URBAN LAND CONSOLIDATION:
IN SEARCH OF ITS APPLICABILITY IN INDONESIA

by

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ABSTRACT

Urban land consolidation (or land readjustment/pooling), which has been applied extensively in Japan, South Korea, and Taiwan, is a self-financing method to convert rural land into urban land by consolidating the land, subdividing it into regular-shaped plots, and providing the necessary infrastructure. The landowners finance the work by reducing their plot size for infrastructure and for land sale to the public. With the provision of the infrastructure, the land value is estimated to increase significantly, and thus the land sale can cover the project costs.

Indonesia started using the method in 1981. However, it did not aim to self-financing projects. This was due to the absence of supporting legislation that enabled the project implementing agency to apply the method fully as practiced in the other countries. As a result, the projects relied heavily on government's budget and provision of infrastructure is very limited.

The aim of this thesis is to search the applicability of the full method in Indonesia. Based on the experience in Japan, South Korea, and Taiwan, the thesis identifies what aspects of factors Indonesia needs to have and what adjustments it needs to make.

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INTRODUCTION

Urban land consolidation is one method of land development used for years in countries like Japan, South Korea, and Taiwan. For example, in cities like Nagoya (Japan), Seoul (South Korea), and Kaohsiung (Taiwan) a large part of urban land has been developed by land consolidation. Basically, the method is used to convert rural land into urban land by consolidating farm plots (which usually have irregular shapes) and rearranging property lines so that plots have a better shape for urban development and produce an organized land subdivision. In the process of rearranging property boundaries, the project implementers set aside some land for constructing public infrastructure and for sale to the public in order to get money to pay for a project. The plots are now inevitably smaller than the originals, but their values are higher because they have public infrastructure.

Planners in Indonesia see that this method can help increase the supply of urban land at a cheaper price because the government does not have to buy the land for public infrastructure. The landowners give a portion of their land for the infrastructure in return for a significant increase in their land value. The savings from the land development
system is significant, particularly in a time of financial scarcity that Indonesia is facing now. This is one of the advantages of land consolidation that attracts the government of Indonesia to apply the system. In addition, land consolidation creates much less resentment against the government than the usual compulsory acquisition. However, I believe land consolidation will not attain its optimum benefit without the appropriate supporting conditions. Experience in Japan, South Korea, and Taiwan proves the needs of supporting conditions and mechanisms, such as regulations in land development and land taxation.

These appropriate conditions and mechanism are what Indonesia is still looking for in its early stages of adopting the system. The country implemented the system in 1981 somehow differently from Japan, South Korea, and Taiwan. After nearly a decade, it is time to review what Indonesia has done and what other things it needs to do to get the most advantage of the system. For this purpose, the country should take into account its own socio-cultural, economic, political, and institutional conditions. It would be disastrous to take a foreign system just like it is without any adjustment since different countries have different conditions that might affect the outcome of the system.

My main purpose is to find and formulate a mechanism of land consolidation that may be suitable for Indonesian
conditions in order to make the most advantage of the system. What are the parts of the mechanism that do not need alteration, what are the parts that do. Why, and what alternatives are possible? To answer these questions, I will structure the thesis in the following way. Chapter I is an overview of the general land consolidation system. In the first part of this chapter I will discuss the basic concept of land consolidation (not country-specific), its objectives and requirements. The second part will be the history of the system in different countries.

In Chapter II I will review current land consolidation practices. I will group Japan, South Korea, and Taiwan (as the countries from which Indonesia learns about the system) on one side, and lay out the mechanism they use to implement the land consolidation. On the other side is a review of the Indonesian experience with land consolidation, what mechanisms Indonesia uses, and what the results are. I will end Chapter II with a conclusion in which I will identify the similarities and relevant differences between the more experienced countries and Indonesia.

Based on conclusions in Chapter II, in Chapter III I will discuss those differences and other aspects of the system which may need alteration to be applicable to the Indonesian case, and how Indonesia should improve the system. Chapter IV is the overall conclusion of the thesis, and it will end with
policy recommendations concerning the appropriate mechanism of land consolidation in Indonesia, in addition to suggestions for further research.
CHAPTER 1
OVERVIEW OF LAND CONSOLIDATION SYSTEM

1.1 General Concept of Land Consolidation

Land consolidation has obtained several names such as land pooling (especially used in Australia), land readjustment, land replotting, and land reparcellegation since the system includes all these processes. In Indonesia the government uses the name land consolidation. For consistency I will also use this name throughout the thesis.

Land consolidation takes place when a group of lands in one area is replotted by adjusting the shape of the lands and cutting down the size of the original plots in order to provide space for public facilities (such as roads, sewerage system and parks) and other needs (see Figure 1). One direct consequence is the value of the land increases because the land now has services and a regular shape. At the same time the consolidation can be made to suit the city plans, resulting in an organized land development with integrated provision of public facilities.

From the government's point of view, land consolidation saves funds for purchasing land and providing public services. It also creates less resentment against the government than what compulsory acquisition usually does. From the land-
LAND REAJUSTMENT SYSTEM

Before land readjustment

After the project

Mr. A's land parcel

Mr. B's land parcel

Mr. J's land parcel

Roads

Parks

Reserve Land

Public Facilities

Construction costs
Relocation costs
Planning and management costs

Project implementation costs

Other Main Financial Resources
National subsidies and loans
Prefectural and municipal subsidies
Repayment of infrastructure costs
Loans to participants
Private loans

Figure 1
Reproduced from OECD (1986).
owners' point of view the system preserves their ownership, and what is more important, it gives them a profit as they expect their land value will increase much more than the cost they pay (in the form of land contribution for the public facilities). In fact, it is this expected surplus from unearned windfall gain that justifies the provision of public services by the land owners instead of by the government.

Who initiates the land consolidation project can be either public or private institutions, depending on the objectives of the project. The public initiators can be the city council or public corporations, such as the housing corporation. Usually their objective is to get land for housing and larger infrastructure installation (not just for the community that participates in the project). The private initiators can be the landowners themselves (usually through an association or a cooperative), or private developers. Their objective is to get profit, which is the difference between the value of their property before and after the consolidation project (Archer, 1984, p. 11).

The physical consolidation process (site replotting and infrastructure construction) becomes easier and faster, and thus it is likely to be cheaper, too, if the land is not yet developed (built up). Therefore land consolidation is usually applied to rural areas (farmland) in the fringe of urban areas, so there is no need to resettle residents. If,
however, the reploting plan requires that the project should tear down the existing buildings, all expenses and compensation to buildings' owners are included in the project's cost calculation. Such a case may happen when the land consolidation takes place in rundown or destroyed urban centers.

The attachment of the land consolidation project to urban areas, where main infrastructure already exists, is important, because the project can just connect its infrastructure to the existing one. Thus, the cost is lower. In addition, being a part of the urban areas will push the land value higher rather than if it is rural areas. In fact, one of the criteria to carry out land consolidation project is that the site should be ready to be urbanized, characterized by the availability of main infrastructure and has the potential for urban development.

The expected increase of land value should enable the project to be self-financing by selling a part of the land at the market value (after the project has been completed). The proceeds are used to recover the costs the project has to bear. Any surplus or deficit is shared among the landowners proportionally to the value of land they contribute to the project. Therefore it is to the landowners' interest that the project increases land value as much as possible. The higher the value, the higher the surplus.
A subsidy from the government depends on the types of public services provided by the project. If the services benefit other people than the participating landowners (e.g., highways), it will be unfair for the landowners to bear all the costs. This is an issue of "external" equity. Internal equity (among the landowners themselves) can also rise from the redistribution of the plots after the consolidation, whether what the landowners get match what they put in. This is why the land valuation system becomes very important in order to accurately calculate how much one gives in and gets out of the project for equity purposes.

1.2 History of Land Consolidation

In the late 19th century Germany started land consolidation in the rural areas. At that time, due to the inheritance division system during the Franconian era, the shape of the farm plots were irregular, long thin lines and thus inefficient for production (Minerbi, 1986, p. 11). The government applied land consolidation to rearrange the land boundaries to produce regular-shaped plots in order to increase efficiency.

