

2013 Mekong Forum, Mekong Institute, Khon Kaen
July 11-12, 2013

MOVING TOWARDS AGRIBUSINESS SUPPLY CHAIN FOR INCLUSIVE AND SUSTAINABLE DEVELOPMENT

Tin Htut Oo

CEO,

Agribusiness and Rural Development Consultants (ARDC)

CONTENTS



MOVING TOWARDS Agribusiness supply chain for inclusive and sustainable Development

1. Global Food Security
2. New Agricultural Vision For Sustainable And Inclusive Development
3. Important Dynamics Of Urbanization
4. Rising Land Acquisition In Developing Countries
5. Promoting Agricultural Development Through Supply Chain Management

GLOBAL FOOD SECURITY

- **GREEN REVOLUTION** in 1960s saved an estimated one billion people from famine as food production increased from 800m to more than 2.2b tonnes between 1961 and 2000 – mainly through crop intensification using HYVs, agrochemicals, irrigation, modern techniques rather than land expansion
- Enormous gains in agricultural production was often accompanied by negative effects on natural resource base and has wider environmental damage through indiscriminate use of agrochemicals polluting environment, deforestation and emission of greenhouse gases
- Subsistence Agriculture has transferred to commercial agriculture rapidly during the past decades: **now moving towards Agribusiness Supply Chain**

GLOBAL FOOD SECURITY

- Need to further intensify crop production with less land and water resources to feed projected **9 billion people in 2050** with dietary changes favoring meat and vegetables as **urban population reaches to 70%**
- FAO projected the need for **70% increase of agricultural production by 2050** globally to meet food demand alone excluding demand for bio-fuel feedstock = extra billion tonnes of cereals
- IFPRI estimated real price increases of wheat 59%, rice 78% and maize 106% during 2010 – 2050 period
- Farmers face series of unprecedented and intersecting challenges of rising fuel and inputs cost, highly fluctuating commodity prices due to global economic crisis, and impact of global climate change

GLOBAL FOOD SECURITY

Producing more food with less resources: 'MORE WITH LESS'

- ✓ FAO (2009) – future production growth – **10:20:70 rule** (10% area expansion, 20% cropping intensity increases, BUT 70% from Technology, Innovation and Policy)
- ✓ Need to **INCREASE PRODUCTIVITY** (not only at production level – where land, water, labor and capital are traditional sources of productivity increases) and **REDUCE WASTAGE** along entire supply chain
- ✓ **Hunger for Land and Thirst for Water: EFFICIENT USE OF RESOURCES**
- ✓ **ENHANCE ECOSYSTEM SERVICES: restoring and safeguarding the functions of biodiversity and natural resources**
- ✓ **CROSS-BORDER INVESTMENTS** – can help develop **comprehensive supply chains and trading networks, transfer of technology, export platforms** – ASEAN as a common market and production base – AEC 2015;

NEW VISION IN AGRICULTURE: 2nd OR NEW GREEN REVOLUTION

NEW VISION FOR SUSTAINABLE AGRICULTURAL DEVELOPMENT

First Green Revolution (High Yielding Approach)

- Seeds : HYVs
- Agrochemicals
- Irrigation
- Technology transfer

Grow first and clean up later

Public sector led movement

Transition from subsistence farming

New Green Revolution (Income and Welfare Approach)

