



Trade liberalization and shrimp farming of the poor in Ben Tre province



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I. Introduction

The report aims at defining impacts of trade liberalization on shrimp farming in the Southern province of Ben Tre whose shrimp farming has developed rapidly recently. It takes in consideration both positive and negative impacts the liberalization on those directly involved in shrimp farming, those whose main income is dependent on the farming and those involved in related activities. They are employees working for shrimp pond owners, co-operatives, companies or related-service suppliers. Trade liberalization creates impacts on all these but in various levels from social groups, from the rich to the poor, from the Viet to ethnic people, from male to female. The report, in the context of WTO accession for Vietnam, and much interest has been paid to the relation among trade liberalization, poverty and development, would raise a voice in discussion on the issue.

Research areas

Ben Tre province enjoys lots of advantages for aquaculture development as wide natural area of 231,351.85 ha, 65 km long coastal line, with four crossing rivers of Co Chien, Ham Luong, Ba Lai and Tien of total 298 km long, and dense canals.

Binh Dai coastal island district of Ben Tre is 40,401.82 ha wide, with 21 km long coastal line, and two big Ba Lai and Cua Dai estuaries of total 42.5 km length. The district, with same features to other Ben Tre districts, comprises dense canals, deriving in diversified ecology with specific characteristics of fresh, blackish, and seawater of estuary island area.

Dai Hoa Loc commune, of Binh Dai district, of 2,300 ha width, with 1,378 households, and 2,342 people in labour force, has 268 poor households, accounting for 13.99% of total commune's households. It is noticeable that 119 households of which have no land for cultivation. There are total 1,298 ha of shrimp farming, including intensive, semi-intensive and integrated rice and shrimp models of 934.15 ha, 55 ha and 309 ha respectively.

In Thanh Phuoc commune, of the district also, with area of 5,285.3 ha, 9,597 people, 2,216 households, and 4,984 labourers, there are 3,798 ha of shrimp farming of which intensive, semi-industrial, integrated forest extensive, extensive and integrated rice-shrimp farming are 715 ha, 109 ha, 1,088 ha, 1,100 and 235 ha respective.

II. Research background

Vietnam, on the track of joining the World Trade Organization (WTO), is step-by-step integrating into global economy. Besides opportunities, the accession also means great challenges and deep impacts on all social aspects.

The Fisheries, from the starting point of small-scale sector and little contribution, is now an economic spearhead, potential sector with high growth rate, and great contribution to the GDP. The fishery export has been considered a very impressive performance recently. The sector's

volume is of 3.3 million tons, with 1.36 million ton from aquaculture, about 40.8%. In 2005, it contributed to 21% of agriculture - forestry - aquaculture GDP and over 4% of the country's GDP.

The fishery export, in 2005, achieved the highest value in 5 recent years, over USD 2.65 billion, regardless difficulties raised by hard international trade regulations. It is estimated that the number will reach USD 2.8 billion in 2006 and USD 4.5 to 5 billion in 2010.

Aquaculture, with many advantages and potentials, is the main material source for export processing and of bases for Vietnam's food security. The cultivation, in recent years, has rapidly developed both in area and volume with progresses in farming method and objectives. The activity makes contribution in employment settlement for thousands of coastal folks, agricultural and rural economic structure shifting promotion and poverty reduction.

WTO accession schedule shows the Vietnam's commitment on gradual removal of trade regulations on fishery import and tariff reduction. The Ministry of Fisheries has actively defined the fishery import tax reduction schedule right at the regional integration. At entering the WTO, import tariff of fresh aquatic products would be decreased to 20% from 30% and processed products, 40% from 50%.

