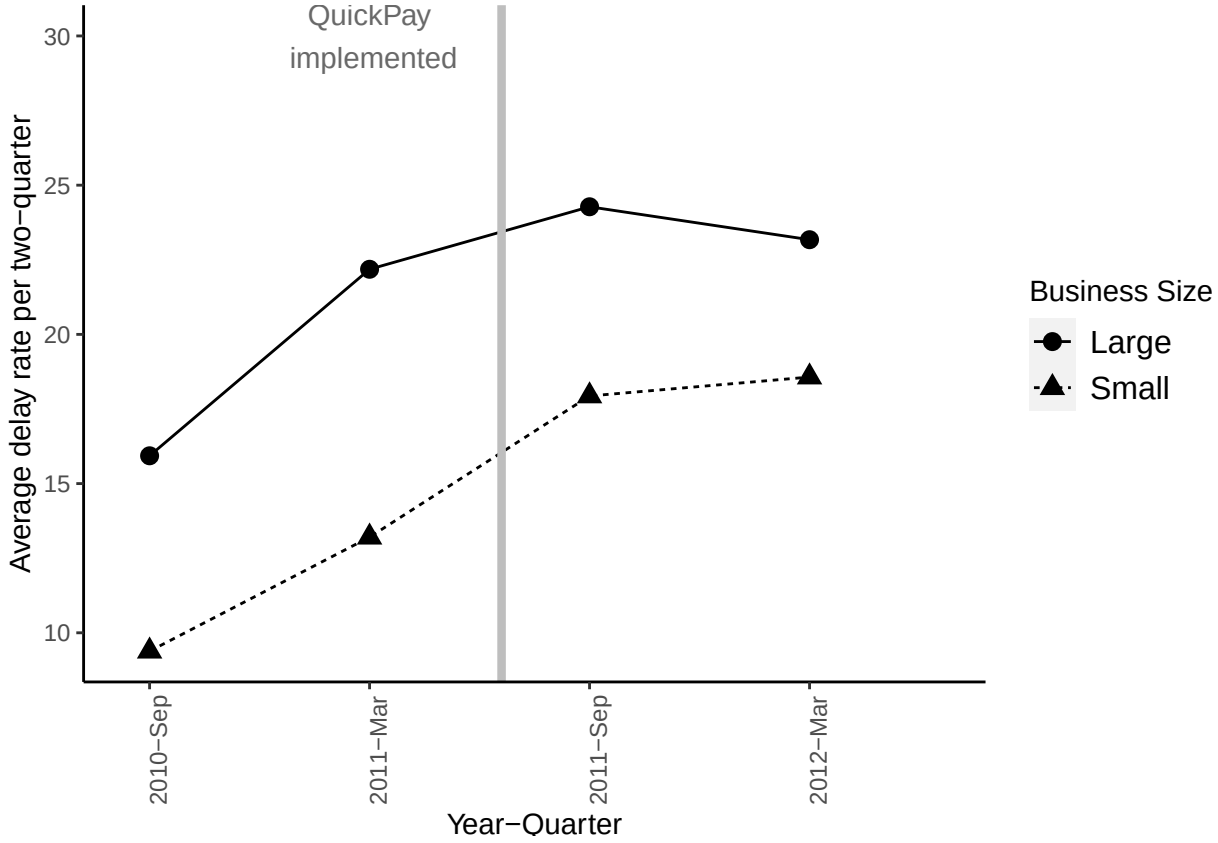
# Delay Rate (Two Quarters): QuickPay (2009-2012)

