Land Valuation for Underground Land Compensation under Land Acquisition Process in Malaysia

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SUMMARY

Compulsory land acquisition is one of the options to secure land for development especially in the urban area due to the land scarcity. Every compulsory land acquisition needs to be compensated adequately according to the legislation. Underground land acquisitions in Malaysia under the compulsory land acquisition process have been emerging and crucial in recent years. This study is a preliminary study, and examining the best method in underground land valuation through critical literature review. An initial systematic literature review has been carried out using PRISMA 2020 updated model and vetting through the institutional documents. The study finds that there are several best possible method and hedonic method is best proposed. As such, further details need to be carried out as the government of Malaysia proposed the use of residual method for the valuation of underground land.

SUMMARY

Pengambilan tanah merupakan salah satu pilihan untuk memperoleh tanah bagi tujuan pembangunan, terutamanya di kawasan bandar berikutan kekurangan tanah. Setiap pengambilan tanah perlu diberi pampasan secukupnya mengikut peruntukan undang-undang. Pengambilan tanah bawah tanah di Malaysia melalui proses pengambilan tanah telah berkembang dan menjadi penting dalam beberapa tahun kebelakangan ini. Kajian ini merupakan kajian awal, dan mengkaji kaedah terbaik dalam penilaian tanah bawah tanah melalui kajian literatur kritikal. Kajian literatur sistematik awal telah dijalankan menggunakan model terkini PRISMA 2020 dan pemeriksaan melalui dokumen institusi. Kajian mendapati bahawa terdapat beberapa kaedah terbaik dan kaedah hedonik paling baik dicadangkan. Oleh itu, perincian lanjut perlu dijalankan kerana kerajaan Malaysia mencadangkan penggunaan kaedah baki untuk penilaian tanah bawah tanah.

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1. INTRODUCTION

Preparing land for development is one of the critical factors contributing to the successful rate of development projects. The developments may range from a small scale to a huge scale and might increase to a mega scale of developments. In preparing the land, development planning comes into the picture for an early stage of the development process. Land needs to be ready for the physical development can proceed for further stages.

Having planned for a development, the land can be secure in several ways. The most applicable and majority methods in securing the land for development are through sale and purchase agreements. However, it depends on the scale of the projects as well as the location suitable to fit the purpose of development. Several other methods can also be considered such as an application to the State Authority through the Land Office for an alienation of State land.

However, development in urban areas is more complex as the land is very scarce (Mohamed et al., 2023). The urban area usually has been fully developed and left only a very limited land to develop further. But, the development must proceed especially to provide the amenities and public infrastructure to the community. As such, the last option available to secure the land is through compulsory land acquisition, or in some countries known as compulsory purchase, eminent domain and resumption. These methods require payment of compensation to the aggrieved parties involved in the process of compulsory land acquisition.

Land compensation in the case of compulsory land acquisition is crucial in the land acquisition process in Malaysia. Land compensation will be based on the land valuation of the scheduled land required for the development. As regards to the implementation of compulsory land acquisition, the needs of the land are no longer on the surface land, but emerge the need for compulsory of underground land acquisition.

The current development approach requires compulsory land acquisition for underground land such as underground rail tracks or roads. The underground land still belongs to the surface land proprietor, as stipulated in the National Land Code of Malaysia [Act 828] (NLC). Thus, every compulsory land acquisition involves the underground land needs to be compensated accordingly. Unfortunately, the current application of land valuation is only suitable for surface land ownership and suits the conventional methods of land valuation only.

As such, it requires a mechanism to value underground land. This study is important in examining the land valuation model for underground land for land compensation. Initially, the study will review several land valuation practices to determine the price for compensation to the aggrieved parties in the land acquisition process. This paper will further report the methodology of the research on the literature review and observations. The next section will discussed the result and elaborate on the findings of the literature review. The researcher will provide some suggestions on this research in the conclusion section.

2. METHODOLOGY

This study employs PRISMA methods in reviewing the literature to find the gap. As an initial step, the literature is classified and categorized into land valuation from the ScienceDirect database. An amount of 537 articles is found under this theme. However, the search is only targeted in journals which later reveals an amount of 457 articles. From this amount, the article further refined into social science and economics, representing 292 articles and 99 articles respectively.

