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**EMBRACING OUR SMART WORLD WHERE THE CONTINENTS CONNECT:
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Paper ID 9483

Integration of Market Price Comparison Approach and Income Approach in Urban Land Assessment

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Introduction

- There are four problems of the Nation : (1) energy, (2) Air), (3) Food and (4) Land.
- Land is a commodity or goods economy very strong influence on the life of the nation, but until now the land issue has a level of complexity of the problem is very high.
- The uniqueness of the nature of this land led to an increasing trend in land prices over time. The tendency of rising land prices are very high, even the highest when compared with the increase of property, inflation, and the BI rate.

Introduction

- In Indonesia, there are three commonly used valuation approaches: market data comparison approach, cost approach, and income capitalized approach.
- In this study aims to integrate the approach of comparison of market data with income capitalization approach so as to derive land value model using geostatistical analysis.

Introduction

- A comparison approach to market data is the most commonly used approach to assessing land. In this case the market price comparison approach is the easiest approach to apply when comparable sales data are reasonably available. But the problem is very difficult to obtain comparable sales data, so the need for a solution in the assessment of land through integration with the approach of capitalization of income.
- Appraisal Institute advises appraisers to use the income capitalization approach to complement and simultaneously control the results of the land price appraisal of the market price comparison approach and Von Thunen. The advantage of the income capitalization approach is to explain the effect of macroeconomic factors and future income expectations on the current market price of land, especially urban land.



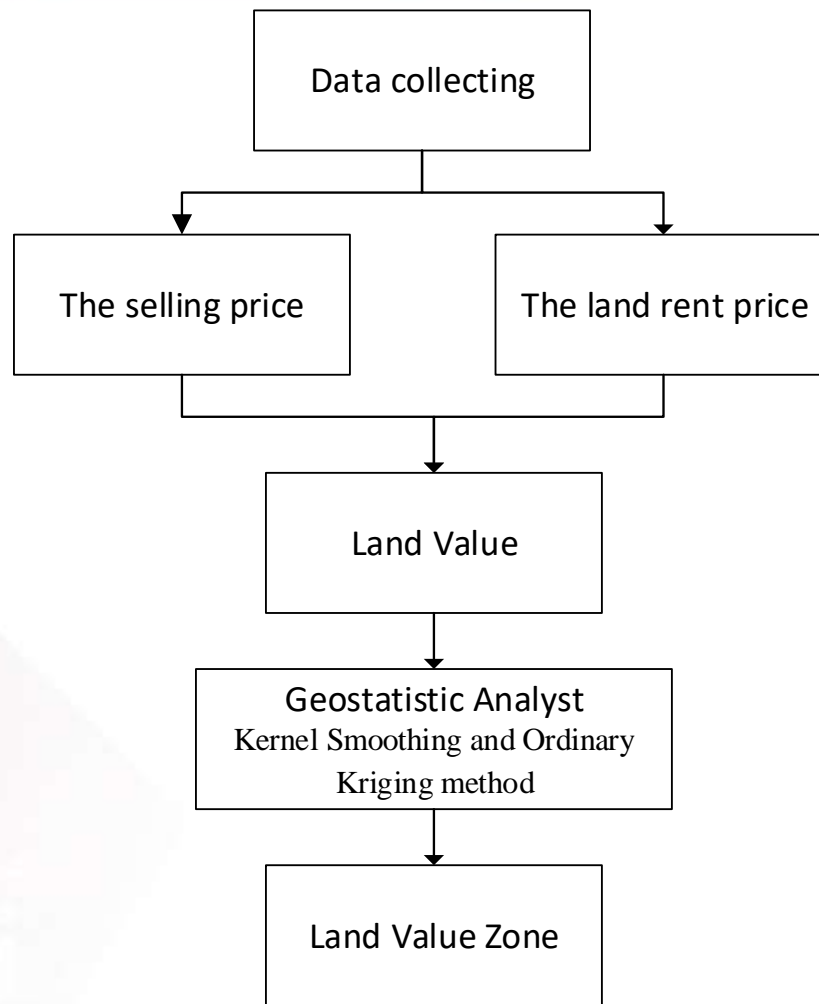
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Methods



