

Analysis Report

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SAMPLE REPORT - Rafael Data Analysis Portfolio

Sample Characteristics

The report starts with the sample characterization. The sample is composed by 52 individuals, all of them being Black women. 90.4% are from the Private Sector. 38.5% has more than 15 years of experience in the private sector.

		Count	Column N %
What is your gender?	Female	52	100.0%
Which race/ethnicity best describes you? (Please choose only one)	Black or African American	52	100.0%
Do you live in the United States?	Yes	52	100.0%
Which of the following best describes your current occupation?	Other (please specify)	1	1.9%
	Private Sector (for-profit businesses that are not owned or operated by the government)	47	90.4%
	Public Sector (public goods, governmental services such as the military, law enforcement, infrastructure, public transit, public education, health care, and government itself, such as elected officials)	4	7.7%
Which of the following best describes your current job level?	Entry Level	2	3.8%
	Executive/C-Level/Senior leadership	8	15.4%
	Middle Management	27	51.9%
	Other (Please specify) - Consultant	1	1.9%
	Other (Please specify) - Director	1	1.9%
	Senior Management	13	25.0%
What is your age range?	21-30	7	13.5%
	31-35	12	23.1%
	36-40	11	21.2%
	41-50	16	30.8%
	51- 60	5	9.6%
	61 and over	1	1.9%
How many years have you worked in the private sector?	Other (please specify)	1	1.9%
	1-3 years	1	1.9%
	3-5 years	9	17.3%
	5-10 years	14	26.9%
	10-15 years	7	13.5%
	15 years +	20	38.5%

Descriptive Statistics and Reliability Tests

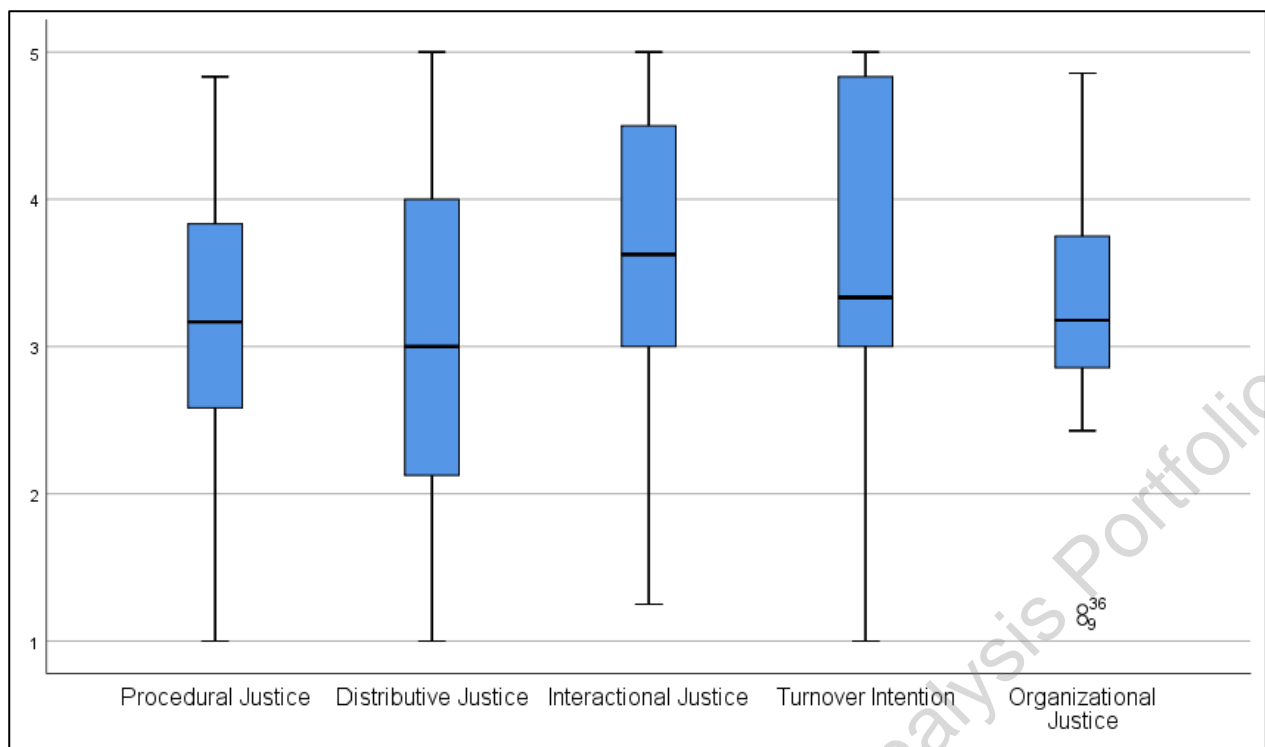
The following table shows means, standard deviation, skewness and kurtosis for all the subscales present in the data. The variables were scored from 1 (Strongly Disagree) to 5 (Strongly Agree). Skewness and Kurtosis are measures that show how close the distribution of numbers is from the normal distributions. All values are within the ± 1.5 range, which indicates normality (Hair et al., 2014).

