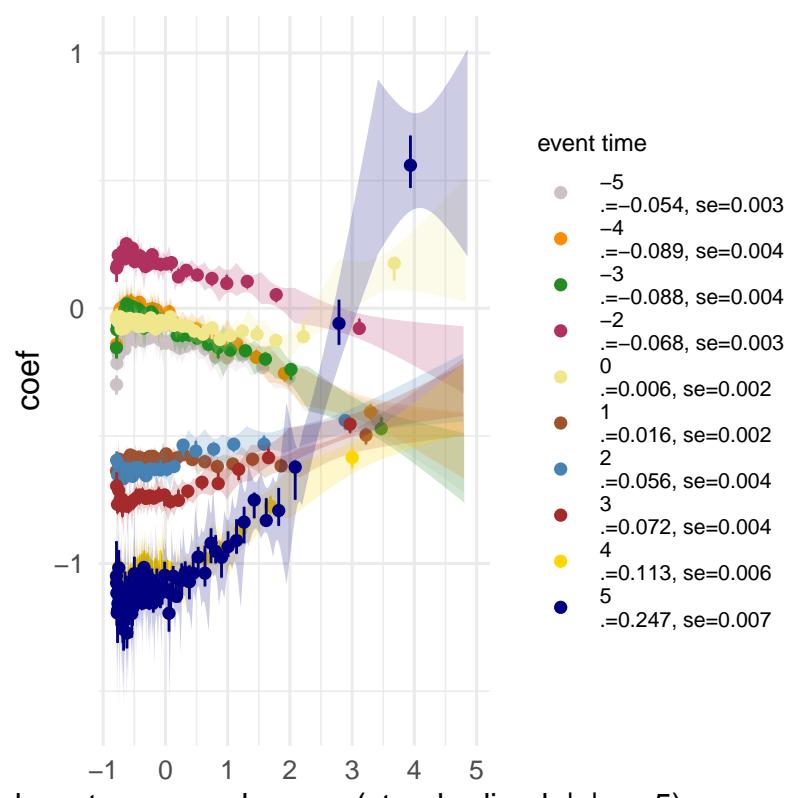
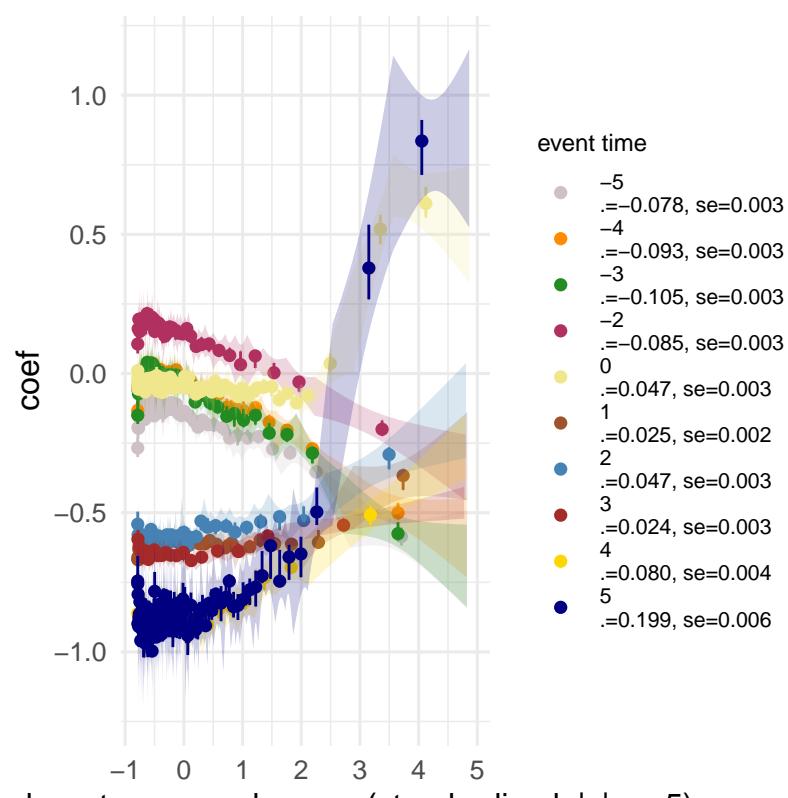


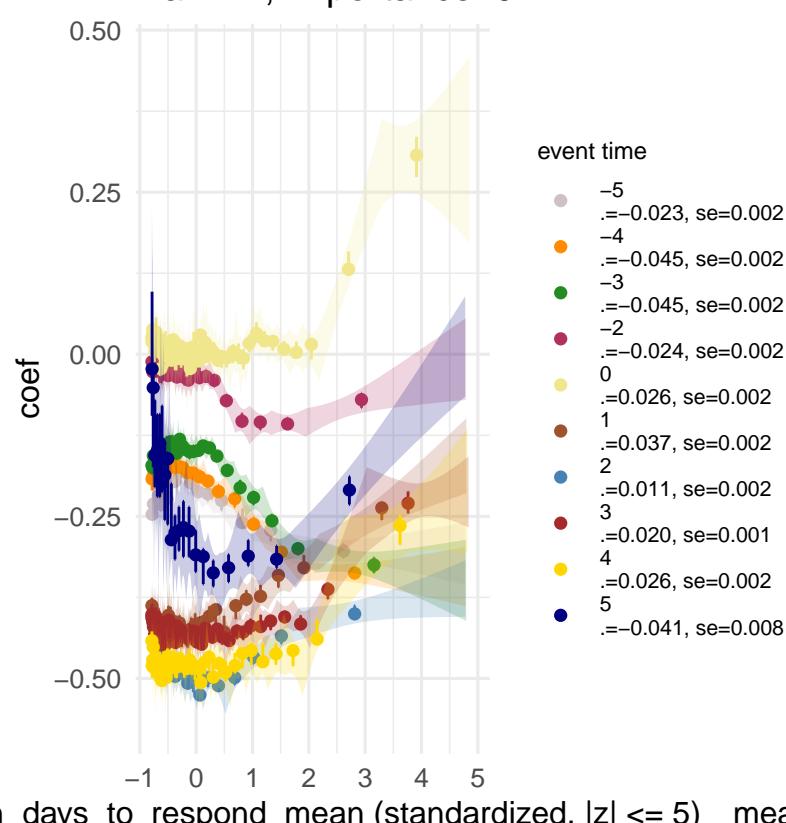
Binscatter of Event-study Coefficients  
 Outcome: pull\_request\_opened (rolling1, top15)  
 talent\_investment → feedback  
 response\_time → mean\_days\_to\_respond  
 Rank: 2, Importance: 0.161



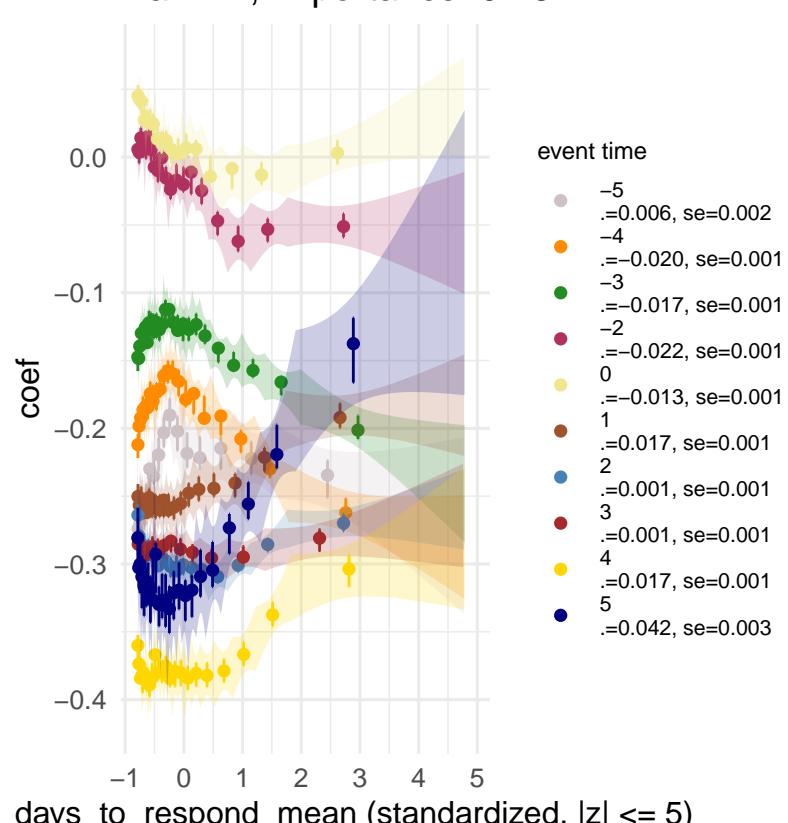
Binscatter of Event-study Coefficients  
 Outcome: pull\_request\_merged (rolling1, top15)  
 talent\_investment → feedback  
 response\_time → mean\_days\_to\_respond  
 Rank: 1, Importance: 0.193



Binscatter of Event-study Coefficients  
 Outcome: overall\_new\_release\_count (rolling1, top15)  
 talent\_investment → feedback  
 response\_time → mean\_days\_to\_respond  
 Rank: 1, Importance: 0.21

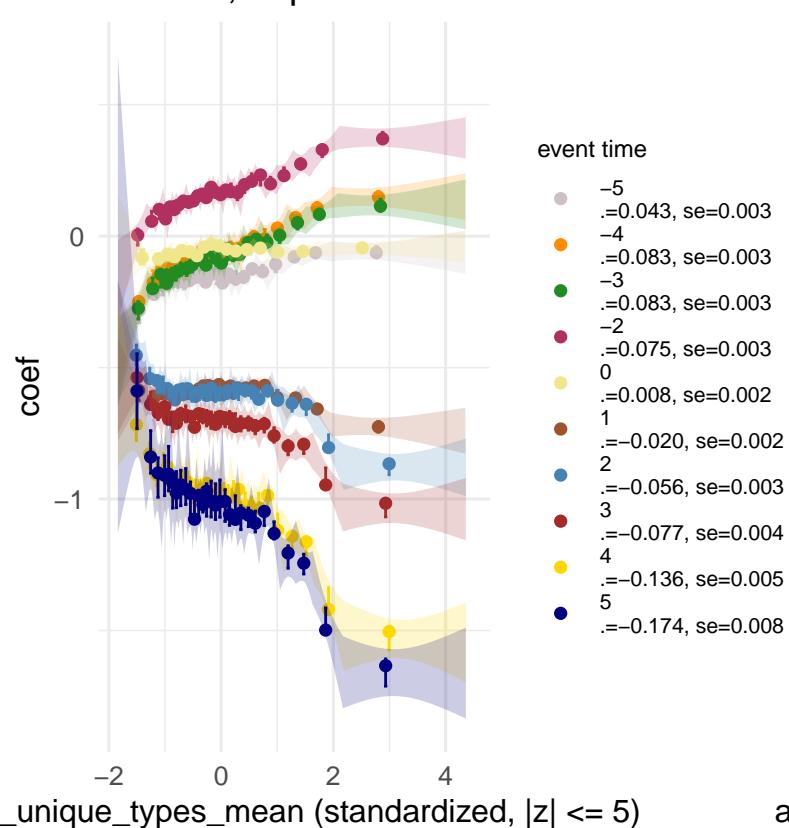


Binscatter of Event-study Coefficients  
 Outcome: major\_minor\_release\_count (rolling1, top15)  
 talent\_investment → feedback  
 response\_time → mean\_days\_to\_respond  
 Rank: 2, Importance: 0.182



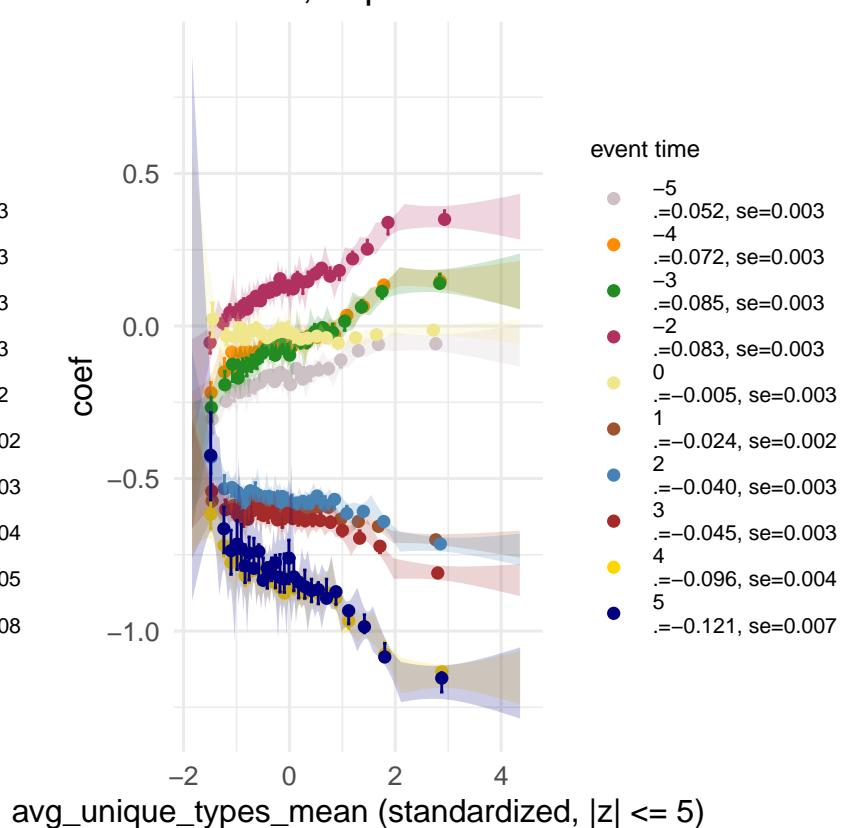
### Binscatter of Event-study Coefficients

Outcome: pull\_request\_opened (rolling1, top15)  
 knowledge\_redundancy → broad\_expertise  
 activity\_diversity\_count → avg\_unique\_types  
 Rank: 3, Importance: 0.112



### Binscatter of Event-study Coefficients

Outcome: pull\_request\_merged (rolling1, t)  
 knowledge\_redundancy → broad\_expertise  
 activity\_diversity\_count → avg\_unique\_types  
 Rank: 2, Importance: 0.123

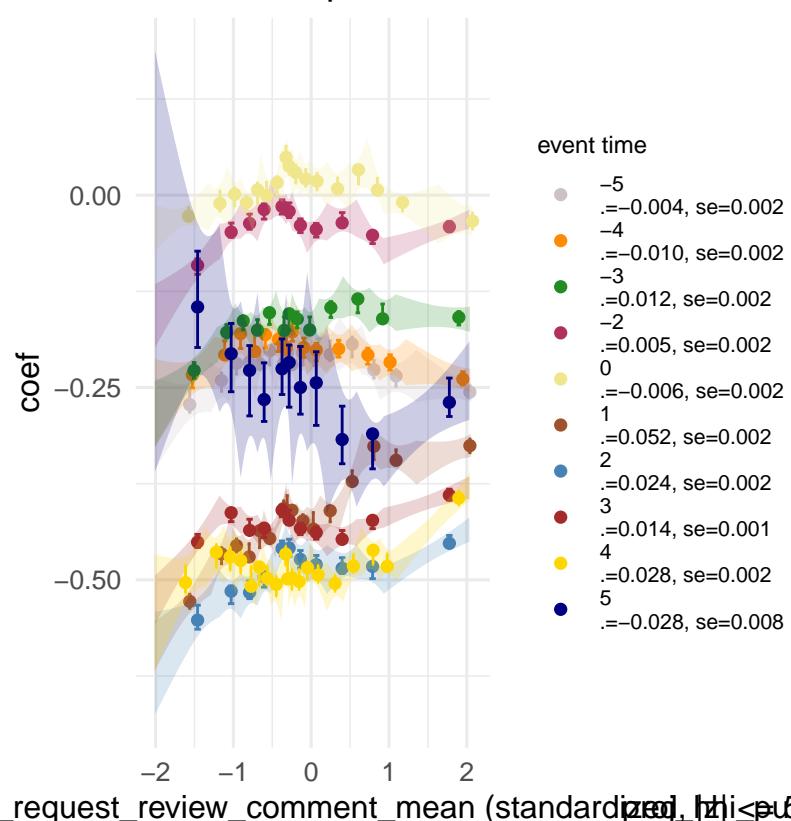


### Binscatter of Event-study Coefficients

Outcome: overall\_new\_release\_count (rolling1, to 15) knowledge\_redundancy → collaboration