Hybrid Seeds and biotechnology -
nanotechnology

Soil and nutrient management

Water management

Knowledge and technology transfer
ICT application

GAP, traceability

Nutrition and food safety

Green growth

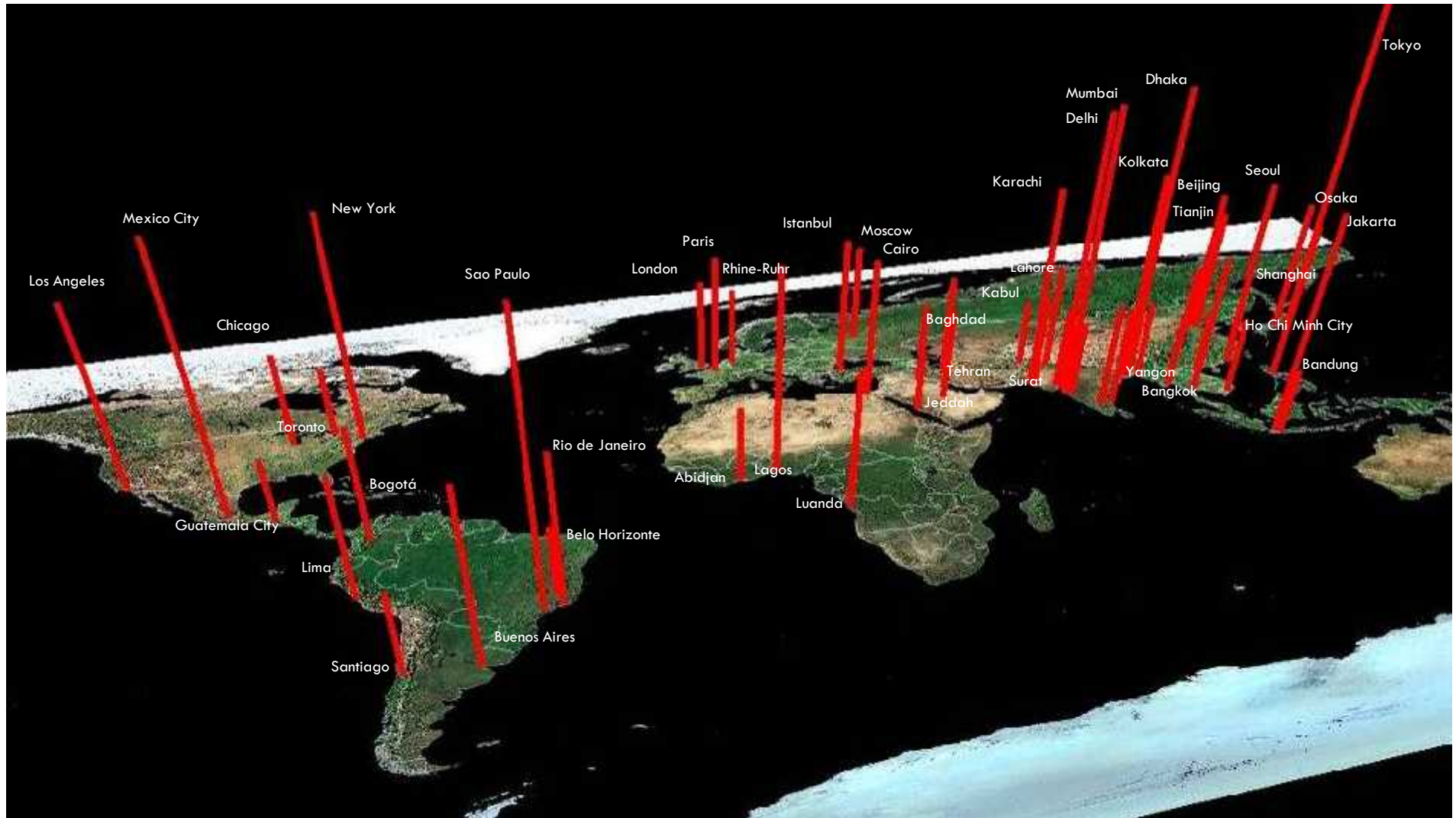
Public-private harmonization

Agribusiness development : supply
chain management

NEW AGRICULTURAL VISION

- ❖ **Agricultural development policies and strategies in GMS, particularly CLMV countries are still trapped in the first green revolution concept - primarily focused to increase production of crops using high yielding varieties and high inputs including expansion of irrigation.**
- ❖ **Need new approach to agriculture that will deliver food and nutrition security and safety, environmental sustainability and economic opportunity.**
- ❖ **Requires a comprehensive approach: transforming and engaging all the stakeholders in the supply chain in an unprecedented harmonized effort.**

