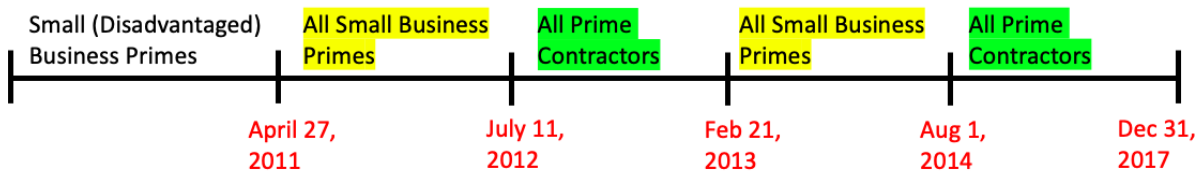


Second Implementation of QuickPay (2013-2016)

Nov 15, 2020

1 Background

Timeline of when different groups started receiving accelerated payments from the Department of Defense.



2 Sample Selection

- Only contracts that were signed on/after March 2013
- Delays measured for quarters March 2013 - March 2016
- Small businesses were receiving faster payments throughout this period
- Payment accelerated to Large Businesses on Aug 1, 2014 (Quarter end Sept 30, 2014)
- 20 four-digit Naics codes most likely to be treated (per Table A.6 in Barrot/Nanda paper)

This table presents the top 20 and bottom 20 4-digit NAICS industries based on treatment, measured as the average quarterly amount of eligible government contracts to be performed in a given industry between 2009Q1-2011Q1, normalized by quarterly payroll in 2011Q1. – Barrot and Nanda 2018

- Firm fixed price (type of contract pricing = J)
- Exclude disadvantaged small businesses
- Exclude bundled contracts
- Defense contracts only (agency code = 97)
- Filters applied on DoD data from Fiscal Years 2010-2018 (using award-data-archive)