	N	Mean	Std. Deviation	Skewness	Kurtosis		
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
(PJ) At your current job have you been able to express your views and feelings during the decision-making processes that impact your outcomes (i.e. pay, raises, promotions, stretch assignments, development/training programs, etc.).?	52	3.538	1.163	-.720	.330	-.200	.650
(PJ) Have you had influence over the outcome arrived at by those procedures?	52	3.250	1.186	-.069	.330	-.716	.650
(PJ) Have those procedures been free of bias?	52	2.788	1.073	-.054	.330	-.679	.650
(PJ) Have those procedures been based on accurate information?	52	3.288	1.054	-.197	.330	-.660	.650
(PJ) Have you been able to appeal the (outcome) arrived at by those procedures?	52	2.981	1.000	-.205	.330	-.489	.650
(PJ) Have those procedures upheld ethical and moral standards?	52	3.288	1.109	-.426	.330	-.436	.650
(DJ) Does your (outcome) reflect the effort you have put into your work?	52	3.135	1.221	-.133	.330	-1.012	.650
(DJ) Is your (outcome) appropriate for the work you have completed?	52	3.038	1.236	-.076	.330	-1.084	.650
(DJ) Does your (outcome) reflect what you have contributed to the organization?	52	3.154	1.227	.026	.330	-1.028	.650
(DJ) Is your (outcome) justified, given your performance?	52	3.231	1.131	.031	.330	-.961	.650
(IJ) Has (he/she) treated you in a polite manner?	52	3.846	.916	-.639	.330	.550	.650
(IJ) Has (he/she) treated you with dignity?	52	3.596	1.034	-.213	.330	-.605	.650
(IJ) Has (he/she) treated you with respect?	52	3.673	1.098	-.508	.330	-.329	.650
(IJ) Has (he/she) refrained from improper remarks or comments?	52	3.500	1.076	-.049	.330	-.840	.650
(TI) How likely is it that you will actively look for a new job in the next year?	52	3.692	1.245	-.649	.330	-.442	.650
(TI) I often think about quitting	52	3.462	1.275	-.176	.330	-1.126	.650
(TI) I will probably look for a new job in the next year	52	3.692	1.276	-.685	.330	-.571	.650

The three organizational justice components, the total scale of organizational justice and turnover intention were tested for reliability using a measure of internal consistency. The rationale for internal consistency is that the individual items or indicators of the scale should all be measuring the same construct and thus be highly intercorrelated (Hair et al., 2014). The analysis in this study was done using Cronbach's Alpha. Alphas were all above 0.700 suggesting good reliability. The corresponding items of each scale were averaged to form the total scores. Organizational Justice was calculated by averaging all the items that correspond to Procedural, Distributive and Interactional Justice components. The table below shows descriptive statistics for the four scales along with the values of Alpha.

	N	Mean	Std. Deviation	Skewness	Kurtosis		α
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	
Procedural Justice	52	3.189	.847	-.212	.330	-.040	0.862
Distributive Justice	52	3.139	1.101	.051	.330	-.959	0.935
Interactional Justice	52	3.654	.937	-.235	.330	-.282	0.930
Turnover Intention	52	3.615	1.154	-.450	.330	-.422	0.898
Organizational Justice	52	3.308	.793	-.267	.330	.646	0.926

To better visualize the distribution of the scores, Box plots were generated. Box plots are graphical representations of the distribution of values in a particular variable. The graph literally box in observations that are around the median (horizontal line in the middle of the box). The box edges represent the interquartile range of values. That is, the 25th percentile (lowest edge) and the 75th percentile (highest edge). 50% of values lie inside the box. The whiskers (lines protruding from the box), represent the minimum and maximum values observed among the cases. Outliers (participants of which values surpass 1.5 times the interquartile range) are presented as dots outside the whiskers, extreme outliers (more than 3 times this range) are represented as stars. The following figure shows box plots for the five scales under study.



