CHAPTER V
CONCLUSION AND RECOMMENDATION

5.1 Conclusion

This research analyzes the correlation between the construction of the new railway stations on the land price change around the station by the influence of a mediator, the facility density. The facility density is affected by the new stations to some extent and, at the same time, can affect the land price change along with the stations' influence. The interaction between these three variables is calculated with the Casual Mediator Analysis with three Equations.

The first result shows a significant correlation between station construction and land price change. By positively affecting the land price change by 0.30 points, constructing one new railway station/shelter will increase the land price within 1km from the station in West Japan by 0.30 points. The second result shows the correlation between the new railway stations and facility density. In this case, a significant relationship was found, where constructing one new railway station/shelter will affect the facility density by 0.05 points. Furthermore, when putting all variables in one regression, a significant correlation between variables found and new stations and facility density positively affect the land price change by 0.25 and 1.05 points, respectively. This result shows the original action, railway projects, positively and significantly impact the area within 1 km around the stations. However, the R-Squared for these three calculations is lower than 15%, emphasizing that some new variables might be needed in the analysis to enrich the result of the research.

The last step using the Causal Mediator Analysis, shows the direct and indirect impacts of the stations' existence on the land price change. The direct effect of the new stations on the land price is 0.25 points, while the indirect impact through the mediator is 0.05. The accumulation of the effects makes the total point 0.30, with the proportion of the mediator in the regression being 17%. This mediator analysis also shows some positive correlation, indicating the same conclusion as the three previous Equations, where the railway's projects bring the increasing price of the land within 1km around the station and positively increase the facility density.

5.2 Future Direction

Three future directions might be possible to continue with this research.

1. To employ more independent variables or mediators.

   As we see in the discussion, the R-squared that explains all the Equations is considered low. It means some variables excluded from this calculation still exist and can be employed in the same analysis in the future. Adding more significant independent variables that affect the land price change might strengthen the result to see how land prices fluctuate after new railway stations are constructed. Furthermore, adding more mediators, such as building attributes and businesses categorized around the stations, would deepen the analysis.

2. Categorized the railway stations

   As this research accumulated all the railway types in West Japan, including local trains, shinkansen, tram, and subway, it will be challenging to see the correlation between each railway mode's construction and the land price. Doing it separately, however, has been conducted by some researchers in the past, but analyzing the impacts of all modes on the land price in one research will be helpful.

3. Examining the land changes price over time by temporal analysis.

   The analysis of temporal changes in land price over time might be conducted to see the impact of certain stations that opened in a particular year. The time series data are employed in this temporal analysis to see data units that change during some periods. This trend can help to analyze the changes in a specific year and station area as time progresses.