ISSN: 2008-5079 / EISSN: 2538-2365
DOI: 10.22034/AAUD.2024.412277.2809

Research Paper

Effectiveness of the Theories of Controlling Urban Land and Housing Rent Revisited: A Meta-Analysis and Systematic Review Study*

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Received 18 August 2023; Revised 06 May 2024; Accepted 23 May 2024; Available Online 21 September 2024

ABSTRACT

Higher urbanization rate, the non-economic exploitation of land, and the unusual growth of urban spaces have significantly contributed to the accelerating pace of land and housing rent, with unsystematic controls making land and urban housing rent difficult, if not impossible. The present study aimed to revisit the concept of "Effectiveness of Theories of Controlling Land and Urban Housing Rent" using me-ta-analysis and systematic review methods. In this connection, articles in scientific databases were searched to investigate the theories of "Land and Housing Rent" us-ing meta-analysis and systematic review methods based on the four-stage model of PRISMA in nine conceptual dimensions. Initially, 300 articles from 2000 to 2022 were identified. Out of this, 149 final articles were selected to be included in the me-ta-analysis by data description in the CMA software, after being incorporated into a specialized protocol. Findings revealed that the combined average effect sizes (ES) of the fixed-effect model and the random-effect model were 0.243 and 0.233, re-spectively, both being statistically significant. The significance of two Cochran (Q-Test) and Squared (I2) indexes with a high heterogeneity showed the effectiveness of the nine variable-based interventions on reducing land and housing rent. According-ly, the selection of the random model as a meta-analysis model was confirmed. Test results, including high heterogeneity rates, high data accuracy, larger "Classic Fail-Safe N index" statistic, as well as the significant contribution of the nine variables to the interventions aimed at affecting land and housing rent were confirmed to be suf-ficiently valid and reliable and were regarded as comprehensive strategies. Finally, it was found that publication bias did not influence the results.

Keywords: Land and Housing Rent Theories, Land and Estate Speculation, Unusual Development of Urban Spaces, Meta-Analysis, Systematic Review.

* This article is derived from the Ph.D Dissertation of the first author entitled "Analyzing the Effectiveness of Smart Urban Growth in Controlling and Eliminating Land and Housing Rent (Case study: Karaj City)", which was supervised by the second author and the advice of the third author (2024).

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1. INTRODUCTION

Over the past decades, the unusual urban expansion from central parts of the city to outside areas has disrupted the continuous urban spatial structure. According to concentrated space management techniques, ordinary people were excluded from engaging in urban development, which made them indifferent to city problems. Under such circumstances, urban space-related rent and corruption are more likely to ensue. Moreover, individual and organizational ineffectiveness may be the causes of resource wastage and rent-seeking in economic, administrative, and managerial activities (Michael Farrel 1957). On the one hand, weak laws (ineffective useful, and harmful laws) are seen as one of the reasons for rent-seeking (Jakob 2005). On the other hand, the rent for free access to natural resources such as land, rivers, pastures, and mines, etc. could cause the ineffective allocation and utilization of resources (Harvey 2008). As explained by primary economic analyses of urban space, the spatial form of space is defined as an output and an outcome of competing demand for space (Alonso 1964). Now, demand for space may arise in increased speculation of land price and the amount of capital and estate exchanged in the trading process (Olivier 2000), which may define speculative growth as the reason for a rent economy (Iqbal and Vince 2013).

From this perspective, the rotational (rent) economy of land and housing rises against the productive land and housing economy (Gunning 2014). Following initial rent theories based on Ricardo's "proprietary right" (Ricardo 1817), the primary research in recent years on rent controls goes back to Hernando's study (Hernando 2000), which was founded on the difference between the less and the more productive land as underlying land rent. Accordingly, official executive measures were taken to alleviate the unofficial rent-seeking processes. One systematic survey on the impacts of rent on unusual urban growth back in 2007 was performed by Hutchison (2007), who described three conceptual dimensions: unstable performance system, urban instability, and spatial instability as the negative consequences of a rent economy. According to Harvey's studies (Harvey 2013), the theory of "Urbanization of Capital Based on Urban Land Rent" is an alarm to forming a rent-based economy. Hence, to prevent the expansion of a land rent economy systematically, Haila (2015) studied the evolving four land systems in the contemporary era, including the land local system, land feudal system, land capitalist system, and land financialization system. In this connection, Howard and Carl (2021) focused on the economic rent from the growing urban space, describing the focus on the land far from the city center and the difference in land prime grade as causing economic rent. Also, Nora et al. (Müller, Murray, and Blázquez 2021) described the absence of productive economic activities as the main factor behind the expansion of land and housing rent. Also, Yao and Tian (2020) investigated the relationship between industrial development and land and housing rent to consider industrial growth and development as the factors behind decreasing rent. For Murillo et al. (2021), financial corruption and rent can deprive needy people of two dimensions of infrastructure investment and prevent public fair access to services. Therefore, it is critical to develop a mechanism to measure rent-seeking as this would help analyze and prevent it. Thus, a Dynamic Stochastic General Equilibrium model was presented by Angelopoulos et al. (2022) to measure rent size to realize the principle of transparency in rent-seeking and government concessions. Laura's study (Luara, Dieter, and Gilbert 2022) suggests that land is mainly seized by stakeholder groups with impunity which causes land and housing rent.

Thus, according to the literature review, despite the relativity effective policies to contain land and housing trading, the controlling factors behind land and estate rent and speculation appear to be failing, exacerbating the unusual development of urban spaces and the resulting rent-based economies. In sum, it is essential to develop a new concept, i.e., "Effective control of urban land and housing rent" in nine dimensions to provide and explain a systematic strategy. For this, the relationship between the specialized theories of land and housing rent needs to be investigated in two convergent and divergent groups with nine dimensions. This will provide a framework that answers the question: "How would urban land and housing rent be controlled effectively?"

2. THEORETICAL FOUNDATIONS

Theories underlying the subject under study may include the following: Stigler et al.'s Theory of Capture (1971), on city legislators' measures for receiving rent and more concessions; Von Thünen's Economic Model (Von Thünen 1826) as the first economic model of urban and suburban spatial organization, which provides a theoretical framework to explain the urbanization of land and housing rent; the Rent-Seeking Welfare Costs Theory based on Lucas' Compensation Change Model (Lucas 1990), which believes that wielding influence in government policies could impose a heavy burden on society; and Krueger's theory (1974) on political rent-seeking and economic ineffectiveness, arising from misusing government concessions, involving four conceptual dimensions (lobbying for ignoring regulations, exchanging bribery, organizing and supporting mutually beneficial groups, and incurring cumbersome costs on society).

