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Strategy and Concept of Business Transformation of the Farms in the Nusa Tenggara, Maluku and Papua

Sumanto

Researcher, Indonesian Research Institute for Animal Production, Bogor, Indonesia

Abstract:

Generally traditional animal husbandry in Indonesia is part of the largest base system and economic structure of the Indonesia society, therefore it become a favorite commodity in poverty programs. Until now traditional animal husbandry is characterized by traditional static profile, small-scale enterprises, peasant farmers with a level of limited education and mobility. This condition is to be a constraint part of farm transformation in Indonesia. Various intensification programs of all livestock commodities have been done for a long time and are specifically made beef self-sufficiency program that has been running for about 15 years, but until now has not been successful Results of development efforts are now in the form of the strategic vertices supporting the transformation of the traditional towards advanced /modern culture, self-sustainable and self-reliant, through Volare concept based on a three in one partnership action (breeder - government / other mediators - funders). Understanding spatial animal husbandry and development of microfinance institutions (MFIs) became the completeness of strategies to achieve goals. The capacity of land and local feed resources are abundant, Nusa Tenggara, Maluku and Papua have the potential to support the acceleration of the transformation of the innovation, especially for large livestock.

Keywords: Transformation, Farm, Nusa Tenggara, Maluku, Papua

1. Introduction

Regional Development of Nusa Tenggara, Maluku and Papua islands, referring to the Term of Development Plan (RPJMN) III (2015-2019) and the Plan of National Spatial (RTRWN) and Spatial island in order to bring into reality the spatial structuring of the island balanced, harmonious, unified, productive, safe, comfortable and sustainable. In addition, the strategy and policy direction for regional development of the Nusa Tenggara, Maluku and Papua islands, attention to strategic issues that must be faced by the government in the next five years in terms of social, economic, cultural, political, legal and security, physical infrastructure, and natural resources including its environment.

Indonesia's economic growth target of 6.4% in 2014 (the president's speech in delivering Draft Budget 2014). Global economic developments are uncertain with world oil prices and the Indonesian export commodities are volatile and debt have reached > 2000 trillion as well as the foundation of the national economy "porous" vulnerable to the issue of negative from developed countries, the economic growth target needs correction for further developments.

Target growth is conditioned by the exchange rate of IDR9.750 / \$ US, it turns out in a few days from the president's speech, penetrate IDR 11,000 / \$ US. Report of the World Economic Forum (WEF) in 2012 Indonesia's competitiveness slumped to 50 of the previous in 2011 at rank 46, which reveals the bad condition of bureaucratic inefficiency, corruption, lack of infrastructure, regulations and labor laws (Kompas August 6, 2013). Everything inhibit transform as and poverty continues to enliven the nation. In the year 2013, rising to the rank of 38 with indicators including economic growth of 5.2%, increase in infrastructure, public services (Koran Sindo, September 5, 2013).

The development of the national economy in general is still concentrated in Java, causing the gap between Java and outside of Java and among National Activity Center with centers of activity underneath. Therefore, in order to accelerate the economic transformation evenly and equitably, strategies and policy directions should consider linkages inter and intra-island, inter and intra sectors with centers of activity: National Activities Centre, Region Activity Centre, Centers of National Strategic activities that are supported by the Center for Local activities.

In the development of today's economy, especially in rural areas, the presence and the role of animal husbandry in developing the area is an important component for the following reasons:

- It is the favorite commodities in reducing poverty.
- Credit for farms generally smoothly, "not" problematic.
- The level of private consumption is still low, large market opportunities specifically its local livestock.
- Traditional animal husbandry are still largely traditionally based on the system and structure of the public economy, already developing in flock. The role of the group facilitates the acceleration of technical transformation of the farms.

- Traditional farm is functioning as savings, Experience prior to 1970, Indonesia is an exporter of cattle and buffaloes to several countries in Asia, still based on traditional farms where expertise is scarce. The pattern of allocation of traditional farm mutations, chance for agribusiness development remains advance, with alignments and approaches appropriate policy and support.
- Animal husbandry subsector can be a component of the new Indonesia's economic growth, as shown in the development of broiler industry which is capital intensive.

Intensification efforts of livestock development has been ongoing since 1969, followed by a special program of self-sufficiency. Everything has spawned the nodes that are part of the growth strategy to support the transformation of economic growth in the region. This paper aims to build a farm transformation strategy based on the results that have been achieved from previous activities, particularly traditional farm in supporting the regional economic development.

2. Potential Development of Animal Husbandry in Nusa Tenggara, Maluku and Papua Islands

2.1. Geographic and Rainfall

Nusa Tenggara is situated at latitude of: 8 ° - 12 ° S and longitude of 115 ° - 125 ° E. Maluku is located at 8 ° S - 3 ° N and the stretch of 124 ° - 135 ° E. Papua is located in the stretch between 2 ° N - 9 ° S and the stretch of 124 ° - 141 ° E.

