

Chungwook-Sim
Remy-Lequesne
Mario-Rodriguez
Ayhan-Irfanoglu
Cemalettin-Donmez
Koray-Tureyen
Jeff-Dowgala
Kari-Klaboe
Gurhan-Comlekoglu
Ekin-Gultepe
Baran-Koroglu
Egemen-Sonmez
Korhan-Dalgic
Atakan-Gokturk
Edagul-Kirpik
Mert-Demir
Kerim-Kurt
Uveys-Gozun
Cennet-Yesilyurt
Mehmet-Enes-Kaya
Mursel-Kayikci

Bora-Ozkan
Cem-Ali-Sagir
Polat-Gulkan
Baki-Ozturk
Fatih-Çanakçı
Mahmoud-Hachem
Bashar-Abdo
Bahaa-Tayba
Julian-Rincon
Amin-Hariri
Matthew-Speicher
Reid-Zimmerman
Rebecca-H-Collins
Marko-Marinkovic
Lissette-Iturburu
Meltem-Eryilmaz-Yildirim
Idris-Bedirhanoglu
M.-Fethi-Güllü
Oscar-Forero
M.-Firat-Aydin

American-Concrete-Institute
ASCE
NIST
Earthquake-Solutions
Wiss-Janney-Elstner-and-Associates
Dicle-University
University-of-Canterbury
QuakeCoRE
Purdue-University
IIT-Izmir



American Concrete Institute

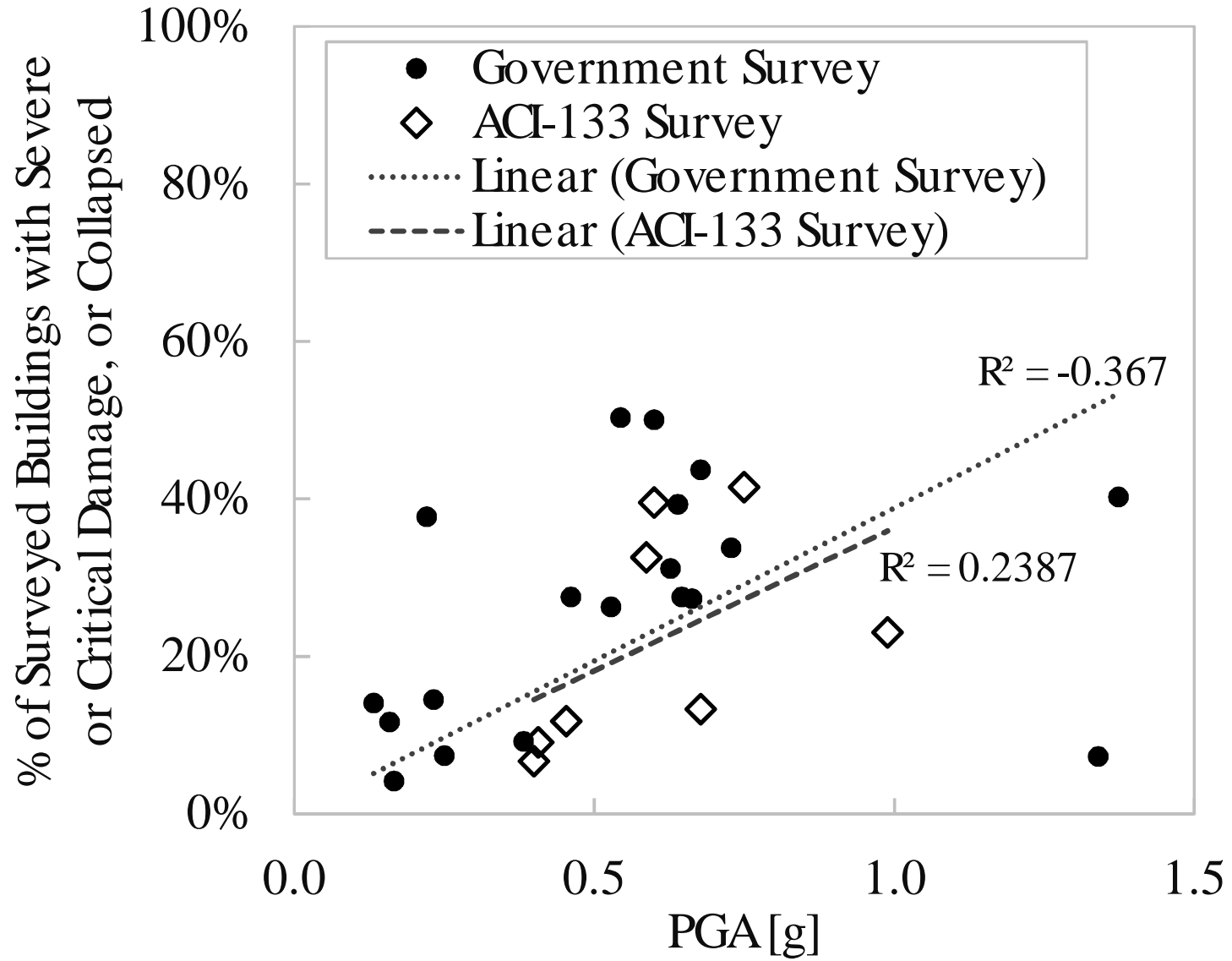
Always advancing

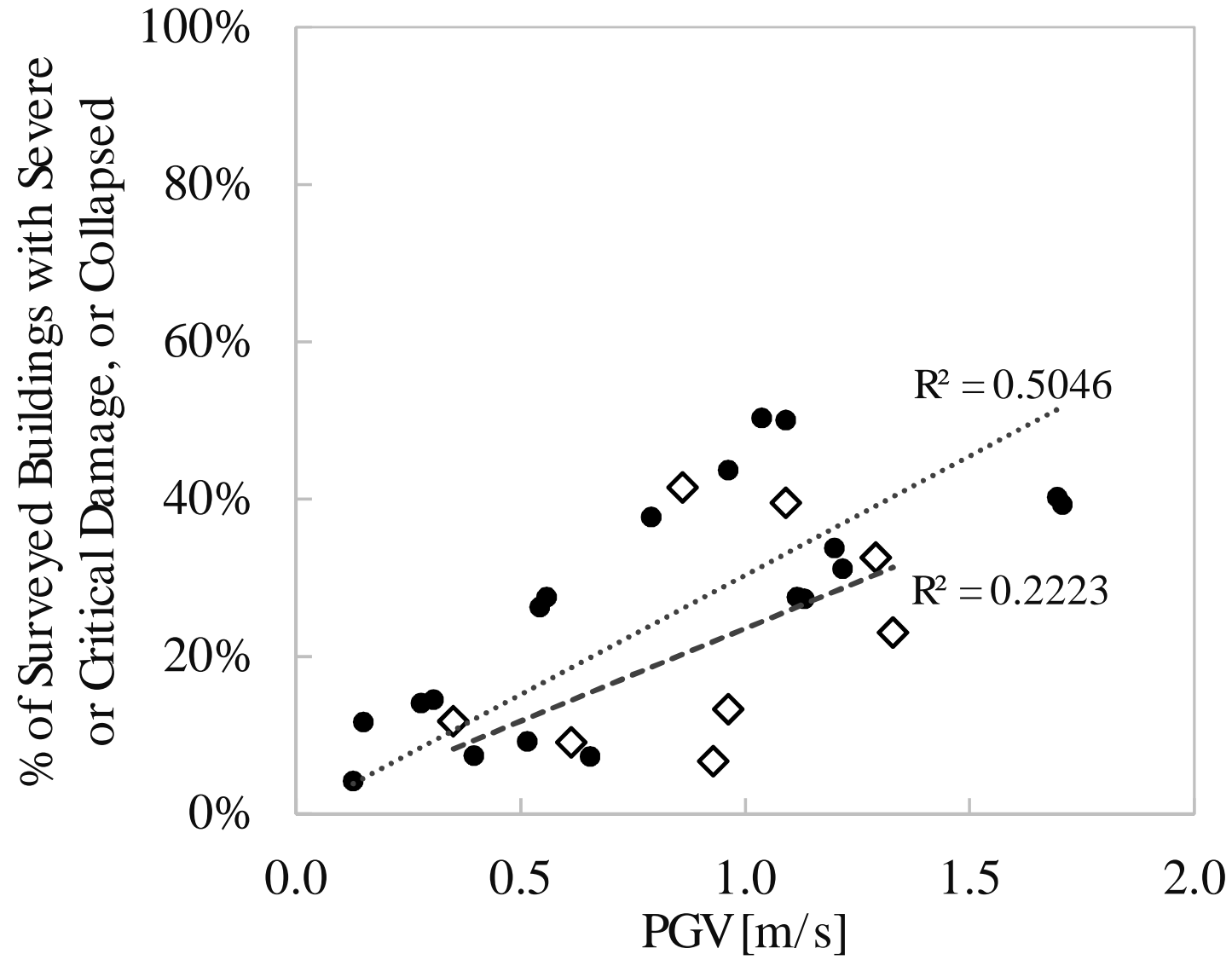
What drove the damage?

