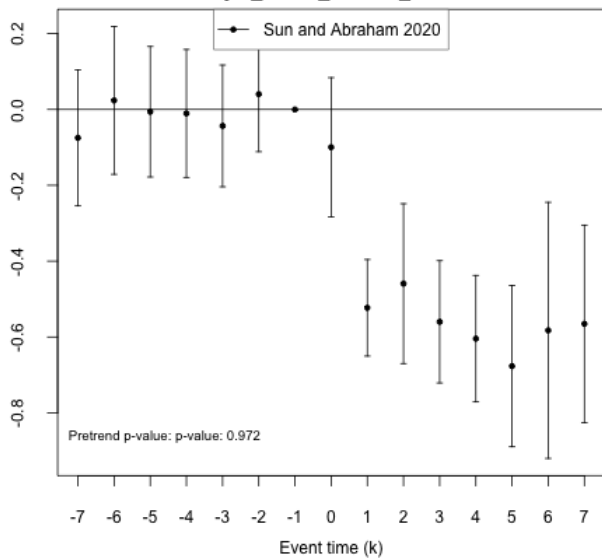
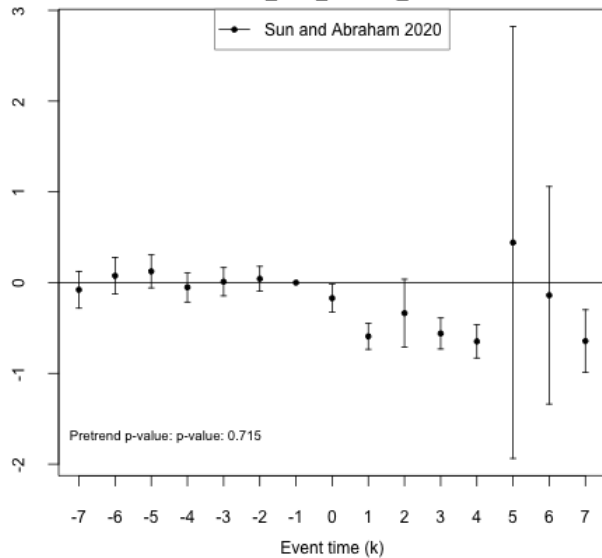


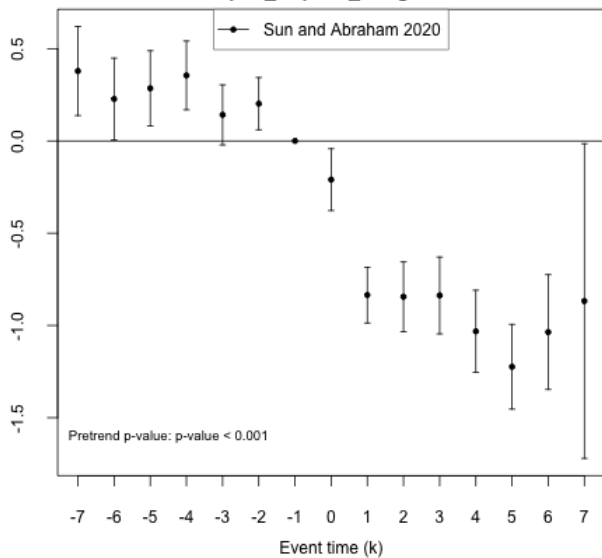
major\_minor\_release\_count



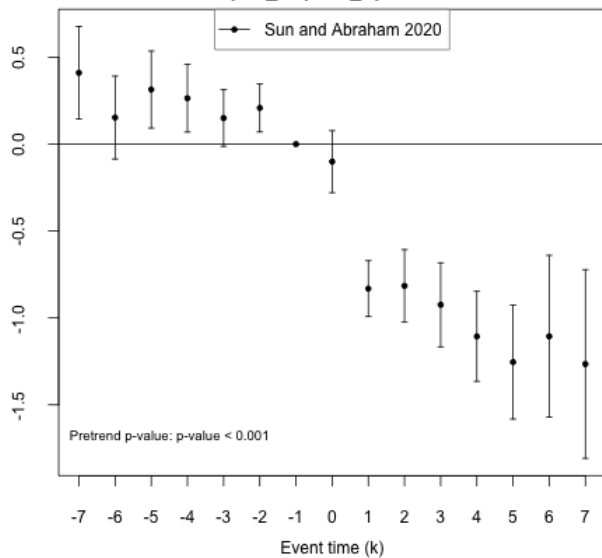
overall\_new\_release\_count



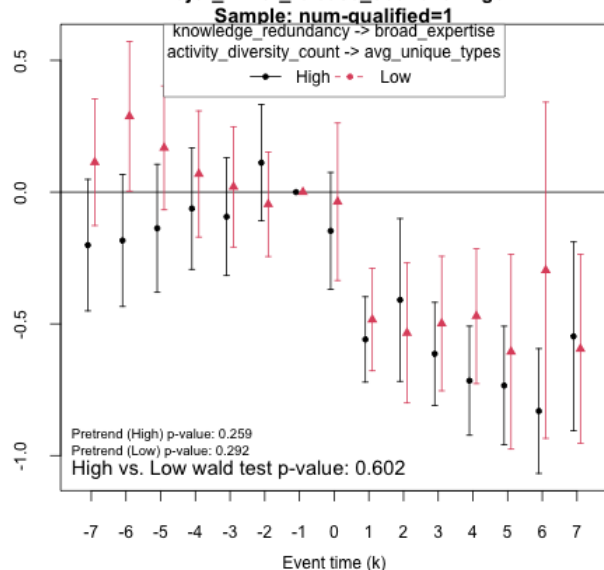
pull\_request\_merged



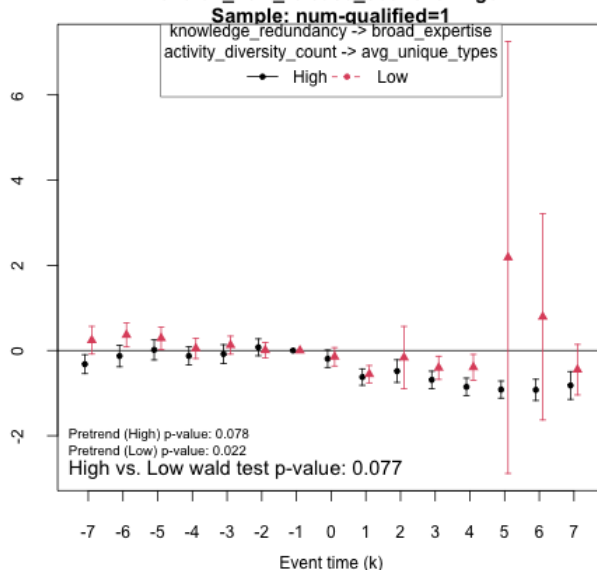
pull\_request\_opened



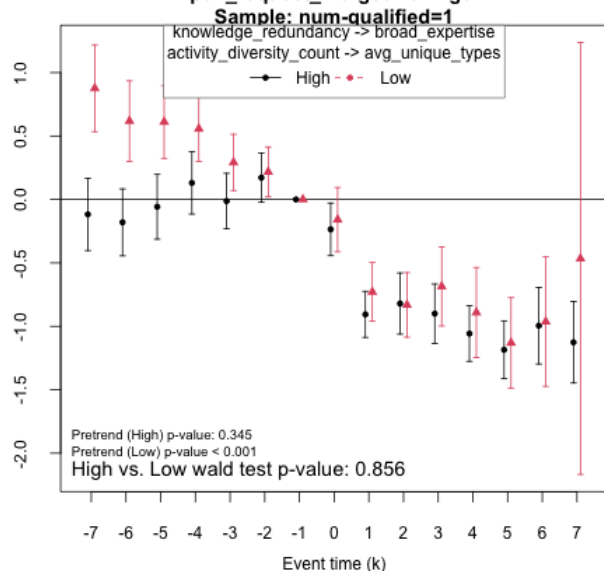
major\_minor\_release\_count rolling5



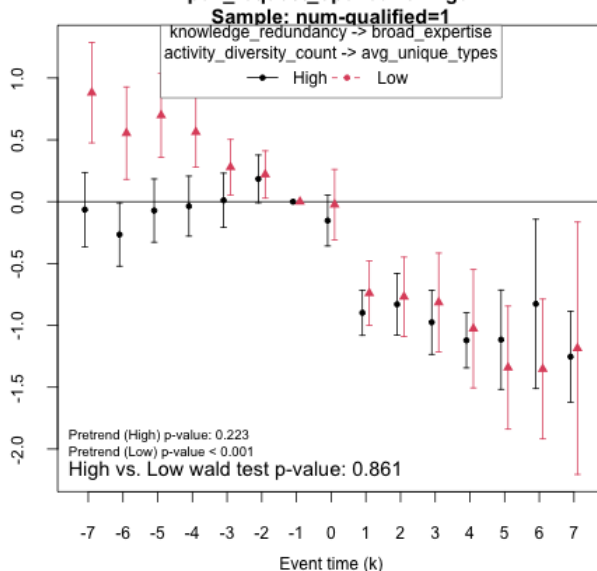
overall\_new\_release\_count rolling5



pull\_request\_merged rolling5



pull\_request\_opened rolling5



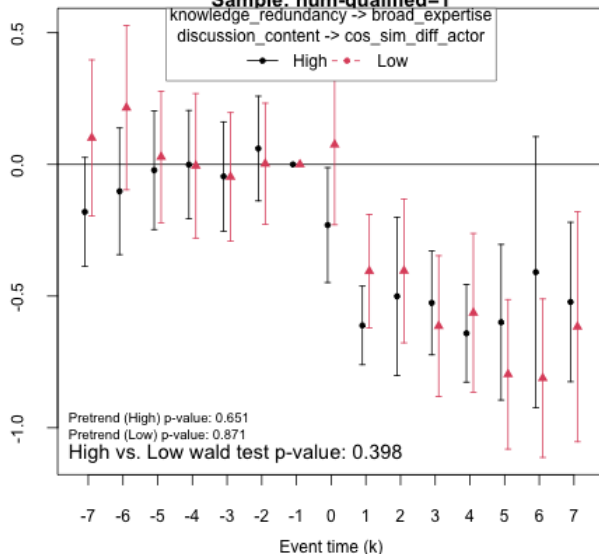
major\_minor\_release\_count rolling5

Sample: num-qualified=1

knowledge\_redundancy -&gt; broad\_expertise

discussion\_content -&gt; cos\_sim\_diff\_actor

—●— High —●— Low



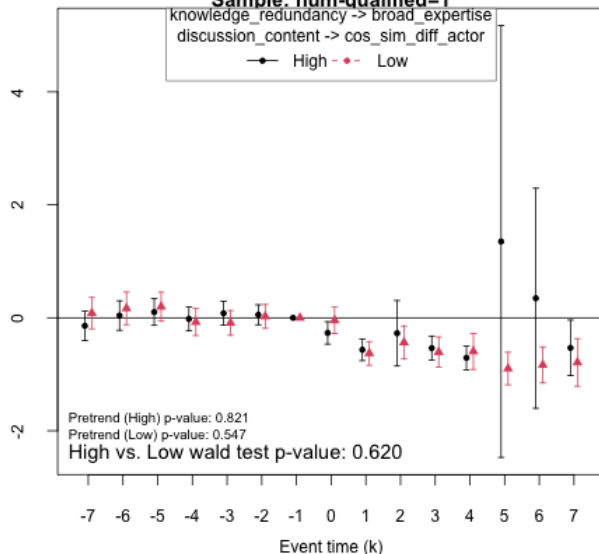
overall\_new\_release\_count rolling5

Sample: num-qualified=1

knowledge\_redundancy -&gt; broad\_expertise

discussion\_content -&gt; cos\_sim\_diff\_actor

—●— High —●— Low



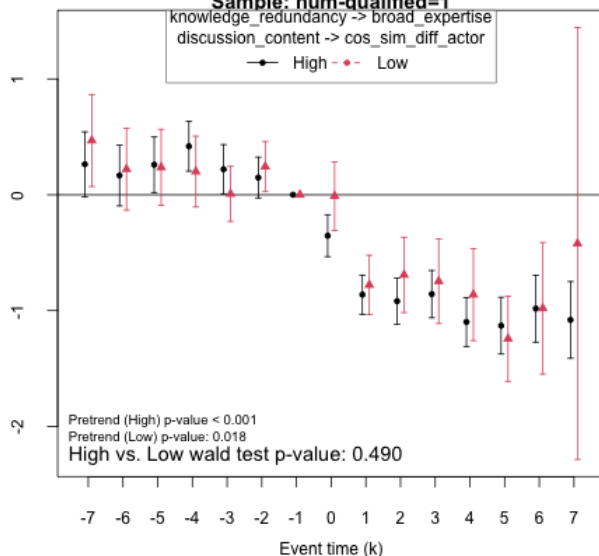
pull\_request\_merged rolling5

Sample: num-qualified=1

knowledge\_redundancy -&gt; broad\_expertise

discussion\_content -&gt; cos\_sim\_diff\_actor

—●— High —●— Low



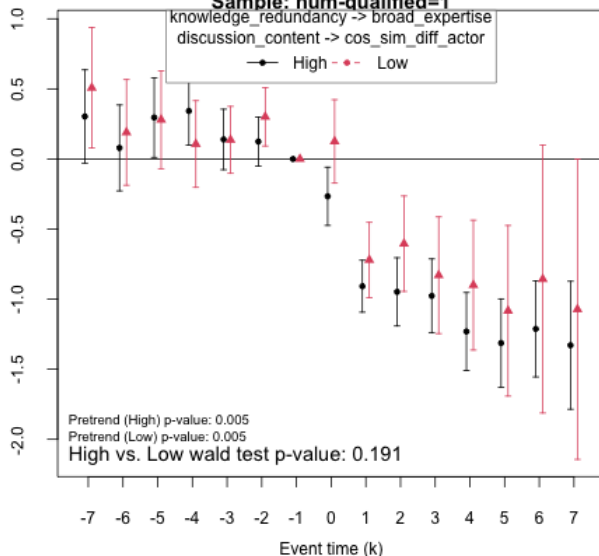
pull\_request\_opened rolling5

Sample: num-qualified=1

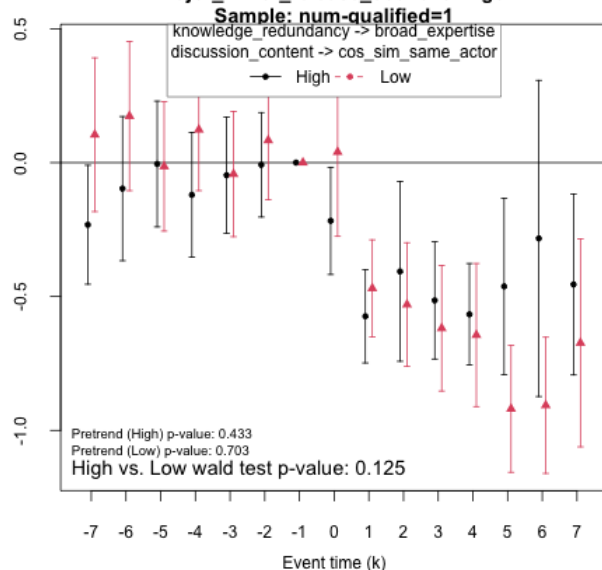
knowledge\_redundancy -&gt; broad\_expertise