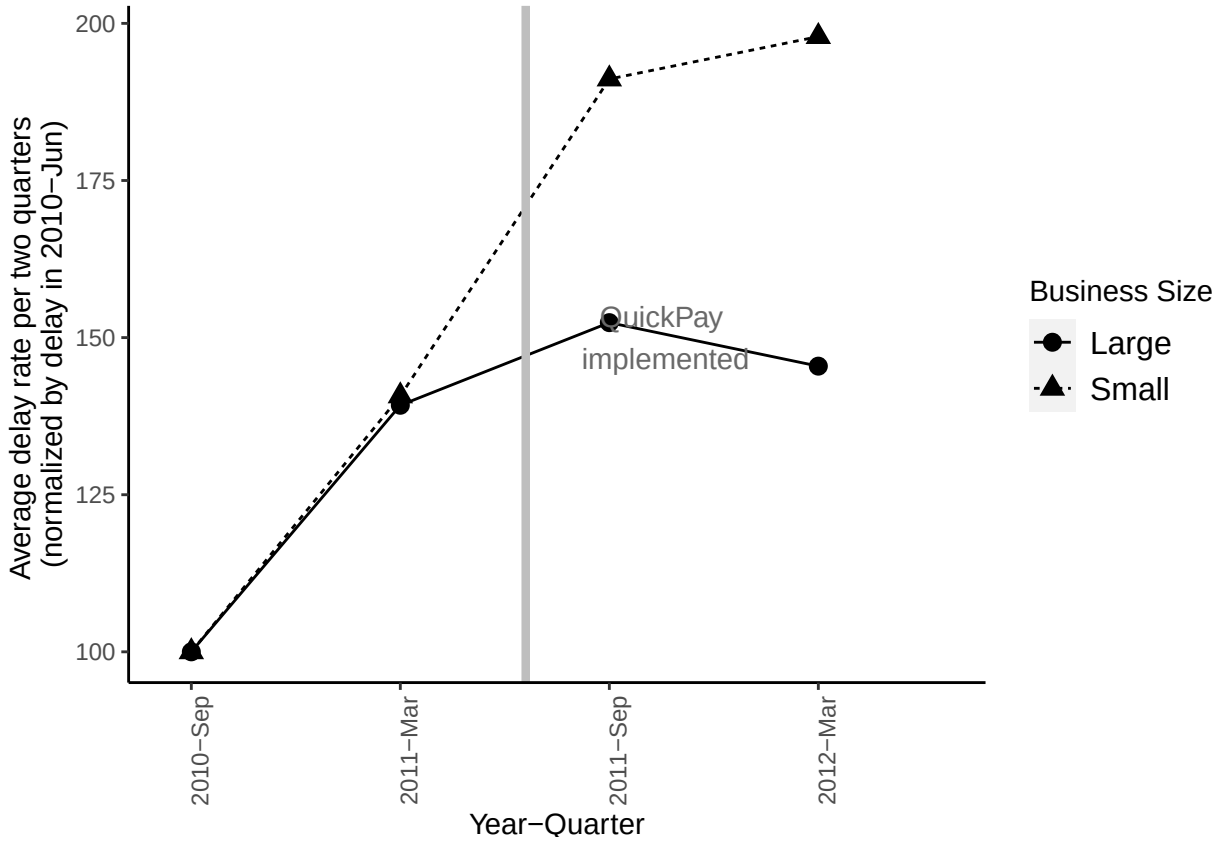
Jan 16, 2022

## 1 Delays over time

- Sample restricted to projects for which start dates matches the one in API
  - This is done by using first reported "action_date" and "date_signed"



### 1.1 Normalized delay rate




## 2 Full Sample Regressions

### 2.1 5% Winsorization

$$\begin{aligned} DelayRate_{it} = \quad & \alpha + \beta_0 Treat_i + \beta_1 Post_t + \beta_2 (Treat_i \times Post_t) \\ + \quad & X_i + (Post_t \times X_i) + \mu_t + \theta_{firm} + \lambda_{task} + \epsilon_{it} \end{aligned}$$

### 2.1.1 One Quarter

Table 1: Effect of QuickPay on project delay rates

| | $DelayRate_{it}$ | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| $Treat_i$ | $-3.34^{***}$ | $-2.72^{***}$ | $-2.70^{***}$ | $-2.07^{***}$ | $-2.14^{***}$ |
| | (0.15) | (0.15) | (0.15) | (0.15) | (0.15) |
| $Post_t$ | $1.02^{***}$ | $-1.01^{***}$ | | | |
| | (0.15) | (0.31) | | | |
| $Treat_i \times Post_t$ | $1.34^{***}$ | $1.62^{***}$ | $1.62^{***}$ | $1.33^{***}$ | $1.36^{***}$ |
| | (0.19) | (0.20) | (0.20) | (0.19) | (0.19) |
| Constant | $8.35^{***}$ | $16.93^{***}$ | | | |
| | (0.12) | (0.24) | | | |
| Duration, Budget, Bids | No | Yes | Yes | Yes | Yes |
| $Post_t \times$ (Duration, Budget, Bids) | No | Yes | Yes | Yes | Yes |
| Year-Quarter fixed effects | No | No | Yes | Yes | Yes |
| Task fixed effects | No | No | No | Yes | Yes |
| Industry fixed effects | No | No | No | No | Yes |
| Observations | 287,530 | 263,488 | 263,488 | 263,488 | 263,488 |
| $R^2$ | 0.004 | 0.05 | 0.06 | 0.09 | 0.10 |
| Adjusted $R^2$ | 0.004 | 0.05 | 0.06 | 0.09 | 0.09 |

