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## Is experience in the public sector associated with Big Five personality aspects?

### ¿Se asocia la experiencia en el sector público con aspectos de los Cinco Grandes de la personalidad?

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#### Abstract

The hypothesis that employees with experience in the public sector differ in personality aspects from those with less or no experience, suggested by the concept of person-organization fit, was tested among 711 participants in executive extension courses of a Peruvian university who filled-in the Big Five Aspect Scales. Whereas significant differences in various personality aspects were observed along age and between males and females, public sector experience only predicted greater Openness. Women outperformed men in Openness and a significant gender x time in public sector interaction revealed that prediction of Openness from the public-sector experience was more pronounced among men. The findings suggest that, in the population studied, little personality differences are attributable to experience in the public sector. Studies are needed to evaluate the external validity of the findings.

**Keywords:** experience in public sector, personality, aspects of the Big Five, Peru, openness.

#### Resumen

El concepto de ajuste persona-organización sugiere que empleados con experiencia en el sector público difieren en aspectos de la personalidad de aquellos con escasa o ninguna experiencia. Cuando se puso a prueba esta hipótesis entre 711 participantes en cursos de extensión para ejecutivos de una universidad peruana, se observó diferencias significativas en las Escalas de Aspectos de los Cinco Grandes entre hombres y mujeres y según la edad, pero la experiencia en el sector público solo predijo mayor Apertura. Las mujeres presentaron mayor Apertura que los hombres y una interacción significativa de género x tiempo en el sector público reveló que la predicción de Apertura desde la experiencia en el sector público era más pronunciada entre los hombres. Los hallazgos sugieren que, en la población estudiada, pocas diferencias de personalidad son atribuibles a la experiencia en el sector público. Se necesita estudios que evalúen la validez externa de los hallazgos.

**Palabras clave:** experiencia en el sector público, personalidad, aspectos de los Cinco Grandes, Perú, apertura.

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## Introduction

The public and private sectors present a number of important differences. First, the public sector is not designed to make a profit and, therefore, there is no competition in government settings in the sense of organizations trying to entice customers away from their competitors. Thus, in reference to the Competing Values Framework (Hartnell, Ou, & Kinicki, 2011), the organizational culture of public sector agencies probably conforms to control rather than competition values; that is, employees are probably more required by the organizational culture to conform to established rules and procedures and less induced to produce rapid results. Second, politicians have direct or indirect influence in the allocation of resources to public sector agencies and may interfere in the process of personnel recruitment and selection as they try to insert their protégés into the system, both at higher management and rank-and-file levels. As a consequence, such principles of management as equitable treatment may be easily transgressed (Flynn, 1993) and the public sector has come to be described as an operating environment characterized by ill-structured and wicked problems (Van der Heijden, 2006).

This study addresses the hypothesis that time spent working in the public sector predicts personality traits. Saks and Ashforth (1997) suggested that having a high person-environment fit will lead to a more positive work experience and less negative affect, and consequently individuals will be more likely to remain in that environment. There is considerable empirical evidence that person-job and person-organization fit are associated with such organizational outcomes as job satisfaction, intention to quit, work-related stress, prosocial behaviors such as organizational citizenship behaviors and teamwork, and ethical behavior and work performance (Erdogan & Bauer, 2005; Kristof, 1996; Lyons, Brenner, & Fassinger, 2005; Lyons & O'Brien, 2006; Roberts & Robins, 2004; Saks & Ashforth, 1997; Sekiguchi, 2004). Therefore, employees who are attracted to the

public sector and remain in it can be expected to be those whose personality, to some extent, fit the sector. However, the personality of public sector employees, if there is one, has not been described. Psychological studies of public sector employees have addressed, for example, relationships between Big Five personality traits and job engagement (e.g., N. Zaidi, Wajid, F. Zaidi, G. Zaidi, & M. Zaidi, 2013), job performance (Cooper, Knotts, McCord, & Johnson, 2013), and counterproductive work behaviors (Raman, Sambasivan, & Kumar, 2016), but the extent to which permanence in the public sector is associated with specific personality traits has not been addressed.