hhic → proj\_hhi\_pull\_request\_review\_comment

Rank: 2, Importance: 0.181

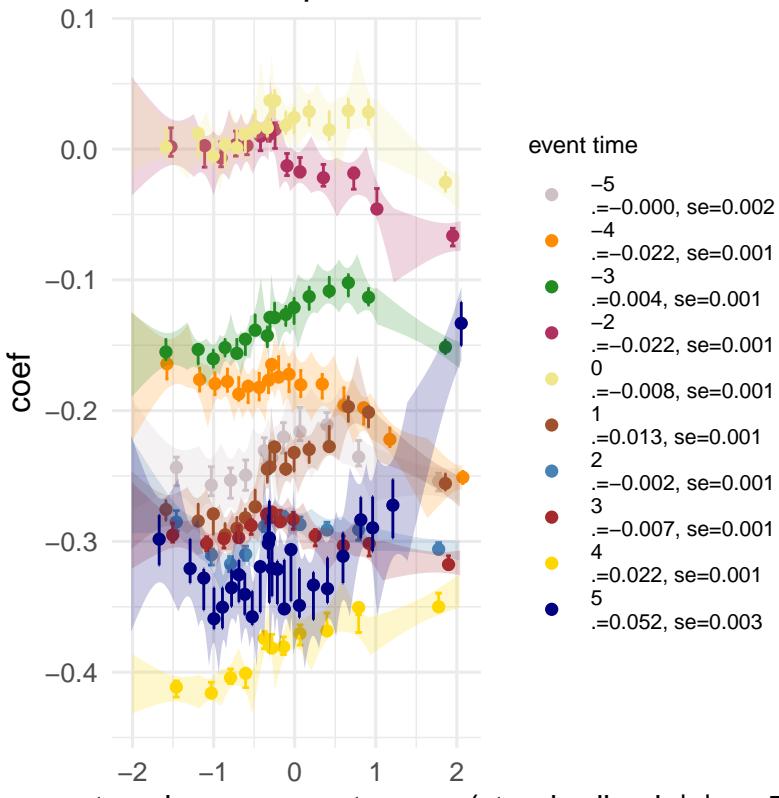


### Binscatter of Event-study Coefficients

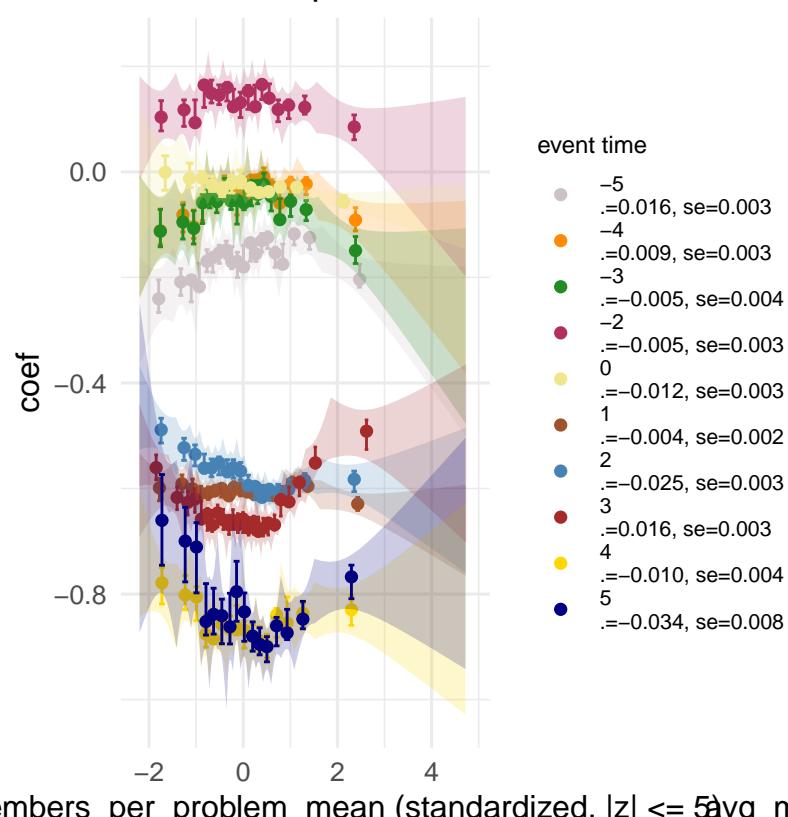
Outcome: major\_minor\_release\_count (rolling1, to 15) knowledge\_redundancy → collaboration

hhic → proj\_hhi\_pull\_request\_review\_comment

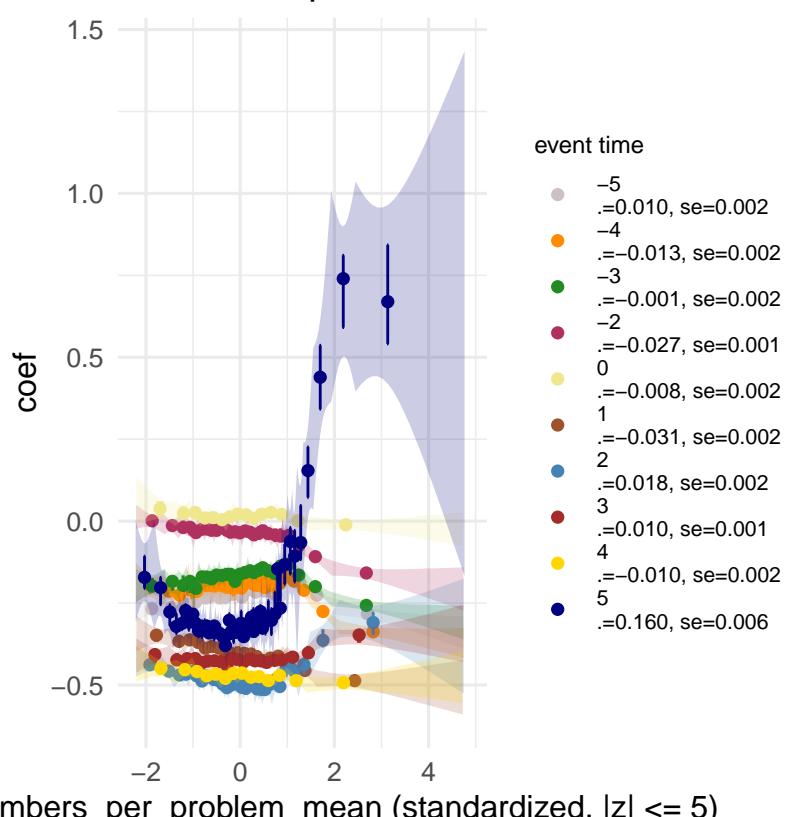
Rank: 3, Importance: 0.104



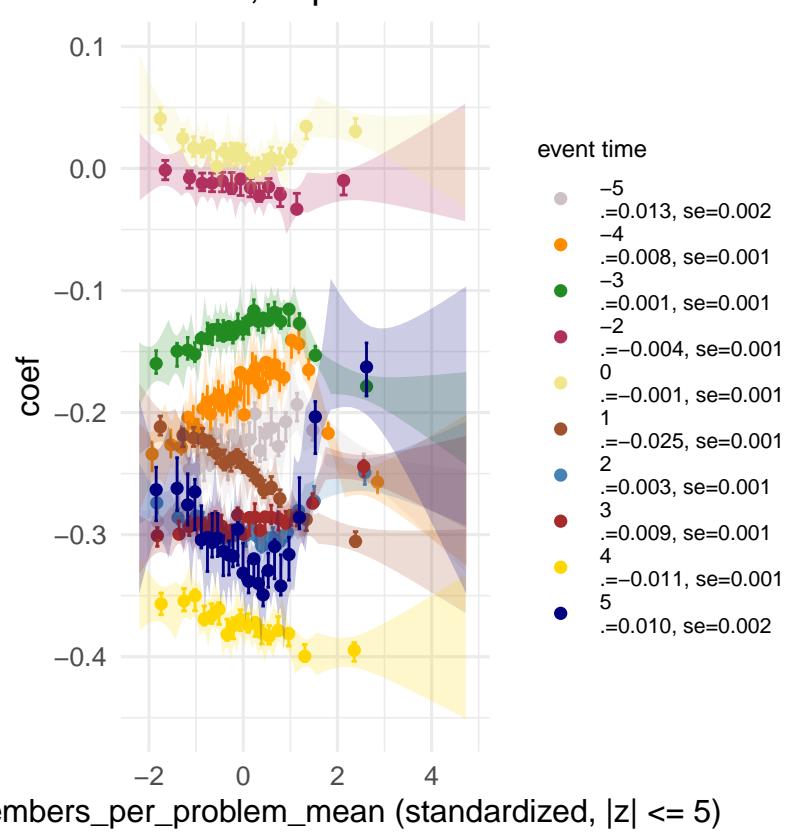
Binscatter of Event-study Coefficients  
 Outcome: pull\_request\_merged (rolling1, top15)  
 knowledge\_redundancy → collaboration  
 member\_count → avg\_members\_per\_problem  
 Rank: 9, Importance: 0.0453



Binscatter of Event-study Coefficients  
 Outcome: overall\_new\_release\_count (roll)  
 knowledge\_redundancy → collaboration  
 member\_count → avg\_members\_per\_problem  
 Rank: 3, Importance: 0.126



Binscatter of Event-study Coefficients  
 Outcome: major\_minor\_release\_count (rolling1, top15)  
 knowledge\_redundancy → collaboration  
 member\_count → avg\_members\_per\_problem  
 Rank: 1, Importance: 0.212



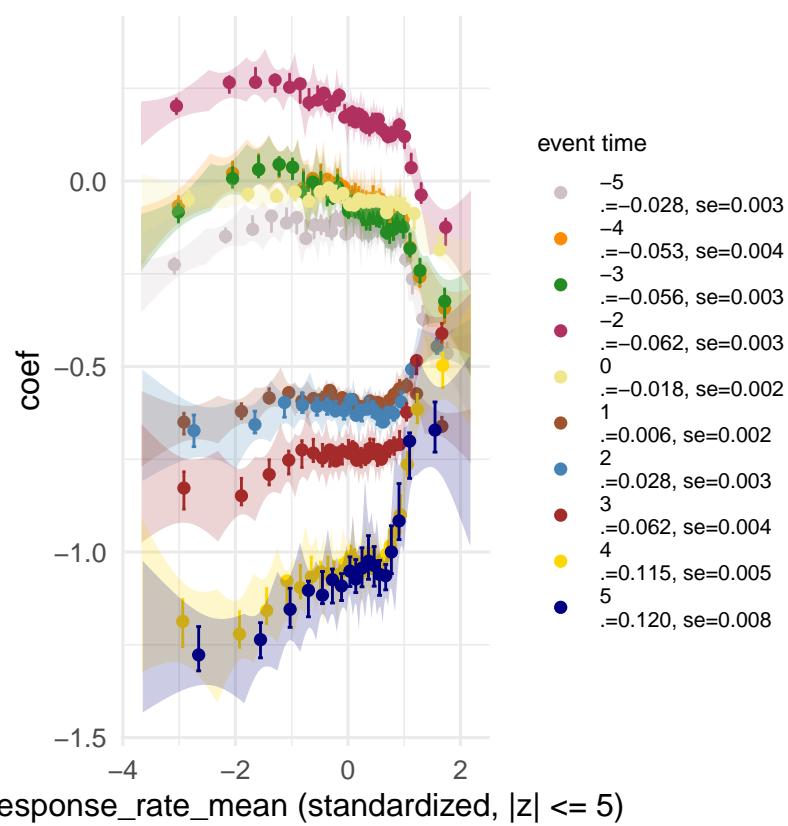
# Binscatter of Event-study Coefficients

Outcome: pull\_request\_opened (rolling1, top15)

talent\_investment → feedback

response\_rate → response\_rate

Rank: 1, Importance: 0.166



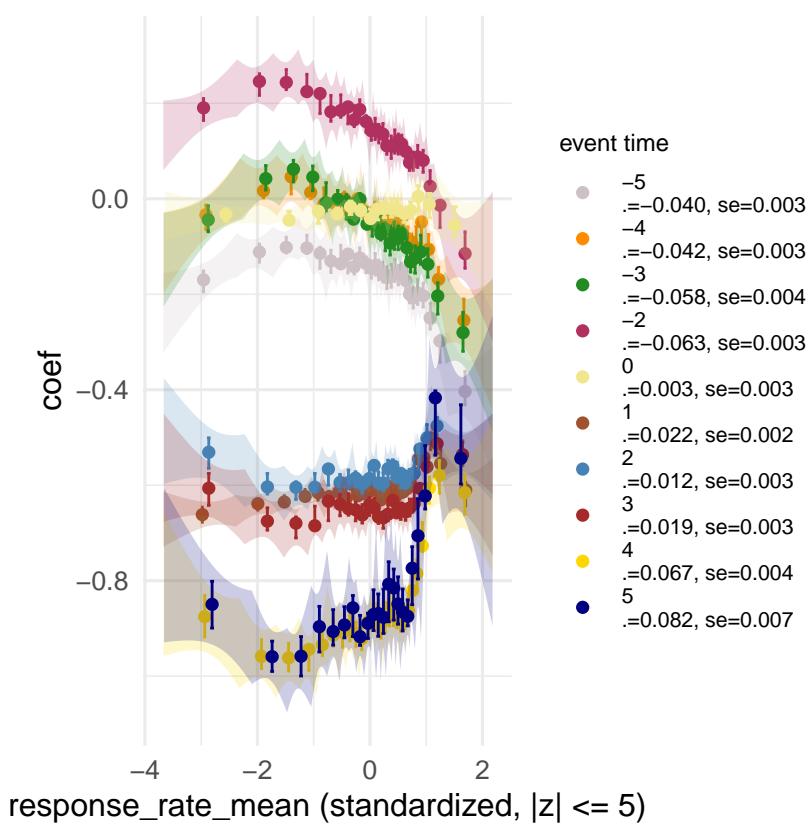
# Binscatter of Event-study Coefficients

Outcome: pull\_request\_merged (rolling1, t)

talent\_investment → feedback

response\_rate → response\_rate

Rank: 8, Importance: 0.0693



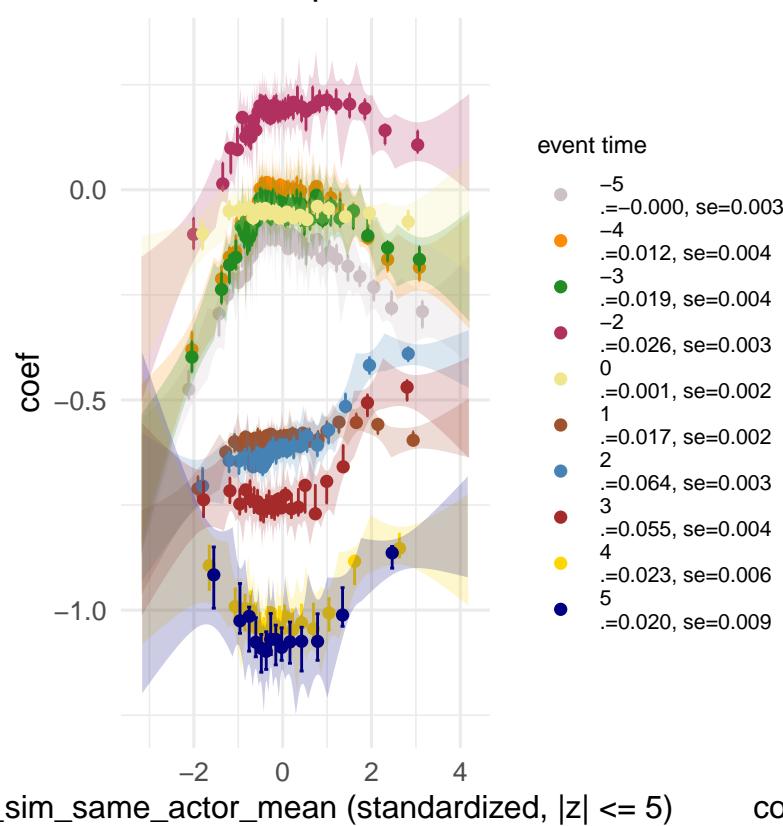
### Binscatter of Event-study Coefficients

Outcome: pull\_request\_opened (rolling1, top15)

knowledge\_redundancy → broad\_expertise

discussion\_content → cos\_sim\_same\_actor

Rank: 5, Importance: 0.0896



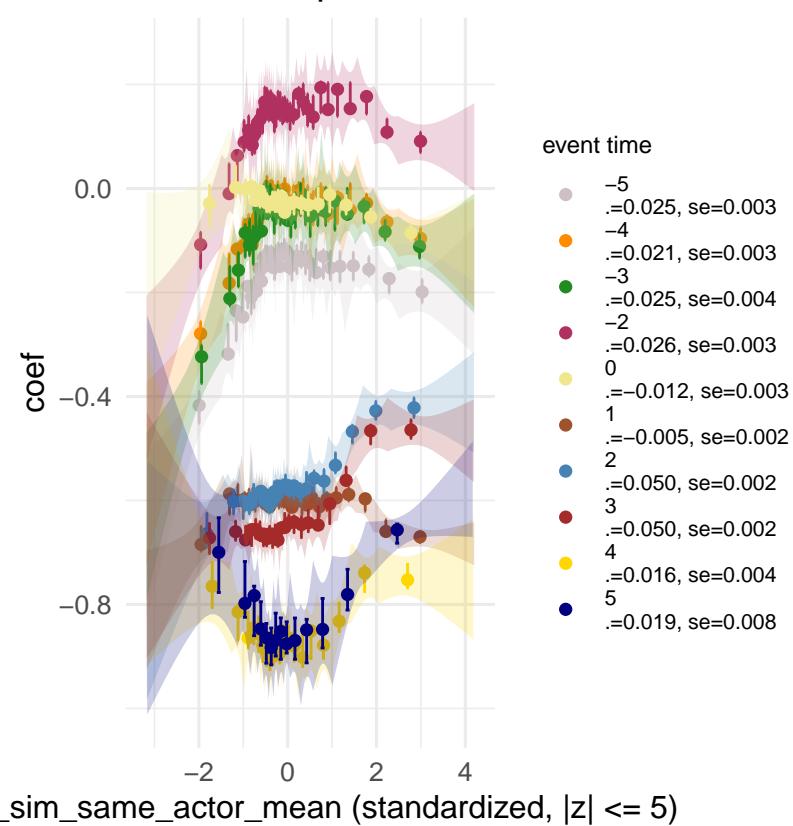
### Binscatter of Event-study Coefficients