discussion\_content -&gt; cos\_sim\_diff\_actor

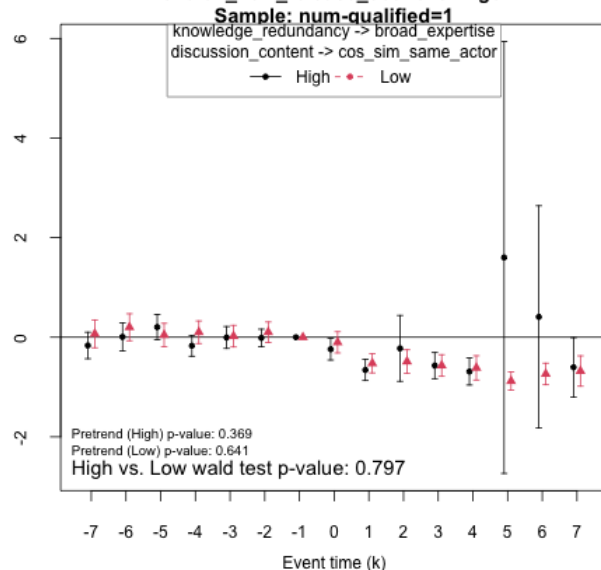
—●— High —●— Low



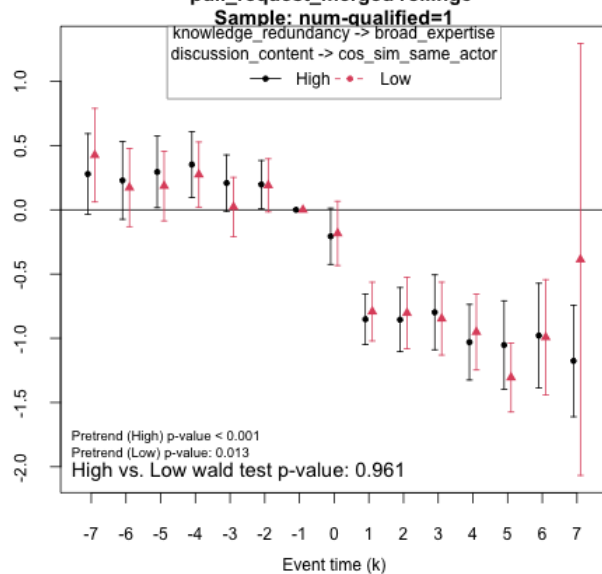
major\_minor\_release\_count rolling5



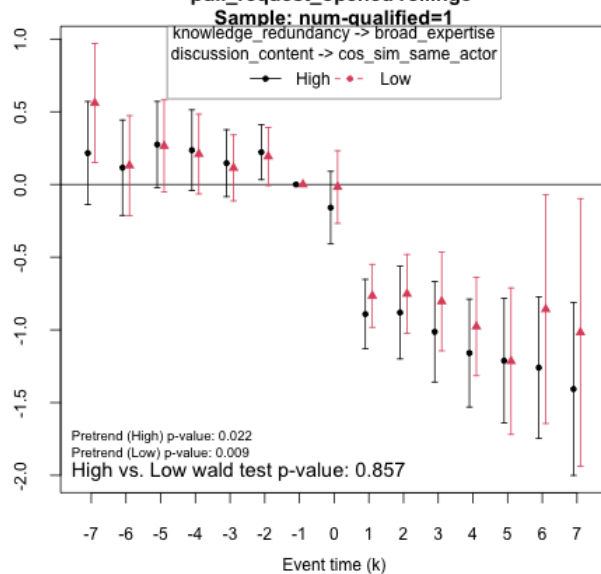
overall\_new\_release\_count rolling5



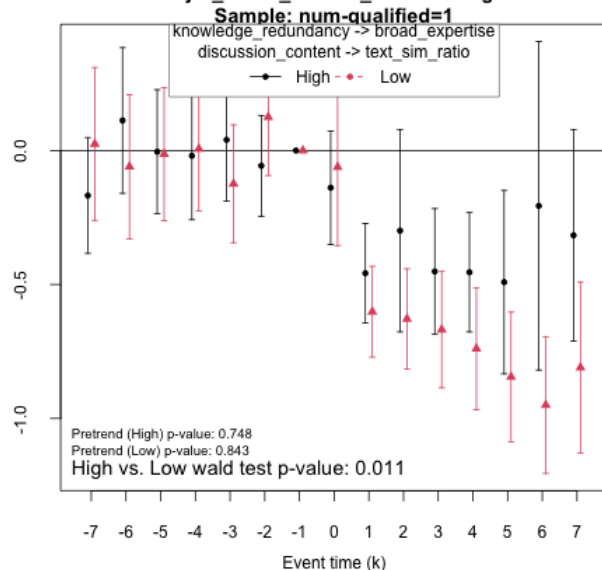
pull\_request\_merged rolling5



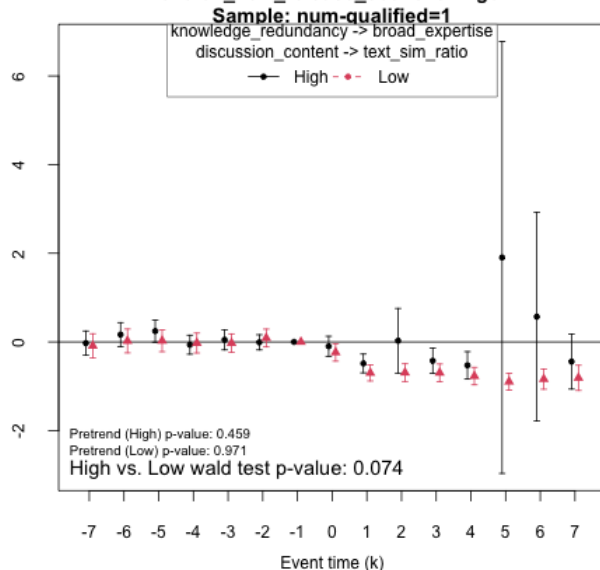
pull\_request\_opened rolling5



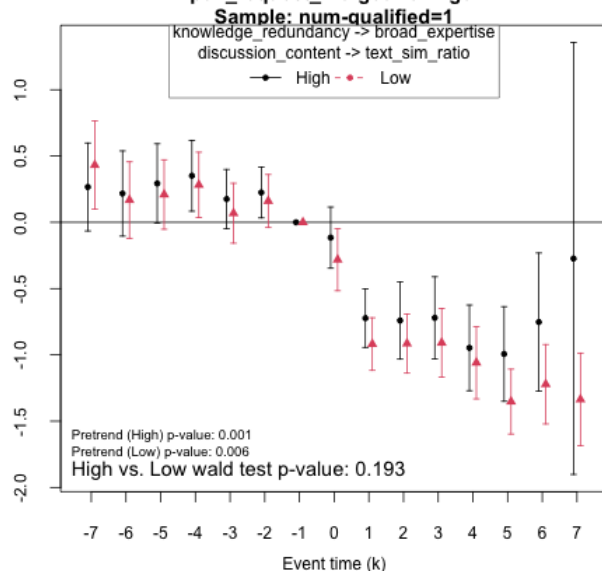
major\_minor\_release\_count rolling5



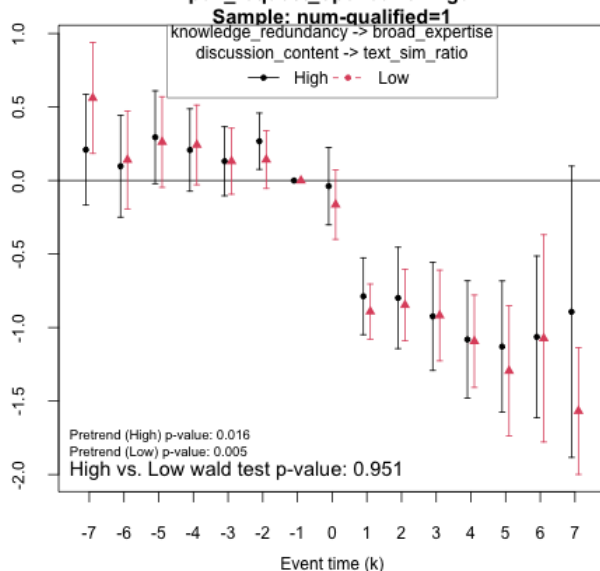
overall\_new\_release\_count rolling5



pull\_request\_merged rolling5



pull\_request\_opened rolling5



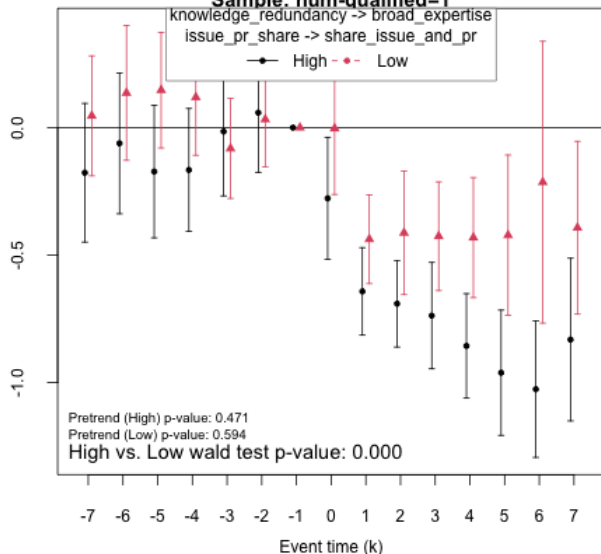
major\_minor\_release\_count rolling5

Sample: num-qualified=1

knowledge\_redundancy-&gt;broad\_expertise

issue\_pr\_share-&gt;share\_issue\_and\_pr

—●— High —●— Low



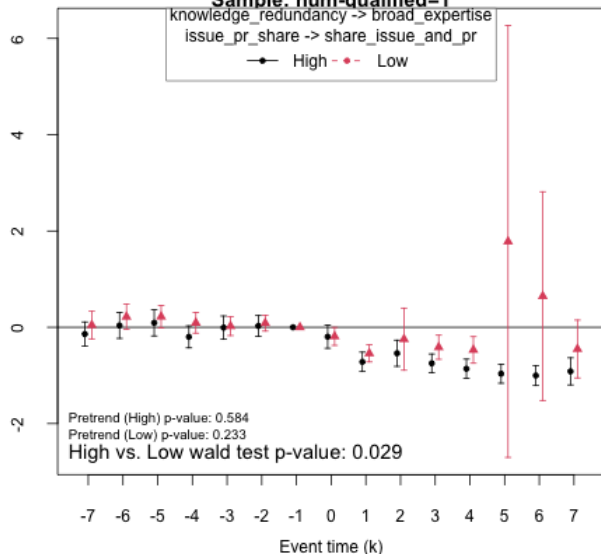
overall\_new\_release\_count rolling5

Sample: num-qualified=1

knowledge\_redundancy-&gt;broad\_expertise

issue\_pr\_share-&gt;share\_issue\_and\_pr

—●— High —●— Low



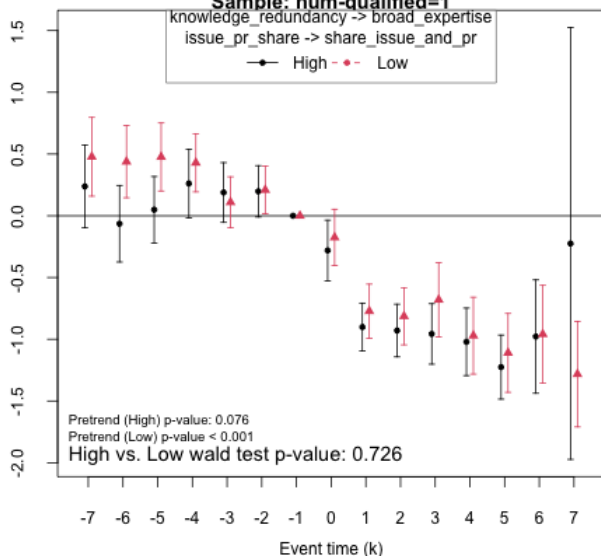
pull\_request\_merged rolling5

Sample: num-qualified=1

knowledge\_redundancy-&gt;broad\_expertise

issue\_pr\_share-&gt;share\_issue\_and\_pr

—●— High —●— Low



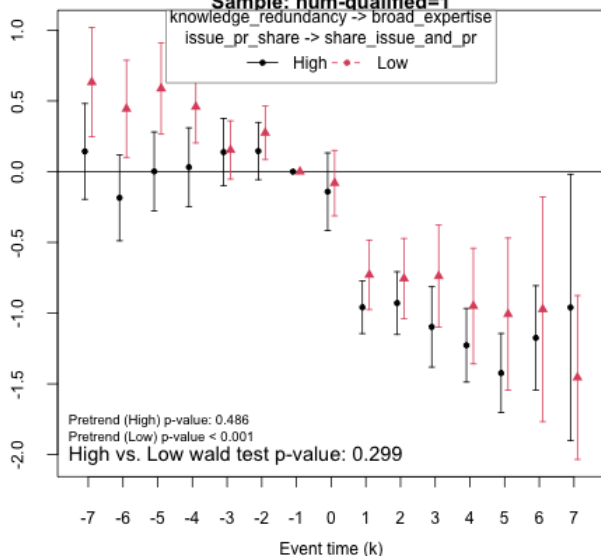
pull\_request\_opened rolling5

Sample: num-qualified=1

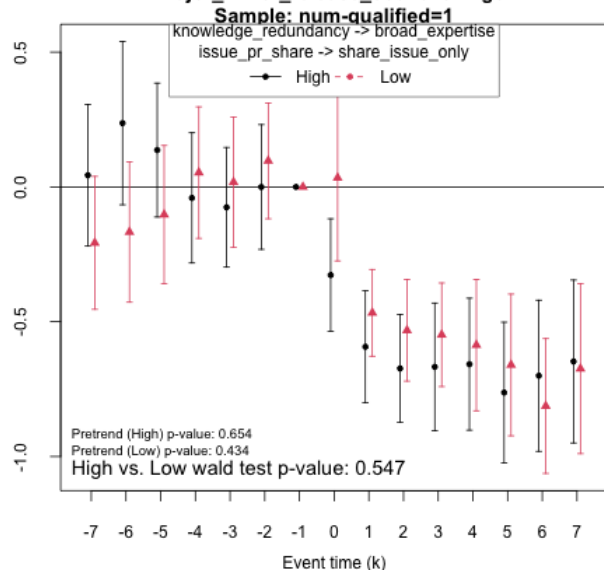
knowledge\_redundancy-&gt;broad\_expertise