All three areas are within the scope of the range of the equator, which means they are in the rainfall patterns /year (Al Bahij, 2013). The rainy season of these three areas is within the range of September to April and the dry season is from May to August. Lack of feed for the dry season occurs in the range of the month from May to August, with variations according to the agro-climate characteristics. Maluku and Papua are in the wet tropics with length of dry season is about 2 months (except south-west Maluku) and Nusa Tenggara (except west Lombok) is in dry agro-climatic region with a length of ≥ 5 -month dry season. In such areas, cropping patterns in a year only one that caused the crisis of green feed

2.2. Agro-Ecosystem of Feed Resources

To build the livestock industry, broilers were able to leverage new economic growth, intensification in all three regions still rely on raw materials from Java and South Sulawesi. Efforts to build the feed industry have been carried out but the raw material is still limited in the transmigration area. Therefore the chicken industry still rely on feed manufacturers in Java and South Sulawesi.

Evaluation of feed fiber sources (forage ruminants) in each of the regions /provinces have done (Ashari *et al.*, 1998) in various agro-ecosystem that is potential as a feed resources include: paddy fields, dry land, fallow, bush (forest edge), grazing land (pasture) and plantations. Evaluation of the potential is using the Location Quotient (LQ), which is based on the data of area of agro-ecosystem. The evaluation results demonstrate the potential in all three regions according to the potential of dominance agro-ecosystems ($LQ > 1$) are:

Nusa Tenggara include:

- o Wetland in NTB
- o Dry Land in (NTT, NTB)
- o Land fallow (NTT) with cropping pattern of rice - fallow - fallow, leading to food crisis and caused high mortality of calves.
- o Pasture (herding area), in the form of common grazing land. There is mini grazing land (mini pasture, mostly privately owned) called lar.

2.3. Maluku

- o Dry land
- o Bushes (forest edge)
- o Pasture
- o plantation

2.4. Papua

- o Bushes (forest edge), in the transmigration area (near the National Park Wazur, Merauke), found a such integration of cattle with periphery of forests as feed source. This integration patterns become part of the concept of spatial planning, by restructuring and innovation into transformation of traditional husbandry.
- o The pattern of grazing off in the forest (forest edge) in Merauke, a person can own up to 1000 head of cattle (Head of Merauke District Veterinary Office, 2005 pers.com.). Such a pattern is a pattern like in Java when the buffalo population in Java reached 2.5 million head in the year of 1925 (LIPI, 1982)

As feed resources those agro-ecosystems are naturally and traditionally potential to play a role in the dynamics of population growth, especially of cattle as a form of economic transformation that support the growth of the area. Planning, spatial planning and innovation on the system, will bring into reality the acceleration of the transformation of farms in contributing to regional economic growth.

2.5. Sago

Besides as a potential fiber feed source, sago is naturally available abundantly, especially in Maluku and Papua, these areas have a potential source of carbohydrate food and feed. Sago besides being a source of food is also a source of feed for all types of animals that can be stored in water before being used as feed for three months. Sago is plastic industrial raw materials that are environmentally friendly.

2.6. *Gewang (Corypha utan)*

Sago similar plants growing in the area of agro-climatic air-dried as Nusa Tenggara, which has a similar function as a source of food and feed such as sago.

2.7. *Palm Plantation*

These plants have started growing in Maluku and Papua, which is integrated, and potentially able to support the acceleration of self-sufficient of the meat. Intercropping with maize and soybeans before palm oil produced, as well as a readily available opportunity for chicken feed industry, in addition to supporting the integration system (CLS) of corn/soybean- cattle (Table 1).

Comodities	Maluku	North M	Total	Papua	West P.	Total	Indonesia
Paddy	104	64	168	111	32	143	69.594
Corn	16	27	43	7	2	9	18.945
Palm	0	0	0	107	64	171	22.899

Table 1: Production of paddy, maize and palm oil (000) ton

Source: BPS (2012)

These three commodities have prospects for development in Papua and Maluku, which are also the potential for development of cattle. Until now still limited in the transmigration area.

2.8. *Local Government Regulations*

Local regulations is one form of innovation policies (software) that supports the management and utilization in a sustainable manner.

- Maluku. Maluku is the only province that accommodates livestock space in spatial form of common grazing. The development of palm oil will continue to provide the presence of livestock in the region, as was the case in Sumatra and elsewhere displaced (Regulation No. 5 of 1995)
- Papua. Jayapura is the only district in Indonesia, which provides space for the management and optimal utilization of sago (Local regulations of Sago).

2.9. *Dynamics of Livestock Population*

Indonesia until the early of 1970s was an exporter country of beef cattle and buffalo, although the export prohibition imposed, 1968. In South Sulawesi over 40 major exporter association, has its own shipping vessels. Now is none. Nusa Tenggara is another area of beef cattle producer for export.

