The Impact of Trusting Relationship Between Managers and Employees on Promotion Prospects

1. Introduction

When it comes to describing a desirable working atmosphere, reliable managers seem to be an indispensable part. A trusting relationship between managers and employees could boost teamwork and enhance collaboration. Edelman's "Trust Barometer" (a survey of 33,000 people in 28 countries) research shows that highly-trusted workplaces enjoy: A 50% higher employee productivity, 106% more energy at work, and 13% fewer sick days. For my research, I would like to take a closer look at how the trusting relationship could affect employees' confidence levels in promotion prospects. That is to answer the question: How good do people think their promotion chances are, and how is their trust level in management specifically could influence this prospect.

Trust relationship can be measured in many aspects. It could be explored by how employees feel about their supervisors directly. For example, do employees think their supervisors give them enough support and care? It could also be measured by how employees trust the management generally, such as do they think they are treated decently at work, that is to say, they are relatively satisfied with salary and benefits; do employees think promotions are handled fairly by managers; do they feel the job is giving them enough freedom to utilize their abilities etc.

From my perspective, being optimistic about promotion is a critical part of one's career because it suggests employees feeling motivated and energized to consistently seeking progress in their work, and it is an important sign that one's career is not stagnant. With higher promotion prospects, employees are more likely to feel confident at their work, and this may help increase productivity and inspire creativity, which are also very beneficial to a company's overall development.

By exploring how a trusting relationship between employees and supervisors could relate to employees' promotion prospects, I hope to shed light on how managers could

increase employees' confidence in promotion prospects and ultimately boost development both individually and for the company.

2. Hypothesis and Variables Description

Hypothesis: The more trust employees have in the management at their work, the more optimistic they are about being promoted.

Dataset: I used the 2010 General Social Survey (GSS) for this study. For all the variables I selected, I recoded them by firstly replacing "Don't know" and "no answers" as NA values, so they won't be used in the regression model later on as valid data; secondly, reversing the values in the dataset, so higher score suggests stronger agreement. I also relabeled some of them, assuming it would be easier to understand.

Key Dependent variable:

-promo: In general, do you think your promotion chances are good? (1= not at all good, 2 = not too good, 3 = somewhat good, 4 = very good)

Key Independent variables:

-trusting: Trust the management at work. (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)

-suphelp: My supervisor is helpful to me in getting the job done. (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)

-supcares: My supervisor is concerned with the welfare of those under him or her. (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)

-promfair: Promotions are handled fairly. (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)

-wkfreedm: I am given a lot of freedom to decide how to do my own work. (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)

-fringeok: My fringe benefits are good. (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)

-jobsecok: The job security is good. (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)

-enoughtime: I have enough time to get the job done. (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)

3. Descriptive Statistics

Table 1 shows the basic descriptive statistics of the dependent and independent variables such as the mean standard deviation, min, max value, and 25th, 50th, 75th percentiles.

Table 1

variable	count	mean	std	min	25%	50%	75%	max
promo	1142.0	2.492995	1.018430	1.0	2.0	3.0	3.0	4.0
trusting	1157.0	3.071737	0.789773	1.0	3.0	3.0	4.0	4.0
suphelp	1124.0	3.266904	0.870987	1.0	3.0	3.0	4.0	4.0
supcares	1119.0	3.231457	0.924257	1.0	3.0	3.0	4.0	4.0
promfair	1082.0	2.879852	0.995076	1.0	2.0	3.0	4.0	4.0
wkfreedm	1162.0	3.390706	0.821030	1.0	3.0	4.0	4.0	4.0
fringeok	1145.0	2.889956	1.085559	1.0	2.0	3.0	4.0	4.0
jobsecok	1149.0	3.243690	0.911486	1.0	3.0	3.0	4.0	4.0
enoughtime	1158.0	3.205527	0.828972	1.0	3.0	3.0	4.0	4.0

The dependent variable is “promo,” asking how good people feel their promotion chances are (1 means not at all good, 4 means very good). We could see that there are 1142 valid answers and the mean value is 2.5, lying between not too good and somewhat good. The standard deviation is 1.02, relatively large. 50th percentile is 3, suggesting that at least 50% percent of the respondents are optimistic about promotion. It seems like overall, the respondents were relatively confident about being promoted in 2010 from the statistics.

