Agrarian Change and Rural Development

Current Insights, Knowledge Gaps & Policy Challenges

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UN-DESA Expert Group Meeting 'Eradicating Poverty to Implement the 2030 Agenda for Sustainable Development"

Key issues

Demand for Healthier Diets

- ❑ Accesibility
- ❑ Affordability

Agri-food Value Chains

- ❑ Inclusiveness
- ❑ Value added

Farming Systems

- ❑ Efficiency
- ❑ Sustainability / Climate-resilient

Accelerating the End of Hunger & Malnutrition

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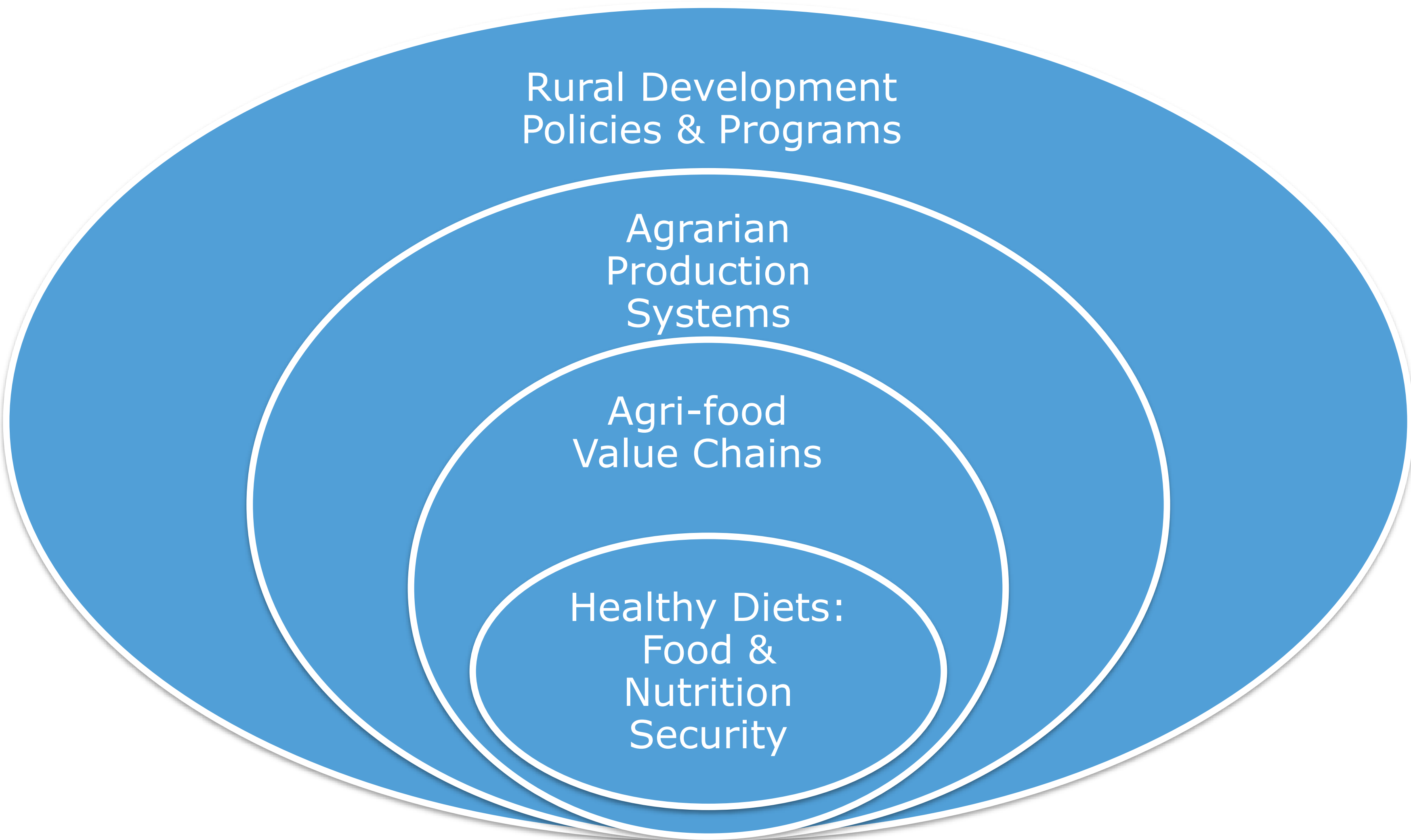
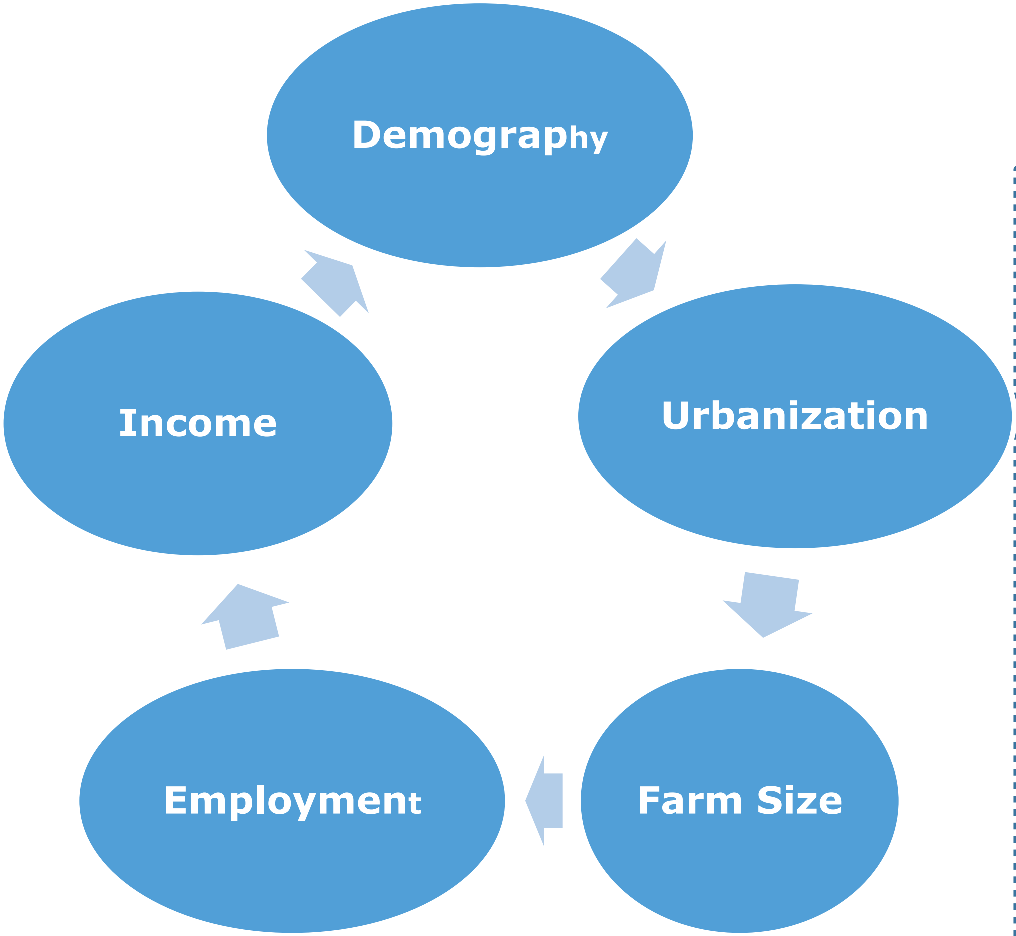
Agrarian Policies for Food Systems



