



SEM Brief 5: Total Pay, Bonus Pay and Hourly Pay

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Main conclusion: Workers in Better Work factories earn USD 15.17 more per month and earn USD 2.92 more per month in bonus pay than other workers. However, the Better Work treatment effect on hourly compensation is not statistically significant. Pay and working conditions are positively correlated, indicating an efficiency wage story rather than a compensating differential story. Piece rate pay significantly increases pay.

The most likely source of the Better Work treatment effect on total pay is enforcement of the minimum wage. The channel does not involve representation, voicing, training, empowerment, etc.

The mediators of the Better Work treatment on bonus pay were more effectively identified. Better Work reduces the fraction of pay that is piece rate, improves formal representation and voicing mechanisms and increases the comfort of workers seeking help from supervisors, managers, the worker committee and the union. These are all associated with increased bonus pay.

Better Work does not have a reduced form treatment effect on hourly pay. However, we do detect a channel through Better Work to hourly compensation. Workers in Better Work factories are more likely to report being paid overtime as soon as the regular workday is complete. This fact increases hourly compensation by USD 1.07 per hour.

1. Reduced Form

We begin first considering the impact of Better Work on the variables that are theoretically important for determining pay. Treatment effects are reported in Table 5.1.

As discussed elsewhere, workers in Better Work factories work 1.4 hours less per week than other workers (column 1). They are also more likely to be paid properly for overtime (column 2). It is a common practice to withhold overtime pay until after a worker has completed their target or to not even pay overtime at all. Compliance, however, requires that firms pay overtime as soon as the regular workday (8 or 9 hours) is complete. Workers in Better Work factories are seven percent more likely to be paid overtime correctly than other workers.

Better Work also reduces the probability of exclusive reliance on piece rate pay (column 3). They are also more likely to have formal representation mechanisms (column 5) and feel comfortable asking for help from supervisory personnel (column 6). Workers in Better Work factories report less workplace abuse (column 7) but they are more likely to fear losing their job (column 8). While a fear of losing one's job could reflect coercive power, it appears in this case that this item is capturing an efficiency wage effect. Fear of losing one's job is a reflection of the fact that the job with their current employer is more desirable than their outside option. Our reason for believing that this indicator is capturing an efficiency wage effect is that it also predicts a shorter work week.

Total pay and bonus pay are also higher in Better Work factories, as can be seen in columns 9 and 10. Workers in Better Work factories earn USD 15.17 more per month and USD 2.92 more per month in bonus pay. However, the Better Work treatment effect on hourly pay, while positive, is not statistically significant, as can be seen in column 11.

2. Theory

As a matter of theory, pay should be determined by the number of hours worked, some basic demographic characteristics that reflect productivity, the amount of training a worker has received and the overall functioning of an organization. A well-functioning organization has strong communication and problem-solving mechanisms and low levels of abuse.

The theoretical predictors of total pay, bonus pay and hourly pay are explored in Table 5.2. Consider first, the length of the workweek. A bit surprisingly, the longer the workweek, the lower total pay (column 1) and the lower hourly pay (column 3). One might expect that a longer workweek would at least predict higher total pay. However, evidently, this is not the case. It is possible, indeed likely, that the length of the workweek is actually a consequence of low productivity. Factories with a low efficiency rate will require a longer work week in order to meet their production target. Note similarly, that workers who often work on their day off (Day_Off) also receive lower total pay and hourly pay. Though, these workers do receive bonus pay for working on their day off, as is required by law.

Work in a Better Work factory is also associated with higher total pay. Note, though, that when we control for other theoretical variables, the BW treatment effect on bonus pay disappears.

As theory predicts, better workplace systems increase pay. Workers who feel comfortable asking for help from supervisors, the HR department and the union, etc., earn higher total pay (USD 6.26 more per month) and higher bonus pay (USD 2.22 more per month). Training increased the hourly compensation. Each one unit increase in a worker's perception of the adequacy of training increases hourly pay by USD 0.33, a quite large effect. However, the aspects of workplace functioning captured by the Empowerment variable have no effect on pay.

