

**Flexible Work Arrangements and
Employee Retention:
A Longitudinal Analysis of
the Governmental Agencies**

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Introduction

- More organizations have begun to offer flexible work arrangements to meet the changing needs of the workforce and respond to the increasingly competitive and volatile economic conditions (Galinsky, Bond and Sakai 2008; Stavrou and Kilaniotis 2010).
- Offering flexible work environments will give employees a sign of organizational support and will contribute to lowering employees' turnover allowing for greater flexibility and autonomy in managing their time and place of work.
- Given that employee turnover can incur great expenses to organizations including costs related to separation process, recruitment, training, and lost productivity (Moynihan and Landuyt 2008; Stavrou 2005), telework can serve as an effective management strategy to save personnel costs for the organization.
- Contribution of the research
 - 1) Longitudinal analysis of the data from federal agencies
 - 2) Used the actual numbers of employee turnover

Prior research

- Teleworking is defined as working outside the conventional workplace or in a location remote from central offices or facilities where the worker can communicate with other members of the organization using new technology, instead of personal contact with them (Di Martino and Wirth 1990; Martin and MacDonnell 2012).
- Advantages
 - Enjoying greater autonomy and flexibility in their work and meeting their needs in family life
 - Reducing commuting time and costs and alleviating job-related stresses
 - Enhancing organizational productivity and employee retention, ultimately enhancing the overall organizational effectiveness
 - Saving overhead costs
- Disadvantages
 - Psychological problems: a feeling of insecurity, perceived deprivation of job opportunities, social isolation
 - Family-related stresses: the negative spillover between work and family

Theoretical Arguments

❖ **Social exchange theory and the conservation of resources model**

- *Social exchange theory* notes that when employees perceive supports for their welfare from their organization and management (e.g., preferable working conditions, benefits), they are likely to reciprocate showing desirable work attitudes, for instance, higher job satisfaction and loyalty toward their employer and organization (Guimaraes and Dallow 1999).
- *The conservation of resources (COR) model* explains the possibility that teleworkers may be able to reduce stresses from work circumstances that will deprive them of resources (e.g., emotional exhaustion, energy depletion), therefore better managing interactions than others (Wright and Cropanzano 1998).

❖ **Managerial support**

- Managers' support for teleworkers and better leader-member exchange (LMX) relationship has reduced the negative psychological consequences on teleworkers (e.g., professional isolation, lower organizational commitment) and further reduced turnover intention of teleworkers (Choi 2018; De Vries, Tummers, and Bekkers 2018).

Telework in public organizations

- There have been mixed arguments over the appropriateness of telework implementation in governmental organizations. Nevertheless, if three contingencies hold, the success of adapting the telework program regardless of sectors.
 - 1) Telework is more suitable for professional workers with higher discretion, performing complex tasks in flatter structures.
 - 2) Telework needs strategic support from management and transparent communication about the program to be successfully adopted.
 - 3) The bureaucratic control rules (e.g., physical presence, visibility of workers) should be redesigned. Self-control, social control, proper use of electronic-based tools, and a trusting relationship between teleworker and supervisor matter.

Hypotheses

- **H1:** Agencies with more teleworkers will have lower voluntary turnover of employees than others.
- **H2:** Agencies with higher telework participation rates will have lower voluntary turnover of employees than others.

Data and Measures

- Data
 - The longitudinal agency-level data (2011—2013) extracted from two sources—US Office of Personnel Management’s congressional reports of telework implementation in federal government and Central Personnel Data Files
 - 143 sub-agencies from the 15 executive branch departments leading to a total of 428 observations in the sample
- Measures
 - Dependent variable: *employee’s voluntary turnover*
 - Independent variables: *the proportion of teleworkers and the participation rates of teleworking*
 - Control variables: pay, organizational size, occupational categories, length of service, gender, and work schedule.

Statistical analysis

- To reflect a time lag between a cause and its effect, the dependent variable and the independent variable of this study were collected in different time periods.
 - The dependent variable, voluntary turnover, was developed based on the data collected in three years: 2012, 2013, and 2014. The independent variables, telework data, were gathered in 2011, 2012 and 2013.
- To analyze the longitudinal panel data, fixed effects models were developed.