*Note:* $^{*}$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01
Each observation is a project-quarter.
SEs are robust and clustered at the project level.

### 2.1.2 Two-Quarters

Table 2: Effect of QuickPay on project delay rates

| | $DelayRate_{it}$ | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| $Treat_i$ | $-7.99^{***}$ | $-6.23^{***}$ | $-6.24^{***}$ | $-4.40^{***}$ | $-4.37^{***}$ |
| | (0.42) | (0.43) | (0.43) | (0.44) | (0.44) |
| $Post_t$ | $4.05^{***}$ | $-1.52$ | | | |
| | (0.45) | (0.93) | | | |
| $Treat_i \times Post_t$ | $2.57^{***}$ | $3.36^{***}$ | $3.37^{***}$ | $2.64^{***}$ | $2.72^{***}$ |
| | (0.56) | (0.59) | (0.60) | (0.59) | (0.60) |
| Constant | $19.65^{***}$ | $36.57^{***}$ | | | |
| | (0.34) | (0.67) | | | |
| Duration, Budget, Bids | No | Yes | Yes | Yes | Yes |
| $Post_t\times$ (Duration, Budget, Bids) | No | Yes | Yes | Yes | Yes |
| Year-Quarter fixed effects | No | No | Yes | Yes | Yes |
| Task fixed effects | No | No | No | Yes | Yes |
| Industry fixed effects | No | No | No | No | Yes |
| Observations | 122,172 | 111,681 | 111,681 | 111,681 | 111,681 |
| $R^2$ | 0.01 | 0.06 | 0.06 | 0.12 | 0.12 |
| Adjusted $R^2$ | 0.01 | 0.06 | 0.06 | 0.11 | 0.11 |

*Note:* $^{*}$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01
Each observation is a project-quarter.
SEs are robust and clustered at the project level.

## 2.2 2.5% Winsorization

$$\begin{aligned} DelayRate_{it} = \quad & \alpha + \beta_0 Treat_i + \beta_1 Post_t + \beta_2 (Treat_i \times Post_t) \\ + \quad & X_i + (Post_t \times X_i) + \mu_t + \theta_{firm} + \lambda_{task} + \epsilon_{it} \end{aligned}$$

### 2.2.1 One Quarter

Table 3: Effect of QuickPay on project delay rates

| | $DelayRate_{it}$ | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| $Treat_i$ | $-5.22^{***}$ | $-4.32^{***}$ | $-4.30^{***}$ | $-3.21^{***}$ | $-3.25^{***}$ |
| | (0.23) | (0.24) | (0.24) | (0.24) | (0.24) |
| $Post_t$ | $2.22^{***}$ | $-0.48$ | | | |
| | (0.24) | (0.49) | | | |
| $Treat_i \times Post_t$ | $2.08^{***}$ | $2.64^{***}$ | $2.64^{***}$ | $2.18^{***}$ | $2.25^{***}$ |
| | (0.30) | (0.32) | (0.32) | (0.31) | (0.31) |
| Constant | $12.26^{***}$ | $23.63^{***}$ | | | |
| | (0.19) | (0.37) | | | |
| Duration, Budget, Bids | No | Yes | Yes | Yes | Yes |
| $Post_t\times$ (Duration, Budget, Bids) | No | Yes | Yes | Yes | Yes |
| Year-Quarter fixed effects | No | No | Yes | Yes | Yes |
| Task fixed effects | No | No | No | Yes | Yes |
| Industry fixed effects | No | No | No | No | Yes |
| Observations | 287,530 | 263,488 | 263,488 | 263,488 | 263,488 |
| $R^2$ | 0.004 | 0.04 | 0.04 | 0.07 | 0.07 |
| Adjusted $R^2$ | 0.004 | 0.04 | 0.04 | 0.07 | 0.07 |

*Note:* $^{*}$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01
Each observation is a project-quarter.
SEs are robust and clustered at the project level.