issue\_pr\_share-&gt;share\_issue\_and\_pr

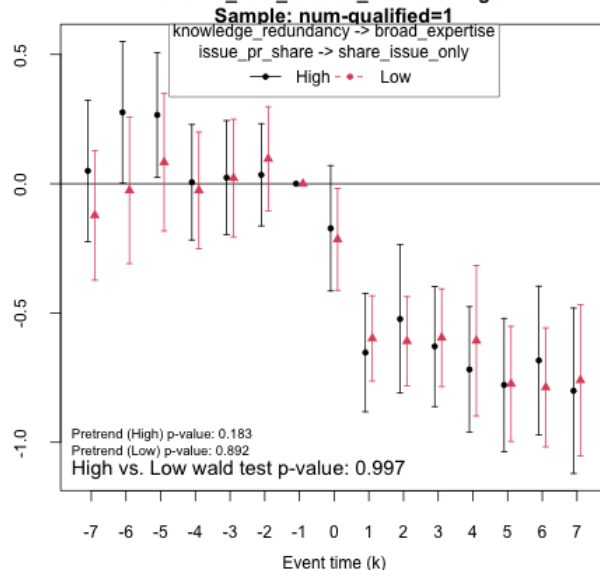
—●— High —●— Low



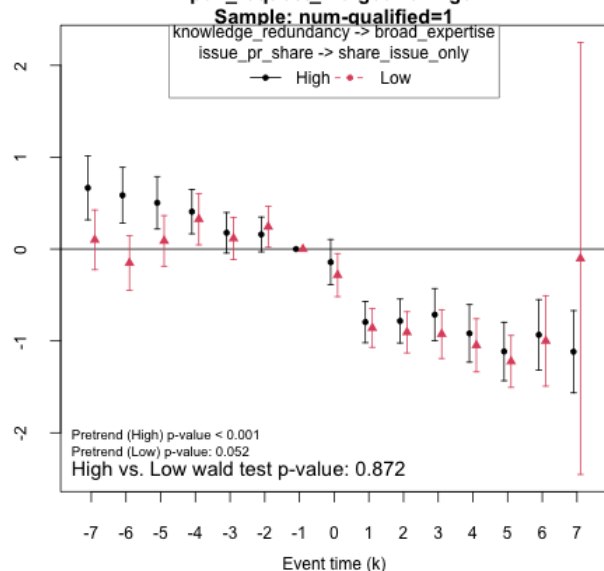
major\_minor\_release\_count rolling5



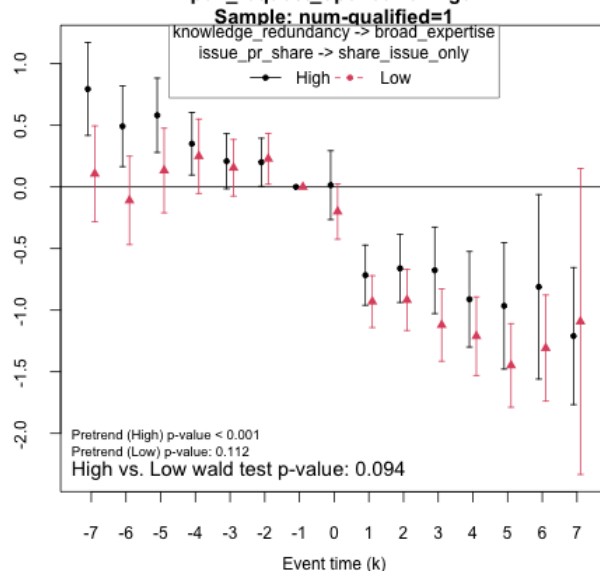
overall\_new\_release\_count rolling5



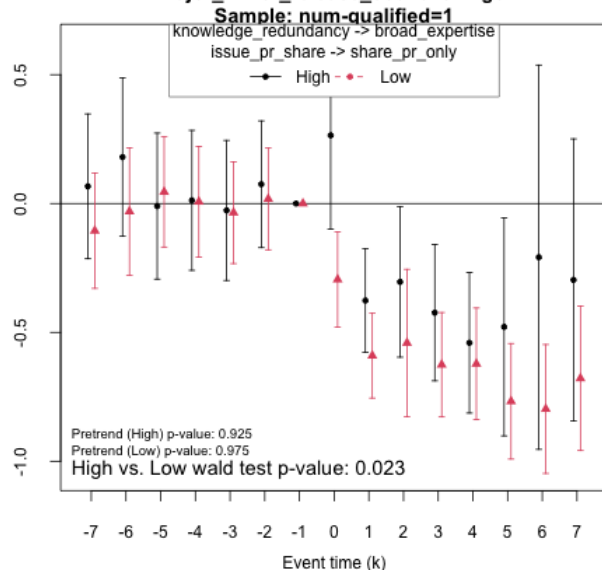
pull\_request\_merged rolling5



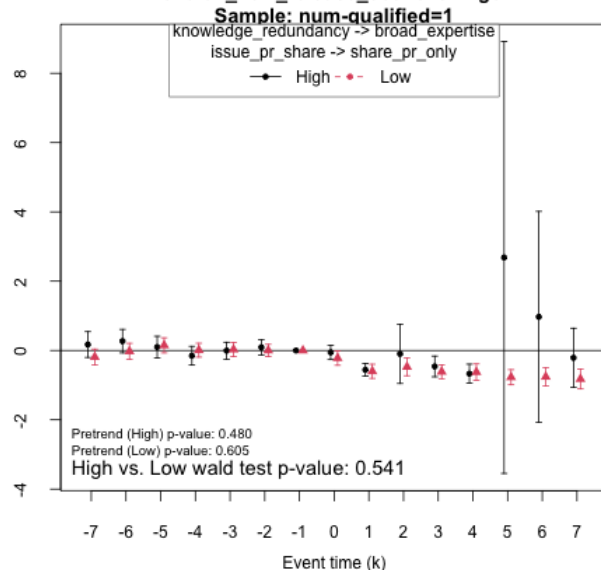
pull\_request\_opened rolling5



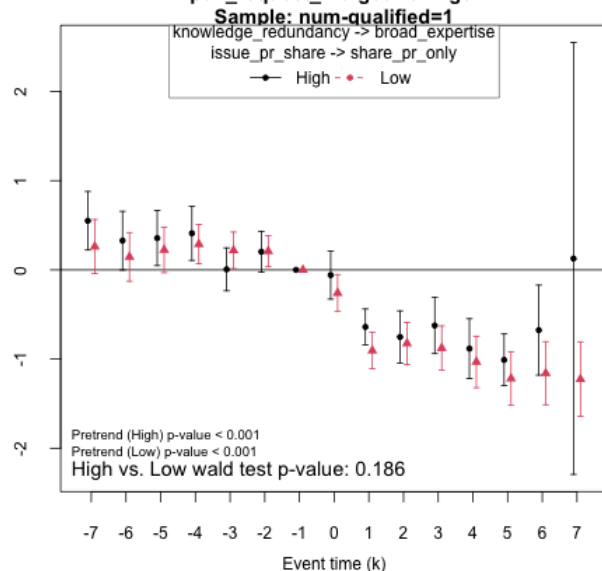
major\_minor\_release\_count rolling5



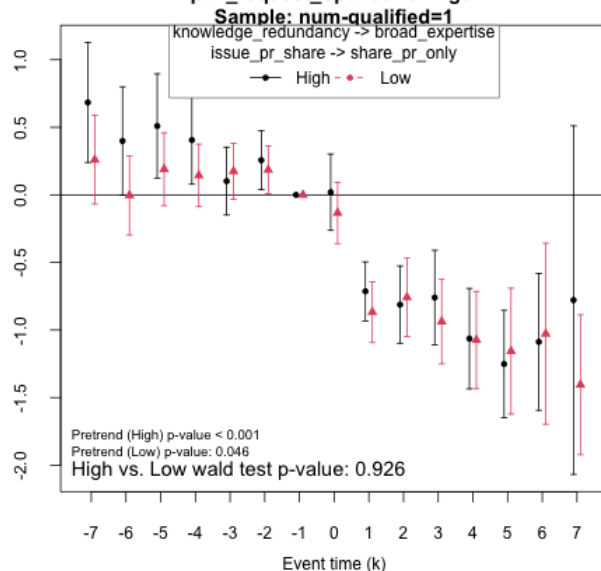
overall\_new\_release\_count rolling5



pull\_request\_merged rolling5

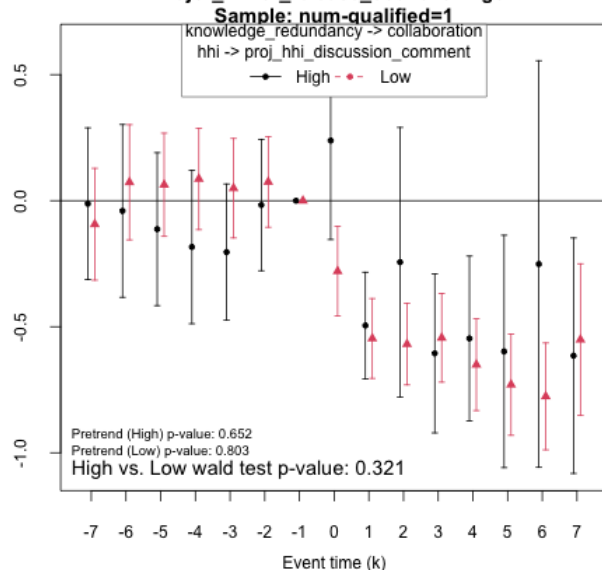


pull\_request\_opened rolling5

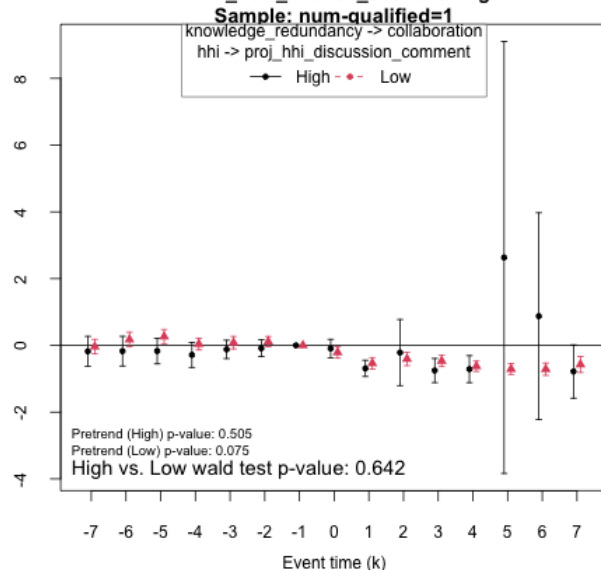




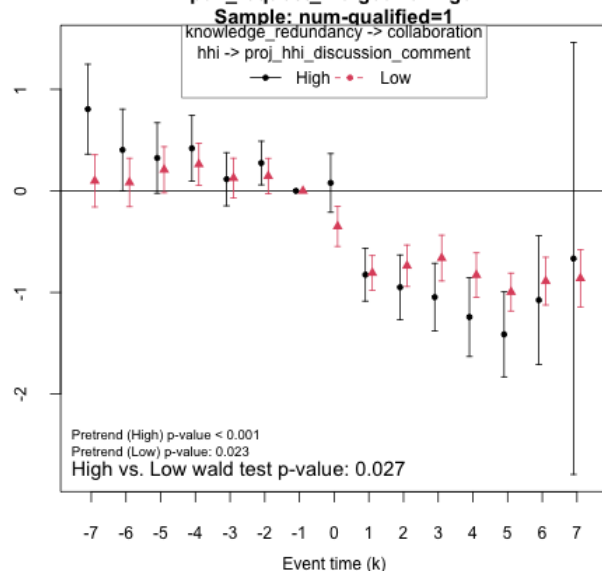
major\_minor\_release\_count rolling5



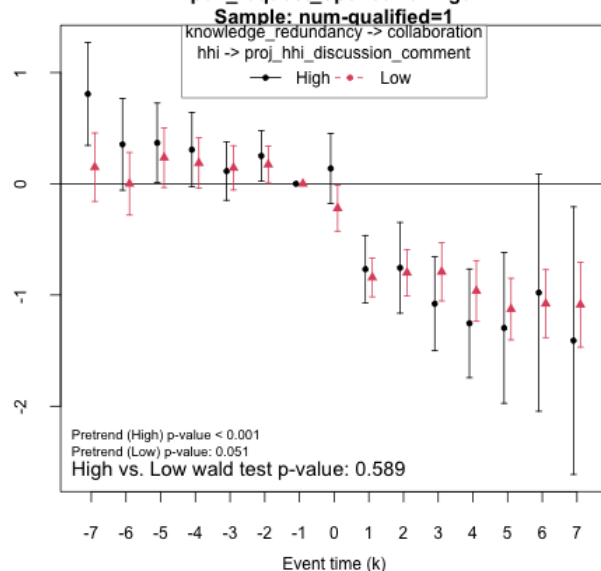
overall\_new\_release\_count rolling5



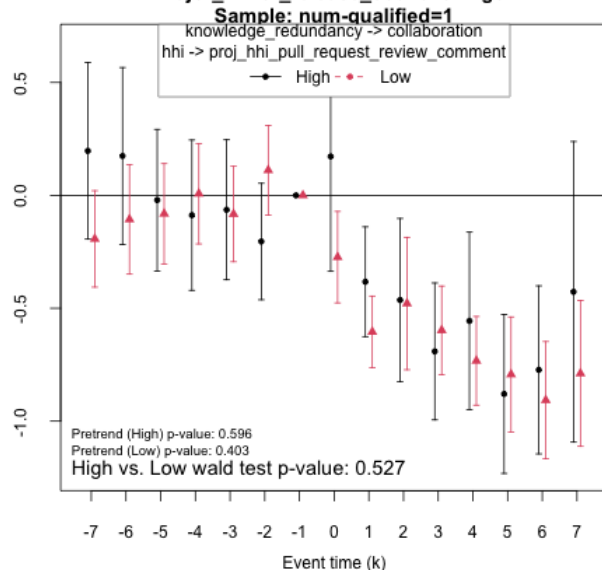
pull\_request\_merged rolling5



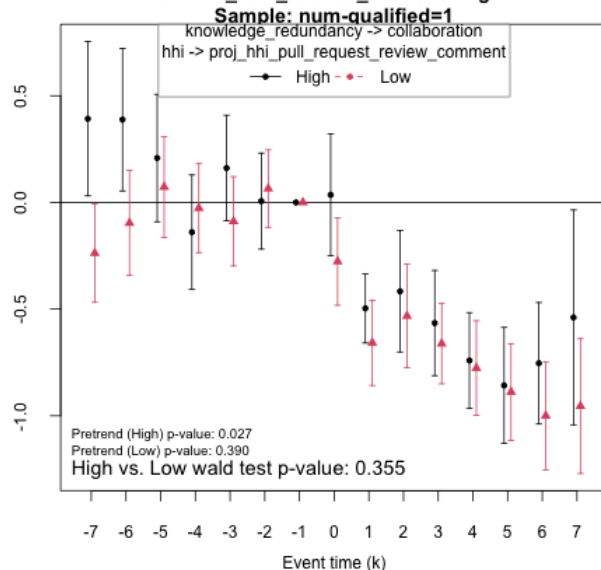
pull\_request\_opened rolling5



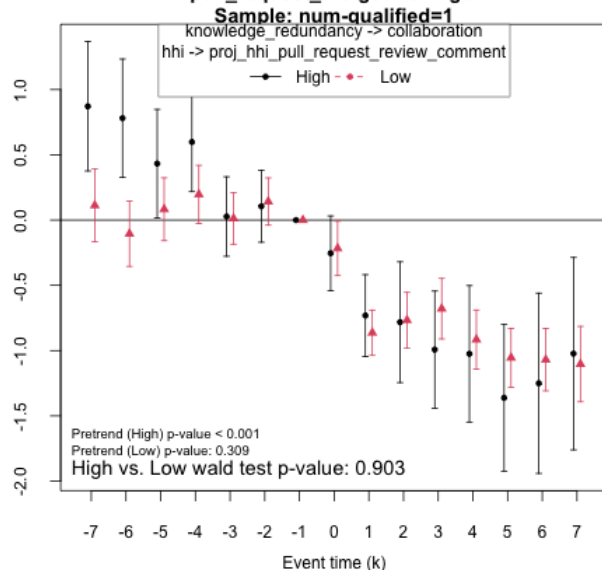
major\_minor\_release\_count rolling5



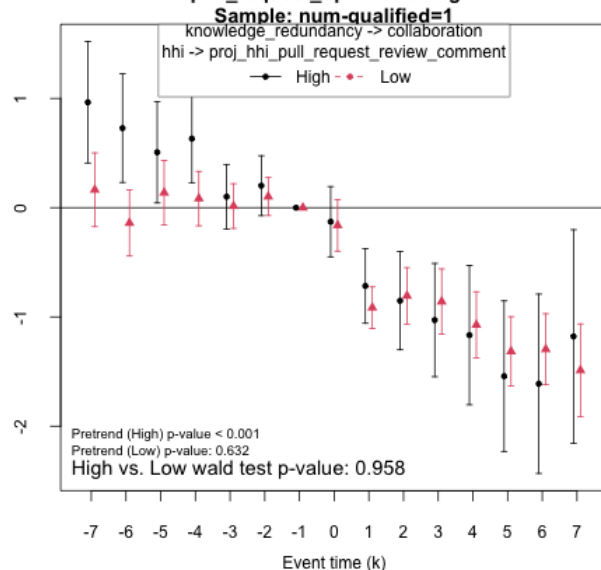
overall\_new\_release\_count rolling5



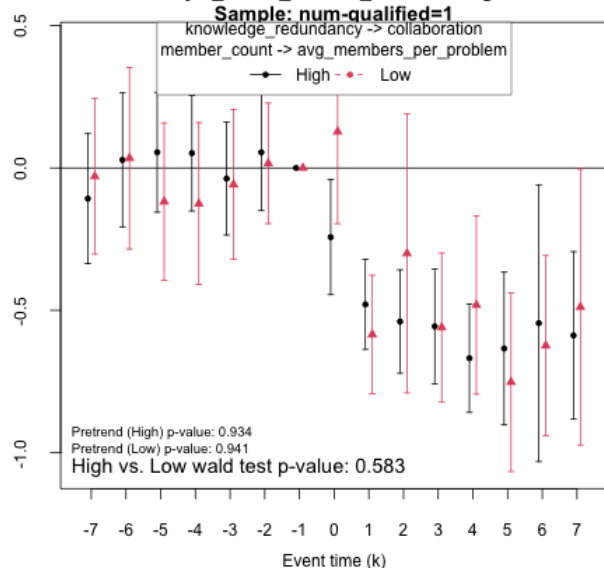
pull\_request\_merged rolling5



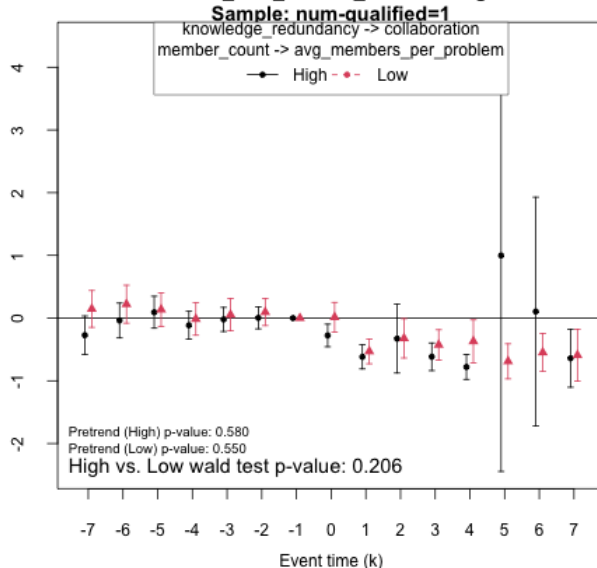
pull\_request\_opened rolling5



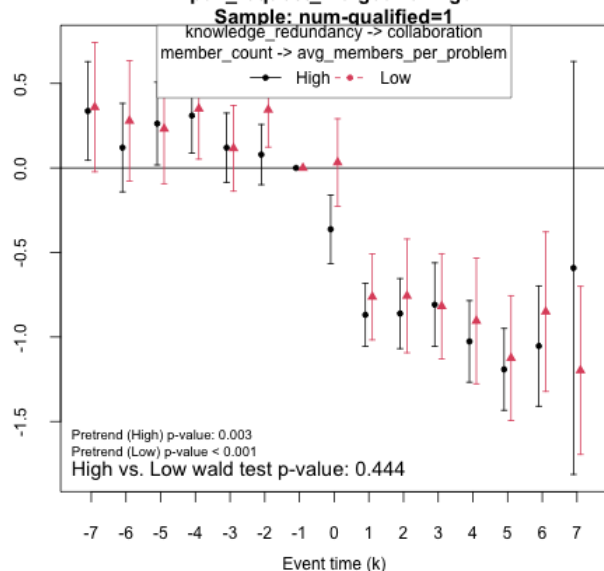
major\_minor\_release\_count rolling5



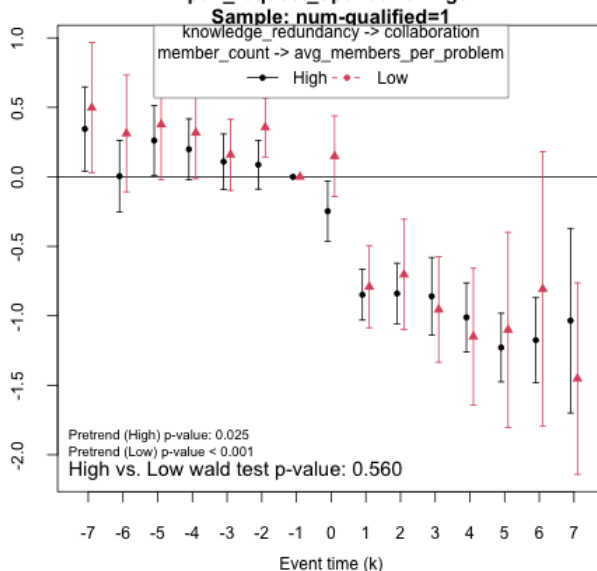
overall\_new\_release\_count rolling5



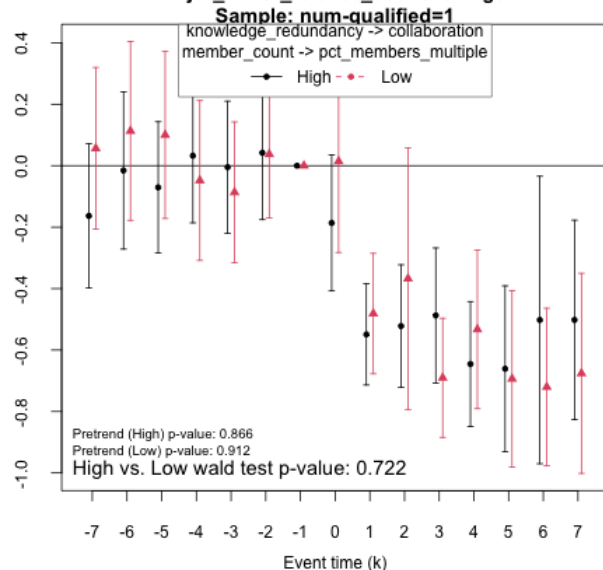
pull\_request\_merged rolling5



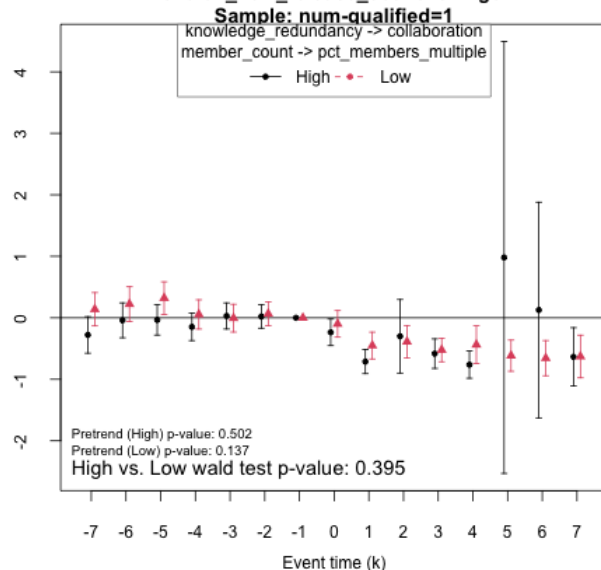
pull\_request\_opened rolling5



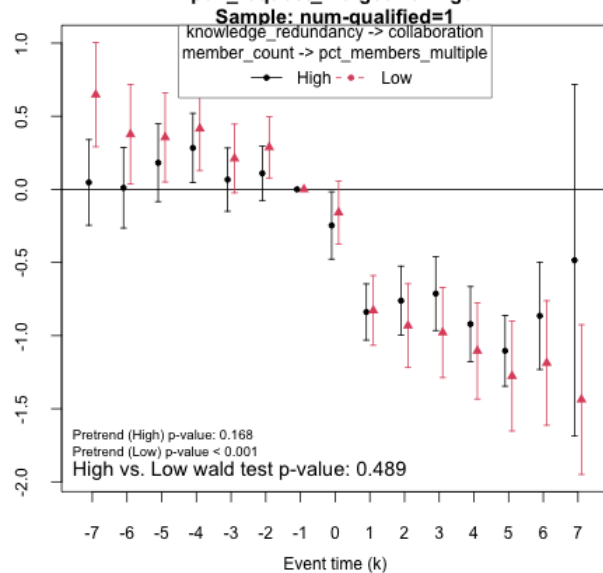
major\_minor\_release\_count rolling5



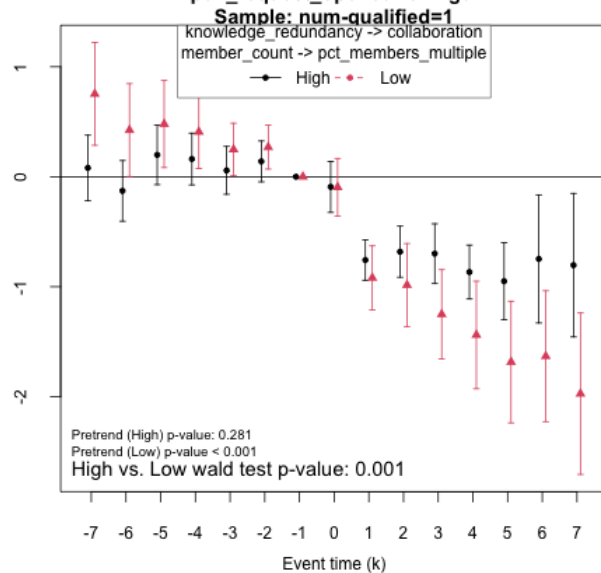
overall\_new\_release\_count rolling5



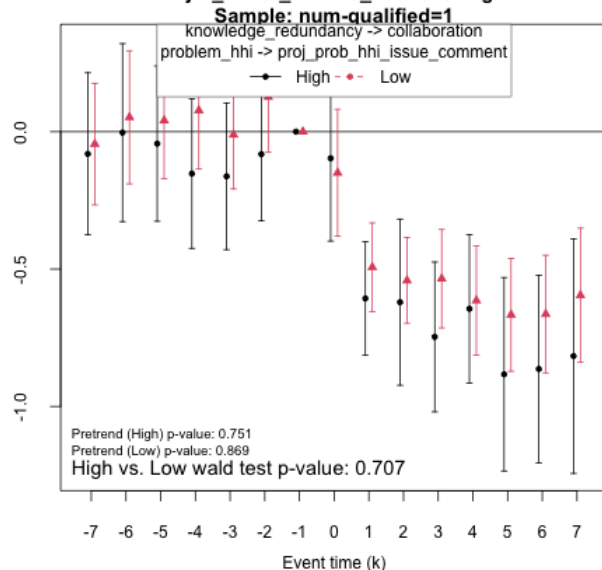
pull\_request\_merged rolling5



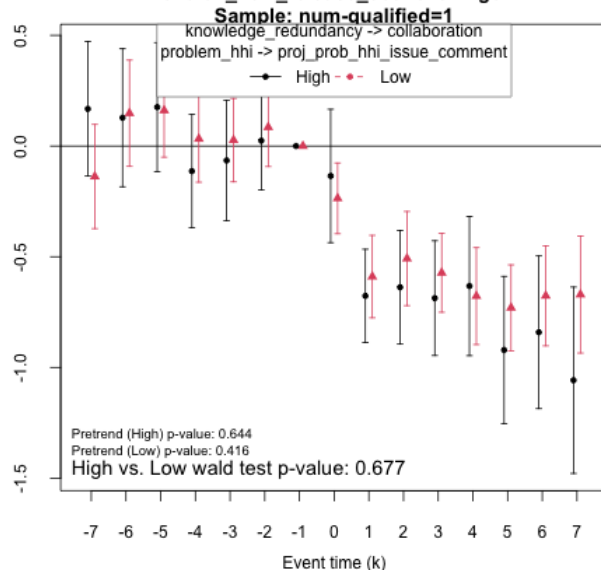
pull\_request\_opened rolling5



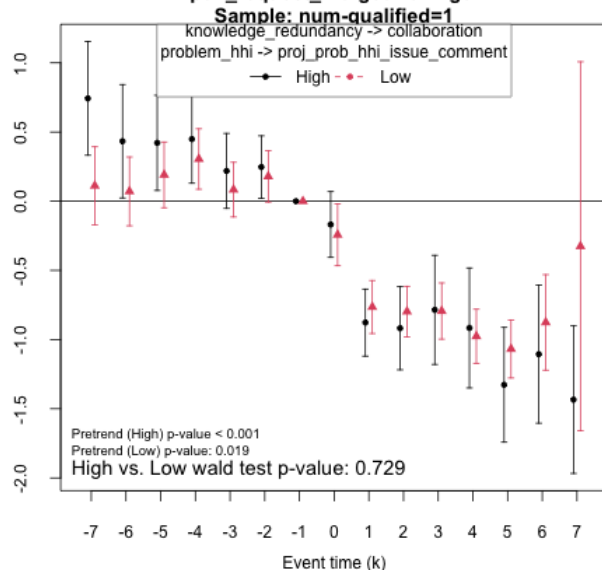
major\_minor\_release\_count rolling5



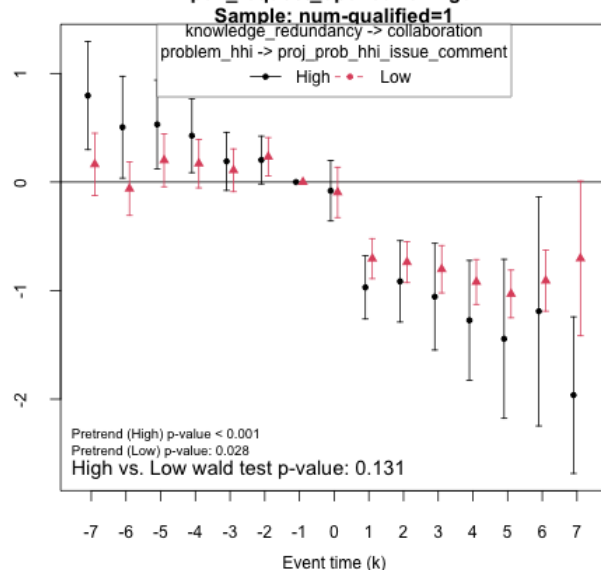
overall\_new\_release\_count rolling5



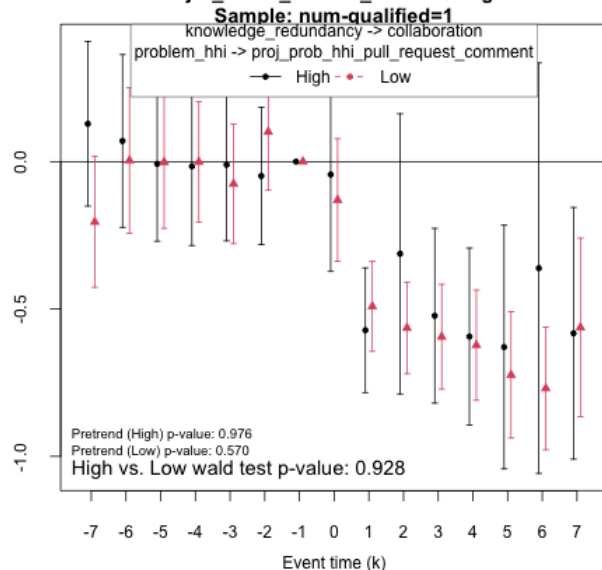
pull\_request\_merged rolling5



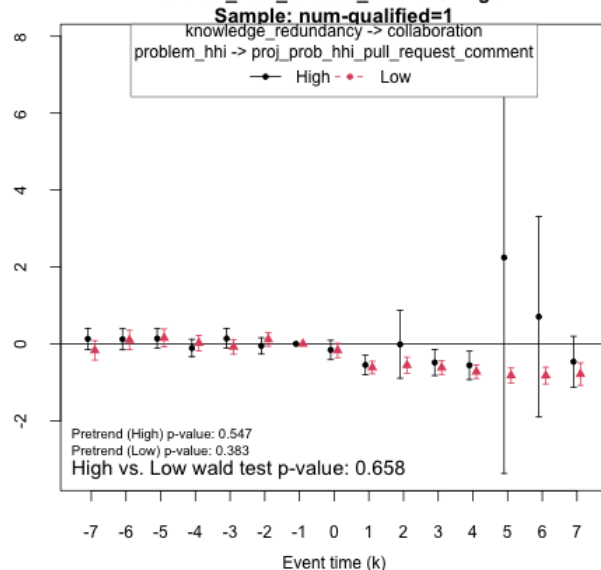
pull\_request\_opened rolling5



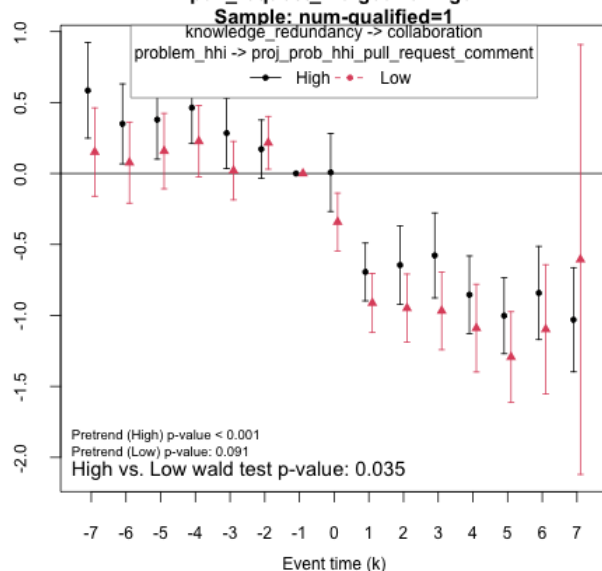
major\_minor\_release\_count rolling5



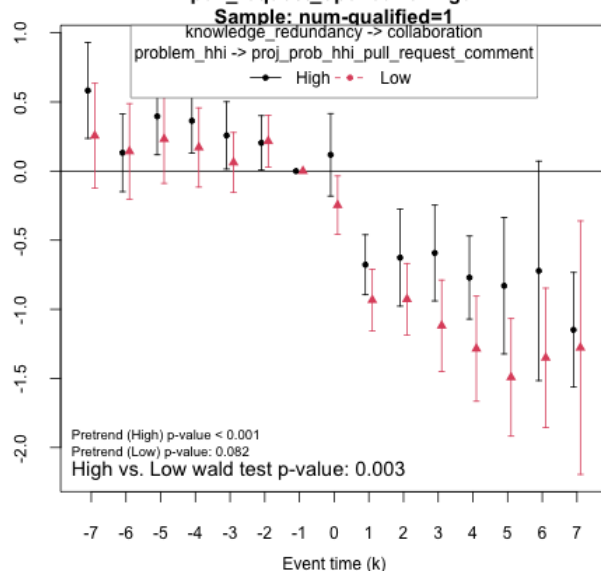
overall\_new\_release\_count rolling5



pull\_request\_merged rolling5



pull\_request\_opened rolling5

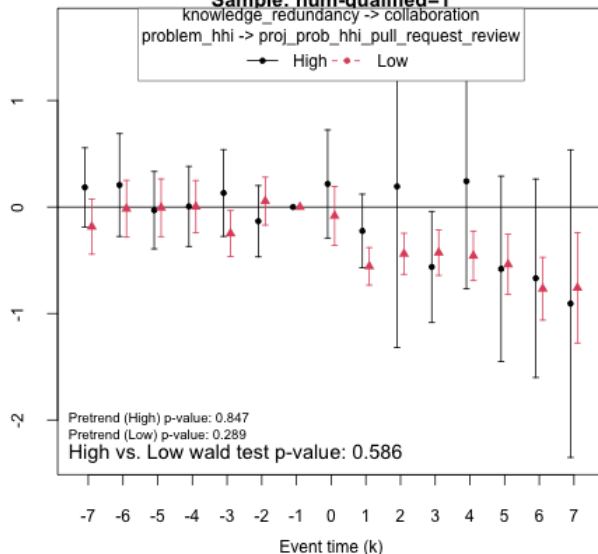


major\_minor\_release\_count rolling5

Sample: num-qualified=1

knowledge\_redundancy -> collaboration  
problem\_hhi -> proj\_prob\_hhi\_pull\_request\_review