The rural land consolidation practice was adopted to urban areas, particularly Frankfurt-am-Main, to provide public facilities. The mayor of Frankfurt-am-Main, Franz Adickes (hence the law was known as Lex Adickes), initiated voluntary
regroupment contract (Kuppers and Nishiyama, 1986, p. 34) in which the government exchanged its land with private land owners' when their land was considered suitable for public facilities. However, the practice did not always work well since landowners might not have agreed to do so, or asked for cash (at a much higher price) rather than land. A law on the land regroupment was then passed ("Act Concerning Regroupment of Property in Frankfurt-am-Main") and it came to force in 1903. The law allowed regroupment to take place when at least half of the owners agreed to it, and they would get monetary compensation when more than 30% of their land was contributed for public facilities. Over the years the percentage became 40% if the project was initiated by the property owners, and 35% by the city council (Kuppers and Nishiyama, 1986, p. 35). During the reconstruction period after both world wars, many cities in the country applied the system. In 1960 the regroupment law was included in the Federal Building Act.

Japan adopted the land consolidation system from Germany (known as tochi kikaku seiri in Japanese) during the Meiji era in the late 19th century. The government first used the system in the rural areas, too, for the same objective: to improve conditions of farmland and make the plots into regular shapes. The Agricultural Land Readjustment Act regulated the practice. In reality many of the land consolidation

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Different authors gave slightly different names and different
projects, however, were used for housing sites instead as the needs for housing were growing.

Being the capital Tokyo was the first city (and soon followed by Osaka, Kyoto, Kobe, Yokohama, and Nagoya) in Japan that applied the land consolidation system as one solution to the financial problems to develop the city (Nakamura, 1986, p. 18). By 1919 the system had become a general policy under the City Planning Act. From then on urban areas in Japan utilized land consolidation extensively, especially after the great earthquake in Tokyo in 1923 (3,000-hectare land consolidation projects) and World War II (28,000-hectare projects in about 120 cities). The Japan Land Readjustment Association figured that until March 1982, 286,000 hectare projects were implemented and 70% (205,000 hectares) have completed the replotted disposition (1986, p. 56).

Generally a land consolidation project takes from 6-10 years to complete, starting from the negotiation to get the approval of the landowners (of at least two-third of the landowners/lessees) and get the authority's approval, to the times, as noted by Nakamura (1986, p. 17). In addition to the ones he mentioned, I found Doebele (1982, p. 18) used the name Agricultural Land Conservation Act of 1899, Miyazawa (1982, p. 91) called it Agricultural Land Consolidation Law of 1899, Hayashi (1978, p. 23) referred to the Agricultural Land Readjustment Act of 1909, and Hanayama (1986, p. 20) referred to Arable Land Readjustment Law of 1899. Nakamura reasoned that it was a miscalculation in the process of translation.
redistribution of the newly-shaped lands. In some cases when the projects are large and complicated (i.e., they are located in already built-up areas), land consolidation projects can take up to 30 years to complete. This kind of project is usually initiated by the government. The size of the projects ranges from 18-168 hectares (Archer, 1986, p. 9).

In 1954 the government legalized the Land Readjustment Act that made changes to the practice of land consolidation. Before 1954 land consolidation was a way for landowners to improve their land value (thus providing public facilities were by-products). The new law reversed the priority and authorized government agencies to carry out land consolidation projects with the condition that two-third of landowners agreed. As a result public bodies became more active and often disregarded the will of the landowners (Nakamura, 1982, p. 9).

Another important change which was made in the 1954 Act was related to the land reduction and compensation. Before 1954 government compensated the landowners if their land contribution exceeded 15%. Now, the government would only compensate if the total value after consolidation was lower than the value before the consolidation. It was very rare that the government had to compensate under this Act because the land value increased significantly after the consolidation project. Opposition from landowners helped shift the program as it is today (see Chapter 2).
Under the Japan's colonization Korea and Taiwan adopted the land consolidation system. In Korea, with the passing of the Colonial City Planning Law of 1934, the system was applied nationwide, but it emphasized more on regularizing plot shapes than the provision of public facilities (Lee, 1982, p. 215). It was not until after-the-war reconstruction period that Korea really adopted the system for urban areas (Doebele, 1982, p. 21). Most of the projects took place in Seoul; by 1975 nearly 60% of urban development in the city was carried out by land consolidation (Hwang, 1977, p. 485). It has become the major method to provide urban residential land.

In the beginning of land consolidation application (until 1950s), the projects in Seoul were small and the major aim was to open roads for military uses. All costs and surpluses were shared equally among landowners, making no differentiation on the types of land they contributed. Usually the land reduction ratio was low (Lee, 1987, p. 213). In the next decade bigger projects were implemented with larger urban infrastructure. The costs for the infrastructure provision were burdened to the landowners but the share now was made proportionally to the benefits each landowner got. In the seventies the projects were ever larger (and took longer time to complete) and the reduction rate of the land was higher "under the rationale that national government was entitled to receive gains from the projects to same extent as landowner"
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(Kim, 1982, p. 130). The costs and benefits calculation also included more variables that might have affected land value, such as soil type and location.

In general landowners more or less accepted these changes since on the whole they still gained a significant amount of the increase of their land value after the project completion. However, the system is not free of complication. Speculation and inflation push the land prices up. Some landowners cannot wait for the large projects to complete so they sell their land to brokers who then reap the benefits. As a result, government has made changes in their policies on land consolidation today (see Chapter 2).

Taiwan also started the agrarian land consolidation before moving into the urban land consolidation. The agrarian land reform conducted earlier produced many farm plots which were too small to be efficiently cultivated. Therefore these small plots were pooled together to increase production by providing irrigation system and access to roads. This program was proved to be successful in the sense that yields increased more than the costs (Lee, 1982, p. 60). However, it was not until 1957 that the decision to adopt system for urban areas was made, and Kaohsiung, a rapid-growing port city used it for the first time (Chou and Shen, 1982, p. 69).

The population growth in Kaohsiung helped push a high rate of land subdivision in small and irregular-shaped plots.
At the same time the city did not have money to provide public facilities, particularly housing. Land consolidation was seen as one way to solve the problem. In fact without land consolidation the government estimated that with their financial conditions, they would have needed 200 years to develop the city as it is now (Hsieh, 1986, p. 67).

The existing Land Law allowed this practice although at that time the law did not cover some important issues that needed to be regulated, such as the calculation of the contribution and redistribution of the land. Rather than using the self-valuation system that was allowed by the law for taxing purposes, a special body assesses the land before and after project.

The landowners welcome the system since it increased the land value. In some major projects landowners were even willing to contribute more than 40% of their land (which is the limit allowed by the law). The vacant land for sale was able to meet the costs. The government basically did not have to finance the projects, and financial institutions lent money for the projects because they could be assured that they would get it back from the land sale.

From the history of the four different countries which have a lot of experience with the system, land consolidation had derived from agricultural necessity. When the system was applied to urban areas, changes had been made to suit the
urban conditions. On the whole there was hardly any resistance from landowners against the system. If there were, "many objections stem from the shortcomings of explanations by executors or from the lack of skilled persons in executive agencies" (Miyazawa, 1982, p. 104).
CHAPTER 2
CURRENT PRACTICE IN LAND CONSOLIDATION

2.1. Japan

Japan is the country that has applied the land consolidation system most extensively. More than 100 cities in the country have used the system, particularly Nagoya which has developed 90% of its built-up areas through consolidation (Misra, 1984, p. 162). The land consolidation is so dominant as a tool for urban development that it has earned a reputation as "the mother of city planning" (Hayashi, 1978, p.1). On average it has also increased the public facilities on the project site from 11% to 28% (Miyazawa, 1982, p. 92). However, with today's high land prices and inflation, people start questioning whether the system is still as powerful as before.

2.1.1. Implementers

The major implementers of land consolidation projects are local public bodies and landowner associations. By 1979 in terms of project area each had a share of 42.3% and 29.5% respectively (Miyazawa, 1982, p. 93). The rest was shared among individual landowners, administrative agencies and public corporations.
Public bodies were particularly active after the introduction of the Land Readjustment Act of 1954 when the country was still developing its urban areas. A lot of big projects, such as highway construction, were undertaken. However, many landowners complained that the government often disregarded their will and projects like highways were somehow detrimental to their living environment, and yet they had to contribute their land (Nakamura, 1982, p. 12).