### 2.2.2 Two-Quarters

Table 4: Effect of QuickPay on project delay rates

| | $DelayRate_{it}$ | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| $Treat_i$ | $-10.70^{***}$ | $-8.44^{***}$ | $-8.46^{***}$ | $-5.53^{***}$ | $-5.34^{***}$ |
| | (0.59) | (0.62) | (0.62) | (0.63) | (0.64) |
| $Post_t$ | $6.48^{***}$ | $-1.54$ | | | |
| | (0.64) | (1.32) | | | |
| $Treat_i \times Post_t$ | $3.59^{***}$ | $4.99^{***}$ | $5.01^{***}$ | $3.84^{***}$ | $4.04^{***}$ |
| | (0.80) | (0.86) | (0.87) | (0.87) | (0.87) |
| Constant | $25.60^{***}$ | $44.93^{***}$ | | | |
| | (0.49) | (0.94) | | | |
| Duration, Budget, Bids | No | Yes | Yes | Yes | Yes |
| $Post_t \times$ (Duration, Budget, Bids) | No | Yes | Yes | Yes | Yes |
| Year-Quarter fixed effects | No | No | Yes | Yes | Yes |
| Task fixed effects | No | No | No | Yes | Yes |
| Industry fixed effects | No | No | No | No | Yes |
| Observations | 122,172 | 111,681 | 111,681 | 111,681 | 111,681 |
| $R^2$ | 0.01 | 0.04 | 0.05 | 0.10 | 0.10 |
| Adjusted $R^2$ | 0.01 | 0.04 | 0.05 | 0.09 | 0.09 |

*Note:* $^{*}$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01
Each observation is a project-quarter.
SEs are robust and clustered at the project level.

## 2.3 2.5% Truncation

$$\begin{aligned} DelayRate_{it} = \quad & \alpha + \beta_0 Treat_i + \beta_1 Post_t + \beta_2 (Treat_i \times Post_t) \\ + \quad & X_i + (Post_t \times X_i) + \mu_t + \theta_{firm} + \lambda_{task} + \epsilon_{it} \end{aligned}$$

### 2.3.1 One Quarter

Table 5: Effect of QuickPay on project delay rates

| | $DelayRate_{it}$ | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| $Treat_i$ | $-3.09^{***}$ | $-2.56^{***}$ | $-2.54^{***}$ | $-2.16^{***}$ | $-2.30^{***}$ |
| | (0.18) | (0.18) | (0.18) | (0.18) | (0.18) |
| $Post_t$ | 0.26 | $-1.43^{***}$ | | | |
| | (0.18) | (0.38) | | | |
| $Treat_i \times Post_t$ | $1.16^{***}$ | $1.28^{***}$ | $1.26^{***}$ | $1.09^{***}$ | $1.09^{***}$ |
| | (0.22) | (0.23) | (0.23) | (0.23) | (0.23) |
| Constant | $7.67^{***}$ | $17.07^{***}$ | | | |
| | (0.15) | (0.30) | | | |
| Duration, Budget, Bids | No | Yes | Yes | Yes | Yes |
| $Post_t \times$ (Duration, Budget, Bids) | No | Yes | Yes | Yes | Yes |
| Year-Quarter fixed effects | No | No | Yes | Yes | Yes |
| Task fixed effects | No | No | No | Yes | Yes |
| Industry fixed effects | No | No | No | No | Yes |
| Observations | 277,791 | 253,749 | 253,749 | 253,749 | 253,749 |
| $R^2$ | 0.002 | 0.04 | 0.05 | 0.09 | 0.09 |
| Adjusted $R^2$ | 0.002 | 0.04 | 0.05 | 0.08 | 0.08 |

*Note:* $^{*}$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01
Each observation is a project-quarter.
SEs are robust and clustered at the project level.