—●— High —●— Low

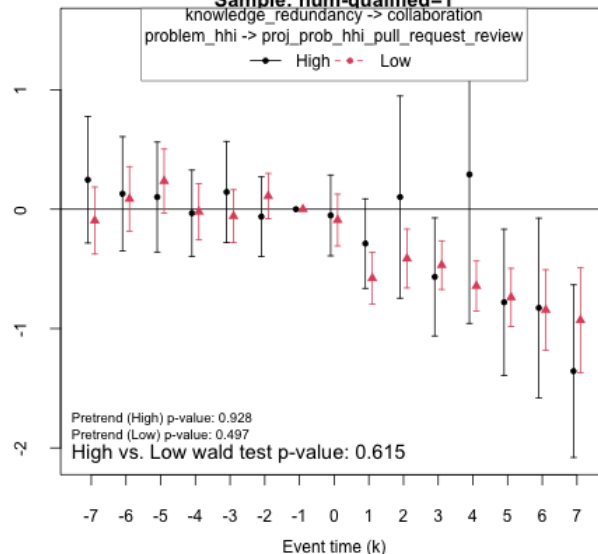


overall\_new\_release\_count rolling5

Sample: num-qualified=1

knowledge\_redundancy -> collaboration  
problem\_hhi -> proj\_prob\_hhi\_pull\_request\_review

—●— High —●— Low

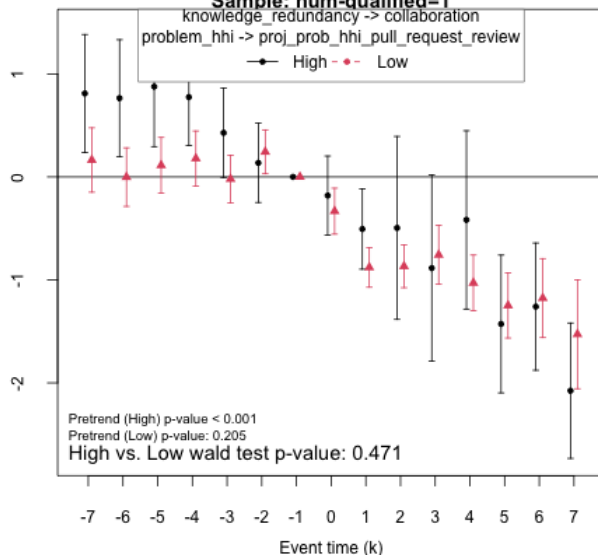


pull\_request\_merged rolling5

Sample: num-qualified=1

knowledge\_redundancy -> collaboration  
problem\_hhi -> proj\_prob\_hhi\_pull\_request\_review

—●— High —●— Low

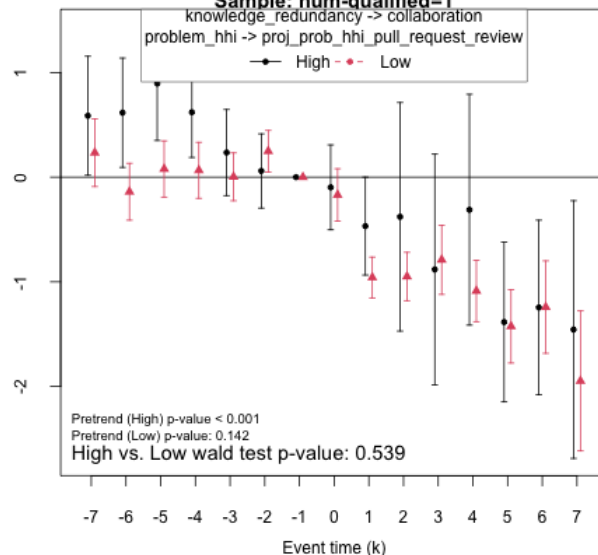


pull\_request\_opened rolling5

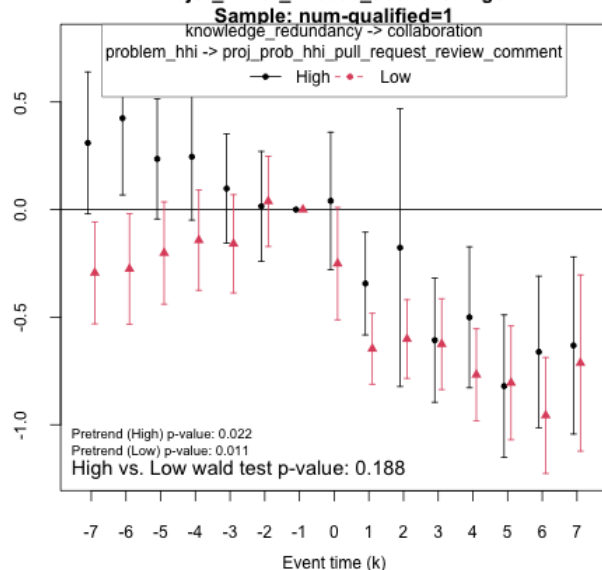
Sample: num-qualified=1

knowledge\_redundancy -> collaboration  
problem\_hhi -> proj\_prob\_hhi\_pull\_request\_review

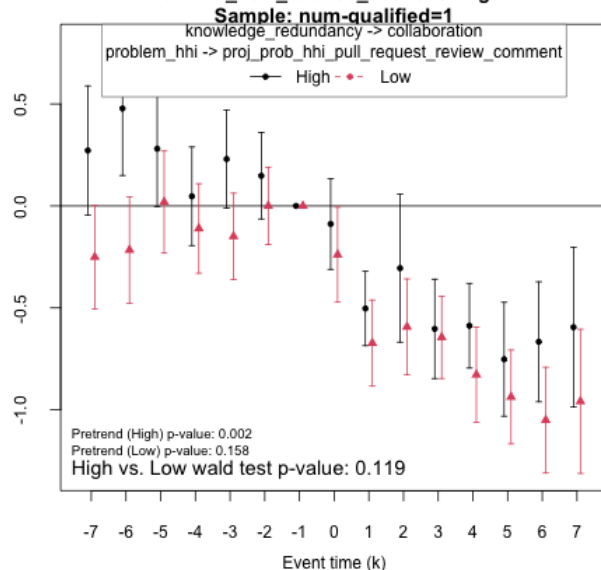
—●— High —●— Low



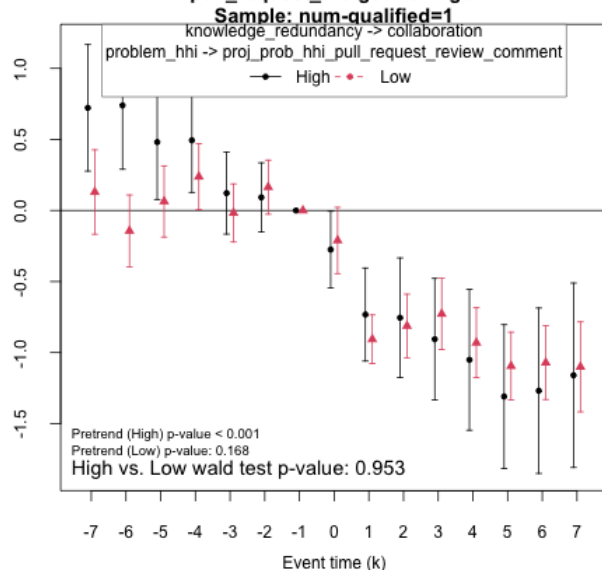
major\_minor\_release\_count rolling5



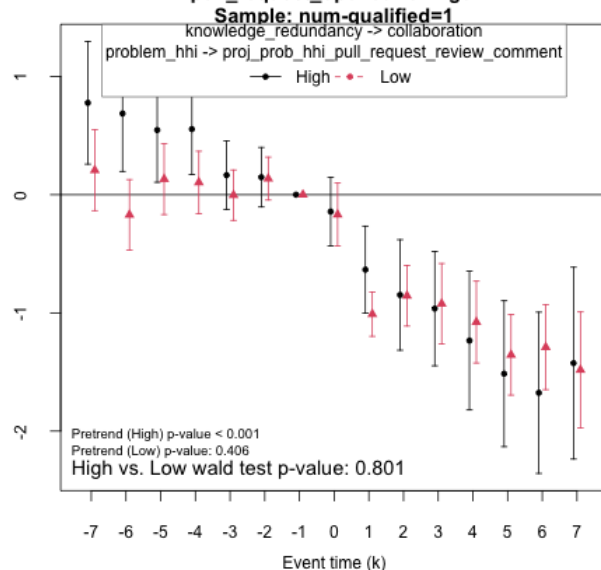
overall\_new\_release\_count rolling5



pull\_request\_merged rolling5

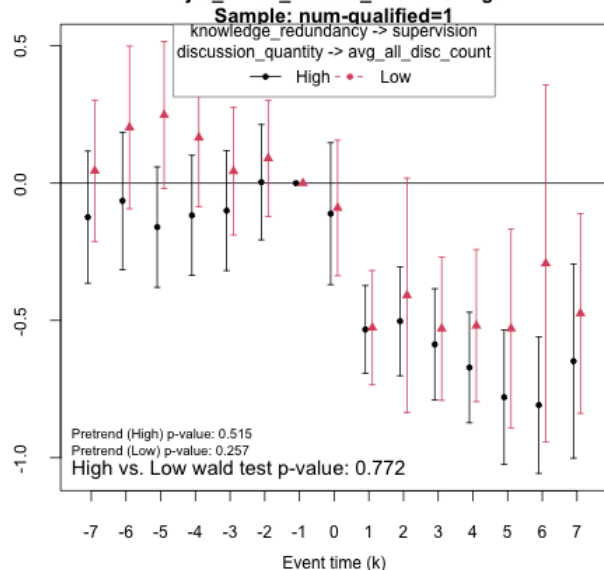


pull\_request\_opened rolling5

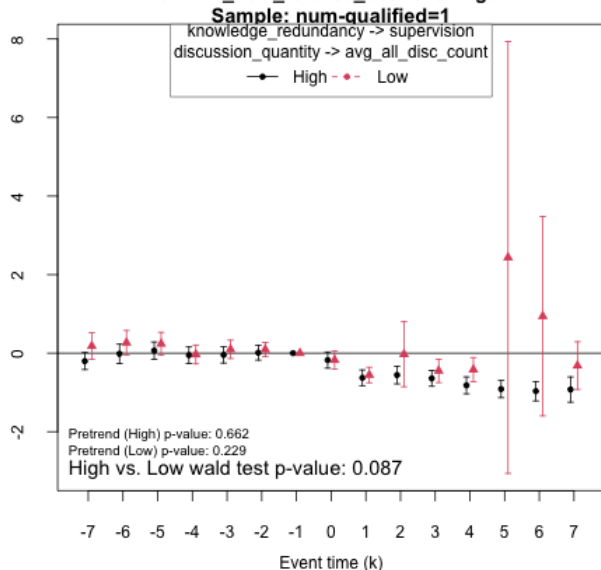




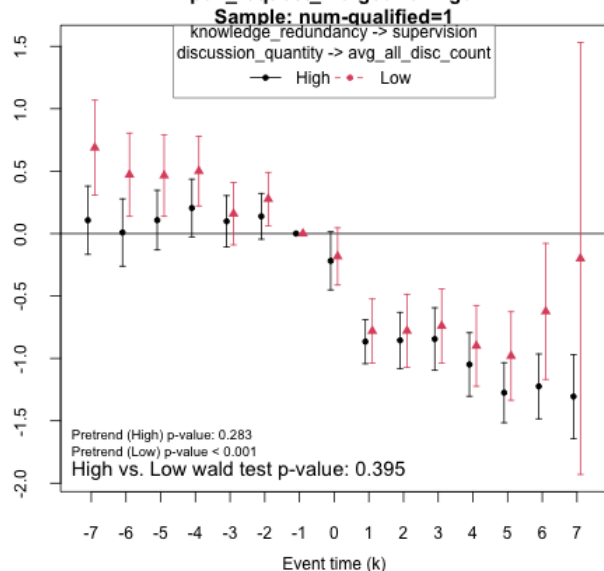
major\_minor\_release\_count rolling5



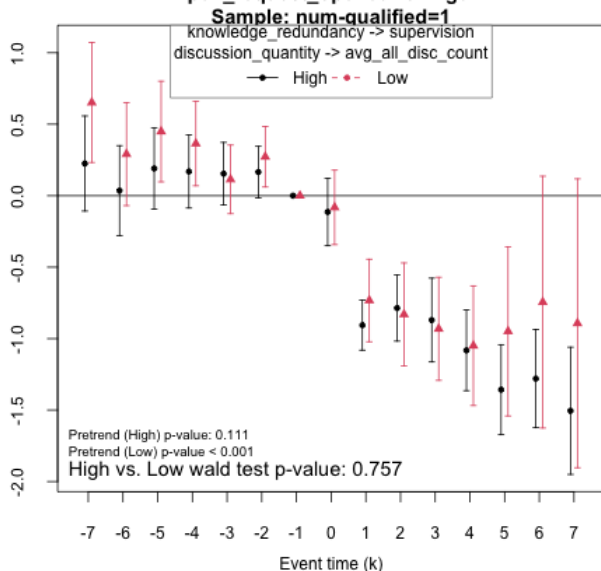
overall\_new\_release\_count rolling5



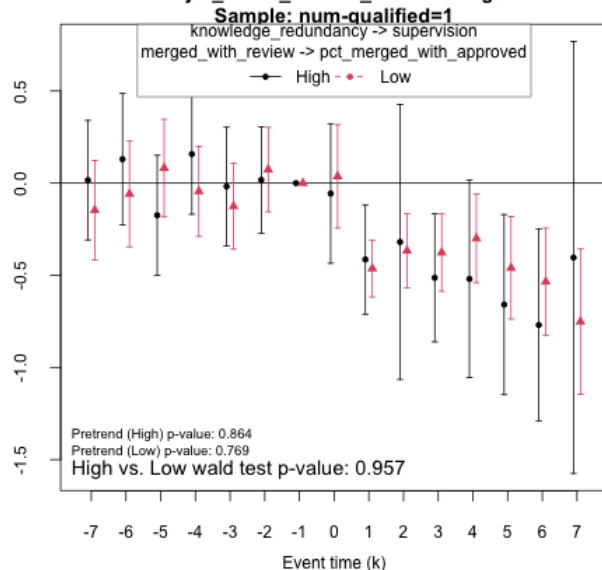
pull\_request\_merged rolling5



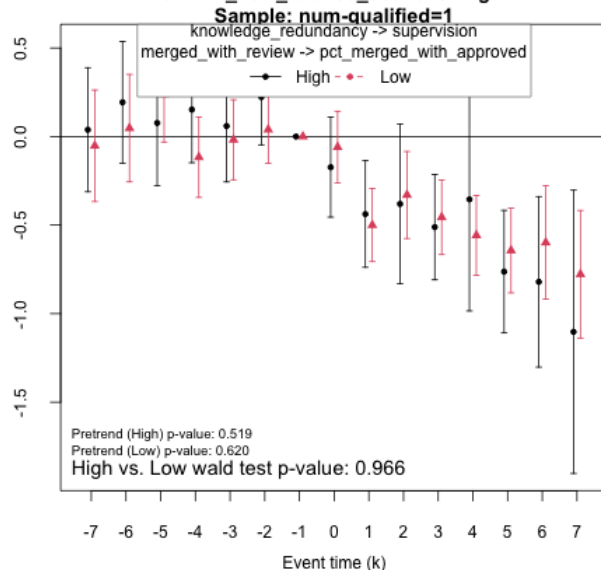
pull\_request\_opened rolling5



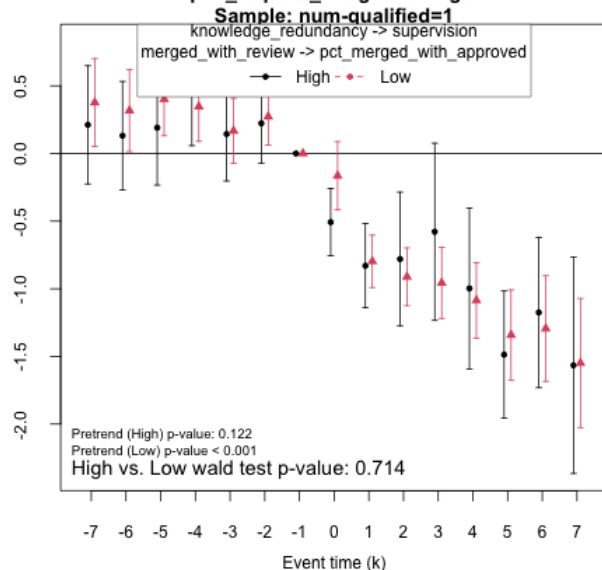
major\_minor\_release\_count rolling5



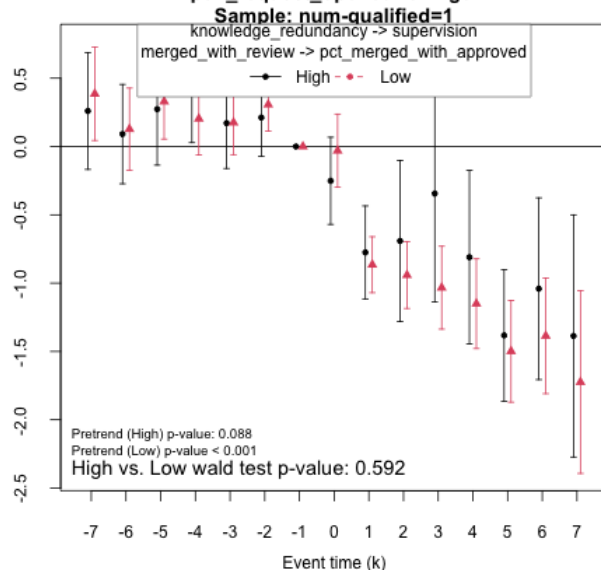
overall\_new\_release\_count rolling5



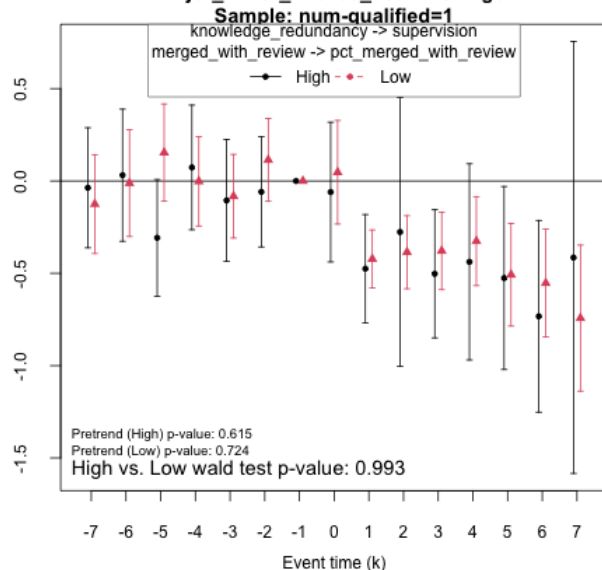
pull\_request\_merged rolling5



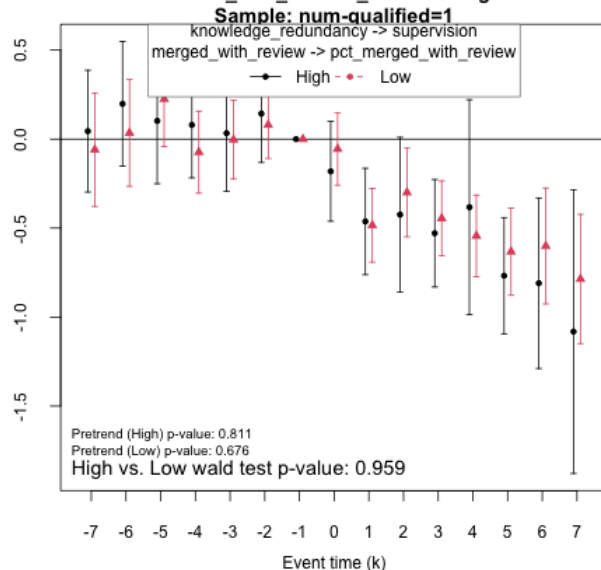
pull\_request\_opened rolling5



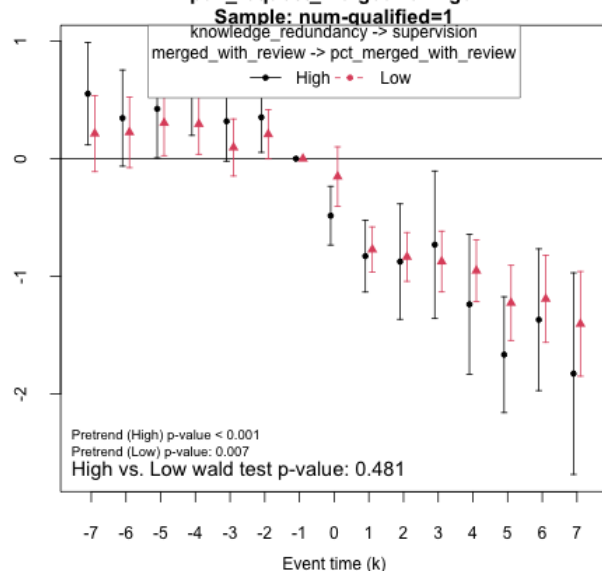
major\_minor\_release\_count rolling5



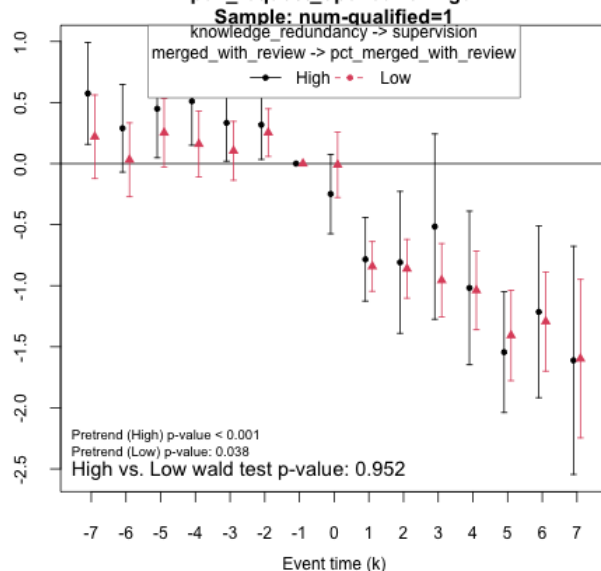
overall\_new\_release\_count rolling5



pull\_request\_merged rolling5



pull\_request\_opened rolling5

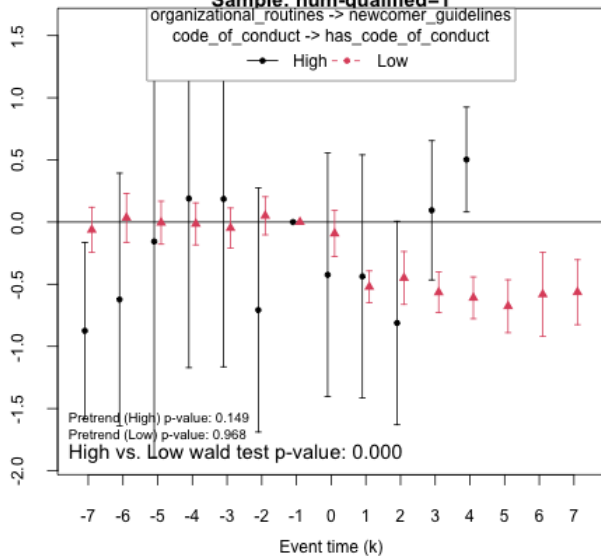


major\_minor\_release\_count rolling5

Sample: num-qualified=1

organizational\_routines -> newcomer\_guidelines  
code\_of\_conduct -> has\_code\_of\_conduct