In recent years, initial research on controlling rent focused on three dimensions defined by Arthur and Casey (1992) which were preserving agricultural

land, preventing environmental destruction, and reducing service costs to realize urban space-proportionate development. Later, as described by Gordon Tullock's Theory of Public Choice (2002), rent and bribery are formed by governments or public institutions by resorting to legal instruments and lobbying for political agenda, which may result in failing administrative, organizational, and economic affairs due to lack of regulatory measures.

Harvey considered the concept of rent or relative possession of information as the reason for the relative improvement of the business situation. For (Harvey 2008), data-based markets will thrive when they have access to more complete information, as in an asymmetrical rent-based world, economic productivity will be overshadowed by corruption. This has led some scholars to adopt solutions to alleviate land and housing rent. These scholarly theories have included the "multiplicity" perspective by Robert Dahl (1956), which has been a primary solution to counter rent-seeking and attends to public participation in decision-making and monitoring of urban and society management. Also, Alen's Mechanism of Space Supply and Demand and Urban Land Market Regulation (Alen 2004) is seen as one of the primary systematic mechanisms of spatial development, which is founded on three assumptions; 1) bringing more land to the urban limits; 2) changing land use, and 3) increasing investment in transacting land or space construction. Also, the study by Domhoff (2005) examines the burgeoning growth of local authority structures around land-based collective interest. As described by Cho et al. (Cho, Poudyal, and Lambert 2008; Lall et al. 2007), one of the non-rent urban land and space development policies was taken to measure the effectiveness of delimiting urban space. To prevent rent, Peters (2013) presented the Theory of Intervention and Incremental Changes (acupuncture) about urban corruption. Also, Aled and Kendra (2017) applied the regulatory corruption framework to reconsider the thinking behind the "rule of law" and to focus on the "role of law" by moving away from government authority. In this connection, the World Bank (2018) stated that launching a sharable database technological system in poor urban governance could be the best option to fight corruption. Junying et al. (Liu, Yuqing Wang, and Zhixiu Wang 2022) demonstrated that several multi-dimensional stimuli would violate construction laws, as the five factors of poor cultural environment, poor internal regulation, previous experience, failure to participate in affairs, and asymmetric information would have the highest impacts on the violation of construction laws. The results also indicated the strong impacts of growing pressure on the violation of laws.

The review of land and housing rent theories under converging and diverging situations, as well as the study of nine research concepts using the meta-analysis process, would help define and investigate the effectiveness of controlling rent in land and housing areas. Figure 1 below shows the periods of theories on land and housing rent.

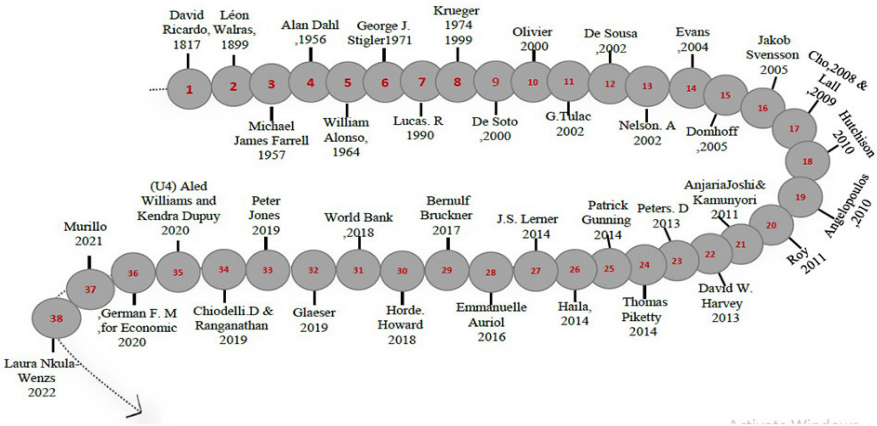

Fig. 1. Periods of Theories on Land and Housing Rent

3. RESEARCH METHOD

According to its subject and nature, the present study applied the Comprehensive Meta-Analysis Version:3 (Michael Borenstein et al. 2014) for data analysis. To achieve results, the literature on the concepts of the effectiveness of the theories of controlling urban land and housing rent was reviewed based on checklist guidelines and the four-stage fuzzy flow diagram of systematic analysis and the PRISMA meta-analysis (Page et al. 2021; An 2021). In the first stage, the inclusion criteria of initial data were determined based on expert views:

(1) The articles that used scientific methodologies to investigate the relationship between urban housing and land rent, and at least one of the components influencing the research must be available;

(2) The articles related to the present study goals must have reported the necessary data to calculate the

effect size;
(3) Full-text research articles must be available at computer information banks;
(4) Foreign articles must have been published from 2000 to 2022, and
(5) One of the keywords of the research must be available in the title or the keywords under study.
Meanwhile, the criteria to exclude the data from the survey were as follows:
(1) The articles that have not reported the information of at least one of the variables to calculate the effect size;
(2) The articles that meet serious methodological weaknesses, and
(3) Identical articles published in several journals under different titles and languages;
To access the articles required, four comprehensive databases, including Google Scholar, SID, Web of Sciences, and Science Direct, were used as the main sources of the foreign literature review. In the scientific databases mentioned, the keywords "("theories of land rent and housing" or "Land & Housing Trading" or "Urban Space Development" or "Corruption Laws & Contracts" or "Transparency" or "Stable and Unstable Incomes" or "Participation of people in Decision-Making") and (Growing ICT Through Apps)" were searched. In total, the inclusion criteria led to the discovery of 300 systematic articles mainly in English (from 2000 to 2022). In the screening stage, after the articles were placed in the specialized protocol (by applying the inclusion and exclusion criteria), 24 articles, were examined by subject and abstract, and 46 full-text articles, were removed from the list of sources due to the inconsistency of content. In the final stage of the process, 149 articles in the area of "Effectiveness of controlling urban land and housing rent" were explored using the meta-analysis method. A review of the initial results of the meta-analysis software and the outputs of the funnel plot in the random effect model (Funnel Plot Standard Error by Fisher's Z) led to the discovery of publication bias and asymmetry of the funnel plot, and the meta-regression of the articles. In the meta-analysis process, after Duval and Tweedie's trim and fill technique and hypothetical analysis were implemented, the effect size was recalculated. By selecting the appropriate adjustments, the search direction was reversed, with the funnel plot becoming symmetrical, in line with the meta-analysis specialized protocol. The new P.E. size and the Q-value in Cochran's Test also reaffirmed this (Fig. 3-5). Two more measures were also taken during the exploration stage.
A) Explaining and grouping the articles based on the concepts of convergence and divergence and the size effect of Cohen's Criteria (1988); hence, the mentioned conceptual dimensions were regarded as the factors contributing to the convergence and divergence of the article results (Table 1).
B) By formulating the checklist of the convergence and divergence of "rent" theories, the relational code of each of the theories with the research variable was formed based on Figure 2 (Wh-Question). Thus, the articles involving the nine dimensions of urban land and housing rent were classified and then coded and analyzed. Also, the data of each study, previously adjusted in the Excel format, was entered into the CMA spreadsheet using the Ctrl-V. Finally, the following was used to classify the content of each article: 1) Would the control and elimination of land and housing rent be examined in detail? and 2) Would that correspond to the nine conceptual dimensions of the present study? Figure 2 below shows the articles under study based on the PRISMA model.