MEGACITIES OF THE WORLD IN 2007

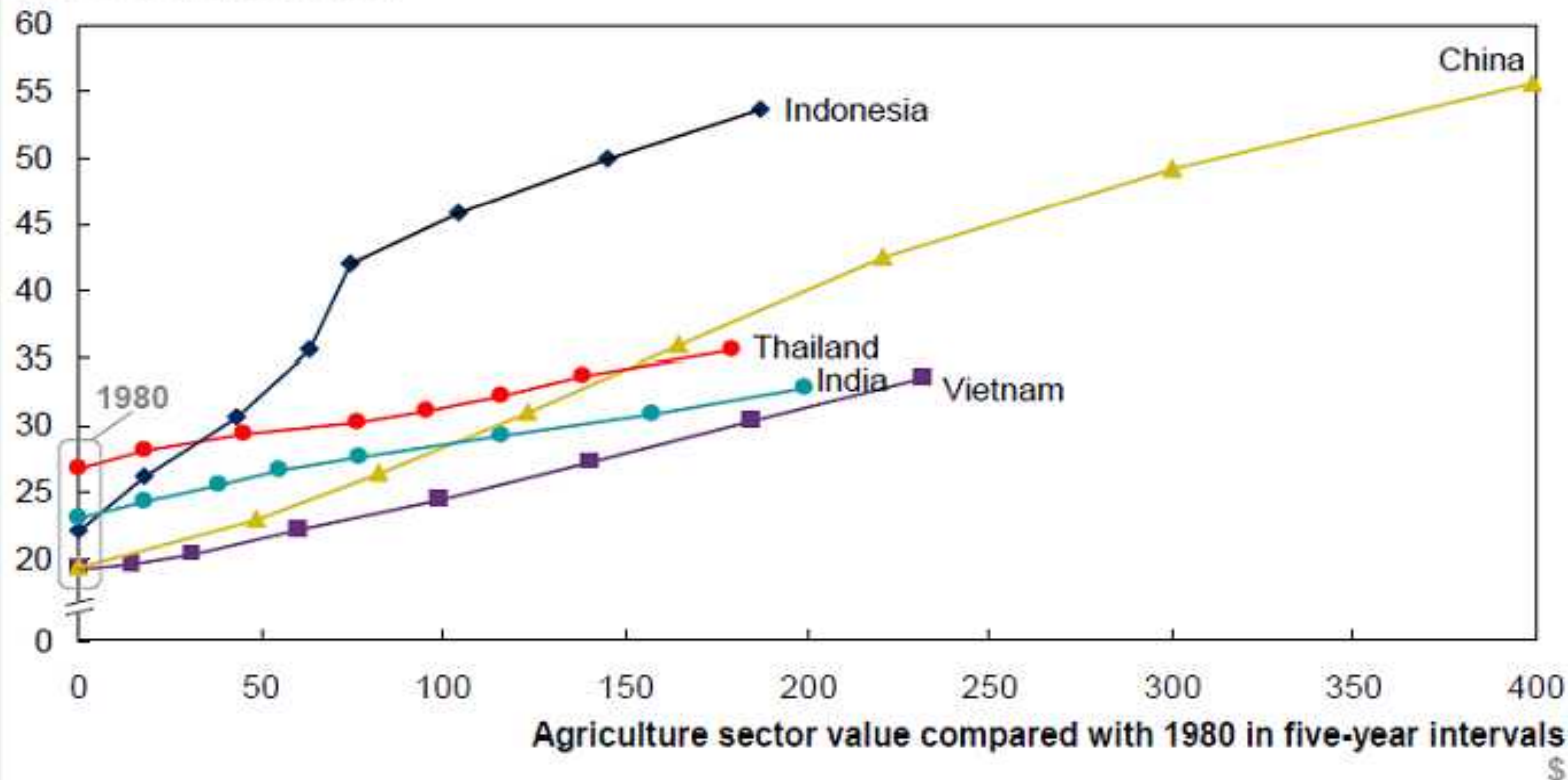


URBANIZATION

In Asia, increasing rates of urbanisation have gone hand-in-hand with large increases in the value of the agricultural sector

Urbanisation rate

Urban/total population (%)



NOTE: First data point per country, 1980; last data point per country, estimated for 2015.