The case of South Sulawesi. In 1999 launched a 1st national program of self-sufficient in meat (1999-2005), since before the area is still able to send beef cattle to Jakarta by 4 exporters. Meanwhile imports of meat and beef cattle started in the early 1990s. Since then in 2001 South Sulawesi were not able to send cows to Jakarta any more, even the only one of the exporter left, has been turned into an importer of offal (heart) of cows, as replacement of shortage of local beef. Whereas over 50% of local beef is to supply meatballs (Ashari *et.al.*, 2001).

There are five national commodity that became a national food self-sufficiency program include: food crops (rice, corn, soybeans), plantations (sugarcane) and livestock (cattle). Including horticulture plants and marine (fish and salt). For livestock besides cattle, there is leading commodity supporting meat self-sufficient, which is generally a commodity diversificatif to the family income.

Various livestock development programs in the form of specific activities of Ditjen of PKH and related cross-sector to maintain populations launched intensively and coordinatively, since 1969. Population growth of man and livestock to date are presented in Table 2.

No	Commodities	Population (000)		Growth
		1969 ¹⁾	2014 ²⁾	
1	beef cattle	6.000	14.726,8	> 2 x
2	buffalo	3.000	1.335,1	turun 0,45 x
3	dairy cattle	50	502,5	12 x
4	sheep/goat	10.000	24.731	2,5 x
5	kampung chicken	60.000	275.116	4,5 x
6	broiler chicken	25.000	1.443.349	40 x
7	layer chicken	600	146.660	>180 x
8	pig	3.000 (1979)	7.694	> 2 x
	man population	110.000	252.165	> 2 x

Table 2: The dynamics of the national cattle population (1969- 2014)

Source: ¹⁾ Winrock Internat. Inst. For Agric. Development, 1986 ²⁾ Ditjen PKH, 2015

From the dynamic development of the livestock population with population growth, are worth noting:

- Traditional husbandry, has not been able to meet the demand of meat especially beef

- Imported chicken (broiler and layer) has evolved as an industry that is able to meet the needs of chicken meat and eggs, which are not able to be serviced by the availability of kampung (indigenous chicken). Industrial broiler development is supported by the availability of breeds quality and inputs (feed quality, breeds and medicines) massively, while very limited investment occurs in local livestock. The development of broiler industry is considered as a new economic growth.
- Beef self-sufficiency Program (PSDS) running third period of almost 15 years, has not shown success.
- Traditional husbandry is still characterized by small scale that has not changed, sapronak (seed and feed) is and still traditional and static; nevertheless, limited has evolved as the vertices of commercial potential growth of traditional farm as an opportunity to develop a strategy of accelerating the transformation of the development of the region.

Chicken is a commodity that serves as a new economic growth, as an industry from upstream to downstream. Learning from the experience of self-sufficiency in rice in 1984, there are five key words, which applies to all agricultural commodities, namely the massive availability of qualified breed, the availability of food and medicines to massive industrial scale, strong involvement of the institutional dynamic, infrastructure and the development of investment. In the broiler industry first, second and fifth keywords have been met. While the main keyword in traditional farm have not been met. But to day superior kampung chicken are now available called KUB chicken (Superior Chicken of Indonesian Research Institute for Animal Production Bogor-IRIAP) which has fueled the transformation of kampung chicken farm that has spread to various provinces. Their food source based on the broilers feed mill which modified its composition and locally based feed composition. The weakness of industrial chicken feed material is because largely derived from imported materials (corn, soy). Because of the development of the chicken population, chicken meat consumption has now reached 4kg /capita /year, but still far from neighboring Malaysia who achieved > 40 kg / per capita.

For cattle, the pattern of rearing system is based on:

- Grazing on common grazing land, fallow land, including forest land abandoned. This pattern took place in the early 20th century, where the buffalo population in Java reached 2.5 head. Outside Java has the potential including this region, but the conversion to palm plantations and other functions as well as the lack of grazing space status encourage more deteriorating the grazing areas.
- Integration system with crops, as draught animal power for cultivation of farmland and energy for transportation as well as energy for sugar cane grinder at countryside

2.10. Nusa Tenggara (NTB+NTT)

The dynamics of the livestock population in the Nusa Tenggara are presented in Table 3.

Poultry. The role of exotic poultry(exotic breed) in Nusa Tenggara has not been coloring their transformation as in other regions. Chicken meat found in restaurant, Nusa Tenggara, is still based on kampong chicken. Famous chicken culinary in NTB is called chicken taliwang. With the finding breed of chicken by IRIAP since last 3 years, there is a little booming development of commercial chicken included in Nusa Tenggara. This will encourage the development of the transformation of traditional farm.

Cattle. Cattle progresses more slowly than the average of population growth. Nusa Tenggara is a good producer regions of both beef cattle ready for slaughter and feeder cattle and spawn sent to various provinces, causing population growth slower than population growth. Therefore Nusa Tenggara, particularly NTB plans to reduce deliveries of feeder cattle to other areas gradually, so that the program of the island of a million cattle can be implemented. Genetic resources cow in Nusa Tenggara is Bali-based cattle. Besides, there is Sumba Ongole cattle (beef cattle) and Hisar (dual purpose tropical cattle: beef and dairy).