1. Agrarian Change



a) Changes in Food demand & large **Dietary Shift**

b) **Bifurcation** of the Farm Production Structure

c) **Missing Middle** for Rural Support Services

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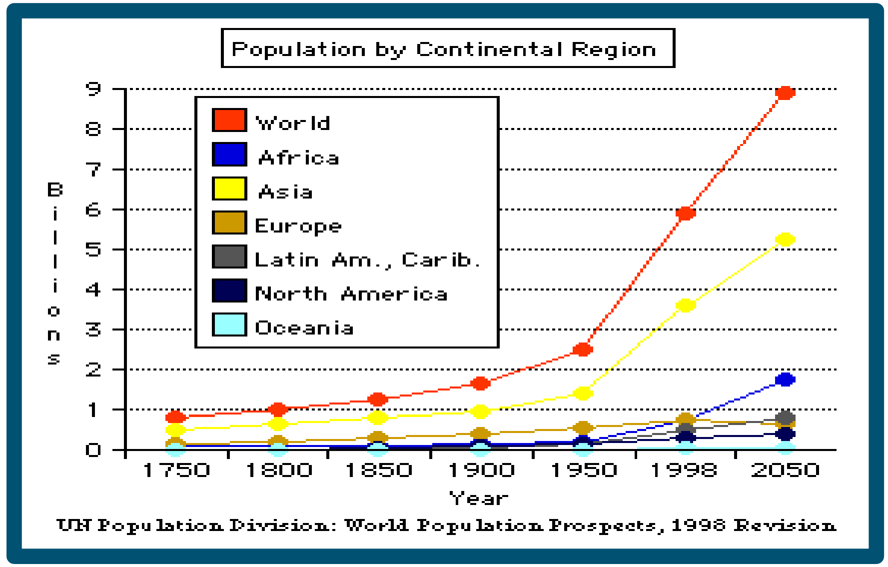
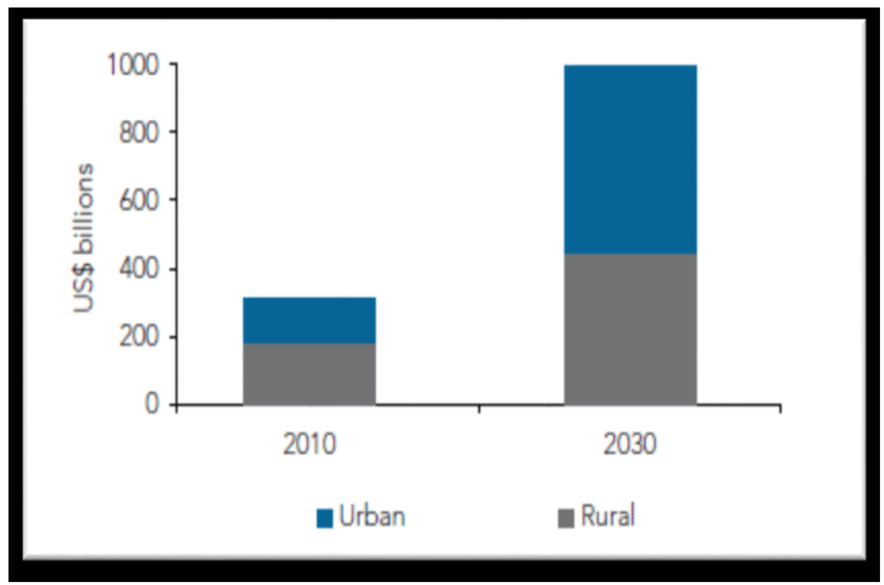
1a) Population Growth & Demand for Food

SSA population will increase from 800 Million (2000) to **2.5 Billion** (2050) in next 40 years
→ 20% world population,

More than half of world's population growth (2020-50) is expected to take place in Africa (+ 1.3 billion).

African food market will grow with **> 300%** between 2010 and 2030 .





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Urbanization & Employment

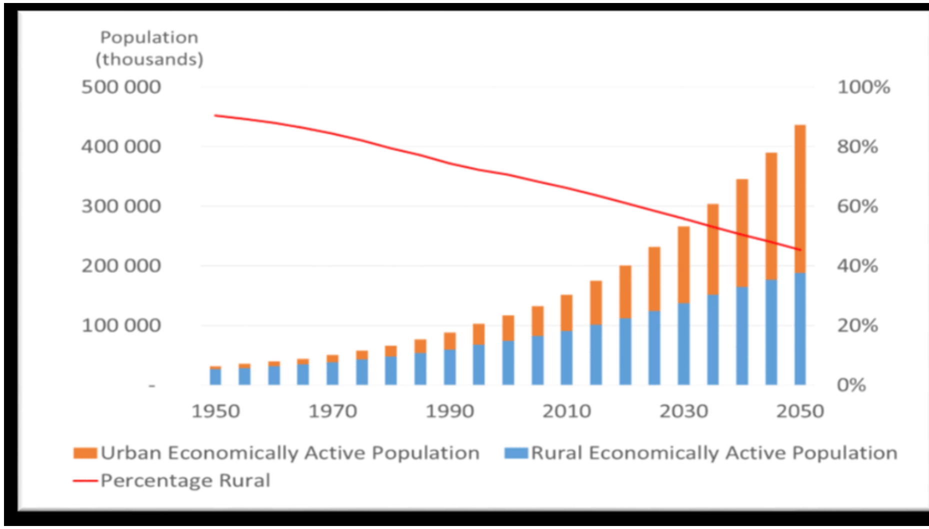
World: Urban population will grow to 75% in 2050

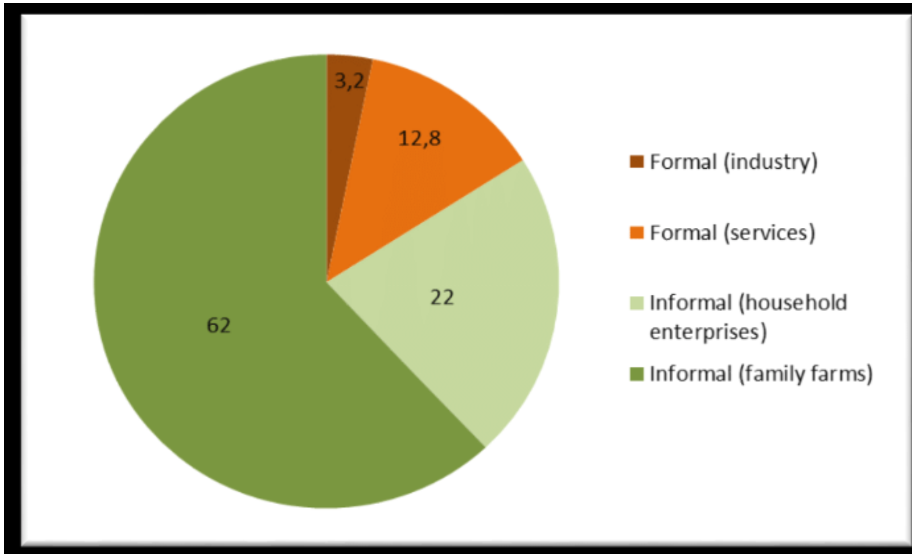
SSA: Rapid rate of Urbanization & some emerging mega-cities (Gulf of Guinea)

Urban workforce share in SSA increases from 20% (2000) to 40% (in 2030)

Most urban growth from natural increase (not migration)

Most employment in family farms, SME businesses & informal household enterprises





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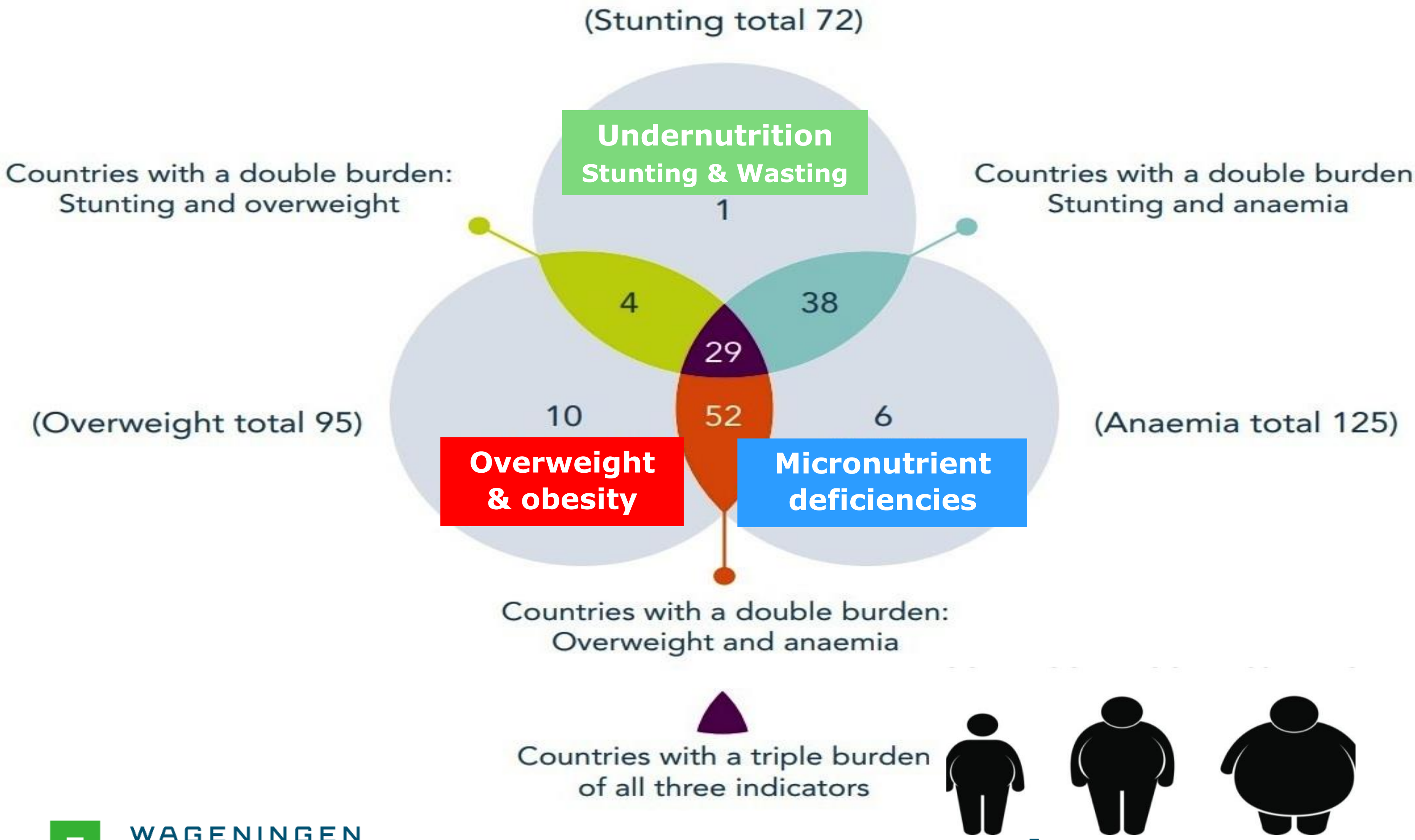
Food Intake: Triple burden of malnutrition



