

The Development of E-Caj Pemajuan Application Model in Valuation and Appraising of Development Charge According to Provision in the Section 32 of Town and Country Planning Act 1976

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ABSTRACT : *e-Caj Pemajuan application model is one of the application by using the computer software to calculate and determine the amount payable to the local authorities if the real estate developers desire to convert the current land use which was zoned in the gazette local plan approved by the state authority. The main of application development purposely to assist the local authorities to estimate the amount should be pay by the applicants and also to use by the students and the interested persons who want to review the amount of development charge. The application development is using the MS Excel software which was improved purposely to “user-friendly” equipped with related menus. A combination of the methods of valuation commonly used by the valuers and also the formula formation which was gazette by the relevance state authorities through the Development Charge Rules that integrated in one form. The benefits could be generated from this application can be simplified the valuation workings, less the calculation materials and reporting. The impact can be acquired from the application development may be apply in teaching and learning process in the higher institutions learning in Malaysia which involving the real estate management and town planning students. It is important things could be equipped among the students in order to prepare them before join the relevance industry. . in other side in term of commercialization, it can be expands to the relevance agencies and organizations which are involving in the real estate development industries such as real estate valuation, planning and development process.*

KEYWORDS - *Real Estate Development, Development Charge, Valuation, Land Value and e-Caj Pemajuan Application Model*

I. INTRODUCTION

Development is a process to develop land and interests therein from the current use to more effective use. In the Malaysian development context, most of the real estate development more involving many parties or players mainly among the investors, developers, professionals, agencies then follow by the contractors. For this purposes, each real estate development needs a special supervision which involves the authorities such as the local authority in order to ensure that the implementation in line with the purpose of development.

For the purpose of this paper, the authors focused on the approach to determine development charge towards the development lands located within the local planning authority administrative area in the Peninsular Malaysia. This study is more focusing on the development of *e-caj* application model for the purpose to determine the amount of development charge by the local planning authorities in Peninsular Malaysia. This application expected to assists and helps the authority in order to reduce time, materials usage and able to specified the chargeable amount.

II. PURPOSE

The aim of this paper is to promote the application development of valuation model for development charge in form of electronic application. The development of this application is a combination of the Microsoft Excel spreadsheet processor and development charge formula as gazette by the State Authorities through the rules makes and passed according the given provision as stated in the Section 35, Town and Country Planning Act 1976. In brief, there are three application models currently undergoing develop which based on the formula as gazette by the State Authorities namely

the changes of land use (known as Version 1.0), the density changes (Version 2.0) and the building floor area changes (Version 3.0). For this paperwork purposes, the authors had already finish development for Version 1.0.

III. ISSUES AND PROBLEMS

Based on the observation and oral survey made to a few local authorities in the Peninsular Malaysia, the authors had conclude some issues and problems in relation to the implementation of valuation of development charges as follow :-

- a) **Using much more the calculation materials :** Some of the local authorities still using conventional materials to estimate and calculate the development charge. The conventional materials refer to the use of papers and stationeries. The use of conventional materials could be giving the impact of unusable resources especially when the officers carry out the valuation workings.
- b) **Lack of Precise Calculation Tools :** In this issue, the authors identified the valuation working to determine the development charge commonly use a conventional calculation tool such as calculator. The use of calculator is limited and it's depending on types and models of calculator. Besides that, the users may face the possibility of error during the workings process. It's may give inaccurate or wrong results.
- c) **Human Factors :** Human factor commonly refers to the time factor which provided by the officers or users who are responsible to carry out valuation and appraise the development charge. In this context, the users are required to draft the calculation process before executing the valuation process. The draft normally based on the formula as provided by the rules and guidelines. In this situation, the understanding of the formula is required in order to ensure that the workings as provided is in line with the needs as required by such formula. In other hand, the users or officers need to provide necessary time to write and calculate the development charge.
- d) **No suitable application available :** Based on the oral interviews with the valuation officers and planning officer who currently served with the local authorities in Peninsular Malaysia, the authors found that no computer application developed and most of them are using conventional tools and materials to determine the development.

IV. DEFINITIONS AND INTERPRETATIONS

According to Section 32(1), the Town and Country Planning 1976, the Development charge is amount of charge to be levied when the changes of current land use, density or floor area of any land which may increases the value after the local plan gazette or any changes incurred of the local plan. In order to discuss the meaning of development charge, there are a few elements taking into account to define and interpret such as land use, density and building floor plan. However, the application to the Federal Territories, any changes of plot ratio is taking into account as a factor where the development may applicable as provided in the Section 40, Federal Territories (Planning) Act 1982.