Buffalo. Buffalo is the second major livestock, that is used to be the companion of exports commodity after cattle. NTB is one of buffalo's breeding area, but its development has declined as seen in Table 3. Traditionally in NTB there is buffalo racing that is to be part of a national tour package. Conversion of land use to encourage the pasturelands waning and declining the buffalo population, above all the layout for livestock have not been accommodated. Meanwhile, the Forestry Department policy that allocated 200,000 hectares to farm development supporting the self-sufficient of meat seems to still not socialized yet (TV One, 2010).

No	Commodities	Population (000)		growth
		1973 ¹⁾	2014 ²⁾	
1	Beef Cattle	959	1.879,5	→ 2 x
2	Dairy Cattle		45	
3	Buffalo	365	263,6	→ - 28%
4	Sheep/Goat	528	1.192	→ > 2 x
5	Kampung Chicken		17.187,7	
6	Broiler chicken	6.373	10.173	27.857,733 → > 4 x
7	Layer chicken		497	→ > 2 x
8	Duck	679	1.357,7	→ > 1 x
9	Pig	1.199	1.801,2	→ > 1 x
	Man/habitant	3.266	9.810,7	→ 3 x

Table 3: Dynamics of livestock population in Nusa Tenggara (1973-2014)

Source: ¹⁾ Woelke, 1978, ²⁾ DitjenPKH, 2015

2.11. Maluku (Maluku and North Maluku Province)

The dynamics of the livestock population in the Maluku Islands since 1973, presented in Table 4.

No	Commodities	Population (000)		Growth
		1973 ¹⁾	2014 ²⁾	
1	Beef Cattle	11	169	→ 15 x
2	Dairy Cattle			
3	Buffalo	24,7	18,8	→ - 27%
4	Sheep/Goat	52	224	→ > 4x
5	Kampung Chicken		3.183,6	
6	Broiler	530	373,6	3.595,986 → > 6 x
7	Layer		38,8	
8	Duck	40	522,7	→ > 13 x
9	Pig	6	140,7	→ > 23 x
	Population	417	2.796,1	→ > 6 x

Table 4: Dynamics of livestock population in Maluku (1973- 2014)

Sumber : ¹⁾ Woelke (1978).

²⁾ Ditjen PKH, 2015

Unexpectedly, the population growth of people is three times more than the other regions within the same period. Therefore, if it is associated with population growth, the role of the chicken in Maluku is not enough coloring to support the transformation of economic growth in the farm area. Bali cattle in Maluku provide color transformation of population growth twice as much as the population growth of man, although its population growth far above national growth. The same thing for goats that is normally maintained in the similar way. Growth for pigs is far beyond expectations where growth > 8 times the population growth of man. In regard to these conditions, there are two things that should be noted:

- Maluku is the only region that has allocated space livestock (large animals) in the Regional Spatial Planning Regulation No. 5 of 1995, which gives business certainty. In addition, there are other potential associated with land availability in particular and in an integrated manner.
- The availability of good local feed for cattle, pigs, poultry and other livestock. Meanwhile food sources for people have switched from sago to rice.
- The pattern of management is still traditionally haven't been touched by modern development of commercial innovation.
- The dynamics of the livestock population in the Maluku shows the development of animal husbandry transformation better than other regions, especially for cattle, goats and pigs with the following notes.
- Exotic Chicken development has not been given a color transformation, because the centers of feed production and the local feed ingredients are very limited. The chicken and feed manufacturers are still imported from Java and South Sulawesi.
- Cattle and goats. Sentra growth generally in the region of transmigration, for the cattle that were fed in an house. But in general the cattle and goats herded either being tied in the yard, left free in the common grazing land, land fallow after the harvest, in the wasted land, on the edge of the forest even in the woods. Problems for goats in the region of development is scabies disease and eye disease at the time brought in after a long journey from the place of origin. Besides grazed until late afternoon, in the evenings additional feed was provided, especially in the dry season for all kinds of livestock.
- In addition, Maluku has the potential for development of palm plantation, which until now has not recorded in the statistics. This potential development opportunities in an integrated system oil palm -corn -cattle, which will support the transformation of the farm, with the completeness of spatial and improved cultivation with technological innovation.

2.12. Papua Province (Papua + West Papua)

Transformation of animal husbandry in Papua is similar to in the Maluku, the chicken is not having so obvious role related to population growth although still faster than the national growth. The role of chicken has not contributed to the transformation in Papua, although efforts on intensification has been and is being done.