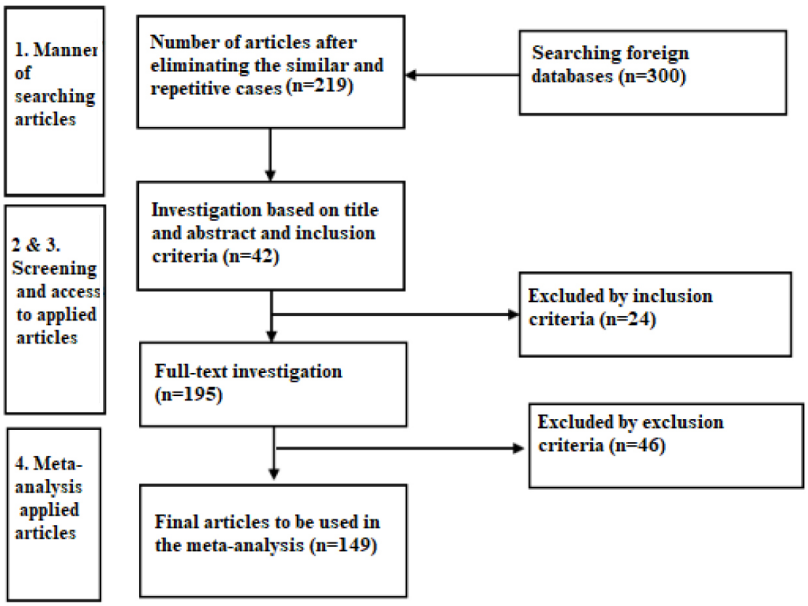

Fig. 2. Process of Selecting the Articles

The PRISMA Model
(Page et al. 2021)

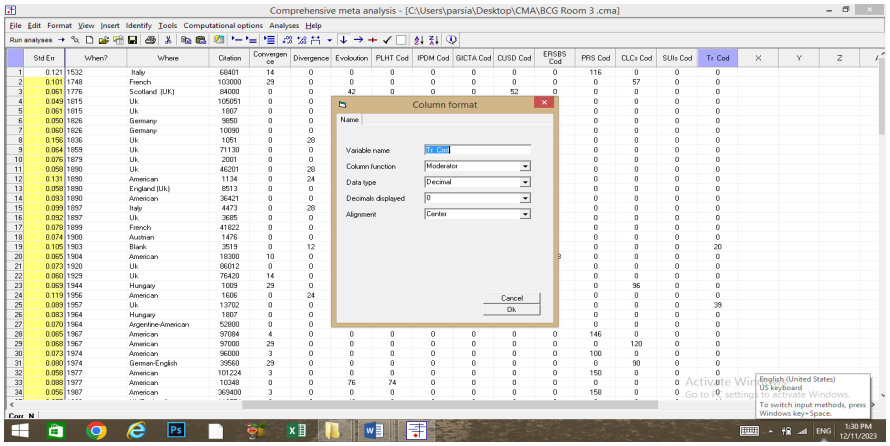

Fig. 3. Wh-Question Coding Process; Nine Conceptual Dimensions of the Articles and their Inclusion in the Meta-Analysis

4. DISCUSSING THE FINDINGS

In this connection, the relationship between the specialized theories of land and housing rent was investigated in the dual groups of convergence and divergence with nine-dimension research concepts (preventing land and housing trading, promoting informed people participation in decision-making and monitoring, growing ICT services, conventional development of urban spaces, effects of ren-seeking on the behavior of society, political rent-seeking, corruption laws and contracts, stable and unusable income, and transparency).

Model		Effect size and 95% interval			Test of null (2-Tail)		Heterogeneity				Tau-squared			
Model	Number Studies	Point estimate	Lower limit	Upper limit	Z-value	P-value	Q-value	df (Q)	P-value	I-squared	Tau Squared	Standard Error	Variance	Tau
Fixed	149	0.243	0.232	0.253	44.284	0.000	75381.439	148	0.000	99.804	2.369	0.297	0.088	1.539
Random	149	0.233	-0.010	0.450	1.880	0.060								

Fig. 4. Heterogeneity Analysis and Cochran's Test

According to Table 2, the effect sizes of the fixed and random models are 0.243 and 0.233, respectively, indicating that both models enjoy significant statistical angles. The Q index value of 149 effect sizes with a freedom degree of 148 is equal to 75381.439, being statistically significant. According to the heterogeneity analysis, concerning the fixed model with a p-value of 0.000 and a significance level of 0.05, the H0 hypothesis stating that the effect size of the articles is similar is rejected. Hence, to analyze the study, the random model with a p-value of 0.060 was used. Also, the I-squared result is 99.804, which is close to 100, suggesting the greater heterogeneity of the effect sizes of the initial articles. For this, 99.80% of the scattering in the initial article results is real and comes from the presence of the variables (Higgins, Thompson, Dicks, and Altman's Criterion 2003). According to both indexes of heterogeneity, the nine variables were found to reduce land and housing rent significantly.