However, workplaces with strong worker voice mechanisms (Representation, Union) are not generally associated with higher pay. In fact, pay is lower. The only exception is that workers in factories with strong representation earn more overtime pay (USD 4.11 per month).

Consider, next, the pay structure. Workers who are paid piece rate earn USD 1.507 more per hour than other workers. Workers who have part of their pay determined by productivity earn USD 7.69 more per month.

Finally, do workers earn less as compensation for humane conditions of work? The answer to that question is no. Workers who report workplace abuse earn USD 7.84 less per month for each unit increase in abuse reported and USD 2.75 less in bonus pay per month.

This last finding is a very important result. Workers are not trading off working conditions and pecuniary pay. Pay is higher when the work week is shorter, workplace abuse is low and workers are comfortable asking for help from supervisors, managers, the union and the worker committee. This finding, again, suggests that above market premium pay is reflecting an efficiency wage rather than compensation for abuse.

3. Simultaneous Equation Modeling (SEM)

Lastly, we turn to identify the channels through which Better Work has its treatment effect. The SEM for total pay is presented in Figure 5.1, bonus pay in Figure 5.2 and hourly pay in Figure 5.3.

Consider first, total monthly pay USD. There are Better Work treatment effects on Empowerment, compliant overtime pay, piece rate pay, representation, union membership, comfort asking for help, fear of losing ones' job and the length of the work week. The working conditions that predict pay are work abuse and days off, neither of which have an associated Better Work treatment effect in the SEM. The Better Work treatment effect is largely unchanged in magnitude from the reduced form, but now, no longer statistically significant. These results indicate that we have not identified the source of the Better Work treatment effect on total pay. The most likely explanation is that Better Work pushes firms to comply with minimum wage law.

We were more successful in characterizing the contribution of Better Work to overtime pay. In the SEM, Better Work is affecting empowerment, overtime pay practices, piece rate, representation, union membership, comfort seeking help, fear of losing one's job and the length of the work week. Bonus pay is determined by workplace abuse, whether workers are receiving some of the pay as bonus pay, and comfort seeking help. These results indicate that the treatment channel on bonus pay is the Better Work treatment effect away from piece rate pay, toward part piece rate pay, representation mechanisms and comfort seeking help from supervisors, managers, the worker committee and the union.

The impact of Better Work on piece rate pay is, again, a reflection of enforcement of the minimum wage. Factories required to pay the minimum wage often reduce incentive pay as a fraction of total pay in order to become compliant with minimum wage law.

We also identify an important channel for Better Work to hourly compensation, even though there is no reduced form treatment effect. In the SEM, Better Work increases empowerment, compliant overtime pay practices, incentive pay, voicing mechanisms (representation, union membership, comfort seeking help) and fear of losing one's job. Of these, compliant overtime

pay practices increase hourly compensation. Workers who report receiving overtime pay as soon as the regular workday is complete earn USD 1.07 more per hour than other workers. This is a very large treatment effect.

Data Construction

Work_Week

What days of the week do you usually work?

What time do you begin and end each day you usually work?

monthlywageUSD

How often are you paid?

How much did you receive the last time you were paid?

Bonus_Pay_USD

Did you receive a production bonus the last time you were paid?

If yes on production bonus: How much was your bonus the last time you were paid?

USD_Hour

monthlywageUSD/ Work_Week

Training

OT_After

Do you get paid for overtime work? Yes, after 8 or 9 hours of work.

Piece_Rate, Time_Rate

Do you get paid by the piece or by time?

Day_Off

How many weeks per month do you work on your day off/Sunday?

Training (a= 0.6779) 5-point agree scale

Applicable_Training Overall, the on-the-job training I receive is applicable to my job.

Training_Needs Overall, the training I receive on the job meets my needs.

Representation (a= 0.6703) Binary

Union Are you a member of union?