The development beef cattle are much better than other regions, which is twice as much as the population growth, although the growth habitant here is close to three times (Table 5). Population growth of pigs is around 8 times the population growth of people. Yet such growth is still based on natural resources and the maintenance of traditional patterns, similar to growth in Maluku. There are some interesting things to be seen in the condition of these developments:

- The availability of grazing land that is available in various agro-systems.
- As in the Maluku, sago is a source of local food, good for swine, beef, local chicken and other livestock as well as resources and food supplies for man.
- Papua is the only province that has regulation legislation on Sago space allocation in the Regional Spatial Planning (Bupati Jayapura, 2001, pers.com) that gives certainty and stability of food and feed safety resources for rural communities.
- The development of palm oil is still in progress. This potential gives a very broad space for integration system of palm oil – beef cattle both in traditional patterns and patterns of commercial / intensification to support the accelerated self- in meat sufficiency in a sustainable manner.
- **Cattle and goats.** The center of growth development is in the transmigration area integrated with food crops. Integration patterns with forest ecosystems in Papua is the largest potential in Indonesia. With this pattern, the transmigration community in Merauke mastery of cattle of around 20 head and patterns of power continues to grow.

No	Commodities	Population(000)		Growth
		1973 ¹⁾	2014 ²⁾	
1	Beef Cattle	10	156,3	→>15 x
2	Dairy Cattle			
3	Buffalo	1,3	0,8	→ - 42%
4	Sheep/Goat	9	73,7	→ >7 x
5	Kampung Chicken		3.360	
6	Broiler	530	3.689,8	7.391,406→>13 x
7	Layer		341,5	
8	Duck	10	110,8	→> 11 x
9	Pig	12	772,	→ > 64 x
	Population	581	3.940,8	→> 6 x

Table 5: Dynamics of livestock population Papua 1973-2014

Sumber : ¹⁾ Woelke (1978) ; ²⁾ Ditjen PKH,2015

3. Strategy and Concept of Transformation of Animal Husbandry

3.1. Transformation of Traditional Farm

In the transformation of traditional farm, must first understand the characteristics of (traits) traditional farmers' with low educational background, then the method of transformation must be done in a way that is wise and appropriate to their background. Technical transformation method with the concept of Volare (Ashari, 2001) is based on the understanding of their backgrounds that are supported by experience in the field.

3.2. Feature of Traditional Farmers

Farm traditional are generally characterized by very limited input, a small-scale business and managed traditionally that until today has not changed, static-oriented needs and without charge (zero cost). Ashari (2001) describes the traditional farm is characterized by 10 P and 10 C, which is basically weak, helpless, but actually they take the role of the largest state subsidies. The need government' concern so that they develop, prosperous and is expected to be be characterized 10 D.

3.3. Feature 10 P:

1. Poor, generally poor, below the poverty threshold
2. Purpose, multi-purpose farming purposes, functioned as the tube's
3. Personality. Ply less profitable.
4. Prospect. Requires care / alignments for the empowerment
5. Perspective. Weak, but acts as largest subsidy of the country.
6. Prejudice. They generally prejudice (suspicious-thought) against newcomers, requires a mediator in the transfer of technology.
7. Peeper. They do not have access to the market, just "peeper alone"
8. Practical. Limited knowledge, they require pe-practical knowledge that is directly applicable.
9. Proletarianbased educated. Low education, training-apprenticeship.
- 10.Puncher. They are risk-averse, zero cost oriented.

3.4. Feature 10 C:

1. Condition. The conditions were not lucky.
2. Collateral. No guarantee.
3. Capital. Do not have the capital.
4. Credit. Difficult access to credit.
5. Character. Less independent, because of their economic background.
6. Capacity. Hard to develop without assistance / care.
7. Communication. Communication is limited.
8. Concomittance. The existence of a lasting and other actors.
9. Competition. Not being able to compete, without assistance.
- 10.Cost. Oriented no charge (zero cost).

3.5. Feature of Farmers Developed

One of the objectives is to make farmers in the región of development as to be economic oriented (commercial), prosperous, independent, characterized by 10 D:

1. Dream. Visionary far ahead.
2. Decisiveness. Decisiveness, quick decision
3. Doer. Implementing, on farmer's own.
4. Determination, commitment, never give up.

5. Dedication. High dedication.
6. Devotion. Loves his job.
7. Details. Critically, clever counting in the business.
8. Desnity (fate). Responsible on him.
9. Dollars. Economic orientation.
10. Distribute. Distributing his business to the auxiliaries.

To empower farmers from 10 P + 10 C to 10 D, the key is in the alignments. The United States provides incentives to farmers reached 19 billion US \$ / year, Malaysia provide incentives for strategic commodity-based on production unit produced. Japan, Taiwan. South Korea European countries, have similar alignments. Dutch in the colonial era gave interest-free credit to our farmers, when the world crisis occurred in the early 20th century (1930, documents the wall photos in Jakarta Maritim Museum, 2000).

The fate of the farmers after independence have not been lucky, especially after the Reformation. Irigation mess, lack of seeds / seedlings / feeder superior (corn seeds yielding a mainstay of corn farmers Gorontalo, from the United States). There may be food self-sufficiency including increasing livestock population, with no real concern, in the form of programs action and policies that support. Revitalization farm by the government has not yet reached the target.