Outcome: pull\_request\_merged (rolling1, t)

knowledge\_redundancy → broad\_expertise

discussion\_content → cos\_sim\_same\_actor

Rank: 4, Importance: 0.109



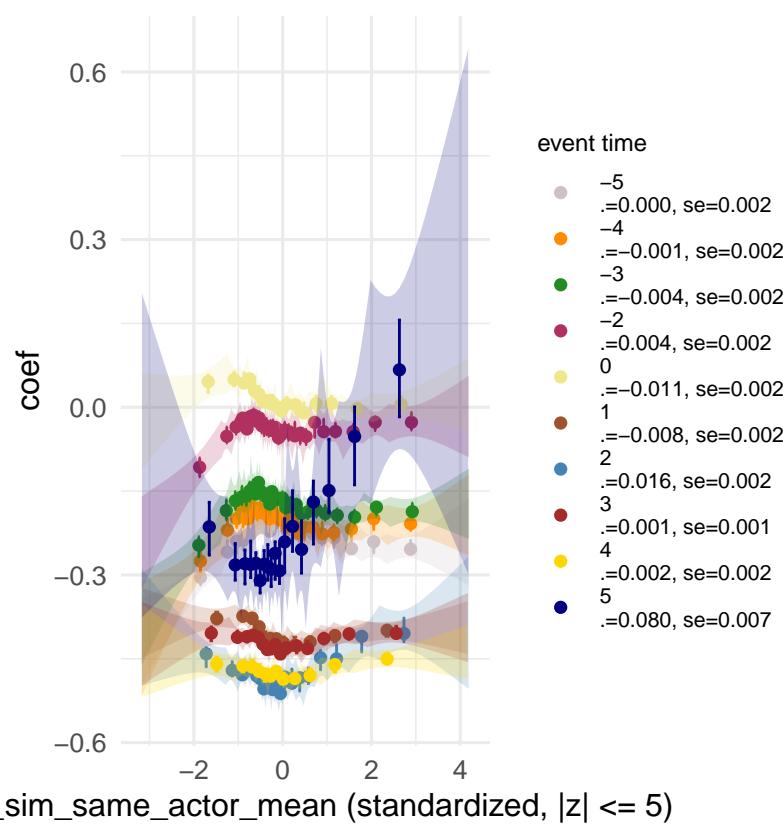
### Binscatter of Event-study Coefficients

Outcome: overall\_new\_release\_count (rolling1, top15)

knowledge\_redundancy → broad\_expertise

discussion\_content → cos\_sim\_same\_actor

Rank: 5, Importance: 0.0882



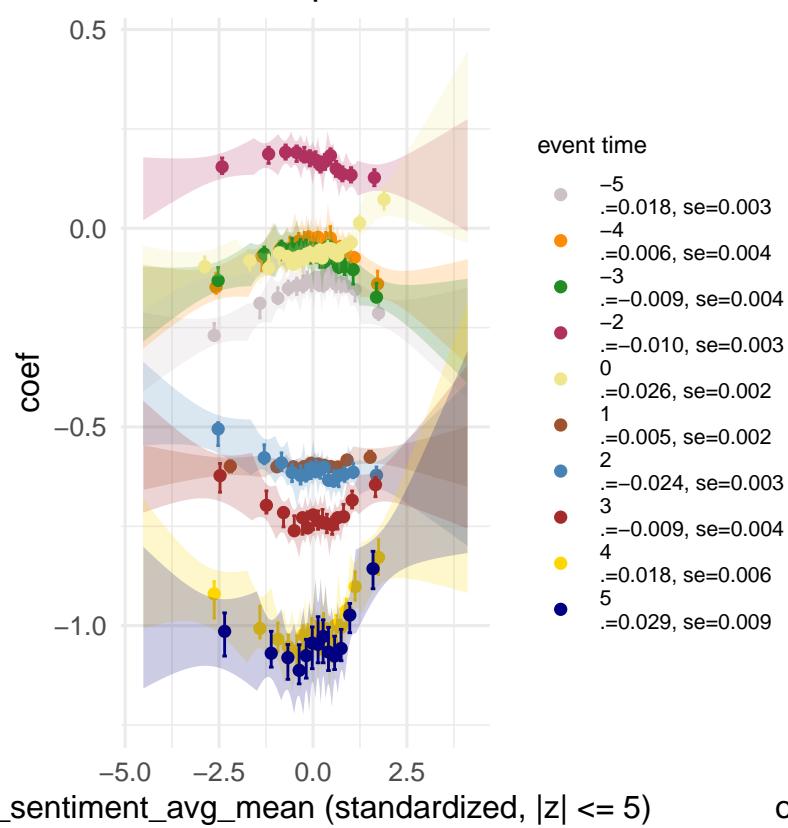
# Binscatter of Event-study Coefficients

Outcome: pull\_request\_opened (rolling1, top15)

talent\_investment → feedback

response\_sentiment → ov\_sentiment\_avg

Rank: 6, Importance: 0.0869



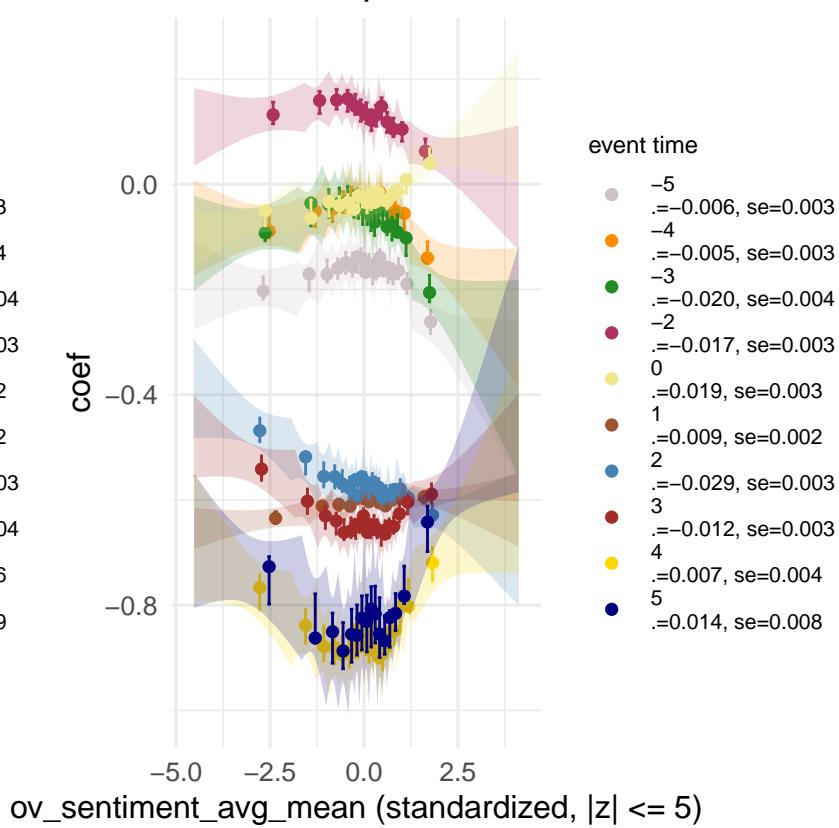
# Binscatter of Event-study Coefficients

Outcome: pull\_request\_merged (rolling1, t)

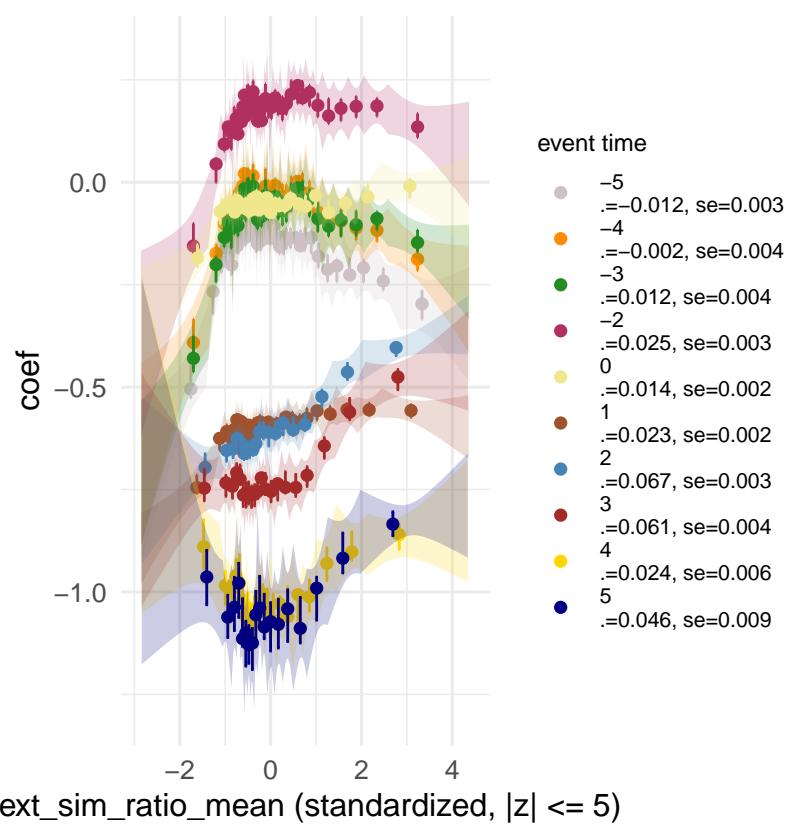
talent\_investment → feedback

response\_sentiment → ov\_sentiment\_avg

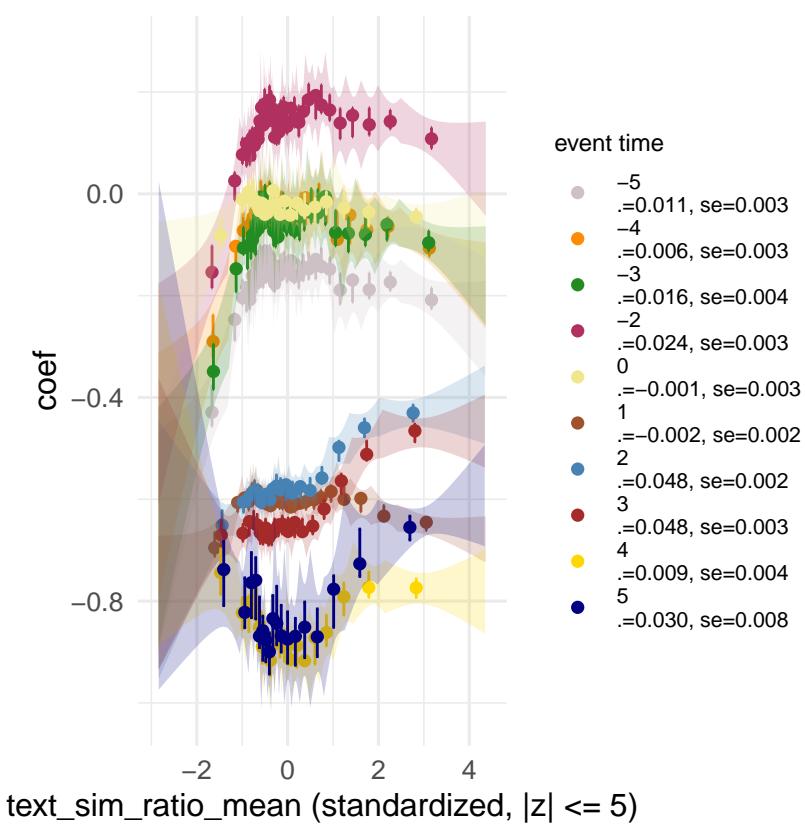
Rank: 5, Importance: 0.089



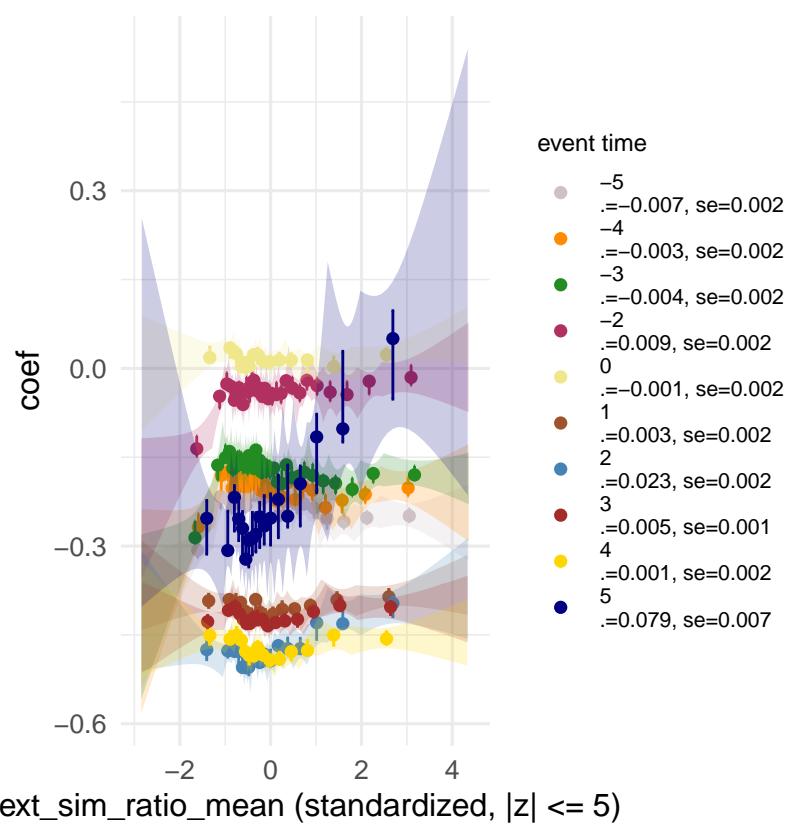
Binscatter of Event-study Coefficients  
 Outcome: pull\_request\_opened (rolling1, top15)  
 knowledge\_redundancy → broad\_expertise  
 discussion\_content → text\_sim\_ratio  
 Rank: 8, Importance: 0.0691



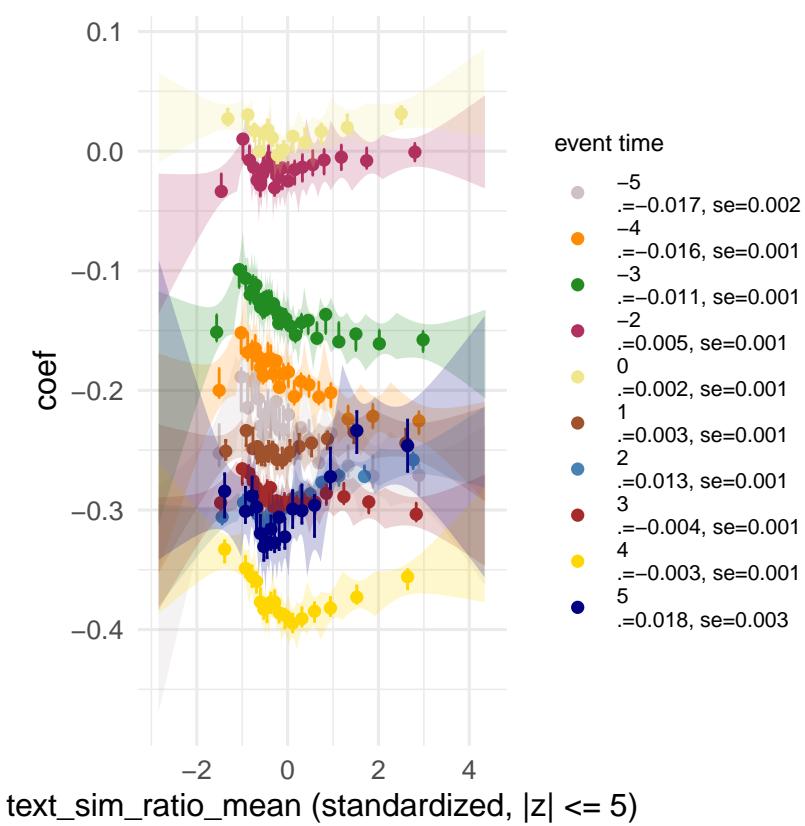
Binscatter of Event-study Coefficients  
 Outcome: pull\_request\_merged (rolling1, top15)  
 knowledge\_redundancy → broad\_expertise  
 discussion\_content → text\_sim\_ratio  
 Rank: 3, Importance: 0.11