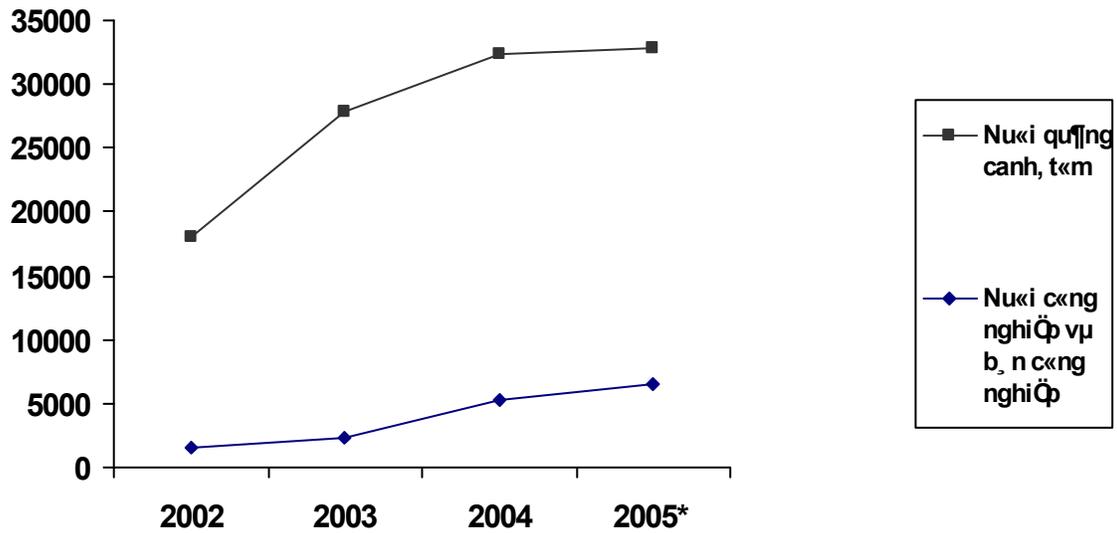
Under the WTO rules in the field of fishery, the State supports for management promotion and national sustainable development include infrastructure building, research, training, fishery extension services and market development. The supports are to be ensured not to protect domestic production or trade distortion. The Government has invested in grade 1 irrigation works for aquaculture, national hatcheries for original breed research and conservation, better aquacultural extension capacity and effectiveness, and training courses in the field. Preferential credit has been also provided since 2000 to make favour conditions for aquacultural development.

III. Shrimp farming in Ben Tre province

Potentials and advantages for aquaculture development especially tiger prawn farming are available in Ben Tre. Besides tidal flats, canals and integrated aquacultural with agricultural, forestry cultivation areas, the province consists of 50,000 ha of aquaculture with the major of shrimp raising, including 12,000 ha of fresh water farming mainly in north west districts, equivalent to 24% and 38,000 ha remains, 76%, of brackish and sea water farming in coastal districts as Binh Dai, Thanh Phu and Ba Tri.

Despite many years of development based on favour natural conditions for aquaculture, shrimp raising in Ben Tre has become the economic spearhead recently with the more important role. There is continuous increase of raised shrimp area and volume (see the figure 1 and 2). Raised shrimp volume is the major and on the rise of total fishery volume, especially it reached quality advantages over the caught products.

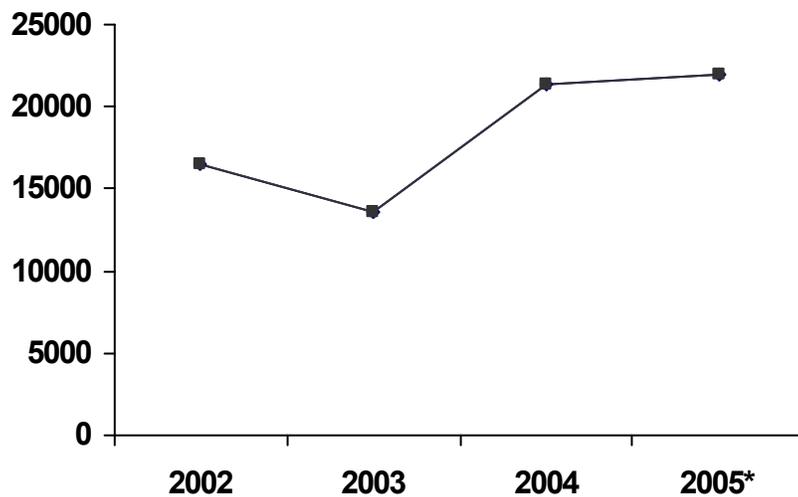
Figure 1 **Shrimp area situation in Ben Tre province**



Source: Ben Tre Department of Fisheries

* Estimate figures

Figure 2 Ben Tre province raised shrimp volume



Source: Ben Tre Department of Fisheries

* Estimate figures

Shrimp breeding contributes not only important part in provincial GDP and economic growth rate but also in employment settlement and income generation for thousands of laborers, reducing the rural employment pressure. In many coastal rural areas of Ben Tre, the model is of much interest thanks to its economic effectiveness. Through shrimp breeding, many households escaped from poverty and bettered off, are now able to afford to build permanent houses, purchase valuable assets as vehicles, television sets, and cassette players. In Ben Tre in 2003, 15,186 workers involved in shrimp farming and 17,480 people in 2005. Moreover, hundreds of others are service suppliers of feed, breed and other materials or hired by shrimp pond owners. Shrimp feeding related workers are mainly in coastal districts of provincial big shrimp farming area as Binh Dai, Ba Tri and Thanh Phu.