### 2.3.2 Two-Quarters

Table 6: Effect of QuickPay on project delay rates

| | $DelayRate_{it}$ | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| $Treat_i$ | $-8.68^{***}$ | $-6.83^{***}$ | $-6.85^{***}$ | $-5.20^{***}$ | $-5.24^{***}$ |
| | (0.52) | (0.55) | (0.55) | (0.55) | (0.55) |
| $Post_t$ | 0.23 | $-3.90^{***}$ | | | |
| | (0.55) | (1.13) | | | |
| $Treat_i \times Post_t$ | $3.50^{***}$ | $3.92^{***}$ | $3.92^{***}$ | $3.15^{***}$ | $3.17^{***}$ |
| | (0.68) | (0.74) | (0.74) | (0.73) | (0.74) |
| Constant | $21.25^{***}$ | $38.94^{***}$ | | | |
| | (0.43) | (0.84) | | | |
| Duration, Budget, Bids | No | Yes | Yes | Yes | Yes |
| $Post_t\times$ (Duration, Budget, Bids) | No | Yes | Yes | Yes | Yes |
| Year-Quarter fixed effects | No | No | Yes | Yes | Yes |
| Task fixed effects | No | No | No | Yes | Yes |
| Industry fixed effects | No | No | No | No | Yes |
| Observations | 118,197 | 107,706 | 107,706 | 107,706 | 107,706 |
| $R^2$ | 0.004 | 0.05 | 0.05 | 0.10 | 0.10 |
| Adjusted $R^2$ | 0.004 | 0.05 | 0.05 | 0.09 | 0.09 |

*Note:* $^{*}$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01
Each observation is a project-quarter.
SEs are robust and clustered at the project level.

# 3 Logistic Regression for Positive Delays

## 3.1 One Quarter

## 3.2 Two Quarter

# 4 Sample with Non-Zero Delays

## 4.1 5% winsorization on full sample

$$\begin{aligned} DelayRate_{it} = \quad & \alpha + \beta_0 Treat_i + \beta_1 Post_t + \beta_2 (Treat_i \times Post_t) \\ + \quad & X_i + (Post_t \times X_i) + \mu_t + \theta_{firm} + \lambda_{task} + \epsilon_{it} \end{aligned}$$

- Winsorization on full sample replaces extreme values
- In this specific case, extreme lower bound values got replaced by zero
- That is, all negative delays get replaced by zero
- So in effect, when we are focusing on subsample with non-zero winsorized delay, we are looking at observations with positive actual delay. That is, we no longer have observations with negative real delay in the data.

| | $I(Delay_{it} > 0)$ | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| Constant | $-2.05^{***}$ | $-0.94^{***}$ | | | |
| | (0.01) | (0.02) | | | |
| $Treat_i$ | $-0.42^{***}$ | $-0.24^{***}$ | $-0.24^{***}$ | $-0.17^{***}$ | $-0.20^{***}$ |
| | (0.02) | (0.02) | (0.02) | (0.03) | (0.03) |
| $Post_t$ | $0.10^{***}$ | $-0.32^{***}$ | | | |
| | (0.02) | (0.03) | | | |
| $Treat_i \times Post_t$ | $0.18^{***}$ | $0.16^{***}$ | $0.16^{***}$ | $0.13^{***}$ | $0.13^{***}$ |
| | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| Duration, Budget, Bids | No | Yes | Yes | Yes | Yes |
| $Post_t \times$ (Duration, Budget, Bids) | No | Yes | Yes | Yes | Yes |
| Year-Quarter FE | No | No | Yes | Yes | Yes |
| Task FE | No | No | No | Yes | Yes |
| Contractor FE | No | No | No | No | Yes |
| AIC | 192105.94 | 169728.46 | | | |
| BIC | 192148.21 | 169833.28 | | | |
| Log Likelihood | −96048.97 | −84854.23 | | | |
| Deviance | 192097.94 | 169708.46 | 168714.31 | 155008.15 | 154261.99 |
| Num. obs. | 287530 | 263488 | 263488 | 260905 | 260857 |

Each observation is a project-quarter. SEs are robust and clustered at the project level.