Factory_Union Which of the following do you have in your factory? Union

Factory_Bargaining Which of the following do you have in your factory? A collective bargaining agreement

Factory_Committee Which of the following do you have in your factory? Worker-manager committee

Help (a= 0.8239) 5-point comfort scale

Supervisor_Help If you have a complaint or concern about work, how comfortable would you feel seeking help from Your supervisor

Coworker_Help If you have a complaint or concern about work, how comfortable would you feel seeking help from A co-worker

HR_Help If you have a complaint or concern about work, how comfortable would you feel seeking help from HR

Trade_Union_Help If you have a complaint or concern about work, how comfortable would you feel seeking help from The trade union

Committee_Help If you have a complaint or concern about work, how comfortable would you feel seeking help from A worker-manager committee

ComplaintBox_Help If you have a complaint or concern about work, how comfortable would you feel seeking help from Suggestion/Complaint box

Demographic Controls

Age

Factory_Experience

i.Position

i.Education

Female

i.Married

Work_Experience

changed_jobs

Factory Characteristics

Factories_Nearby Are there other factories nearby where you could get another job?

Vietnam

bw_factory

Time Control

endline

Figure 5.1 Monthly Pay USD SEM

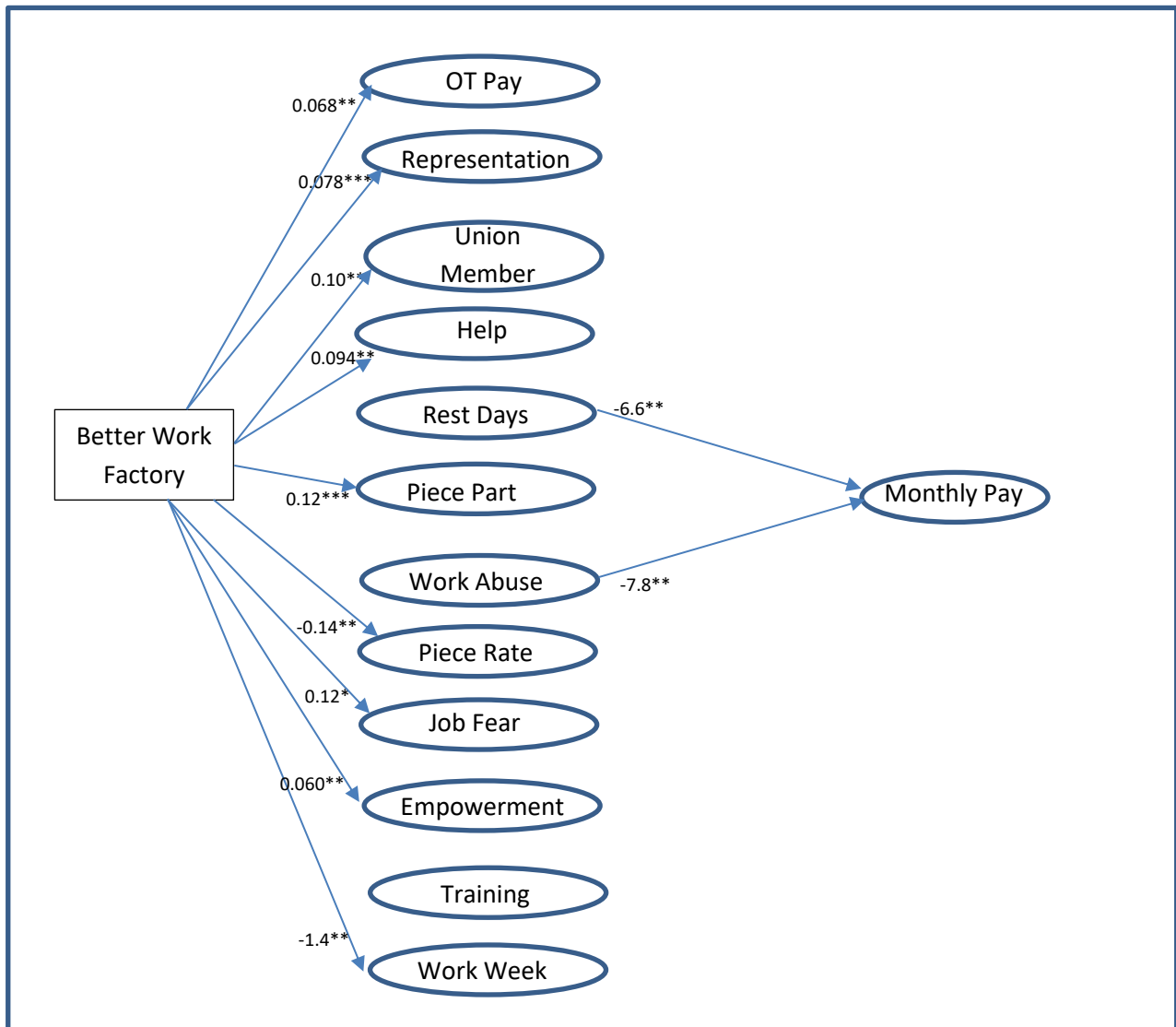


Figure 5.2 Bonus Pay USD SEM

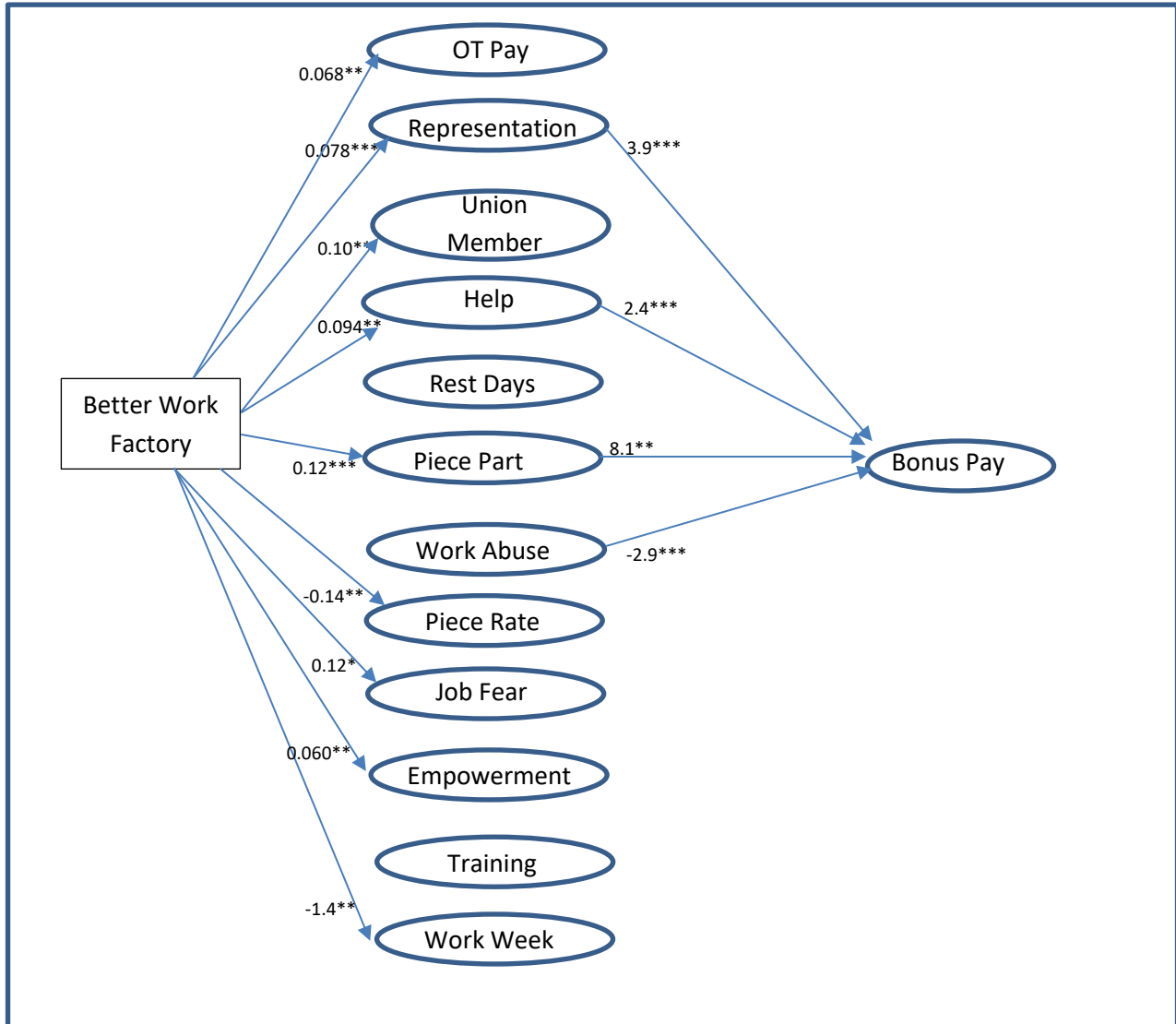


Figure 5.3 Hourly Pay USD SEM

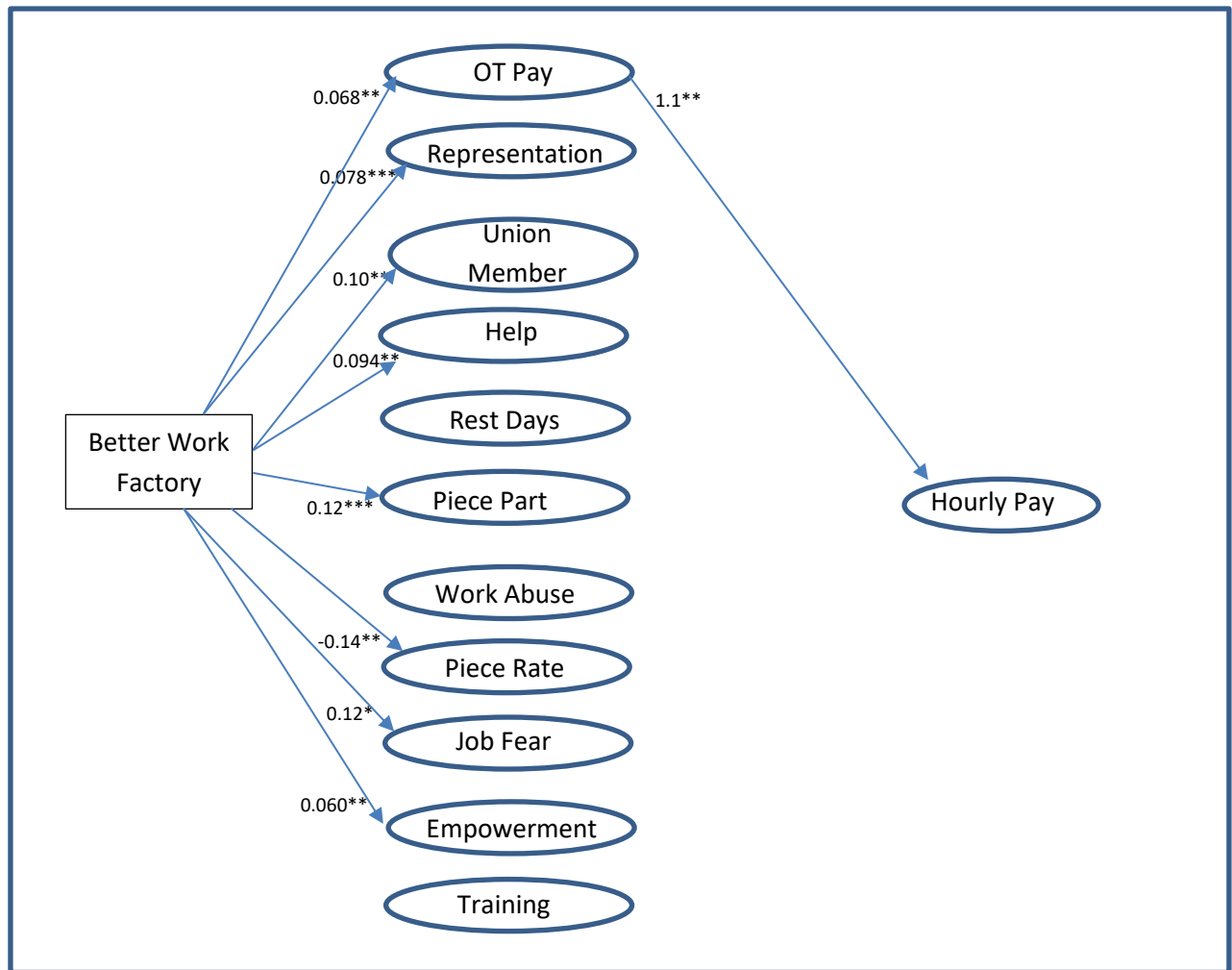


Table 5.1 Reduced Form Treatment Effect

VARIABLES	(1) Work Week	(2) Legal Overtime Pay	(3) Piece Rate	(4) Time Rate	(5) Representation	(6) Help	(7) Work Abuse	(8) Job Fear	(9) Monthly wage USD	(10) Bonus Pay USD	(11) USD Hour