—●— High —●— Low

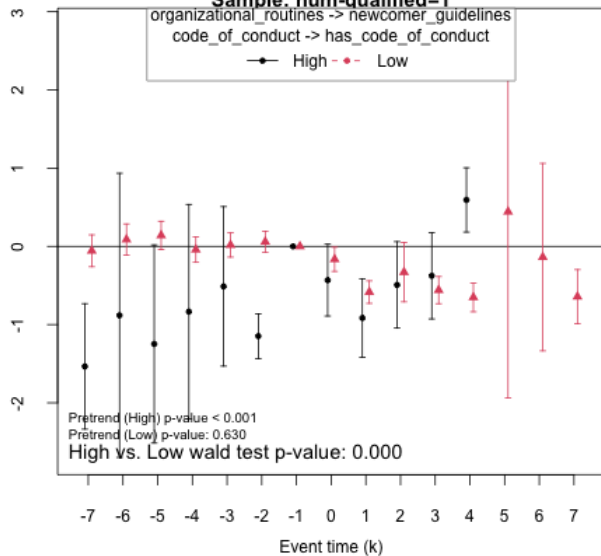


overall\_new\_release\_count rolling5

Sample: num-qualified=1

organizational\_routines -> newcomer\_guidelines  
code\_of\_conduct -> has\_code\_of\_conduct

—●— High —●— Low

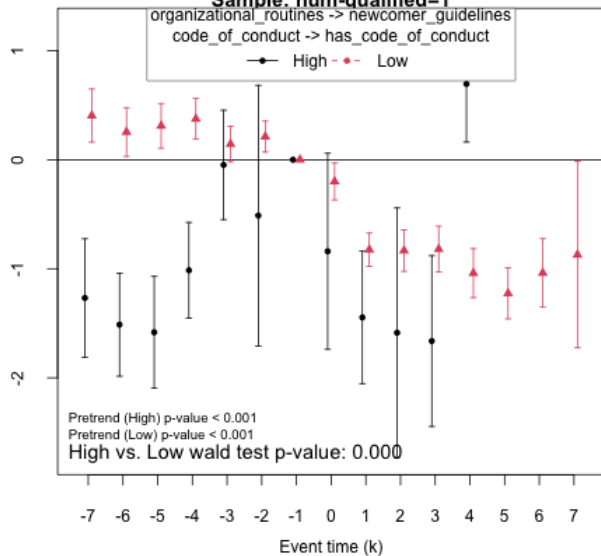


pull\_request\_merged rolling5

Sample: num-qualified=1

organizational\_routines -> newcomer\_guidelines  
code\_of\_conduct -> has\_code\_of\_conduct

—●— High —●— Low

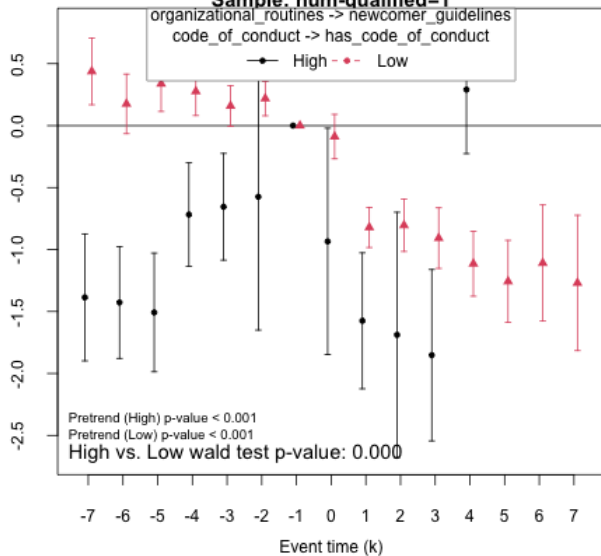


pull\_request\_opened rolling5

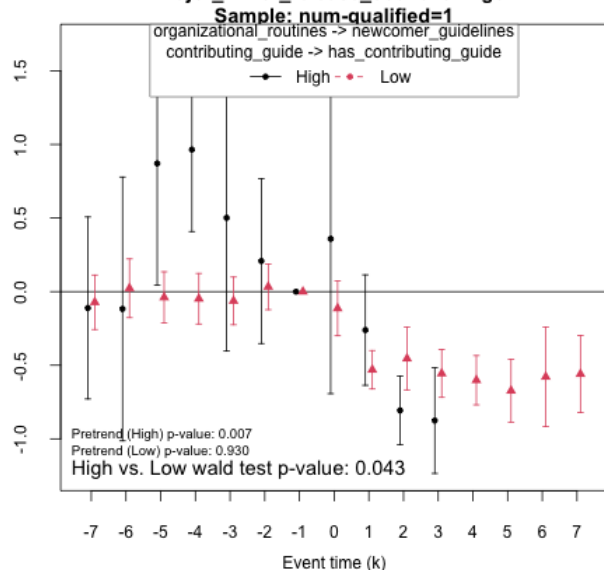
Sample: num-qualified=1

organizational\_routines -> newcomer\_guidelines  
code\_of\_conduct -> has\_code\_of\_conduct

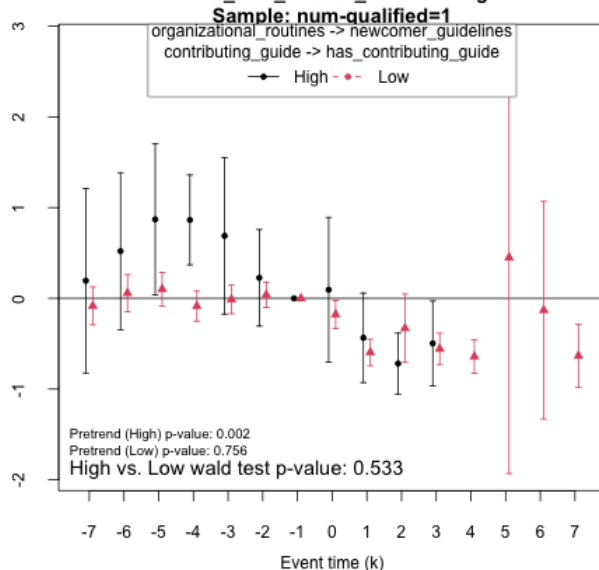
—●— High —●— Low



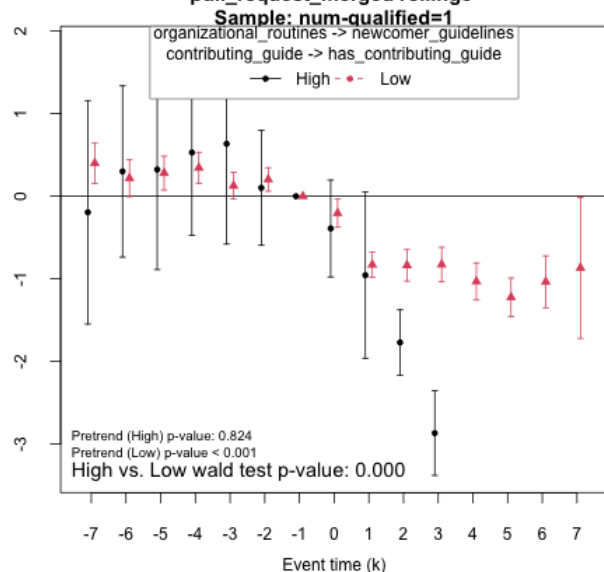
major\_minor\_release\_count rolling5



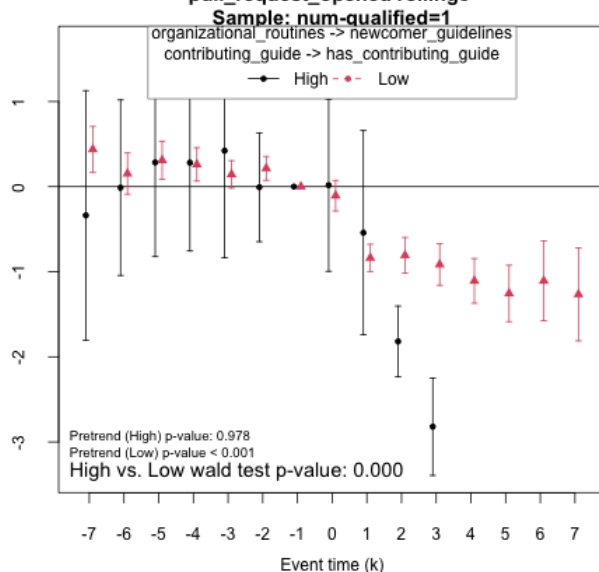
overall\_new\_release\_count rolling5



pull\_request\_merged rolling5



pull\_request\_opened rolling5

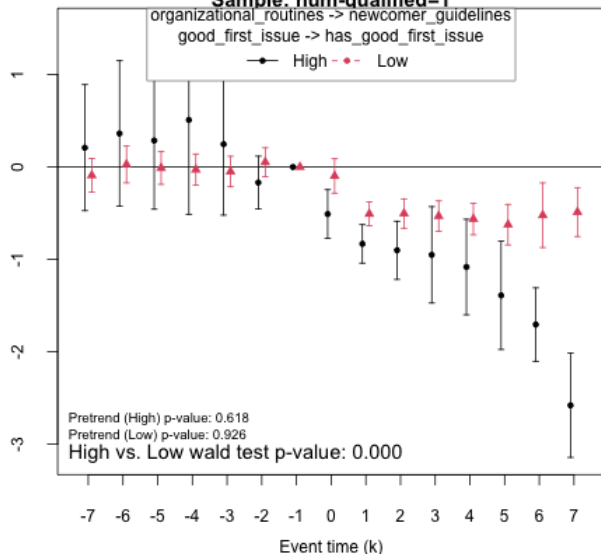


major\_minor\_release\_count rolling5

Sample: num-qualified=1

organizational\_routines -> newcomer\_guidelines  
good\_first\_issue -> has\_good\_first\_issue

—●— High —●— Low

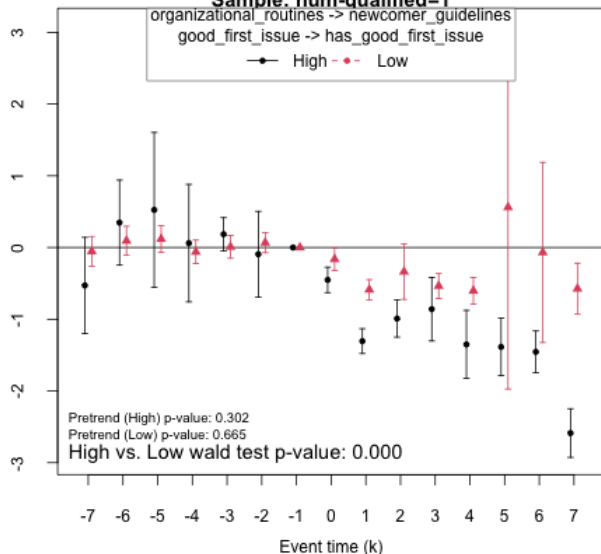


overall\_new\_release\_count rolling5

Sample: num-qualified=1

organizational\_routines -> newcomer\_guidelines  
good\_first\_issue -> has\_good\_first\_issue

—●— High —●— Low

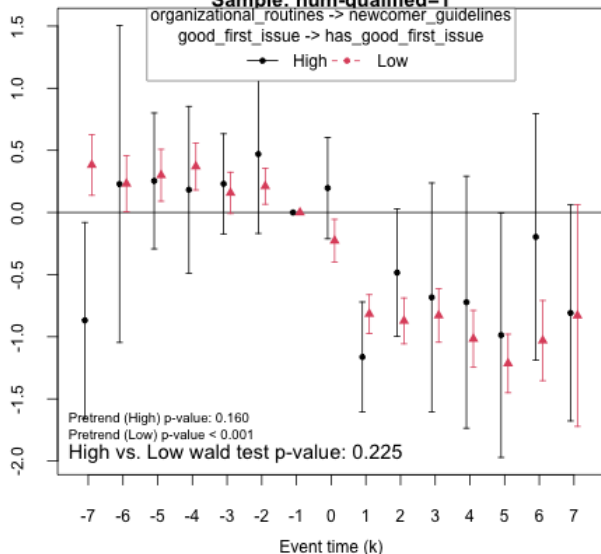


pull\_request\_merged rolling5

Sample: num-qualified=1

organizational\_routines -> newcomer\_guidelines  
good\_first\_issue -> has\_good\_first\_issue

—●— High —●— Low

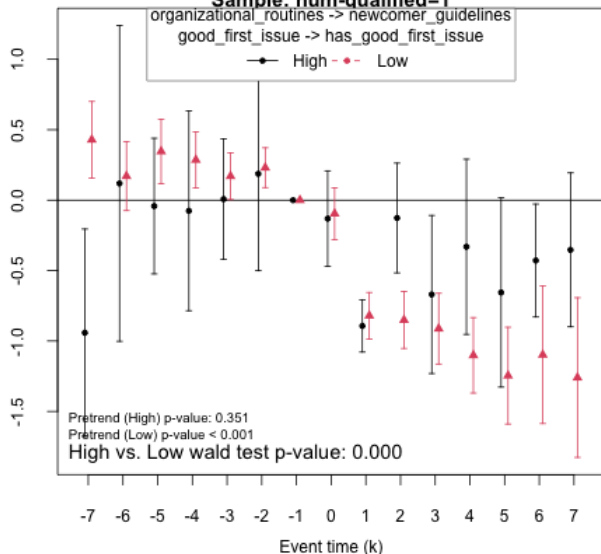


pull\_request\_opened rolling5

Sample: num-qualified=1

organizational\_routines -> newcomer\_guidelines  
good\_first\_issue -> has\_good\_first\_issue

—●— High —●— Low

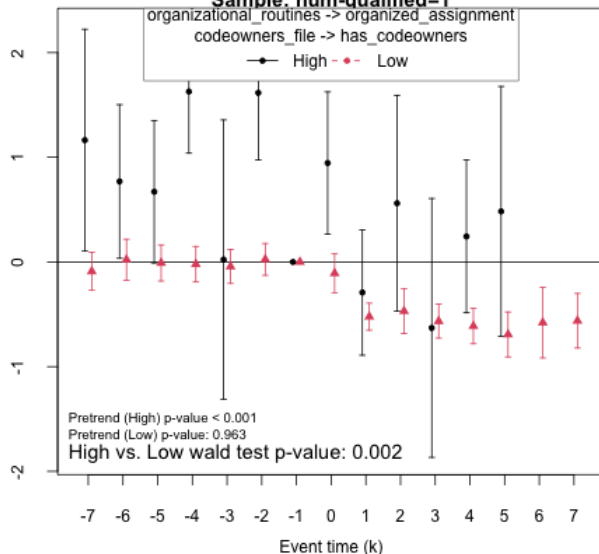


major\_minor\_release\_count rolling5

Sample: num-qualified=1

organizational\_routines -> organized\_assignment  
codeowners\_file -> has\_codeowners

—●— High —●— Low

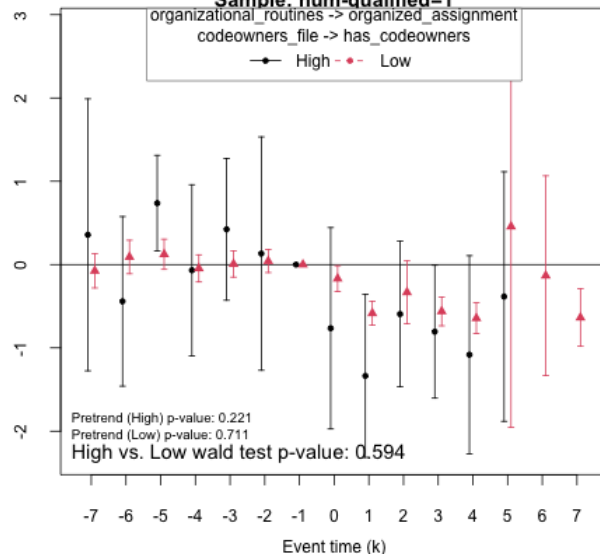


overall\_new\_release\_count rolling5

Sample: num-qualified=1

organizational\_routines -> organized\_assignment  
codeowners\_file -> has\_codeowners

—●— High —●— Low

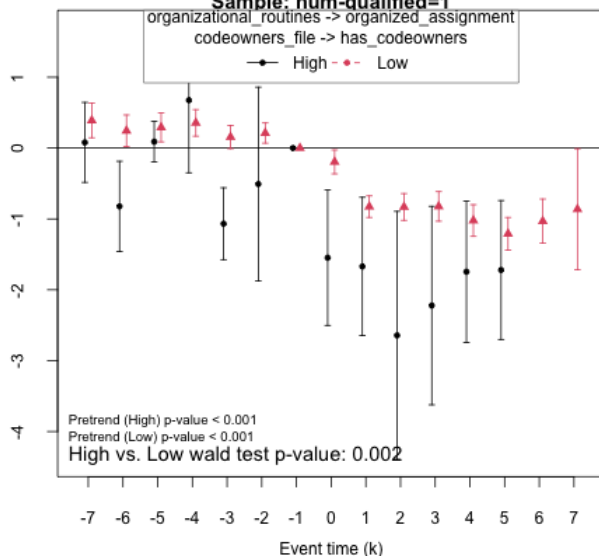


pull\_request\_merged rolling5

Sample: num-qualified=1

organizational\_routines -> organized\_assignment  
codeowners\_file -> has\_codeowners

—●— High —●— Low

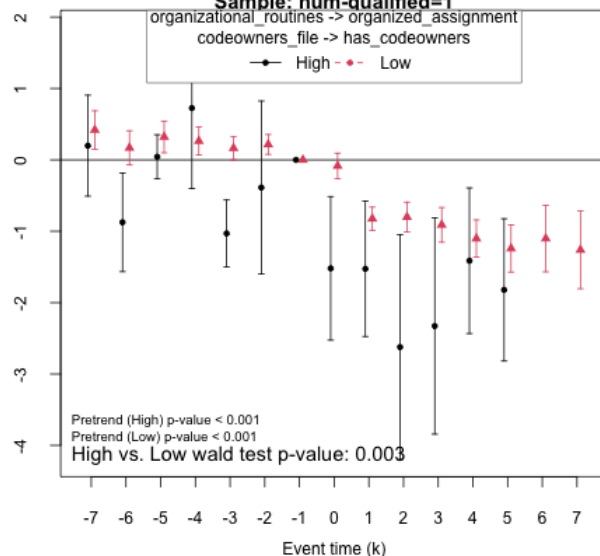


pull\_request\_opened rolling5

Sample: num-qualified=1

organizational\_routines -> organized\_assignment  
codeowners\_file -> has\_codeowners

—●— High —●— Low

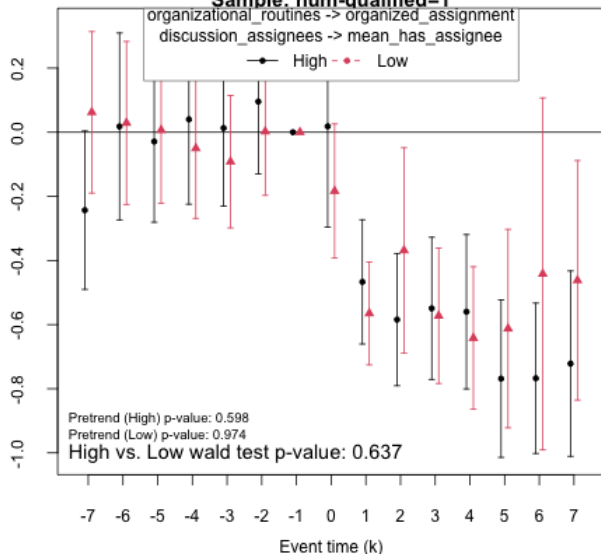


major\_minor\_release\_count rolling5

Sample: num-qualified=1

organizational\_routines -> organized\_assignment  
discussion\_assignees -> mean\_has\_assignee

—●— High —●— Low

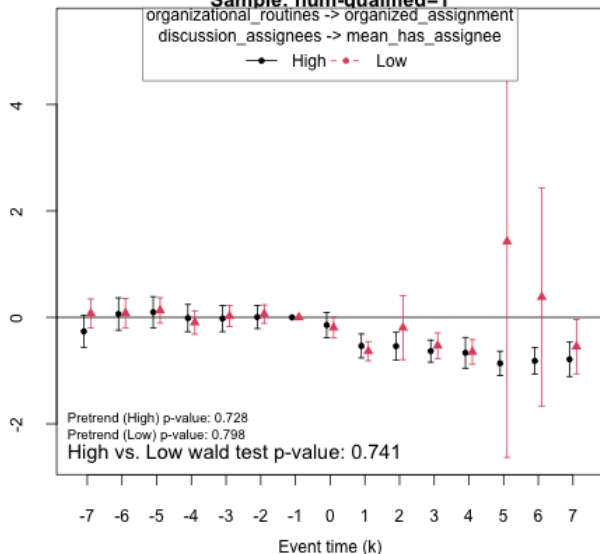


overall\_new\_release\_count rolling5

Sample: num-qualified=1

organizational\_routines -> organized\_assignment  
discussion\_assignees -> mean\_has\_assignee