Table 7: Logistic Regression: One Quarter Delay

#### 4.1.1 One Quarter

Table 9: Effect of QuickPay on project delay rates

| | $DelayRate_{it}$ | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| $Treat_i$ | $-9.22^{***}$ | $-9.34^{***}$ | $-9.38^{***}$ | $-7.62^{***}$ | $-7.54^{***}$ |
| | (0.69) | (0.69) | (0.68) | (0.70) | (0.71) |
| $Post_t$ | $2.29^{***}$ | $-0.51$ | | | |
| | (0.54) | (0.78) | | | |
| $Treat_i \times Post_t$ | $6.78^{***}$ | $6.62^{***}$ | $6.67^{***}$ | $6.25^{***}$ | $6.56^{***}$ |
| | (0.82) | (0.82) | (0.81) | (0.80) | (0.81) |
| Constant | $73.51^{***}$ | $73.36^{***}$ | | | |
| | (0.45) | (0.61) | | | |
| Duration, Budget, Bids | No | Yes | Yes | Yes | Yes |
| $Post_t \times$ (Duration, Budget, Bids) | No | Yes | Yes | Yes | Yes |
| Year-Quarter fixed effects | No | No | Yes | Yes | Yes |
| Task fixed effects | No | No | No | Yes | Yes |
| Industry fixed effects | No | No | No | No | Yes |
| Observations | 30,138 | 30,130 | 30,130 | 30,130 | 30,130 |
| $R^2$ | 0.01 | 0.02 | 0.03 | 0.14 | 0.14 |
| Adjusted $R^2$ | 0.01 | 0.02 | 0.03 | 0.11 | 0.12 |

*Note:* $^{*}$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01
Each observation is a project-quarter.
SEs are robust and clustered at the project level.

| | $I(Delay_{it} > 0)$ | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| Constant | $-1.63^{***}$ | $-0.66^{***}$ | | | |
| | (0.02) | (0.03) | | | |
| $Treat_i$ | $-0.43^{***}$ | $-0.23^{***}$ | $-0.24^{***}$ | $-0.17^{***}$ | $-0.18^{***}$ |
| | (0.03) | (0.03) | (0.03) | (0.03) | (0.03) |
| $Post_t$ | $0.14^{***}$ | $-0.24^{***}$ | | | |
| | (0.02) | (0.04) | | | |
| $Treat_i \times Post_t$ | $0.17^{***}$ | $0.14^{***}$ | $0.15^{***}$ | $0.11^{***}$ | $0.11^{***}$ |
| | (0.03) | (0.04) | (0.04) | (0.04) | (0.04) |
| Duration, Budget, Bids | No | Yes | Yes | Yes | Yes |
| $Post_t \times$ (Duration, Budget, Bids) | No | Yes | Yes | Yes | Yes |
| Year-Quarter FE | No | No | Yes | Yes | Yes |
| Task FE | No | No | No | Yes | Yes |
| Contractor FE | No | No | No | No | Yes |
| AIC | 103653.12 | 90445.89 | | | |
| BIC | 103691.97 | 90542.12 | | | |
| Log Likelihood | −51822.56 | −45212.94 | | | |
| Deviance | 103645.12 | 90425.89 | 90246.58 | 81486.80 | 80974.48 |
| Num. obs. | 122172 | 111681 | 111681 | 110106 | 110066 |

Each observation is a project-quarter. SEs are robust and clustered at the project level.

Table 8: Logistic Regression: Two Quarter Delay

#### 4.1.2 Two Quarters

Table 10: Effect of QuickPay on project delay rates

| | $DelayRate_{it}$ | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| $Treat_i$ | $-16.47^{***}$ | $-16.73^{***}$ | $-16.59^{***}$ | $-12.45^{***}$ | $-11.87^{***}$ |
| | (1.60) | (1.60) | (1.59) | (1.64) | (1.66) |
| $Post_t$ | $9.03^{***}$ | $-0.10$ | | | |
| | (1.33) | (2.00) | | | |
| $Treat_i \times Post_t$ | $11.55^{***}$ | $11.12^{***}$ | $11.09^{***}$ | $10.11^{***}$ | $10.45^{***}$ |
| | (1.97) | (1.97) | (1.96) | (1.95) | (1.95) |
| Constant | $119.88^{***}$ | $122.61^{***}$ | | | |
| | (1.08) | (1.53) | | | |
| Duration, Budget, Bids | No | Yes | Yes | Yes | Yes |
| $Post_t \times$ (Duration, Budget, Bids) | No | Yes | Yes | Yes | Yes |
| Year-Quarter fixed effects | No | No | Yes | Yes | Yes |
| Task fixed effects | No | No | No | Yes | Yes |
| Industry fixed effects | No | No | No | No | Yes |
| Observations | 18,616 | 18,609 | 18,609 | 18,609 | 18,609 |
| $R^2$ | 0.02 | 0.03 | 0.03 | 0.18 | 0.18 |
| Adjusted $R^2$ | 0.02 | 0.02 | 0.03 | 0.14 | 0.14 |