With these complaints and the fact that the government had completed major infrastructure installation, the 1970s showed a shift in land consolidation practice. Since that time private institutions, in this case the land consolidation associations, have become more active and taken the opportunities to make profits during the fast urbanization. They see that big cities have limited space to accommodate the cities' activities. Therefore, the land consolidation associations concentrate more on the suburbs and small to middle size cities adjacent to the big cities to catch the urbanization spillover.

2.1.2. Procedures

At the initial stage the implementers choose the site (usually within the designated urban promotion area) and make sure they get the support from the landowners. The law requires at least two-third of the landowners (in terms of
number and acreage) should agree with the project. To get this support, implementers should campaign and give intensive information about the project and its benefits.

Landowners should at least agree how much land they should contribute, which they will do only after they know how much they will get from the project in terms of the increase of their land's value. Thus, implementers should value the land at this stage. Usually they use evaluators from the tax office, banks, and professional evaluators (City of Nagoya, 1982, p. 33). Landowners should get a compensation if their land value before the project is higher, but this case rarely happens (Nakamura, 1982, p. 9).

To carry out the project, implementers must get a permit from the prefectural governor, or other superior authority (depending on the kind of project and implementing institution). Implementers submit the project programs, including the rules and regulations all related parties should follow. The program should include the:

- location of the project
- objective of the project
- reasons for choosing the site
- the time period
- the budget and the fund's source
- the replooting and allocation plans (including plans for public facilities), and
- methods of the land sale.
In making the program, the implementers should also make sure of the details of the site, such as who owns what and where. The plans for public facilities should take into account the future demands or expected development, especially for big projects.

Upon receiving the proposal, the prefectural office examines that what is written in the program matches with the official records, such as the property ownership. If it is not, the implementers should make corrections as necessary.

The next step is to exhibit the project program to public for two weeks in case there is any objection. If there is an objection, the implementers should revise the program. Once the implementers get the landowners' and authority's approval, the project can start.

2.1.3. Land Valuation, Reduction and Replotting

The basic principle in replotting the land is that as much as possible the new land should be the same as the original in terms of location and characteristics, and its value should be proportional to the original. The land is assessed using a certain index number which weighs the land use, location, and other factors that may affect the land value.

Conflicts may arise during the replotting. Some landowners may manage to get more favorable location and some
may not be satisfied with what they get. Negotiation among landowners is important, and implementers must be able to persuade them to accept the new lots, which, in large projects, may be far from their original location (flying replotting). Hayashi likens this process as "sharing pieces of applepie [sic] among friends" (1977, p. 37).

2.1.4. Financing

For projects initiated by private sector, cost-equivalent land is the major source of revenue. Implementers can borrow money from the government (interest-free) for 5 years. The government gives the loan based on an average per square meter of the project. Private banks, Japan Housing Agency, and Japan Development Bank also provide loans (Hayashi, 1978, p. 38).

For projects initiated by public sector, besides the ordinary budget of the implementing agency, there are also subsidies from local or national government. Usually the project's beneficiaries are more than the local community, so it will not be fair to ask the local community (landowners) to bear all the expenses. Highway construction is a typical example of this kind of project. Both local and central government share the costs. There is no land reserved for sale. The landowners contribute their land only for the highway construction.
2.1.5. Conclusion

There is more opposition from landowners when the public bodies are the implementers since the implementers' main objective is to get free land for infrastructure, regardless of the landowners' will. In the case of landowners as the implementers, usually the conflict is between the large and small landowners. Large landowners who can see urban development will increase their land value are more enthusiastic and thus use their influence to carry out the project. They can spare their land for reduction and even sell parts of it and reap significant gains. Small landowners may be forced to leave the site if the reduction makes their plots too small to develop, although they may either get a compensation or priority to buy a larger plot after the project by paying the difference in cash (Misra, 1984, p. 163).

In areas where the land prices are going up fast, landowners may also object the system. They prefer individual development (without land reduction). They do not see any need to participate since their land value will increase anyway. On the other hand, if land prices are moving slowly, landowners welcome the land readjustment because they know it will soon increase their land value.

The basic objective of land consolidation is to increase the supply of urban land which then will lower the land price.
However, the taxation system becomes an obstacle to achieve this objective. The tax on agricultural land can be as low as 2-3% of residential land next to it. Therefore, it becomes a strong incentive for landowners to keep their land as farmland rather than residential land—even after the land consolidation. They hold on to their farmland in the cities to speculate for a price increase (which is inevitable since land is kept out of the market), although farming is not their source of living (they are known as "weekend farmers"). In metropolitan areas of Tokyo, Osaka, and Nagoya,

...there are 63,000 hectares of farmland inside urban-development districts, including 40,000 hectares of high-priced agricultural plots that have been designated "taxable as residential land." The purpose of this classification is to encourage the conversion of farmland into housing lots by raising taxes. But strangely enough, only 14% of these plots are actually being taxed at the residential rate; the owners of the others pay only trifling amounts. They have taken advantage of a loophole in the system that allows them to apply for exemption from higher tax rate by declaring their intention to continue farming for the next 10 years (Nakajima, 1987, p. 19).

In land consolidation projects only, 18,400 hectares of land are vacant (OECD, 1986, p. 58).

In this situation the urban land supply is artificially stagnant if not diminishing. The price becomes extraordinarily high. In turns the situation will lead to urban sprawl because people need more land. Without a supporting law of higher taxes on farm land or a compulsion to build on vacant land, land consolidation cannot do much to increase land supply and decrease land prices.
Keeping it in the family: The tax system induces owners of urban farms to hold on to their land even if they must leave the work to spouses or other relatives.

Holdouts: Unless more of these small farm plots are put on the market, land prices in metropolitan areas will rise to even more exorbitant levels.

2.2. South Korea

The South Korean government’s efforts to spur industrialization in Korea in 1960s had pushed urbanization, especially in major cities like Seoul. One obvious consequence was the need of urban services, particularly housing, but for the government housing was a lower priority at that time since the government was putting its resources more to industrialization. Little financial support from the government to provide urban services pushed the implementation of land consolidation, especially in Seoul.

Just like Japan, urbanization in Korea has made extensively used of land consolidation. In fifty years (1934-84) there have been 397 projects (58 or 15% of them in Seoul) that covered 43,580 hectares (13,984 hectares or 32% in Seoul). More than 80% of the Seoul projects was done in 1960s and 1970s (Lee, 1987, p. 213). In fact, "without LR [land readjustment], Seoul might not have been able to accommodate successfully the enormous influx of migrants..." (Hwang, 1986, p. 22).

2.2.1. Implementers

Like in Japan, implementers of land consolidation projects can be individual landowners, landowner associations, public corporations, and central (Ministry of Construction) and municipal governments. Until now, municipal government
has been the major project implementer. In smaller cities, though, landowners have become more active to initiate a project.

2.2.2. Procedures

In the planning phase the implementers choose the site (in area which has been designated for land consolidation by the Ministry of Construction) and negotiates with landowners to get their approval. At least two-third of the landowners (in number and area) must agree. Once both sides agree, the implementers announce the project and give the public two weeks to review the plans. The plans are then submitted to the Ministry of Construction to get its approval.

The next phase is the development of the project. When necessary, existing buildings are demolished and the site development works start. The last phase is reallocation of the plots. Landowners register their new plots. The last phase ends with the cash adjustment among the landowners (the difference of what they should get and what they really get).

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It is not unusual for local government initiated projects to start before they obtain a formal approval from the Ministry of Construction since local government assumes the ministry will approve (Hwang, 1986. p. 289).
2.2.3. Land Valuation, Reduction and Replotting

Today replotting is determined by the value of land each owner contributes. All possible factors that might affect the value of the land are considered before putting up the real value of each plot. However, the assessment, although it is much refined now than before, does not always accurately reflect the market value (which is the "true" value of the land). Negotiation with landowners are important then. The implementers have the obligation to listen to suggestion and complaints from landowner participants and act accordingly.