Intensity

Lack of robustness

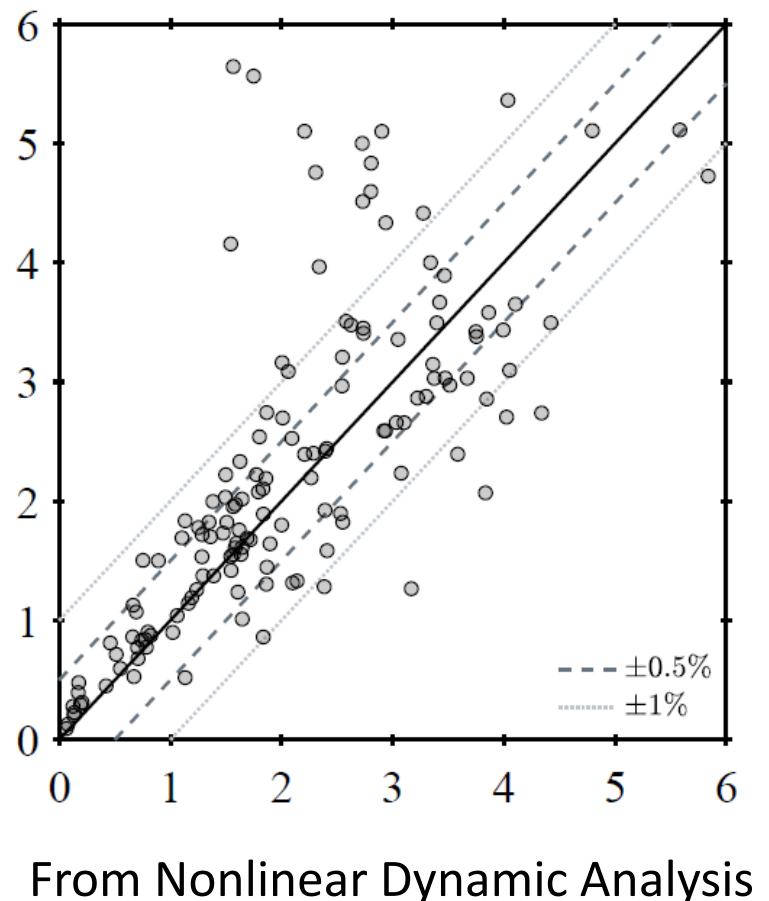
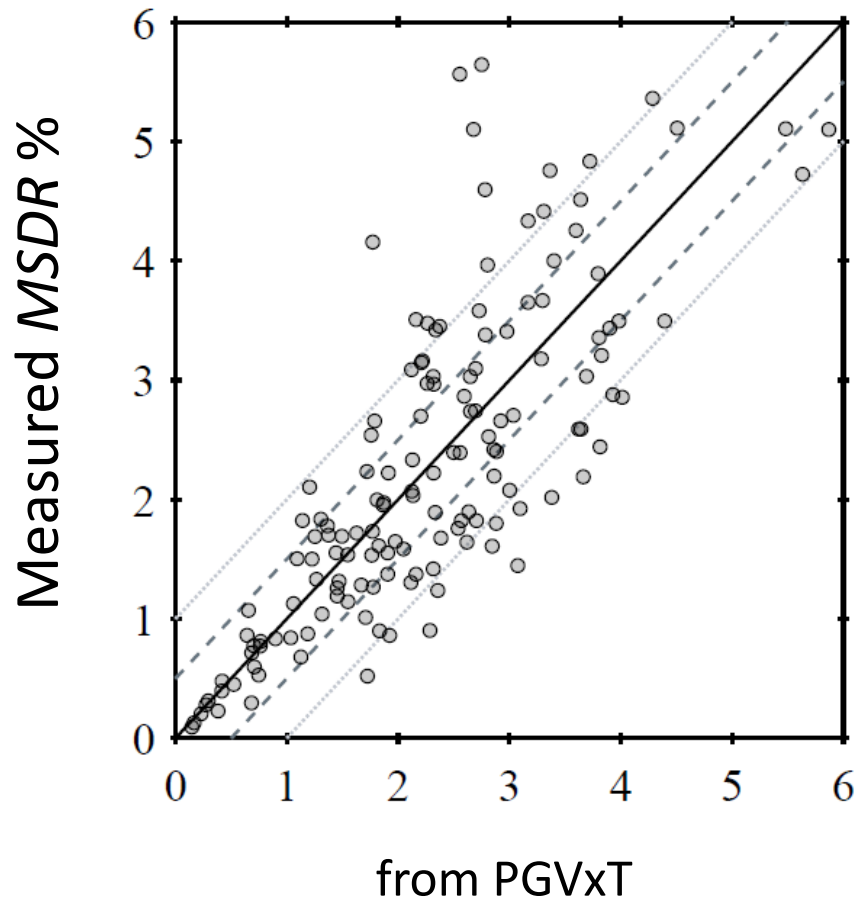
(detailing)



