seldom, sometimes, often, very often)
3. Considering the various jobs I have had and organizations that I worked for over my IT career, I experienced a persistent feeling that my job responsibilities have been fair. (Seven-point Likert scale: strongly disagree/strongly agree)
 - 3a. Of the total number of organizations for which you have worked as an IT professional, in how many of those did you experience feeling that your job responsibilities were fair?
 - 3b. Of those experiences, what was the frequency with which you felt your job responsibilities were fair? (Likert frequency scale: never, seldom, sometimes, often, very often)
4. Considering the various jobs I have had and organizations that I worked for over my IT career, I experienced a persistent feeling that my workload has been fair. (Seven-point Likert scale: strongly disagree/strongly agree)
 - 4a. Of the total number of organizations for which you have worked as an IT professional, in how many of those did you experience feeling that your workload was fair?
 - 4b. Of those experiences, what was the frequency with which you felt your workload was fair? (Likert frequency scale: never, seldom, sometimes, often, very often)
5. Considering the various jobs I have had and organizations that I worked for over my IT career, I experienced a persistent feeling that the rewards I received have been fair. (Seven-point Likert scale: strongly disagree/strongly agree)
 - 5a. Of the total number of organizations for which you have worked as an IT professional, in how many did you experience feeling that the rewards you received were fair?
 - 5b. Of those experiences, what was the frequency with which you felt the rewards you received were fair? (Likert frequency scale: never, seldom, sometimes, often, very often)