2.2.4. Financing

In South Korea land consolidation projects are practically self-financing, even though they often involve construction of large infrastructure. Government seldom gives subsidies (Hwang, 1986, 289). Yet, both government (usually the city) and private institutions can give a loan to the project which will be paid back after the cost-equivalent land is auctioned. In Seoul, surpluses from the projects are put into a special fund which is used to help finance the next projects (Kim, 1982, p. 149).

2.2.5. Conclusion

Little subsidy made the Korean projects (which were primarily for network infrastructure and housing land supply)
very much dependent on cost-equivalent land. The dependency leads to large-scale projects. "...the ten LC [land consolidation] projects in Seoul completed during the period 1971-80 (mainly by the Seoul City Government) averaged 282 ha each" (Archer, 1986, p. 12).

The heavy dependency on cost-equivalent land has resulted in some drawbacks. First, the land reduction ratio becomes too high (as high as 68.3% in one project in Seoul which started in 1982) and landowners show strong resistance against this. Second, spaces for public facilities become smaller. Third, there is land speculation in and around the projects—landowners leave the land vacant for capital gains between transactions. In addition, since land contribution and redistribution was based on size rather than value, internal inequity in the benefit often happens.

The large-scale projects also have their obstacles. Korea has limited arable land and this land is fragmented into small holdings which can make land replotting more complicated. Other than that, many owners cannot afford to wait for the completion of large projects so that they sell their land to speculators (Archer, 1984, p. 14). Almost half of the projects took more than 10 years to complete.

The drawbacks somehow decline the land consolidation's popularity in the 1980s. The government decided to rely less on it and diverse the use of land development system with
negotiated and compulsory land purchase. It also changed into land valuation method in calculating the land contribution and redistribution. However, in its large-scale project to produce land for low- and middle-income housing, the Korea Land Development Corporation decided not to use land consolidation system because the increase land price on the site (due to speculation) plus all the procedures "made them an unsatisfactory source of moderate cost land for housing development" (Archer, 1986, p. 12). Yet, in smaller cities (than Seoul and Phusan) land consolidation is still being used.

2.3. Taiwan

After the first urban land consolidation project in Kaohsiung, only 11 projects of 385 hectares were carried out until 1971 since the government gave its priority to rural areas, in addition to lack of skilled personnel. However, from 1971 to 1978 nineteen local governments managed to initiate 49 projects which covered 2,175 hectares, and nearly 45% of the area was in Kaohsiung. By the end of 1985 urban infrastructure was financed without the land consolidation. It could have been included in the budget for the whole project and the sale of the houses was expected to recover the costs.
land consolidation in Taiwan had covered 6,429 hectares and 68% (4,389 hectares) of it was for buildings (Hsieh, 1986, p. 73).

In theory there are voluntary and compulsory measures the government can take to implement land consolidation projects, but as much as possible the government uses the voluntary measures to avoid opposition. On the other hand, government may also carry out the project by the request of the landowners. The law requires that at least 50% of the landowners (in number and area) should approve before the project can go on. If there are objections, the government should take them into consideration and make necessary revision. However, under the pretext of public interests, the government has the final say for the project implementation (compulsory measures).

2.3.1. Implementers

City government (especially in Kaohsiung) is the dominant developer. Starting in 1979 the law authorized landowners to form an association to carry out land consolidation projects. By the end of 1985 they had carried out 25 projects which covered 89 hectares (an average of 3.5 hectares/project). The government even provides some tax and charges exemption to encourage the associations. However, "leaseholders are neither allowed to carry out urban land consolidation projects
nor provided with rights to claim their rights on urban land consolidation program" (Hsieh, 1986, p. 8).

2.3.2. Procedures

Basically the procedures are similar to those in Japan and South Korea. The implementers survey the area, make plans and negotiate with landowners to get their approval. To avoid speculation and complication, landowners are also requested not to do any construction on the land nor transfer its ownership (except for inheritance). After they have approved, the plans are submitted to the provincial government for official approval. The next step is to announce the plans publicly, and if within 30 days there are no objections, the implementers can proceed with the project preparation, make detailed designs, and calculate the cashflow.

The criteria of site selection is also more or less the same. The crucial criteria is that the estimation of the land value increase should be enough to recover the project costs. The land reduction should not exceed 40%. Future demand of the land development in the area should also be considered. Implementers should take into account the potential development of the site, and the plans should conform with the city plans.

Size is another criteria included in the site selection. The project should not be too large for fear that it will take
too long to complete and landowners may not unable to wait. Today, except for projects initiated by landowners (which are much smaller), the size generally ranges from 70-100 hectares (Hsieh, 1986, p. 14) which is much larger than it was in the initial stage.

2.3.3. Land Valuation, Reduction and Replotting

In replotting the land implementers should make efforts that the new plots should be similar in location and characteristics to the original. The main consideration is the total value of the land before and after the project. The Committee of Urban Land Appraisal assesses the plots. It applies a rule-of-thumb coefficient for different land type (based on location, accessibility, topographical conditions, etc.) to decide how much each landowner should contribute and get back their land. The method of the assessment is announced to public.

In cases where a landowner has more than one plots and they are all above the designated minimum size, the landowner gets the same number of new plots. If the plots are below the minimum size and thus have to be combined, implementers should try to locate the combined new plot in the location of the original largest plot. However, this matter is subject to negotiation.
2.3.4. Financing

Private sector (i.e., Urban Land Consolidation Association) can get a loan (from the Equalization of Land Rights Funds) at a low or even be exempted of interest rate, depending on the type of project they are doing. Other financial institutions can also lend the fund to be repaid after the project is completed. If the project is initiated by the government, the capital layout is the budget of the relevant agencies.

2.3.5. Conclusion

So far the system has been a success with the landowners. The government has made a lot of efforts to explain about it so that the landowners understand what benefits they can get. The good understanding helps reduce the chance of speculators to step in and reap the benefits which are not theirs (Doebele, 1982, p. 90). However, what the government feels as a problem now is the insufficient number of skilled personnel to manage and coordinate the project implementation. On average a project takes about 3 years to complete. The size of the completed projects range widely (at least in Kaohsiung), from .7 to more than 300 hectares although the majority have been a medium size, between 40 and 72 hectares (Archer, 1986, p. 15).
2.4. Indonesia

The first land consolidation project in Indonesia was proposed in 1979 and was not carried out until 1981. It was located in Denpasar, Bali (see Appendix 1). Since then the government has implemented nearly 40 projects covering about 1,800 hectares in sixteen provinces (Bray, 1988, p. i). However, there are certain basic differences in the concept of the land consolidation Indonesia is applying.

The major difference is that land consolidation projects in Indonesia is not self-financing because they do not have the cost-equivalent land. So far, only one reported project is considered to be "self-financing." It was a 7.7-hectare project in Bandung, initiated for the first time by the Center for Land Research and Development (under the Ministry of Home Affairs) with the local planning agency. In this project, the local government got land for its offices as a reimbursement for the funds the government had spent on the project (see Appendix 2).

Another aspect that distinguishes the Indonesian system with the one in Japan, South Korea, and Taiwan, is that the Indonesian projects do not include infrastructure construction. What the projects do is just organizing the layout in the site, basically reassembling the plots, then putting the grids for roads and other public facilities. On
average, each project has a reduction rate of 20% for this purpose.

The main reason the projects do not have cost-equivalent land is because there is no law that enables the project implementers to get the payback, and it becomes more a delicate problem since the implementers have always been government offices. Without the cost-equivalent land means the project does not have revenues, and without revenues, the project cannot afford to construct the public facilities.

All this time the government has carried out the projects without any legal regulation. Each implementing agency has only a sketchy guideline. Without a legal support, there are a lot of things the agency cannot do, and it becomes more difficult since people are not familiar yet with the program.

2.4.1. **Implementers**

So far all the land consolidation projects in Indonesia have been initiated by the government offices. Different offices have tried to carry out the projects. The Center of Land Research and Development, is now carrying out a pilot project in Bogor (they completed the one in Bandung which attempted to get a cost-recovery land for the first time as mentioned above). The Ministry of Public Works (the Housing Agency) has also initiated a few projects. Other provincial-level offices might have been doing the same thing with their
own budget, although there is no official report to the national-level office (there is no coordination on land consolidation program—each agency works within their area of responsibility). However, the most active implementer so far has been the Directorate of Land Reform, under the Directorate General of Agrarian Affairs, Ministry of Home Affairs."