3 Notation

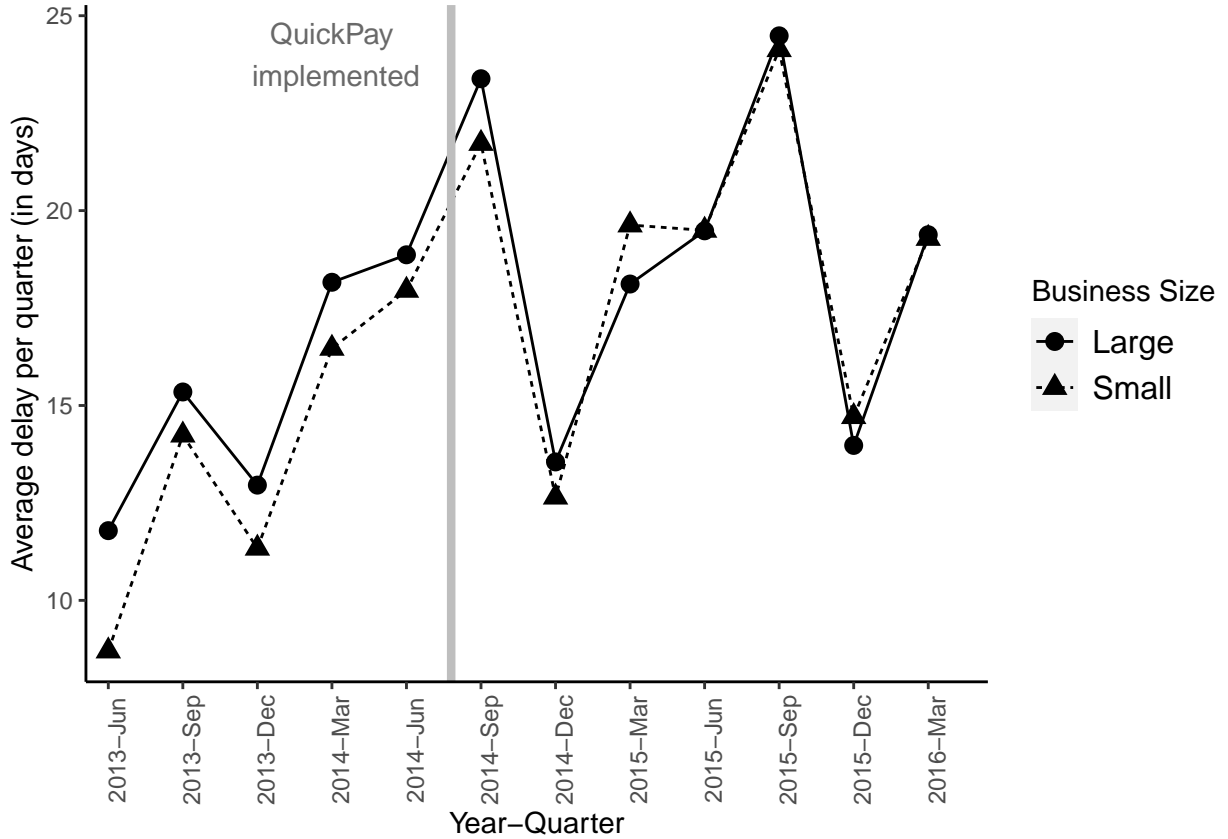
- Project i , Year-Quarter t

- X_i denotes project level controls: initial duration, initial budget, number of offers received
- $\mu_t, \theta_{firm}, \lambda_{task}$: Year-Quarter, Firm, and Product/Service code Fixed effects
- All continuous variables are winsorized at the 5% level

$$Treat_i = \begin{cases} 1, & \text{if project } i \text{ is a large business} \\ 0, & \text{otherwise} \end{cases}$$

$$Pre_t = \begin{cases} 1, & \text{if year-quarter } t < \text{Aug 01, 2014} \\ 0, & \text{otherwise} \end{cases}$$

4 Delays over Time



5 Parallel Trends Test

6 Baseline Regressions

$$Delay_{it} = \alpha + \beta_0 Treat_i + \beta_1 Pre_t + \beta_2 (Treat_i \times Pre_t) + \epsilon_{it}$$

$$Delay_{it} = \alpha + \beta_0 Treat_i + \beta_1 Pre_t + \beta_2 (Treat_i \times Pre_t) + X_i + (Pre_t \times X_i) + \mu_t + \theta_{firm} + \lambda_{task} + \epsilon_{it}$$

Table 1: Quickpay 2009-2011

	<i>Delay_{it}</i> (in days)		
	(1)	(2)	(3)
<i>Treat_i</i>	0.10 (0.25)	-0.32 (1.00)	-0.44 (1.02)
<i>Pre_t</i>	-3.86*** (0.26)		
<i>Treat_i × Pre_t</i>	1.43*** (0.42)	2.54*** (0.51)	2.16*** (0.51)
Constant	18.58*** (0.15)		
Year-Quarter Fixed Effects	No	Yes	Yes
Firm Fixed Effects	No	Yes	Yes
Task Fixed Effects	No	No	Yes
Duration, Budget, Bids	No	Yes	Yes
<i>Pre_t</i> × (Duration, Budget, Bids)	No	Yes	Yes
Observations	233,433	210,597	210,597
R ²	0.001	0.10	0.11
Adjusted R ²	0.001	0.05	0.05

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.

7 Contract Financing

$$CF_i = \begin{cases} 1, & \text{if project } i \text{ receives contract financing} \\ 0, & \text{otherwise} \end{cases}$$

$$\begin{aligned} Delay_{it} = & \alpha + \beta_0 Treat_i + \beta_1 Pre_t + \beta_2 (Treat_i \times Pre_t) \\ & + \beta_3 CF_i + \beta_4 (CF_i \times Pre_t) + \beta_5 (Treat_i \times Pre_t \times CF_i) \\ & + X_i + (Pre_t \times X_i) + \mu_t + \theta_{firm} + \lambda_{task} + \epsilon_{it} \end{aligned}$$

Table 2: Effect of Contract Financing: Quickpay 2009-2011

	<i>Delay_{it}</i> (in days)		
	(1)	(2)	(3)
<i>Treat_i</i>	0.12 (0.24)	-0.28 (1.00)	-0.39 (1.02)
<i>Pre_t</i>	-3.40*** (0.28)		
<i>Treat_i × Pre_t</i>	1.55*** (0.44)	2.26*** (0.55)	1.78*** (0.55)
<i>CF_i</i>	6.24*** (0.35)	0.71 (0.46)	0.70 (0.46)
<i>Pre_t × CF_i</i>	-3.01*** (0.75)	-2.57*** (0.86)	-2.48*** (0.86)
<i>Pre_t × CF_i × Treat_i</i>	-1.20 (1.10)	1.68 (1.25)	2.42* (1.26)
Constant	17.70*** (0.15)		
Year-Quarter Fixed Effects	No	Yes	Yes
Firm Fixed Effects	No	Yes	Yes
Task Fixed Effects	No	No	Yes
Duration, Budget, Bids	No	Yes	Yes
<i>Pre_t × (Duration, Budget, Bids)</i>	No	Yes	Yes
Observations	233,433	210,597	210,597
R ²	0.003	0.10	0.11
Adjusted R ²	0.003	0.05	0.05

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.

