Property Development Risk: Case Study In Indonesia - I Wayan Muka

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Property Development Risk: Case Study In Indonesia

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Abstract:- Property development makes a significant contribution to the Indonesia property industry and economy. Decision makers have very rarely all the relevant information they need in order to analyze all aspects and make the optimal decision. Property development is always long-term and it is therefore very important to ensure that the final decision is optimal or very close to being optimal. Some important information may not be known at certain point and it might have a very significant negative impact on the final decision. The objective of this research is to analyze this problem and offer possible solutions and formulate several recommendations. From a survey of leading property developers in indonesia, the importance of 71 property development risk factors is assessed. The most important risk factors; political risk, technological risk, social risk and economic risk were being seen as having the highest overall risk level in the property development process.

Keywords:- Property Development, Risk Factors

I. INTRODUCTION AND RESEARCH OBJECTIVES

This research contains information about property development and its relation to decision making process in the conditions of uncertainty. The objective of this research is to discuss the influence of uncertainty on property development. More information is available for the decision makers each year and everything is starting to be interconnected but even so a lot of information is unreliable or uncertain. Very frequently the decision makers have to make a qualified guess in order to estimate important parameter which they need to analyze and evaluate alternative investment. The use of sophisticated methods in decision making like for example multiple criteria decision analysis, fuzzy logic and other soft computing methods can be used to improve the accuracy of the decision making process. However using these methods is not trivial and certain skills and expertise are needed to utilize these tools efficiently. The objective of property development process is to find and choose the optimal investment alternative considering all relevant factors and variables. But in some cases decision based on known variables may be skewed and not optimal. Some important details may be unknown and they might have significant influence on the final decision.

If the decision makers would have this unknown information they could make a completely different decision. Some information can be hidden on purpose by third party in order to achieve higher selling price or to conceal some problem.

Such scenarios also need to be taken into consideration. Therefore it is necessary to focus enough attention on the decision making process not just in the perfect conditions when all information is correct and easily available but also in the conditions of uncertainty with unknown, incorrect or misleading information.

Property development and investment is a very important and sensitive area of the operation of business companies. Investments are often long-term and require a significant amount of resources. First there has to be a thorough analysis of the current situation in the business company and if there are no other options how to expand the existing capacities or increasethe efficiency of processes inside the company in order to achieve set goals then it is time to consider investing into new building complex or into a new brown field. One of the serious mistakes is to focus too little attention on the initial research of the inner needsof the investor. It has to be clear what the investor needs what is the objective what does the investor aim to achieve with the investment.

Sometimes it might seem like investing into a new manufacturing plant is inevitable but it may happen that after considering other options another solution might be found that costs less and provides almost the same or equal profit. Initial research of the needs is therefore very important. Once the decision makers come to a

conclusion that the purchase of new building or plant has to be done it is time to do a research of all possible alternative investments. For this it is necessary to define a set of parameters that are relevant for the investor. Without this set of relevant parameters the decision making process might be negatively influenced by bias of one of the decision makers for example. Most decision makers tend to use their previous experience in order to find the optimal alternative investment. For example a negative experience with some type of property might make the decision maker to prefer other alternative investments that seem to look much better due to hisor hers previous negative experience. If this bias is not explained and decision makers do not know about it or do not discuss it the resulting decision may be far from optimal. Another important detail to consider is that the investment is not over the day the property is signed over to the investor. Investor should have a plan how to quickly accommodate the new capacity to suit own needs. Such accommodation of course costs additional resources.

Good manager knows the impact of the decision even before the decision is made. Accommodation of the new real estate should be therefore always possible even if some unexpected events occur in the future. There might always be a risk that some equipment might not be available or some changes to the structure or surrounding of the property might be met with opposition of the local community or new legislation might hinderthe planned changes etc. Therefore even such scenarios for each alternative investment must be taken into consideration. Thinking about things that might occur in the future ensures that there are is no unexpected negative consequences of the investment. Property appraisal focuses on the questions of price and value. Market value is different than price. International valuation standards committee defines the market value as: The estimated amount for which a property should exchange on the date of valuation between a willing buyer and a willing seller in an arms-length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently, and without compulsion. Another term used in property appraisal is investment value. Investment value is the value to one particular investor. For different investors one realty can have several different investment values. This value isusually higher than the market value of the particular property. If the investment value is lower then the market value then this investment alternative is not optimal and should not be chosen.