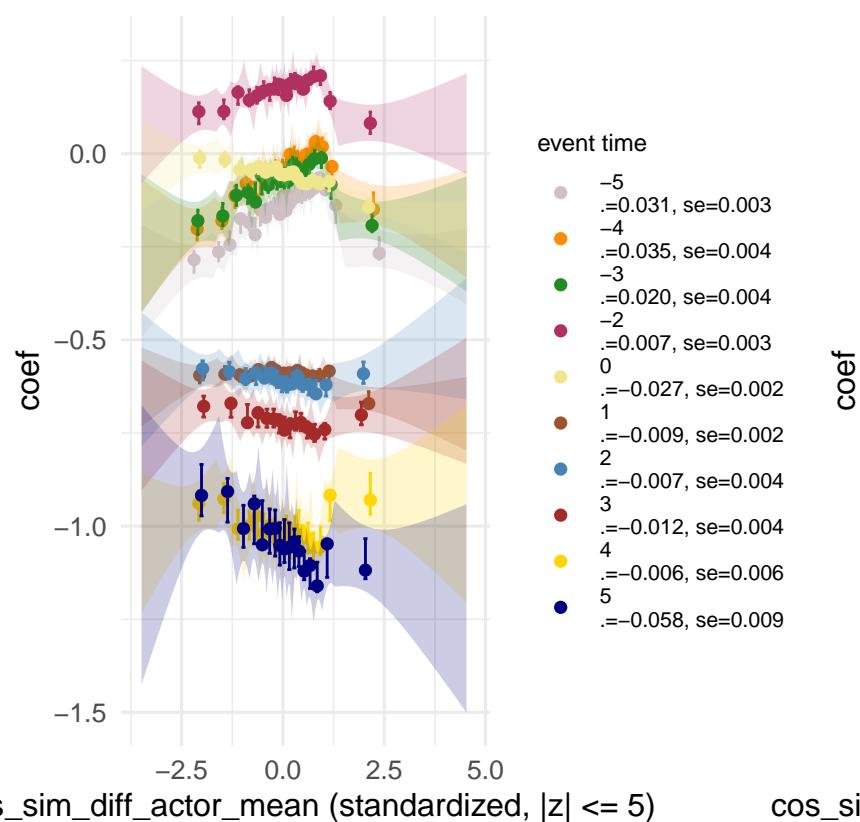
Binscatter of Event-study Coefficients  
 Outcome: overall\_new\_release\_count (rolling1, top15)  
 knowledge\_redundancy → broad\_expertise  
 discussion\_content → text\_sim\_ratio  
 Rank: 7, Importance: 0.0534



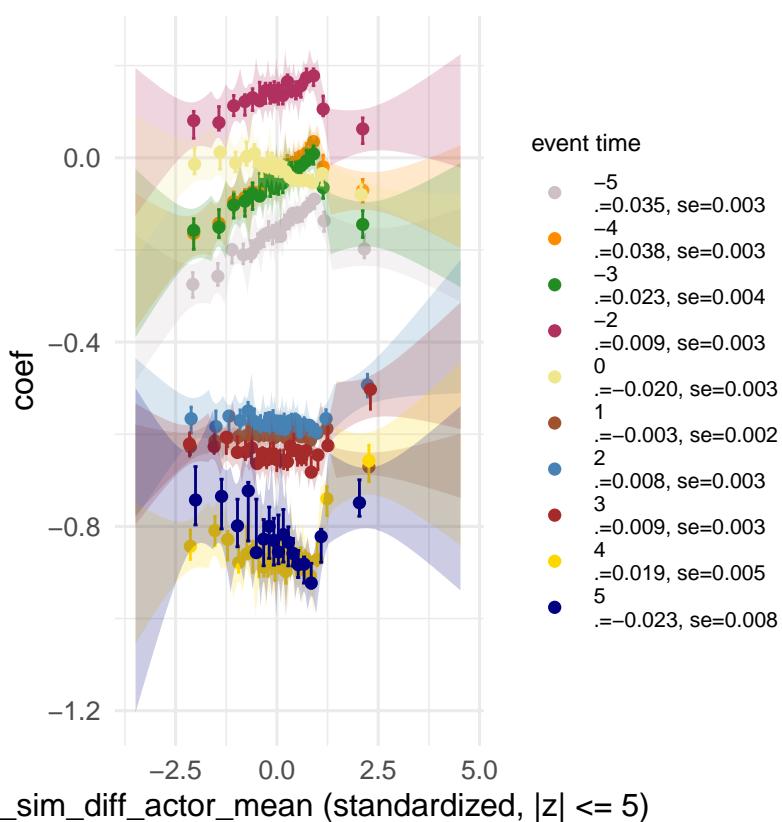
Binscatter of Event-study Coefficients  
 Outcome: major\_minor\_release\_count (rolling1, top15)  
 knowledge\_redundancy → broad\_expertise  
 discussion\_content → text\_sim\_ratio  
 Rank: 4, Importance: 0.1



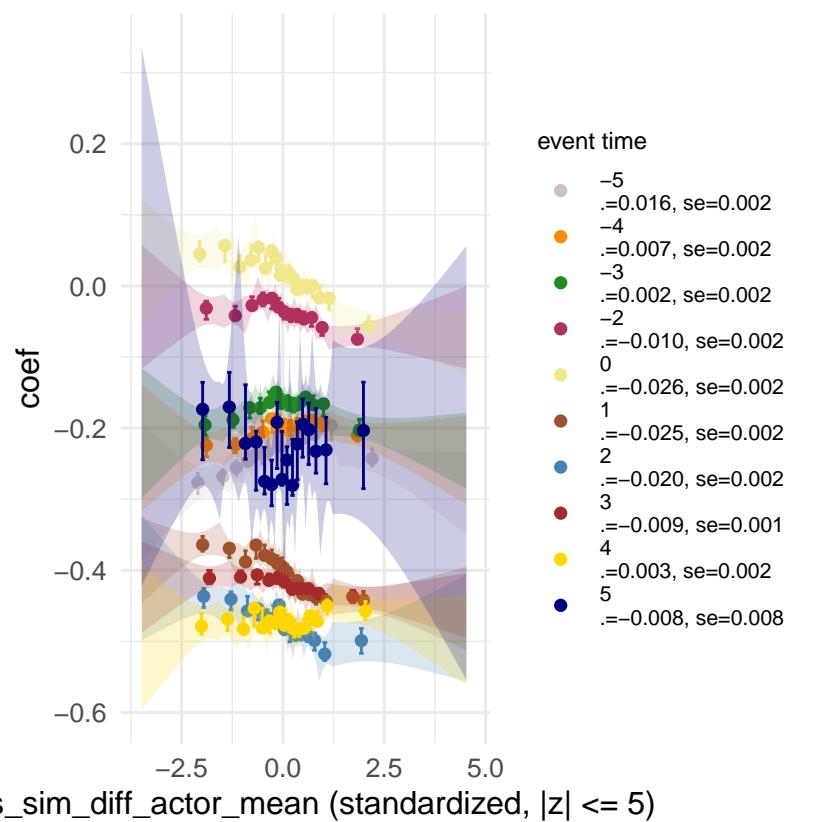
Binscatter of Event-study Coefficients  
 Outcome: pull\_request\_opened (rolling1, top15)  
 knowledge\_redundancy → broad\_expertise  
 discussion\_content → cos\_sim\_diff\_actor  
 Rank: 4, Importance: 0.0981



Binscatter of Event-study Coefficients  
 Outcome: pull\_request\_merged (rolling1, t)  
 knowledge\_redundancy → broad\_expertise  
 discussion\_content → cos\_sim\_diff\_actor  
 Rank: 6, Importance: 0.0797



Binscatter of Event-study Coefficients  
 Outcome: overall\_new\_release\_count (rolling1, top15)  
 knowledge\_redundancy → broad\_expertise  
 discussion\_content → cos\_sim\_diff\_actor  
 Rank: 8, Importance: 0.0389



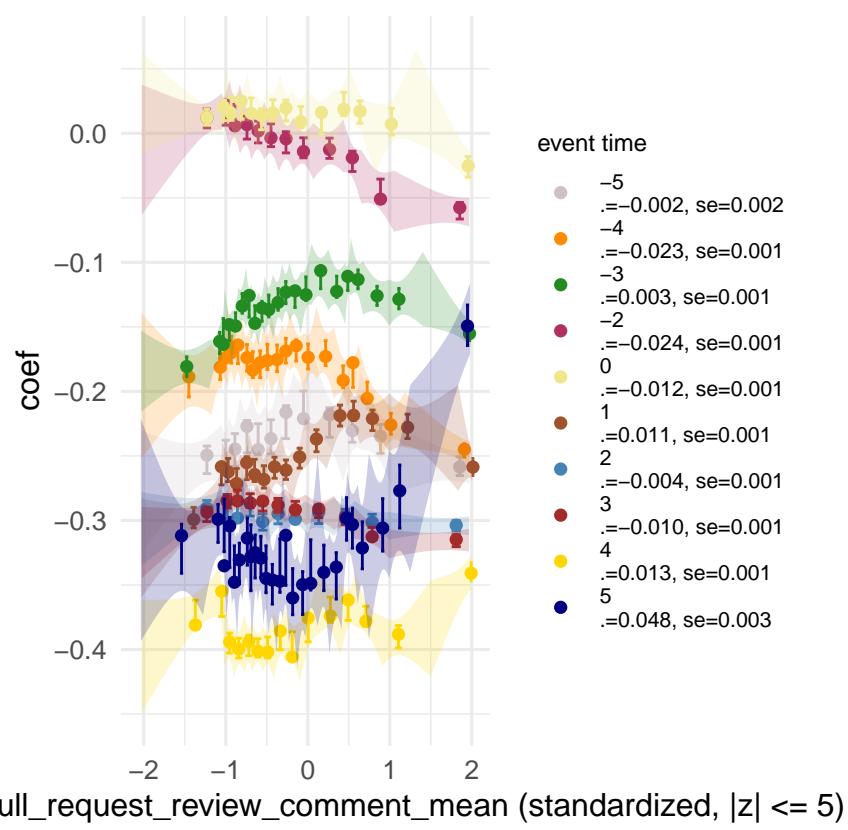
# Binscatter of Event-study Coefficients

Outcome: major\_minor\_release\_count (rolling1, top15)

knowledge\_redundancy → collaboration

problem\_hhi → proj\_prob\_hhi\_pull\_request\_review\_comment

Rank: 6, Importance: 0.0626



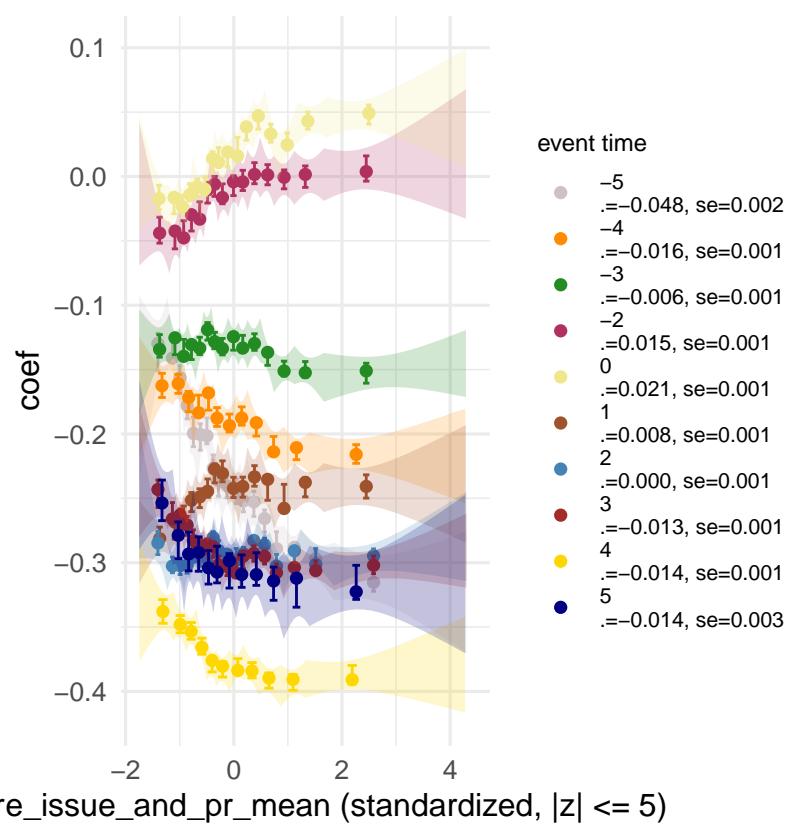
# Binscatter of Event-study Coefficients

Outcome: major\_minor\_release\_count (rolling1, top15)

knowledge\_redundancy → broad\_expertise

issue\_pr\_share → share\_issue\_and\_pr

Rank: 7, Importance: 0.0439



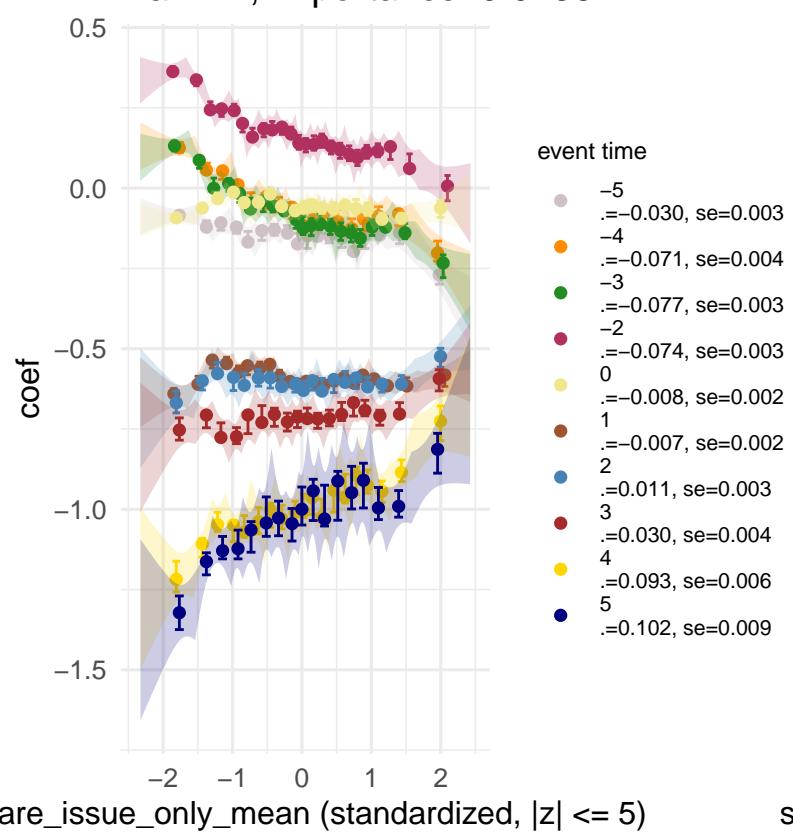
# Binscatter of Event-study Coefficients

Outcome: pull\_request\_opened (rolling1, top15)

knowledge\_redundancy → broad\_expertise

issue\_pr\_share → share\_issue\_only

Rank: 7, Importance: 0.0736



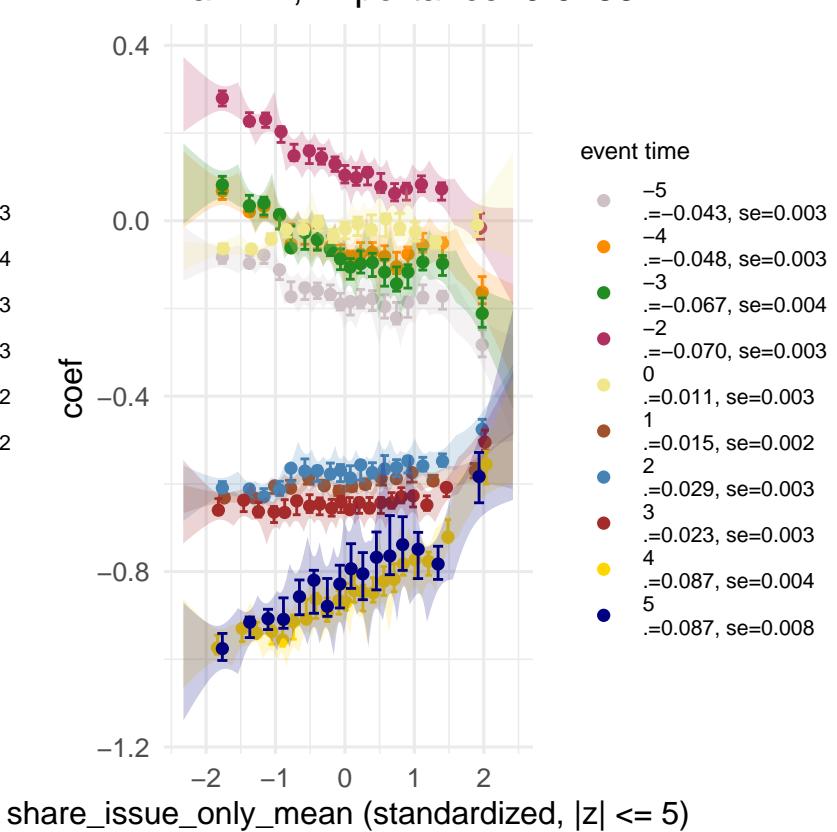
# Binscatter of Event-study Coefficients