The study approaches the task utilizing the 10 aspects of the Big Five framework. DeYoung, Quilty, and Peterson (2007) demonstrated the existence of two correlated but distinct aspects within each of the five broad domains. Within Neuroticism, they distinguished *Volatility* from *Withdrawal*. The former is associated with emotional lability, irritability or anger, and difficulty controlling emotional impulses whereas the latter is characterized by facets such as Depression, Anxiety, and Vulnerability, which imply problems of inhibition and negative affect directed inward. Agreeableness contains *Compassion* (defined by facets such as Warmth, Sympathy, Tenderness), an aspect strongly related to emotional affiliation, and *Politeness* (defined by facets such as Cooperation, Compliance, Straightforwardness), a more reasoned consideration of and respect for others' needs and desires. Conscientiousness entails *Industriousness* and *Orderliness*. The former refers to purpose, efficiency, and self-discipline and the latter to dutifulness, order, and perfectionism. *Assertiveness* and *Enthusiasm* are the two aspects of Extraversion. *Assertiveness* implies agency and dominance whereas *Enthusiasm* describes a gregarious and friendly person with positive emotionality. Finally, *Intellect* (an exploration of ideas, evidence, mainly through reasoning) and *Openness* (experiencing art, feelings, nature) are differentiated as two forms of the disposition to explore. DeYoung et al. (2007) showed that a subdivision of the Big Five

personality domains into 10 aspects not only is empirically justified but has a biological substrate. Subsequent studies have demonstrated the usefulness of this categorization for identifying gender differences in personality (Weisberg, DeYoung, & Hirsh, 2011) and explaining political (Hirsh, DeYoung, Xu, & Peterson, 2010), interpersonal (DeYoung, Weisberg, Quilty, & Peterson, 2013), and economic and health behavior (Rustichini, DeYoung, Anderson, & Burks, 2012), as well as cognitive ability (DeYoung, Quilty, Peterson, & Gray, 2014) and artistic and scientific productivity (Kaufman et al., 2015).

## Method

### Context and participants

ESAN, a university based in Lima, Peru launched in 2013 an Online Management Extension Program for Executives as an alternative to its traditional face-to-face Executive Extension Program. Students of both programs were targeted for the present study and invited to participate via electronic mail. The offer of their personality profile when the data were collected was used as incentive. The sample was strongly biased toward the private sector. Four hundred ninety-two (492) cases with 0 years working in the public sector had on average 10.55 years working in the private sector. Two hundred eleven (211) cases with 1 or more years in the public sector had on average 4.75 years working in the public sector and 7.93 years in the private sector.

### Measurements

The 100-item Big Five Aspect Scales of DeYoung et al. (2007) were forward-back translated into Spanish and utilized to measure the 10 aspects among participants. Their internal consistency reliability was satisfactory for research purposes (*Volatility*  $\alpha = .79$ ; *Withdrawal*  $\alpha = .73$ ; *Compassion*  $\alpha = .75$ ; *Politeness*  $\alpha = .81$ ; *Industriousness*  $\alpha = .58$ ; *Orderliness*  $\alpha = .58$ ; *Enthusiasm*  $\alpha = .77$ ; *Assertiveness*  $\alpha = .77$ ; *Intellect*  $\alpha = .78$ ; *Openness*  $\alpha = .66$ ). Data on gender (female = 1, male = 2),

age, and numbers of years working in the public and private sectors were also collected.

### Analytic Strategy

To simplify the analyses, age outliers were excluded and the sample was limited to participants aged 22-55 ( $N = 711$ ). Bootstrapping was used in hypothesis testing to avoid problems with variables which might not satisfy the statistical assumptions.