8 Receives Financial Aid

$$FinancialAid = \begin{cases} 1, & \text{if firm receives grants or is a c8A participant} \\ 0, & \text{otherwise} \end{cases}$$

$$\begin{aligned} Delay_{it} = & \alpha + \beta_0 Treat_i + \beta_1 Pre_t + \beta_2 (Treat_i \times Pre_t) + \beta_3 FinancialAid \\ & + \beta_4 (FinancialAid \times Pre_t) + \beta_5 (Treat_i \times Pre_t \times FinancialAid) \\ & + X_i + (Pre_t \times X_i) + \mu_t + \theta_{firm} + \lambda_{task} + \epsilon_{it} \end{aligned}$$

Table 3: Effect of Grants or C8A Participant: Quickpay 2009-2011

	<i>Delay_{it}</i> (in days)		
	(1)	(2)	(3)
<i>Treat_i</i>	0.30 (0.25)	-0.57 (1.01)	-0.67 (1.02)
<i>Pre_t</i>	-4.08*** (0.33)		
<i>Treat_i × Pre_t</i>	1.94*** (0.51)	2.99*** (0.61)	2.83*** (0.62)
<i>FinancialAid</i>	2.20*** (0.26)	5.64*** (0.40)	5.74*** (0.39)
<i>Pre_t × FinancialAid</i>	0.06 (0.51)	-2.64*** (0.65)	-2.78*** (0.65)
<i>Pre_t × FinancialAid × Treat_i</i>	-1.53** (0.73)	-1.22 (0.93)	-1.88** (0.94)
Constant	17.80*** (0.17)		
Year-Quarter Fixed Effects	No	Yes	Yes
Firm Fixed Effects	No	Yes	Yes
Task Fixed Effects	No	No	Yes
Duration, Budget, Bids	No	Yes	Yes
<i>Pre_t × (Duration, Budget, Bids)</i>	No	Yes	Yes
Observations	233,433	210,597	210,597
R ²	0.001	0.10	0.11
Adjusted R ²	0.001	0.05	0.05

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.

9 Receives Contracts and Financial Aid

$$CFA = \begin{cases} 1, & \text{if firm receives "contracts and grants"} \\ & \text{or grants or is a c8A participant} \\ 0, & \text{otherwise} \end{cases}$$

$$\begin{aligned} Delay_{it} = & \alpha + \beta_0 Treat_i + \beta_1 Pre_t + \beta_2 (Treat_i \times Pre_t) + \beta_3 CFA \\ & + \beta_4 (CFA \times Pre_t) + \beta_5 (Treat_i \times Pre_t \times CFA) \\ & + X_i + (Pre_t \times X_i) + \mu_t + \theta_{firm} + \lambda_{task} + \epsilon_{it} \end{aligned}$$

Table 4: Effect of Contracts, Grants, or C8A Participant: Quickpay 2009-2011

	<i>Delay_{it}</i> (in days)		
	(1)	(2)	(3)
<i>Treat_i</i>	-0.24 (0.25)	-0.05 (1.00)	-0.14 (1.02)
<i>Pre_t</i>	-6.31*** (0.54)		
<i>Treat_ixPre_t</i>	0.69 (0.71)	3.27*** (0.84)	2.99*** (0.84)
<i>CFA</i>	-5.51*** (0.30)	-3.27*** (0.54)	-3.64*** (0.55)
<i>Pre_t x CFA</i>	2.80*** (0.60)	1.00 (0.71)	0.87 (0.72)
<i>Pre_t x CFA x Treat_i</i>	1.28 (0.80)	-1.37 (1.02)	-1.57 (1.03)
Constant	23.06*** (0.30)		
Year-Quarter Fixed Effects	No	Yes	Yes
Firm Fixed Effects	No	Yes	Yes
Task Fixed Effects	No	No	Yes
Duration, Budget, Bids	No	Yes	Yes
<i>Pre_t x (Duration, Budget, Bids)</i>	No	Yes	Yes
Observations	233,433	210,597	210,597
R ²	0.003	0.10	0.11
Adjusted R ²	0.003	0.05	0.05

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.