3.6. Concept of VOLARE

Based on the achievements of livestock development in the past and their development until recently, in the form of knots both in the traditional farm, in the company, as well as the presence of local wisdom that is conceptual as part of vertices growth of a thriving, all become sources of inspiration that are technically support the acceleration of the transformation of the farm. Vertices of these need to be instituted and empowered as an apprenticeship ("field school") for farmers and other businesses that are generally less educated. This pattern can accelerate the transformation of traditional systems towards advanced systems (commercial). This method refers to the concept of Volare (Ashari 2001):

V - Vision vision / dream ahead to advance

O - Observations observe the existence of commercial knots

L - Lecture academic support to the existence of new vertices and local wisdom that is conceptual, supported engineering through innovation.

A - Apprenticeship Internships, knots developed as centers intern (SCHOOL FIELD) principled teaching by showing, learning by doing

R - Reengineering The ability to reengineer

E - Entrepreneurship Entrepreneurship, the ability to perform self-employment

3.7. Transformation Strategy

The strategic steps necessary to encourage the development, transformation of the farms. Measures of the overall conceptual and the competence based on the potential of available resources as well as on the development of the present operating results in the form of knots, the concepts of local wisdom needs to be done. Future strategy that should be done technically operational, conceptual with the support of relevant policies, those are presented in the following Figure.

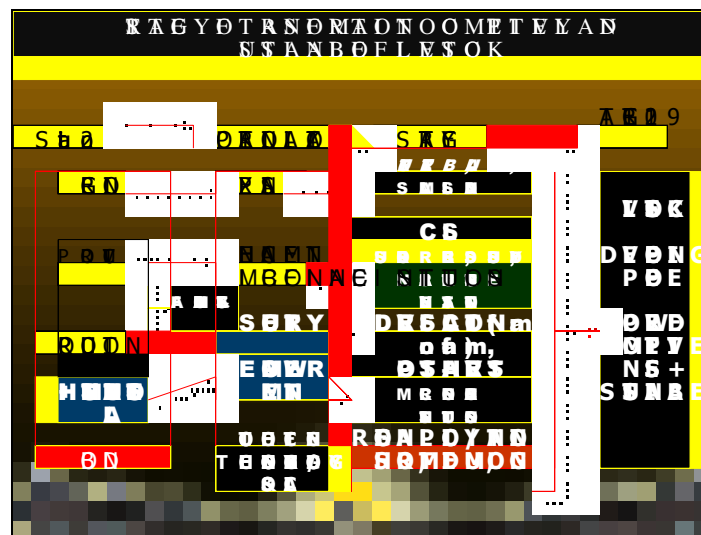


Figure 1: The strategy of transformation towards developed a competitive and sustainable Farming

3.8. Start of Vertices

The ability of entrepreneurial through apprenticeships is starting from the nodes that have been instituted and empowered its capacity as a center of learning in the field then they need to be supported by government policies as form of partiality to achieve competitive capabilities.

3.8.1. Three in One Package

Needs policies on the development of system partnership of business after the passage of trade in the package three in one (farmers as plasma - government or other parties as mediators and donors: private, CSR, state and individual as the core) towards the establishment of clusters of businesses, of commercial farms. The clusters either patterned of breeding or fattening or combinations. Preferred food resources of local origin, but in compulsion can bring in from outside the region; This process is possible to progress when the related policies are available.

3.8.2. Policy

➤ The policy of intensification, diversification, extension and rehabilitation. Intensification (both for crop businesses and livestock enterprises) and diversification in the integration system of crop-livestock (CLS) is potential eg palm oil by utilizing waste / byproduct of oil and set up feed mills with origin palm oil waste as feed for massive available for both the scope of the plantation areas and farmers outside the oil palm plantations within the scope of the relevant areas as well as outside the region CLS. In the system of livestock manure produced becomes part of the enrichment and rehabilitation of critical land.

➤ Five key words. 5 keywords self-sufficiency are components be targeted in intensification to achieve self-sufficiency.

➤ Regional Policy and '*catur tertib*'. Development of the region as an area of intensification, diversification, extension and rehabilitation with establishment through spatial planning in order to develop investment or optimally utilize the wasted land and customary land / customary potential through "*catur tertib*". In each region expansion both "*ulayat*" and non "*ulayat*" lands should be preceded by a "*catur tertib*" (administrative, legal, care and use)." *Ulayat* "landat this time has been recognized by the Constitutional Court, as the assets of communities and countries should be utilized as much as possible for the development.

➤ MFIs (Microfinance Institutions). MFI development policies, support the liquidity of the assets of the sub-sector, especially rural farms that supported the credit policy in increasing the velocity of money in the countryside. Their village funds will help the success of MFIs. MFIs that have been successful in Indonesia generally in the informal sector which could be as reference in the agricultural sector.

➤ Post-harvest. Or so-called downstream. Need to use the momentum of the government's attention in the next few years that is focusing on downstream businesses. As it has been known taht in the case of post-harvest on the farm in the Outer of Java included in these three regions are still not developed yet or limited development.