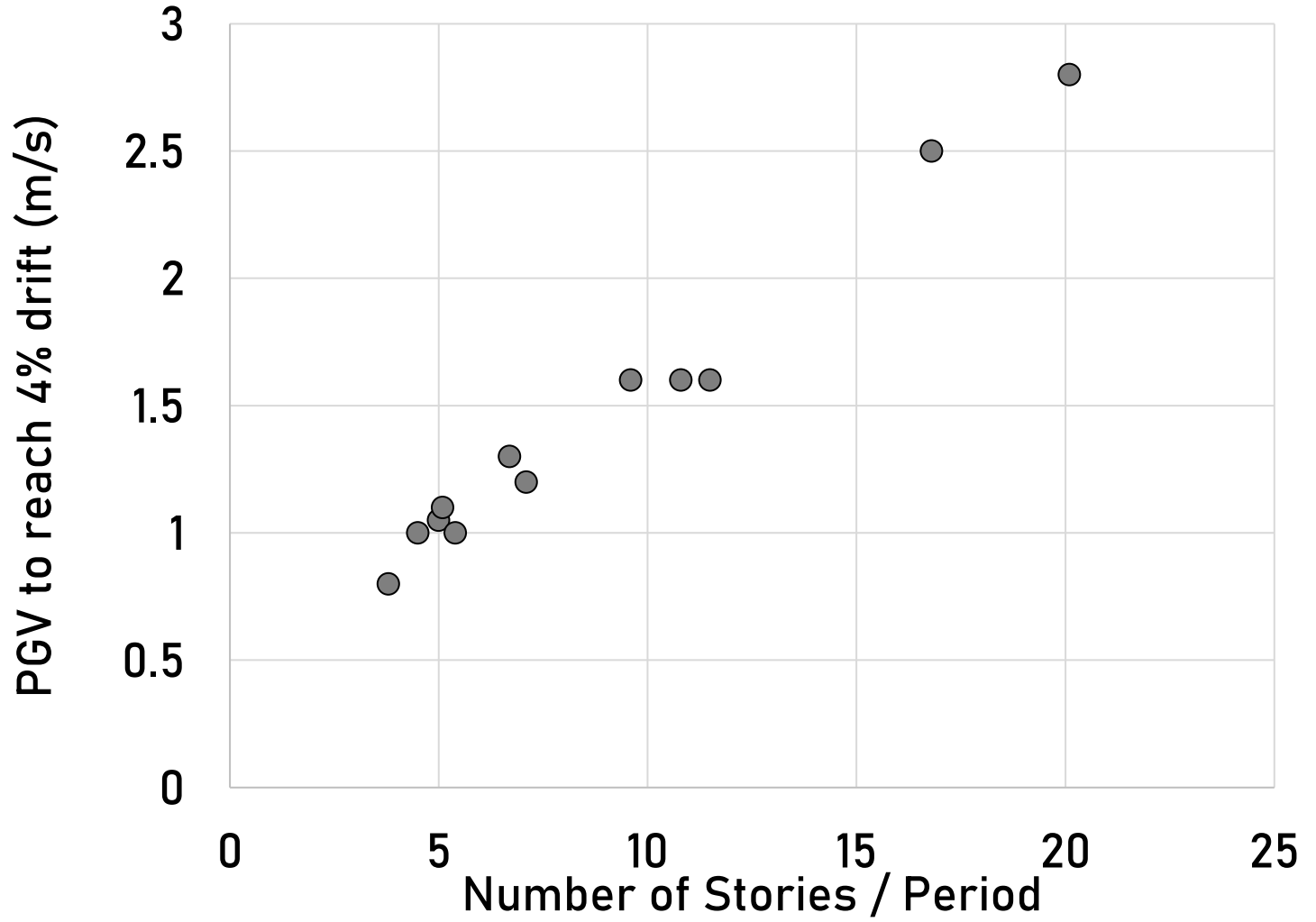


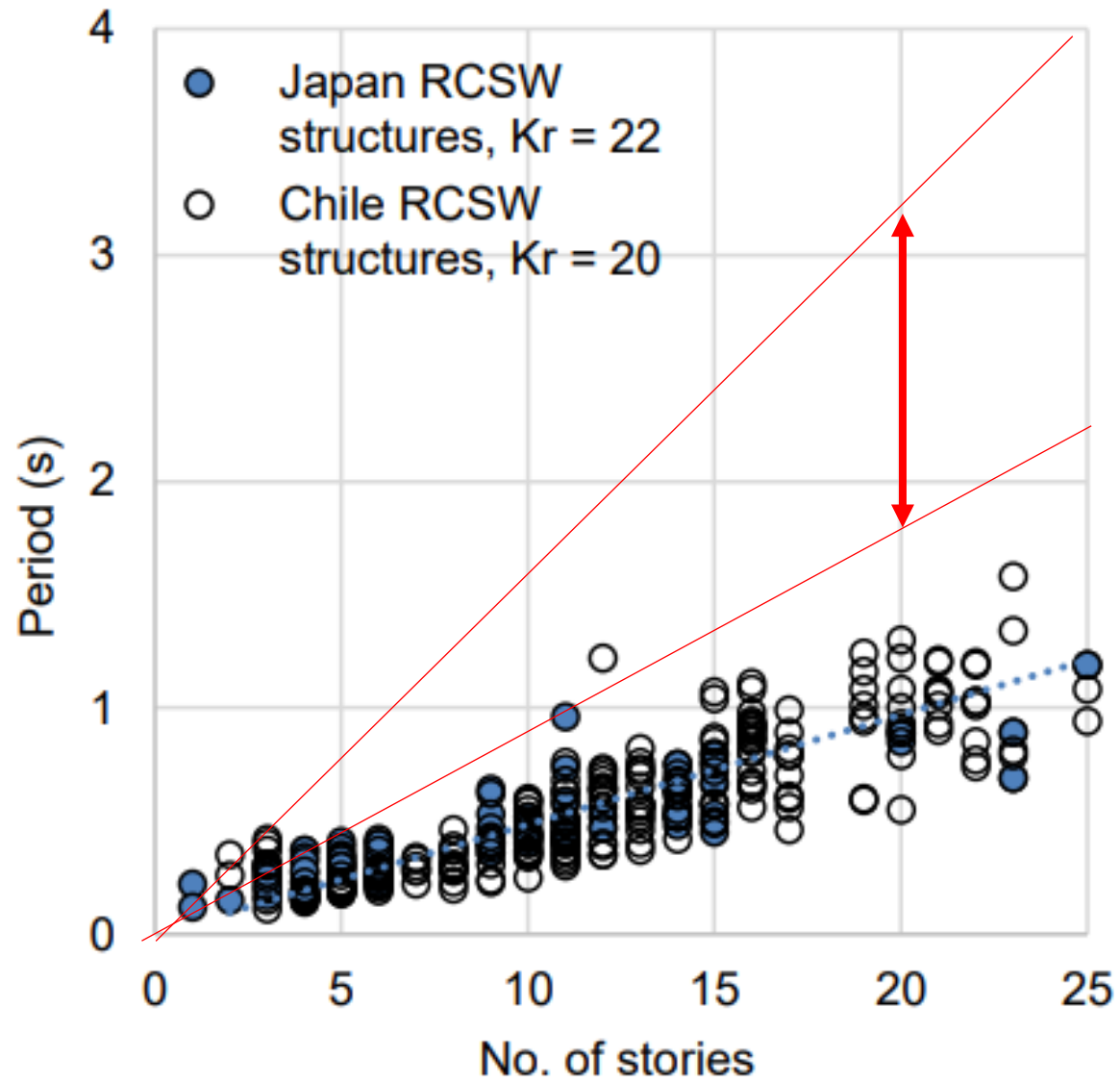
ROOF DISP ~ PGV x T

Sozen, 2003



Calculated Maximum Story Drift Ratio *MSDR* %





