

CHAPTER VI

CONCLUSION

6.1. Conclusion

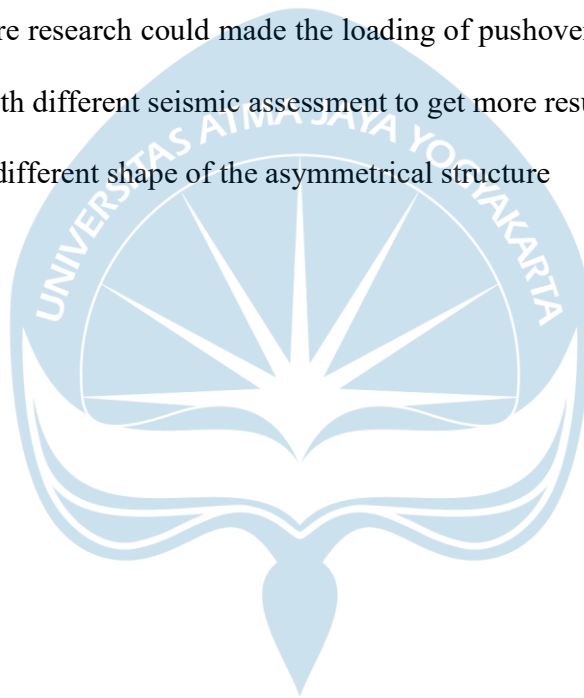
Base on the pushover analysis, the influence of interaction infill frame to the RC frame in asymmetrical structure are:

1. The structure that have infill wall interact directly to the frame have 0.002m more displacement in X direction compare the structure with infill wall without interaction.
2. The structure that have infill wall interact directly to the frame have smaller displacement in Y direction in second and third story compare to the other structure.
3. The torsional moment that acting to infill wall without interaction to the frame have 31% more torsional moment in first story, 63% more in second story but it has 36% less in the third story.
4. The axial forces that acting to the infill wall without interaction to the frame have 14% more axial forces in the first story, 10% more in the second story and 2% more in the third story
5. The beam moment of the structure that have infill wall interact to the frame have smaller moment compare to structure that have infill wall doesn't interact to the frame.

6.2. Suggestion

Suggestions can be given by the author for further research as below:

1. The column in the first story have to strengthening to avoid the soft story.
2. For future research could made the loading of pushover with any combination or try with different seismic assessment to get more result.
3. Try the different shape of the asymmetrical structure



REFERENCES

- Bakalis, A. P., & Makarios, T. K. (2018). Dynamic eccentricities and the “capable near collapse centre of stiffness” of reinforced concrete single-storey buildings in pushover analysis. *Engineering Structures*, 166(July 2017), 62–78. <https://doi.org/10.1016/j.engstruct.2018.03.056>
- Moretti, M. L. (2015). Seismic design of masonry and reinforced concrete infilled frames: A comprehensive overview. *American Journal of Engineering and Applied Sciences*, 8(4), 748–766. <https://doi.org/10.3844/ajeassp.2015.748.766>
- Murty, C. V. R., & Jain, S. K. (2000). Beneficial Influence of Masonry Infill Walls on Seismic Performance of Rc Frame Buildings. *Twelfth World Conference on Earthquake Engineering (12WCEE)*, 1–6.
- Nibhorkar, S. S., & Shinde, B. H. (2016). *Performance of Infill Walls as a Global Retrofitting Technique*. 5013(5), 712–715.
- Tabatabaei, R., & Saffari, H. (2011). Evaluation of the torsional response of multistory buildings using equivalent static eccentricity. *Journal of Structural Engineering*, 137(8), 862–868. [https://doi.org/10.1061/\(ASCE\)ST.1943-541X.0000324](https://doi.org/10.1061/(ASCE)ST.1943-541X.0000324)

Varadharajan, S., Sehgal, V. K., & Saini, B. (2012). Review of different structural irregularities in buildings. *Journal of Structural Engineering (India)*, 39(5), 538–563.

Waghmare, M., Patil, P. V. S., Civil, S., & Ghodawat, S. (2017). *EFFECT OF PRESENCE OF INFILLS IN GROUND STOREY ON SEISMIC PERFORMANCE OF R. C. BUILDINGS*. 1175–1178.