4. Understanding of Spatial Livestock

Region (space) farm is an area specifically designed and integrated to the business or farming activities. Integrated (Integrated) as a component of farming (crops base, plantation base, base fisheries, forestry, or other) and integrated as a component of certain ecosystems (eg cattle within the national parks, hunting parks, the ecosystem of the lake, a river that is part of agrotourism) , These areas are areas that should be laid out in regional discretion.

The space allocation farms are basically in the following areas:

4.1. Integrated Region

Understanding integrated here gives meaning and coherence to all agroekosistem or ranch is a certain ecosystem components such as the ecosystem of the lake, yard, park and so on.

4.1.1. Integrated Farming Systems

In the pattern of integration (integration) is a component of livestock farming as a sideline to the main business branches, where it was traditional to commercial-scale subsistence to medium and large scale. The pattern is a pattern in the ranch activities that existed until now based in penagarian with its core business can be tamanan food (rice, horticulture, crops), plantation, fishery.

4.1.2. Particular Ecosystem.

Livestock one of which can be a component in certain ecosystems of natural and artificial as the ecosystem of the lake, national parks, yards / residential, small islands, the yard can add value to the social, economic, physical and biological to the environment in interaction with other components which of them can be a travel koponen (agro-livestock). Some types of local livestock has advantages as a tourist components, such as Bali cattle, buffalo, sheep Garut (as rams), Madura cattle (with *karapan*), dairy goat, goat beans (in lombakan like bull-races, on the island of Raas - Sumenep), sonok cattle (cows Stunt Madura females competed for the march), thus the existence of cattle, buffaloes in certain ecosystems, such as in national parks (as a tourist commodities), ducks and or buffalo lake eco-system, whose existence together, do not disturb the environment.

4.2. Special Areas

Special meaning here is the area with the main activity in a region in the form of factory farming. This area covers the area of pastures and livestock business district. Pastures, consisting of:

4.2.1. Common Grazing

This area is in the form of pasture area, which until now are traditional, and not managed well and does not have the status of regional spatial of local regulation, the Spatial Plan or General Spatial Plan Area (RUTRD); and the existence of written only in statistics only and have no legal status so many areas grazing displaced as a result do not have the force of law, of the region tergusurtersebut no

relocation area as a substitute, although the community has tens and even hundreds of years using the region. Instead there was pasture status "as land (department) general / social", as is done in the transmigration of blood first (Case Lampung), but it was then transformed to enable as underutilized by the community or the lack of guidance from the local Animal Husbandry Department. In general grazing area in Sumbawa potential as a grazing cattle had reached the number of 1,400 head in 1990s.

Livestock future potential areas for development of special zones, as a region well-managed pasture production technology, facilities and infrastructure that support production efficiency, which is even capable of contributing to the increase in local revenue (PAD). This area can be a government-owned, private or community-owned penagarian, once the idea of a Chief District Veterinary Office Sumbawa. Its growth is not yet known.

4.2.2. Ranch and Mini Ranch

As a region the same farm with the common grazing areas. The difference with the common grazing is in terms of possession. Ranci generally owned by a business entity (legal status) with the charge of technology in management that has been oriented and market efficiency. But the community itself has grown mini ranci emerged as found in East East Nusa Tenggara Barat called lar, Tewah Central Kalimantan and Irian Jaya are owned by individuals or groups. Special lar insufficient fodder in the dry season is usually supported with rice straw. A cow with larnya petrnak have 70 cows tail, in 2001. The charge thun mini ranci new technology in the form of fencing in general wire fence with a limited amount. Thus the need to fence technology introduced from a variety of materials and models. As with the livestock fence in developed countries, the availability of the fence has been a good one for padok separate industry or pasture.

4.3. Farm Business

4.3.1. Farm Business of "Rukan"

Rukan stands for "houses and stables", meaning the location of the cage on the side of the house and is the smallest unit of domestic production. An expanse of land generally include one type of livestock is an area of intensification as a business or as a branch of the main business-oriented agribusiness (with or without a partnership). Components such farms in this region is very dominant, among others stable, orchard grass, mini ranch, grazing land, while the other components just as a supporter. Ownership of individuals, groups, commercial enterprises or a combinations. Example "*Rukan*": *Rukan* dairy Cibungbulan, Bogor; *Rukan* beef cattle in Bupul, Merauke (Transmigration area). Opened transmigration of similar land in Langon Muara Pasir District, East Kalimantan and South Sulawesi. But the economic crisis seems to hit the groundbreaking pilot project, then next to their local problems (of land disputes in the province as well as the quality of land in East Kalimantan).