Nfs	Egger's regression interceept	Begg and Mezumdar rank correlation
8357	p-value2 = 0.78352	p-value2 = 0.88127

Fig. 5. Meta-Analysis Tests

According to Table 3, the review of the Begg and Mazumdar Rank Correlation Test showed a p-value2 of 0.88127, being greater than 0.05. Thus, the H0 hypothesis is confirmed. This means that the scattering of the effect sizes of the individual articles is symmetrical, suggesting that the study's plot does not face bias.

Also, the review of the Egger's Test showed a p=value2 of 0.78352, being greater than 0.05. Thus, the H0 hypothesis is confirmed. This means that the scattering of the effect sizes of the individual articles is symmetrical, suggesting that the study's plot

does not face bias and the meta-analysis results are sufficiently valid.

The analysis of the Classic Fail-Safe N index showed that after 8357 non-significant studies entered the analysis process, the calculated effect size will be non-significant, with errors occurring in the final calculation result analyses. This indicates higher accuracy of the data and reliability of the results, as no publication bias threatens the results.

4.1. Making the Articles' Effect Sizes Symmetrical

The review of the initial metal-analysis software results, on the right side of the funnel plot of the random effect model, showed that 23 articles were regarded as missing by the meta-analysis, making the funnel plot asymmetrical (Fig. 6). Hence, the searching adjustments must be reversed.

Duval and Tweedie's trim and fill

		Fixed Effects			Random Effects			Q Value
	Studies Trimmed	Point Estimate	Lower Limit	Upper Limit	Point Estimate	Lower Limit	Upper Limit	
Observed values		0.24257	0.23223	0.25285	0.23291	-0.01015	0.44999	75381.4393
Adjusted values	23	0.58148	0.57473	0.58815	0.55213	0.34348	0.70884	115317.443

Look for missing studies where?

- ○ Not specified
- ○ To left of mean
- ◉ To right of mean

Look for missing studies using which model?

- ○ Not specified
- ○ Fixed effect model
- ◉ Random effects model

Fig. 6. Missing Articles on the Right Side of Dual and Tweedie's Trim and Fill Table to recalculate the Effect Size

4.2. Stages of Making [Effect Sizes] Symmetrical (Fig.s 6 & 7)

If there are a higher number of smaller articles on one side of the plot than on the other side, this ambiguity will arise in the CMA that blank spaces may appear by as many as the same 23 articles on the other side of the plot, which causes asymmetry. Implementing Dual and Tweedie's Trim and Fill technique will hypothetically add these articles to the analysis and recalculate the summary effect size. After selecting the adjustments, the search direction was reversed and the funnel plot was symmetrical. The shift of the previous effect size (P.E = 0.24257) to the new effect size (P.E = 0.58148) and of Q-values and other options from 75381.4393 to 115317.443 indicates that the subject is confirmed.

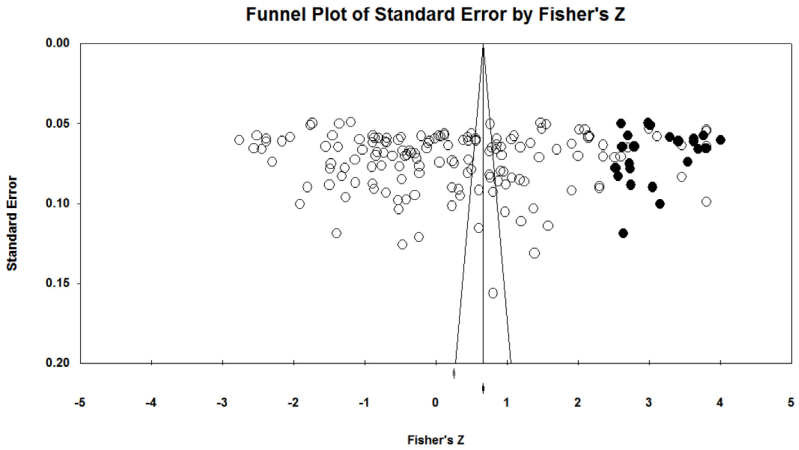

Fig. 7. Missing Articles of the Funnel Plot to recalculate the Effect Size

4.3. Standard Error

According to Figure 8, the vertical line of the coordinates represents standard errors. The value tends to a smaller value from zero, i.e., the standard error will decrease by moving toward the upper side of the vertical line. The horizontal line is a report on the standard effect sizes.

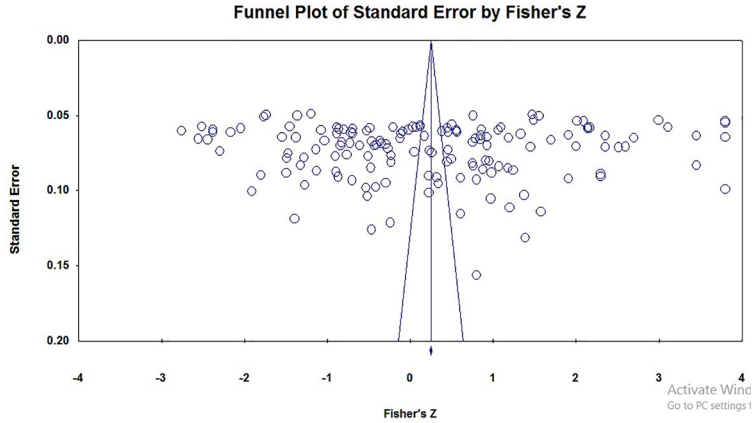

Fig. 8. Standard Error

4.4. Accuracy of the Variable Effect Plot

Each of the circles in Figure 9 is an individual article. The upward accumulation of the circles means that the articles selected by the meta-analysis have smaller errors and a higher sample size. Also, the data are symmetrical on both sides of the plot, i.e., the meta-analysis does not have bias, and the study enjoys sufficient validity.