Outcome: pull\_request\_merged (rolling1, t)

knowledge\_redundancy → broad\_expertise

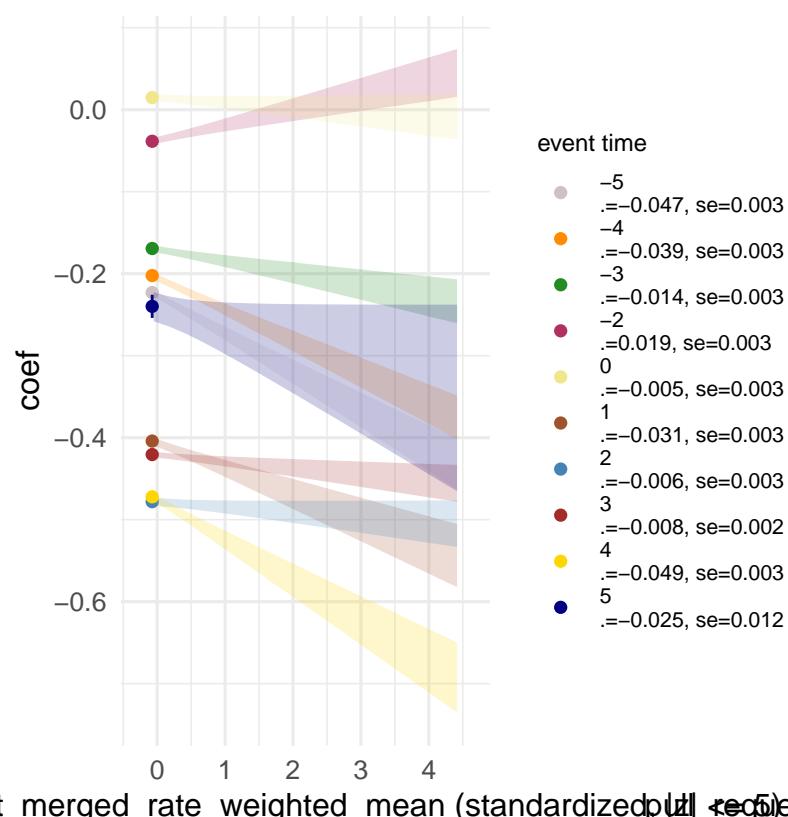
issue\_pr\_share → share\_issue\_only

Rank: 7, Importance: 0.0786



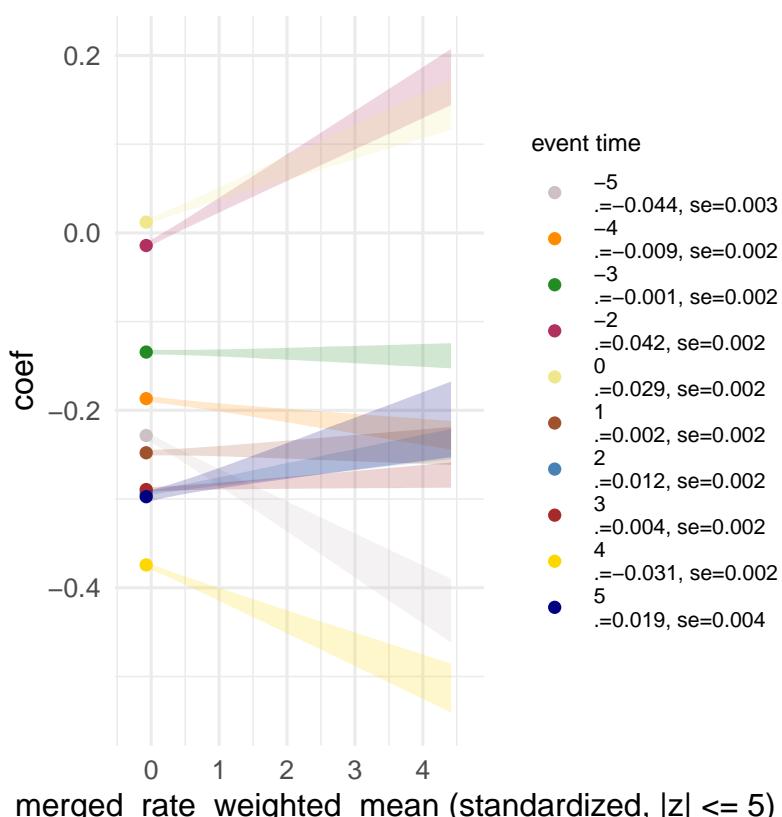
### Binscatter of Event-study Coefficients

Outcome: overall\_new\_release\_count (rolling1, top15)  
 talent\_investment → growth\_opportunity  
 merge\_review\_pr → pull\_request\_merged\_rate\_weighted\_mean  
 Rank: 10, Importance: 0.0302

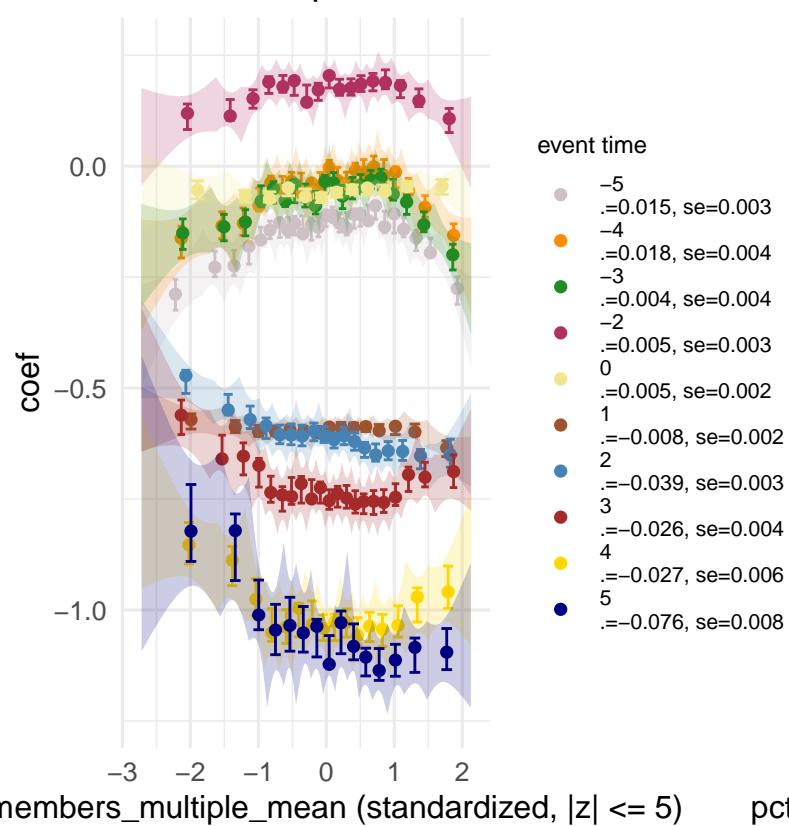


### Binscatter of Event-study Coefficients

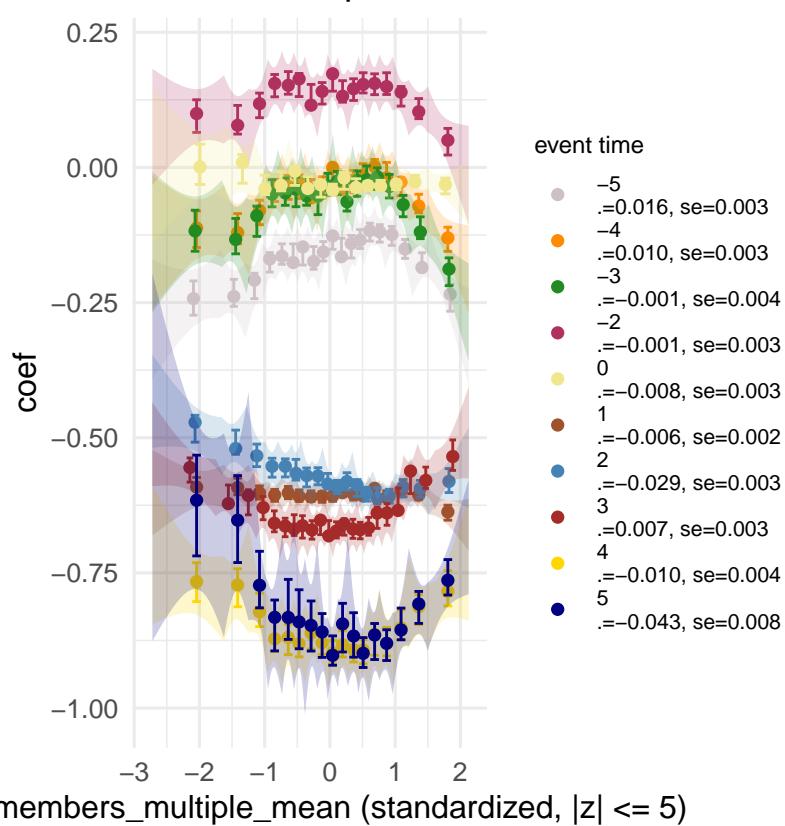
Outcome: major\_minor\_release\_count (rolling1, top15)  
 talent\_investment → growth\_opportunity  
 merge\_review\_pr → pull\_request\_merged\_rate\_weighted\_mean  
 Rank: 5, Importance: 0.0677



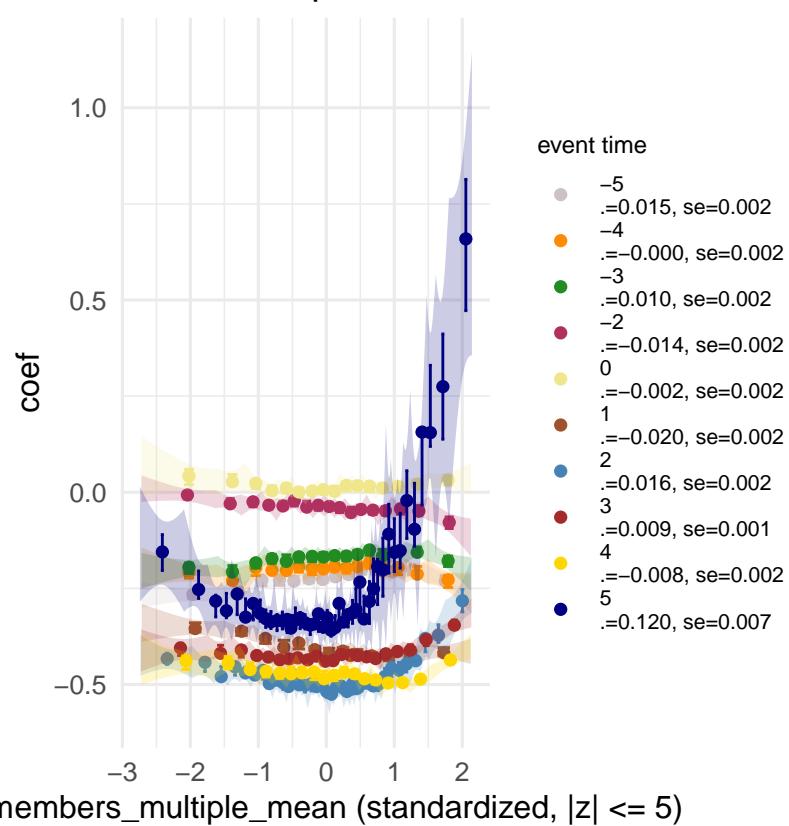
Binscatter of Event-study Coefficients  
 Outcome: pull\_request\_opened (rolling1, top15)  
 knowledge\_redundancy → collaboration  
 member\_count → pct\_members\_multiple  
 Rank: 9, Importance: 0.0637



Binscatter of Event-study Coefficients  
 Outcome: pull\_request\_merged (rolling1, top15)  
 knowledge\_redundancy → collaboration  
 member\_count → pct\_members\_multiple  
 Rank: 11, Importance: 0.0198

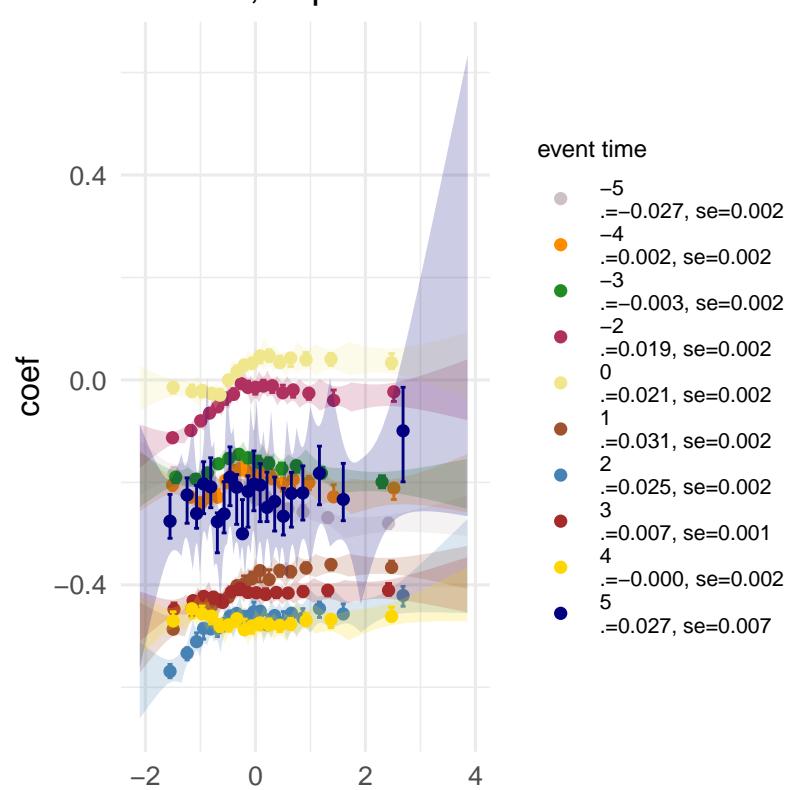


Binscatter of Event-study Coefficients  
 Outcome: overall\_new\_release\_count (rolling1, top15)  
 knowledge\_redundancy → collaboration  
 member\_count → pct\_members\_multiple  
 Rank: 4, Importance: 0.0891



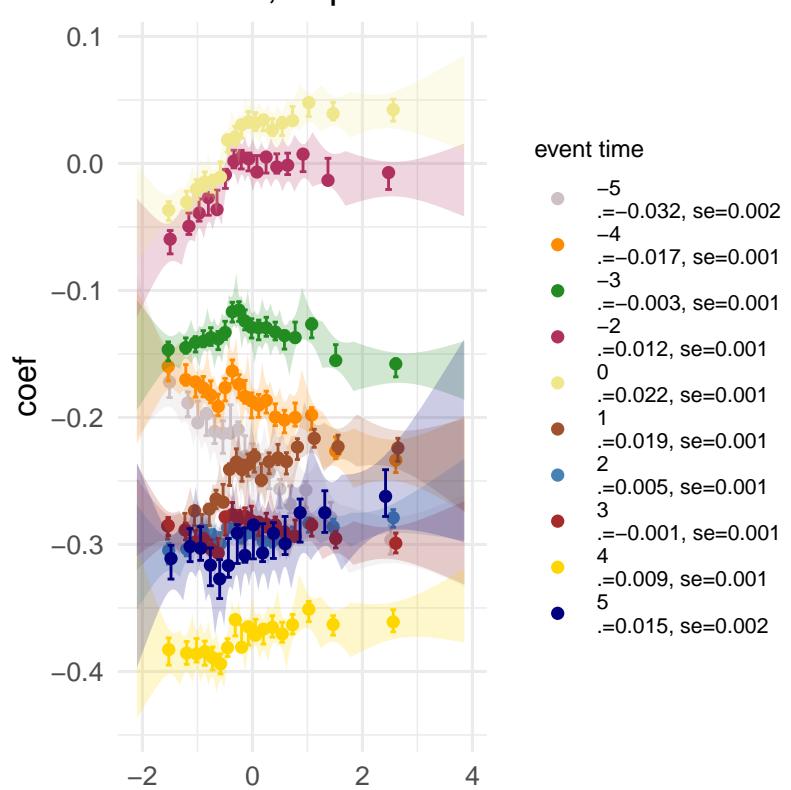
### Binscatter of Event-study Coefficients

Outcome: overall\_new\_release\_count (rolling1, top15)  
 knowledge\_redundancy → collaboration  
 hhi → proj\_hhi\_discussion\_comment  
 Rank: 6, Importance: 0.0584



### Binscatter of Event-study Coefficients

Outcome: major\_minor\_release\_count (rolling1, top15)  
 knowledge\_redundancy → collaboration  
 hhi → proj\_hhi\_discussion\_comment  
 Rank: 10, Importance: 0.0329



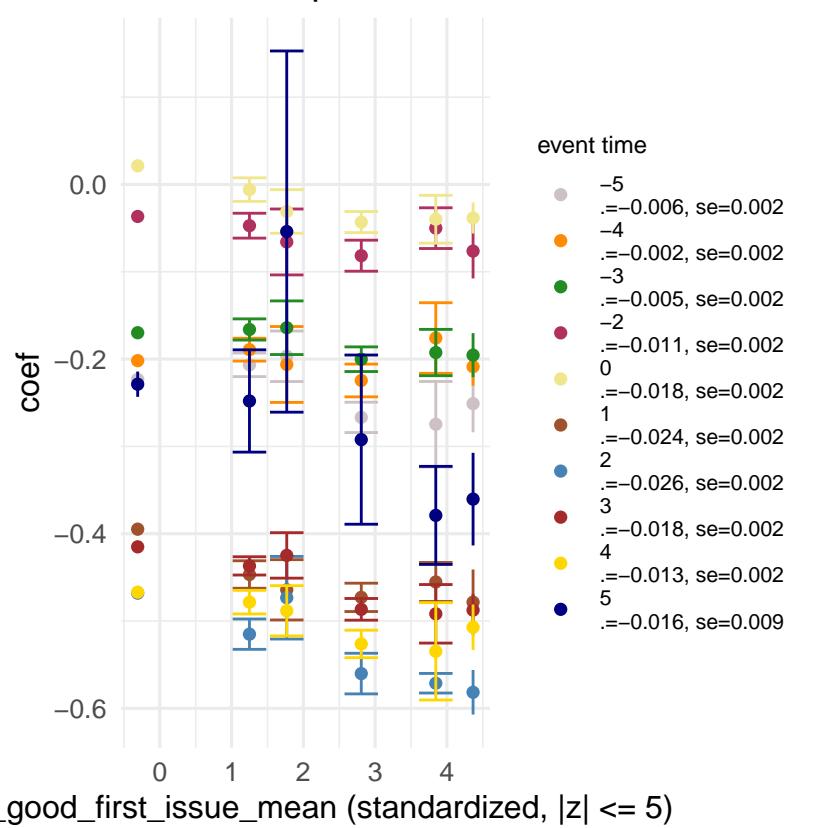
# Binscatter of Event-study Coefficients