*Note:* $^{*}$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01
Each observation is a project-quarter.
SEs are robust and clustered at the project level.

## 4.2 2.5% winsorization on non-zero sample

$$\begin{aligned} DelayRate_{it} = \quad & \alpha + \beta_0 Treat_i + \beta_1 Post_t + \beta_2 (Treat_i \times Post_t) \\ + \quad & X_i + (Post_t \times X_i) + \mu_t + \theta_{firm} + \lambda_{task} + \epsilon_{it} \end{aligned}$$

### 4.2.1 One Quarter

Table 11: Effect of QuickPay on project delay rates

| | $DelayRate_{it}$ | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| $Treat_i$ | $-24.72^{***}$ | $-24.71^{***}$ | $-24.59^{***}$ | $-15.28^{***}$ | $-13.41^{***}$ |
| | (2.43) | (2.44) | (2.42) | (2.49) | (2.54) |
| $Post_t$ | $15.46^{***}$ | 3.48 | | | |
| | (2.15) | (2.95) | | | |
| $Treat_i \times Post_t$ | $25.24^{***}$ | $24.34^{***}$ | $24.07^{***}$ | $22.04^{***}$ | $22.49^{***}$ |
| | (3.07) | (3.07) | (3.05) | (3.03) | (3.05) |
| Constant | $118.01^{***}$ | $124.90^{***}$ | | | |
| | (1.72) | (2.22) | | | |
| Duration, Budget, Bids | No | Yes | Yes | Yes | Yes |
| $Post_t \times$ (Duration, Budget, Bids) | No | Yes | Yes | Yes | Yes |
| Year-Quarter fixed effects | No | No | Yes | Yes | Yes |
| Task fixed effects | No | No | No | Yes | Yes |
| Industry fixed effects | No | No | No | No | Yes |
| Observations | 32,707 | 32,699 | 32,699 | 32,699 | 32,699 |
| $R^2$ | 0.01 | 0.02 | 0.02 | 0.14 | 0.15 |
| Adjusted $R^2$ | 0.01 | 0.02 | 0.02 | 0.12 | 0.12 |

*Note:* $^{*}$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01
Each observation is a project-quarter.
SEs are robust and clustered at the project level.

#### 4.2.2 Two Quarters

Table 12: Effect of QuickPay on project delay rates

| | $DelayRate_{it}$ | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| $Treat_i$ | $-26.92^{***}$ | $-26.68^{***}$ | $-26.37^{***}$ | $-16.57^{***}$ | $-14.83^{***}$ |
| | (3.28) | (3.27) | (3.25) | (3.35) | (3.39) |
| $Post_t$ | $19.70^{***}$ | 3.33 | | | |
| | (2.95) | (4.34) | | | |
| $Treat_i \times Post_t$ | $24.39^{***}$ | $23.17^{***}$ | $23.12^{***}$ | $21.01^{***}$ | $21.41^{***}$ |
| | (4.26) | (4.24) | (4.22) | (4.20) | (4.22) |
| Constant | $145.54^{***}$ | $164.54^{***}$ | | | |
| | (2.29) | (3.14) | | | |
| Duration, Budget, Bids | No | Yes | Yes | Yes | Yes |
| $Post_t \times$ (Duration, Budget, Bids) | No | Yes | Yes | Yes | Yes |
| Year-Quarter fixed effects | No | No | Yes | Yes | Yes |
| Task fixed effects | No | No | No | Yes | Yes |
| Industry fixed effects | No | No | No | No | Yes |
| Observations | 20,072 | 20,065 | 20,065 | 20,065 | 20,065 |
| $R^2$ | 0.01 | 0.02 | 0.02 | 0.17 | 0.18 |
| Adjusted $R^2$ | 0.01 | 0.02 | 0.02 | 0.13 | 0.14 |

*Note:* $^{*}$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01
Each observation is a project-quarter.
SEs are robust and clustered at the project level.