4.3.2. "Kunak Anak Desa"

Kunak anak desastandsfor Areal Ranch Penagarian is the intensification of farms as well as area *Rukan*, only the difference in terms of its location, which is separated by settlements and does not become part of other activities. The owner is an individual, but is managed as a group, or a commercial entity or a combination as an example, the following:

- 1) *Kunak anak Desa* of beef cattle in Tasik, Garut. This mini area is developed in the community and not the planned local government, partnership form.
- 2) *Kunak Anak Desa* of beef cattle in Belitung, which is a livestock area allocated by the oil palm company "Sahabat Suka Makmur, as a special area, but this activity is still in its early stages, using Bali cattle.

4.3.3. Regional Livestock Industry

Kunak charged is capital intensive, as industry (upstream), which is a component saponak (seed, feed, drugs) as well as the production of livestock products, namely processing (downstream) or a combination of: upstream and aquaculture.

5. Conclusion

Five food self-sufficiency program of agricultural commodities (including a husbandry) to the target in 2014, nothing was achieved despite the application of a special program within a few periods. Even imported foodstuffs are likely to increase. In this relationship, some of the following note needs to be taken:

- Five key words. From the experience of self-sufficiency in rice in 1984, once again there are five key words for the achievement of self-sufficiency in the agricultural sector, any commodities: first the availability of massive seedling / seed superior, second availability of massive production facilities –fertilizer and medicines for crops or feed and medicine for livestock drugs for fish, to third institutional dynamic and accommodating activity, fourth and fifth infra structure investment. Until now there has been demonstrated the fulfillment of key words.
- Poor coordination. The reformation movement impact the lack of official coordination. This situation affects the safe guards' weakness and the implementation of a program. The attitude that based on the egosectoral supported by less accommodating regulation will make the condition even worse.
- The results of the national census of cattle in 2013 shows that the population of cattle was 14.28 million, which shows the achievement of self-sufficiency or may be the number that does not correspond to the reality.
- The case of exotic chicken. Industrial developments of the chicken farms as a form of transformation can occur, especially in the sources of food production because it has been the fulfillment of the main keywords that are first the available superior breed,

second the availability of feed massively with the development of industries and third the availability of capital. The development of the chicken industry was becoming a new economic growth, although slowing down therefor. Breeding transformations of broiler chicken industry increase the consumption of meat up to 4 kg/capita /year, that still far behind the Malaysia who have achieved > 40 kg / capita / year.

➤ There has been a tendency of transformation of cattle, goats and pigs in the natural and traditional conditions in Maluku and Papua, and also for goats in Maluku. The wideness of the land and the local availability of food sources of fiber and carbohydrates to support these developments.

➤ Structuring the regional natural resources and appropriations within the spatial area became necessity as exemplified by the Jayapura district (sago) and Maluku (animal husbandry farms), which will support the region's economic transformation. Acceleration of the transformation goes along with the development of innovation with the appropriate technology and take advantage of local wisdom there.

➤ Post harvest to livestock as a form of downstream are still limited or even not yet done in outside of Java, including in all three regions. The local government needs to seize the moment of the central government attention for downstream agro intensification (including livestock) in the context of the transformation of animal husbandry sub-sector (Kompas 30 Juli,2013).

➤ The concept of transformation Volare with three in one package is a field school concept based on the vertices of local knowledge and experience as well as a principled teaching by showing, learning by doing. This concept is intended especially for low-educated human resources and remote all economic activities. Need a list of national / regional vertices to become agents of transformation of the regional economy.

➤ At a time like now where the role of agricultural extension has gone (no longer available) then Volare concept with its three in one package is an option to build a mainstream of the economic transformation of the region. This concept can be applied to all economic activities.

➤ Space of animal husbandry is not explicit and implicit in Spatial Regulation No. 26 of 2007 as well as in the Government Regulation No. 26 Year 2008 on Spatial National Program. Therefore understanding the farm became part of space planning stabilization and transformation. MoF regulation 2009 which gives the allocation of forest land to 200,000 for the farms with priority to East East Nusa Tenggara need to be accommodated.

➤ Patterns in space that has been accommodated by Maluku (farms) and Papua (sago) to be undertaken throughout the district territory in both provinces and as model for all regions across Indonesia that have potential in the context of the resource as well as in the context of the regional arrangement in general, according to the use of space for all of the interest in an integrated manner.

➤ West Nusa Tenggara which has been serving the needs of beef cattle ready for slaughter, as well as feeder that is going into 19 provinces is experiencing population growth inhibition although it has been accompanied by a special program to support self-sufficiency as an island of a million cows.

➤ Micro Finance Institutions (MFIs) is becoming a part of the economic transformation of rural areas in order to improve the liquidity of the assets of rural communities and to improve the money liquidity in the countryside despite the Act of Microfinance No. 1 2013 newly published not yet fully accommodate the interests / needs of the local economy down to discourse and embodied its role.

➤ Downstream agro intensification program (including livestock) of central government should be interpreted as an opportunity to transform the local economy.

➤ Its need to develop a FEEDBACK culture (coordinated, rational, informastif, transparent, innovative and creative) in building acceleration of economic transformation, beyond the problem of bureaucratic systems and organizational

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