Table 2 Three-year (2011—2013) average proportions of telework participation by agency

	Teleworkers (%) (Rates of change (%))**	Telework eligible workers (%) (Rates of change (%))	Voluntary turnover (%)	Organizational size
Airforce (AF)	4.88 (424.8)	11 (20.6)	2.7	164,485
Army (AR)	4.17 (13.3)	9.33 (196.2)	3.47	254,245
Navy (NV)	14.56 (54.7)	20.67 (35.7)	2.05	193,293
Defense (DD)	18.83 (37.6)	32.67 (39.3)	3.84	108,575
Agriculture (AG)	47.94 (169.9)	49.56 (25.3)	2.76	95,917
Commerce (CM)	37.37 (45.6)	42.31 (26)	3.93	45,380
Justice (DJ)	20.19 (158)	37.57 (52.1)	1.76	113,240
Labor (DL)	43.43 (112.5)	46.53 (49.9)	3.15	15,940
Education (ED)	51.34 (84.5)	51.89 (23.7)	4.7	4,195
Health and Human Services (HE)	17 (N/A)	19.83 (N/A)	2.23	84,588
Homeland Security (HS)	14.86 (192.4)	28.83 (119.4)	2.43	189,341
Housing and Urban Development (HU)	61.05 (217.3)	N/A (N/A)	3.38	8,444
Interior (IN)	23.20 (173.5)	24.32 (54.9)	2.95	69,955
Transportation (TD)	52.09 (67.8)	63.85 (23.5)	1.98	54,776
Treasury (TR)	41.2 (63)	52.97 (15.4)	2.3	92,619
Energy (EN)	N/A	N/A	2.21	14,992
State (ST)	N/A	N/A	3.58	12,694
Veterans Affairs (VA)	N/A	N/A	3.15	348,724

Note: The numbers in italic indicates three agencies that reported the highest proportions of teleworkers and employees eligible for telework. The subagency data of the three-year average proportions of teleworkers and eligible employees were aggregated into the departmental level. The data (teleworkers and employees eligible for telework) for three departments (Energy, State, Veterans Affairs) were not available.

**The average rates of change (2011—2012 & 2012—2013) were calculated for the proportion of teleworkers and rate of telework participation.

Table 3 Bivariate correlations

	Voluntary turnover	Teleworker	Telework participation	Prof & admin	Clerical	Technical	Gender	Tenure	Full-time	Pay
Voluntary turnover										
Teleworker	-0.17**									
Telework participation	-0.11*	0.83**								
Prof & Admin	-0.01	0.45**	0.53**							
Clerical	0.25**	-0.19**	-0.23*	-0.48**						
Technical	-0.04	-0.30**	-0.32**	-0.67**	0.20**					
Gender	0.21**	0.35**	0.35**	0.34**	0.06	-0.12*				
Tenure	-0.36**	0.22**	0.14**	0.10*	-0.21**	-0.03	0.12*			
Full-time	-0.16**	0.14**	0.05	0.15**	-0.38**	-0.1*	-0.01	0.43**		
Pay	0.15**	0.29**	0.21**	0.42**	-0.05	-0.34**	0.29**	0.06	0.07	
Organizational size	-0.24**	-0.45**	-0.50**	-0.52**	0.22**	0.42**	-0.53**	-0.14**	-0.09	-0.39**

Note: **, $p < .001$; *, $p < .05$.

Table 4 Fixed effects model of telework on voluntary turnover

Independent variables	Dependent variable (voluntary turnover)	
	Model1	Model2
	Coefficients (Std. Err.)	Coefficients (Std. Err.)
Teleworker (TW)	-0.0165* (0.008)	
Telework participation (TWP)		-0.017* (0.009)
Professionals & Administrators	0.102 (0.111)	-0.073 (0.126)
Clerical	0.571*** (0.131)	0.817*** (0.179)
Gender	0.111 (0.098)	0.097 (0.11)
Length of service	-0.01** (0.003)	-0.006 (0.004)
Full-time employment	-0.45** (0.137)	-0.321* (0.153)
Pay	0.216* (0.128)	0.259* (0.127)
Organizational size	0.445 (1.333)	-0.224 (1.379)
Constant	0.414** (0.156)	0.402* (0.174)
Number of observations	422	341
Number of groups	160	136
F-statistics	15.90***	13.80***
R-square		
Within	0.334	0.359
Between	0.116	0.137
Overall	0.133	0.127

Note: The unit of analysis is a subagency-level measure. ***, $p < .001$; **, $p < .01$; *, $p < .1$

Discussion

- The findings support the social exchange theory that employees who telework or are allowed to telework are more likely to develop positive attitudes toward their agency and management and less likely to leave it than others.
- The concerns over lack of supervision over teleworkers will be alleviated by utilizing advanced technology (e.g., avoiding non-work related interventions).
- The effect of managerial support for telework help achieve greater benefit from telework implementation and reduce the negative influences over teleworkers (e.g., a feeling of isolation, peer pressure, lost opportunities for career advancement).

Practical implications

- The potential negative consequences of telework should be properly treated.
 - Diminished interpersonal relationships may cause negative psychological conditions of teleworkers (e.g., isolation, depression).
 - Managerial effort to maintain frequent interactions with teleworkers and exercise supportive leadership will be necessary to help teleworkers avoid negative psychological experiences.
 - Proper use of technology will also be important to keep teleworkers in the network and promote active working relationships with supervisors and colleagues.