Various shrimp breeding models suit to coastal land ecological conditions and farmers' ones, including extensive brackish water sea shrimp farming, sea shrimp farming in ponds, extensive canal with breed raising, extensive sea shrimp feeding, intensive and semi-intensive tiger prawn model, integrated tiger prawn-rice cultivating, shrimp-rice integration and giant river prawn. Among the above models, intensive and semi-intensive tiger prawn farming are rising rapidly with products of strong competitiveness.

IV. Positive impacts

Almost shrimp growers in Ben Tre derive from rice farmers and gardeners. In the past, rice cultivation was the main livelihoods of many farmer households. In the early 1990s - the very commence of renovation and opening policy, Ben Tre farmers' and fishermen's living conditions were of many difficulties with strings of rice monoculture and limited income sources kept them in poverty and prevented them from economic breakthroughs. Since the renovation and trade liberalization implementation, Ben Tre economy has been changed. The whole Ben Tre economy was affected by trade liberalization with the most affected field and objectives are of food producing and rice farmers, especially poor farmers in tidal land areas respectively. Transition by trade liberalization brought them the most disadvantages. Agriculture, the key livelihood that generated jobs and income for poor farmers, faced obstacles due to products (rice and fruits) grown in salted and aluminized land failed to compete to products from others' highly subsidized economies. It is trade liberalization that *promoted agricultural structure transition in Bent Tre, to break the rice monoculture economy, towards centralized and specialized commodity production*. Widespread changes in all Ben Tre coastal rural areas also result in negative sides. Paddy field, low effective saline and uncultivated areas were narrowed for being shifted into aquaculture, shrimp ponds of households, co-operatives and enterprises. Total provincial shifted area was 6,904 ha, 5,358 ha and 5,398 ha in 2003, 2004 and 2005 respectively. Trade liberalization encouraged farmers to move into shrimp feeding and the past Dai Hoa Loc commune (of Binh Dai district) 1,256 ha rice-farming land is now only over 30 ha. It is also released by folks of hamlet 6 (Thanh Phuoc commune) that 95% communal rice growing land are now under shrimp raising as the later's higher economic effectiveness. While one rice crop can make about VND 3 million profits per ha, the number of shrimp farming can reach VND 100 to 150 million in case of no risk. The change is noticed to be from shrimp farming trade liberalization according to the chairman of Thanh Phuoc commune (Binh Dai district).

Box 1 Shifting from rice into shrimp farming thanks to trade liberalization

Since the market opening to, increased shrimp consumption volume leads to folks' shifting into shrimp raising from rice growing and the Thanh Phuoc commune's traditional agricultural structure has been changed quickly. At the moment, shrimp raising is the main livelihood of almost households and the communal production structure is overwhelmed by shrimp with unremarkable rate of rice cultivating.

Stated by Mr. Ngo Van Th, chairman of Thanh Phuoc commune, Binh Dai district, Ben Tre province in November 2005.

Trade liberalization paves the way for deeper integration of Ben Tre economy into the global one but also creates certain impacts. Ben Tre farmers move from familiar and long history economy of self-supply and small-scaled agriculture into shrimp farming for export, an up-scaled good suppliers and an element of international labor allocation. This is a comprehensive and profound change. Their old backward production customs and techniques are now replaced by advanced knowledge of good production.

It is acknowledged that shrimp raising for export produces much higher income than rice farming. Thanh Phuoc, along with the sector's development, after some years of investing in the sector, is now the richest commune of the district. Commune farmers' income is of sharp increase with VND 8 million per capita in 2005 and it obtained an unprecedented low poverty rate of 0.5% of total communal households (11 ones). Dai Hoa Loc commune, nearby Thanh Phuoc, by shrimp feeding, also enjoyed fast poverty reduction rate with 13.99% (268) poor households (under the new poverty line).

Trade liberalization with stimulation of social investment resulted in raised capital, fully mobilized sources, mass investment in pond cultivation for shrimp, developed shrimp-related services and export processing and more added jobs. In 2004, the investment by Ben Tre people alone was VND 1,170,916 million, including VND 827,270 million of self-finance and VND 343,691 million from bank loans. Increased investment is the motivation for widespread development of the sector with mass cultivation of shrimp ponds in paddy fields, salinas and uncultivated areas, resulting in higher demand on workers involved, deriving to rural employment restructure. The labor force can be classified into professional and unprofessional workers, directly feeding workers and mangers, service suppliers and other supporters