Regression Models

This section shows the results of the regression models. An initial model tested if Procedural, Distributive and Interactional Justice showed any effects on Turnover Intention. The model was significant ($F = 3.710$, $p = 0.018$, $R^2 = 0.188$), but none of the three predictors were significant ($p > 0.05$). This means that none of the three components has any effects on turnover intention whatsoever, according to the data and considering a 95% confidence level. The researcher suspects that the lack of statistical significance might be due to the small sample size, which implicates on a high margin of error around the beta coefficient.

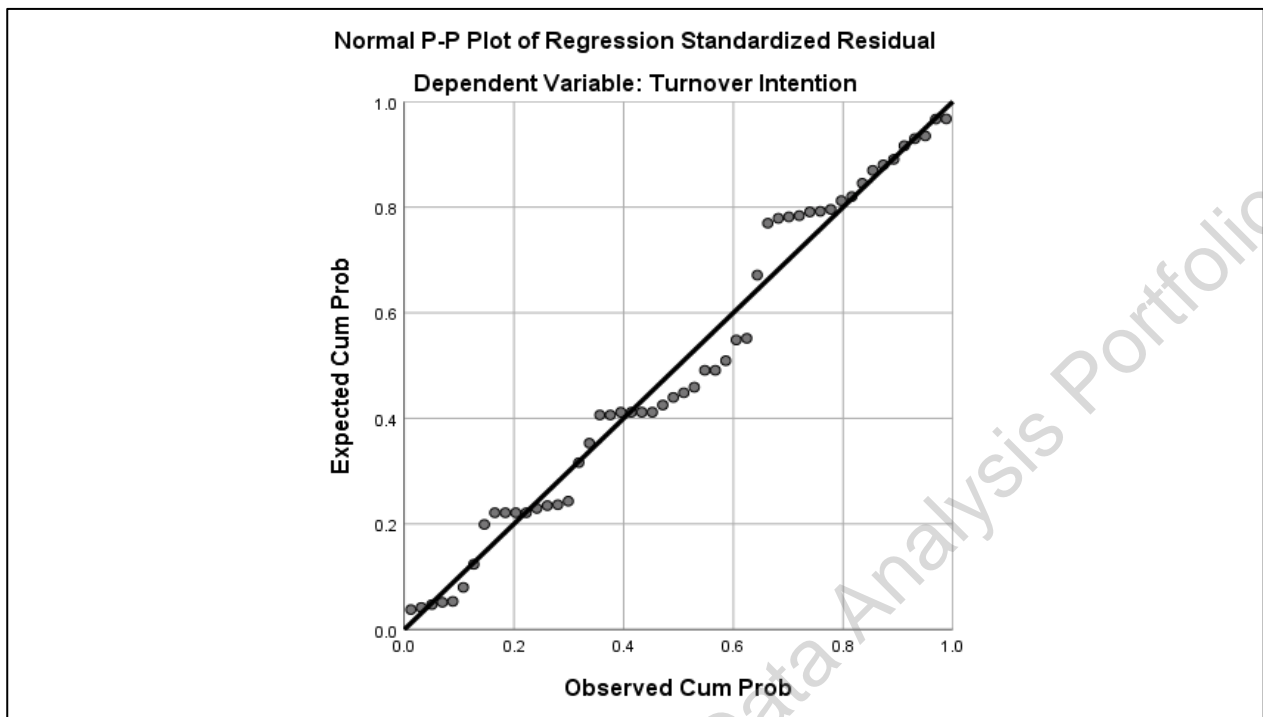
Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	p
		B	Std. Error	Beta		
1	(Constant)	5.694	.668		8.526	.000
	Procedural Justice	-.461	.291	-.339	-1.584	.120
	Distributive Justice	.028	.187	.026	.148	.883
	Interactional Justice	-.190	.205	-.154	-.930	.357