The meaning of land use is provided under the Section 2, Town and Country Planning Act 1976 and Section 2, Federal Territories (Planning) Act 1982 as any use of the land other than merely for the keeping or storage of materials and equipment intended to be employed in the construction or erection of a building on the land, or as a site for temporary buildings for the accommodation of workers involved in the construction or erection of the building. The second element is, density which was defined in the Section 2, Town and Country Planning Act 1976 as, the intensity of use of land reckoned or expressed in terms of the number of persons, dwelling units, or habitable rooms, or any combination of those factors, per unit area of land; and for the purpose of this definition, "habitable room" does not include a kitchen, storeroom, utility room, lavatory, bathroom, or garage. And the element is, building floor area as define in the Section 2, Town and Country Planning Act 1976 as, the total area of floor space within a building, as measured between the external sides of walls or, in the case of party walls, between the centres of such walls.

According to the *Jabatan Perancangan Bandar dan Desa Semenanjung Malaysia* (2016), Local Plan means an official document which interprets general policies and proposals containing in the Structure Plan to specific and practical physical forms. Local Plan is provided to the identified areas within the local authority administrative area. It's a specific plan that interprets the policies and proposals as stated in the Structure Plan. Local Plan shows in form of bigger scale of development layout equipped with written statements in order to explain the policies and details descriptions about the development.

Land value referred to the concept of land value including its interest therein. Investopedia (2016) define the land value as, the value of a piece of property, including both the value of the land itself as well as any improvements that have been made to it. Land values increase when demand for land exceeds the supply of available land, or if a particular piece of land has intrinsic value greater than neighboring areas. Sutawijaya (2004) define the meaning of land value which influenced by profit cash flow which generated from the use of land. Benefits or profits are influenced by difference factors which involving the human and non-human factors. Human factors mean the human action in order to

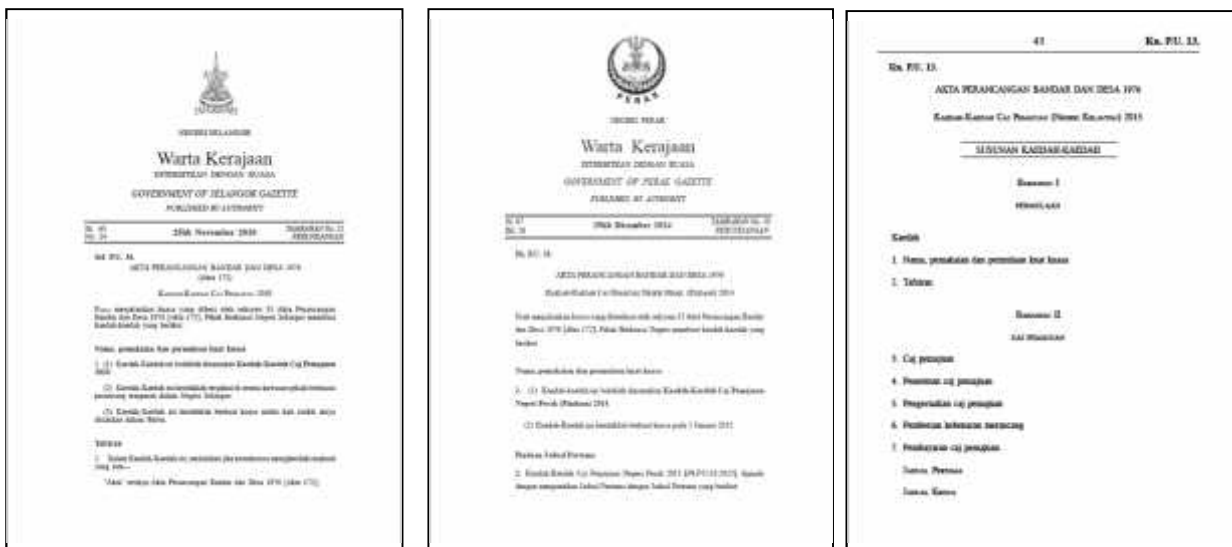
increases the land value such as construction of buildings and structures. And, the non-human factors referred to the physical factors such as accessibility, location and situation of the land.

Malaysian Valuation Standards 2015 define the value is an economic concept referring to the price most likely to be concluded by the buyers and sellers of an asset, or service that is available for purchase. Value is not a fact, but an estimate of the likely price to be paid for assets and services at a given time in accordance with a particular definition of value. The economic concept of value reflects a market's view of the benefits that accrue to one who owns the assets or receives the services as of the effective date of valuation. Market Value is defined in the Malaysian Valuation Standards 2015 as, the estimated amount for which an asset or liability should exchange on the valuation date between a willing buyer and a willing seller in an arm's-length transaction after proper marketing where the parties had each acted knowledgeably, prudently and without compulsion.