Box 2 Employment impacts

“There are 129.815 ha of shrimp farming in Dai Hoa Loc commune, consisting of industrial, semi-industrial, and integrated shrimp-rice models with 934.15 ha, 55 ha and 309 ha respectively. Labor demand, especially in farming season, is very high. In 2005, 1,378 shrimp farming households absorb 2,342 laborers, reducing employment pressure. Many unemployment are now hired by pond owners”

Stated by Mrs. Nguyen Thi Th. Vice chairwoman of Dai Hoa Loc commune, November 2005

Hired workers are mainly the poor as their lack of capital, land, and knowledge for their livelihoods. They often work for owners, co-operatives, enterprises, hatcheries, and material suppliers with hard works as pond dredging, environmental improvement, shrimp caring and so on. It often takes 4 months for one shrimp crop from breed releasing to harvesting but employees can have working time in about 6 to 8 months and get payment of VND 700,000 to 800,000 per month. There are often 1 to 3 hired workers in every poor household in Dai Hoa Loc anh Thanh Phuoc communes to enable to afford their essential needs. Despite strenuousness in work, the payment could help many households in being free of poverty (see the Box 2). Some workers who had to leave the homeland for employment in Hochiminh city, Dong Nai, Binh Duong, Vung Tau – Ba Ria now can get jobs right in the hamlet. Therefore, this can help limiting pressure of social service and infrastructure overload for urban and industrial areas.

Box 3 Escaping from poverty by working for shrimp pond owners

There are 4 people in my family, including 2 children. The two children are small and schooling in the communal high school. We are very poor with continuous starvation. Since the shrimp farming development, my wife and I have worked for pond owners, hatcheries, service suppliers and companies. We earn about VND 1.5 million per month, affording to essential needs and now we are not in poverty line but of little saving.

Stated by Nguyen Cong Tr., Binh Hue 1 hamlet, Dai Hoa Loc commune, Binh Dai district, Ben Tre province, in November 2005

Some poor households, encouraged by profit from the sector to bravely invest in farming with loans, coupled with learnt experiences and little good luck, are now poverty-free and better off (see the box 3). There are now more good owners with experiences in organizing dozens of hectare shrimp farming farmsteads in rural areas.

Box 4 Bettering off from poverty by shrimp farming

She has three children, the first son, 15, the second, 8 and the third daughter, 2. Before 2000, her family was very poor and lived on little income from the husband's work for a relative and her small business in communal fish market. In 2000, they are of bravery to get credit for 2,300 m² pond cultivation for tiger prawn, gaining VND 7 million profit. Since then, they continue production and always make profit with VND 16 million in 2005 alone. They are now in economic stability and can afford house repairing, television set and motorbike.

Interviewing Mrs. Lu Thi Th., 35, hamlet 3, Thanh Phuoc commune, Binh Dai district, Ben Tre province, November 2005

Trade liberalization promotes production and social infrastructure improvement in hamlets and villages. Transportation, irrigation, power supply, hatcheries systems are invested dozens of VND billion in shrimp farming areas. The province financed VND 7,114 billion for irrigation system, VND 1,499 billion for hatchery building in 2004 and the numbers are estimated VND 9.1 billion, VND 1.5 billion respectively in 2005. Dozens of VND billion have been invested in equipment purchasing, hatchery building by enterprises, co-operatives and farmers also.

Under strict requirements by customers and international trade regulations, shrimp farmers are to apply advanced technologies in production for ensuring product quality and food safety, meeting the market demand. It is admitted that awareness and application of new technologies in the whole shrimp feeding process, from pond cultivation, environmental protection, breed selection, to caring, post-harvest preserving techniques bring farmers' remarkably improved production and business capacity. Backward cultivation customs are now replaced by advanced production and business methods on the basis of the more clearly renewed economic thoughts. Linkages between shrimp farmers and processing units, breed centers and other service suppliers, between production and business have been set up and developed in rural areas.

VI. Negative impacts

Agriculture, forestry and fishery structure in Ben Tre has been changed due to trade liberalization and fishery import tariff cut. The program of agriculture, forestry and fishery restructure has been implemented for market adaptation and trade liberalization. Aquaculture is considered the provincial economic spearhead in the restructure process. Recent sharp increase of aquaculture, however, has created Ben Tre farmers' *livelihoods disorder*. Among thousands of farmers, the poor are the most disadvantaged in seeking new livelihoods to adapt to changed situation of severe and unequal competition. Employment changes of the poor under impacts of trade liberalization can be diagrammed as follows:

The poors' employment changes often confront many difficulties especially in case of involuntariness, but reluctance and passiveness as their lack of necessary conditions for changes as capital, experiences, technical knowledge, management ability, and information for new job accession. Particularly, it is more difficult to such a job like shrimp farming with many requirements of capital, about VND 100 to 150 million per hectare, high techniques. Much

capital needed for pond excavator hiring, transportation building, power stations, breed, feed, medicine and machine buying, environmental improvement, and employment. Bettering off of some shrimp farmers affects the poor's enrichment thought much. Some poor households overwhelmed by the shrimp farming "storm" of high profit and with the hope of "new life", got bank loans for shrimp ponds unprompted. But many of the poor with less investment than the rich, resulting in low productivity and competitiveness, received failure and loss only. The poverty circle can be illustrated as follows.