In terms of the independent variables, most of the mean values are above 3, showing

a strong agreement that there is a trusting relationship between employees and managers at the workplace. Respondents, on average, agree they can trust the management at work (trusting 3.07); supervisors are helpful and care about employees' well-being and benefits (suphelp 3.26, supcares 3.23); they have much freedom to decide how to do their own work (wkfreedm 3.39); the job security is good(3.24), and they are given enough time to get the work done (enoughtime 3.21). Agreement on trusting promotions is handled fairly (promfair 2.88) and The fringe benefits of the work are good score relatively lower (fringeok 2.89), lying between disagree and agree. In general, respondents report a high degree agreement of trusting the management at work, with 50th percentiles equal to 3(agree) or 4(strongly agree). However, it's noticeable that the standard deviation for all the variables is above 0.75, suggesting diversity in respondents' opinion on their promotion chances and the trusting relationship at work.

4. Models

4.1 Initial Model - Multiple Linear Regression Model

I used the multiple linear regression model with eight independent variables and the dependent variable "promo" for my initial model. The independent variables and dependent variables are all ordinal level variables ranging from 1 to 4, so they satisfy the requirement of multiple linear regression model. Compared to logistic regression, it doesn't require a binary outcome, so I don't have to discretize my data and lose information. Multiple linear regression is also easier to interpret. It could explicitly tell us the how much the promotion points change when the independent variables increase a level (suggesting stronger agreement on that there is a trusting relationship at the workplace). So I decided to use the multiple linear regression model. The results are in table 2.

Table 2

OLS Regression Results

Dep. Variable:	promo	R-squared:	0.238
Model:	OLS	Adj. R-squared:	0.233
Method:	Least Squares	F-statistic:	40.47
Date:	Sat, 27 Mar 2021	Prob (F-statistic):	2.23e-56
Time:	21:32:44	Log-Likelihood:	-1343.0
No. Observations:	1043	AIC:	2704.
Df Residuals:	1034	BIC:	2749.
Df Model:	8		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
Intercept	0.7166	0.160	4.466	0.000	0.402	1.032
trusting	0.0034	0.042	0.081	0.936	-0.080	0.086
suphelp	0.0087	0.041	0.212	0.832	-0.072	0.089
supcares	-0.0495	0.040	-1.237	0.216	-0.128	0.029
promfair	0.3883	0.036	10.755	0.000	0.317	0.459
wkfreedm	0.0178	0.037	0.477	0.634	-0.056	0.091
fringeok	0.1437	0.029	5.012	0.000	0.087	0.200
jobsecok	0.0767	0.036	2.156	0.031	0.007	0.147
enoughtime	0.0313	0.036	0.861	0.390	-0.040	0.103

Omnibus:	21.131	Durbin-Watson:	1.966
Prob(Omnibus):	0.000	Jarque-Bera (JB):	21.055
Skew:	-0.321	Prob(JB):	2.68e-05
Kurtosis:	2.732	Cond. No.	54.1

Notes:
[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Firstly, most of the coefficients of the variables are positive, so it might be as I expected that the more trust employees have in the management at their work, the more optimistic they are about being promoted. The coefficients for promfair, fringeok, jobsecok are statistically significant. The coefficient for promfair is 0.39, suggesting that holding other variables constant, on average, for one category more someone trusts that promotions at work are handled fairly by their managers, they are 0.39 points more likely to feel they could be promoted. For fringeok, the coefficient is 0.14, meaning on average, for one category stronger someone feels their fringe benefits offered by the manager at work is satisfying, they are 0.14 points more likely to believe they could be promoted, controlling other variables. Employees with one level higher agreement on their job security is good are also 0.08 points more optimistic about promotion on average, ceteris paribus. Those variables all convey the same idea that trust could positively impact employees' promotion prospects, no matter is the trust with the supervisors directly or general trust in the job

benefits and security established jointly at the workplace.