### 4.3 2.5% truncation on non-zero sample

$$\begin{aligned} DelayRate_{it} = \quad & \alpha + \beta_0 Treat_i + \beta_1 Post_t + \beta_2 (Treat_i \times Post_t) \\ + \quad & X_i + (Post_t \times X_i) + \mu_t + \theta_{firm} + \lambda_{task} + \epsilon_{it} \end{aligned}$$

### 4.3.1 One Quarter

Table 13: Effect of QuickPay on project delay rates

| | $DelayRate_{it}$ | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| $Treat_i$ | $-21.32^{***}$ | $-21.89^{***}$ | $-21.82^{***}$ | $-12.79^{***}$ | $-10.76^{***}$ |
| | (2.22) | (2.23) | (2.22) | (2.24) | (2.28) |
| $Post_t$ | $14.83^{***}$ | $-0.38$ | | | |
| | (1.88) | (2.59) | | | |
| $Treat_i \times Post_t$ | $20.95^{***}$ | $19.97^{***}$ | $19.86^{***}$ | $18.00^{***}$ | $18.48^{***}$ |
| | (2.73) | (2.72) | (2.71) | (2.67) | (2.68) |
| Constant | $116.22^{***}$ | $112.15^{***}$ | | | |
| | (1.55) | (2.02) | | | |
| Duration, Budget, Bids | No | Yes | Yes | Yes | Yes |
| $Post_t \times$ (Duration, Budget, Bids) | No | Yes | Yes | Yes | Yes |
| Year-Quarter fixed effects | No | No | Yes | Yes | Yes |
| Task fixed effects | No | No | No | Yes | Yes |
| Industry fixed effects | No | No | No | No | Yes |
| Observations | 31,077 | 31,069 | 31,069 | 31,069 | 31,069 |
| $R^2$ | 0.01 | 0.03 | 0.04 | 0.18 | 0.19 |
| Adjusted $R^2$ | 0.01 | 0.03 | 0.04 | 0.15 | 0.16 |

*Note:* $^{*}$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01
Each observation is a project-quarter.
SEs are robust and clustered at the project level.

### 4.3.2 Two Quarters

- 2.5% truncation done after calculating 2Q delays

Table 14: Effect of QuickPay on project delay rates

| | $DelayRate_{it}$ | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| $Treat_i$ | $-23.95^{***}$ | $-24.47^{***}$ | $-24.19^{***}$ | $-14.04^{***}$ | $-12.24^{***}$ |
| | (2.93) | (2.92) | (2.91) | (2.94) | (2.98) |
| $Post_t$ | $18.72^{***}$ | $-2.48$ | | | |
| | (2.52) | (3.69) | | | |
| $Treat_i \times Post_t$ | $21.89^{***}$ | $20.75^{***}$ | $20.70^{***}$ | $18.74^{***}$ | $19.19^{***}$ |
| | (3.68) | (3.66) | (3.65) | (3.61) | (3.63) |
| Constant | $142.49^{***}$ | $148.49^{***}$ | | | |
| | (2.03) | (2.80) | | | |
| Duration, Budget, Bids | No | Yes | Yes | Yes | Yes |
| $Post_t \times$ (Duration, Budget, Bids) | No | Yes | Yes | Yes | Yes |
| Year-Quarter fixed effects | No | No | Yes | Yes | Yes |
| Task fixed effects | No | No | No | Yes | Yes |
| Industry fixed effects | No | No | No | No | Yes |
| Observations | 19,074 | 19,067 | 19,067 | 19,067 | 19,067 |
| $R^2$ | 0.01 | 0.03 | 0.03 | 0.20 | 0.21 |
| Adjusted $R^2$ | 0.01 | 0.03 | 0.03 | 0.16 | 0.17 |

*Note:* $^{*}$p<0.1; $^{**}$p<0.05; $^{***}$p<0.01
Each observation is a project-quarter.
SEs are robust and clustered at the project level.