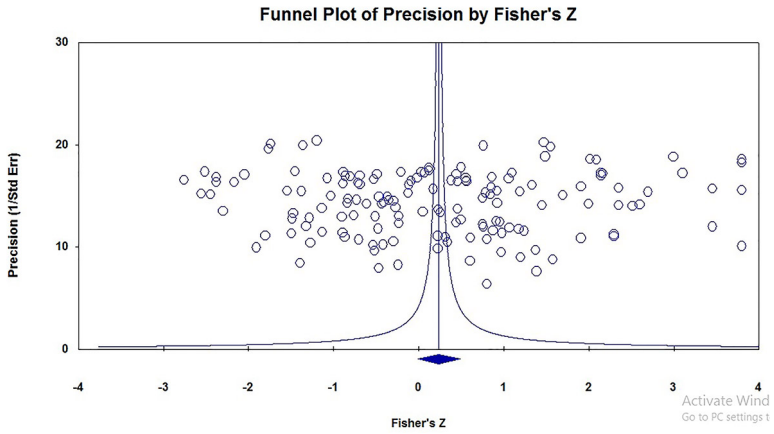

Fig. 9. Accuracy of Variable Effect Plot

4.5. Meta-Regression of the Convergence of the Articles

Figure 10 shows that the ascending and positive slope of Fisher's Z regression line range is significant with the statistical equation (Slope=0.03) and (P≤0.001). Hence, a unit increase in the process of convergent articles will increase the effectiveness of the nine dimensions of those articles by 0.03 in controlling housing and land rent, with a value of 0.03 being the medium effect size according to Cohen's criterion (1988).

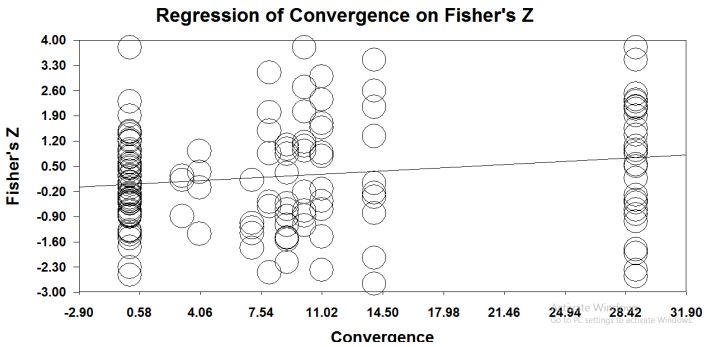

Fig. 10. Meta-Regression of Convergence in the Articles

4.6. Meta-Regression of the Divergence of the Articles

Figure 10 shows that the negative slope of the divergent Fisher's Z regression line range is significant with the statistical equation (Slope=-0.02) and (P≤0.001). Hence, a unit increase in the process of divergent articles will reduce the effect size of the nine dimensions of the articles by 0.03, as a value of 0.02 is the small effect size based on the Cohen criterion (1988).

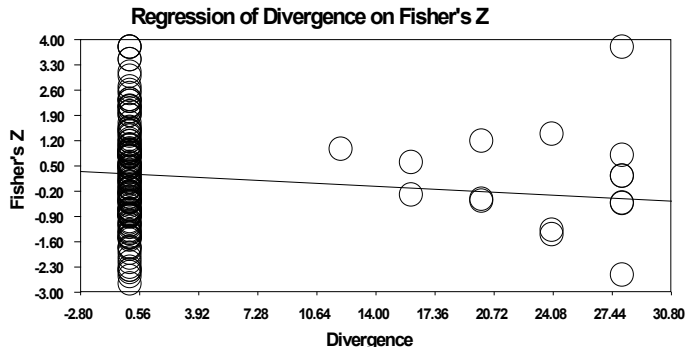

Fig. 11. Meta-Regression of the Divergence in the Articles

4.7. Meta-Regression of the Variable "Preventing Land and

Housing Trading"

Figure 12 shows that the positive and ascending slope of the meta-analysis of the conceptual dimension of "Preventing land and housing trading" is statistically significant at Slope=0.01 and P≤0.001. Therefore, a unit increase in this variable will poorly and directly (Cohen's criterion) control land and housing rent by 0.01.

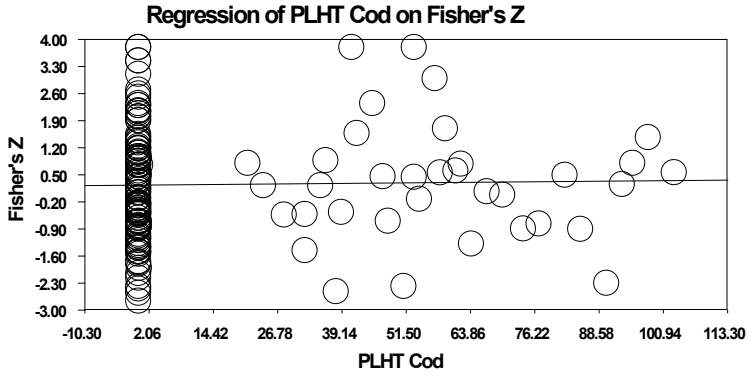

Fig. 12. Meta-Regression of the Variable of "Preventing Land and Housing Trading" in the Articles

4.8. Meta-regression of the Variable "Informed Participation of People in Decision-Making and Monitoring

Figure 13 shows that the positive slope of Fisher's Z regression line range of the concept of "Informed participation of people in decision-making" is significant with the significant equation (Slope=0.02) and (P≤0.001). Thus, a unit increase in the variable above will directly and moderately reduce land and housing rent by 0.02.

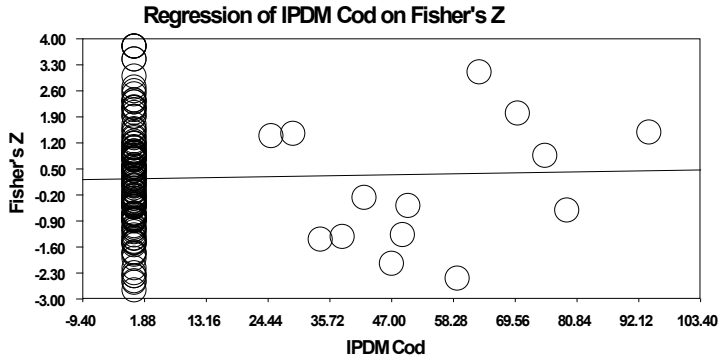

Fig. 13. Meta-Regression of the Variable of "Informed Participation of People in Decision-Making and Monitoring in the Articles

4.9. Meta-Regression of the Variable of "Growing ICT Services Through Apps"

Figure 14 shows that the inverse slope of Fisher's Z regression line range of "Growing ICT services" is significant with the statistical equation (Slope=-0.018) and (P≤0.001). According to Cohen's criterion, a value of 0.018 is a small effect size. Hence, a unit increase in ICT services by -0.018 will inversely and poorly affect the non-control of land and housing rent.