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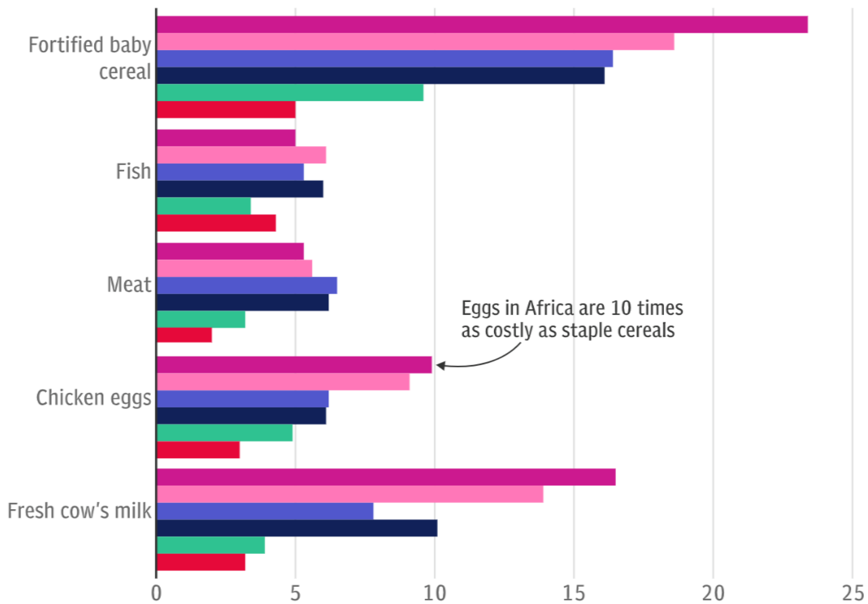
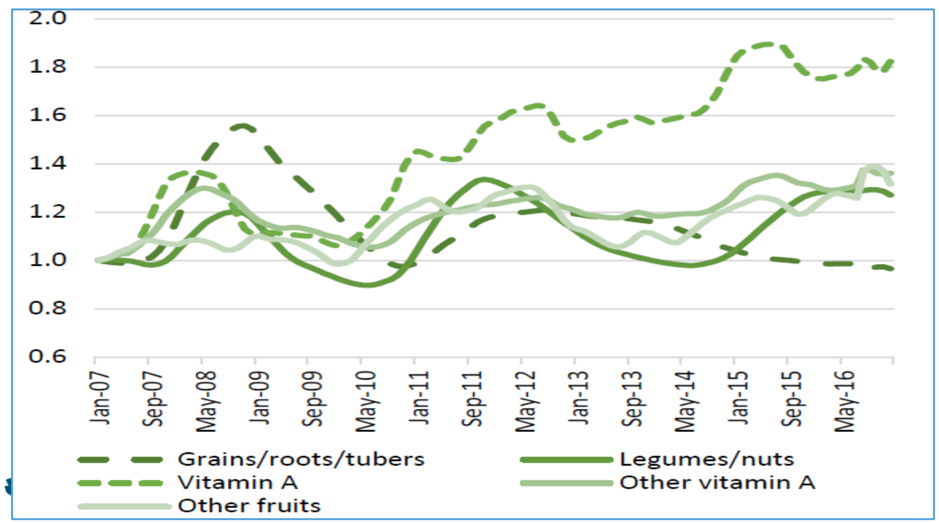
Food prices: healthy diets are expensive



*Caloric prices are the ratio of the price of 1 calorie of a given food (e.g. eggs) relative to 1 calorie of the cheapest staple cereal in each country

SOURCE: AJAE



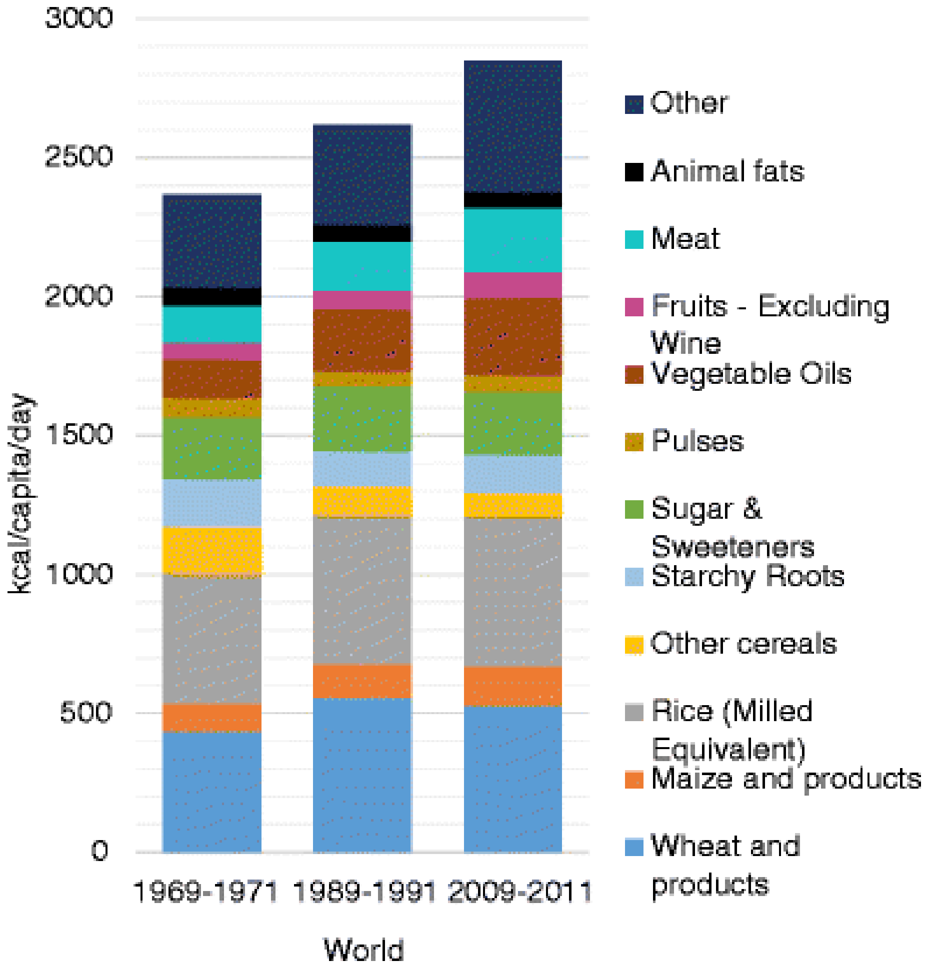
Nigeria: Calories from animal-sourced food are up to 20 times more expensive than cereal-based calories

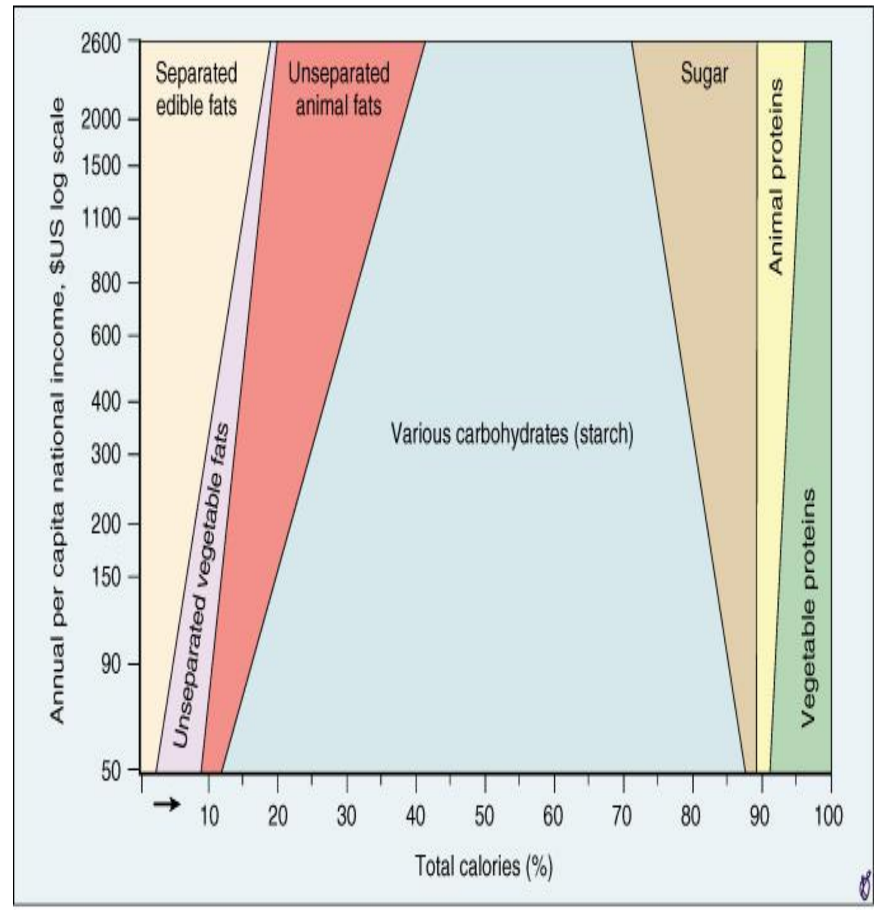
(Heady et al, 2016 Food prices & poverty reduction, IFPRI)