## Results

The 10-aspect structure of the Big Five Aspect Scales was validated through a confirmatory factor analysis that yielded satisfactory adjustment indices ( $\chi^2/df = 2.060$ ; CFI = .951; TLI = .949; RMSEA = .039; SRMR = .057). The loadings were .44 (*Volatility*), .99 (*Withdrawal*), .38 (*Compassion*), .46 (*Politeness*), .99 (*Industriousness*), .42 (*Orderliness*), .58 (*Enthusiasm*), .99 (*Assertiveness*), .76 (*Intellect*), and .40 (*Openness*). However, the expected Big Five structure failed to materialize when León, Morales, Vértiz, and Burga-León (2017) tried an exploratory factor analysis. Model I in Table 1 shows that *Volatility* (Vol), *Withdrawal* (Wit), and *Enthusiasm* (Ent) decreased with age; *Industriousness* (Ind), *Orderliness* (Ord), and *Intellect* (Int) increased with age; and *Compassion* (Com), *Politeness* (Pol), *Assertiveness* (Ass), and *Openness* (Ope) did not change significantly in this sample. Controlling for age, females presented greater *Withdrawal*, *Compassion*, and *Politeness* scores and smaller *Intellect* scores than males (Model II in Table 1). Controlling for age and gender, time in the public sector did not make a difference in any of the ten aspects (Model III in Table 1). However, when the gender x time in public sector interaction was included in the regression, this variable, as well as gender and time in the public sector, achieved statistical significance (Model IV in Table 1). Figure 1 depicts the interaction using the 0 years versus 1 or more years in the public sector dichotomy to compare private and public sector employees.

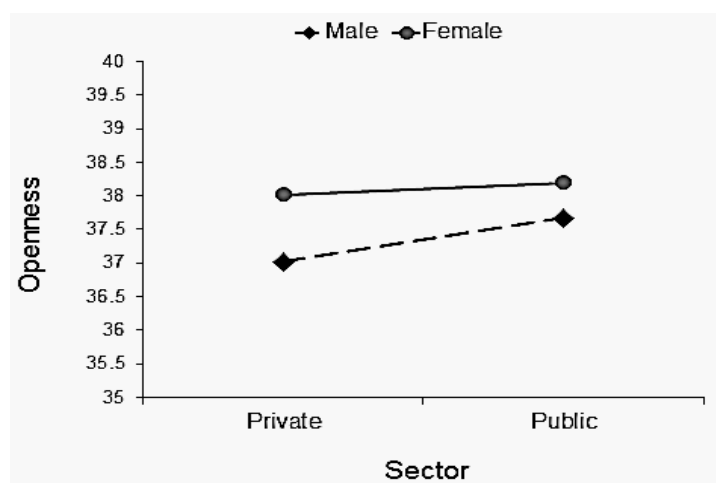
**Table 1**

*Standardized coefficients for the independent regression of each of 10 personality aspects on age (Model I); age and gender (Model II); age, gender, and time in public sector (Model III); and age, gender, time in public sector, and gender x time in public sector (Model IV)*

Models and Predictors	Vol	Wit	Com	Pol	Ind	Ord	Ent	Ass	Int	Ope
<b>Model I</b>										
Age	-.13**	.17**	-.06	.05	.16**	.20**	-.09*	.04	.08*	-.05
<b>Model II</b>										
Age	-.11**	-.15**	-.03	.09*	.17**	.20**	-.08*	.04	.05	-.03
Gender (Female = 0, Male = 1)	-.07	-.08*	-.16**	-.18**	-.03	.04	-.07	.02	.13**	-.07
<b>Model III</b>										
Age	-.12**	-.16**	-.03	.08*	.17**	.19**	-.07	.05	.07	-.02
Gender (Female = 0, Male = 1)	-.06	-.08*	-.16**	-.17**	-.02	.04	-.07	.02	.13**	-.08
Time in public sector	.03	.01	.00	-.00	.01	-.00	-.04	-.03	-.03	-.05
<b>Model IV</b>										
Age	-.12**	-.16**	-.03	.08*	.17**	.19**	-.07	.05	.07	-.02
Gender (Female = 0, Male = 1)	-.10	-.08	-.24**	-.15	-.11	.02	-.16	-.11	.05	-.24*
Time in public sector	.02	.01	-.02	.01	-.01	-.01	-.06	-.06	-.05	-.09*
Gender x time in public sector	.04	-.00	.10	-.03	.10	.03	.11	.14	.09	.18*

*Note:* Vol = volatility, Wit = withdrawal, Com = compassion, Pol = politeness, Ind = industry, Ord = Orderliness, Ent = enthusiasm, Ass = assertiveness, Int = intellect, Ope = openness.