In practice the Directorate of Land Reform, with its offices at different government levels, work together with other local offices to form a team to implement the project. This team usually includes the planning offices, public works offices, agrarian offices, the taxation offices, and other local authorities. By the 1986/87 fiscal year the Directorate of Land Reform has implemented 32 projects in 16 provinces and another 8 projects are still in progress (Bray, 1988, p. 3).

The main responsibility of the Directorate of Land Reform is to manage land use and ownership. Naturally, in its land consolidation projects its objective is not to service land, but rather to manage land by creating an organized layout (mostly for residential purposes), producing free land for

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3The Directorate General of Agrarian Affairs was dissolved last November as the President created a special body to manage land affairs. The new office is named National Land Agency and it is directly responsible to the President.

4Basically, the discussion of the Indonesian land consolidation in this thesis refers to the projects initiated by the Directorate of Land Reform, as they have the most data relative to the other initiators.
public facilities, and registering the plot ownership. Infrastructure provision is not the agency's responsibility, and the agency cannot afford it, anyway, since the projects do not have revenues from the cost-equivalent land.

The agency itself is still unsure of the people's willingness to give up more land, and it has no authority to enforce it. What usually happens is, the local public works agency (which is included in the project planning) builds the infrastructure by using its own traditional budget. Thus, the interest of the implementing agency is reflected in the objectives of the project. However, cooperation with the Public Works is always possible. For example, the project in Lumintang, Bali, was carried out at the request from the Public Works agency, because this agency had problems to acquire land for their bypass ring-road project.5

2.4.2. Procedures

The Directorate General of Agrarian Affairs puts the implementation of land consolidation projects into two phases. The first phase ends with the landowners signing the release of their right on the land to the project

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5The Directorate of Land Reform reported that as a result of the Lumintang land consolidation project, the Public Works agency saved 50% of its initial budget for land purchase.
implementer/government. The second phase ends with the landowners getting back their titles on the new land.

During the first (preliminary) phase the agrarian office at the provincial and sub-provincial levels work together to identify the project site. The result leads to preliminary discussions with local officials and landowners. If the landowners agree to the basic principles of the project, they release their rights to the government, and then the implementers get a preliminary approval from the head of the local government (the regent or mayor).

With the regent or mayor's approval, the implementers prepare a proposal to get funding from the national-level office to start the second phase. The implementers then describe the project in more details to the landowners, prepare a detailed map of the existing plots with their values, and identify the owners of each plot.

Once the funding is granted, the second phase (the implementation) starts. The Directorate General for Agrarian Affairs on behalf of its Minister issues a decree to confirm the project and provide the fund. The implementers measure and evaluate the plots, then design the site layout and get the landowners' approval with all the necessary negotiation for the replotting. The plots and land for roads are marked out. The governor then issues a decree on the replotting. The agrarian office registers the rights of the new plots and issues the certificates to the owners.
2.4.3. Land Valuation, Reduction and Replotting

In the beginning the Directorate of Land Reform used the area method for replotting. The plot value was not taken into account. The rate of reduction could vary within one project. Those who contributed the most got a land by the widest road.

Using the area method only the agency found problems to get the landowners' agreement. In addition, landowners put more emotional attachment to their land. Many refused to have flying plots, or insisted to keep some parts of their old plots. This was why some of the plots had slightly irregular-shapes, or the plots were divided into smaller ones, or the public facilities were not located in the best place, in exchange of the limited flexibility to replot the land.

Usually in reduction and replotting negotiation, the implementing agency always tried to revoke the community spirit among landowners and persuade the local community leaders to agree first. The Bandung project, however, applied both the area and value method for replotting. It could be the first that used the value method (it started in 1984 and finished in 1988). So far, no complaint is reported.

2.4.4. Financing

The Directorate General for Agrarian Affairs have funded the land consolidation it initiated, using its traditional
budget. The costs covered the preliminary study and the works for preparing the plans. Landowners only contributed land for public facilities. The construction of these facilities are carried out by the relevant agencies (i.e., the public works offices) using their conventional funds, not the project's. Therefore the works depend on the agency's budget and timing or priorities (Archer, 1986, p. 21). As there was no reserved land for sale, there was no revenue outside what the government provided.

The project costs also cover the land registration and certificate issuance. An official at the Directorate of Land Reform said that it was in exchange of the landowners' participation in the project (Djaja, 1986, p. 8). However, if the land title was not clear—in this case the State takes over the land—the "owners" had to pay for the land and the registration as stipulated in Regulation No. 224 of 1961 (on the redistribution of land in the Agrarian Land Reform Program).\(^5\)

2.4.5. Conclusion

There is no figure about the rate of registered land status in the sites before the land consolidation project,\(^\text{--}\)

\(^5\)Some projects outside Java and Bali involved the state's land which has been occupied by the local people. With land consolidation, the land was redistributed to these people with clear title.
although in general project reports mentioned problems of unclear titling. The problems usually concerns with identifying the landowners. There are cases when the project implementers have to negotiate with more than one owners for one piece of land when the land is inherited to more than one persons, and it becomes more difficult when not all the owners are living in the area.

Obviously, unclear land titling slows down the project implementation. However, once land consolidation is implemented, the project improves the land registration rate since at the end of the project all landowners get the new plots with the land certificates. The rate of registered land in urban areas (except Jakarta) is estimated between 10% to 15% (DHV, 1986, p. 27)—and in rural areas usually the rate is lower. If we assume this rate applies to the project sites, then land consolidation improves the condition significantly. Thus, land consolidation system helps create clear land titling.

Despite the factors that slow down land consolidation projects in Indonesia, the projects take only about two years to complete, much shorter than those in other countries. No construction of major infrastructure may be one of the

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The improved land title (besides the public facilities) might or might not help increase the land price. Further study is needed to determine its role, if there is.
reasons. However, with the obligation to get 100% landowners' consensus, and at least four projects (with a size of 32.4, 55, 83.7, and 95.8 hectares) involve more than 700 to 900 landowners, Archer finds the speed is quite impressive (Archer, 1986, p. 21).

Most of the projects have been in small towns. On one hand, they might have the advantage of easier identifying of the landowners. In the case of the absence of any formal proof of landownership, people still accept a claim on land based on customary law or the confirmation of the neighborhood authorities or elders who are considered knowledgeable about the history of land in the area. On the other hand, being in small cities the sites may not be ready for urbanization--one of the accepted criteria of choosing a land consolidation site. In fact, in some projects many plots are still being used for farming after the consolidation. This rural characteristic of the site may "justify" the implementers for not seeing the needs to construct roads and drainage system.

Implementers might not have applied clear criteria for site selection. The Bandung project report said that the site was chosen more because there was land available for the project, rather than because of some criteria. This kind of policy might not produce favorable results--that the projects cannot sustain potential development--particularly if the towns are growing fast or have the potential to get larger.
Early experience in Korea should become a warning. Lee noted that in the colonial period in Korea:

Since the projects focused primarily upon regularising the shape of the plots and realigning the circulation systems, the provision of essential urban public facilities through the projects was severely limited and some of these areas are now again under consideration for redevelopment (Lee, 1987, p. 215).

Even well after the colonial period, the limited public facilities (because landowners resisted higher reduction rate) may result in a lower quality of life for the later inhabitants in the site (Kim, 1982, p. 142). Indonesian projects could head the same direction, which is not desirable.
CHAPTER 3
ADJUSTMENTS FOR INDONESIA

Based on the experience of the other countries (Japan, South Korea, and Taiwan) and of Indonesia, there are some crucial issues Indonesia should address to move further with the land consolidation and optimize the system. These issues are related to the (1) enabling legislation, (2) cadastral conditions, (3) financing, (4) preventive measures against speculation, (5) land valuation, reduction and land replotting methods, and (6) training.

3.1. Enabling Legislation

Japan, South Korea, and Taiwan have had laws and regulations on or related to land consolidation practices since the early stage they applied the system. In the beginning Japan had the Agricultural Land Readjustment Act of 1899, South Korea had the Colonial City Planning Law of 1934, and Taiwan had the Land Law of 1930. As they move along, they pass other laws and amendments that are more suitable to their conditions, so that they are able to make better use of the system.