Ethiopia: Relative prices of leafy vegetables, legumes & nuts and animal-based foods compared to staple cereals are 30-60% higher

(Bachewe et al., 2017, The rising costs of nutritious foods in Ethiopia, IFPRI)

Dietary change: shifts to energy-rich food





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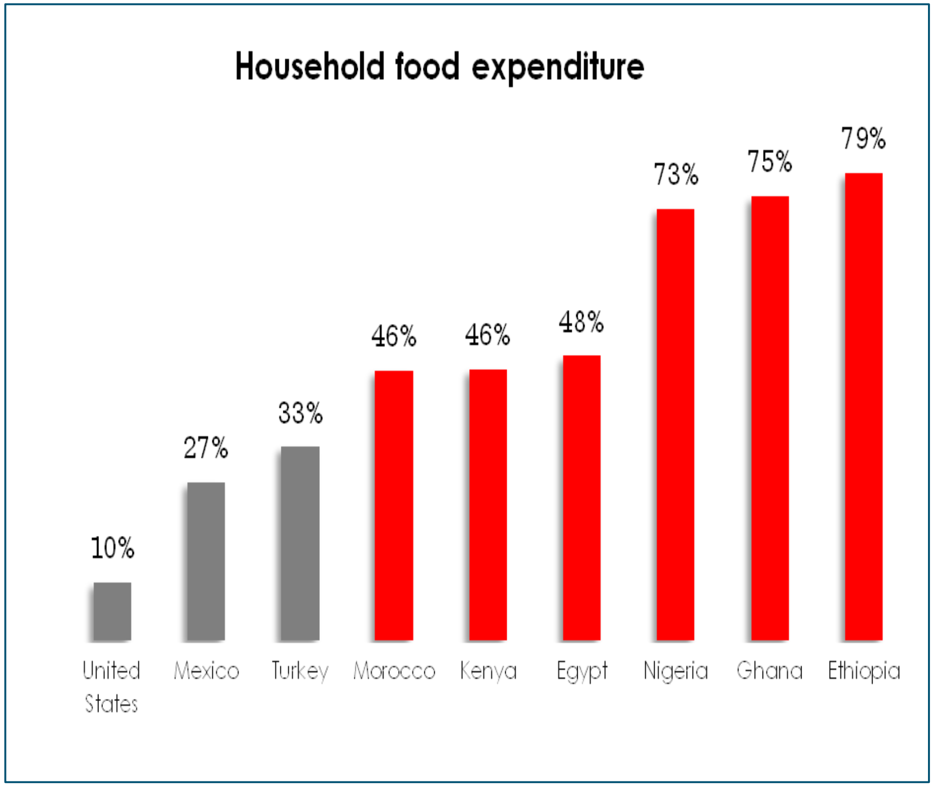
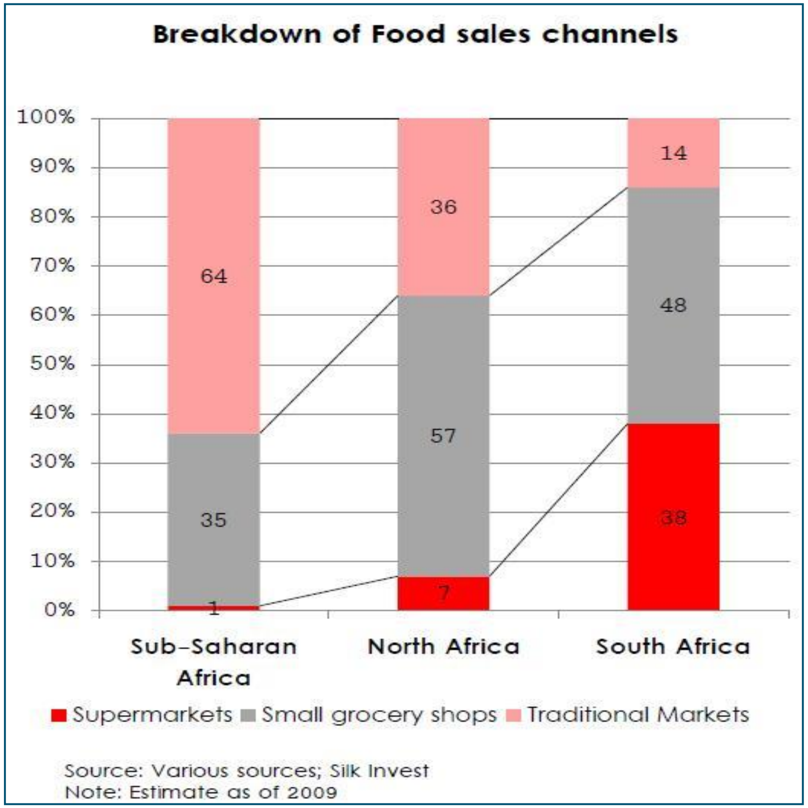
Increasing demand for F&V, Poultry, Eggs, Fish + processed foods (sugar/salt/saturated fats)

Food expenditures & shopping habits





SSA Household spend 45-80% of income for food
SSA Markets provide 40-70 % of food supplies
Processed foods represent 20-40% of food intake

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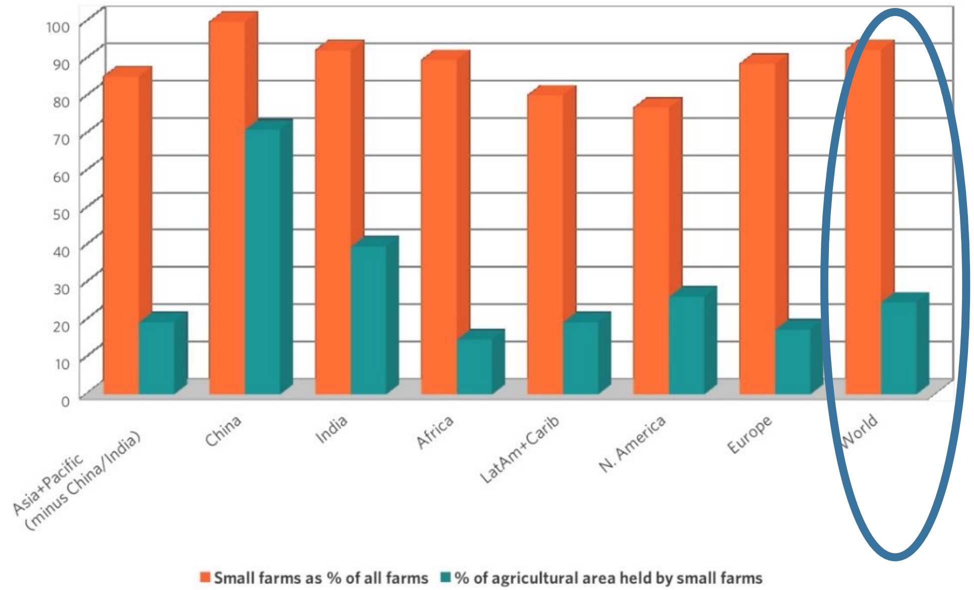
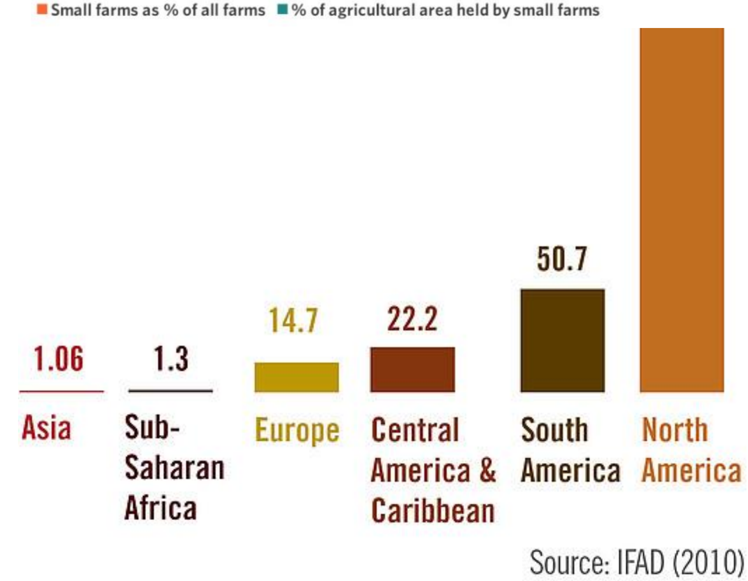
1b) Farm production structure

90% of farm in the world are smallholder owned & operated, but they hold only 25% of world's farmland

Average farm size in SSA is 1.3 ha. and in SE Asia 1.06 ha. (IFAD)

Rapidly increasing role of **medium-scale farms** (Kenya) to 50% of farmland (Zambia)