Outcome: overall\_new\_release\_count (rolling1, top15)

organizational\_routines → newcomer\_guidelines

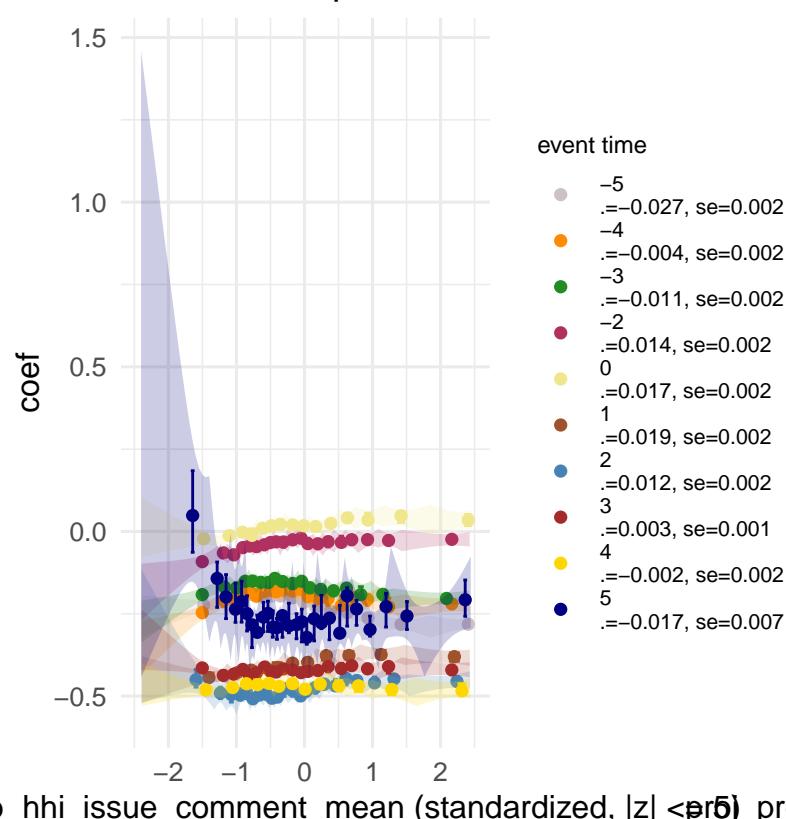
good\_first\_issue → has\_good\_first\_issue

Rank: 9, Importance: 0.0307



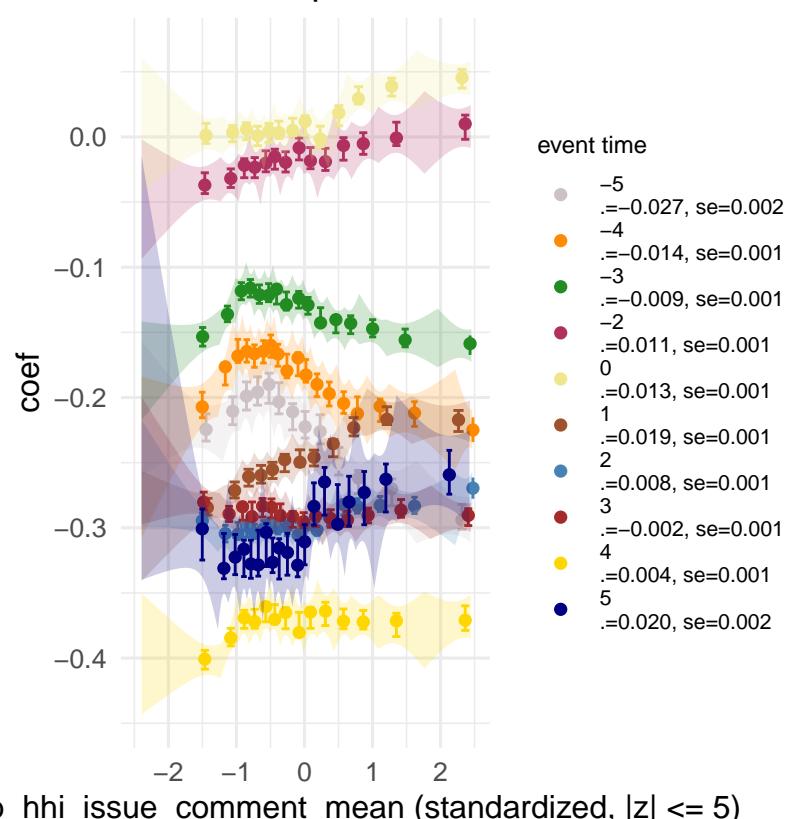
### Binscatter of Event-study Coefficients

Outcome: overall\_new\_release\_count (rolling1, top15)  
 knowledge\_redundancy → collaboration  
 problem\_hhi → proj\_prob\_hhi\_issue\_comment  
 Rank: 12, Importance: 0.0227



### Binscatter of Event-study Coefficients

Outcome: major\_minor\_release\_count (rolling1, top15)  
 knowledge\_redundancy → collaboration  
 problem\_hhi → proj\_prob\_hhi\_issue\_comment  
 Rank: 8, Importance: 0.0427



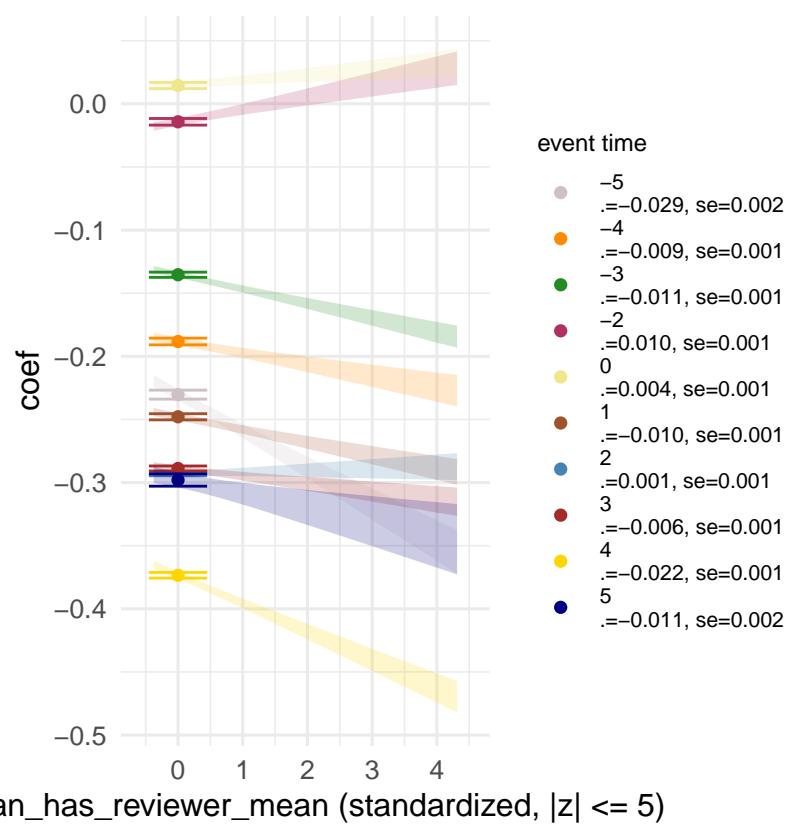
# Binscatter of Event-study Coefficients

Outcome: major\_minor\_release\_count (rolling1, top15)

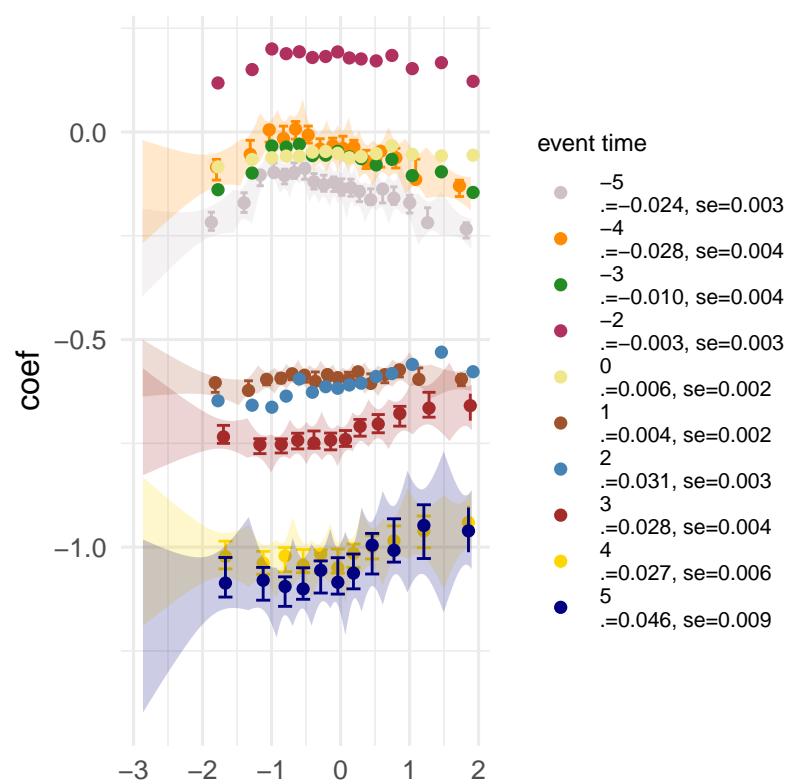
organizational\_routines → organized\_assignment

pr\_reviewers → mean\_has\_reviewer

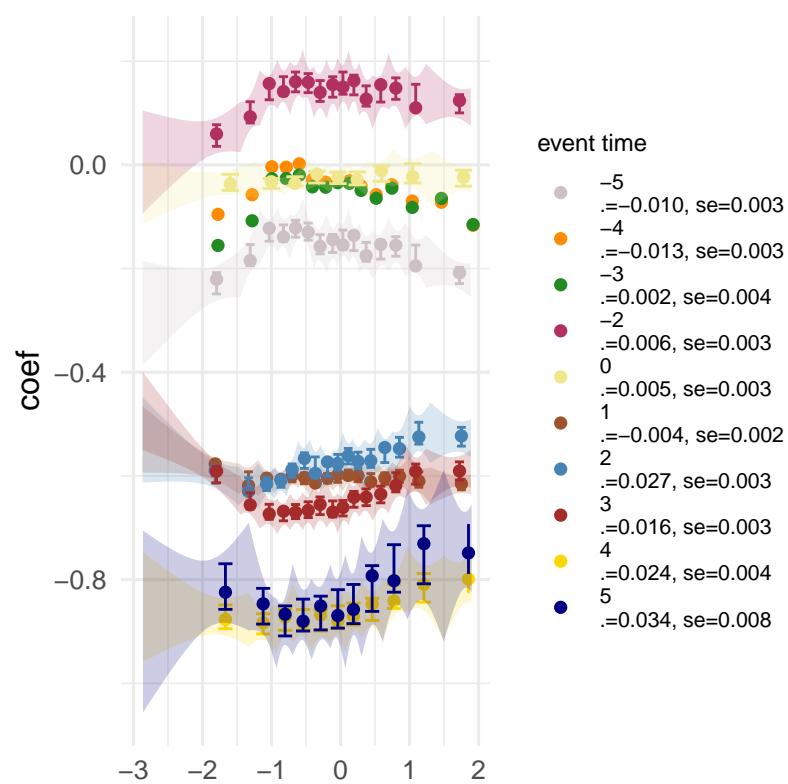
Rank: 11, Importance: 0.0272



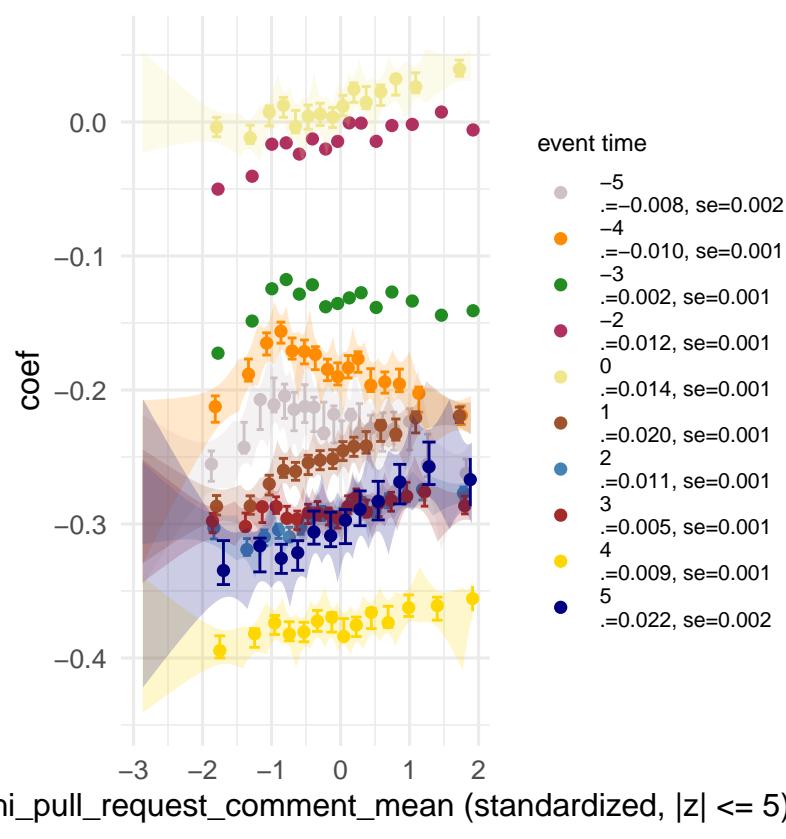
Binscatter of Event-study Coefficients  
 Outcome: pull\_request\_opened (rolling1, top15)  
 knowledge\_redundancy → collaboration  
 problem\_hhi → proj\_prob\_hhi\_pull\_request\_comment  
 Rank: 12, Importance: 0.0135



Binscatter of Event-study Coefficients  
 Outcome: pull\_request\_merged (rolling1, top15)  
 knowledge\_redundancy → collaboration  
 problem\_hhi → proj\_prob\_hhi\_pull\_request\_comment  
 Rank: 12, Importance: 0.0196



Binscatter of Event-study Coefficients  
 Outcome: major\_minor\_release\_count (rolling1, top15)  
 knowledge\_redundancy → collaboration  
 problem\_hhi → proj\_prob\_hhi\_pull\_request\_comment  
 Rank: 9, Importance: 0.0416



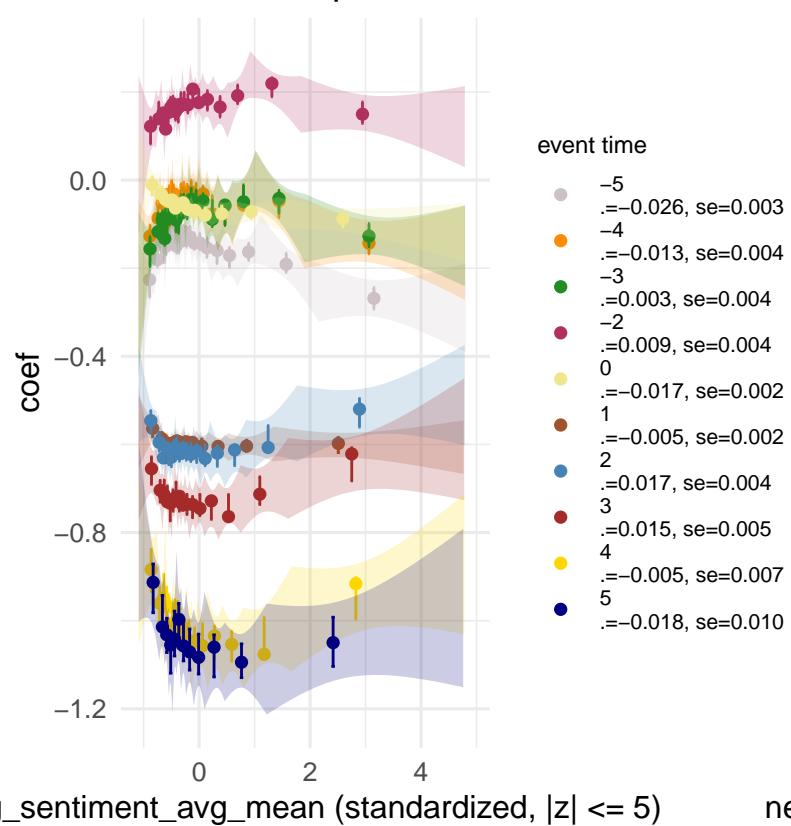
# Binscatter of Event-study Coefficients