—●— High —●— Low

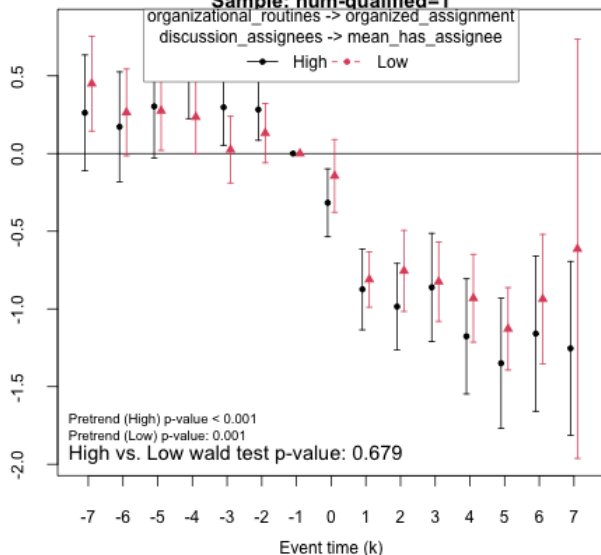


pull\_request\_merged rolling5

Sample: num-qualified=1

organizational\_routines -> organized\_assignment  
discussion\_assignees -> mean\_has\_assignee

—●— High —●— Low

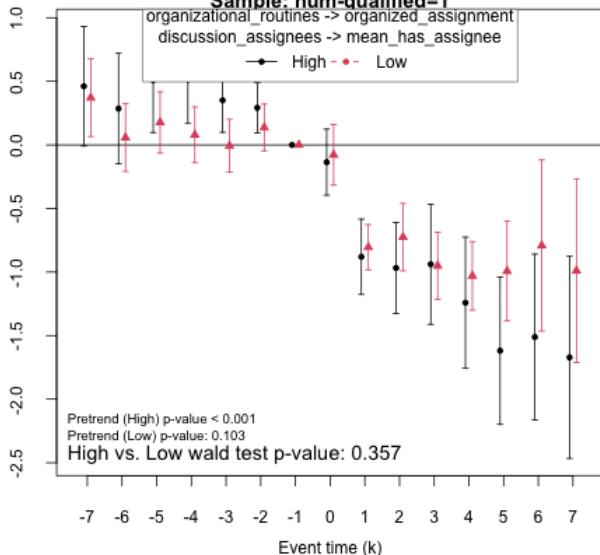


pull\_request\_opened rolling5

Sample: num-qualified=1

organizational\_routines -> organized\_assignment  
discussion\_assignees -> mean\_has\_assignee

—●— High —●— Low





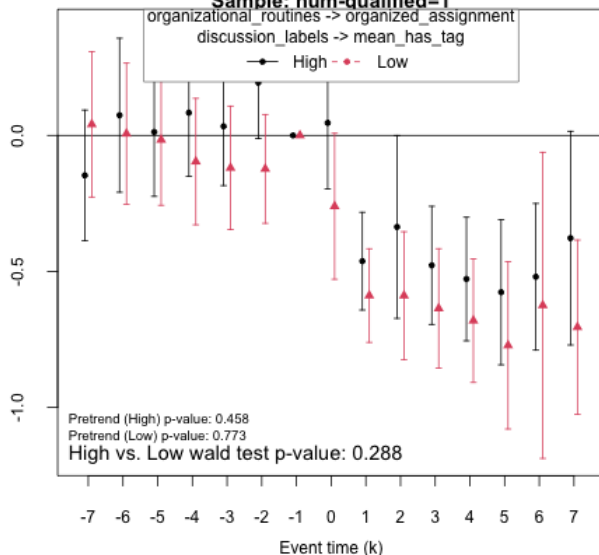
major\_minor\_release\_count rolling5

Sample: num-qualified=1

organizational\_routines -&gt; organized\_assignment

discussion\_labels -&gt; mean\_has\_tag

—●— High —●— Low



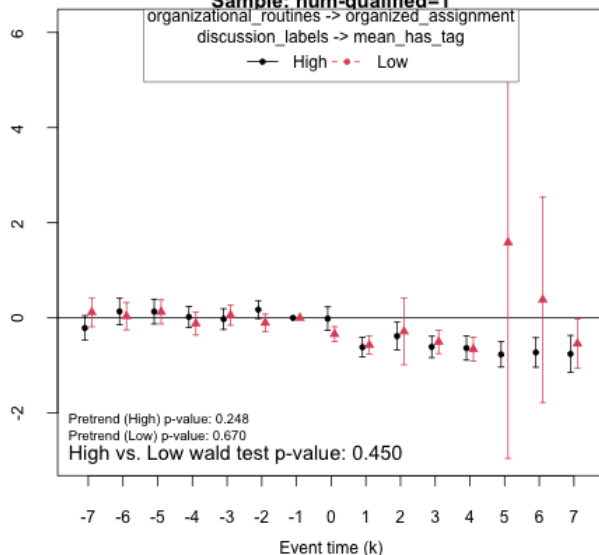
overall\_new\_release\_count rolling5

Sample: num-qualified=1

organizational\_routines -&gt; organized\_assignment

discussion\_labels -&gt; mean\_has\_tag

—●— High —●— Low



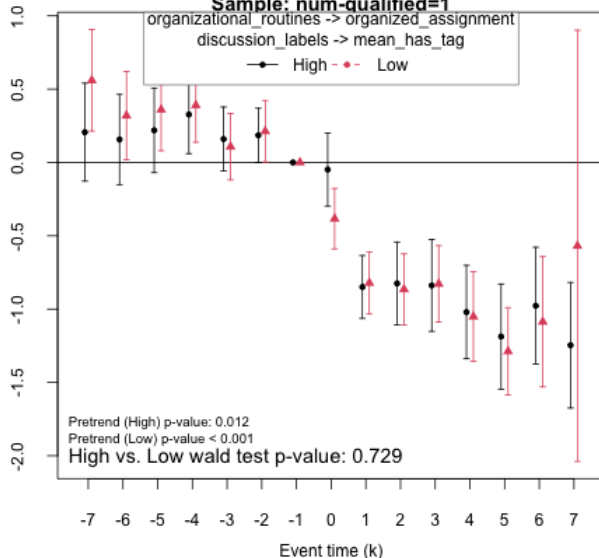
pull\_request\_merged rolling5

Sample: num-qualified=1

organizational\_routines -&gt; organized\_assignment

discussion\_labels -&gt; mean\_has\_tag

—●— High —●— Low



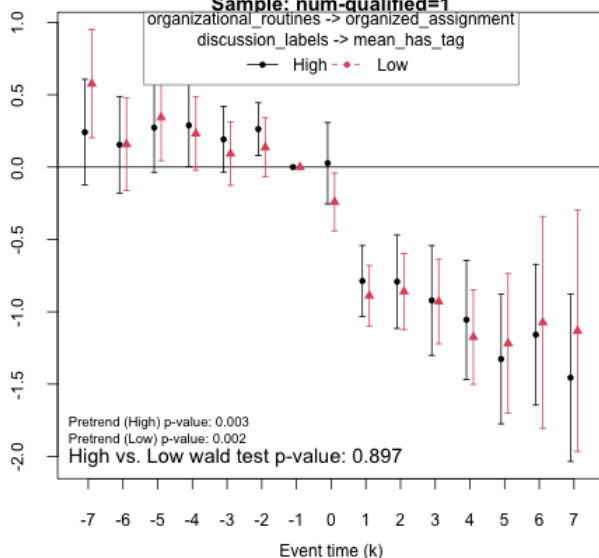
pull\_request\_opened rolling5

Sample: num-qualified=1

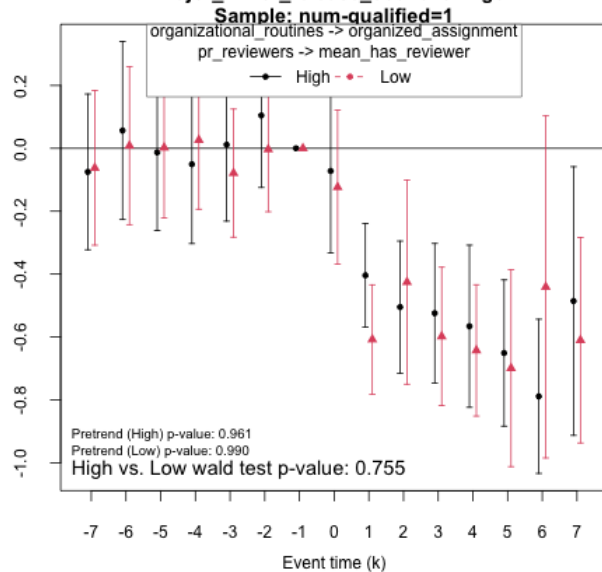
organizational\_routines -&gt; organized\_assignment

discussion\_labels -&gt; mean\_has\_tag

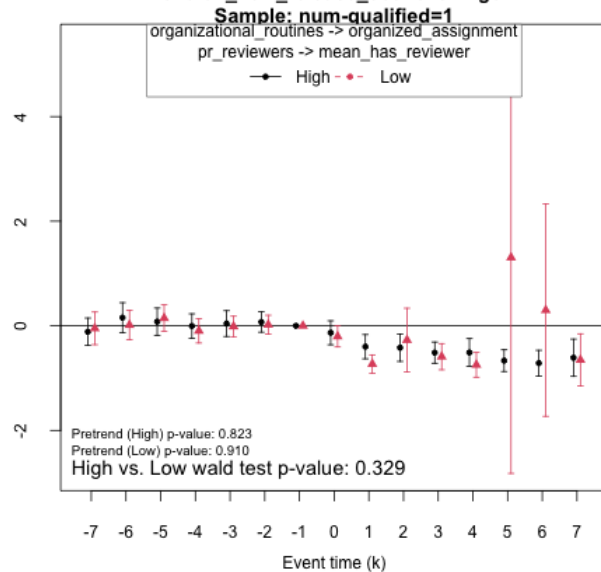
—●— High —●— Low



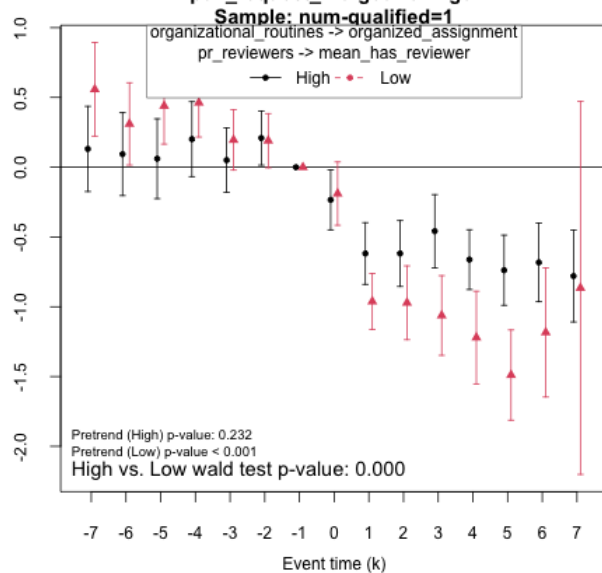
major\_minor\_release\_count rolling5



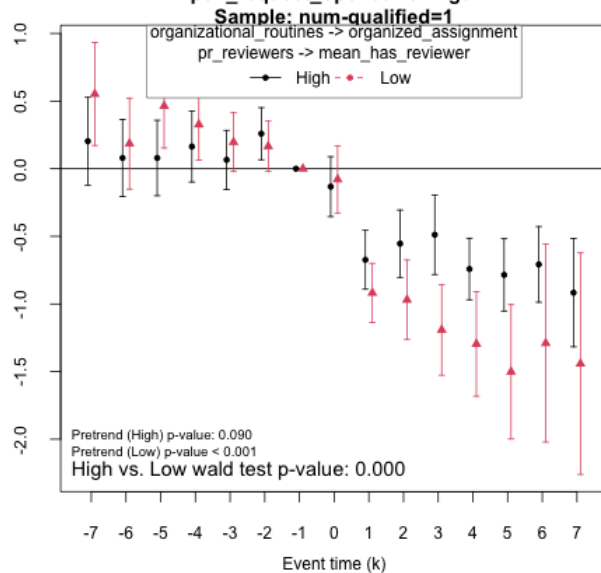
overall\_new\_release\_count rolling5



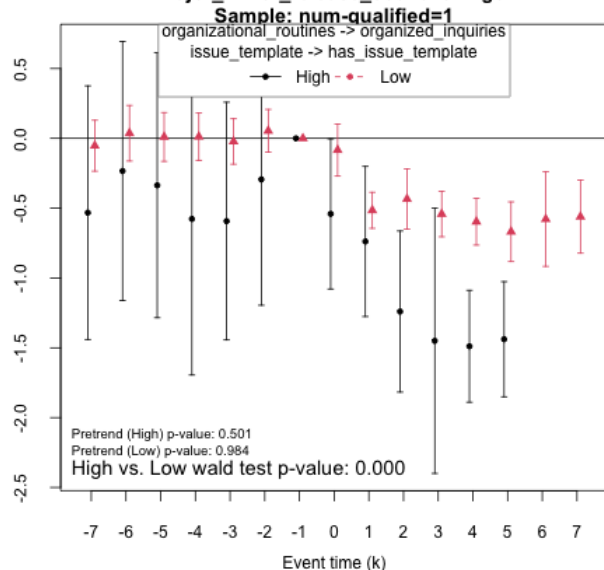
pull\_request\_merged rolling5



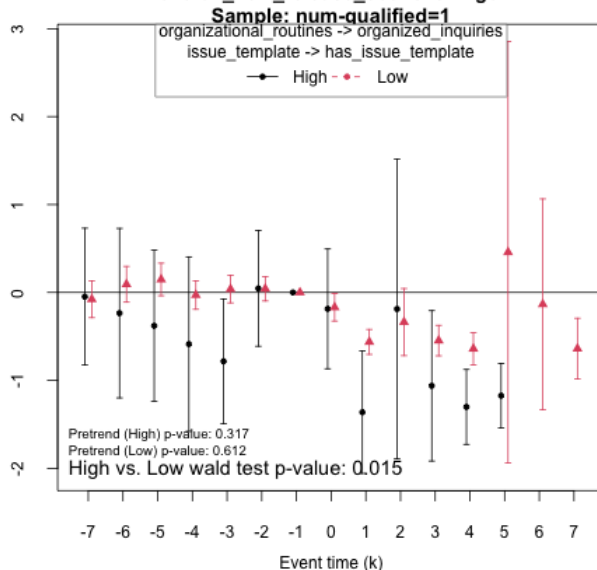
pull\_request\_opened rolling5



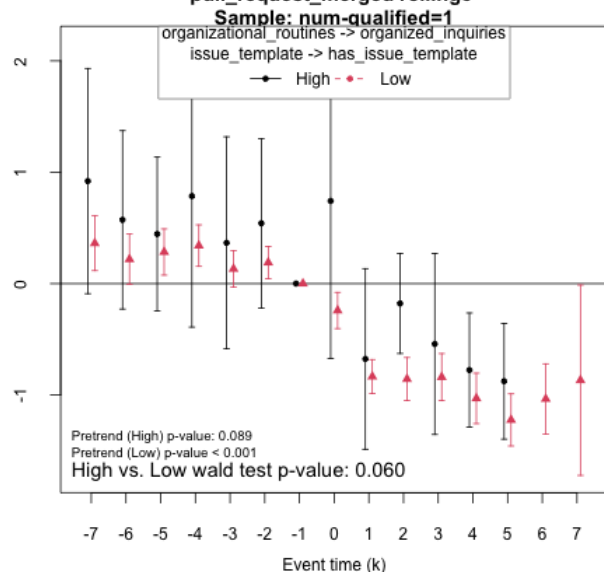
major\_minor\_release\_count rolling5



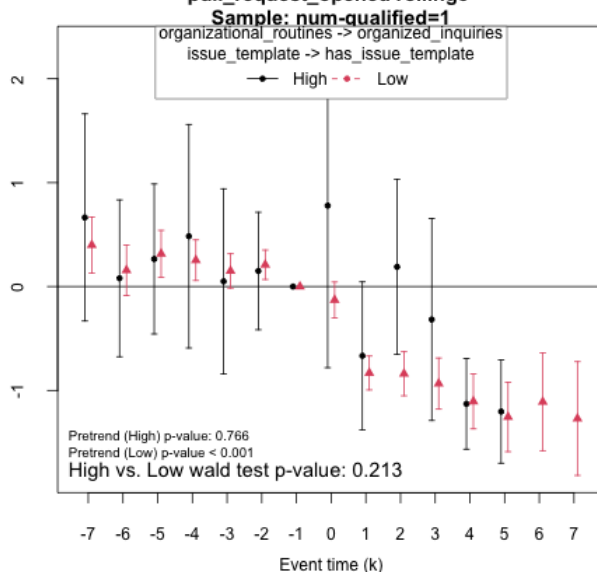
overall\_new\_release\_count rolling5



pull\_request\_merged rolling5



pull\_request\_opened rolling5



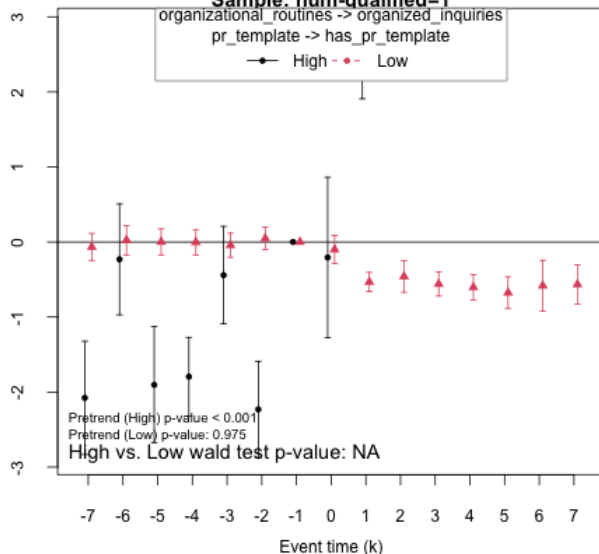
major\_minor\_release\_count rolling5

Sample: num-qualified=1

organizational\_routines -&gt; organized\_inquiries

pr\_template -&gt; has\_pr\_template

● High - ● Low



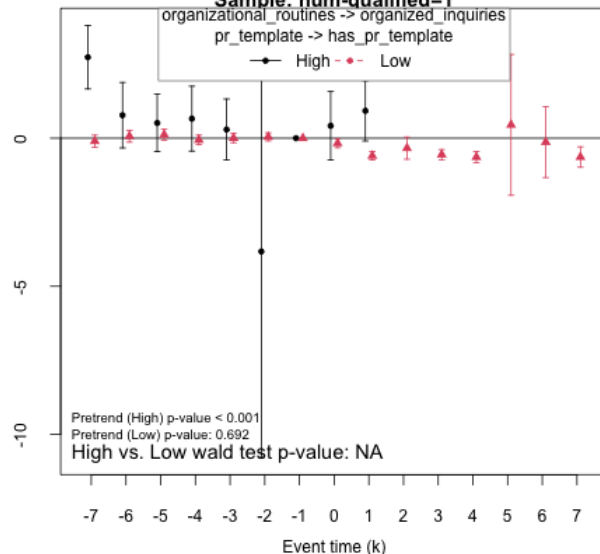
overall\_new\_release\_count rolling5

Sample: num-qualified=1

organizational\_routines -&gt; organized\_inquiries

pr\_template -&gt; has\_pr\_template

● High - ● Low



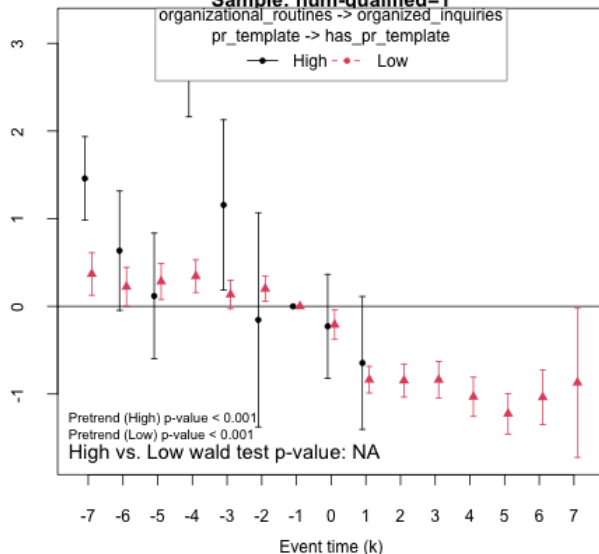
pull\_request\_merged rolling5

Sample: num-qualified=1

organizational\_routines -&gt; organized\_inquiries

pr\_template -&gt; has\_pr\_template

● High - ● Low



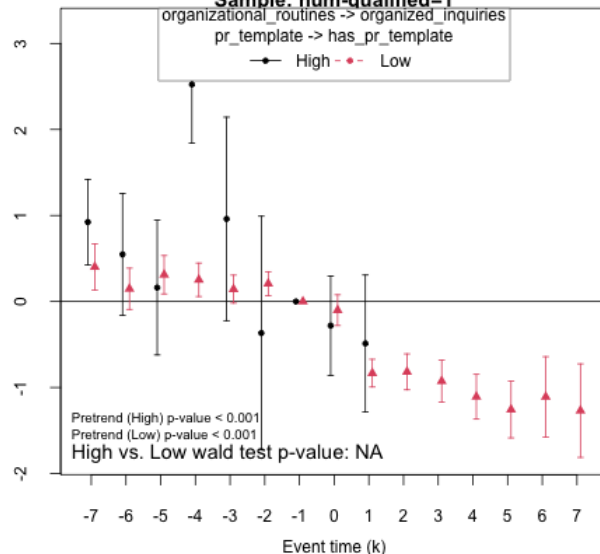
pull\_request\_opened rolling5

Sample: num-qualified=1

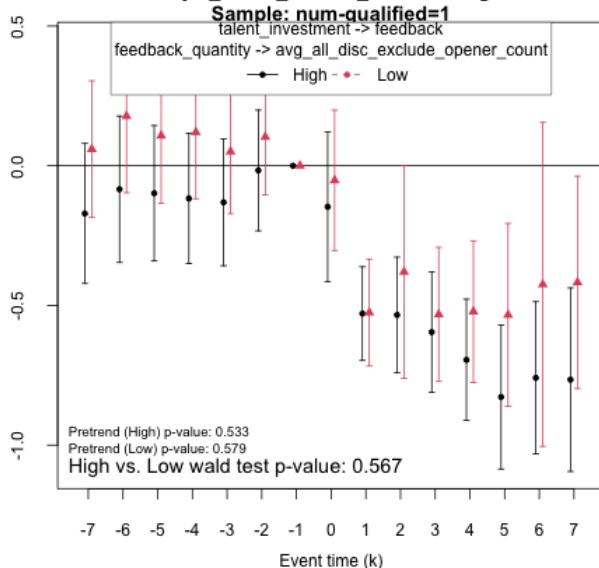
organizational\_routines -&gt; organized\_inquiries