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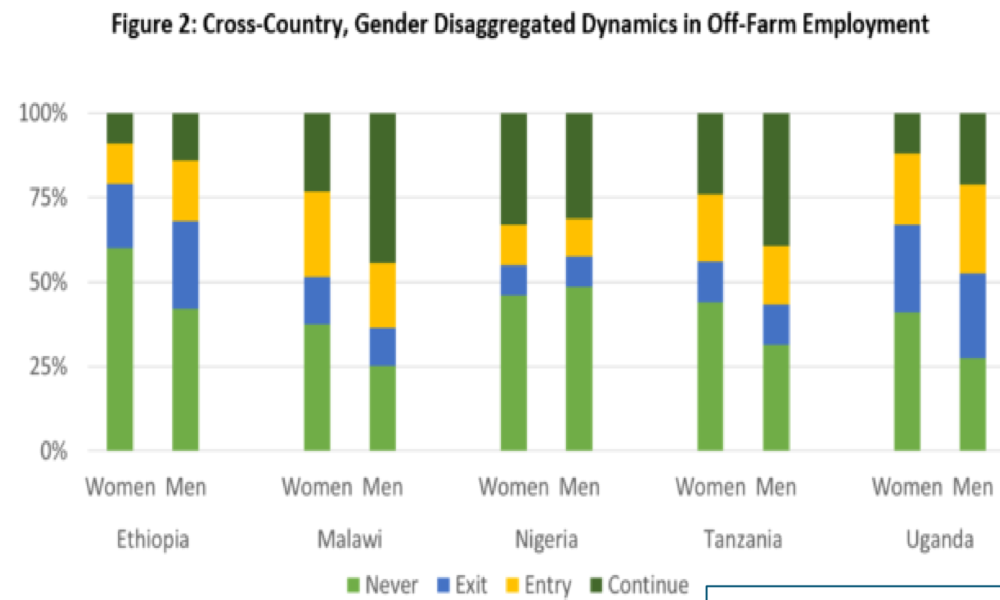
Agrarian structure: rural employment

44% of SSA households are engaged in **off-farm** and/or **non-farm** employment

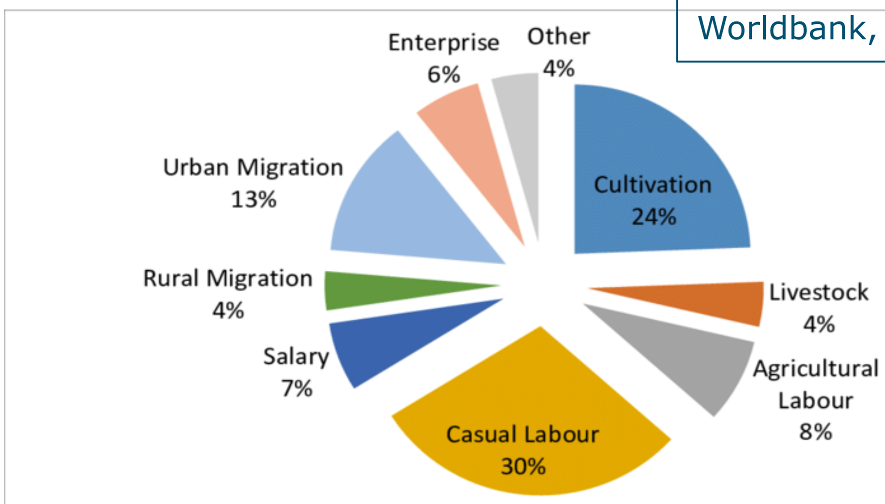
Women are 9% less likely to work non-farm: gender gap

Off-fam income may represent up to 30-50% of household income

Nonfarm income may represent 20-40% of rural household income (FAO)



Vd Broeck & Kilic, Worldbank, 2018



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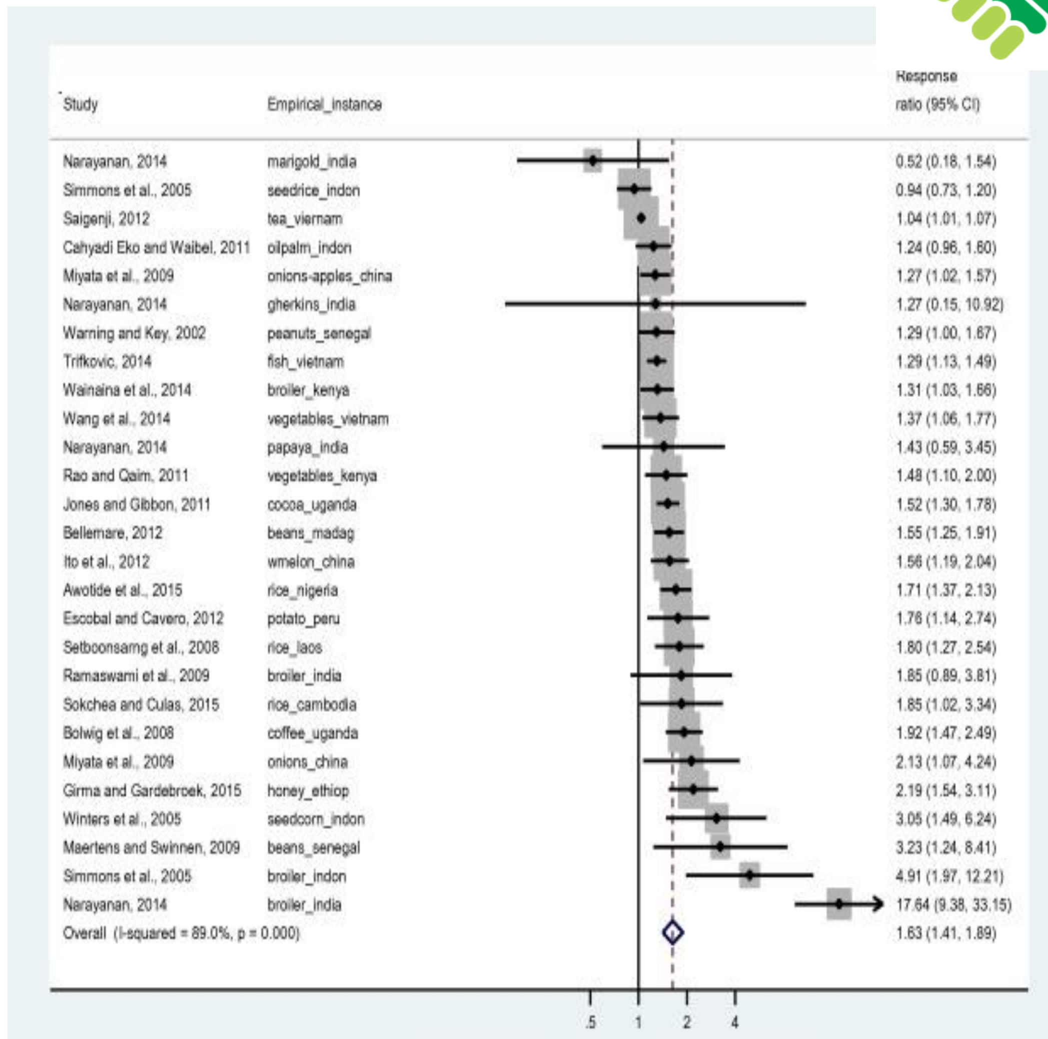
Contract Farming

Contract farming mainly involves medium-size farmers.

Most contract farming takes place for high-value activities (F&V, broilers).

Income & employment effects of contracts tend to be positive.

Grades & standards encourage contract farming (for exports).



Giel Ton et al. (2018) Contract farming for improving smallholder incomes: What can we learn ?, World Development (104): 46-64.