Indonesia, on the other hand, does not have adequate regulations that might authorize the land consolidation
practices. However, the government (in this case it is the Directorate of Land Reform under the Directorate General of Agrarian Affairs) was pretty sure of the benefits of land consolidation and realized that producing applicable laws and regulations would take a long time. Therefore, it decided to proceed with the system despite the unavailability of legal support (Djaja, 1986, p. 2).

Without the enabling legislation the government does not have any choice but getting a total consensus from the landowners to carry out a land consolidation project. There is always a chance that some landowners do not agree. The government has taken a lot of time to negotiate with all landowners and it often has to give explanation to individual landowners (Djaja, 1986, p. 8), or else the project cannot be implemented. Thus, it is necessary to set up a regulation that requires less than 100% consensus from the landowners because it will speed up the implementation and reduce the risk of project rejection.

Japan and South Korea require two-third of the landowners to approve before the project can proceed, while Taiwan requires only more than a half. As the system is new in Indonesia, government should avoid drastic measures. It would be preferable to follow the Japanese and South Korean two-third requirement although both "over half and two-third requirements" are recognized in Indonesian legal system. For
example, to change the constitution, two-third of the members of the People's Assembly should be present and at least two-third of them should agree; if there are more than one presidential candidates, more than half of the members of the People's Assembly should agree.

The legislation should also regulate the procedures of land consolidation practices in details and yet flexible enough to the different conditions in different areas in the country. It should create a standardized guideline that will help the implementation move faster and more efficiently. Issues like the criteria for site selection, minimum new plot size, maximum land reduction rate, cost-equivalent land, subsidies, minimum provision of public facilities, compensation, equity, and implementing institutions should also be addressed explicitly since they would otherwise create problems.

Land issues have always been crucial. Politically, they have been sources of agrarian discontent in Indonesian history. Their sensitivity has resulted in ad hoc improvements and solutions, rather than a complete treatment. Moreover, the government has been giving higher priorities to economic growth, particularly in the New Order period (after 1966). Yet, the development of the country has brought land issues back, and they have become more pressing, thus demanded serious treatment.
Urban Land Consolidation: 
In Search of Its Applicability in Indonesia

The creation of the National Land Agency is an evidence of the serious needs to deal with land issues. By making the land agency (previously the Directorate General for Agrarian Affairs) as an autonomous body, responsible only to the President, and with offices at every government level, land issues will get a larger political recognition. Land consolidation can benefit from this change since many of the personnel of the new agency are from the old agency, and we can expect them to have the same strong commitment to land consolidation system.

3.2. Cadastral Conditions

Despite the impressive speed of project completion Indonesia has shown, clear land titling and good cadastre will even make land consolidation move faster. The time and cost spent on the needs to find out who owns what, where, and how much will be much reduced. Project implementers can be sure with whom they should negotiate and quickly determine whether they can proceed with the project. They deal with only one person for at least one plot of land.

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Of 171 complaints people reported to ruling faction in the Parliament during the period of 1982-87, seventy percent are related to land issues (Tempo, 1988, p. 22). Recently some disputes on government land purchases and fake land certificates have become national news.
Compared with Japan, South Korea, and Taiwan, Indonesia still has a lot of problems with its cadastre. It does not have an up to date landownership database, and there is no sufficient supporting technical and administrative skill. As I mention in Section 3.1, the Indonesian government did not give priority to land issues until lately. The Basic Agrarian Law of 1960, which is the major land law in the country, is not even fully implemented until now. The law requires that all land be registered, and yet only "a very low percentage of land is titled, and throughout the country there are a very large number of small individual parcels of land and also a large number of individual owners" (MacAndrews, 1986, p. 79).

There are several major factors attributable to the cadastral conditions, such as:

- The Basic Agrarian Law does not impose a time limit for registration (MacAndrews, 1986, p. 27).
- People consider the cost they have to pay to get the certificate of title is too high, and they still have to pay bribes.
- The process is cumbersome and therefore takes a long time. The government may say that it needs only 3 to 6 months to get a certificate, but in practice it takes more than a year. Inefficient bureaucracy, the need to bribe at various level of offices, lack of adequate and qualified personnel throughout the country contribute to the delay.
Dishonest personnel take part in creating fake land certificates (one plot may have three certificates for three different owners, or there may not be any plot at all).\(^2\)

In addition to the disincentives above, people still feel secured with the customary land law, or some statement from the neighborhood authorities or elders saying the land is theirs. This is very much in practice in small towns. People do not see an immediate need to get a land certificate. When they have extra fund, they would rather use it for housing improvement or other necessities (e.g., business, education). Registering the land to get a land certificate is not a priority.

3.3. **Financing**

One of the basic principles of land consolidation is the system's ability to be self-financing. In fact, this the principle that mainly attracts the governments of Japan, South Korea, and Taiwan to implement the system. As I discuss in Chapter 2, this is exactly the ability that the Indonesian government do not make use of, except in the Bandung project.

\[^2\]The business lead to criminal acts that have involved billions of rupiahs. More than 1000 fake certificates have been found in Jakarta and Bekasi (a small city adjacent to Jakarta).
The Directorate General for Agrarian Affairs which has been the major implementer reasoned that since people are not yet familiar with the system, it is better to get people's participation in stages, thus the government only implements the "basic" land consolidation (Djaja, 1986, p. 2). The early stages of people's participation is the contribution of their land for public infrastructure (mostly roads), and the "basic" land consolidation is to rearrange the plots and put it grids. In addition, the Directorate General for Agrarian Affairs does not have legal power to take land from the project and sell it to recover the project costs, apart from the fact that people might not be willing to give up more land for cost recovery since the government usually provides the public facilities at no cost to the landowners (Archer, 1986, pp. 19, 21).

In such conditions, land consolidation projects in Indonesia have been totally subsidized (except for land provision). The implementing agency uses its traditional budget to finance the administrative work, replotting, and compensation. The Public Works agency finances the construction of public facilities.

The practice clearly has missed the most important part of land consolidation system, which is self-financing. Again, the situation shows the urgency to have legal forces to regulate and implement land consolidation with clear objectives. Instead of just managing the land use, as what the Agrarian office's objective is, cost recovery should also be included
as the main objective, and to assure the cost recovery, provision of infrastructure is vital. The available data (Table 1), though they are not complete, show the high increase in land value after the project. This unearned capital gains justifies the government to tap the landowners' profit more by increasing the reduction rate for cost recovery.

Table 1
Increase in Land Value in Indonesian Projects

<table>
<thead>
<tr>
<th>Location</th>
<th>Land Value (Rp '000/m²)</th>
<th>Land Reduction (%)</th>
<th>Increase in Value (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before</td>
<td>After</td>
<td></td>
</tr>
<tr>
<td>Denpasar, Bali</td>
<td>10</td>
<td>50</td>
<td>17</td>
</tr>
<tr>
<td>Tarok Dipo, Bukittinggi</td>
<td>10</td>
<td>40</td>
<td>11</td>
</tr>
<tr>
<td>Lumintang, Badung</td>
<td>12.5</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>Tengah, Bogor</td>
<td>7.5</td>
<td>20</td>
<td>28</td>
</tr>
<tr>
<td>Painan Timur, Painan</td>
<td>2</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Babakan Surabaya, Bandung</td>
<td>17.5</td>
<td>50</td>
<td>27</td>
</tr>
</tbody>
</table>


The references do not clarify whether these prices are nominal or real. The years of the valuation are not clear, either. Average rate of inflation from 1981 to 1987 is 9.6%. Bray (1988, p. 48) acknowledged that the data "appears to be based on spot surveys and anecdotal evidence," as there has been little monitoring.
The main strategy is how to sell the idea to the landowners, convince them of the advantages and disadvantages of participating or not participating in the project. It is also necessary to note that the land parts chosen for cost recovery should be attractive enough to sell quickly so that the risk to have an idle investment can be minimized.

In the case of advance financing, the projects can borrow money from public and private financial institutions like any other business, using the land as collateral. This is "business," so careful feasibility study should be carried out to see whether the projects can pay off. The implementers, supported by the landowners, should be responsible for the repayment. The practice of borrowing a loan by and from local government is not common in Indonesia, however, the Ministry of Finance is proposing the Regional Development Account to channel loans from the central government (Bray, 1988, p. 61).