pr\_template -&gt; has\_pr\_template

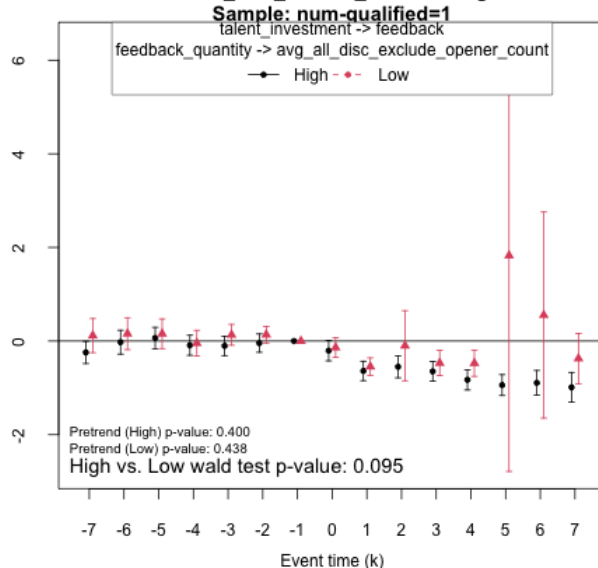
● High - ● Low



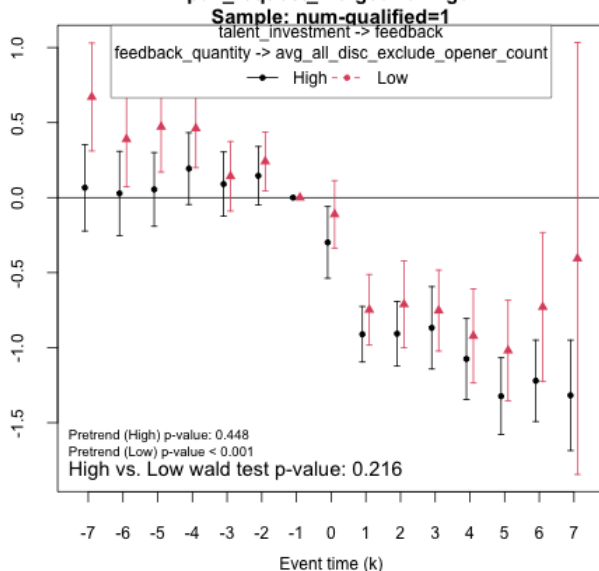
major\_minor\_release\_count rolling5



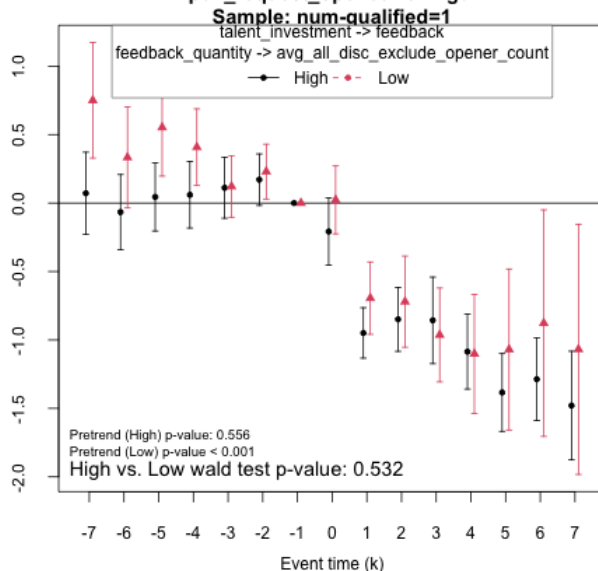
overall\_new\_release\_count rolling5



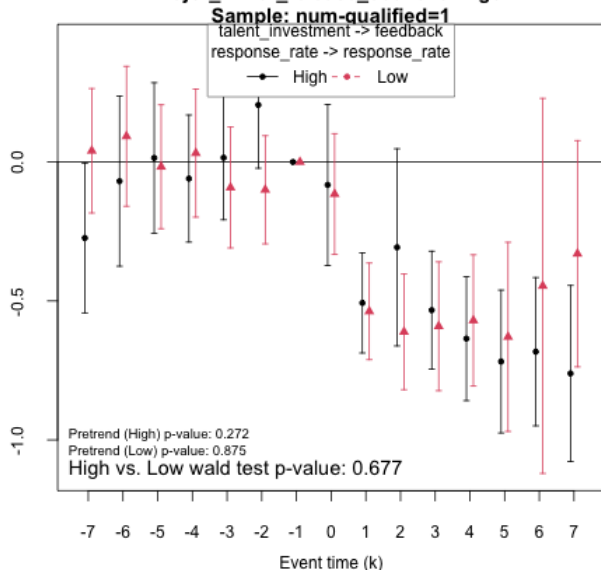
pull\_request\_merged rolling5



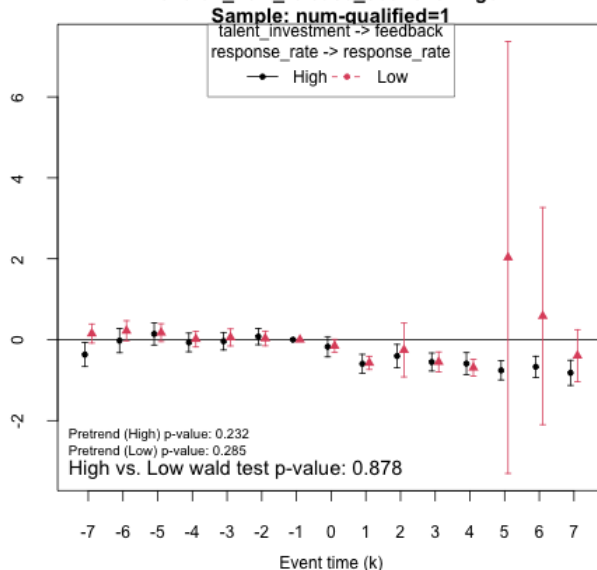
pull\_request\_opened rolling5



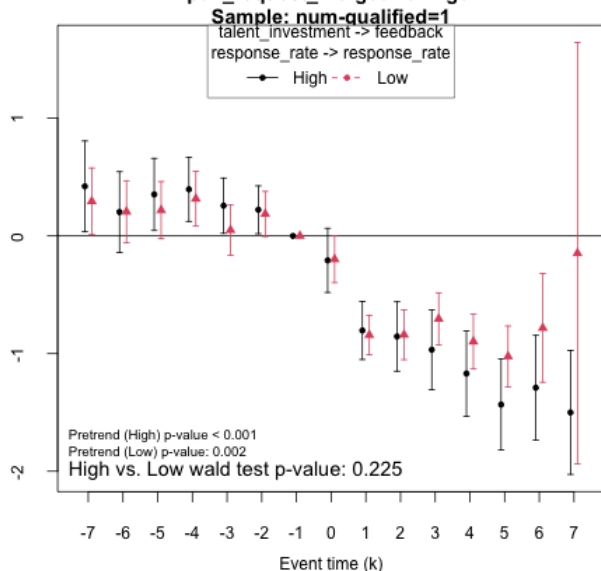
major\_minor\_release\_count rolling5



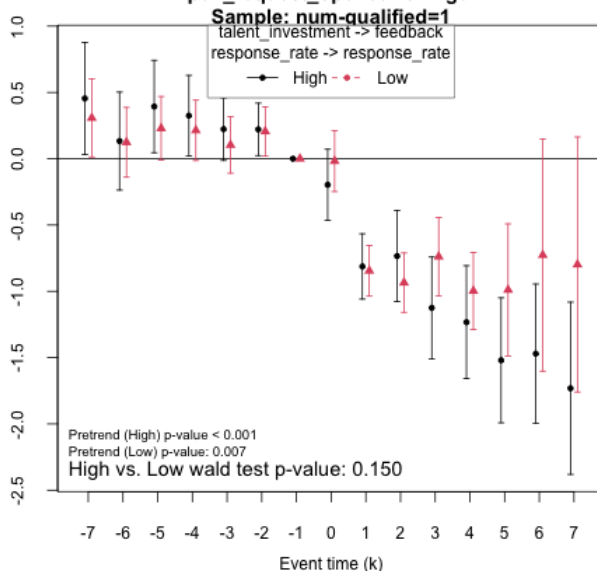
overall\_new\_release\_count rolling5



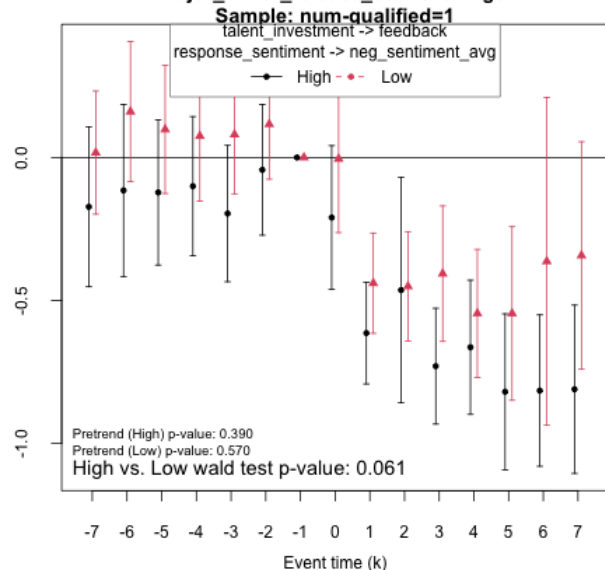
pull\_request\_merged rolling5



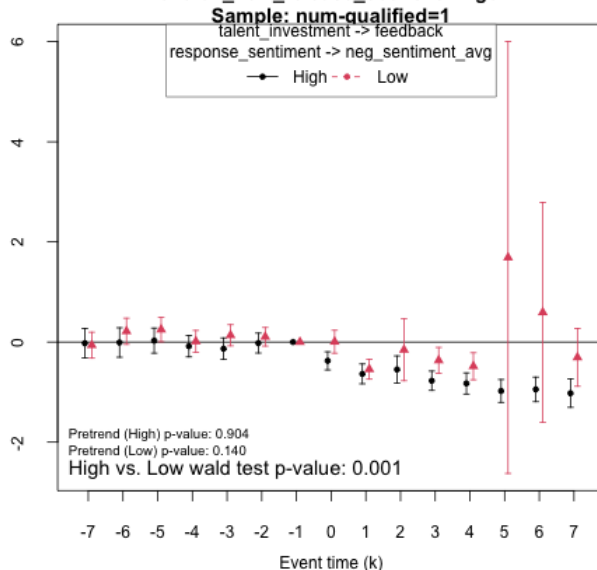
pull\_request\_opened rolling5



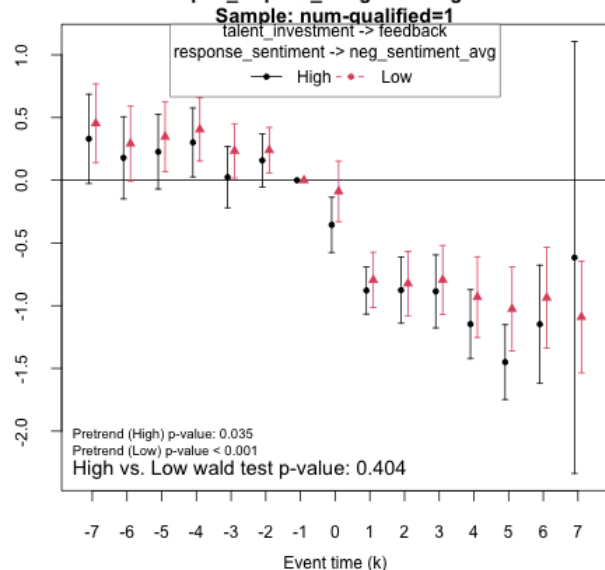
major\_minor\_release\_count rolling5



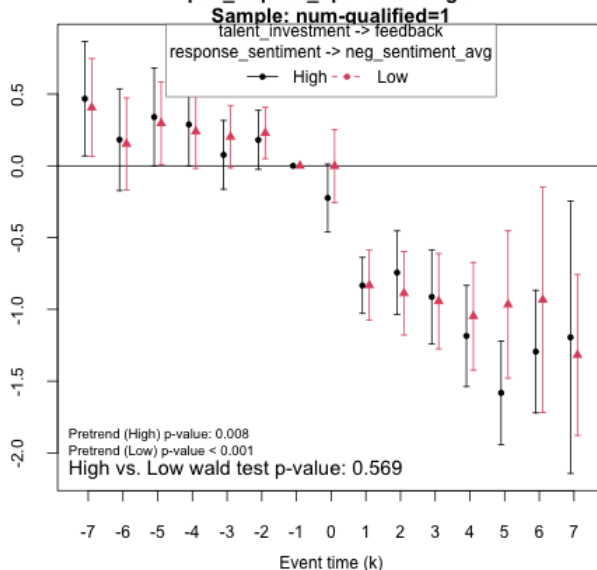
overall\_new\_release\_count rolling5



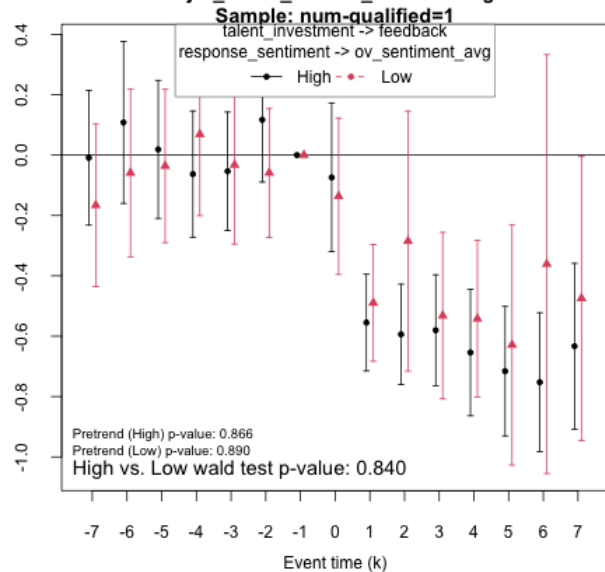
pull\_request\_merged rolling5



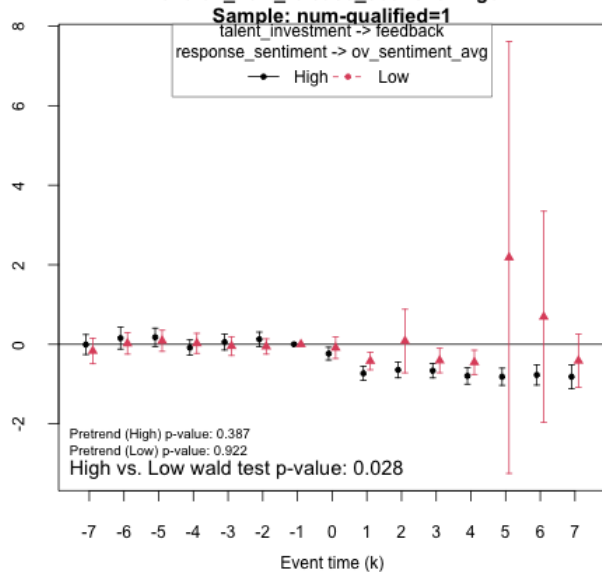
pull\_request\_opened rolling5



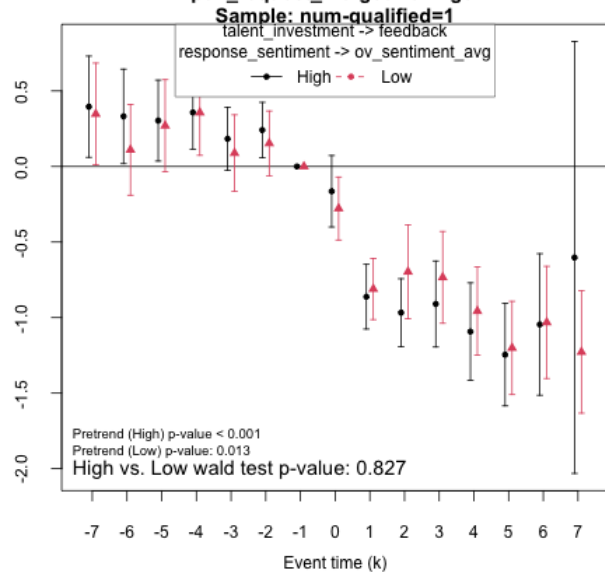
major\_minor\_release\_count rolling5



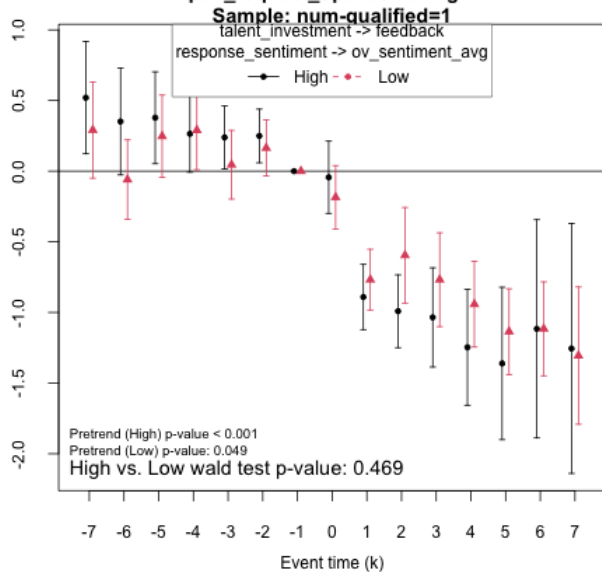
overall\_new\_release\_count rolling5



pull\_request\_merged rolling5

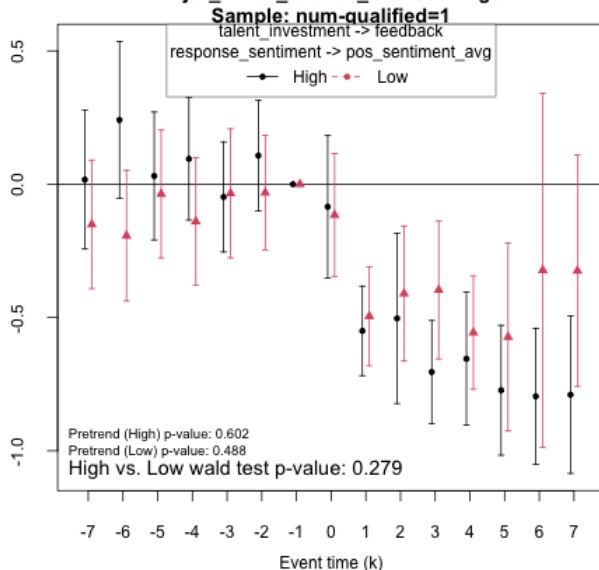


pull\_request\_opened rolling5

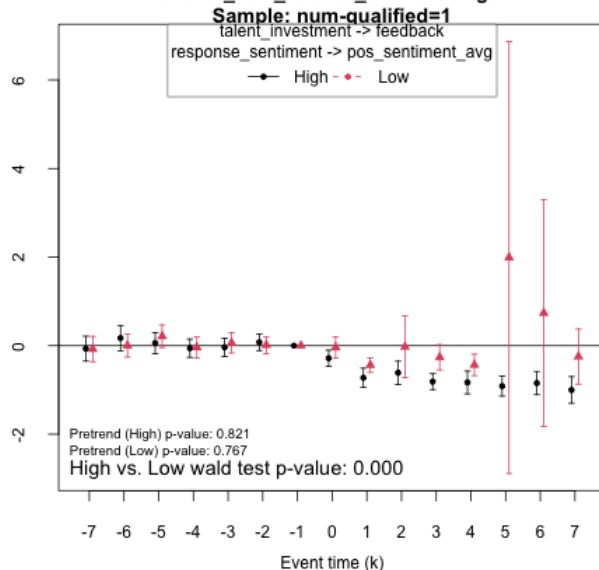




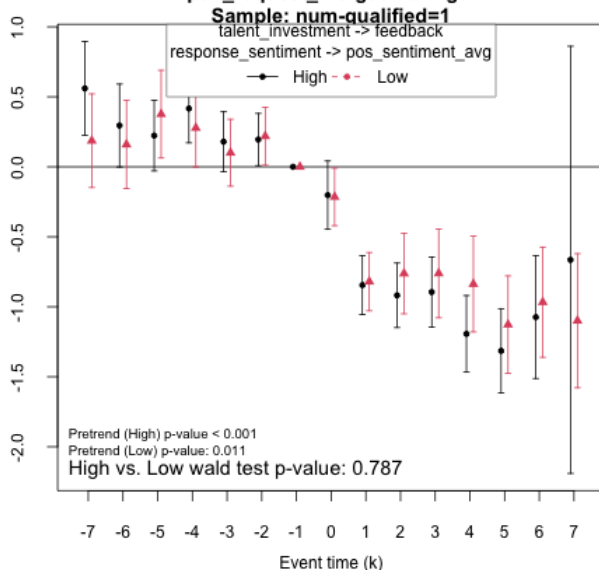
major\_minor\_release\_count rolling5



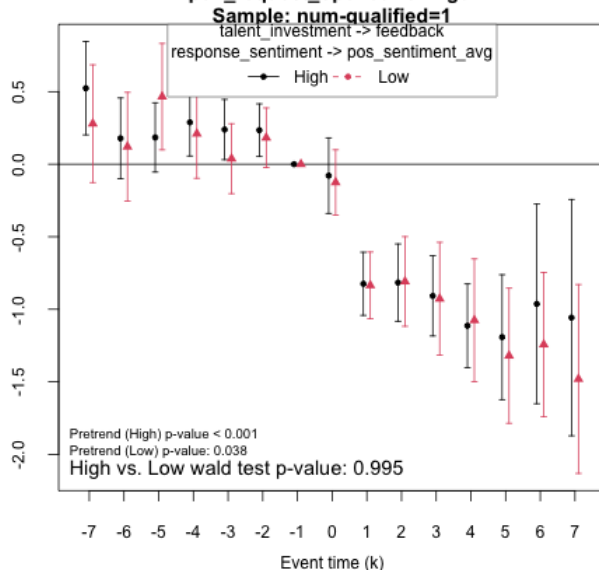
overall\_new\_release\_count rolling5



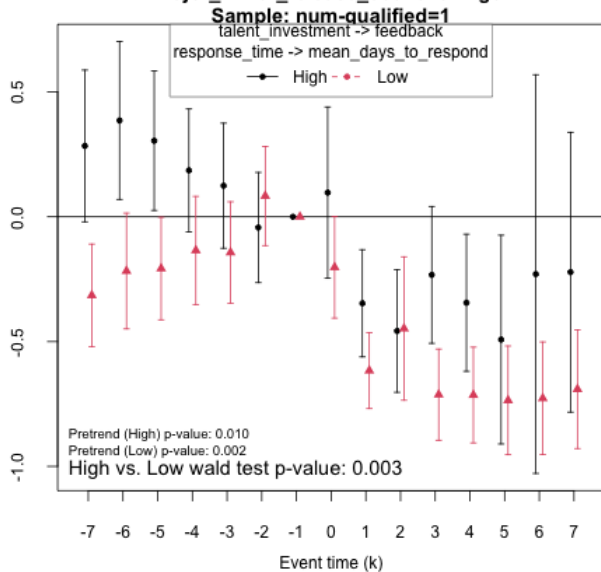