**A proxy to measure robustness
(Hassan and Sozen, 1997)**

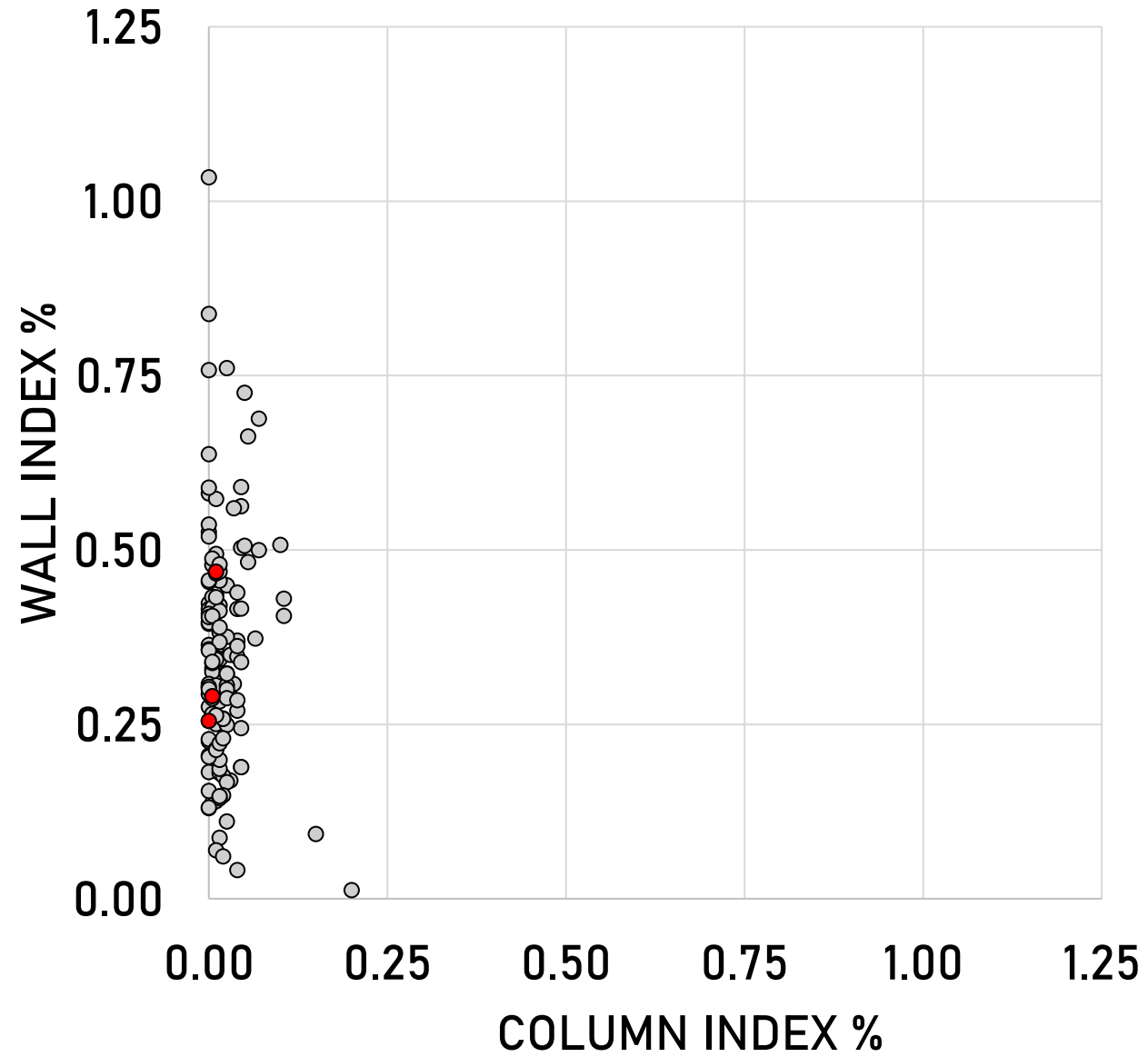
WALL INDEX =

Sum of RC Wall Area
Sum of Floor Area