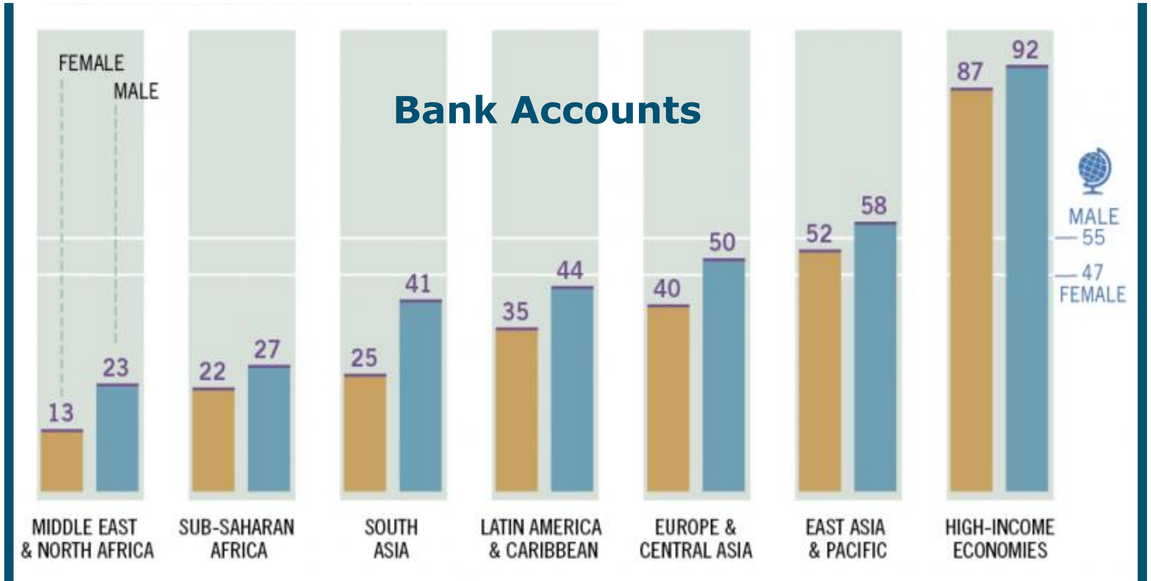
1c) Missing Middle: Finance Gap

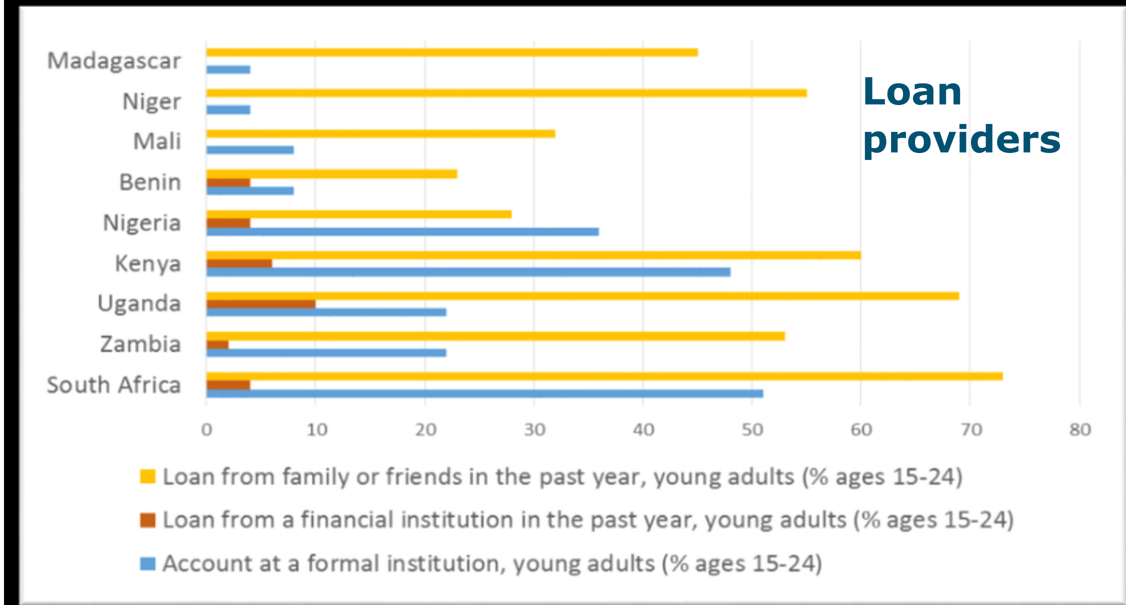
SSA Smallholder access to (formal) finance is less than 20%

Scarce offer of appropriate loan products for small-scale farmers

Growing number of bank accounts (also through mobile money)

Largest number of loans from family, friends and informal institutions (ROSCA's)





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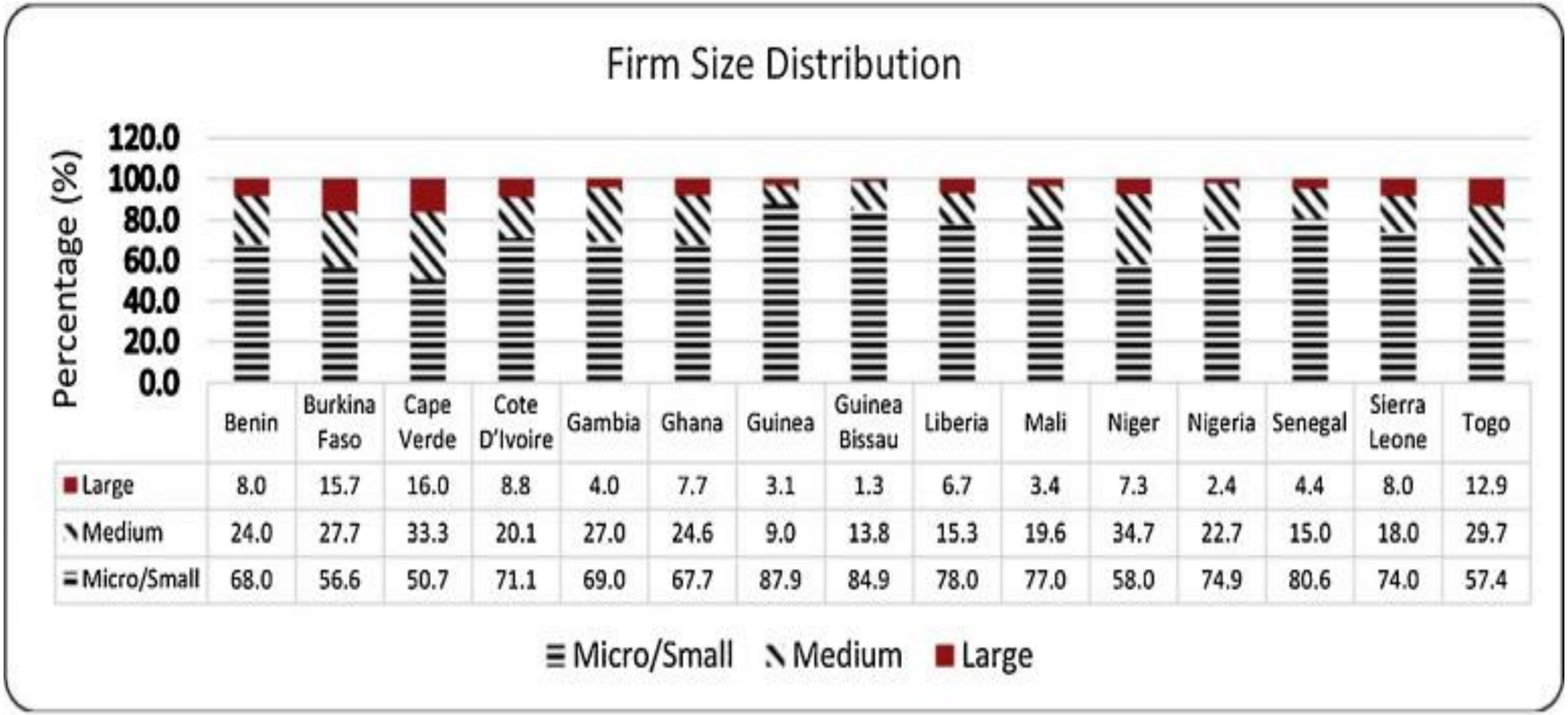
Missing Middle: Many very small SMEs



	Benin	Burkina Faso	Cape Verde	Cote D'Ivoire	Gambia	Ghana	Guinea	Guinea Bissau	Liberia	Mali	Niger	Nigeria	Senegal	Sierra Leone	Togo
Large	8.0	15.7	16.0	8.8	4.0	7.7	3.1	1.3	6.7	3.4	7.3	2.4	4.4	8.0	12.9
Medium	24.0	27.7	33.3	20.1	27.0	24.6	9.0	13.8	15.3	19.6	34.7	22.7	15.0	18.0	29.7
Micro/Small	68.0	56.6	50.7	71.1	69.0	67.7	87.9	84.9	78.0	77.0	58.0	74.9	80.6	74.0	57.4

SME firms dominate the SSA business landscape (90% firms < 10 workers)
High (female) employment generation (20-30%); but low value added