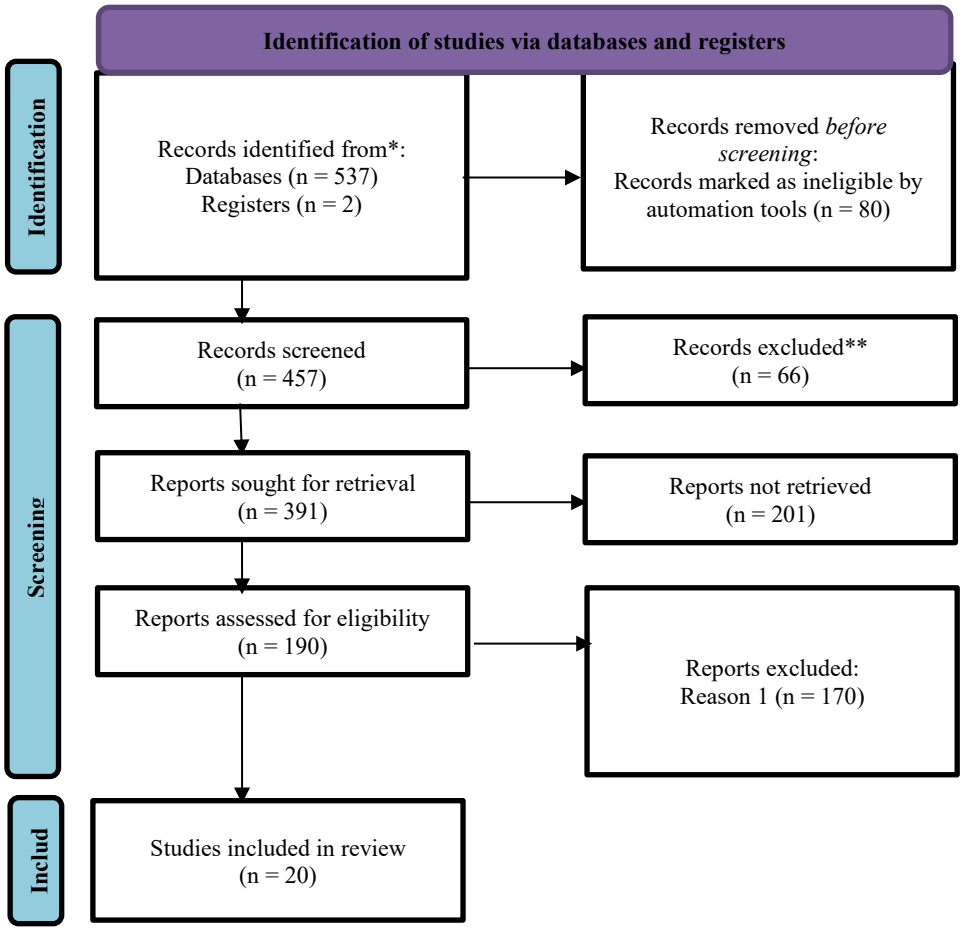

Figure 1: PRISMA 2020 flow diagram

An amount of 190 articles were selected ranging from 2015 to the current year to focus on the current development and based on the amendment done to the legislation for land acquisition for underground land in Malaysia in 2016. Focusing on the issue of underground land valuation, the database only suggests 20 articles related to the specific themes.

Besides, this research also embarked on interviews with several participants such as personnel from government departments and using several records and observations from the researcher's experience.