bw_factory	-1.392*** (0.357)	0.0696*** (0.0136)	-0.140*** (0.0128)	0.0224 (0.0174)	0.0929*** (0.0116)	0.0931*** (0.0286)	-0.0935*** (0.0245)	0.124*** (0.0327)	15.17*** (3.898)	2.916*** (0.787)	0.0695 (0.247)
Constant	61.77*** (3.354)	0.582*** (0.123)	0.422*** (0.117)	0.259* (0.149)	0.562*** (0.106)	3.276*** (0.263)	2.424*** (0.216)	3.650*** (0.335)	104.4*** (36.64)	-4.195 (7.459)	-0.489 (2.317)
Observations	6,037	5,848	6,004	6,004	4,440	4,441	5,704	6,030	5,935	5,647	5,906
Number of uniqueID	3,577	3,501	3,545	3,545	2,771	2,918	3,410	3,564	3,496	3,430	3,495

Random Effects Panel Estimator

Demographic, Country, Time Controls

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 5.2 Pay Theoretical Model

VARIABLES	(1) monthlywageUSD	(2) Bonus_Pay_USD	(3) USD_Hour
Work_Week	-0.496** (0.195)	0.0293 (0.0389)	-0.519*** (0.00881)
bw_factory	13.74*** (5.189)	0.381 (1.104)	-0.109 (0.235)
Work_Abuse	-7.842** (3.183)	-2.748*** (0.639)	0.0822 (0.144)
Empowerment	6.878 (6.010)	1.944 (1.217)	0.166 (0.272)
Training	2.461 (4.170)	-0.462 (0.831)	0.326* (0.189)
OT_After_8_9	7.625 (5.727)	-1.974* (1.155)	-0.475* (0.259)
Piece_Rate	9.316 (5.772)	-0.770 (1.203)	1.507*** (0.261)
Piece_Part	-5.317 (5.285)	7.679*** (1.073)	0.0553 (0.239)
Day_Off	-6.610*** (2.042)	0.757* (0.409)	-0.229** (0.0923)
Representation	-12.64 (7.779)	4.105*** (1.563)	-0.776** (0.352)
Union	-12.79*** (4.702)	-1.636* (0.944)	-1.115*** (0.213)
Help	6.266* (3.216)	2.219*** (0.646)	0.139 (0.145)
Job_Fear	-0.647 (2.132)	0.0404 (0.432)	-0.0616 (0.0964)
Constant	142.0** (58.99)	-14.15 (11.62)	30.27*** (2.667)
Observations	3,314	3,203	3,314
Number of uniqueID	2,332	2,295	2,332

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Random Effects Panel Estimator