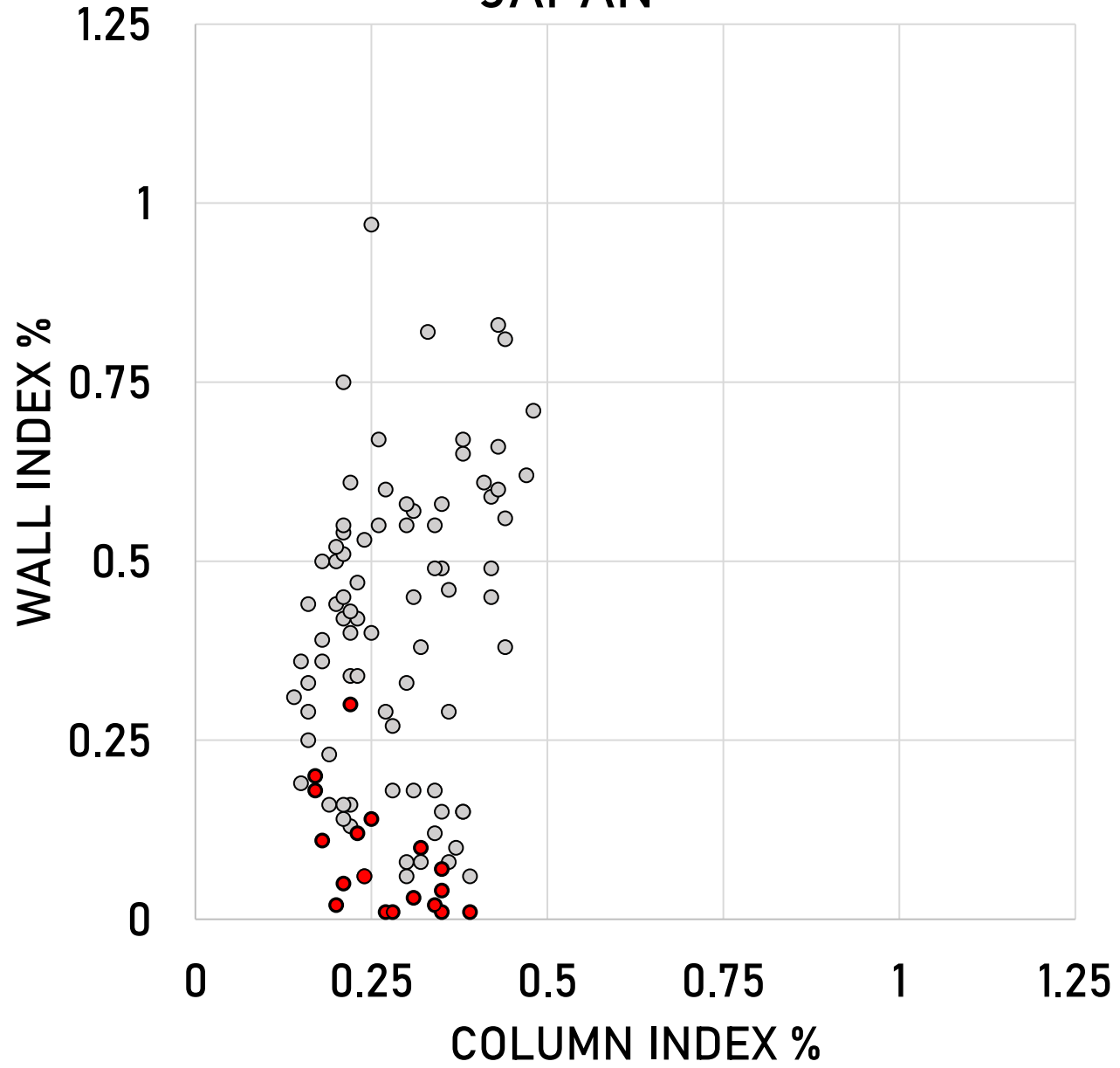
COLUMN INDEX =

Sum of Column Area
2x Sum of Floor Area

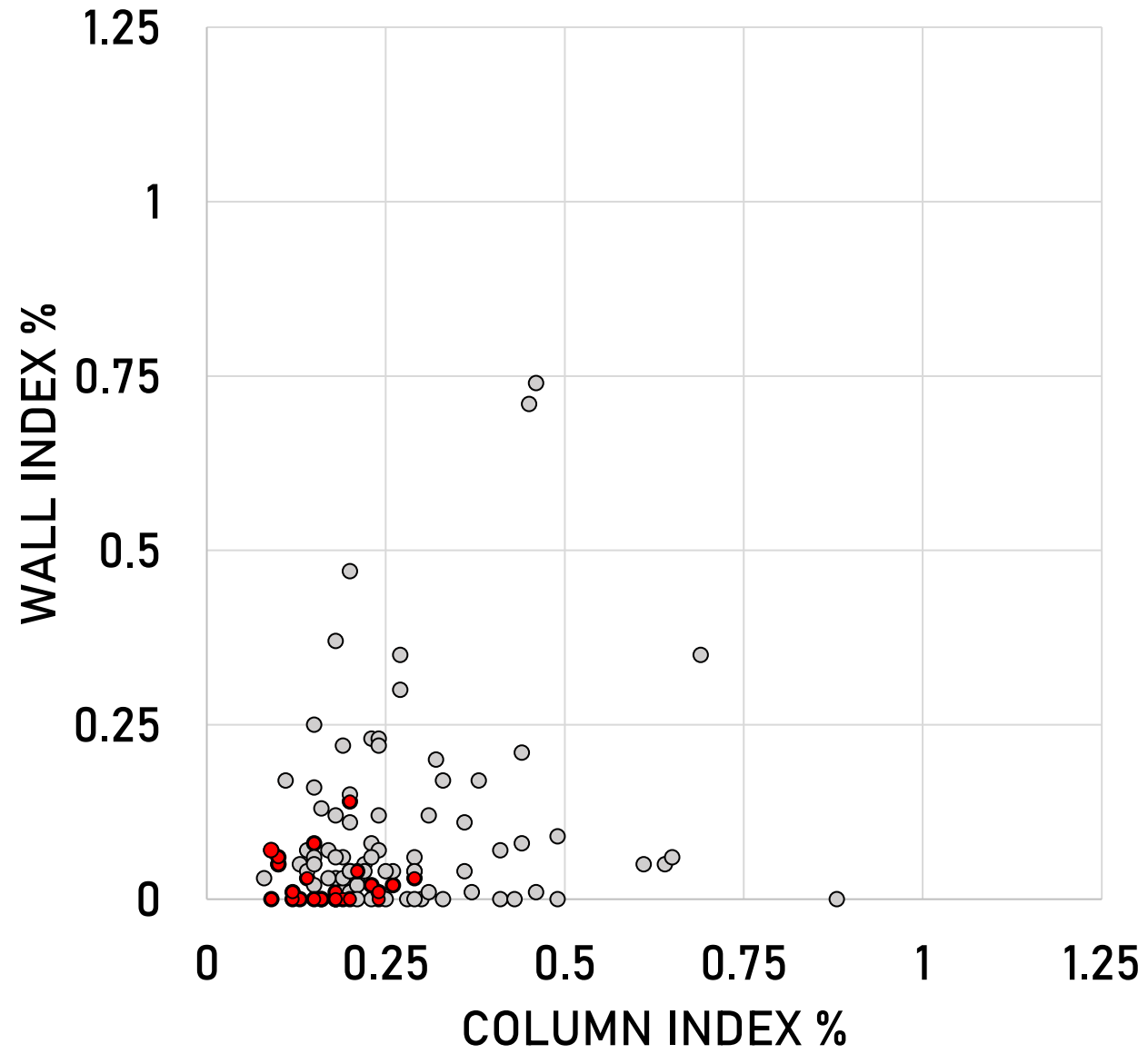
CHILE