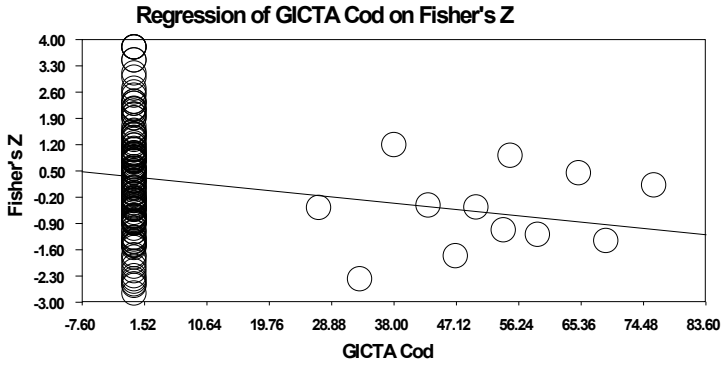

Fig. 14. Meta-Regression of "Growing ICT Apps" in the Articles

4.10. Meta-Regression of "Conventional Development of Urban Space"

Figure 15 shows that Fisher's Z regression line slope of the variable "Conventional development of urban space" in the articles is inversely and statistically significant at (Slope= -0.05) and (P≤0.001). According to Cohen's criterion, a value of 0.05 is a large effect size, and for each unit, the unconventional urban space development is strongly and directly related to land and housing rent by 0.05.

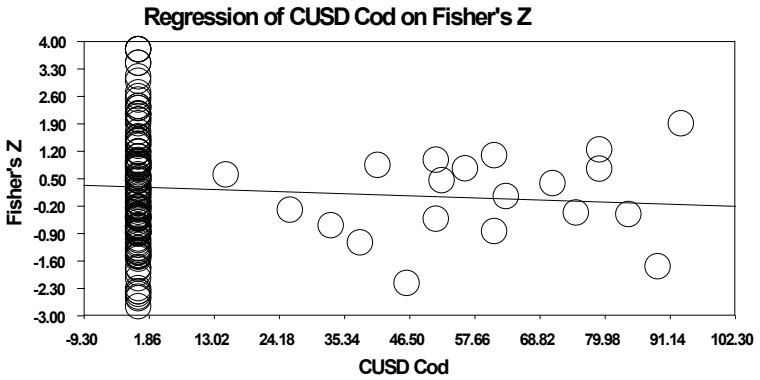

Fig. 15. Meta-Regression of "Conventional Development of Urban Spaces" in the Articles

4.11. Meta-Regression of "Effects of Rent-Seeking on the Behavior of Society"

Figure 16 shows that the line range slope with Fisher's Z regression weight of the variable "Effects of rent-seeking on the behavior of society" is positively and statistically significant at Slope=0.07 and P≤0.001. According to Cohen's criterion, an effect size of 0.07 is so large; thus, a unit increase in the concept of "Effects of rent-seeking behavior on society" will increase the effectiveness of the non-control of land and housing rent by 0.07.

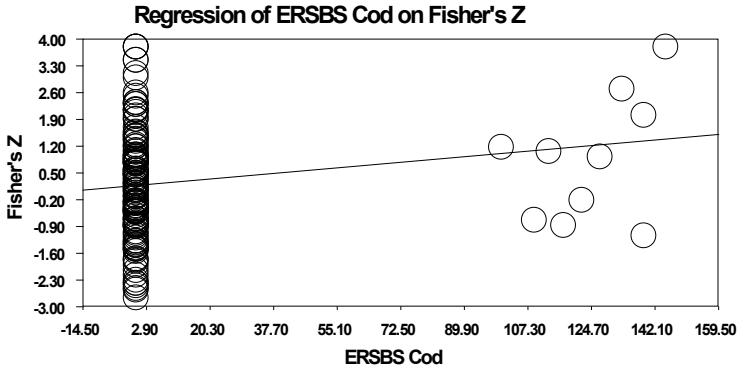

Fig. 16. Meta-Regression of "Effects of Rent-Seeking on the Behavior of Society in the Articles

4.12. Meta-Regression of the Concept of "Political Rent-Seeking"

Figure 17 shows that Fisher's Z regression line slope of the dimension of "political rent-seeking" was inversely negative and was statistically significant at Slope=-0.01 and P≤0.001. According to Cohen's criterion, a value of 0.01 is a small effect size. Hence, a unit increase in "Political rent-seeking" will increase land and housing rent by -0.01.

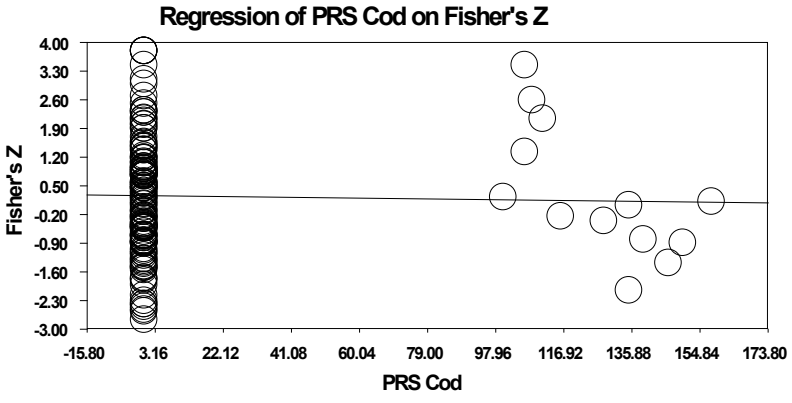

Fig. 17. Meta-Regression of "Political Rent-Seeking" in the Articles

4.13. Meta-Regression of the Concept of "Corruption Laws and Contracts"

Figure 18 shows that the positive slope of Fisher's Z regression of the dimension of "Corruption laws and contracts" is significant with a statistical equation (Slope=0.07) and (P≤0.001). According to Cohen's criterion, an effect size of 0.07 is a very large size; thus, a unit increase in the aforementioned dimension will increase the strong effectiveness of controlling land and housing rent by 0.07.