Outcome: pull\_request\_opened (rolling1, top15)

talent\_investment → feedback

response\_sentiment → neg\_sentiment\_avg

Rank: 10, Importance: 0.0247



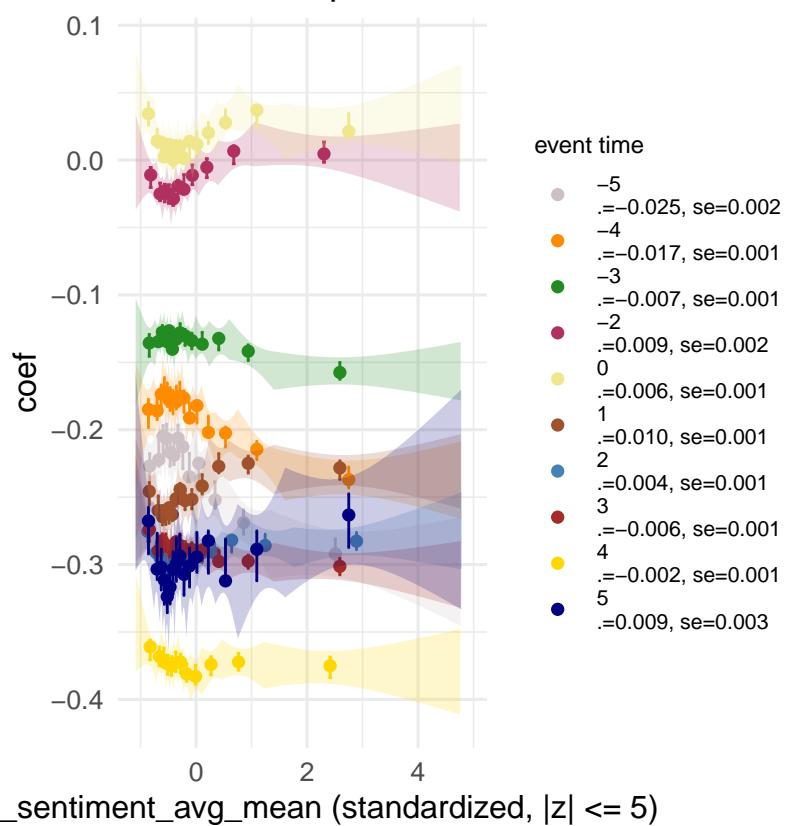
# Binscatter of Event-study Coefficients

Outcome: major\_minor\_release\_count (rolling1, top15)

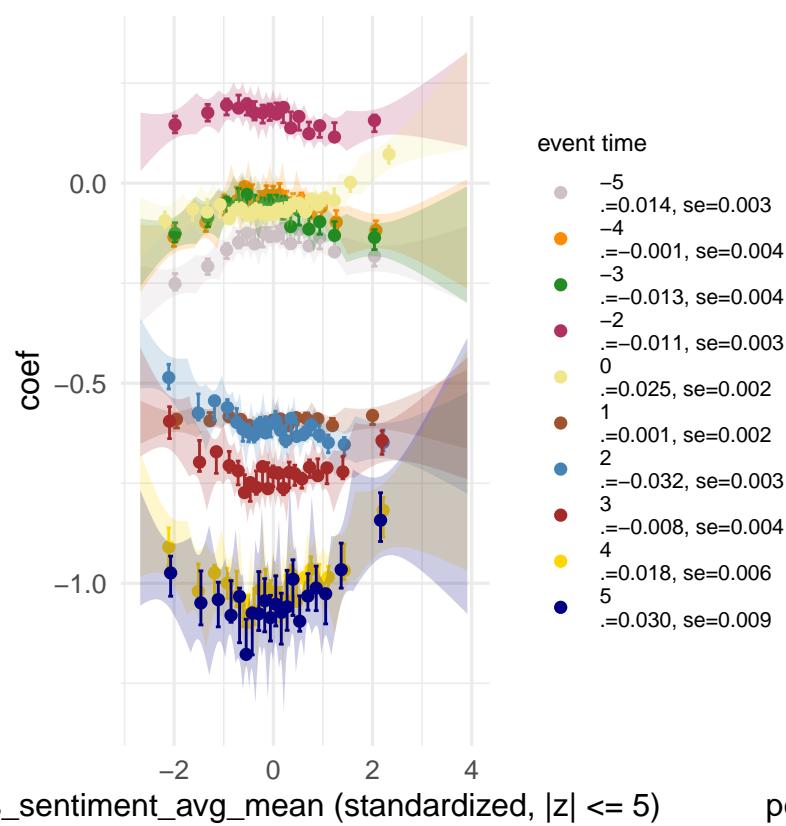
talent\_investment → feedback

response\_sentiment → neg\_sentiment\_avg

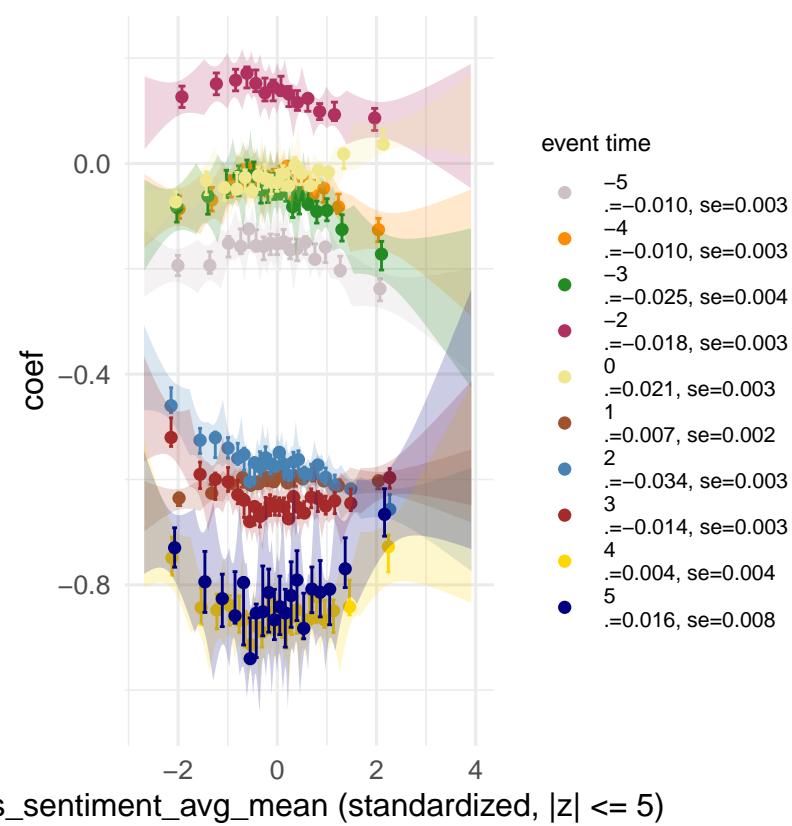
Rank: 14, Importance: 0.0211



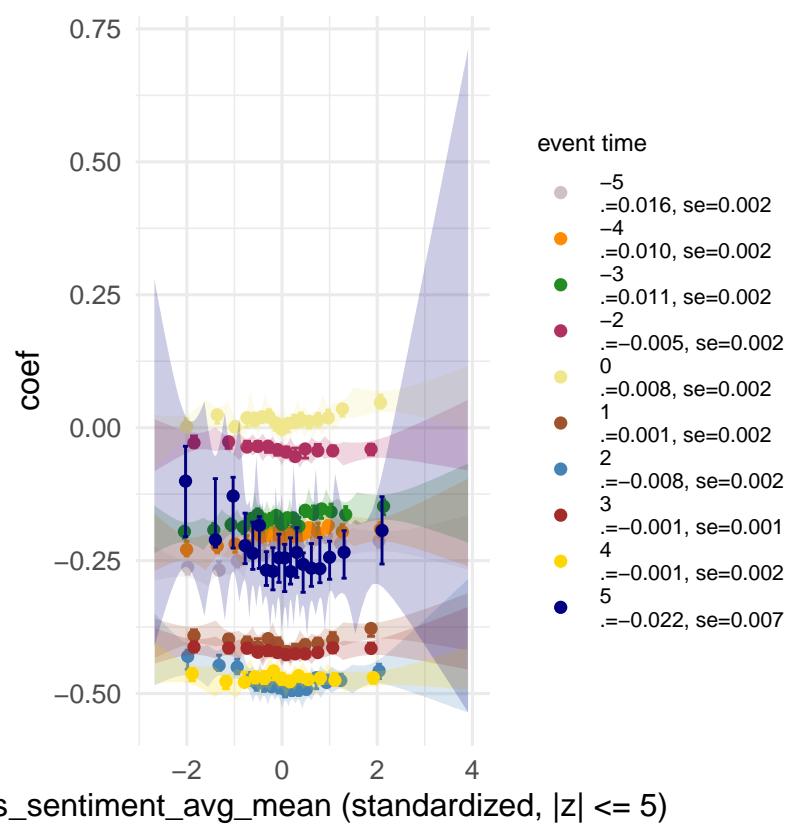
Binscatter of Event-study Coefficients  
 Outcome: pull\_request\_opened (rolling1, top15)  
 talent\_investment → feedback  
 response\_sentiment → pos\_sentiment\_avg  
 Rank: 11, Importance: 0.0236



Binscatter of Event-study Coefficients  
 Outcome: pull\_request\_merged (rolling1, t)  
 talent\_investment → feedback  
 response\_sentiment → pos\_sentiment\_avg  
 Rank: 10, Importance: 0.0369

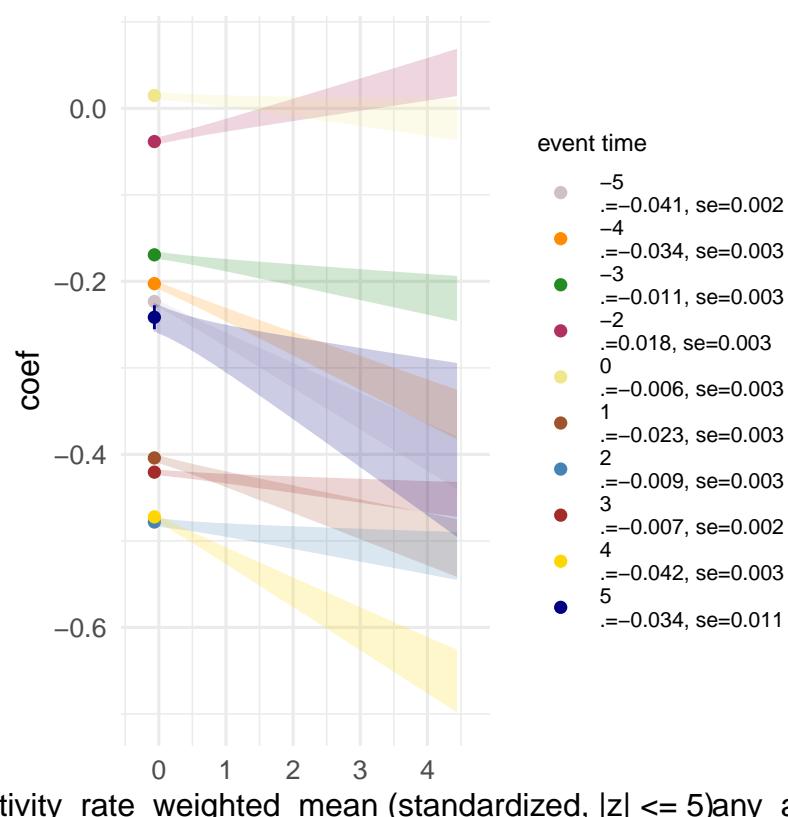


Binscatter of Event-study Coefficients  
 Outcome: overall\_new\_release\_count (rolling1, top15)  
 talent\_investment → feedback  
 response\_sentiment → pos\_sentiment\_avg  
 Rank: 15, Importance: 0.0121



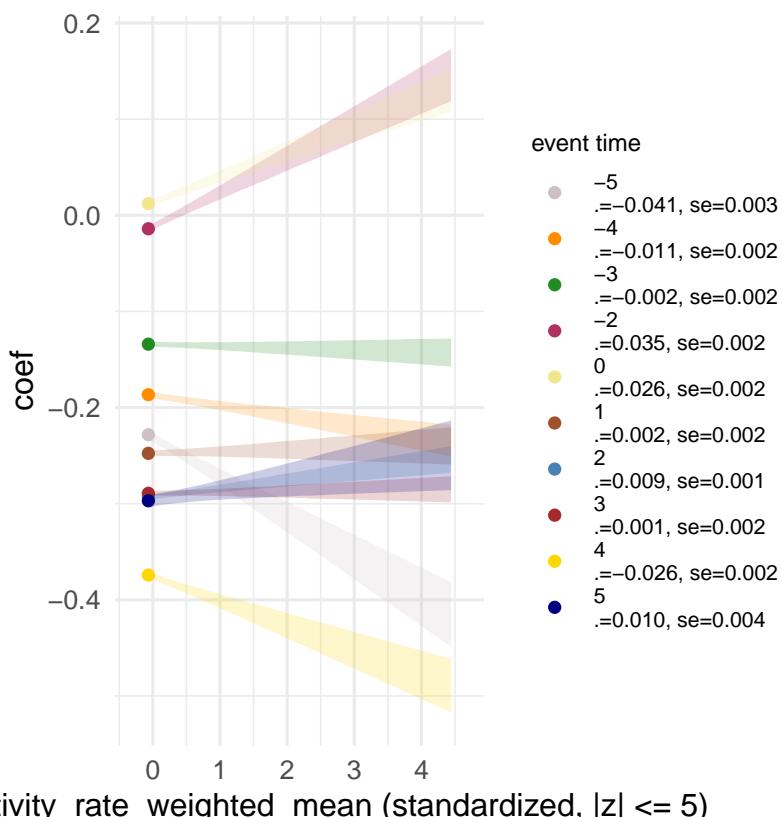
### Binscatter of Event-study Coefficients

Outcome: overall\_new\_release\_count (rolling1, top15)  
 talent\_investment → growth\_opportunity  
 merge\_review\_pr → any\_activity\_rate\_weighted  
 Rank: 11, Importance: 0.028



### Binscatter of Event-study Coefficients

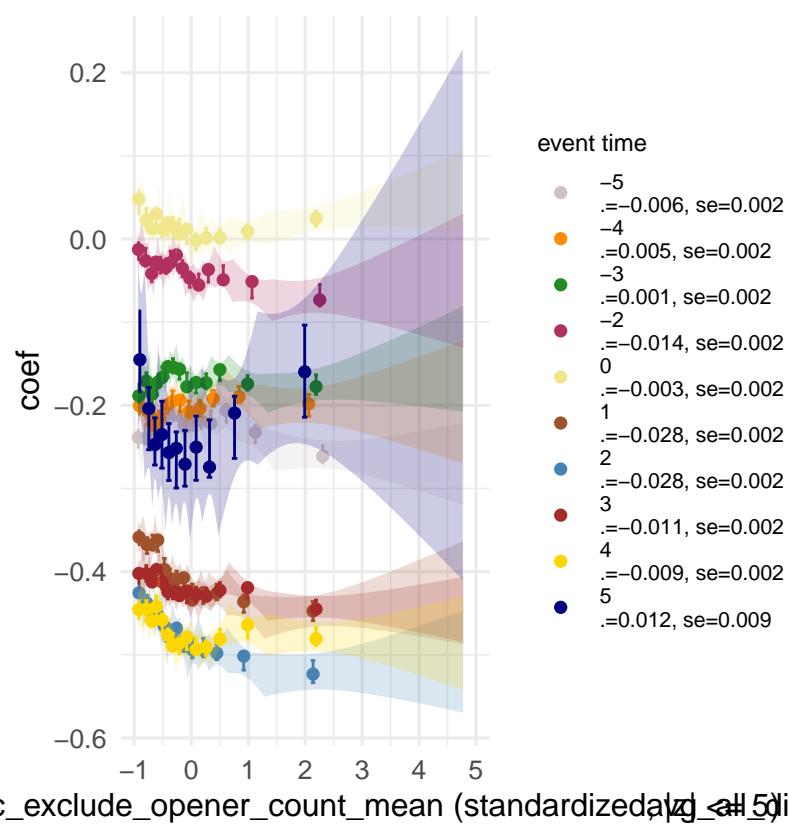
Outcome: major\_minor\_release\_count (rolling1, top15)  
 talent\_investment → growth\_opportunity  
 merge\_review\_pr → any\_activity\_rate\_weighted  
 Rank: 15, Importance: 0.0164



### Binscatter of Event-study Coefficients

Outcome: overall\_new\_release\_count (rolling1, top talent\_investment → feedback)

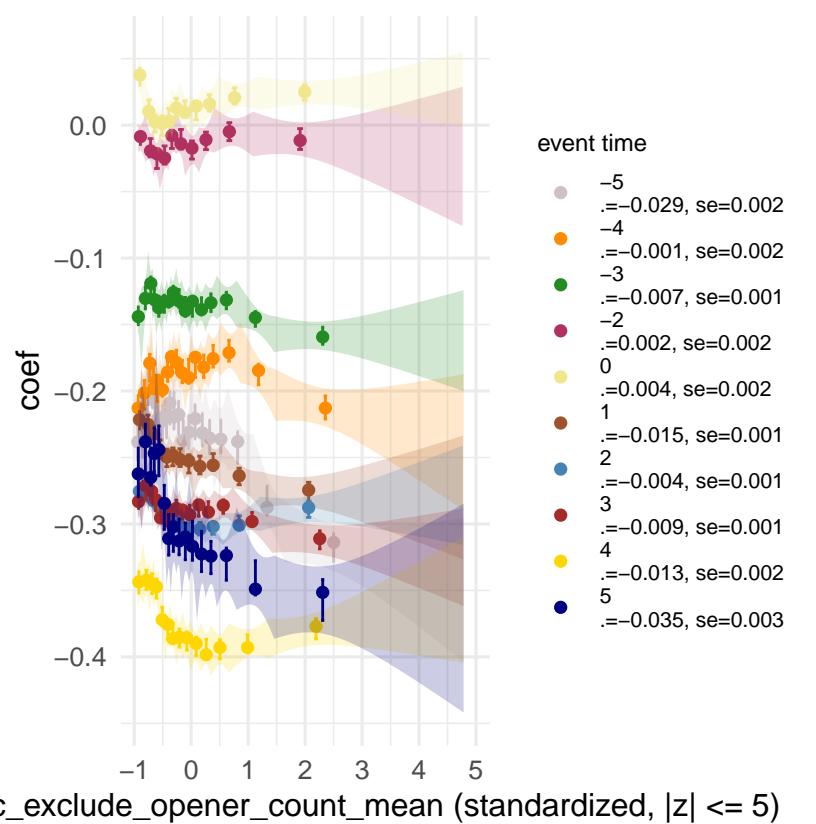
feedback\_quantity → avg\_all\_disc\_exclude\_opener\_rank: 13, Importance: 0.0172