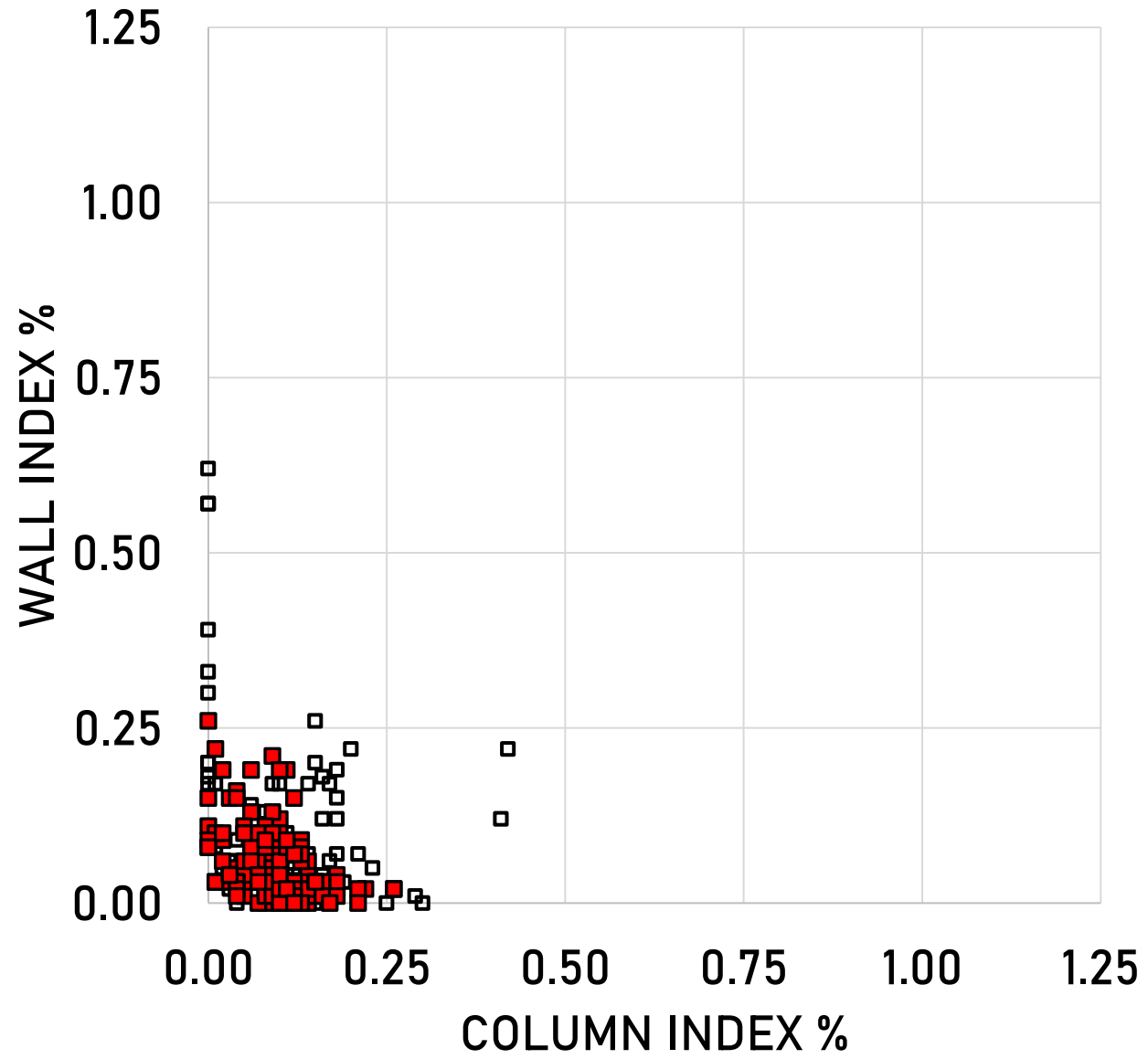
JAPAN

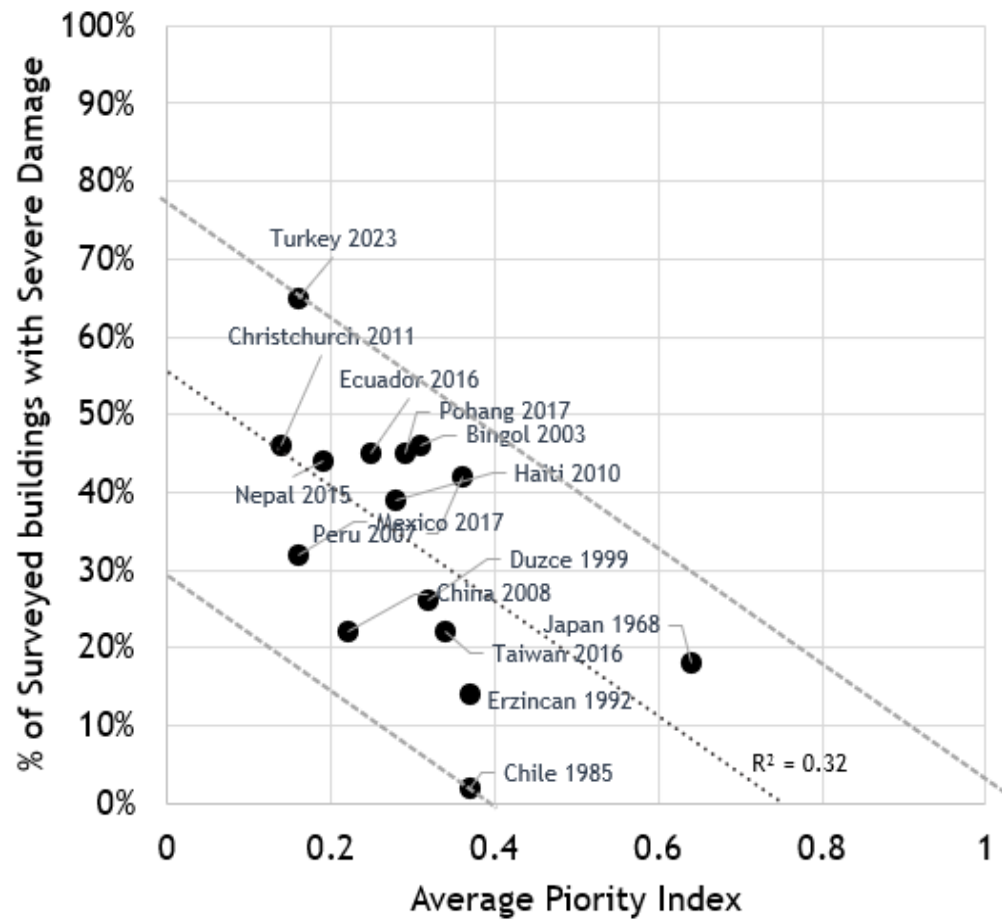


TAIWAN

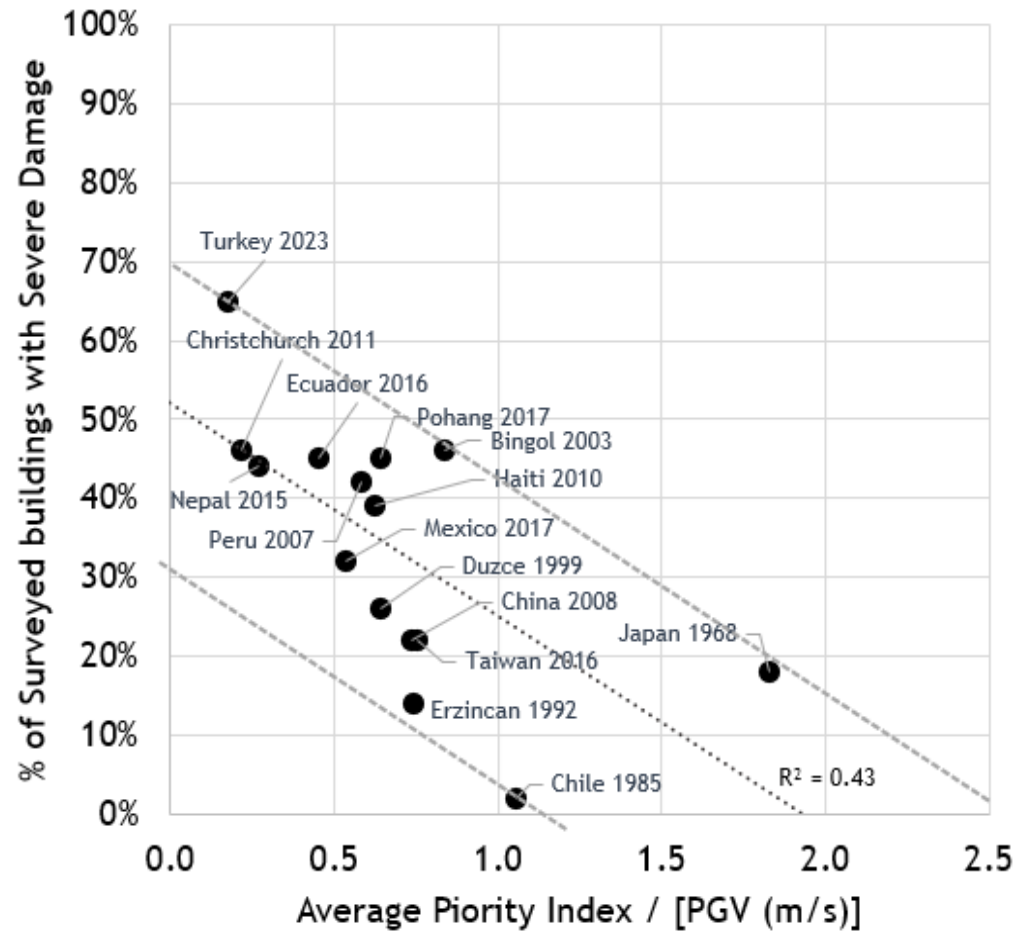
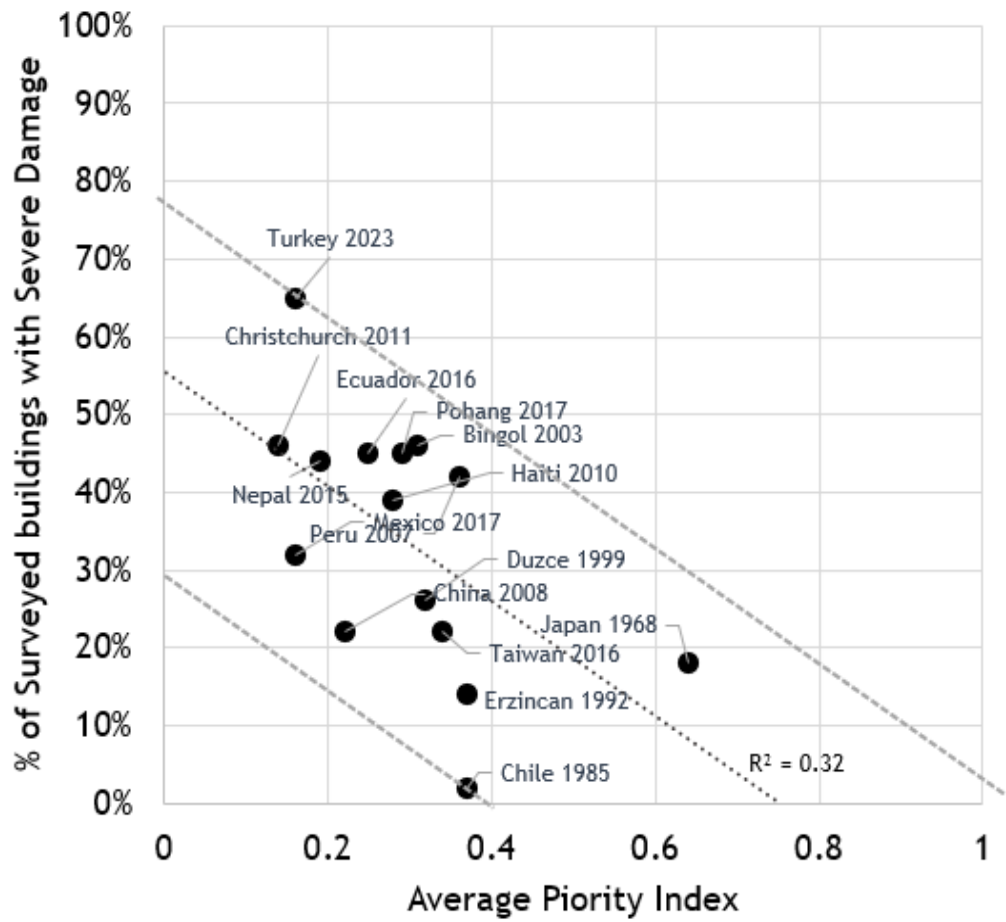