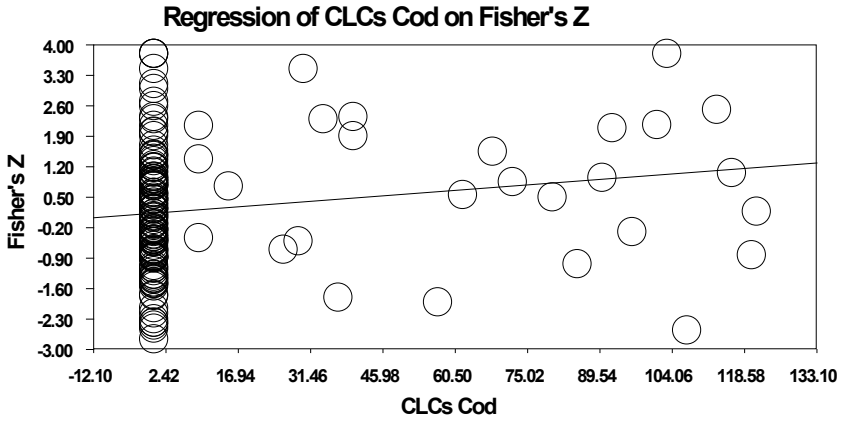

Fig. 18. Meta-Regression of "Corruption Laws and Contracts" in the Articles

4.14. Meta-Regression of Dimension of "Stable and Unstable Income"

Figure 19 shows that the negative slope of Fisher's Z regression line of the dimension of "Stable and unstable income" in the articles is significant with a statistical equation (Slope=-0.04) and (P≤0.001). According to Cohen's criterion, a value of 0.04 is a relatively large effect size. In other words, "Urban unstable income" is highly and directly related to land and housing rent, thereby leading to land and housing rent.

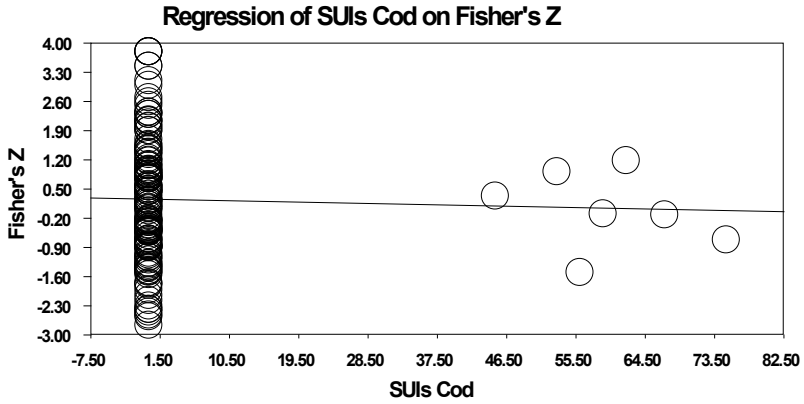

Fig. 19. Meta-Regression of "Stable and Unstable Income" in the Articles

4.15. Meta-Regression of the Dimension of Transparency

Figure 20 shows that the inverse slope of the line range with Fisher's Z regression weight of the dimension "Transparency" did not have a direct effect on reducing land and housing rent, and was statistically significant at Slope=-0.02 and P≤0.001.

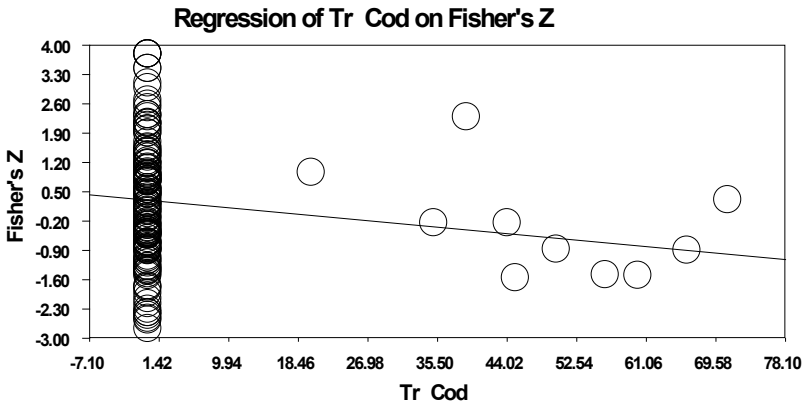

Fig. 20. Meta-Regression of "Transparency" in the Articles

4.16. Interaction of Basic Components of the Study

Figure 21 shows that concerning the interaction of the basic components of the study, one would notice the unsystematic and unbalanced focus on the nine conceptual dimensions of the study. In this connection, the conceptual dimensions of "corruption laws and contracts", "effects of rent-seeking behavior on society", "preventing land and housing trading", and "informed people participation" respectively had the highest effects on reducing land and housing rent. Meanwhile, the conceptual dimensions of "conventional development of urban space", "stable and unstable income", "transparency", "growing ICT services", and "political rent-seeking", respectively had the lowest effects on controlling land and housing rent.

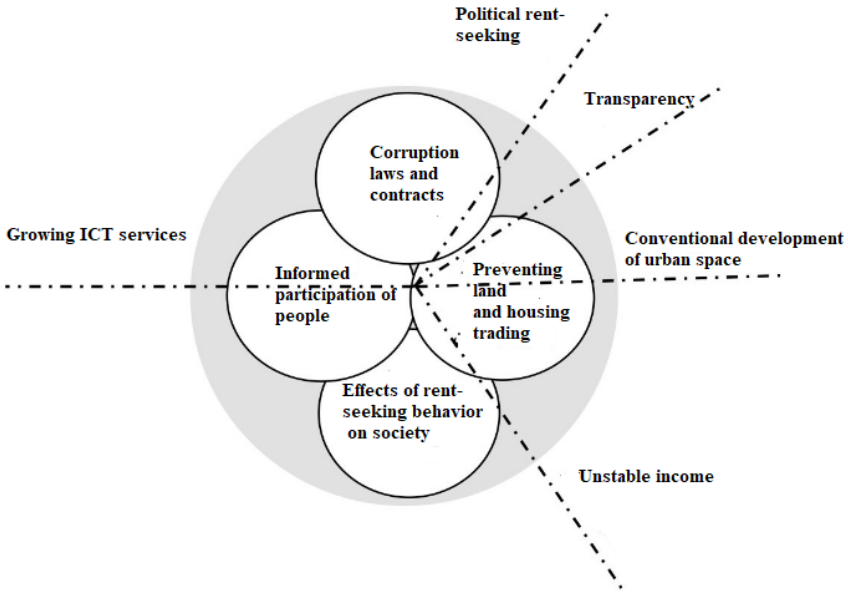

Fig. 21. The Interaction of the Basic Components of the Effectiveness of Controlling Land and Urban Housing Rent