a. Dependent Variable: Turnover Intention

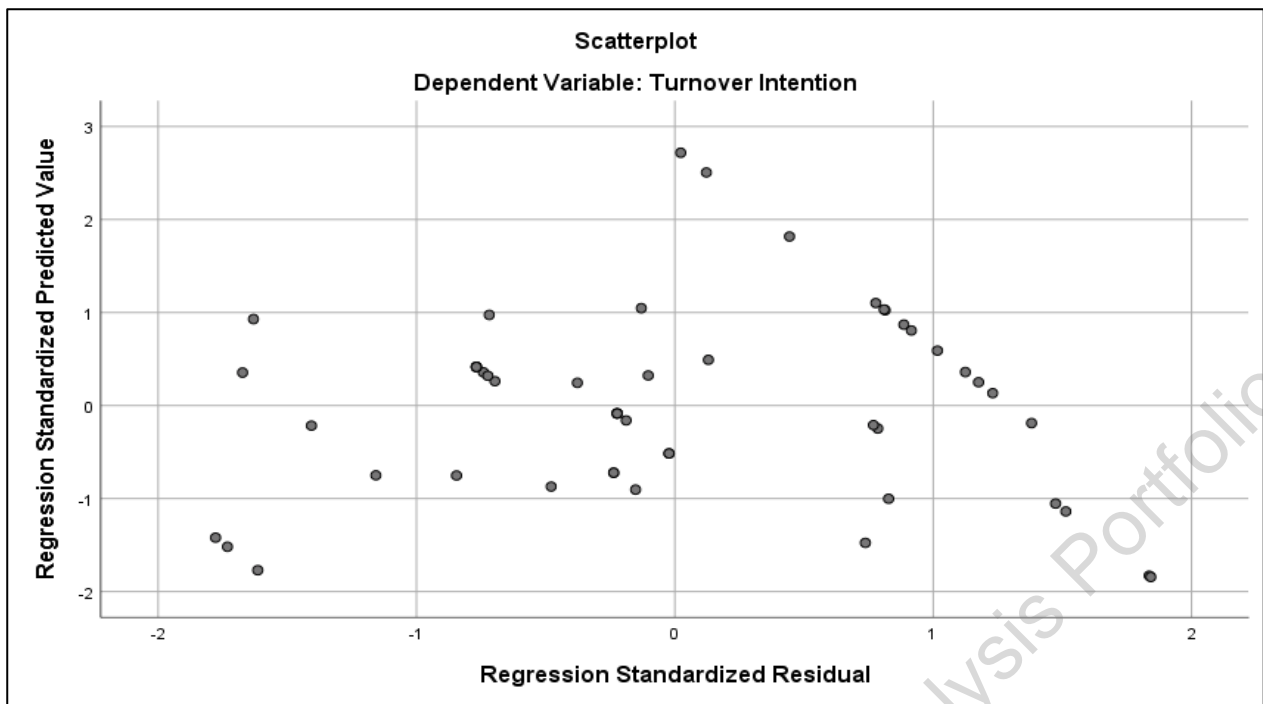
Lastly, violations of the assumptions of normality, linearity and homoscedasticity of residuals (errors) were examined for the regression model. The next figure shows a P-P plot, which is used to assess

the normality of residuals. The observations should follow a diagonal pattern to suggest normality of residuals (Tabachnick & Fidell, 2014).



The graph suggests that no substantial violations of normality are present.

The next figure shows a scatterplot of standardized residuals and standardized predicted values of the dependent variable. If points are well distributed along the X and Y axes, this would suggest homoscedasticity and linearity. Nonlinearity is indicated when most of the residuals are above the zero line on the plot at some predicted values and below the zero line at other predicted values. Lack of homoscedasticity is indicated if values are more dispersed for a given predicted values than at other values (Tabachnick and Fidell, 2014).



A second regression model tested if Organizational Justice has any effect on Turnover Intention. The model was significant ($F = 10.024$, $p = 0.003$, $R^2 = 0.167$).

Organizational Justice has a significant negative effect on Turnover Intention ($\beta = -0.409$, $p = 0.003$). This means that the higher the organizational justice, the lower the turnover intention of a Black women (Table below).