SOURCE: IHS Global Insight; United Nations, *World population prospects: The 2010 revision*; national statistical offices; McKinsey Global Institute analysis

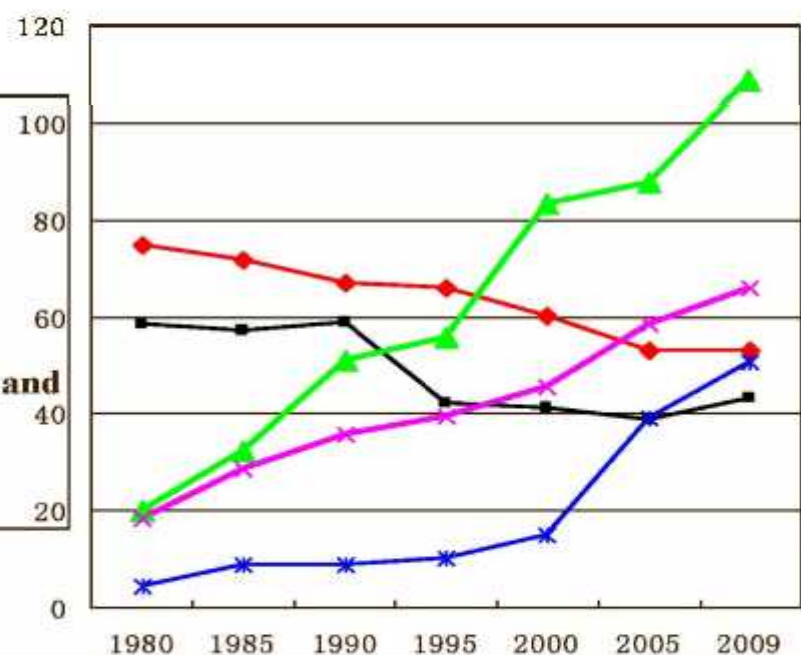
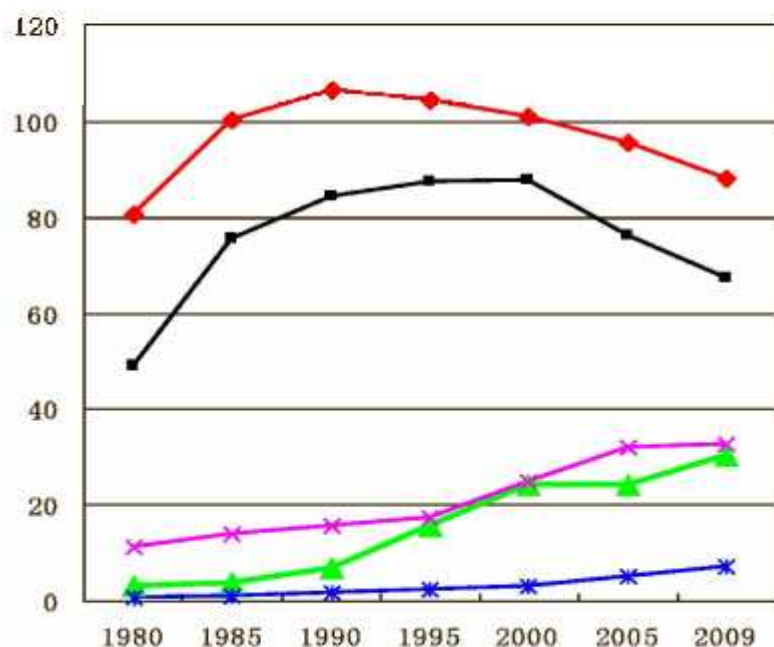
CASE STUDY: RURAL & URBAN CONSUMPTION IN CHINA

Beside income, urbanization has been the other driving force of food consumption pattern changes.

Per capita food consumption (kg)

Rural

Urban



Urban consumer consumes less grain but much more meats, milk and fruits

IMPORTANT DYNAMICS OF URBANIZATION



Growing competition for land and water resources between urbanization and agricultural production, but...