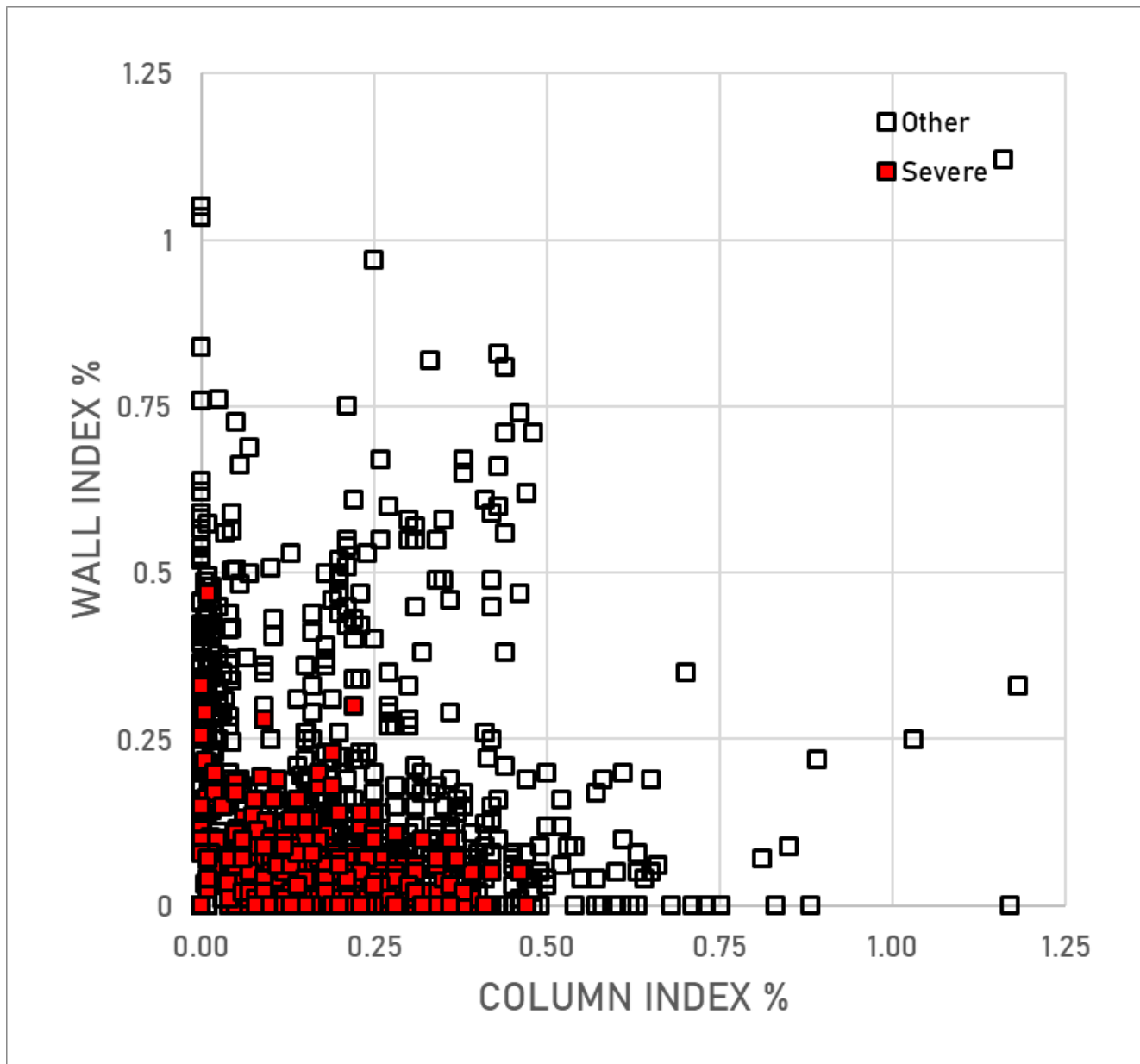
TURKEY





Pledger





Pledger



Seismic Evaluation of Older Concrete Buildings for Collapse Potential

FEMA P-2018 / December 2018



FEMA



ACI 314R-16

Guide to Simplified Design for Reinforced Concrete Buildings

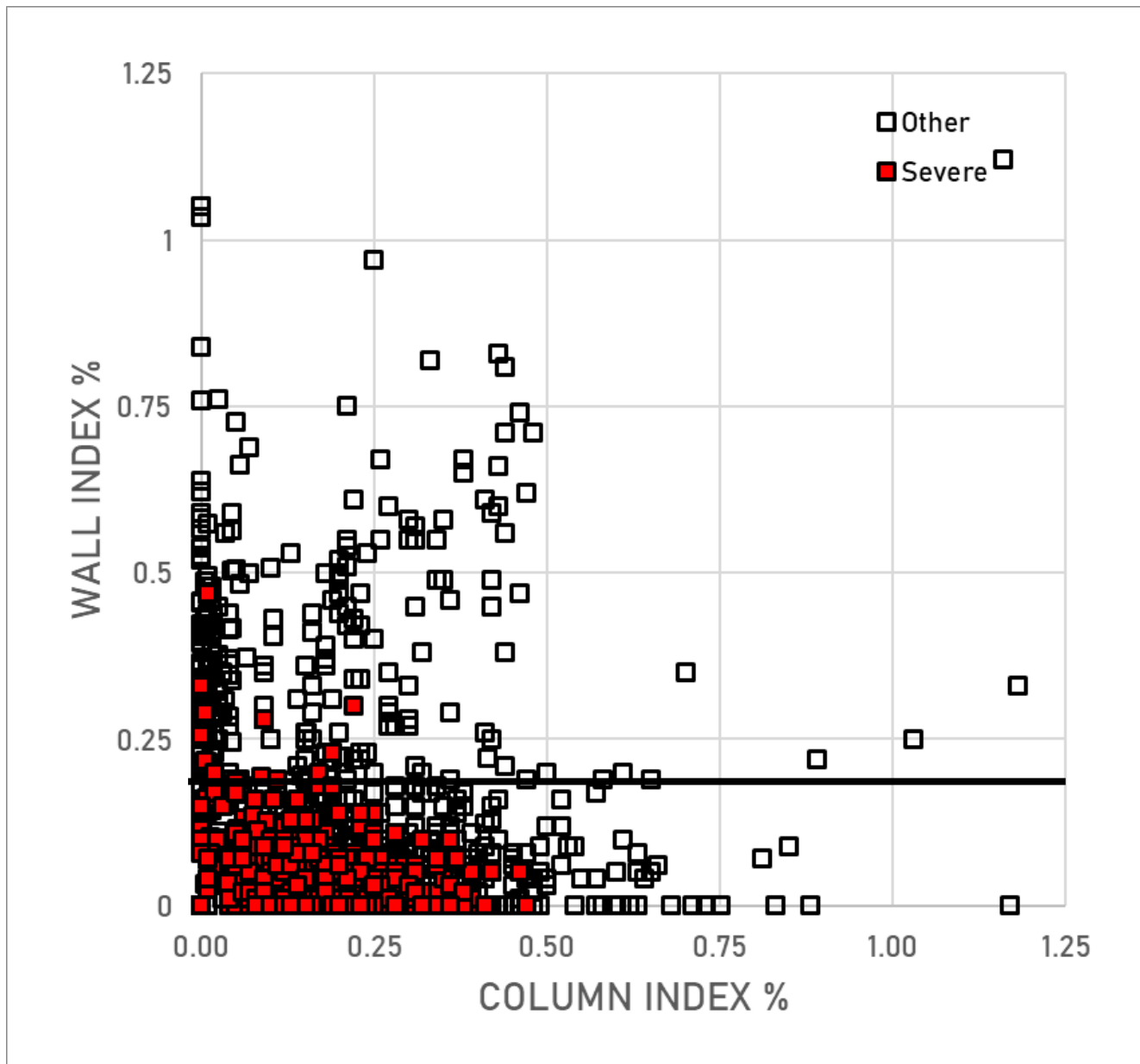
(For Buildings of Limited Size and Height,
based on ACI 318-14 and ACI IPS-1, "Essential
Requirements for Reinforced Concrete
Buildings")

Reported by ACI Committee 314

Türkiye Bina Deprem Yönetmeliği

Deprem Etkisi Altında
Binaların Tasarımı İçin Esaslar

Mayıs 2018



0.2% < WI

$$0.2\% < WI$$

$$WI \times N < 0.2\% \times 15$$

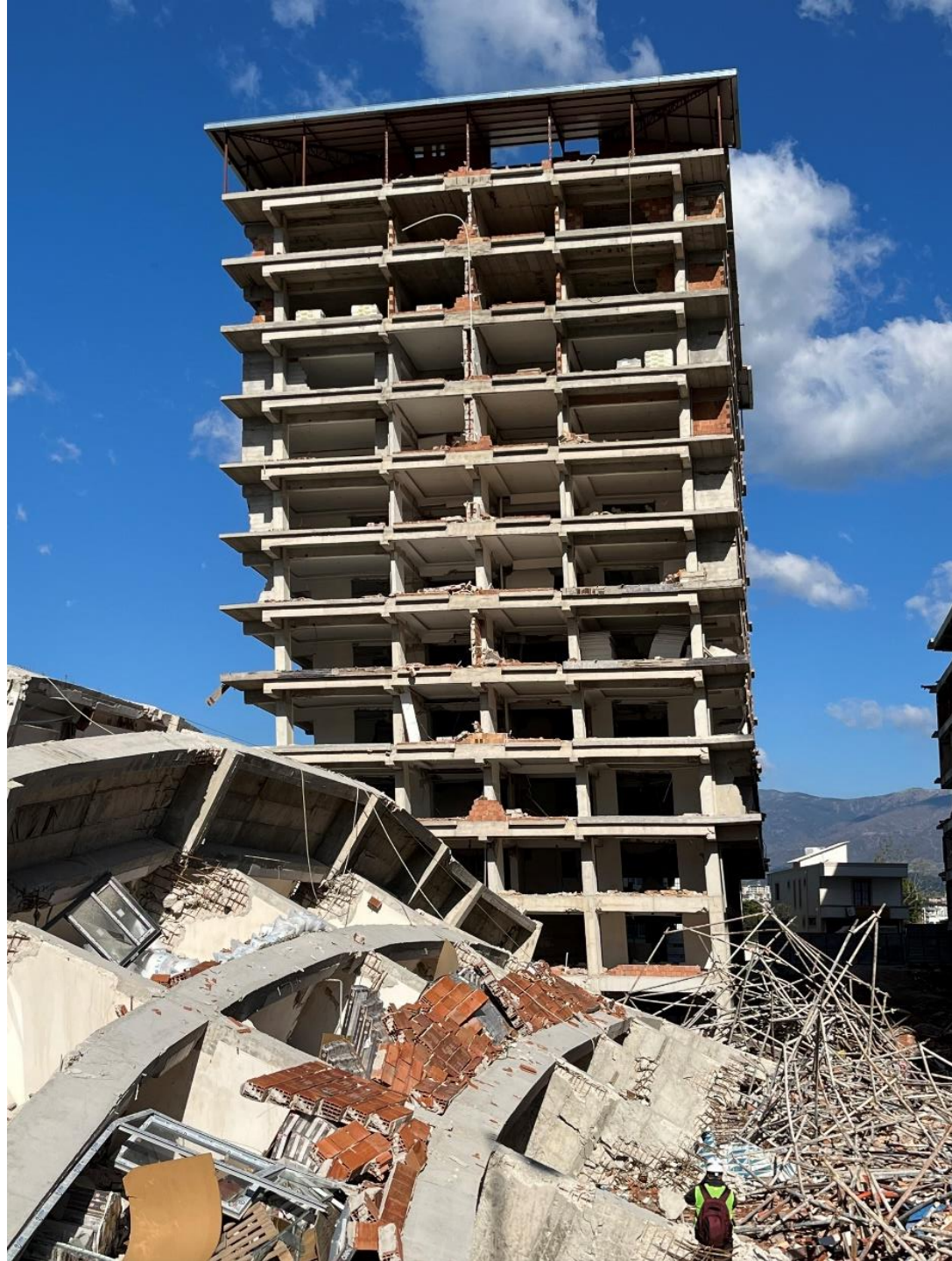
Intensity

Lack of robustness

(detailing)