\* $p < .05$ , \*\* $p < .01$ , after bootstrapping.



**Figure 1.** Adjusted means for openness among males and females classified into private or public sector.

## Discussion

The effects of the independent variables were generally small. The study results entailing age are consistent with the findings reported in the literature. Whereas personality traits change importantly in adolescence (Kawamoto & Endo, 2015), they do not between 30 and 39 years of age (Kawamoto, 2016), at least in Japan. But systematic variation is observed over larger portions of the life-span in various countries (Edmonds, Goldberg, Hampson, & Barckley, 2013; Milojev & Sibley, 2014; Walton et al., 2013). Similar is the case of personality differences between the genders. Goodwin and Gotlib (2004) and Chapman, Duberstein, Sörensen, and Lyness (2007) in the United States; Weisberg, DeYoung, and Hirsh (2011) in Canada; León et al. (2017) in Peru; and Costa, Terracciano, and McCrae (2001) and Schmitt, Realo, Voracek, and Allik (2008) cross-culturally have reported greater Neuroticism, *Volatility*, and/or *Withdrawal* among females than males.

In the context of the significant differences in several of the 10 aspects of the Big Five observed along age and between genders in Table 1, the results regarding time in the public sector speak of important similarities between employees with large, some, or no experience with the public sector regarding nine of the 10 aspects. The low reliabilities of *Industriousness* and *Orderliness* do not appear to explain their lack of relationships with experience in the public sector; highly reliable aspects such as *Volatility* and *Politeness* also failed to correlate with it. The exception was Openness. Females exhibited greater scores on this variable, employees with experience in the public sector presented higher scores than personnel with experience only in the private sector, and the difference between sectors was especially pronounced among males.

No obvious interpretation of these results is available. The concept of person-organization fit suggests that people attracted to the public sector, especially men, are more likely to see beauty in things that others might not notice, frequently daydream,

appreciate art, and need a creative outlet (De Young, 2014). However, theoretically, it is equally likely that years in the public sector cause frustration in the achievement of task goals and enhance these dispositions as escape routes. The nature of the sample grants greater credibility to the former interpretation. The sample was strongly biased toward the private sector. Even the participants who reported having one or more years working in the public sector had, on average, more years in the private sector. The emergence of differences in personality that are attributable to a very limited number of years in the public sector suggests that the employees arrived in the public sector already with greater Openness. This interpretation is consistent with the absence of a significant interaction of age with time in the public sector. Working in the public sector appears to grant lower social status than working in the private sector in Peru; perhaps an open mind is needed to transcend this perception, at least in the population targeted in this study. The significant interactive effects of gender and time in the public sector on Openness could be reflecting a greater Openness needed by men to enter an institution of lower social status. However, only longitudinal research will be able to produce evidence relevant to the direction of causality.

The self-selection of cases severely limits the external validity of the findings. The study was limited to persons who were attending executive extension courses at the leading university in the field of business management in Peru. It is unlikely that these persons are representative of the general population of Peruvian employees; they are probably more representative of skilled professionals and middle-management echelons who wish to advance their careers. Moreover, León et al. (2017) contributed the following observation: "the fact that the Big Five failed to materialize in the exploratory factor analysis could be explained by a response set of the participants. Experienced and competitive professionals may tend to supply answers contaminated by social desirability" (p. 126).

Whether the findings are replicable in other countries or cultures is another question that the research leaves unanswered. But, for clarifying these types of issues are the replication studies. The present study just opened a line of research.

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