Coefficients^a

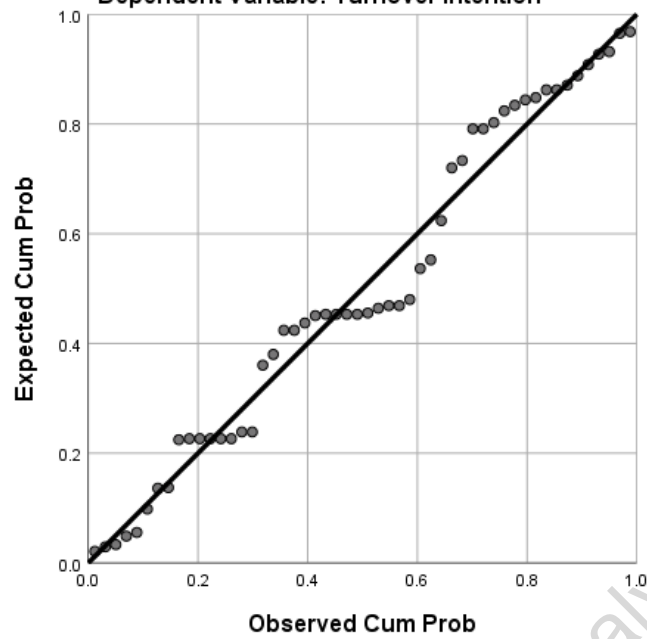
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.582	.638		8.743	.000
	Organizational Justice	-.595	.188	-.409	-3.166	.003

a. Dependent Variable: Turnover Intention

The residual graphs suggest no violation of residual assumptions are present and the model can be considered value.

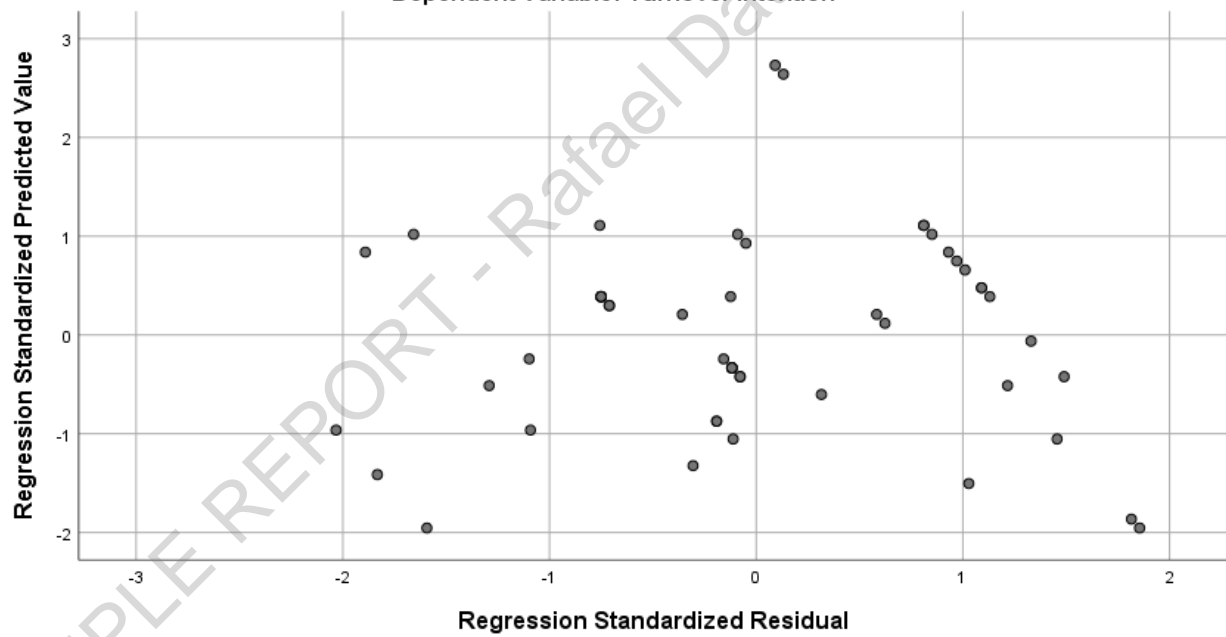
Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Turnover Intention



Scatterplot

Dependent Variable: Turnover Intention



References

- Hair, J. F., Black, W., Babin, B., & Anderson, R. (2014). *Multivariate data analysis* (Seventh). Pearson Education, Inc.
- Tabachnick, B. G., & Fidell, L. S. (2014). *Using multivariate statistics* / Barbara G. Tabachnick, Linda S. Fidell.

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