Secondly, it is very noticeable that most of the coefficients are not statistically significant, and one of them (supcares) even has a negative coefficient, the opposite direction compared to others when all the variables are recoded in the same scale (1 = strongly disagree and 4 = strongly agree) and measures similar attitude on trust in the management. However, the adjusted R square is 0.233, a relatively large R square, meaning that around 23% of the variance in promotion prospect could be explained by the eight features I chose. It is an important sign that there might be multicollinearity in the features, and the negative coefficient also shows the model might focus on fitting the noise and thus giving a questionable output, so I need to take some measures to reduce this multicollinearity. To explain this explicitly, an employee who thinks their supervisor is helpful (suphelp) and caring (supcares) is very likely to agree that they can trust the management at work (trusting). So it is not hard to imagine when holding supervisors' help and caring constant, there might not be much variance in trusting the management at work that could affect the attitude on promotion prospect. I think this is also the case for many of the variables in the model in table 2.

Considering the above problems in my first multiple linear regression model, I decided to combine some of the eight independent variables to reduce multicollinearity.

4.2 Multiple Linear Regression Model with scaled independent variables

To alleviate multicollinearity, I decided to combine six of the eight independent variables ("trusting", "suphelp", "supcares", "promfair", "wkfreedm", "enoughtime") since they all measure the same underlying idea that if employees could trust the management at work. A trusting relationship at workplace could be explored by those variables such as in general do you think you could trust the management (trusting), whether you think your supervisors is helpful and caring (suphelp, supcares); do you think promotions are handled fairly by your manager (promfair); do you think you are given

enough time and freedom to get your work done (wkfreedm, enoughtime).

I calculated the Cronbach's alpha score of the six variables to see if there is indeed a close correlation between them, and a high alpha score could help confirm that.

Table 3

raw_alpha <dbl>	std.alpha <dbl>	G6(smc) <dbl>	average_r <dbl>	S/N <dbl>	ase <dbl>	mean <dbl>	sd <dbl>
0.7828806	0.7820954	0.7604047	0.3742938	3.589165	0.004732001	3.182804	0.6039391

Table 3 shows that the Cronbach's alpha score of the six variables is 0.78, so it confirms that those six variables are highly correlated and it is reasonable to combine them together to create a new scale. In order to do this, I made a new single variable by calculating the row means of the six variables. The new variable is called "trustmanage" and table 4 shows the descriptive statistics of this new variable. We could see that the mean score for "trustmanage" is 3.18, lying between agree(3) and strongly agree(4).

Table 4

	count	mean	std	min	25%	50%	75%	max
trustmanage	1164.0	3.182804	0.603939	1.0	2.833333	3.333333	3.666667	4.0

Table 5 shows the result of the multiple linear regression after scaling and combining six of the variables. The coefficient of "trustmanage" is 0.39 ($P < 0.001$). It is very statistically significant compared to the original model, and the magnitude also increased, confirming that there is a positive impact of a trusting relationship between managers and employees on employees' promotion prospects. On average, for each category more trust employees have in the management at work, they are 0.39 points more likely to feel they could be promoted, controlling fringe benefits and job securities. The coefficients for fringe benefits and job security are still significant, suggesting those two features could also explain variance in promotion aspects. Specifically, on average, for one level stronger someone agrees that they are treated with decent fringe benefits for their work, they are 0.18 points higher in believing they could be promoted, controlling job security. An

increase of one category in trusting the job security is good also results in a 0.10 points increase in believing the promotion chances are good on average, holding fringe benefits constant.

However, there are still some limitations to the model. We could notice that the adjusted R square decreases from 0.23 to 0.17, which is a drawback from scaling and combining the six variables. Also, the model didn't consider how controlling variables could affect promotion prospects. For example, age, education, marriage status, and the number of children might also affect employees' promotion prospects, and I included those variables in the following model.