Figure 3 **Employment changes of the poor under trade liberalization impacts.**

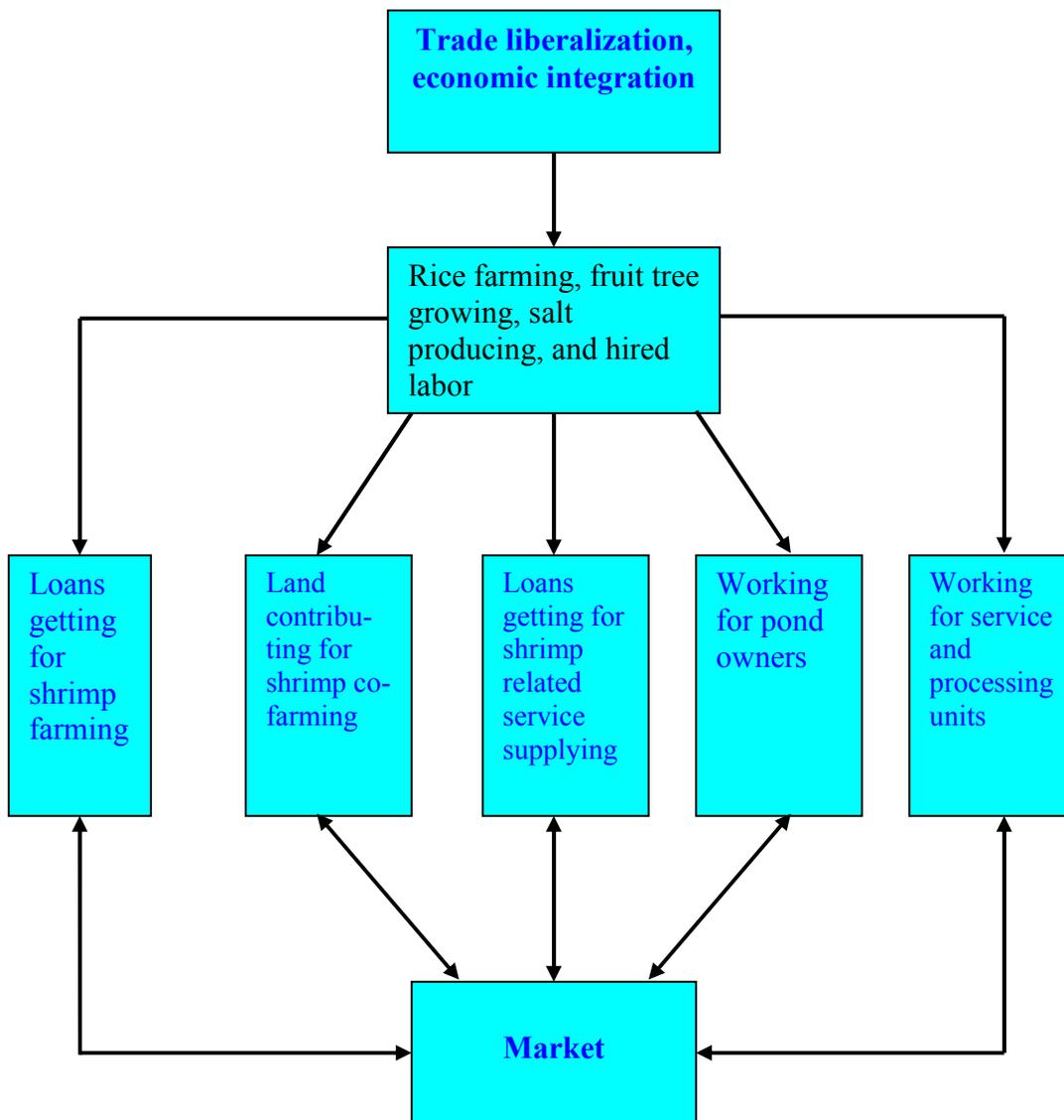
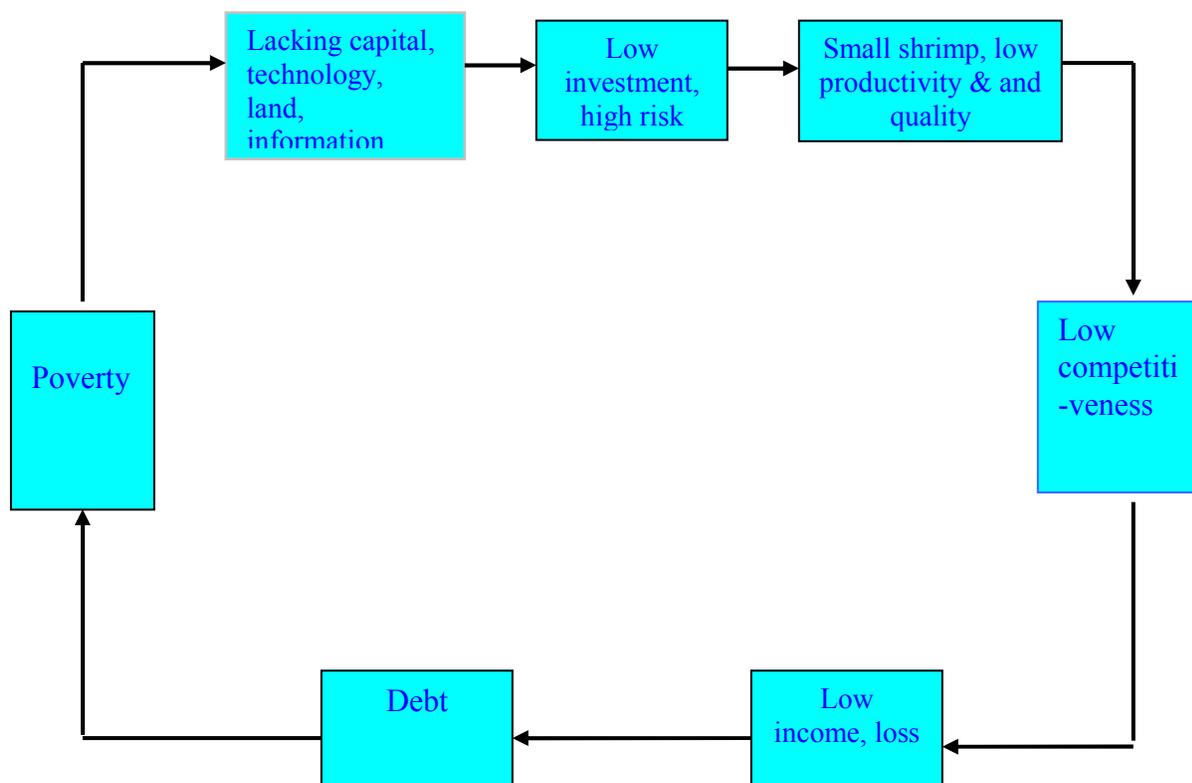