V. SCOPE OF PAPERWORK AND VALUATION MODEL

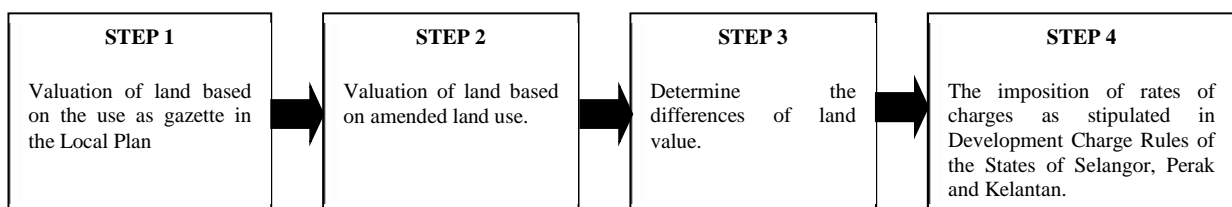
For this purpose, the consideration is given to the current practice of valuation for development charge implemented by the local planning authority. Basically, the Act has not specified the rate of charges and methods of calculation the development charge that may apply by the local planning authorities, However, section 32(2), Town and Country Planning Act 1976 specified the power of state authority to impose the rate of charges and the methods of calculation as provided in the rules makes by the state authority according to the power given by the Act. In order to develop the application, the authors referred to the rules makes by the States of Selangor, Perak and Kelantan as attached below:-

Table 1 : Development Charge Rules for the States of Selangor, Perak and Kelantan



For the Version 1.0 is based on the provisions as stated in the rules, the valuation process as follows :-