Decision making under uncertainty is far more difficult than decision making in scenario where all acquired information is correct and known. Especially on the market and in social sciences in general uncertainty is encountered very frequently. It is due to the fact that the behavior of consumers is hard to define. It is possible to make quite precise measurements based on the careful observation of the reality but it is very hard to predict the future behavior of the consumers or the future development of the market price of some property. The more dynamic the market and the more long-term the prediction should be the less accurate it is. There are several main issues when working in an environment which has unknown or uncertain factors and conditions. If some information is unknown it is usually possible to estimate the approximate value of this unknown variable. Qualified guess often helps decision makers to overcome the uncertainty caused by a small number of important parameters of some investment alternative that are not known to decision makers. It is far more difficult to solve this problem in a dynamic environment. As the decision making process takes time – the more complex decision the more time it takes to make the decision. During this time the accuracy of the information gathered initially deteriorates.

Several methods can be used to deal with the uncertainty. There are well known basic methods based on statistics, probability, decision theory and theory of utility. It is useful to always have a clear hierarchy in what information is useful and important and what information is less useful and not so important. If all important information is correct and available and few not so important factors and parameters are not known it is easy to make the optimal decision. But considering a scenario where the several most important parameters are not known and difficult to estimate but all the in significant details are available – to make optimal decision in such conditions is far more difficult and takes significantly more work and experience than in the first theoretical example. Another method is to trade time and resources for certainty – most unknown parameters can be observed, measured or carefully estimated so they are not known precisely but at least the estimation gives much better idea about the property than when no time and resources is spent and the parameter is just unknown. General rule is: if something is very important it is a wise investment of time and money to carefully estimate the possible value of an unknown parameter. Uncertain information of different kinds can be fused together. It is easier to evaluate a dynamic system after observing a similar dynamic system in comparable conditions. Modeling and simulation can be used to simplify the complex reality and simulate the possible future development of target parameter. It is very important to structure complex problems so the understanding of the problem is optimal (Broz,2003).

II. PROPERTY DEVELOPMENT RISK

All aspects of property investment risk have received extensive coverage for many years; this includes the riskreduction effects of property in a portfolio, portfolio risk reduction via property diversification, risk premiums for property sectors and the impact of valuation-smoothing on property risk (Booth et al, 2002). However, it has been recognised for many years that research into property development risk is limited (Whipple, 1988); particularly given the role of the property cycle and its strategic implications for property and property development (Pyhrr et al, 1999; Newell & Staglick;2004).

With the chronological stages in the property development process being broadly identified (eg: Cadman and Topping, 1995; Miles et al, 2000), most approaches concentrate on measuring property development risk, rather than identifying or prioritising key risk elements in the property development process. These approaches largely concentrate on feasibility analysis and cashflow analysis (eg: Byrne, 1996; Cadman and Topping, 1995), with only limited attention given to property development risk management (eg: Cadman and Topping, 1995; Miles et al, 2000). A broad classification of property development risk into four categories (commercial,construction, land, social) and 21 sub-categories has also been developed (Dullisear,2001). Other studies have largely concentrated on specific aspects of property development risk such as development financing risk (Markham, 2001) and interest rate risk (Cameron, 1990). Property development risk is only briefly addressed in the API's Professional Practice Standards via guidance note 6.2 (feasibility studies) and guidance note 6.6 (property development management) (API, 2004). Overall, property development risk has received limited coverage. This area of property development risk management has taken on increased significance recently as leading property developers in Indonesia have recognised the need to further strengthen their risk management controls to maintain their discipline in bidding for work and to execute projects successfully. The following sections of this paper address this key issue in property development by assessing the importance of a range of property development risk factors based on a survey of the leading property developers in Indonesia.

III. METHODOLOGY

The research methodology describes how this research will be conducted in terms of data collection and information collation, and the ensuing analysis and presentation of results. The main sources of data and information will be a literature study and empirical research.

- **Literature Study**

The primary purpose of the review of published literature was to establish what previous research has been conducted concerning the property development process risks. The literature study therefore used various sources such as texts, journal, articles, reports, masters, dissertations and doctoral theses relevant to the research. Available electronic databases were also consulted. Sources for these databases include Ebsco-host, Proquest, Blackwell, and Google.

- **Empirical Survey**

A quantitative approach was chosen for this research. The empirical survey used will be examined under the following headings: Objective of the survey, design of the questionnaire, survey method and analytical methods (Graziano & Raulin, 2004).

The objective of the survey, using a structured questionnaire, was to extract from the respondents information that they termed as risk, on a descending scale (Likert scale) from extremely high risk (5), high risk (4), moderate risk (3), low risk (2) and extremely low risk (1). The questionnaire measured the importance (weight) that each respondent attached to each risk element identified. The information gained will be analysed in this study and a model constructed and presented for use in the industry. It is acknowledged that qualitative data collection methods are reliant on questions as the means for extracting primary data. So questionnaires were the main source of soliciting information from the participants.

SURVEY RESPONDENT PROFILE

Of the 15 listed property developers initially selected in Indonesia, three declined to participate, giving an effective sample of 12 property developers.All respondents indicated their organisation had formal processes for assessing risk before making a decision to proceed with a new development project. 100% of respondent's organisations also assessed individual property development risks before commencing a property development, as well as identifying specific risk management strategies for the property development. 55.1% of respondents indicated that specific property development risk management strategies had been practiced by their organisation for more than five years, with there mainder having these risk management strategies for an average of five years.