Figure 4 Poverty circles of the poor shrimp farmers



Lack of capital, techniques, and management capacity and information access more broaden the poor's failure risk than the rich. Under the technical requirements in shrimp farming, there should be three crossing ponds, including one for shrimp, one for deposition and the rest for waste treatment. However, limited land and capital lead the poor to have only one pond for shrimp, not the two others. The rich can afford excavator, while the poor get ponds manually. As a result, the pond is shallow, unsteady edge and easily polluted by wastewater from canal. The ponds with inability to get regular dredgement, or right treatment for environment bring negative impacts on shrimp growth process. Polluted environment is one reason to mass death of shrimp in the poor's ponds. The rich that often have technical problems of environmental treatment, breed selection, feed and diseases solved by fishery engineers can limit the risks. The poor fail to afford these engineers but expect support from fishery extension agencies and this is so limited.

Box 5 Difficulties of poor shrimp farmers

I am Le Tan H., born in 1955, living in Binh Hue 2 hamlet, Dai Hoa Loc commune, Binh Dai district, Ben Tre province. At seeing many enriched people by shrimp, I borrowed VND 30 million bank loans for investing in industrial tiger prawn farming on the 0.6 ha rice-growing area. I had the 0.4 ha water surface pond excavated with hope of success to be poverty-free. However, reasons of not access to production techniques, limited capital and investment, incorrect environment treatment way lead to many shrimp deaths, and my two continuous loss years. I fail to return principal and interest for bank and my family faces many difficulties.