Table 5

OLS Regression Results

Dep. Variable:	promo	R-squared:	0.166
Model:	OLS	Adj. R-squared:	0.164
Method:	Least Squares	F-statistic:	74.28
Date:	Mon, 29 Mar 2021	Prob (F-statistic):	8.03e-44
Time:	20:45:25	Log-Likelihood:	-1511.2
No. Observations:	1125	AIC:	3030.
Df Residuals:	1121	BIC:	3050.
Df Model:	3		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
Intercept	0.3788	0.154	2.461	0.014	0.077	0.681
trustmanage	0.3914	0.053	7.428	0.000	0.288	0.495
fringeok	0.1873	0.028	6.669	0.000	0.132	0.242
jobsecok	0.1030	0.035	2.915	0.004	0.034	0.172

Omnibus:	53.865	Durbin-Watson:	1.959
Prob(Omnibus):	0.000	Jarque-Bera (JB):	31.351
Skew:	-0.258	Prob(JB):	1.56e-07
Kurtosis:	2.366	Cond. No.	32.0

Notes:
[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

4.3 Adding controlling variables

Demographic variables such as age, gender, race and socioeconomic status such as education and work prestige could also affect promotion prospects at the same time. For example, many articles discuss glass ceilings faced by female employees, so I would like

to explore if females indeed feel less likely to be promoted in the dataset. I would also like to explore if race also affects people's confidence in the promotion. Do minority groups feel less likely to be promoted? How is age related to the promotion prospects? What's the role of socioeconomic status? How does promotion prospects differ among groups of people with different education background, work prestige and years of working? To explore those questions, I decided to add the following controlling variables to the model. For all the variables, I deleted "no answers" and "Don't know" because they are not informative.

-age: respondents' age (from 18 - 89)

-educ: respondents' education years (from 0 - 20 years)

-sex: respondents' gender (1 = male, 2 = female)

-race1: recoded from "race" (1 = White, 2 = Black and Other))

-yearsjob: How long respondents have worked in the present job (from 0.25 year to 50 years)

-prestg80: the respondent's occupational prestige score (1980) (from 17 to 86; the high higher score means higher occupation prestige)

Table 6 is the descriptive statistic for the control variables, using all the data in the whole dataset.

Table 6

variable	count	mean	std	min	25%	50%	75%	max
age	4857.0	49.277949	17.210328	18.00	35.0	49.0	62.0	89.0
educ	4891.0	13.566142	3.062784	0.00	12.0	13.0	16.0	20.0
sex	4901.0	1.565191	0.495783	1.00	1.0	2.0	2.0	2.0
race1	4901.0	0.770455	0.420583	0.00	1.0	1.0	1.0	1.0
yearsjob	1156.0	7.956315	8.906898	0.25	2.0	5.0	11.0	50.0
prestg80	4901.0	41.760253	16.879098	0.00	31.0	42.0	51.0	86.0

Table 7 shows the descriptive statistics of control variables after dropping NA values for the independent variables “trustmanage”, “fringeok”, “jobsecok”. I think this would be more accurate because only the respondents with non-NA values on independent variables are taken into the regression model, so it is more suitable to just look at those respondents’ demographic and socioeconomic information.

Table 7

variable	count	mean	std	min	25%	50%	75%	max
age	1128.0	43.539894	13.673471	18.00	32.0	43.0	54.0	88.0
educ	1128.0	13.978723	3.024814	0.00	12.0	14.0	16.0	20.0
sex	1128.0	1.531915	0.499202	1.00	1.0	2.0	2.0	2.0
race1	1128.0	0.775709	0.417299	0.00	1.0	1.0	1.0	1.0
yearsjob	1128.0	7.985151	8.933412	0.25	2.0	5.0	11.0	50.0
prestg80	1128.0	43.223404	15.477255	0.00	32.0	44.0	52.0	86.0

The result didn’t differ much from the table6. We could see the average age of our respondents is 44, with a standard deviation of 14. Respondents on average have 14 years of education, 8 years of working on the current job with 44 job prestige. Years of job and prestige of job varies a lot according to the standard deviation. There’re almost half females and half males, more Caucasians on average.

Table 8 shows the multiple linear regression results after adding the controlling variables.