3. RESULTS AND DISCUSSION

3.1 Land Valuation

Land valuation especially for compensation of land acquisition in Malaysia under the purview of the Valuation and Property Services Department (*Jabatan Penilailan dan Perkhidmatan Harta – JPPH).* JPPH plays an important role in compulsory land acquisition including undertaking detailed study in the valuation of compensation claimable in the compulsory land acquisition process. One of the elements for land compensation under the compulsory land acquisition process is the "market price" value of the land as stipulated under the First Schedule of the Land Acquisition Act 1960 [Act 486], Law of Malaysia. The paragraph of the First Schedule provides –

> *"(1A) In assessing the market value of any scheduled land, the valuer may use any suitable method of valuation to arrive at the market value* ***provided that regard may be had to the prices paid for the recent sales of lands*** *with similar characteristics as the scheduled land which are situated within the vicinity of the scheduled land and with particular consideration being given to the last transaction on the scheduled land within two years from the date with reference to which the scheduled land is to be assessed under subparagraph (1)."(**emphasis added)*

The "market price" value contributes to several issues and is also one of the contentious matters in deciding the amount of compensation. This can be noted from court cases where the Federal Court of Malaysia decided that it depends on the "willing buyer and willing seller" concept. Federal Judge, Syed Agil Barakbah, in delivering the judgement had mentioned:

> *"...market value means the compensation that must be determined by reference to the price which a willing vendor might reasonably expect to obtain from a willing purchaser..." (emphasis added)*

There are several methods in valuation for the market price. According to Bourassa & Hoesli (2022), land valuation is usually carried out using Hedonic models in the context of property valuation, especially residential property valuation (Bourassa & Hoesli, 2022). However, there is still an outcry in the field where the market price is not valued accordingly. Scholar such as Doan Q (2023) says that the market price of the land is usually lower than the actual value of land. It occurs when the market price is tabled for five years which results to lack of accuracy of land price (Doan, 2023).

The accuracy of land value further explained by Debrunner & Kaufmann (2023), is related to the several actors in the valuation procedure. Thus, it is a complex procedure which requires careful consideration (Debrunner & Kaufmann, 2023). This argument is supported by Bidanset et al. (2022) where the scholars agreed that it is a challenge to provide accurate land value as well as defendable one. As such, the study finds that it is important to find a solution for better valuation techniques although there are rising appraisal techniques considering the density of the land as well as urban-rural factors (Bidanset et al., 2022). The element of density especially in the urban area is a good point to study.

Talking about urban land development, it seems that land scarcity is an issue (Mohamed et al., 2023, 2024). The developments now are focusing on vertical development, including development in Malaysia. Urban development must be well planned to consider the land value of the development (Rodas et al., 2018). Considering the new development approach, the value of land not only refers to density, it also refers to the structure of the development. Again, the comparative approach is used and based on the targeting properties (Zabel, 2022). However, the base used is not appropriate when the structure to compare is unavailable.

The emerging development that currently happening in Malaysia is the development of underground tunnels especially for the rail tracks or road development. The underground elements, especially valuation, are hardly studied by scholars (Rasid, 2017). As such, a study has been conducted by JPPH and comparisons have been made to several countries by the scholar in that study, but the specific method is yet to be affirmed. It is suggested that the best method is the residual method. The proposed model also uses some figures for discount rates (Abu, 2023).

The residual method has its own requirements and merits. According to Clapp (2022), the scholar mentioned that using residual methods refers to the long-standing theory that "*property values derive from the present value of net rents generated from the structure and its location*". It is said to refer to residual as "*land value at the time of new construction is a residual equal to the HBU property value less the construction costs*" (Clapp & Lindenthal, 2022). It can be noted that this method requires the element of building or structure to encompass the value of the land. Thus, the residual method for the valuation needs to be studied as it requires structure elements whereas the current emerging development approach cannot compare the structure element yet.

In addition, the valuation also differs from one purpose to another. Land valuation for land consolidation, for example, is not to value the land for tax or sale, but rather the value to reallocate the land to the landowners affected by the land consolidation (Ertunç & Uyan, 2022). It is also contended that the land value for the residential real estate market also differs. The land value for the real estate market is said to be not coherent with the demand market (Źróbek-Rozanska, 2016). This situation is concluded by the researcher that the demand is high despite high value because it is compensated by other values such as transportation and other facilities. As such, the valuation of land needs to suit the purpose of the valuation.