Statement by Le Tan H., Binh Hue 2 hamlet, Dai Hoa Loc commune, Binh Dai district, Ben Tre province, November 2005

Factor of shrimp breed is decisive in farmers' success. Breed quality depends on many stages of production, quarantine, conservation and transportation. Breed service, in recent years, has been widely developed in the province with active participation of various economic backgrounds. Its quality, however, is of dependence on traders' attitude and responsibility to community since the market is under their control. Some measures have been applied as breed examining, quality certificate, to gain control on the market and prevention of low quality breed into farming areas. But some low breed can be out of control of local fisheries and authority agencies, coming cultivating areas. It is usual for the poor to buy these breeds due to their low knowledge or little capital makes them to buy on deferred payment with enclosed risks. Many bought the unqualified breed as lacking information or being cheated. Almost poor households are unable to reach Central provinces for reed procurement but through traders with higher price but lower quality.

Suffering from unfair competition leads the poor to great loss. It is believed that the poor get loss in shrimp market due to their small scaled, unfocused production and weak linkage. The poor's ponds are often of less than 1 ha while those of the rich are dozens of hectares with much higher productivity. Hard access to market information especially output market makes the poor to sell their products to traders, not the fishery processors as the rich do. Many stakeholders suffer from shrimp price changes, including also exporters and producers but the poor the most. When the price downs, the poor are forced to sell output to traders with low price due to reasons stated by traders as small and weak shrimp and polluted environment, etc. It is the same situation to the time of mass harvest. At that time, all households try to sell products for limiting loan interest and mass death of long keeping. Prolonged farming duration with increased cost but unchanged price, making greater loss, is also of the poor's worry. Many poor households have to painfully sell all products to traders with VND dozens of million losses. The rich are of more advantages over the poor in shrimp market. The rich are able to directly contact to processing units without go-betweens to get higher prices. Processing factories also are more favored of procuring from the rich's outputs as big volume, direct collection with ensured quality, not as much damaged as shrimp collected from many the poor's ponds. The Rich's products are also of more competitiveness in terms of dimension thanks to standard technologies. Market information access is more advantage to the rich because of their affordability to have media as Internet, television, and newspaper. In Tra Vinh, for example, many pond owners have Internet installed; some others have visited successful models in central provinces and abroad.

Box 6 Tears of poor shrimp farmers

The poor are so miserable. We have to borrow capital, not from bank as our lack of deposit, but from other lenders for increased cost of machine oil, shrimp medicines and feed. It is easy to get loans but with so high interest of 20% per month. Despite our expectation in four months of strenuous shrimp caring to return principal, shrimp price falls continuously. In 2003, one kilogram of 40-shrimps/kg types priced over VND 85,000, but the number was VND 78,000 and VND 62,000 – 70,000 in 2004 and 2005 respectively only. Moreover, we also faced difficulties in selling while traders preferred big volume from the rich to our small volume. They ignored our supplication and then, we had to accept the set price favored them. However, we had no way than selling them in tears because situation could be worse with more damaged shrimp by too long keeping.

Stated by Truong Thi B., 50, hamlet 5, Thanh Phuoc commune, Binh Dai district, Ben Tre province, November 2005

Shrimp price falling is from many causes but it is often considered resulting from complications in export with shrimp cases sued or strict requirements set by foreign partners. Being obliged to sign in “bond” fund, Vietnam fishery processors for export are to spend a large investment in fund signing and extended input cost from the loans burdens enterprises, reducing their profits. Some enterprises signed the fund with USD millions and they try to embroil farmers co-suffering from the loss with them.

Reduced shrimp price affects farmers much pulls many of them in re-poverty. Households with main income from shrimp farming or nearly poor households are very sensitive to abnormal changes of shrimp price and input price (machine oil, transportation, power, breed, and so on). Increased input cost also means the poor’s reduced income. In fact, average income of shrimp farmers decreased over a half against that of early period. Great loss would be over households with death shrimp, leading them to re-poverty. It is the fact that households with diversified income sources of little dependence on shrimp would be affected less at shrimp price dropping. However, almost households in survey districts do shrimp farming and main income from shrimp plays decisive role to their total income.

Many signals show environmental pollution risks with unpredictable consequences from shrimp farming. The long-run vision also believes that shrimp farming does harm for ecological sustainability, disordering the poor’s livelihoods and higher poverty rate. It is considered that polluted environment and low quality breed cause shrimp diseases with mass death. Reduced shrimp farming effectiveness and emerging environmental issues are alarming the sector’s sustainability. What the poor benefit from trade is unable to be ensured due to environmental risks. The poor confront disadvantages not only by reduced output price, raised input cost but also by environmental issues. It is to well understand, to have capital and techniques for environmental treatment. But as the poor fail to obtain all the three conditions, their low environmental cost can provides them not as good environment as the Rich’s. The problems are under the poor’s awareness but it is impossible to settle with their limited capital sources and

techniques. They have been suffering great environmental consequences. Many shrimp ponds of un-cultivation for 2 years after loss but now are still unable to grow rice. Many experts believe that it will take many improvement years for rice re-cultivation on the land.