We could see that R square increased from 0.16 to 0.20, confirming that some of the variances in promotion prospects are explained by those control variables. Most of the coefficients are statistically significant. On average, getting one year older and one year more education decreases one’s promotion prospects by 0.01 and 0.03 points, respectively, controlling other variables. Females are 0.12 points lower of feeling they could be promoted than males on average, also statistically significant (P = 0.024), net of other variables. People who are in the minority group feel 0.17 points lower of getting promoted

than people who are white, holding other variables constant (P = 0.009). The results fit my assumptions mostly. I expected that females might feel less optimistic about promotion given many factors such as discrimination and glass ceilings at work, so it is with people who are not white. People with higher education might start with a higher salary job so that promotion might feel harder for them.

I also assumed that as people's working year on the job increases, they might accumulate more resources and experience, thus feeling more optimistic about promotion. However, the coefficient for "yearsjob" is not statistically significant, probably because I included the factor age in the model, and controlling age leaves few variances in years of job, so I decided to exclude age next. Job prestige also relates to education, so I think excluding it might be more appropriate.

Table 8

OLS Regression Results

Dep. Variable:	promo	R-squared:	0.209
Model:	OLS	Adj. R-squared:	0.202
Method:	Least Squares	F-statistic:	32.42
Date:	Wed, 31 Mar 2021	Prob (F-statistic):	8.54e-51
Time:	11:41:46	Log-Likelihood:	-1468.2
No. Observations:	1117	AIC:	2956.
Df Residuals:	1107	BIC:	3007.
Df Model:	9		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
Intercept	1.3547	0.220	6.162	0.000	0.923	1.786
trustmanage	0.4208	0.052	8.103	0.000	0.319	0.523
fringeok	0.1996	0.028	7.190	0.000	0.145	0.254
jobsecok	0.0959	0.035	2.762	0.006	0.028	0.164
age	-0.0109	0.002	-4.858	0.000	-0.015	-0.006
educ	-0.0257	0.010	-2.502	0.012	-0.046	-0.006
sex	-0.1233	0.055	-2.253	0.024	-0.231	-0.016
race1	-0.1722	0.066	-2.610	0.009	-0.302	-0.043
yearsjob	-0.0025	0.004	-0.704	0.482	-0.009	0.004
prestg80	0.0022	0.002	1.113	0.266	-0.002	0.006

Omnibus:	29.343	Durbin-Watson:	2.011
Prob(Omnibus):	0.000	Jarque-Bera (JB):	22.077
Skew:	-0.248	Prob(JB):	1.61e-05
Kurtosis:	2.522	Cond. No.	536.

Table 9 shows the result after excluding age and prestige of job because they are highly

related to years of job and education respectively. As I expected, the coefficient of "yearsjob" is statistically significant now but it is not what I assumed. On average, controlling other variables, the coefficient shows that spending one year more on the current job decreases one's promotion prospect for 0.01 points. However, the magnitude is very minimal, so the effect of years of job on promotion prospects might be less prominent.

Table 9

OLS Regression Results

Dep. Variable:	promo	R-squared:	0.191
Model:	OLS	Adj. R-squared:	0.186
Method:	Least Squares	F-statistic:	37.36
Date:	Wed, 31 Mar 2021	Prob (F-statistic):	3.66e-47
Time:	12:10:56	Log-Likelihood:	-1480.7
No. Observations:	1117	AIC:	2977.
Df Residuals:	1109	BIC:	3017.
Df Model:	7		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
Intercept	1.0009	0.209	4.793	0.000	0.591	1.411
trustmanage	0.4041	0.052	7.722	0.000	0.301	0.507
fringeok	0.2034	0.028	7.261	0.000	0.148	0.258
jobsecok	0.1079	0.035	3.082	0.002	0.039	0.177
educ	-0.0214	0.009	-2.317	0.021	-0.039	-0.003
sex	-0.1271	0.055	-2.298	0.022	-0.236	-0.019
race1	-0.1933	0.066	-2.912	0.004	-0.323	-0.063
yearsjob	-0.0099	0.003	-3.146	0.002	-0.016	-0.004

Omnibus:	36.003	Durbin-Watson:	2.005
Prob(Omnibus):	0.000	Jarque-Bera (JB):	25.755
Skew:	-0.265	Prob(JB):	2.55e-06
Kurtosis:	2.477	Cond. No.	138.