pull\_request\_merged rolling5



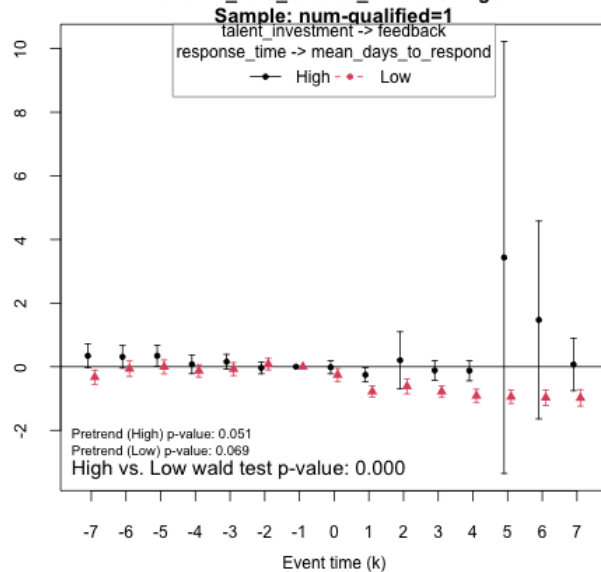
pull\_request\_opened rolling5



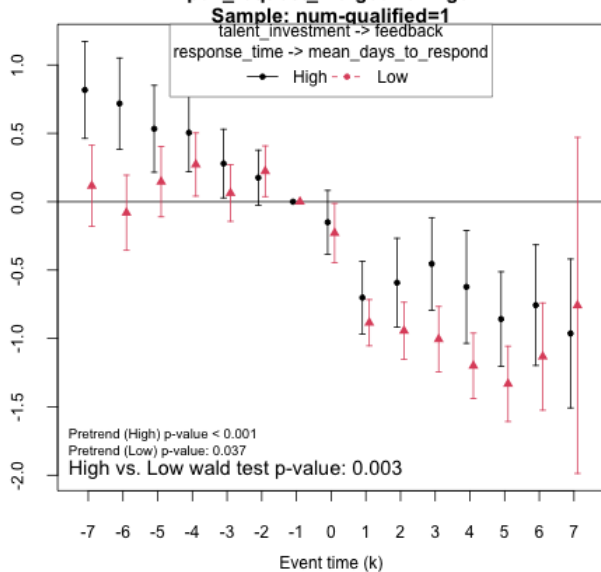
major\_minor\_release\_count rolling5



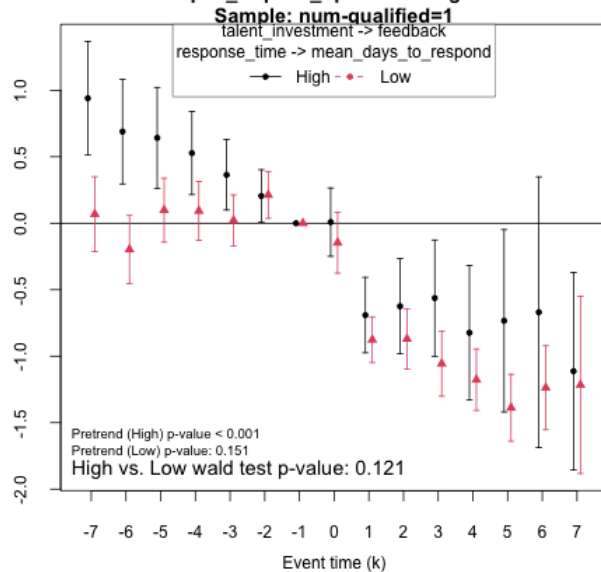
overall\_new\_release\_count rolling5



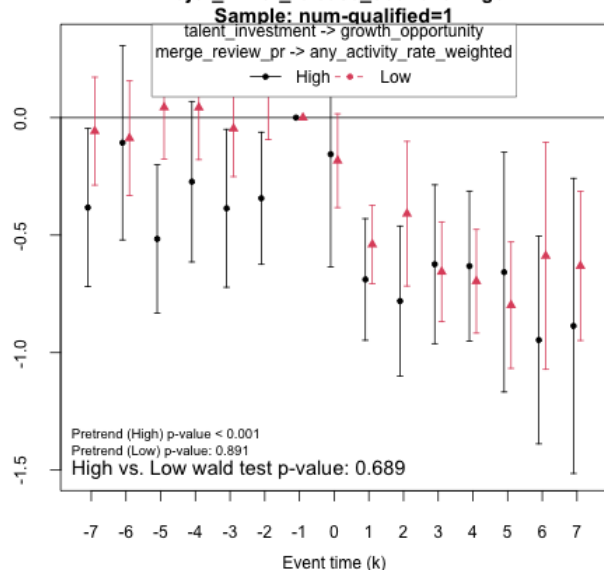
pull\_request\_merged rolling5



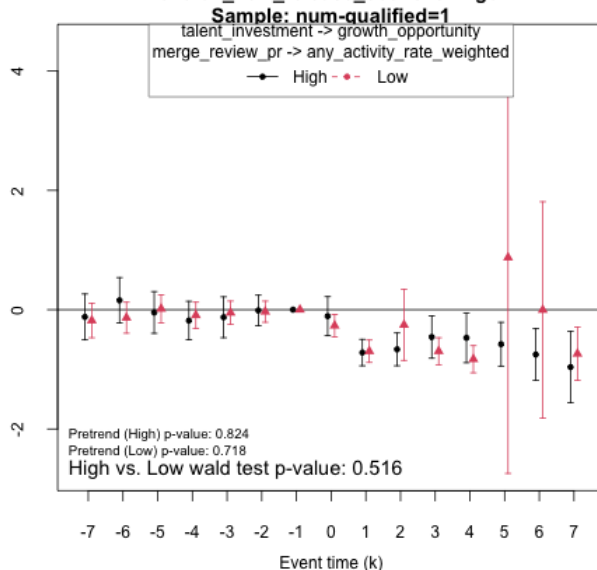
pull\_request\_opened rolling5



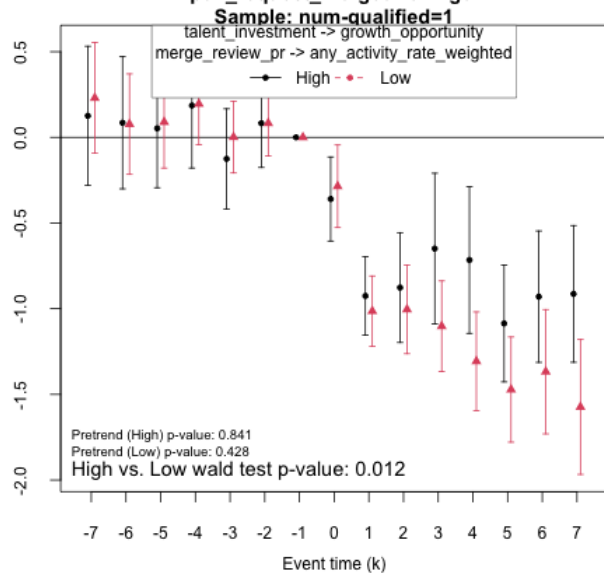
major\_minor\_release\_count rolling5



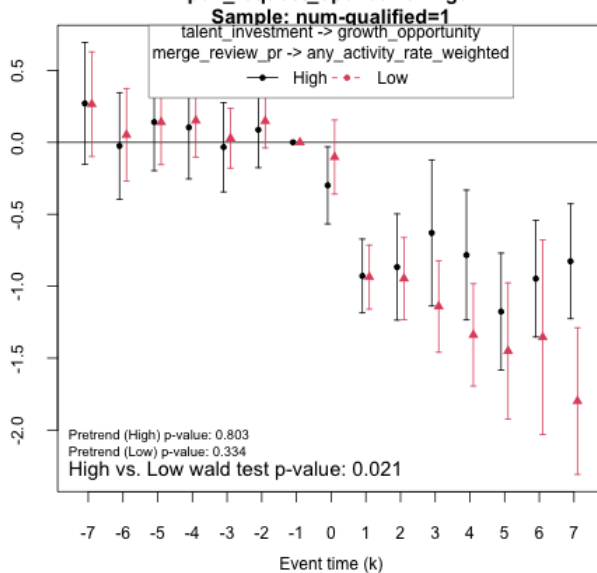
overall\_new\_release\_count rolling5



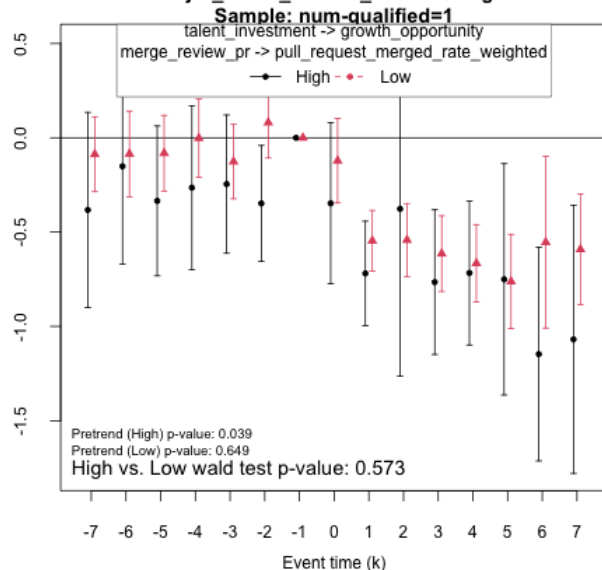
pull\_request\_merged rolling5



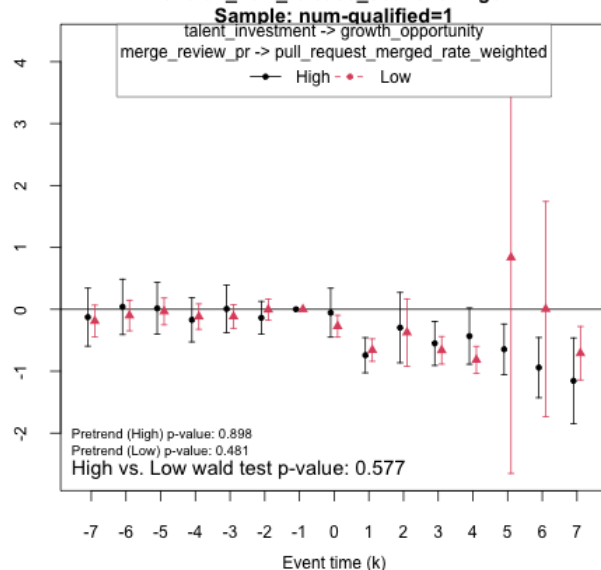
pull\_request\_opened rolling5



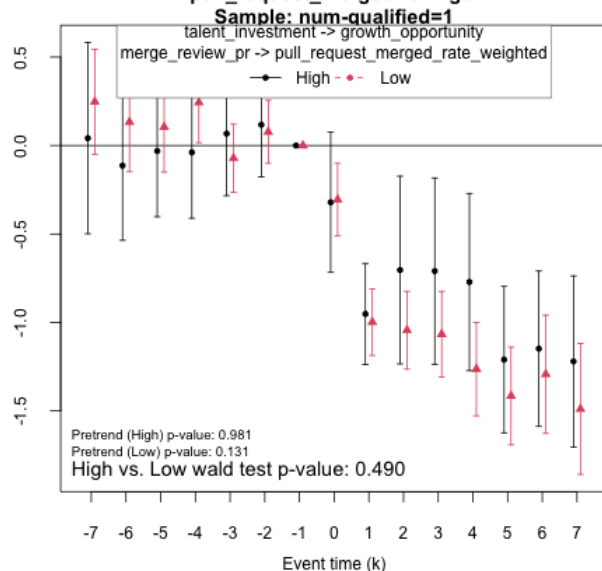
major\_minor\_release\_count rolling5



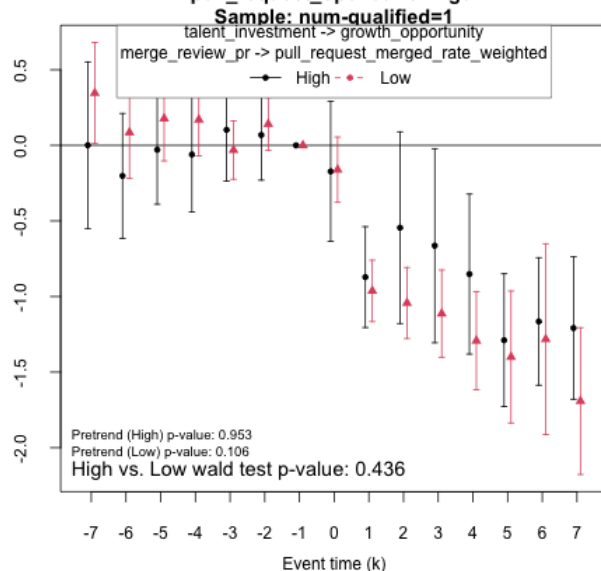
overall\_new\_release\_count rolling5



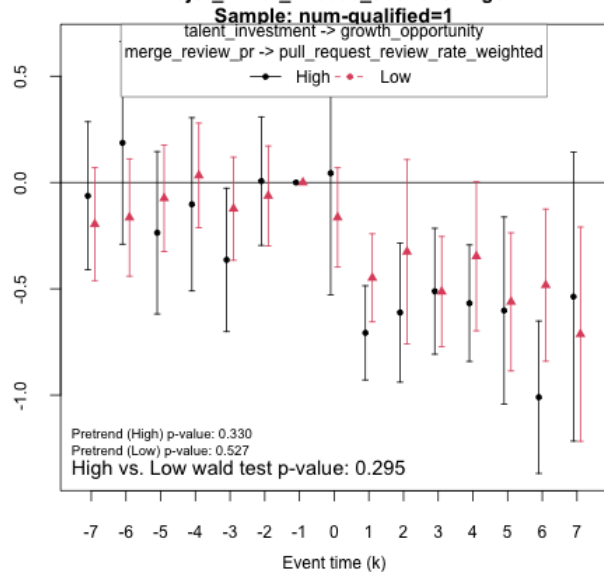
pull\_request\_merged rolling5



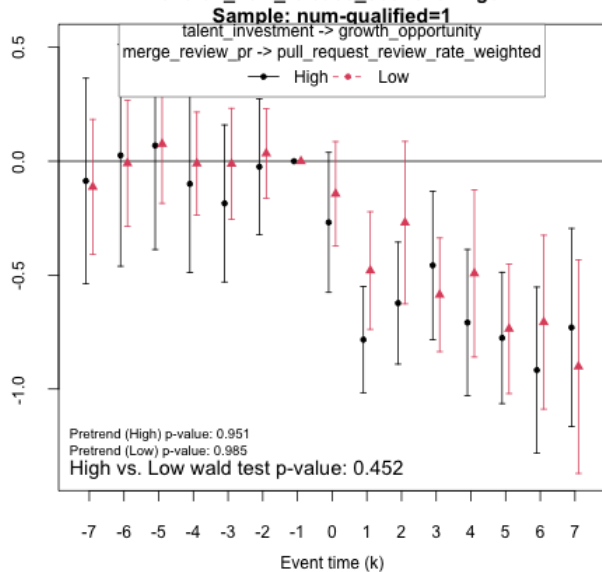
pull\_request\_opened rolling5



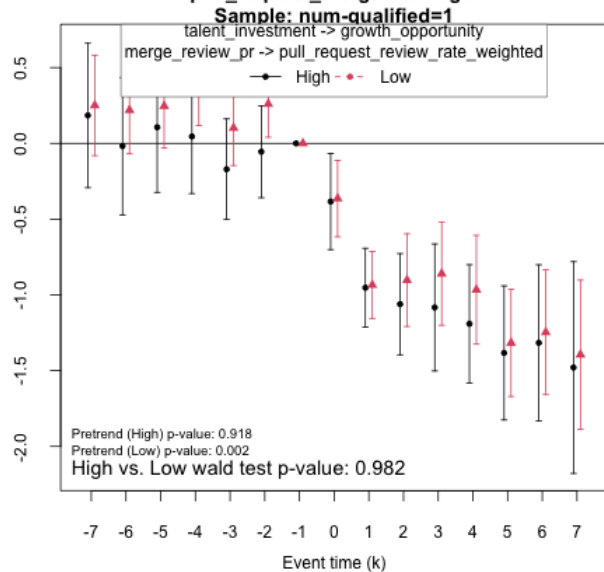
major\_minor\_release\_count rolling5



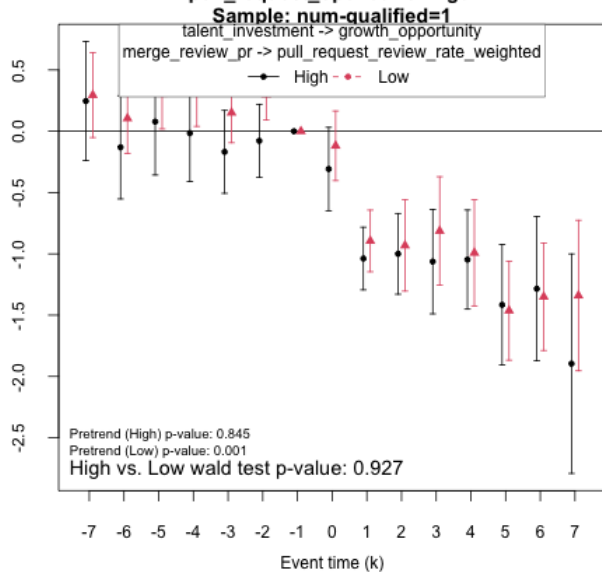
overall\_new\_release\_count rolling5



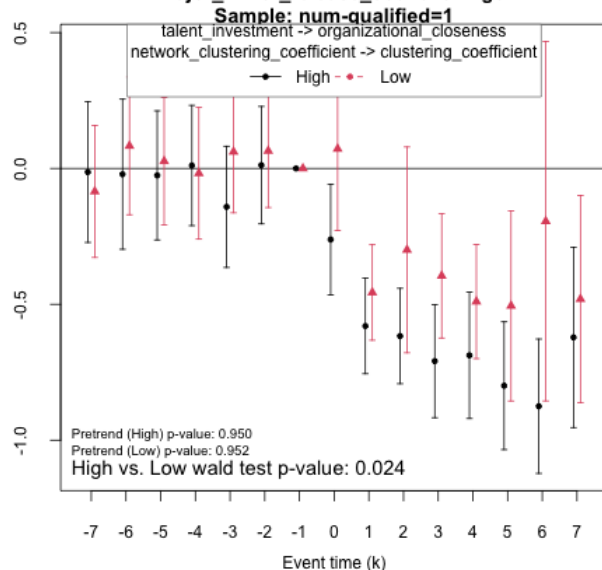
pull\_request\_merged rolling5



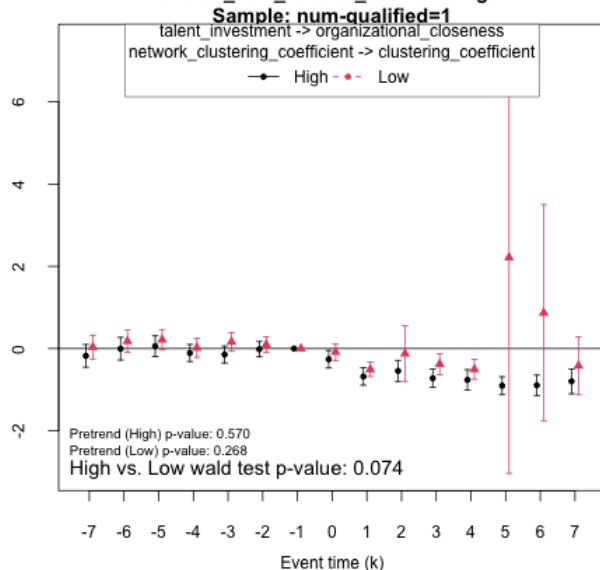
pull\_request\_opened rolling5



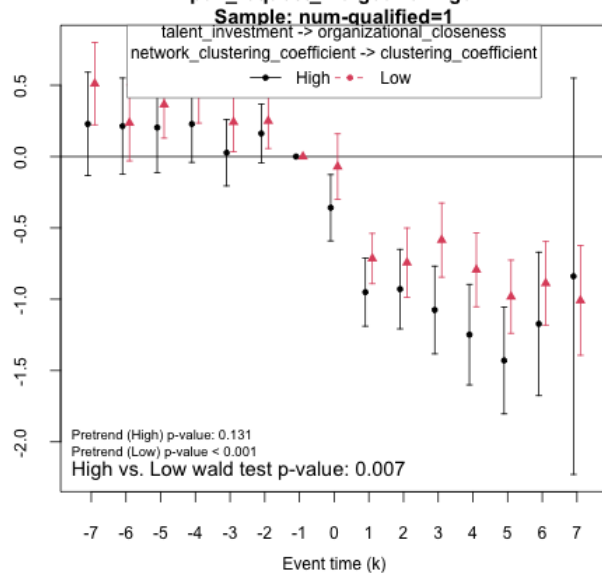
major\_minor\_release\_count rolling5



overall\_new\_release\_count rolling5



pull\_request\_merged rolling5



pull\_request\_opened rolling5