The land valuation is also important in the land acquisition process. The compensation paid from the process of land acquisition, in Vietnam for example, is said to be less than the value of the market price (Tuan & Hegedus, 2022). Similarly, land compensation in Malaysia also faces the issue of adequacy. Several cases have been brought to the High Court of Malaya as the compensation for land is contested. As of record, the Department of Director General of Lands and Mines (JKPTG), one of the relevant authorities in handling land acquisition proceedings, has referred to court a sum of 806 cases in 2019, among others involving claims of the inadequacy of compensation.

Furthermore, there is also a finding that the purpose of valuation in the land acquisition process needs to be differentiated from the valuation for contaminated land (Akujuru & Ruddock, 2015). According to the research, the valuation method for land acquisition should differ from the valuation method for assessment of land contamination. This valuation of contaminated land is another type of compensation for the land acquisition process.

In conclusion on land valuation, there are several land valuation methods and techniques which might be different from the others subject to the purpose of the valuation. McMillen & Zabel (2022) have summarized the valuation method and techniques as such (i) traditional methods for valuing land – vacant land sales; (ii) traditional methods for valuing land – depreciated cost / residual approach; (iii) Hedonic price functions; (iv) teardowns; (v) Bayesian approaches; (vi) Option value; and (vii) Land shares. However, the study suggested that whatever methods and techniques are used, the value of land is still comparable (McMillen & Zabel, 2022).

3.2 Underground Land

Besides the inadequacy of compensation in land acquisition, the issue of inadequacy expands to the valuation of underground land. As mentioned by Rasid (2017), the valuation of underground land is subject to further deliberation as there are lack of resources and research in the area. The development of underground land is relatively new in Malaysia. The development of underground land is emerging due to the rail track for Mass Rapid Transit (MRT). For example, the MRT Sungai Buloh – Kajang Line project is reported to have 9.5km of underground tunnel which includes the needs to value the underground land for compensation.

Echoing research by Farah (2016), the underground land framework evolves into a land acquisition procedure. The legal position of land acquisition expands to the underground land under amendment of Act 486.

Figure 2. The underground expressway (mymrt, 2013)

The acquisition of underground land will require compensation for the respective underground land. The underground can be classified into different terms such as resource assets consisting of natural, social and economic assets (Qiao et al., 2022). This study is interesting because it values the land attributed to classical labour theory, expanded labour theory, utility theory and marginal utility theory in valuing underground land. Thus, the underground land value can be calculated based on these theories.

Considering the utility of the underground land, the acquisition of underground land for the current approach in Malaysia is more on the public infrastructure initiative. As such, the utility theory as suggested by Qiao (2022) could be further investigated. According to the National Land Code [Act 828] of Malaysia, the use of underground is not limited to certain purposes. However, the JKPTG has guided that the alienation of land with depth will depend on the surface purpose or category which implies the minimum depth for agriculture, building and industry will be 6 meters, 10 meters and 15 meters respectively (National Land Code (Underground Land) (Minimum Depth) Regulations 2017, 2017).

4. CONCLUSION

Land valuation is a basis for the payment of land compensation under the land acquisition procedure, including practices in Malaysia. The current approach of the underground valuation still facing challenges in the court brought by the aggrieved parties. The exact valuation for underground land is still undergoing discussion and the compensation is subject to the court's decision.

As such, the appropriate techniques and methods need to be developed as the development of underground and acquisition and payment of its compensation is quite new in Malaysia. Based on these initial findings, further study seems to have its novelty in this area to propose the most appropriate method is valuing the underground land, especially for payment of compensation under the current legislation.

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BIOGRAPHICAL NOTES

Ahmad Hamidi Mohamed started his employment at SME Bank in Kuala Lumpur, Malaysia after shortened his pupilage term in Messrs. Abdullah & Zainuddin. A year later he joined Public Services and served in the Department of Director General of Lands and Mines (Federal) as Principle Assistant Director. Most of his public service term in these 18 years is on the policy of land administration and management with his niche area is Land Acquisition. He has also been the Land Administrator for the state of Perlis, and the Federal Territory of Kuala Lumpur. He is currently pursuing a doctorate in a public university in Malaysia. He was actively involved in the Association of Land Professionals of Malaysia (*PERTAMA*) and has also published several articles in journals and department publications.

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