- Urbanization helps to finance productivity improvements in agriculture
- Urbanization increases demand for agricultural products
- urbanization has been the other driving force of food consumption pattern changes...consumption of fruits, edible oil, meats, fish and milk have growing significantly with income overtime and home vs away from home

Investing in rural development at the same time as urban development may offer a way to avoid overwhelming cities with migrants who are pushed off their land rather than attracted by the city ... **RUBANIZATION!**

RISING LAND ACQUISITION

- AT THE FOREFRONT ARE FOOD-IMPORTING COUNTRIES WITH LAND AND WATER CONSTRAINTS (e.g. GULF STATES) AND COUNTRIES WITH LARGE POPULATIONS AND FOOD SECURITY CONCERNS (e.g. CHINA, SOUTH KOREA, INDIA)
- Targeted developing countries where production costs are lower with more abundant land and water
- Others factors for investment include geographic proximity and climate conditions for preferred crops
- Different types of investment either directly or through state-owned entities and private-public partnership on land leases, concessions or purchases with widely differing size and terms of contracts
- Another type to secure food supplies is through contract farming and investment in rural and agricultural infrastructure including irrigation
- Investment in perennial plantation and cash crops rather than basic staples through land acquisition driven by profit-making motives of private sector in developing countries happened during the past decades

LARGE-SCALE LAND ACQUISITIONS: THREATS AND OPPORTUNITIES



- **Decrease in public and private sector investment in agriculture** has led to food price spike of 2008 and food prices surge to record levels in early 2011
- Land acquisition for large-scale commercial agriculture can be seen as **opportunity**: changing global economic context, fiscal inability of public sector to provide capital and urgent need for greater development in agricultural productivity and rural economy
- Opportunities can be seen as **unwarranted optimism** emphasizing the threats to people's livelihoods and ecological sustainability if inequality exists in bargaining power which can led to socio-political instability
- **Additional investments** in agriculture in developing countries should be welcome in principle – while speed, scale and terms of land acquisition have provoked opposition in some countries (e.g. Philippines blocked China land contract; Daewoo logistics corporation 1.3M ha lease negotiations in Madagascar played a role in political conflicts in 2009)

Demand for land particularly with access to water will increase: requires more attention through sound monitoring, statistical assessments and land rights policies and considerations on ecological sustainability of land and water resources for large-scale investment

IMPORTANCE OF LARGE SCALE AGRICULTURE



- Supply Chain Management in large-scale agriculture;- from plow to plate concept including GAP, traceability, food and nutrition security aspects;
- The need to control for high perishability and safe handling involves specialized production, packing techniques and refrigerated transport, all of which require large capital investments and also investment in research, development and marketing, which small and medium-sized enterprises cannot easily afford (Johann Kirsten & Kurt Sartorius, 2002);
- Success models of large-scale agriculture include land development for smallholder rubber and palm oil plantations under FELDA in Malaysia and in Indonesia, and PPP with multinational corporations in Vietnam for tea and coffee production;

ALTERNATIVES TO LAND ACQUISITION

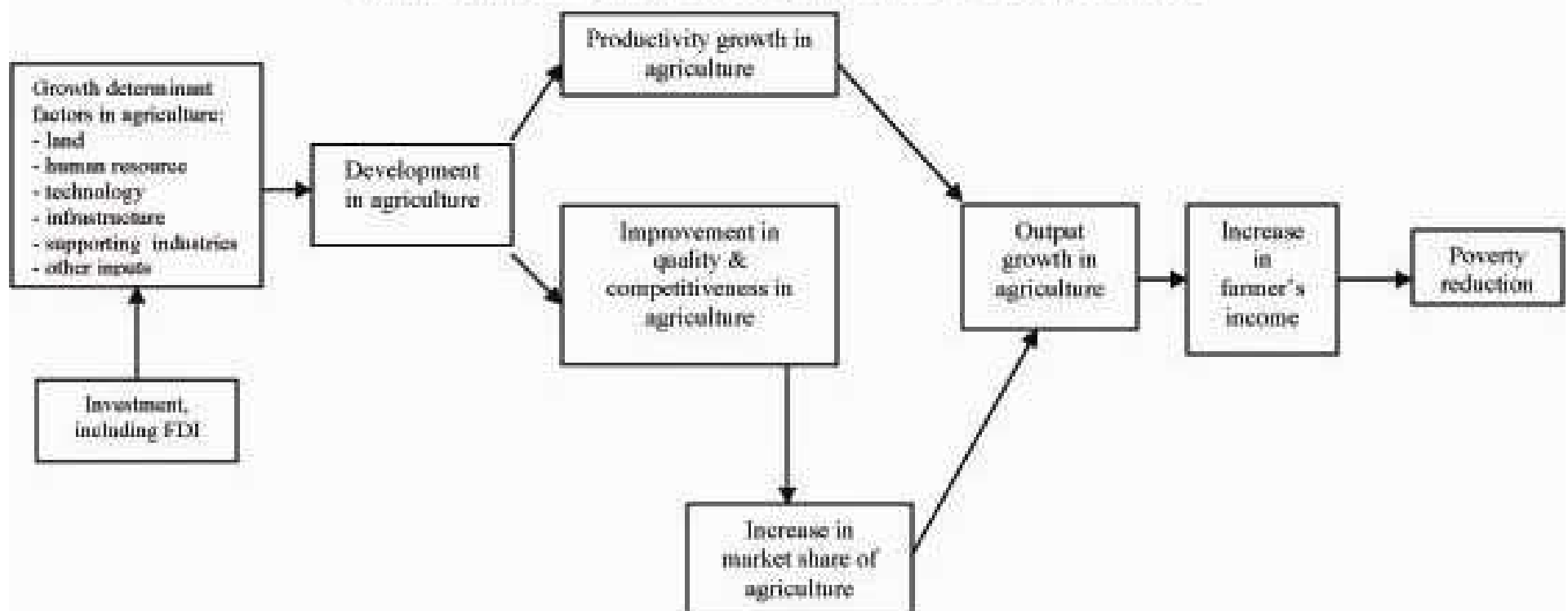
- Is it possible to formulate inclusive agribusiness models bringing benefits to smallholder farmers and protect their land rights while ensuring returns to private companies? Do agriculture investment projects need to evict existing farmers ?
- Promoting investment models that maximize opportunities for smallholders include;
 - (1) contract farming;
 - (2) management contracts;
 - (3) tenant farming and sharecropping;
 - (4) joint ventures;
 - (5) farmer-owned business; and
 - (6) upstream/downstream business links

