

# Logistic regression: Positive Delay Rate – QuickPay (2009-2012)

Jan 22, 2023

## 1 Logistic Regressions (Negative Delay)

## NOTE: 242,688 observations removed because of NA values (LHS: 242,688).

## NOTE: 266,784 observations removed because of NA values (LHS: 242,688, RHS: 266,784).

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## NOTES: 266,784 observations removed because of NA values (LHS: 242,688, RHS: 266,784).

## 961/0 fixed-effects (25,727 observations) removed because of only 0 (or only 1) outcomes.

## NOTES: 266,784 observations removed because of NA values (LHS: 242,688, RHS: 266,784).

## 19/961/0 fixed-effects (26,447 observations) removed because of only 0 (or only 1) outcomes.

Table 1: Logit model: Effect of QuickPay

Dependent Variable:	$I(Delay_{it} < 0)$				
Model:	(1)	(2)	(3)	(4)	(5)
<i>Variables</i>					
Constant	-4.71*** (0.05)	-9.93*** (0.39)			
$Treat_i$	-0.19*** (0.07)	0.11 (0.08)	0.12 (0.08)	-0.01 (0.08)	-0.01 (0.08)
$Post_t$	0.11* (0.06)	1.63*** (0.48)			
$Treat_i \times Post_t$	-0.28*** (0.09)	-0.33*** (0.10)	-0.34*** (0.10)	-0.30*** (0.10)	-0.29*** (0.10)
<i>Fixed-effects</i>					
Time			Yes	Yes	Yes
Task code				Yes	Yes
NAICS code					Yes
<i>Fit statistics</i>					
Observations	260,211	236,115	236,115	210,388	209,668
Squared Correlation	0.0003	0.007	0.007	0.02	0.02
Pseudo R <sup>2</sup>	0.003	0.05	0.05	0.12	0.12
BIC	24,242.6	22,759.5	22,825.1	25,268.2	25,774.9

*Clustered (Project ID) standard-errors in parentheses*  
*Signif. Codes: \*\*\*: 0.01, \*\*: 0.05, \*: 0.1*

## 2 Logistic Regressions (Negative Delay) — One Type

## NOTE: 154,236 observations removed because of NA values (LHS: 154,236).

## NOTE: 171,267 observations removed because of NA values (LHS: 154,236, RHS: 171,267).  
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## NOTES: 171,267 observations removed because of NA values (LHS: 154,236, RHS: 171,267).  
## 922/0 fixed-effects (23,026 observations) removed because of only 0 (or only 1) outcomes.  
## NOTES: 171,267 observations removed because of NA values (LHS: 154,236, RHS: 171,267).  
## 18/922/0 fixed-effects (23,544 observations) removed because of only 0 (or only 1) outcomes.

Table 2: Logit model: Effect of QuickPay

Dependent Variable: Model:	$I(Delay_{it} < 0)$				
	(1)	(2)	(3)	(4)	(5)
<i>Variables</i>					
Constant	-4.61*** (0.06)	-9.77*** (0.47)			
$Treat_i$	-0.06 (0.08)	0.22** (0.09)	0.23*** (0.09)	0.04 (0.09)	0.05 (0.09)
$Post_t$	0.07 (0.07)	1.46** (0.60)			
$Treat_i \times Post_t$	-0.26** (0.10)	-0.31*** (0.11)	-0.31*** (0.11)	-0.30*** (0.11)	-0.29*** (0.11)
<i>Fixed-effects</i>					
Time			Yes	Yes	Yes
Task code				Yes	Yes
NAICS code					Yes
<i>Fit statistics</i>					
Observations	174,306	157,275	157,275	134,249	133,731
Squared Correlation	0.0001	0.006	0.007	0.02	0.02
Pseudo $R^2$	0.002	0.04	0.05	0.10	0.11
BIC	18,292.2	17,286.3	17,340.8	19,622.8	20,117.9
<i>Clustered (Project ID) standard-errors in parentheses</i>					
<i>Signif. Codes: ***: 0.01, **: 0.05, *: 0.1</i>					

### 3 Logistic Regression (Negative delay) – Clean Time Independent Control

## NOTE: 279,526 observations removed because of NA values (LHS: 242,688, RHS: 70,154).  
## NOTE: 301,032 observations removed because of NA values (LHS: 242,688, RHS: 301,032).  
## NOTE: 301,032 observations removed because of NA values (LHS: 242,688, RHS: 301,032).  
## NOTES: 301,032 observations removed because of NA values (LHS: 242,688, RHS: 301,032).  
## 941/0 fixed-effects (24,403 observations) removed because of only 0 (or only 1) outcomes.  
## NOTES: 301,032 observations removed because of NA values (LHS: 242,688, RHS: 301,032).  
## 19/941/0 fixed-effects (24,950 observations) removed because of only 0 (or only 1) outcomes.

Table 3: Logit model: Effect of QuickPay

Dependent Variable:	$I(Delay_{it} < 0)$				
Model:	(1)	(2)	(3)	(4)	(5)
<i>Variables</i>					
Constant	-4.61*** (0.06)	-10.04*** (0.44)			
$Treat_i$	-0.29*** (0.08)	0.12 (0.09)	0.14 (0.09)	0.02 (0.09)	0.02 (0.09)
$Post_t$	0.07 (0.07)	1.49*** (0.56)			
$Treat_i \times Post_t$	-0.24** (0.10)	-0.31*** (0.11)	-0.32*** (0.11)	-0.29*** (0.10)	-0.29*** (0.10)
Controls		Yes	Yes	Yes	Yes
Controls $\times Post_t$		Yes	Yes	Yes	Yes
<i>Fixed-effects</i>					
Time			Yes	Yes	Yes
Task code				Yes	Yes
NAICS code					Yes
<i>Fit statistics</i>					
Observations	223,373	201,867	201,867	177,464	176,917
Squared Correlation	0.0004	0.007	0.007	0.02	0.03
Pseudo R <sup>2</sup>	0.004	0.05	0.06	0.12	0.12
BIC	20,766.4	19,496.2	19,552.5	21,854.4	22,369.4

*Clustered (Project ID) standard-errors in parentheses*

*Signif. Codes: \*\*\*: 0.01, \*\*: 0.05, \*: 0.1*