Figure 1 : Development Charge Valuation Process

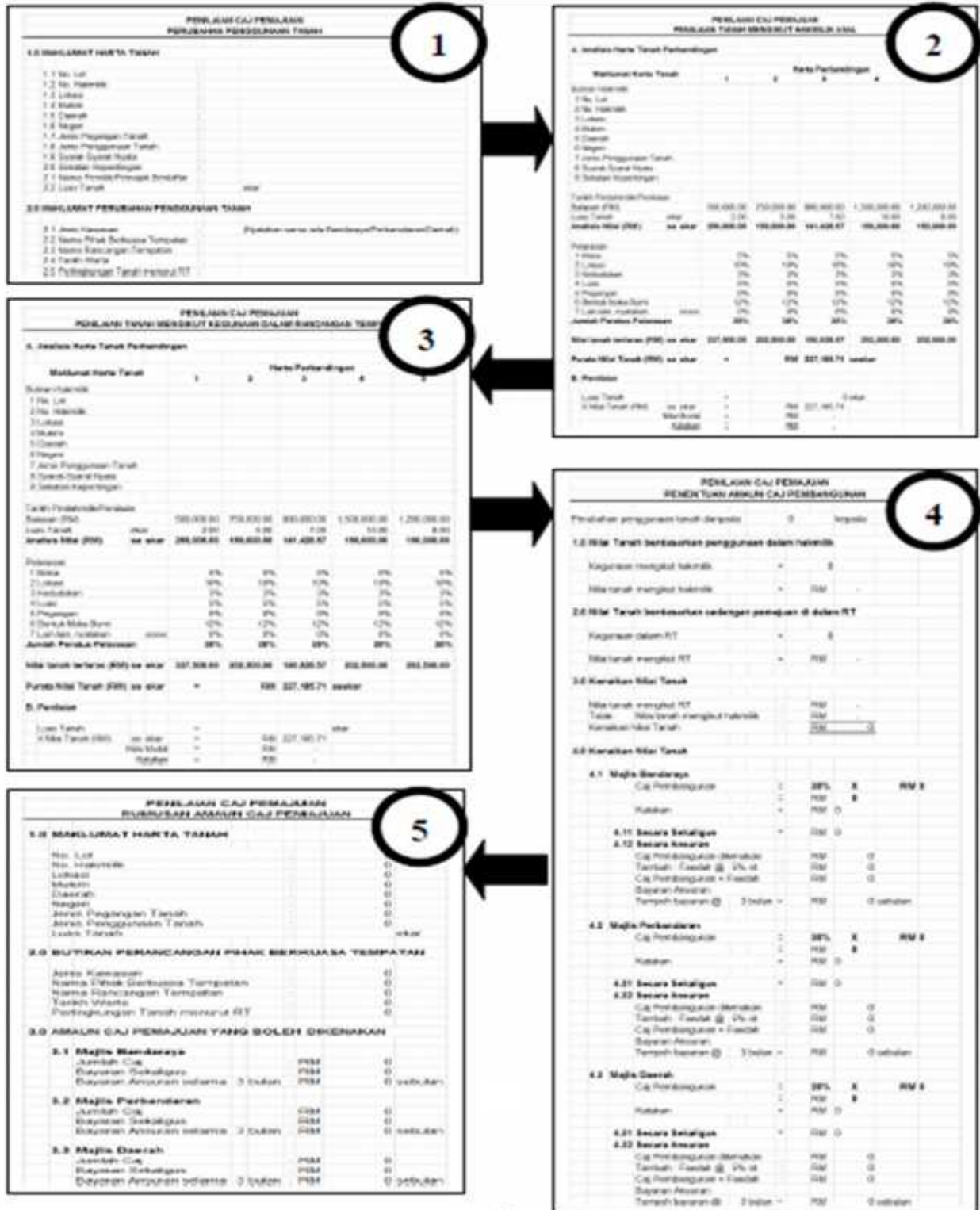


The method of valuation applied in order to determine the value of land based on difference conditions is the Comparison Method. This method only applies for the Version 1.0. According to the Malaysian Valuation Standards 2015, comparison approach means an approach that provides an indication of value by comparing the subject asset with identical or similar assets for which price information is available. In the valuation process, some elements and factors are required to consider such as transaction date, tenure, land area, purchasing price, the fraction of land and building values, land use, type of cultivation (if the subject land used for agricultural) and the adjustment factors.

VI. RESULTS AND DISCUSSIONS

With reference to the development charge rules gazette in the States of Selangor, Perak and Kelantan, the basis of application as follow :-

Figure 2 : Valuation Process to determine the Development (Basic Model)








Based on the above model, a modification and touch up was constructed and developed from the basic model by using the MS Excel. The main purpose of modification is to modify the presentation of valuation form to more interactive figure and more user-friendly. The result from such modification towards the formula developed from the MS Excel is known as follows :-

Figure 3 : Initial Menu



Table 2 : Working Procedure by using e-Caj Pemajuan application

Nos	Menu	Explanation
1.		<p>This section required the users to fill the information related to the ownership of land which acquired from land title certificate.</p>
2.		<p>) This section known as valuation and appraise space purposely use to determine the amount of development charge.</p> <p>) The valuation workings based on the Market Comparison Approach where the comparable data of the before and after the changes of land use are acquired from the Valuation and Property Services Department (<i>Jabatan Penilaian dan Perkhidmatan Harta – JPPH</i>) and the National Property Information Centre (NAPIC).</p> <p>) The users will analyse and estimate the comparable factors.</p>

3.		<p>) This section provides the analysis to value and appraise the subject land where the main purpose is to determine the capital value after taking into account the changes of land use.</p> <p>) The comparable data will be acquired from JPPH Sale Evidences and NAPIC Property Market Report.</p> <p>) The users will analyse and appraise the comparable factors.</p>
4.		<p>) This section shows the valuation and appraising process of development charge.</p> <p>) The calculation is auto-generated mode where the process and formula was fixed which based on the development charge rules of the States as gazette.</p> <p>) The workings data have networked with the data filled in the previous sections.</p>
5.		<p>) This section shows the summary of valuation of development charge in form of summary report to be compiled with other documents.</p> <p>) The information as provided is in the auto-generated mode which linked with other information or data that was filled in the previous sections.</p>

VII. THE SIGNIFICANT OF VALUATION APPLICATION FROM ISLAMIC PERSPECTIVES

In order to provide the facilities and amenities to the public, the authority should taking into account the public requirements (*maslahat*) in order to ensure that every level of society will able to reach such accommodation. From property development perspective, the main problem is the scarcity of land supply whereby the developers need to evaluate the outcome from development process. In this matters, the profit orientation is being the priority among them to ensure that the developers able to get the highest revenue other than the cost of construction. However, from the authority perspectives, the public needs are the priority. Therefore in order to ensure that both developers and public communities satisfy, an alternative should be taken by the authority. In this context, the developers are being bounded by the guidelines which were provided by the authority in order to ensure that the developments not only provide the physical development to the peoples but also to provide comfort environment. Development Charge is an alternative option provided by the authority where the charge as a compensation paid by the developers may use to provide other infrastructure to solve the issues of environment which may effect to public. Even though, the Islamic development features are indirectly applied by the authority in order to balance the needs of public, environment and the developers.

VIII. CONCLUSION

Based on the first run application, the authors identified that the valuation and calculation process of development charge is able to solve the problems as stated and tabulated before. The main important thing, the use of this application is able to solve the problems of accuracy and precisely the amount of development charge to be chargeable. Besides that, this application able to saves and reduces the time consumption and calculation materials during the valuation workings process. Specifically, the use of this application may able to reduce up to 60% from the overall of total cost and time consumption to provide an estimate the development charge.

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The authors hope this application able to expand the use to the local authorities in Malaysia and able to uniform the valuation process. However, the valuation and appraise process of development charge still requires improvement in order to provide more suitability in the valuation process.

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