5. CONCLUSION

Considering the test results and the study's conceptual dimension regressions through the CMA, as well as the interaction of the basic components of the effectiveness of controlling urban land and housing rent, there seems to be an unsystematic and unbalanced focus on the nine conceptual dimensions of the study. In this connection, the conceptual dimensions of "corruption laws and contracts", "effects of rent-seeking behavior on society", "preventing land and housing trading", and "informed people participation" respectively had the highest effects on reducing land and housing rent. Meanwhile, the conceptual dimensions of "conventional development of urban space", "stable and unstable income", "transparency", "growing ICT services", and "political rent-seeking" respectively had the lowest effects on controlling

land and housing rent. The findings of this study were in line with those of Pervasive Information Rent (Harvey 2008), Urban Land Maret Regulation (Evans 2004), Theory of Intervention and Incremental Change (acupuncture) in Urban Rent and Corruption (Peters 2013), Corruption Laws and Contracts in Urban Development/Shift of Focus from the "Rule of Law" to the "Role of Law" (Aled and Duputy 2017), Launching Sharable Database Technology for Preventing Rent (World Bank 2018), Four-Stage Land Evolution Systems in the Contemporary Era (Haila 2014), Mechanism for Measuring Rent-Seeking (Murillo-Sandoval et al. 2021), and Determination of Rent Size Aimed at Realizing the Principle of Transparency (Angelopoulos et al. 2022). Thus, the nine conceptual dimensions of the study, which were effective in controlling urban land and housing rent, will be interpreted as follows using a meta-analysis and a systematic review:

- Convergence of the articles (Slope=0.30) and (P≤0.001); the nine concepts of the convergent articles were directly and moderately effective in controlling housing and land rent.
- Divergence of the articles (Slope=-0.24) and (P≤0.001); the nine concepts of the divergent articles were inversely and poorly related to land and housing rent.
- The dimension of corruption laws and contracts (Slope=0.7) and (P≤0.001) ranked first by the effectiveness of reducing land and housing rent.
- The dimension of the effects of rent-seeking behavior on society (Slope0.70) and (P≤0.001) ranked first by the effectiveness of growing land and housing rent, ensuing the ineffectiveness of the mechanism of controlling rent.
- The dimension of the informed participation of people in decision-making (Slope=0.23) and (P≤0.001) held a weak effect size and was generally ranked second by the effectiveness of reducing land and housing rent.
- Preventing land and housing trading (Slope=0.10) and (P≤0.001) held a very weak effect size and was generally ranked third by the effectiveness of reducing land and housing rent.
- The dimension of the unconventional development of urban space (Slope=-0.50) and (P≤0.001) held a very high effect size and was generally ranked second by the effectiveness of growing land and housing rent.
- The dimension of unstable income (Slope=-0.04) and (P≤0.001) held a very high effect size and was generally ranked third by the effectiveness of growing land and housing rent.
- The dimension of transparency (Slope=-0.02) and (P≤0.001) held a weak-to-moderate effect size and was generally ranked fourth by the effectiveness of growing land and housing rent.
- The concept of growing ICT services Through Apps (Slope=-0.18) and (P≤0.001) held a weak-to-moderate effect size and was generally ranked fifth by the effectiveness of non-control of land and housing rent.
- The concept of political rent-seeking (Slope=-0.10) and (P≤0.001) held a weak effect size and was generally ranked sixth by the effectiveness of non-control of land and housing rent.

In sum, the individual viewpoints of the researchers, disregard for the conceptual dimensions affecting the control of land and housing rent, methodological gaps, less systematic analyses, theoretical limitations, and inadequate mechanisms for applying the study results were among the major reasons for the ineffectiveness of the results of each study in controlling land and housing rent, thereby exacerbating urban rent-seeking behavior. With an all-encompassing perspective, the present study presented a comprehensive model that involves all the concepts that would effectively help to control land and housing rent using a meta-analysis method and a systematic review. Hence, the focus by researchers on all nine dimensions of the study could form a systematic strategy to monitor and control land and housing rent, thus serving as a smart integrated model systemically managing land and housing rent across cities. The findings of the present study could be used by researchers, students, and practitioners working in such areas as urban monitoring, management, and planning. The findings can also enrich the literature on urban land and housing and relevant factors, and contribute to research gaps in this connection. However, despite the findings and because this study analyzed other analyses, there were some constraints on the way of the research, including the reliance of this meta-analysis on foreign-based research, the availability of printing and electronic research, failure to investigate library research, the emphasis by most research on significant results, failure to report non-significant results and findings, and the inadequacy of the methodological information in some of the articles. For this, researchers are recommended to work out these constraints to apply the following suggestions for future research:

(1) Correcting corruption laws and contracts and preventing land and housing trading;
(2) Developing the mechanism of transparency in the conventional development of urban space;
(3) Promoting public participation and knowledge in the effectiveness of smart urban growth to control land and housing rent;
(4) Improving the effectiveness of growing ICT technologies, apps, and AI to control land and housing rent;
(5) Containing political rent;
(6) Strengthening and developing the activities leading to stable urban income, and
(7) Applying technological limitations to rent-seeking to reduce the effects of rent-seeking behavior on society

ACKNOWLEDGMENTS

This article wasn't supported by any financial or spiritual sponsors.

CONFLICT OF INTEREST

The authors have no conflicts of interest to declare.

MORAL APPROVAL

The authors commit to observe all the ethical principles of the publication of the scientific work based on the ethical principles of COPE. In case of any violation of the ethical principles, even after the publication of the article, they give the journal the right to delete the article and follow up on the matter.

PARTICIPATION PERCENTAGE

The authors state that they have directly participated in the stages of conducting research and writing the article.

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HOW TO CITE THIS ARTICLE

Rumiani-Mahmoudi, Kourosh, Zahra-Sadat Saeideh Zarabadi, and Shima Dadfar. 2024. Effectiveness of the Theories of Controlling Urban Land and Housing Rent Revisited: A Meta-Analysis and Systematic Review Study. *Armanshahr Architecture & Urban Development Journal* 17(47): 123-138.

DOI: 10.22034/AAUD.2024.412277.2809
URL: https://www.armanshahrjournal.com/article_197527.html