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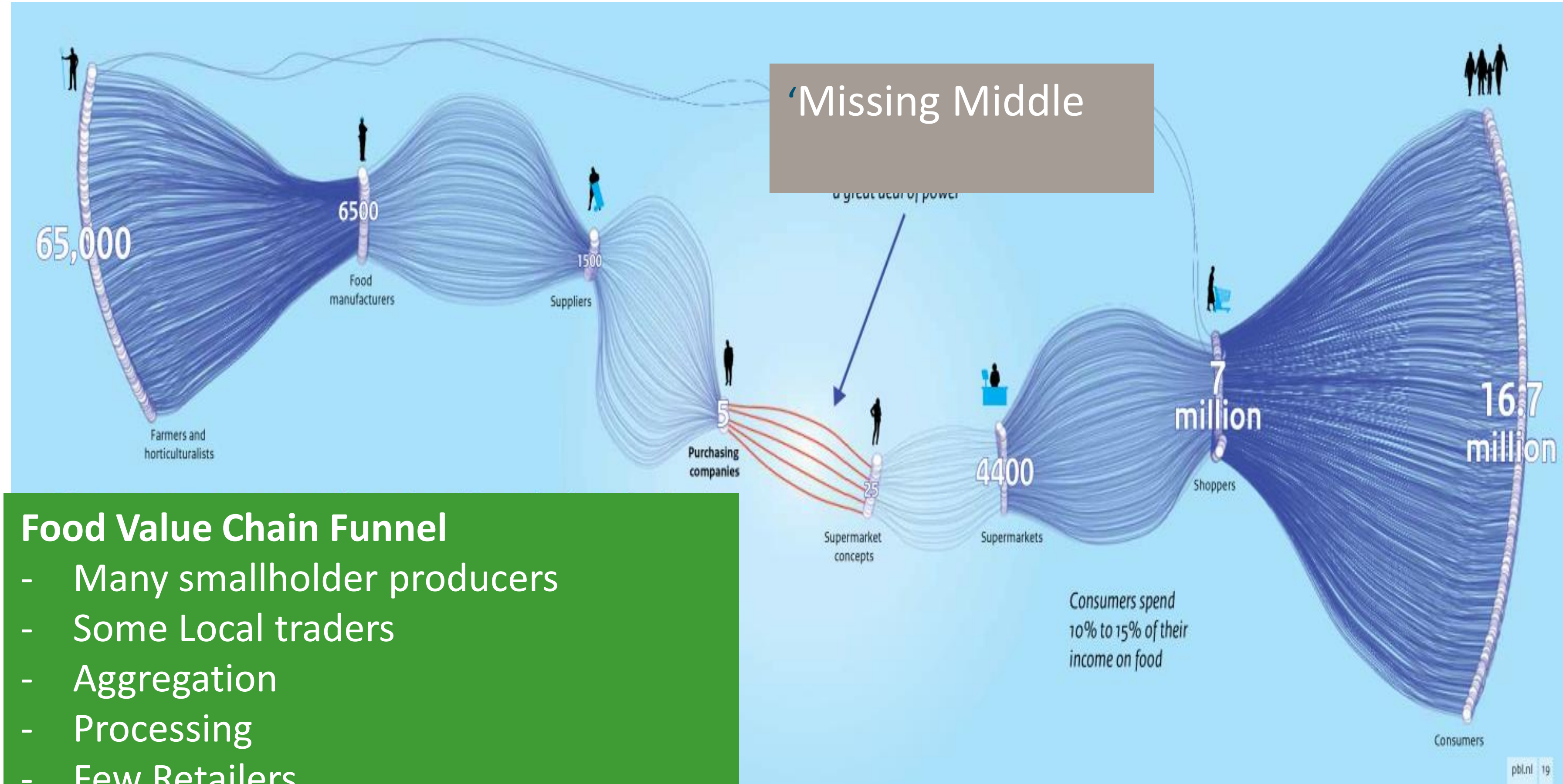
P. Quartey et al. (2017) Financing the growth of SMEs in Africa. Review of Development Finance 7 (1): 18-28,

Thin Midstream in Value Chains



Food Value Chain Funnel

- Many smallholder producers
- Some Local traders
- Aggregation
- Processing
- Few Retailers
- Large number of consumers

High concentration & low competetition in the Middle of the Value Chain

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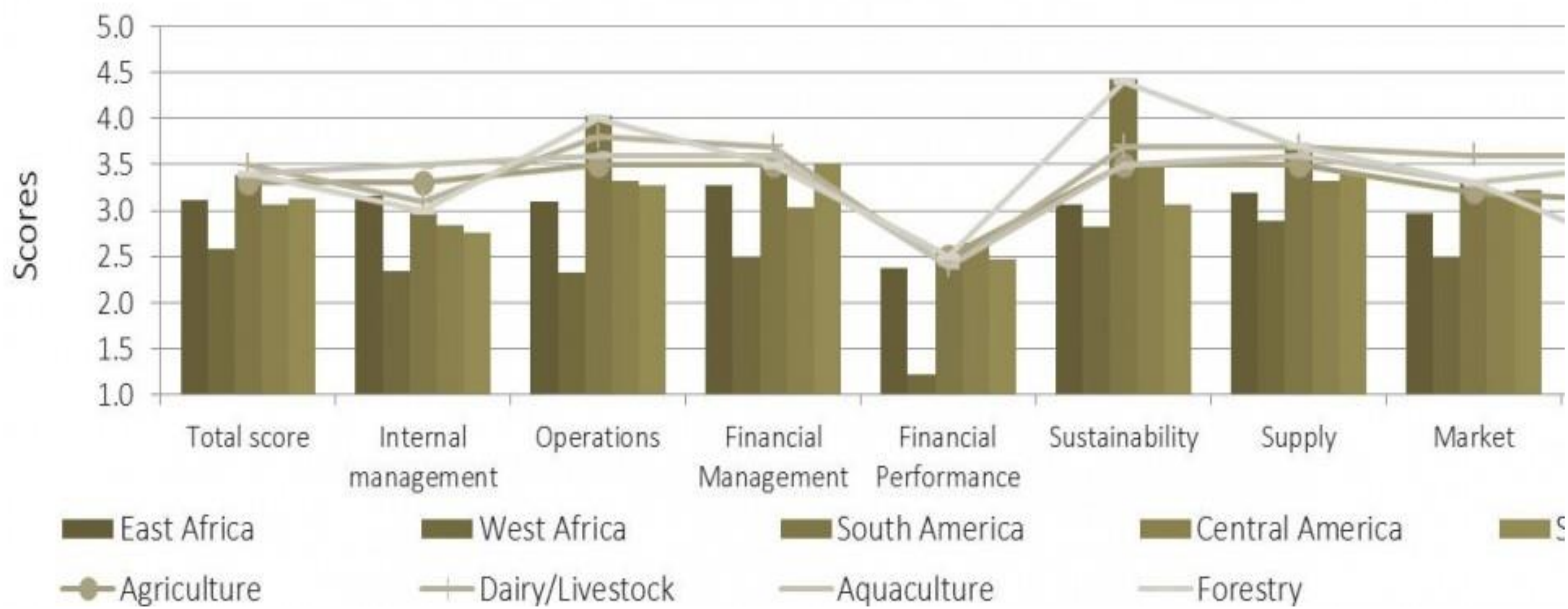
Weak farmer organizations



Only 20-40% of farmers are affiliated to farmer organizations.
Farmer organizations face severe financial & management constraints

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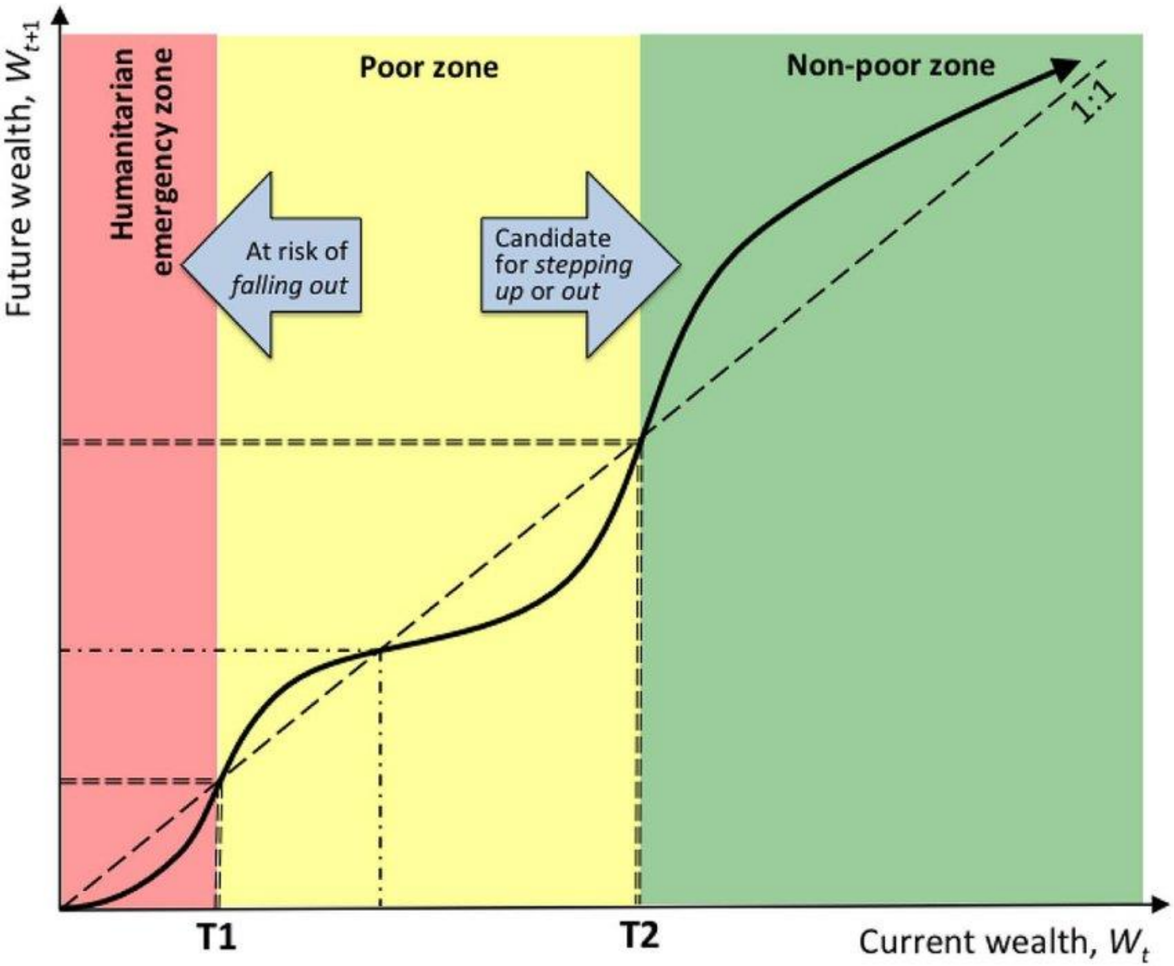
Source: SCOPE Insight