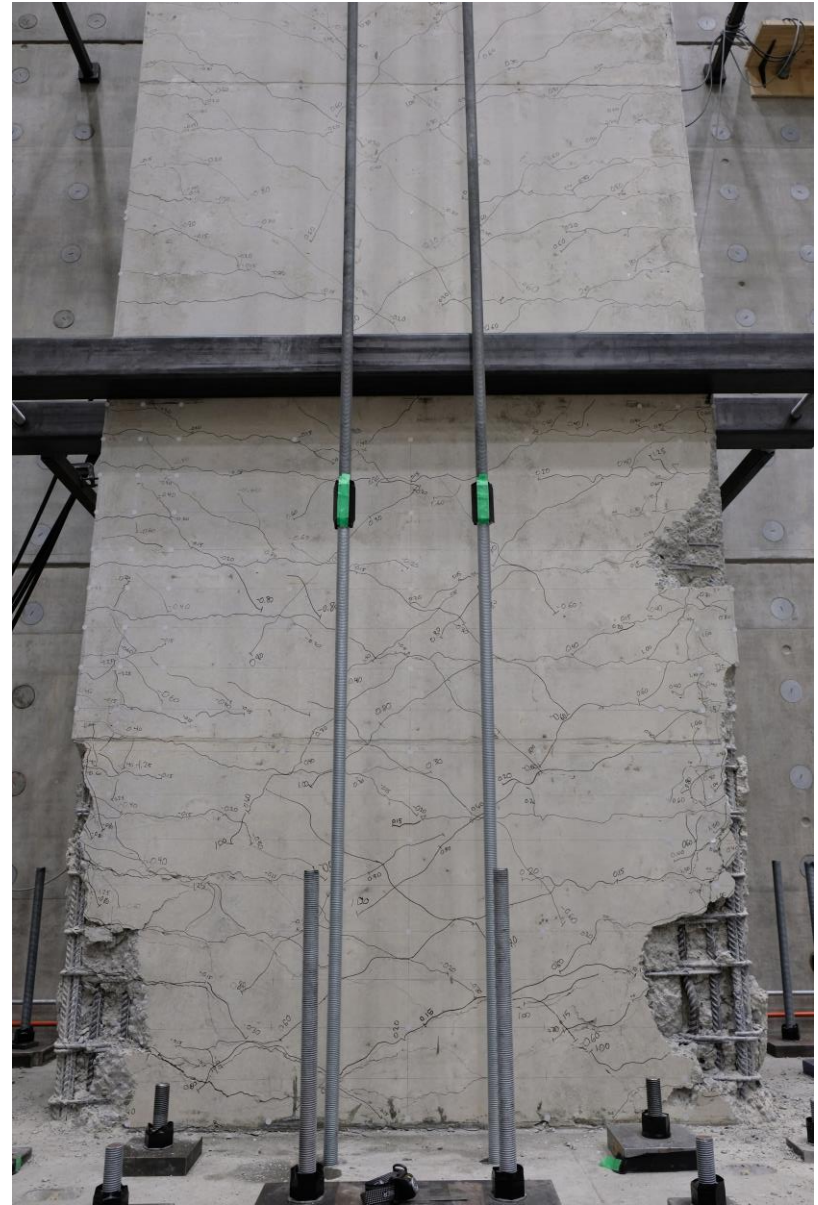
Why can't we limit period, WI, and or drift?

Do we know better?









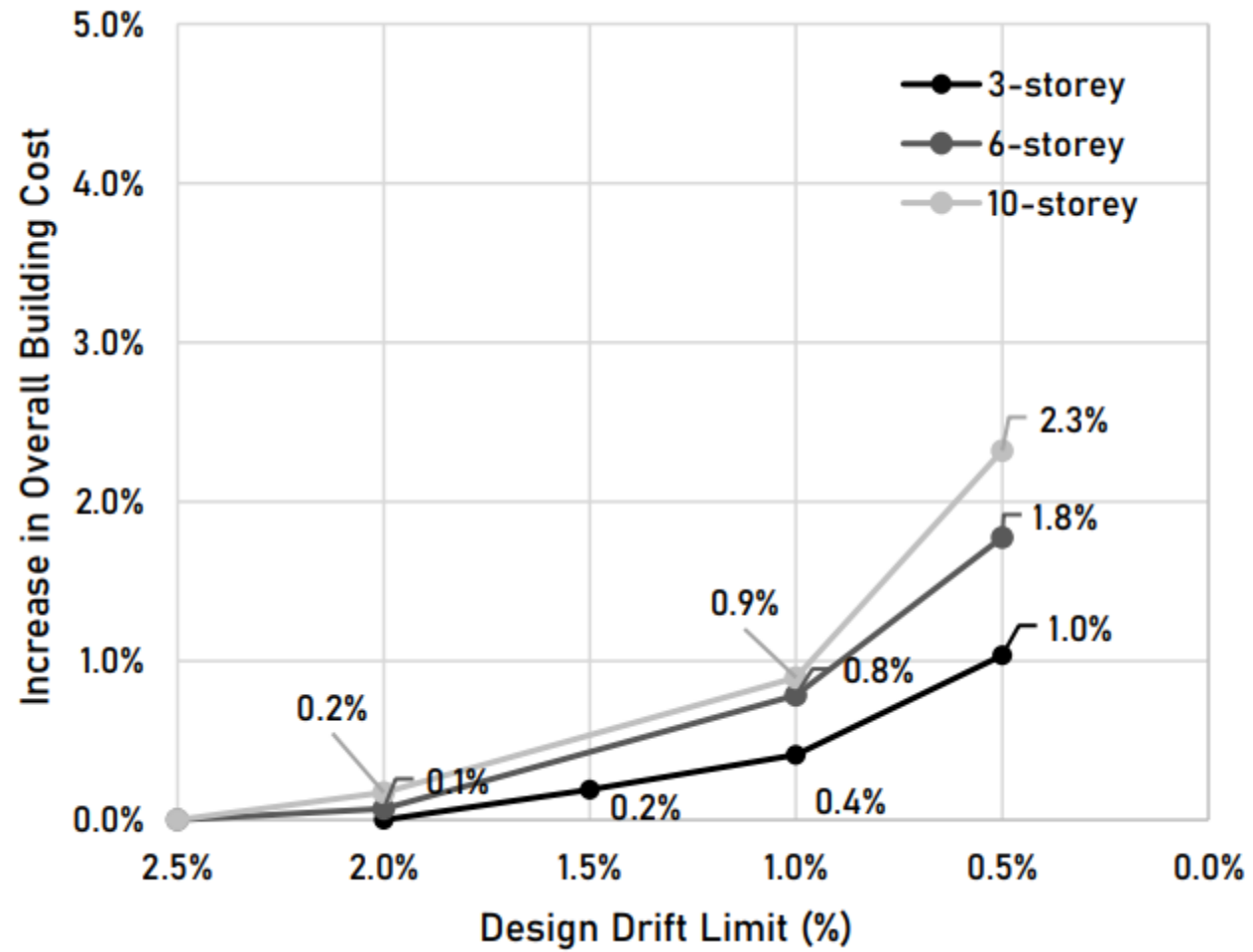
We must have freedom (windows)



03.16.2010 16:05



What about \$?



Why can't we limit period, WI, and or drift?



What about strength?