Certain kinds of project may deserve a government subsidy, and the regulation should clarify these criteria. The basic argument to get a subsidy is "fairness"—that those who benefit must pay. If larger communities (other than the participating landowners) can also enjoy the benefits of the project, then they should pay through government subsidies. Such projects may include building schools, clinics, river embankment, artery roads, etc.†

†For general criteria, Introduction to Land Readjustment
The subsidy can come from the central or local government, again depending on the beneficiaries the project can cover (usually it correlates with the project size). The government can carry out some parts of the project as a direct subsidy, or it can provide grants, interest-free or low-interest loans as an indirect subsidy.

3.4. Preventive Measures against Speculation

A fast increase of land price will certainly attract speculation, which will even push the price higher because the land is being taken out of the market. The community at large has to pay for an unnecessarily higher price.

In general there are two types of land speculators around the land consolidation projects. The first are the original landowners themselves. They have no intention to develop their land because it is more profitable to keep it that way while waiting for the price to go higher. The second type speculators are the non-landowners. They buy the land from landowners and wait for a much higher price before they sell it. Thus, they get the capital gains (not the displaced landowners) with hardly any efforts.

(Kukaku Seiri) Practice (City of Nagoya, 1982, pp. 62-65) provides a good example.
Japan, and South Korea to a lesser degree, is facing this problem of speculation. In Japan the speculators are often the landowners themselves. They are decreasing the land supply from the market, and meanwhile there is always a demand for land. Thousands of hectares of land in the middle of the cities are remained undeveloped. Land price then becomes incredibly high (see Chapter 2).

The root of this problem is not the land consolidation itself. In fact land consolidation is increasing the supply of serviced land which in the long term, theoretically, will bring the price down (in the short term land consolidation pushes the price up). However, since there is an incentive for people not to develop their land (namely keep the land for agriculture), that is exactly what they are doing, and in addition their land’s value is increasing. The incentive is the tax exemption or reduction the government gives for agricultural land, even those in the cities. So far, there is not enough political will to make significant changes in the taxation system.

What is happening in Japan proves that land consolidation will not produce as much benefit by itself. There should be supporting conditions integrated with the system. Taxation system is one of them.

In its efforts to increase revenues, especially since the fall of oil price, the government started the taxation reform
in early 1980s. One part of the reform package is the new Land and Building Tax (introduced in 1986) which can be a good support for land consolidation in Indonesia. It minimizes the tax exemptions and it uses, as the tax base, the capital market value which incorporates the development value of the property. Thus, underutilized land will be taxed based on its potential value with the objective to discourage speculation (Kelly, 1988, p. 10).

To implement the law, property identification, registration, and valuation are essential. The valuation itself is to be made every three years, except in areas of rapid development. In its strategy to implement the law, the government has given a priority to improve the valuation, and the work is expected to be finished this year for the mass appraisal of the majority of the properties and in 1990 for the individual-based appraisal of the higher-value properties.

These improving efforts will be useful for land consolidation practices. Of course, in the end it is the implementation of the law that counts, not just the regulations, and that the related agencies can work together. It is too soon to say that with this new law and all the work being done about it the land consolidation will work better. However, at least the law provides the right condition for land consolidation.

South Korean experience indicates the need of another measure against speculation, which is complete and good timing
information. In this country the speculation is slightly different than that in Japan. The speculators are of the second type. Many of the landowners in the South Korean projects cannot afford to wait for the project to complete, particularly if the projects are large. They sell their land to "middlemen" who buy it readily at a price much lower than what they would get had they wait until the project finishes. The rush to sell is partly attributable to the lack of understanding of the landowners about the benefits of land consolidation. They do not see that their land value will increase significantly, that it is worthwhile to make efforts to wait. Government implementing agencies do not make sure that the landowners understand. The consequence, the landowners do not get the benefits they deserve.

The Taiwan experience shows that with good information, speculation can be minimized. The government goes into great lengths to explain the system to landowners (Doebele, 1982, p. 90). Wide promotion of the system is necessary. When landowners understand that they will benefits, they will not hesitate to ask the government to initiate the project for them as what the people in Bukittinggi did (Djaja, 1986, p. 11). They may have other reasons to reject the project, such as their emotional attachment to the land, but again the government or implementing agency should have a strategy to sell the project and give correct information.
The timing of the information is also important. For sure landowners should hear about a coming project before the speculators do. A difficult situation arises when the officials who know about the coming project leak the information, intentionally or unintentionally, to other people, or their relatives for that matter. Bray finds out that there is a large proportion of civil servants who own the land in some land consolidation sites, although he has not proved that they are not the original landowners (Bray, 1988, p. 51).

3.5. Land Valuation and Land Replotting Methods

Land valuation and land replotting methods are no doubt two of the most crucial elements in land consolidation. Both are tightly related and both affect how much landowners pay in the form of land reduction, and how much they get in the form of serviced new plot or additional cash adjustments. Therefore, the landowners are concerned that the methods produce fair results to them. Unfair and incorrect valuation and replotting will only create resentment, while the project needs their cooperation.

In land evaluation, ideally land consolidation projects should use the market value which is the value the land will likely get in an open market. This value is usually assumed to be "equal to the price recently paid for a similar property
or interest in land" (Dale, 1988, p. 51), known as the comparative value. The price itself is affected by intrinsic and extrinsic factors, such as the nature of soil, topography, location, accessibility to public services, and title. Each of these factors has a value which is determined by the land utilization. For example, a land for farming may value the nature of soil more than a land for commercial use. Thus, in making comparison, adjustments should be made if the affecting factors and utilization are different. When the projects are large and involves a lot of parcels, each of the affecting factors gets a rate or index number which corresponds to its value. The parcel is then assessed by computing this number rather than calculating its real value in monetary terms.

For land replotting there are three methods the land consolidation projects can apply: the area method, the value method, and the combination of the two. In the area method, the new plot has a size of the original plot minus the designated reduction--regardless the value of the land. If two persons have the same size of old plots and new plots, and their market values are different, it means they have inequity in the benefit they get. Thus, the area method is appropriate only if the area has a homogeneous value, or if the new plot is in the original location or very close to it. In the value method, the value of the new plot is proportional to the value of the old one, relative to the other plots in the site. If
the old plot has the highest value in the site, the new plot should also have the highest, too (after being adjustment by the reduction). The method is applied when the area has a heterogeneous value, or when the new plot is not in the original location. The combination method is used in a combination situation.

South Korean earlier cases showed that the land valuation method they used resulted in unfair distribution of benefits among the landowners, and this is one of the reasons the system is now losing its popularity, at least in Seoul. In Indonesia its first project in Bali got delayed because of disagreement over the reduction rate, then it had to go through difficult discussions on replotting because the reduction rate was based on plot area instead of plot value/price (Djaja, 1986, p. 9). However, for the project in Bandung, initiated by the Center for Land Research and Development, did use the three methods discussed above in accordance with the existing conditions.

The importance of land valuation and land replotting requires qualified assessors in land consolidation projects. It is a mistake to use unqualified ones just because they are available in the land consolidation implementing agency. Hiring professional assessors is one possibility, or since so far the projects have been initiated by government (may remain so in the near future since other possible implementers are
not ready yet), the implementing agency can work together with people from the taxation agency. Using information from the taxation agency will also reduce work and time period.

3.6. Training

However good a system is, even with full political and financial support, without appropriate competency to carry it out, the system will not give maximum benefits. On this premise, training is essential for land consolidation.

Government officials, from the central down to the local levels, who are in charge of the system implementation need to have deep knowledge about how the system works (including reviewing proposals and monitoring). They should also be prepared to potential problems. This non-technical knowledge can be acquired by learning from other countries’ experience.

Technical knowledge is also important, particularly in land valuation and replotting methods (see Section 3.5) which require a special expertise. Recruiting skilled personnel, training the existing staff through special courses, or cooperating with the taxation office are some options.
4.1. Conclusion

Land consolidation, originated from the German system, has been used in Japan, South Korea, and Taiwan extensively for years. The three countries, especially Japan, have produced thousands of hectares of urban land through the system. One of their main objectives is to save funds for land development and public infrastructure provision because the system enables cost recovery by making better usage of private resources (namely the land contribution from landowners).