Notes:
[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

4.4 Adding interactions

According to the previous result in table 9, trust in management does play an important role in one's promotion aspects. In this section, I would like to explore how that effect differs between different groups of people, especially married and currently not married people. I expect that after involving in marriage, people might devote more time to their family and children, and sometimes it is hard to balance between work and family, so there

might be other stronger factors such as how much time they need to spend on taking care of their children that affecting their promotion prospects, rather than trust in the management. They are possible to feel less optimistic about making progress in their career. So I would like to explore more about that. Below is the descriptive statistic of the marriage status.

-married: I recoded the original variable "marital". 0 = currently not married, including widowed, divorced, separated, never married), 1 = married. Table 10 shows the distribution. The number of married and not married people almost split even. Most of the people who are currently not married never married.

Table 10

	not married(0)	married(1)
Married	0	540
Widowed	38	0
Divorced	192	0
Separated	37	0
Never married	321	0

Table 11

OLS Regression Results

Dep. Variable:	promo	R-squared:	0.194
Model:	OLS	Adj. R-squared:	0.188
Method:	Least Squares	F-statistic:	29.66
Date:	Wed, 31 Mar 2021	Prob (F-statistic):	1.38e-46
Time:	21:56:49	Log-Likelihood:	-1478.3
No. Observations:	1117	AIC:	2977.
Df Residuals:	1107	BIC:	3027.
Df Model:	9		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
Intercept	0.7463	0.247	3.016	0.003	0.261	1.232
C(married)[T.1.0]	0.5519	0.297	1.860	0.063	-0.030	1.134
trustmanage	0.4886	0.066	7.360	0.000	0.358	0.619
trustmanage:C(married)[T.1.0]	-0.1869	0.092	-2.040	0.042	-0.367	-0.007
fringeok	0.2068	0.028	7.357	0.000	0.152	0.262
jobsecok	0.1079	0.035	3.080	0.002	0.039	0.177
educ	-0.0216	0.009	-2.342	0.019	-0.040	-0.003
sex	-0.1308	0.055	-2.361	0.018	-0.240	-0.022
race1	-0.1844	0.067	-2.754	0.006	-0.316	-0.053
yearsjob	-0.0099	0.003	-3.131	0.002	-0.016	-0.004

Omnibus:	36.588	Durbin-Watson:	2.003
Prob(Omnibus):	0.000	Jarque-Bera (JB):	25.833
Skew:	-0.262	Prob(JB):	2.46e-06
Kurtosis:	2.471	Cond. No.	232.

Notes:
[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.

Table 11 shows the results when the interaction is included. The coefficient of the interaction is -0.19 ($P < 0.05$), which means the magnitude of the effect of trusting relationship on promotion prospect did differ from the married and unmarried group. Specifically, holding other variables constant, on average, married people feel 0.19 points lower of getting promoted than unmarried people for each category stronger they feel they could trust the management at work. Unmarried respondents on average feel 0.49 points higher to believe they have good chances to be promoted for each category more strongly they feel they could trust the management at work, holding other variables constant, while married respondents feel 0.30 (0.49-0.19) points higher with promotion prospect when trust increases one unit. So as I expected, marriage is a factor affecting trust relationship and promotion prospects.

5. Final Model

Compared to the original model, my final model combined six of the eight independent

variables, added controlling variables and interaction terms. I also added the number of children in my last model, because after examining the effect of marriage, I assume that the more children respondents have, they might be more exhausted and less likely to feel optimistic about promotion. Table 12 is the result of my final model.