No tailor made best possible option benefiting smallholders while remaining attractive for investors – need to take into account local land tenure, culture and tradition, demographic and agro-ecological considerations

RELATION BETWEEN INVESTMENT, DEVELOPMENT OF AGRICULTURE AND POVERTY REDUCTION

(Source: Tulus Tambunan, *The impact of FDI on poverty reduction*)

Relation between Development of Agriculture and Poverty Reduction



PROMOTING AGRICULTURAL DEVELOPMENT THROUGH SUPPLY CHAIN MANAGEMENT



WHY SUPPLY CHAIN MANAGEMENT ?

- (1) the role of agriculture is changing rapidly with the development of agribusinesses: from subsistence to commercial farming with more emphasis on standards in food and nutrition quality and safety;
- (2) changes in the competitive environment for food, feed, fiber and fuel products have triggered the interest in supply chains together with;
 - (i) globalization and regional integration;
 - (ii) rapidly growing urbanization and income;
 - (iii) declining terms of trade for producers, particularly the small holder farmers;
- (3) Traditional commodity orientation in R&D and production to business to business relationships through 'ppp';

PROMOTING AGRICULTURAL DEVELOPMENT THROUGH SUPPLY CHAIN MANAGEMENT



A supply chain can be looked into as a set of agribusiness activities and products that lead to a produce that reaches the final consumer.

Supply chain management in agribusinesses can help in understanding:

- ❑ How the products reach the final destination;
- ❑ The economic relationship (structure) between the members in the chain;
- ❑ Change of this structure over time;
- ❑ Key threats to the entire value chain;
- ❑ Key determinants of the share of profits created by the chain

PROMOTING AGRICULTURAL DEVELOPMENT THROUGH SUPPLY CHAIN MANAGEMENT



FIVE MAJOR COMMON FACTORS LARGELY RESPONSIBLE FOR INCREASING ATTENTION TO AGRICULTURAL SUPPLY CHAIN MANAGEMENT IN THE GMS REGION FOR SUSTAINABLE AND INCLUSIVE ECONOMIC DEVELOPMENT TO ENHANCE THE REDUCTION OF ECONOMIC DISPARITIES AMONG AND WITHIN THE COUNTRIES:

- (1) Changing demography and consumer behavior
- (2) Expanding connectivity and competition
- (3) Information and Communication Technology
- (4) The importance of speed
- (5) Visibility of best practices

THANK YOU FOR YOUR KIND ATTENTION!