Trade liberalization creates shrimp feeding “storm” in Ben Tre but also means missing other income sources. Gardening used to be based on by the poor and contributes to their earnings, but now is not of interest due to their attention paid to shrimp. It is harder for gardening now not only as the poor’s less attention to but also low productivity fruit trees growth on saltalized and aluminized land from sea water diversion canal to shrimp ponds. At the moment, gardening contributes almost nothing to farmers’ income. This performs the very instability of poor households’ income, also un-sustainability of shrimp farming.

A few women have their own shrimp ponds but many involve in related works. It can be said that employment for women are now of improvement. They participate in shrimp pond managing, shrimp caring, input and output market accessing and training courses held by aquaculture extension agencies and other companies. Women are now more self-confident in family and public decision making with improved economic management and social communication capacity through training. However, it seems women are more burdened with housework when man are busy to shrimp ponds. They, for example, have to shoulder more responsibility in family and children caring for man. While the rich can hire workers for farming, the poor women have to implement by themselves. Women in needy households with small shrimp ponds must be responsible for all works as their man work for payment far away. This can be translated that women in shrimp farming areas enjoy few opportunities to get more knowledge and involve in social activities.

There is no proof of children labor in Ben Tre. Though children are now of better living standards and schooling thanks to households’ improved income, those in poor and lost households also suffer many changes. Farmers of consecutive loss cut children’ schooling expenses of extra lessons, books, notebooks and other materials and some other children have affected psychology from debt situation of the family and disagreements of parents.

VII. Conclusion and Comments

1. Conclusion

Trade liberalization and economic integration create impacts on Ben Tre economic restructure with logical change of farmers from rice into shrimp cultivation. Both the rich and the poor invest in shrimp but with many differences in terms of motivation, conditions and benefits from trade liberalization and economic integration. Some of the poor are of voluntary shifting into shrimp farming for higher profit but some others are of compulsoriness at low productivity rice and consecutive loss to grow rice in saltalized and aluminized land affected from other households’ seawater diversion canals.

Shrimp farming, in the context of trade liberalization and economic integration, benefit farmers much but in unfair distribution to various shrimp farming groups. It seems that the poor receive

fewer employment and income opportunities than the rich. The sector, despite its positive impacts on livelihoods of the poor but also faces them many challenges of trade liberalization. The poor shrimp farmers are confronting the greatest and long-term problems of risk of re-impoverishment and environmental pollution. In case environment protection measures are failed to fully implement, shrimp farming can lead the poor to having no chance for livelihood choices. Despite the recent situation of high income and employment generation, shrimp farming implies price instability and unsustainable development. When Vietnam gets WTO membership, the sector will face greater challenges from strict trade regulations and trade inequality.

2. Comments

Some measures supporting shrimp farmers need to be done to minimize negative impacts of trade liberalization and market changes. Besides general measures, the poor should be obtained some following supports.

- *Support for infrastructure building:* In coming years, the sector is developing and extending production scale with higher demand on infrastructure serving for its development. The technical infrastructure system includes transportation, supply and drainage canals, power supply station, hatcheries and high quality feed producers. The effective building is in need of investment from the State and master development plan for shrimp farming area. Folks should be encouraged to involve in shrimp farming area plan drawing and implementing.
- *Promotion of fishery extension and technology transferring:* Though fishery extension makes contribution to the sector's development with strengthened activities and is the provider for almost technical knowledge of the farmers, are now still incomprehensive and fails to benefit all farming groups. The poor group, as many reasons, is unable to attend training souses held by extension agencies and learning tours as well. Thus, it should be strengthened and popularized fishery extension activities, technology transference, food safety, marketing, processing, product conservation, communication skills, information receiving and analyzing, etc.
- *Market accessing:* it is to bettering market research, demand prediction and to define necessary information system, including market volume, structure, price, etc. It must be ensured to timely and adequately provide market information to farmers, also the poor, on mass media (radio, television, newspaper, and so on) or with support of local staffs with documents. Improved support for shrimp farmers to access market with various forms as customers meeting, fairs and exhibitions are necessary.
- *Better community management:* shrimp farming development are all of community's implementation with usage of public works as irrigation canals, environment treatment systems. As farming activities by one household affects others much, community management in the areas should be further strengthened through management groups assigned by villagers. The groups work for public interest on basis of democracy and community's innovation mobilization.