ASSESSMENT PROPERTY DEVELOPMENT RISK FACTORS

The following sections assess the importance of the various property development risk factors across the five chronological phases in the property development table 1.1:

Table 1.1. Property development risk ratings

Criteria	Sub-Criteria	Average Sub Criteria risk rating	Average Criteria risk rating
1. Social Risk	Workforce availability	3.44	3.71
	Community acceptability	4.17	
	Cultural compatibility	3.53	
	Public hygiene	3.68	
2. Technological Risk	Site conditions	4.12	3.76
	Designers and Constructors	3.75	
	Multiple functionality	3.28	
	Constructability	3.80	
	Duration	3.55	
	Amendments	3.87	
	Facilities management	3.96	
	Accessibility &Evacuation	3.41	
	Durability	3.67	
3. Environmental Risk	Adverse environment	3.41	3.34
	Impacts	3.23	
4. Economics Risk	Interest rate	3.31	3.70
	Property type	4.01	
	Market liquidity	3.45	
	Currency conversion	3.29	
	Demand and Supply	4.35	
	Purchaseability	3.91	
	Brand visibility	3.66	
	Capital exposure	3.57	
	Lifecycle value	3.96	
	Area accessibility	3.50	
	Buyers	3.86	
	Tenants	3.41	

	Investment return	3.09	
	Inconvertibility of Local Currency	3.56	
	Foreign Exchange Risk	3.71	
	Devaluation Risk	3.26	
	Inflation Risk	3.69	
	Small Capital Market	3.81	
5. Political Risk	Political Groups/activist	3.55	
	Commercial Tax Policy	3.42	
	Local Tax Policy	3.28	
	Council Approval	3.65	3.96
	License Approving	4.25	
	Political Influence	3.97	
	Internal Resistance	3.25	
	Labor Resistance	3.63	
6. Legal Risks	Changes in Law and Regulation	4.35	3.69
	Inefficient Legal Process	3.35	
	Legal Barrier	3.41	
7. Transaction Risk (Bidding Risk)	Delay of Privatization Program	3.67	3.37
	Improper Privatization Program	3.73	
	Incapable Administration Body	3.42	
	Reluctance to Proceed	3.68	
	Too small Number of Interested Investor	2.35	
	Unfair Process of Selection of Private Investor	3.52	
	Unfair Selection of State Owned Interprises to Privatize	3.18	
	Unfavorable Investment Environment	3.39	
	Valuation of Asset	3.38	
8. Construction Risk	Delay Risk	3.67	3.28
	Cost Overrun	3.14	
	Project Management Ability	3.51	

	Completion Risk	3.24	
	Force Majeure	2.32	
	Technical Risk	3.92	
	Liability Risk	3.21	
9. Operations Risk	Associated Infrastructure Risk	2.91	3.36
	Demand Risk (Volume and Price)	3.76	
	Supply Risk (Volume and Price)	3.58	
	Imptoper Regulation (too loose or too tight	3.49	
	Management Risk	3.26	
	Price Escalation Risk	3.14	

Overall, Table 1.2 presents the ranking property development risk factors identified by respondents. Clearly political risk, technological risk,social risk and economic risk dominate this priority risk schedule. Of the 71 risk management strategies identified as being utilised throughout the property development process, the key strategies to mitigate property development risk were: (i) government policy, (ii) community acceptability, (iii) site conditions, (iv) unstability government, (v) property type, (vi) changes in law and regulation, (vii) license approving.

Table 1.2 : Ranking property development risk factors

Risk factor	Average risk rating
1st: Political Risk	3.96
2nd: Technological Risk	3.76
3rd: Social Risk	3.71
4th:: Economic Risk	3.70
5th: Legal Risk	3.69
6th: Transaction Risk	3.37
7th: Operation Risk	3.36
8th: Environmental Risk	3.34
9th: Construction Risk	3.28

IV. CONCLUTION

Property development is inherently risky, with a number of risks evident throughout the property development process. This sees property developers using a range of sophisticated quantitative and qualitative procedures to assess the various elements of property development risk. Based on a survey of leading property developers in Indonesia, this study has identified and prioritised the key property development risks as identified by the leading property developers in Indonesia. The most important risk factors; political risk, technological risk,social risk and economic risk were being seen as having the highest overall risk level in the property development process. Developers were seen to be using a wide range of risk management strategies throughout the development process. Overall, this study has added to the critical understanding of the risk management process in property development. Increased awareness and understanding of this complex process will see a more formal and rigorous assessment of risk recognition and the risk management planning needed at all stages of property development to mitigate these risks.

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