From the landowners' point of view this system is more acceptable than compulsory purchase or eminent domain. In land consolidation the landowners do not have to move because they do not sell their land to the government (who usually compensates the landowners with less than what they ask for and thus create resentment). In fact they still keep their land except it is smaller but with a higher value. All landowners share the costs and benefits, which does not happen in eminent domain as only certain landowners are affected (i.e., only landowners along the proposed road have to give up their land).
The experience in Japan, South Korea, and Taiwan shows that landowners can accept the land consolidation system. The dissatisfaction is usually because landowners feel the government imposes its will on them, basically determines the kinds of facilities to be built without really consulting the landowners; or because the landowners find the land reduction rate is too high since the government hardly gives any subsidy although the project is too large for the landowners to bear the costs.

Indonesia tried the system for the first time in 1981 and has been using it steadily up to the present time. However, unlike the other countries, Indonesia does not yet aim at cost recovery. Instead, the agency is more interested in land management. The government subsidizes the projects except for land provision for public infrastructure, and since the government's fund is limited, the services it provides for the projects are also limited. The potential problem is, the services will not be adequate before long, especially if the place is growing fast (Chapter 2, Section 2.5), as what South Korea is experiencing. Once the area is built up, it is more difficult and costly to reorganize. Hence, projection of future needs is mandatory in project feasibility study.

The main "flaw" of the Indonesian system is the absence of legislation that can enforce and regulate the implementation like in other countries. Consequently, the
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government then is very dependent on the landowners' total consensus which can be costly to reach. The government can neither force the landowners to pay for the project (so it is not self-financing) nor have the right to sell the cost-equivalent land.

After nearly a decade of implementation, Indonesia shows the system is applicable and still has the capacity to bring more benefits only if it makes the necessary improvements. Without the changes or improvements, the system has reached its limits and is unable to produce better results. One thing is obvious, the government will not have the funds to keep on financing the projects. It needs stronger commitment from related government officials to push for the changes, apart from the political support which seems "available" with the creation of the National Land Agency as an autonomous body, directly under the President, to handle land issues.

Land consolidation as a system for land development is unable to function optimally without the supporting external conditions and other prerequisites. It does increase the land prices, but in the long run, as it keeps on increasing the land supply, it will decrease the prices. However, there are obstacles to reach this objective. One of them is speculation, which pushes up the land price. Appropriate taxation system, correct information, and right timing to implement the project are vital to minimize speculation and
price increase. Good cadastre is another important element to expedite project implementation. Establishing the financing mechanism and providing skilled personnel are other requirements. Indonesia does not yet have them all, but it has made some improvements to reach them.

Land consolidation is also potential to reduce costs for low-income housing. The Korean Land Development Corporation experience did show that it was costly and cumbersome to go through the whole process of land consolidation just to get a small percentage of land for low-income housing. This may be the limitation of the system--it becomes too expensive when it is too large. At a smaller scale, it might still be worthwhile, or the housing corporation (i.e., Indonesian Perumnas) acts as a buyer instead of implementer. In this case there should be a stipulation that a part of the cost-equivalent land should be sold to the housing corporation at a lower price. Other than this possibility, the savings the government makes due to land consolidation (not having to buy land for, and provide public facilities) can be transferred to low-income housing funds.

4.2. Recommendations

To get a maximum advantage of the land consolidation, there are several measures the Indonesian government needs to take.
* Make enabling legislation available soon. This is the most important step to take to give a legal power to the system to operate. We have seen that without this power a lot of benefits have been missed. Some major issues that need to be covered in the legislation are:

- **The system's aims.** The system should aim at a self-financing, organized, urban land management with the provision of appropriate facilities, and distribution of the benefits equally among the landowners. Consequently the implementing agency should have the authority to sell the cost-equivalent land for cost recovery.

- **The minimum number of landowners to support the project.** This requirement can take the less drastic Japanese or Korean model--two-third of the landowners (in terms of number and area) should agree before the project can proceed. Negotiation and mediation is thus necessary to enable the implementing agency to achieve this quorum.

- **The criteria of site selection.** The criteria should support the aims of the system as mentioned above. They should include, among others, (1) the close distance of the site to trunk infrastructure to reduce costs and to assure urban development in the near future, (2) the small parcels of land (but still meet the minimum size for development after the reduction rate) in the site so that a larger number of landowners can benefit, and (3) the relative easiness to identify landownership in the site.
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- **The implementing agency.** Ideally it should be the municipality which knows the area best, what it needs, and whether it is integrated with the general municipality plans. However, since the agrarian office has got more experience, the municipality should work together with the agrarian office (i.e., the Bandung project) which will be a good training for the municipality itself. For a long-term objective, landowners association should also be encouraged to carry out land consolidation projects. Except for national projects, it should be sufficient for the implementing agency to get the governor's approval.

- **The minimum public facilities.** There should be a minimum standard of the public facilities provision, and they should meet the projected needs of the site development. This should be designed to avoid the implementing agency as well as the landowners to sacrifice the public facilities for higher profits.

- **The criteria of eligibility for subsidies.** The criteria should be based on the benefits the project produces. If the project benefits more than the participating landowners, then the government should give a subsidy, and what level of government the subsidy comes from also depends on project—whether it is municipal, regional, or national.

* Launch an intensive publicity about the system. To get a support for both the legislation and the implementation the
related "actors" should understand how the system works. The lawmakers need to know that the system does not harm their constituents, in this case they are generally the landowners. The landowners need to be assured that they will benefit from the project, so does the implementers. Previous projects can become examples of what the system can produce. Hence the importance of publicity which can be given through mass media and local/neighborhood authorities, especially in prospective land consolidation sites. Clear information to landowners can also become a measure against the stepping in of middlemen to reap the unearned capital gains.

* Create standard guidelines and criteria for project implementation by using the legislation. This is to help the implementing agency to work more efficiently and better manage the project.

* Create revolving funds to sustain the system. Instead of sharing all the surpluses among the landowners, these surpluses from government-initiated projects can be used to start other projects. This can be done after all necessary cash adjustment to reach equity among all landowners is made.

* Create coordination. Coordination, including sharing information, among related agency is necessary so that what one agency is doing will not contradict the others' and
impede the results. For example, when the municipality has designated an area for land consolidation, the public works agency should not construct facilities so that the landowners find it irrelevant to join the project.

* **Train personnel to acquire expertise in land consolidation management and implementation.** The expertise the implementing agency needs includes technical as well as management capabilities, such as land valuation and negotiation. When the private sector, namely the landowners association, starts to get involved, the agency can provide guidance and technical assistance.

* **Evaluate past projects.** In-depth evaluation of past projects leads to finding of typology to create models that can help better implementation and formulate the appropriate policies. The evaluation should include the financial, economic, and social impact study inside and outside the project.

* **Research on land consolidation legislation and financing system in other countries.** An in-depth study of legislation and financing system in the other experienced countries can improve the system in Indonesia and avoid making the same mistakes.

* **Create mechanism to transfer the savings the government makes due to land consolidation to low-income housing funds.** The "unused" budget allocation for providing public
facilities (including the land purchase) may be used instead for low-income housing projects. However, a further study is needed to see whether this new mechanism is feasible.
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B I B L I O G R A P H Y


City Planning Bureau, the City of Nagoya. 1982. Introduction to Land Readjustment (Kukaku Seiri) Practice.


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APPENDIX 1

Maps of Denpasar Project
(the first land consolidation project)
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Map Number 3. Situation of the Location after Land Consolidation has been Completed

Province: Bali
Regency: Badung
District: East Denpasar
Village: Sumatera Klad

Costs: Rp 150,000.00
List of Revenues No. 4/1982
DIRECTORATE OF LANDREFORM
DIRECTORATE GENERAL OF AGRARIAN AFFAIRS
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APPENDIX 2

Maps of Bandung Land Consolidation Project
(the first "self-financing" project)
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Before Land Consolidation
Babakan Surabaya, Bandung
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After Land Consolidation
Babakan Surabaya, Bandung