All the coefficients for the variables seem to be statistically significant. We could see that a trusting relationship between managers and employees indeed has a positive effect on respondents' promotion prospects. Controlling other variables, on average, for one unit deeper the trust is on management, respondents report 0.5 points higher in believing their promotion chances are good and statistically significant. The magnitude of the impact of trust on promotion varies between the married group and unmarried group. Feeling satisfied in job fringe and that job security is good also play an important role in increasing one's confidence level in promotion. In terms of the controlling variables, controlling trust on management, on average, people with higher education tend to feel less positive about promotion, probably because they start their job on a higher level, so promotion is more competitive and challenging. Women and minorities also report a more negative attitude on promotion, and the magnitude is relatively large; the level of confidence is 0.12 points lower for women and 0.20 points lower for minorities on average, holding other variables constant, which is still an alert for us even the sample size is small (1117 observations). The number of children is also an indicating factor, as I expected, holding other variables constant, and on average, for each additional child a respondent has, they are 0.06 points less optimistic about promotion. The effect of years on job on promotion is really minimal somehow (-0.0081), holding all the other variables constant, which is not as I expected. I assume that after some years on the job, people would accumulate some experience and feel more confident on promotion. The result suggests that years on the job might be less important than the other variables in the model when predicting job promotion because we could see that the effect is not very prominent when we hold other variables constant.

Table 12

OLS Regression Results

Dep. Variable:	promo	R-squared:	0.202
Model:	OLS	Adj. R-squared:	0.195
Method:	Least Squares	F-statistic:	27.98
Date:	Sun, 04 Apr 2021	Prob (F-statistic):	4.67e-48
Time:	11:47:05	Log-Likelihood:	-1472.9
No. Observations:	1117	AIC:	2968.
Df Residuals:	1106	BIC:	3023.
Df Model:	10		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
Intercept	0.9133	0.252	3.629	0.000	0.420	1.407
C(married)[T.1.0]	0.6037	0.296	2.041	0.042	0.023	1.184
trustmanage	0.4955	0.066	7.492	0.000	0.366	0.625
trustmanage:C(married)[T.1.0]	-0.1878	0.091	-2.060	0.040	-0.367	-0.009
fringeok	0.2010	0.028	7.168	0.000	0.146	0.256
jobsecok	0.1137	0.035	3.254	0.001	0.045	0.182
educ	-0.0301	0.010	-3.160	0.002	-0.049	-0.011
sex	-0.1235	0.055	-2.236	0.026	-0.232	-0.015
race1	-0.2022	0.067	-3.023	0.003	-0.333	-0.071
yearsjob	-0.0081	0.003	-2.541	0.011	-0.014	-0.002
childs	-0.0636	0.020	-3.253	0.001	-0.102	-0.025

Omnibus:	33.382	Durbin-Watson:	1.997
Prob(Omnibus):	0.000	Jarque-Bera (JB):	24.270
Skew:	-0.257	Prob(JB):	5.37e-06
Kurtosis:	2.493	Cond. No.	233.

6. Limitation and Conclusion

In general, the relationship between trust in the management and promotion prospect is as I expected. However, there are still several noticeable limitations of the model.

Firstly, the GSS 2010 data is the panel data, but I used it on a naive regression model so there might be misinterpretations. The sample size is relatively small even fitting the naive model, only 1117 observations, so there might not be sufficient variance in those samples to jump in the conclusion that a trusting relationship is important to the confidence level in promotion. Secondly, the adjusted R square is actually less than the original model, from 0.23 to 0.20, even after adding all the control variables and interactions. The R square is largely affected by combing several variables into a single variable. In this case, I would trade a higher R square for the significant relationship between independent and dependent variables, but it is still worth further consideration. Thirdly, I used the linear regression model, which essentially treats my ordinal variables as continuous variables and could lead

to a large interpretation bias. However, I think a clearer and more understandable interpretation weighs more in this topic, so I still use multiple linear regression. Lastly, the promotion prospect is self-reported confidence level in promotion but not the fact, and self-reported confidence might be subject to many other psychological factors such as the happiness of one's life overall; more simply, if the respondent had a rough day at work when they filled out the questionnaire, they might select that their promotion chances were really low even if their job went really well most of the time, so the unstableness of the self-reported promotion prospect could also lead to some bias and misinterpretation.