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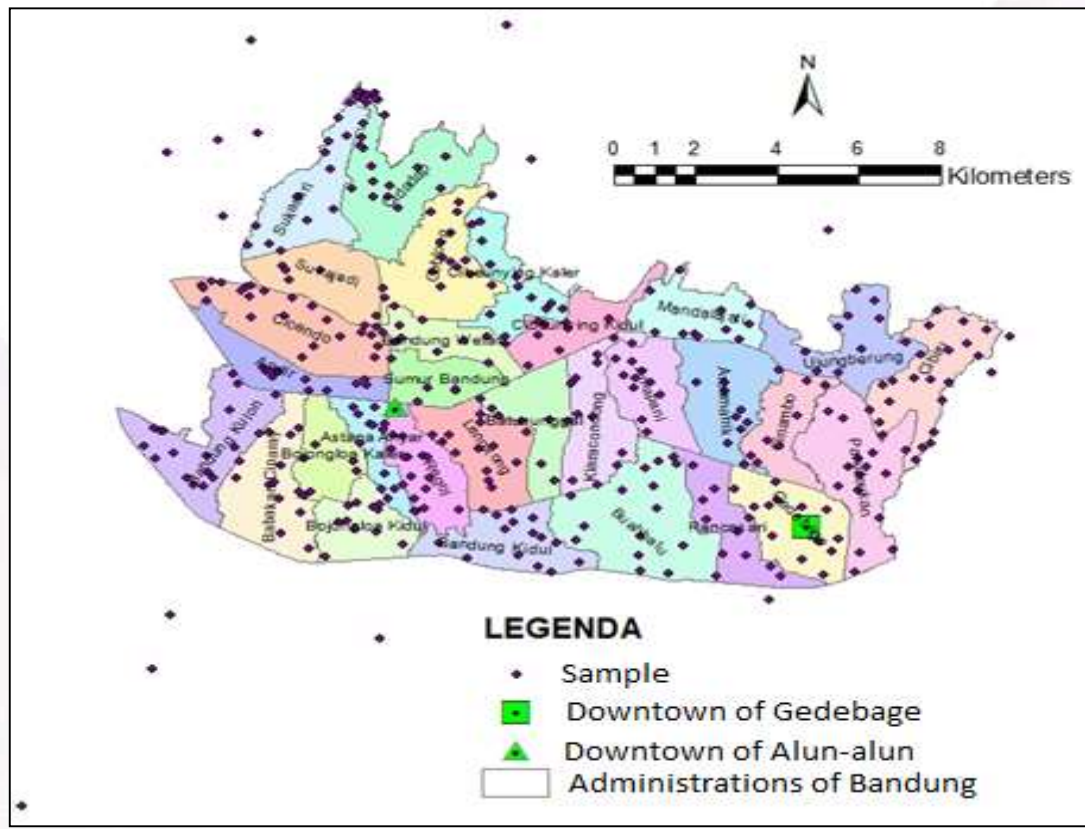




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Results



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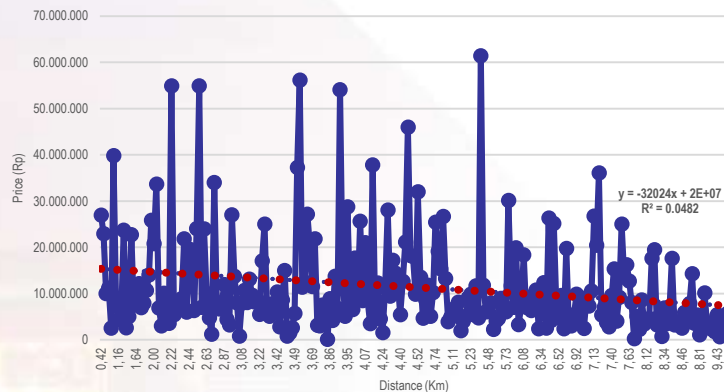
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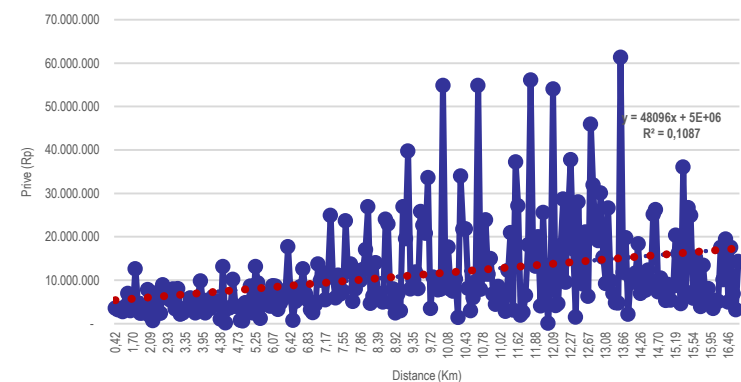
Results