### Binscatter of Event-study Coefficients

Outcome: major\_minor\_release\_count (rolling1, top talent\_investment → feedback)

feedback\_quantity → avg\_all\_disc\_exclude\_opener\_rank: 13, Importance: 0.023



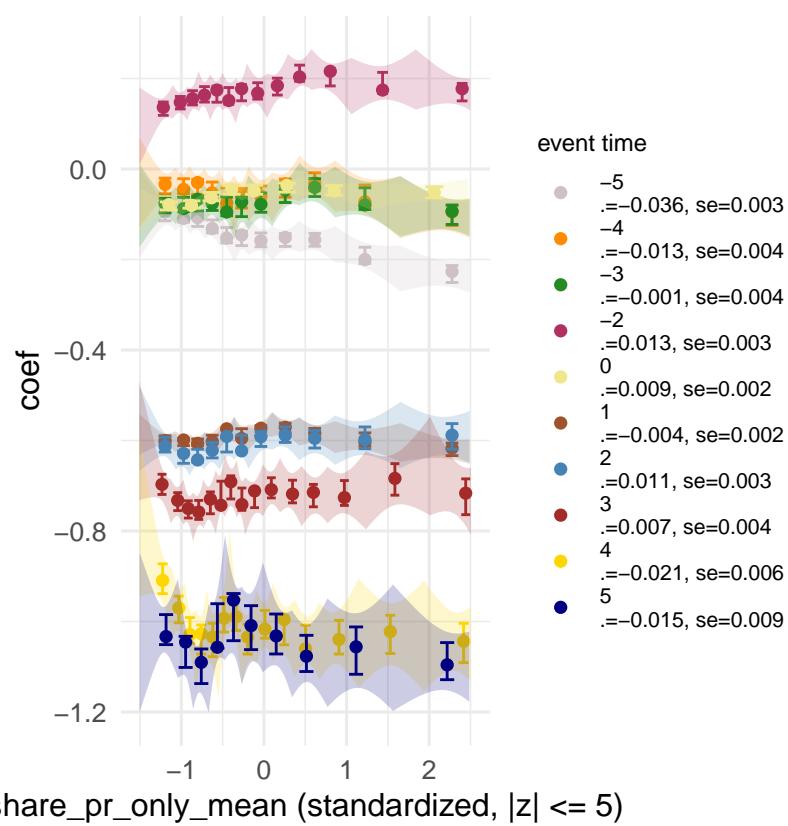
# Binscatter of Event-study Coefficients

Outcome: pull\_request\_opened (rolling1, top15)

knowledge\_redundancy → broad\_expertise

issue\_pr\_share → share\_pr\_only

Rank: 13, Importance: 0.00599



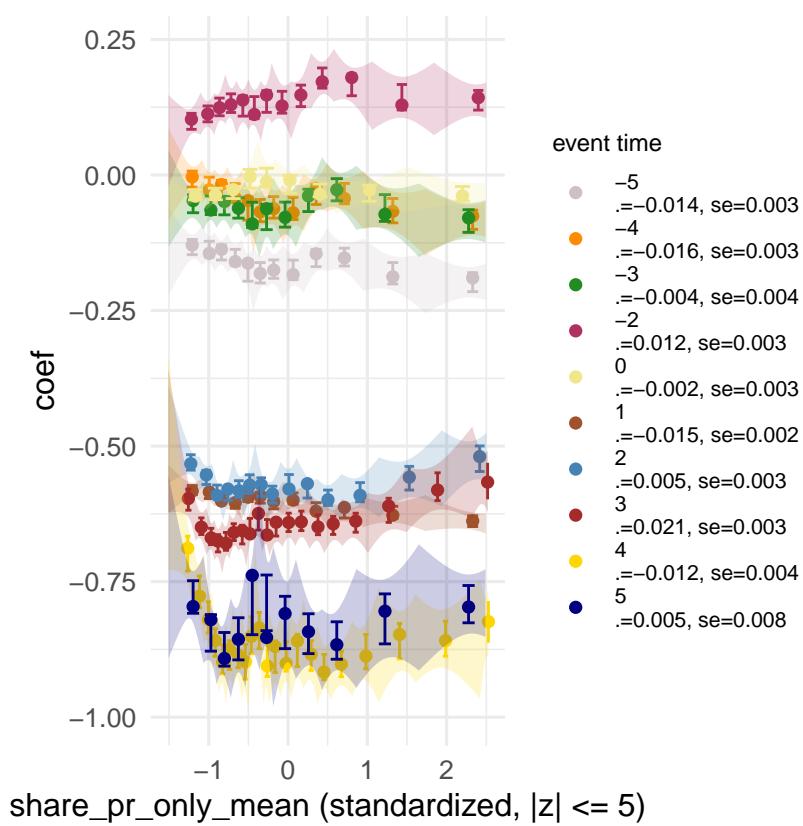
# Binscatter of Event-study Coefficients

Outcome: pull\_request\_merged (rolling1, top15)

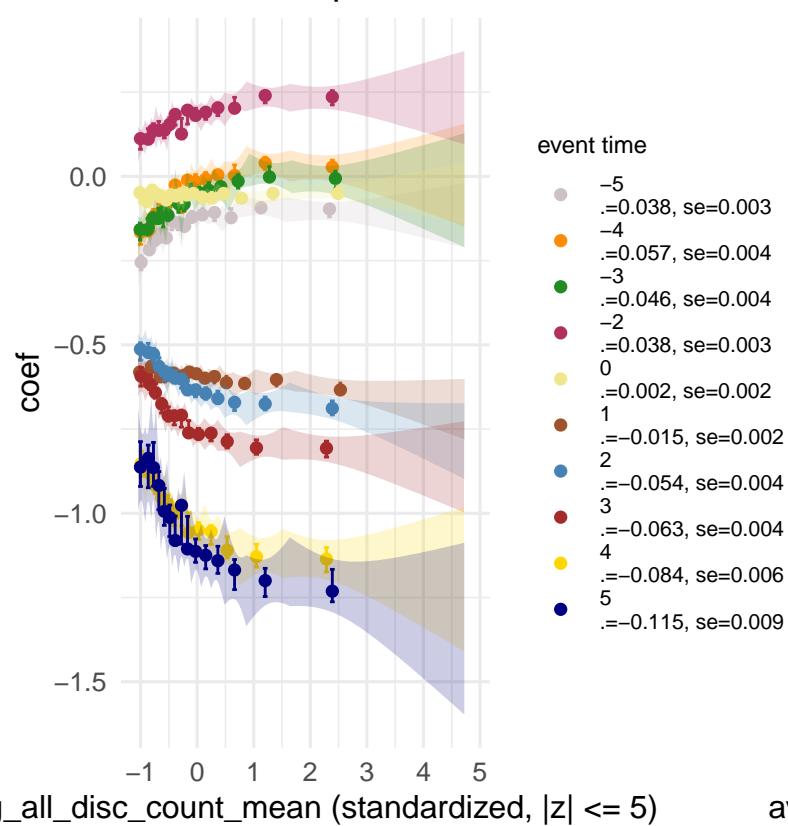
knowledge\_redundancy → broad\_expertise

issue\_pr\_share → share\_pr\_only

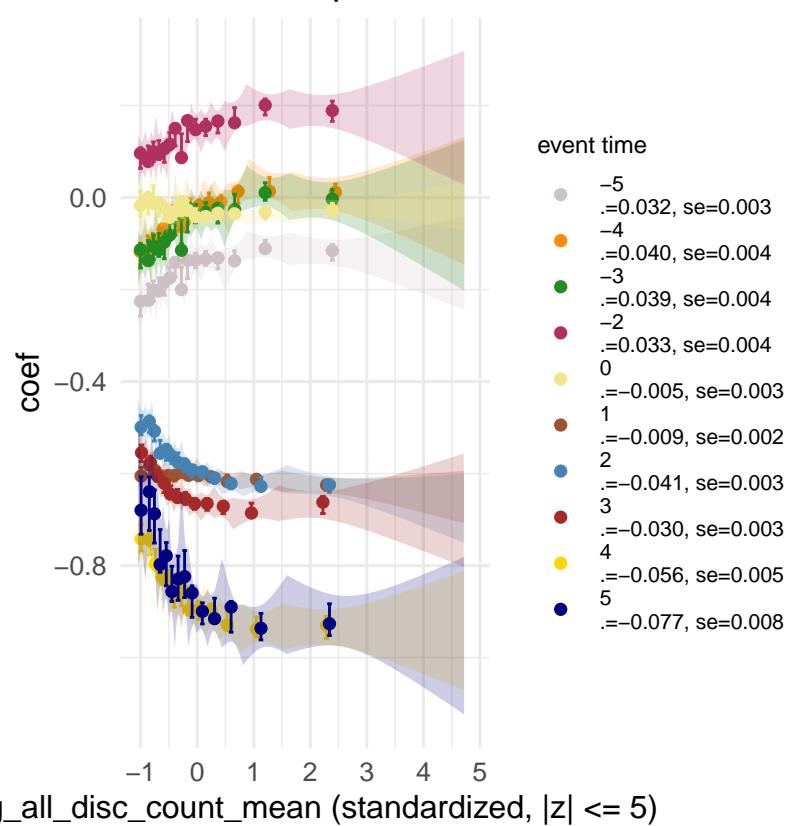
Rank: 13, Importance: 0.0125



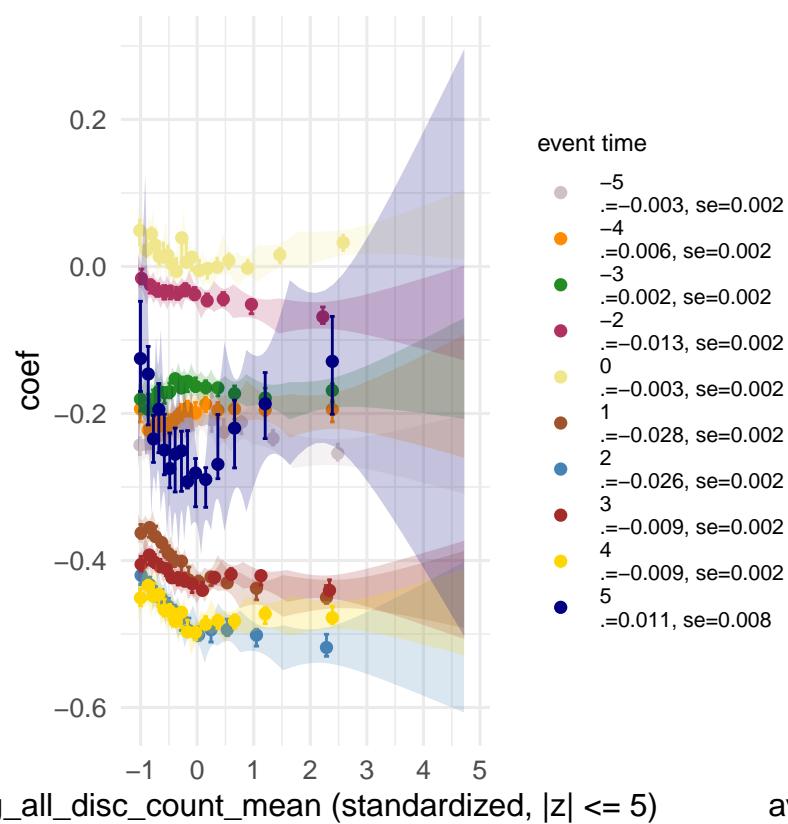
Binscatter of Event-study Coefficients  
 Outcome: pull\_request\_opened (rolling1, top15)  
 knowledge\_redundancy → supervision  
 discussion\_quantity → avg\_all\_disc\_count  
 Rank: 15, Importance: 0.00551



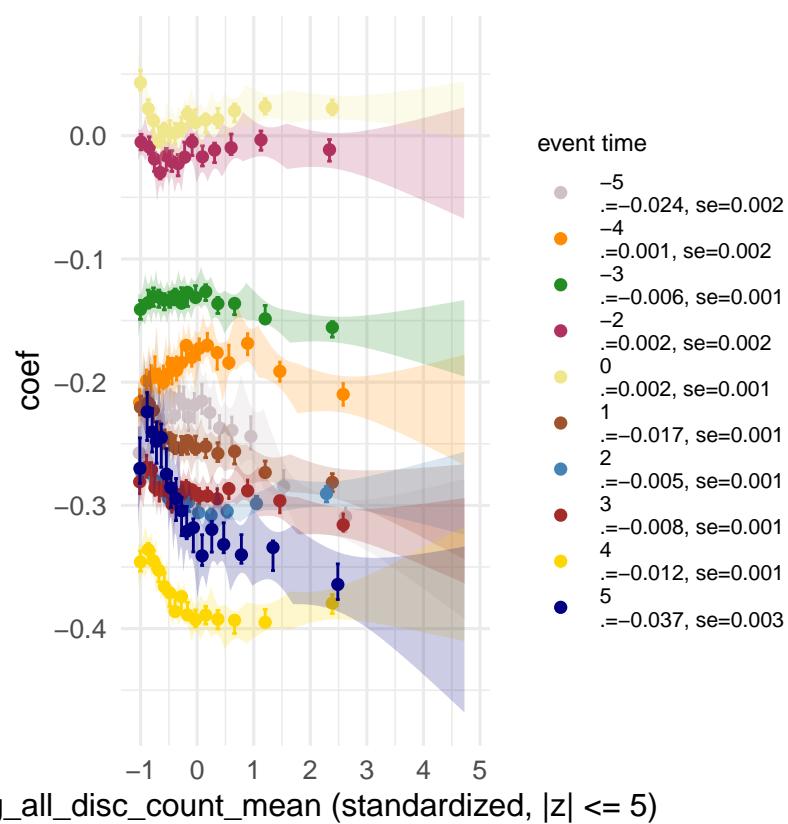
Binscatter of Event-study Coefficients  
 Outcome: pull\_request\_merged (rolling1, top15)  
 knowledge\_redundancy → supervision  
 discussion\_quantity → avg\_all\_disc\_count  
 Rank: 15, Importance: 0.0054



Binscatter of Event-study Coefficients  
 Outcome: overall\_new\_release\_count (rolling1, top15)  
 knowledge\_redundancy → supervision  
 discussion\_quantity → avg\_all\_disc\_count  
 Rank: 14, Importance: 0.0145



Binscatter of Event-study Coefficients  
 Outcome: major\_minor\_release\_count (rolling1, top15)  
 knowledge\_redundancy → supervision  
 discussion\_quantity → avg\_all\_disc\_count  
 Rank: 12, Importance: 0.0238



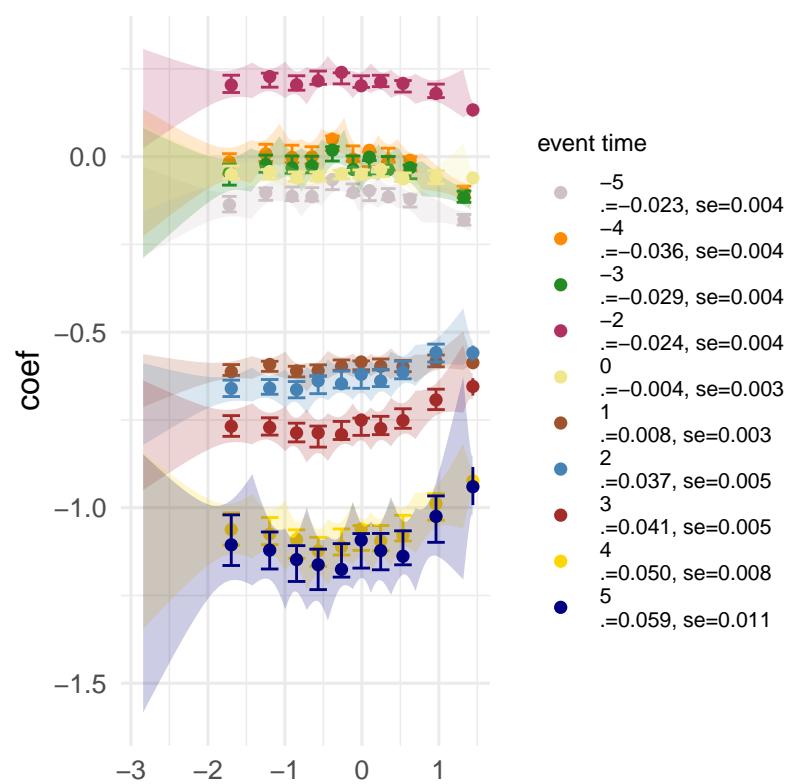
### Binscatter of Event-study Coefficients

Outcome: pull\_request\_opened (rolling1, top15)

knowledge\_redundancy → collaboration

problem\_hhi → proj\_prob\_hhi\_pull\_request\_review\_mean

Rank: 14, Importance: 0.00558



### Binscatter of Event-study Coefficients

Outcome: pull\_request\_merged (rolling1, t)

knowledge\_redundancy → collaboration

problem\_hhi → proj\_prob\_hhi\_pull\_request\_review\_mean

Rank: 14, Importance: 0.0094