- The closer to downtown of Alun-alun, land prices tend to increase.
- Conversely, the closer to downtown of Gedebage, land prices tend to decline.
- The town center of Alun-alun and Gedebage has a different appeal to the price of the land.

Relationship of Land Price with Land Distance to Downtown of Alun-Alun



Relation of Land Price with Land Distance to Downtown of Gedebage



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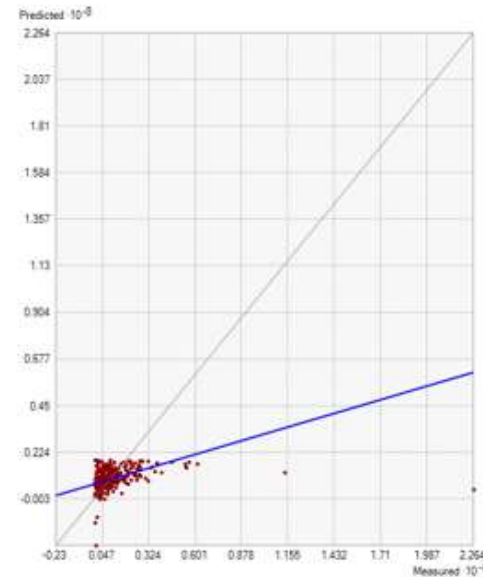
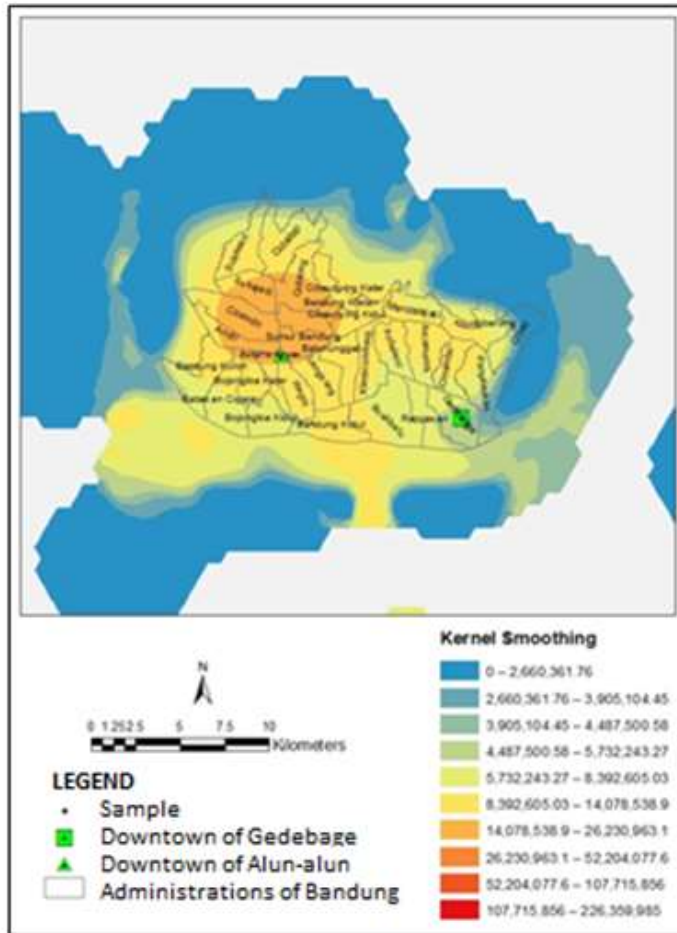
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Results



Regression function $0.24018105759878 * x + 6844347.36039094$

Prediction Errors

Samples 400 of 407

Mean -837905.6332497614

Root-Mean-Square 14710878.264223486

Mean Standardized -0.05367389511566478

Root-Mean-Square Standardized 0.9819627352583705

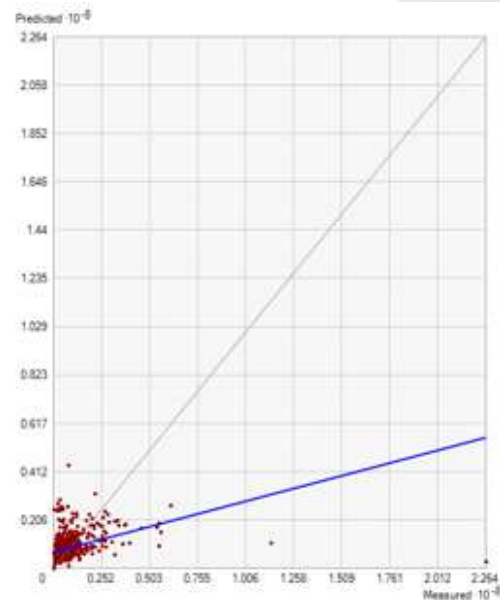
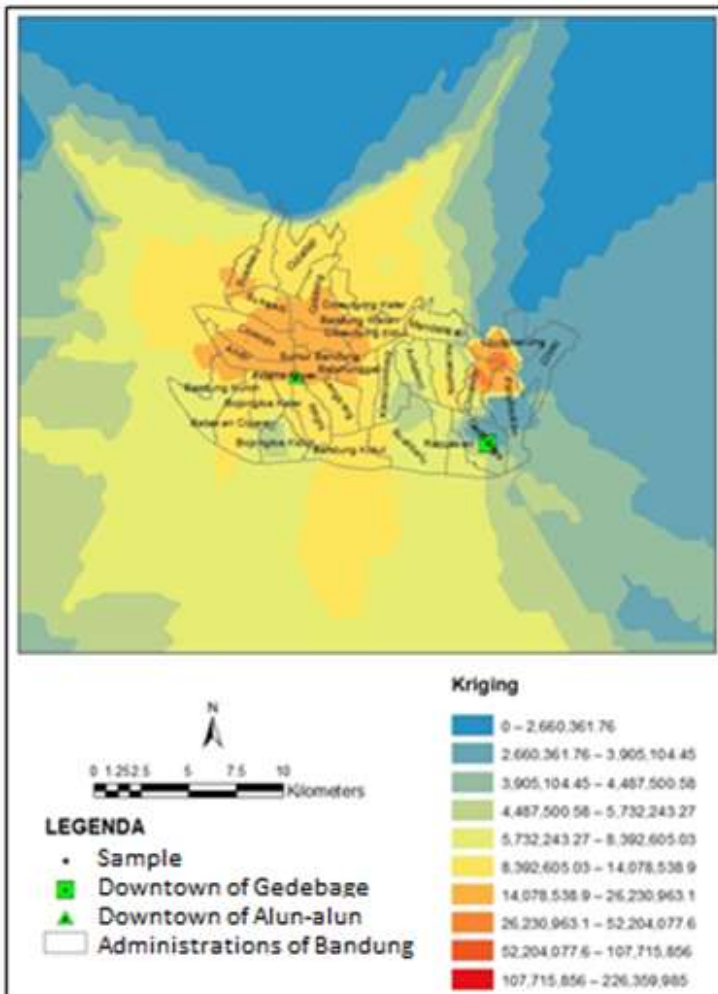
Average Standard Error 15245178.616776954

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Results



Regression function $0.215445422549656 * x + 6901542.38256091$

Prediction Errors

Samples 407 of 407

Mean 145254.13637934398

Root-Mean-Square 15266139.965626366

Mean Standardized 0.008139154126543473

Root-Mean-Square Standardized

0.876023740778149

Average Standard Error

17369701.637605727

Conclusion

- Based on the results of the analysis that has been done can be concluded that the geostatistical approach with Kriel Kickel Smoothing and Ordinary Kriging methods can be used to model urban land prices.
- This can be reinforced by a near-standard Root-Mean-Square Standardized 1.
- The income capitalization approach can be integrated to complement and control the results of the land price appraisal of the market price comparison approach and Von Thunen.
- The advantage of the income capitalization approach is to explain the effect of macroeconomic factors and future earnings expectations on the current market price of land, especially urban land.