2. Inclusive Rural Development



Three Pathways

- ❑ Falling out
- ❑ Stepping up
- ❑ Stepping out

Three strategies

- ❑ Innovation
- ❑ Intensification
- ❑ Integration

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Source: Barrett & Dorward

2a) Food Systems Innovations: Agrologistics

International trade to/from Sub-Sahara Africa

- Trade Costs are 4 – 7 times higher
- Waiting times are 13-27 times longer

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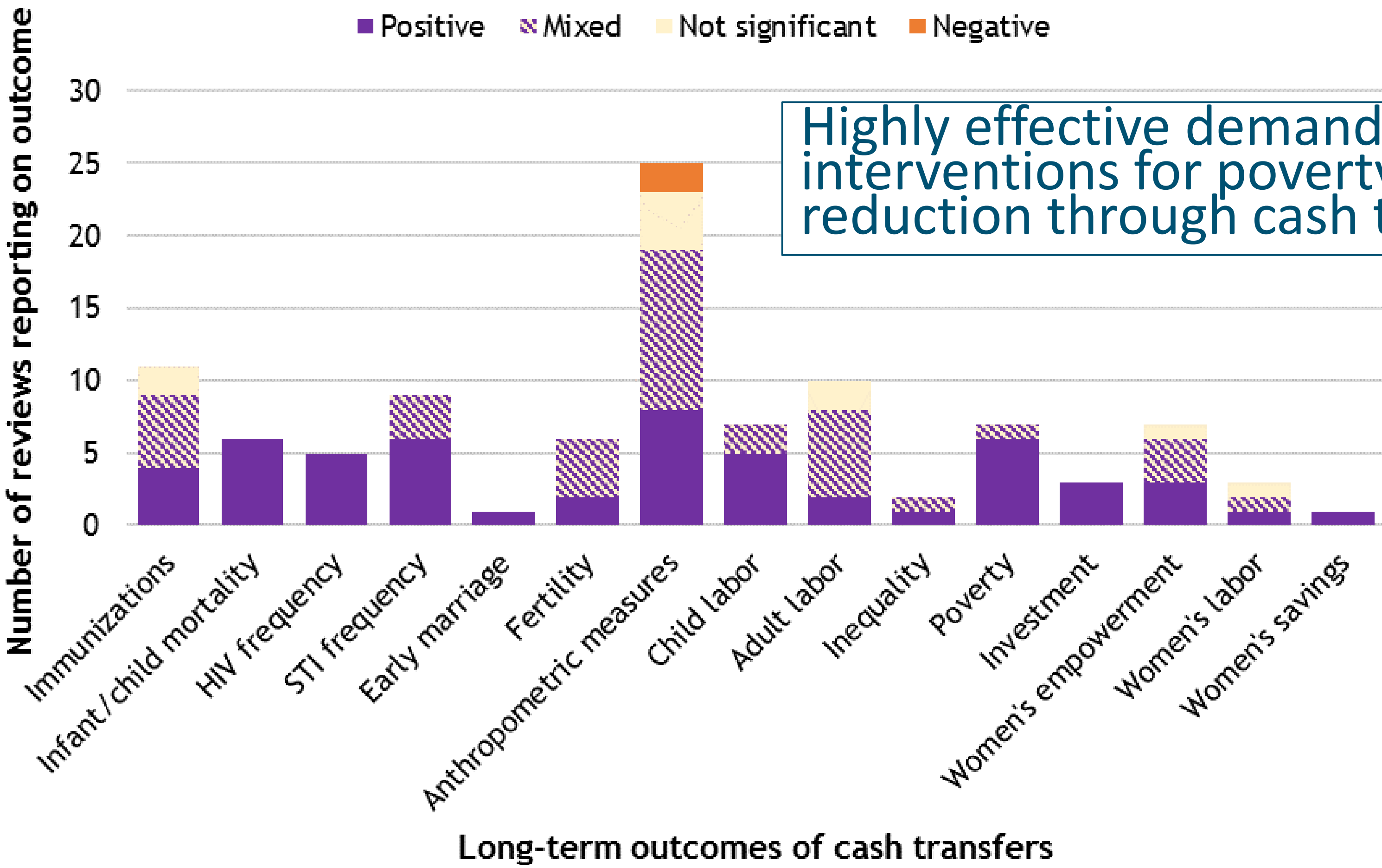
Food Systems Innovations: cash transfers



Highly effective demand-led interventions for poverty reduction through cash transfers

Source: Bastagli et al. (2016) SR on Impact of cash Transfers

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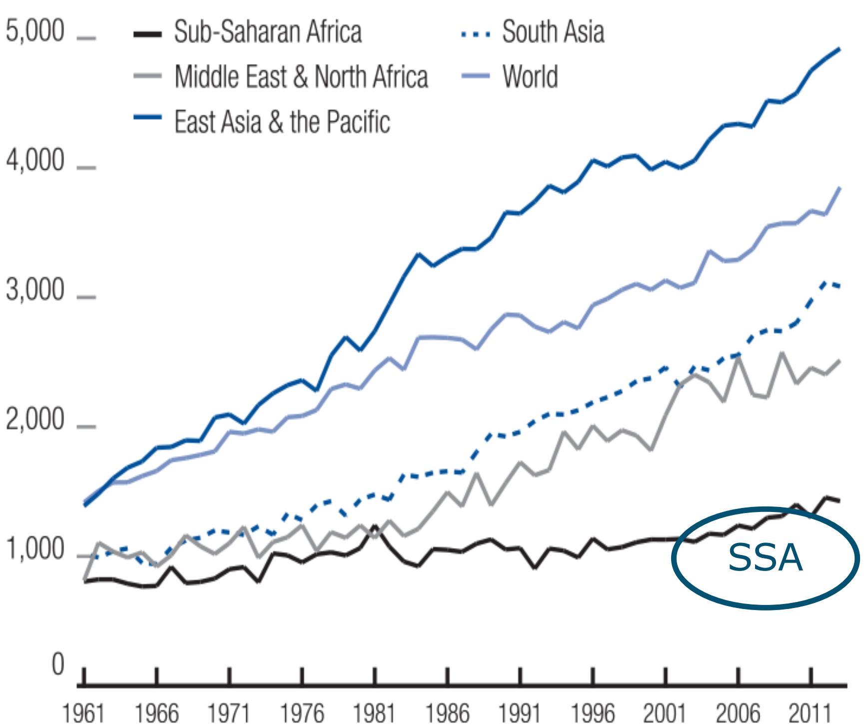
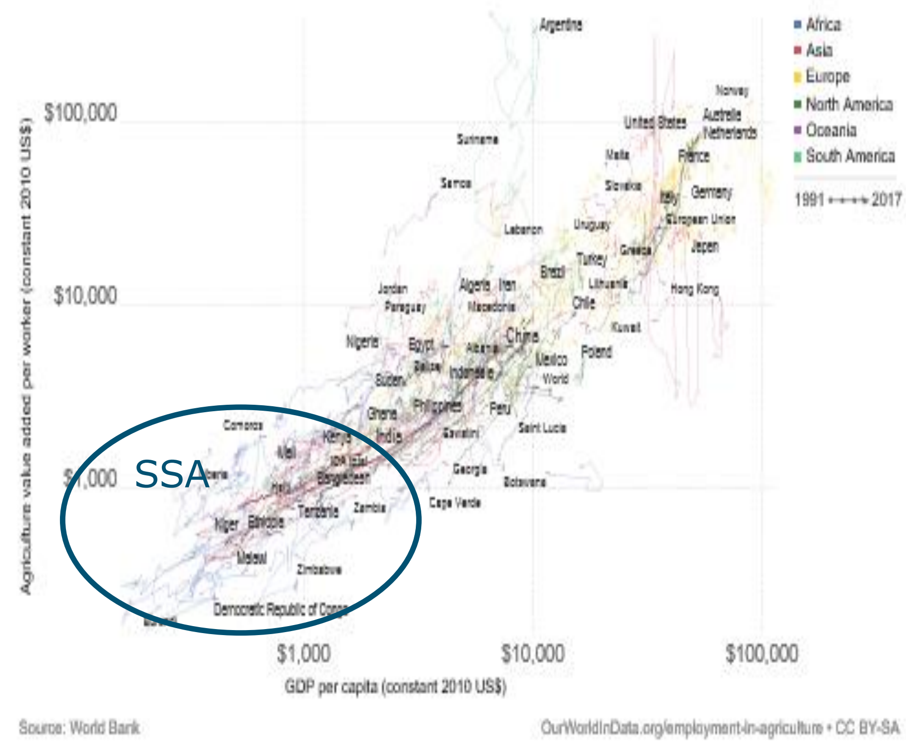
2b) Agricultural Intensification: Productivity

Land Productivity (1961-2013) Kg/ha



Source: World Bank, 2015.

Labour productivity (1991-2017) VA/worker (vs GDP/capita)



Overall stagnation in land & labour productivity
→ **delayed agricultural transformation**

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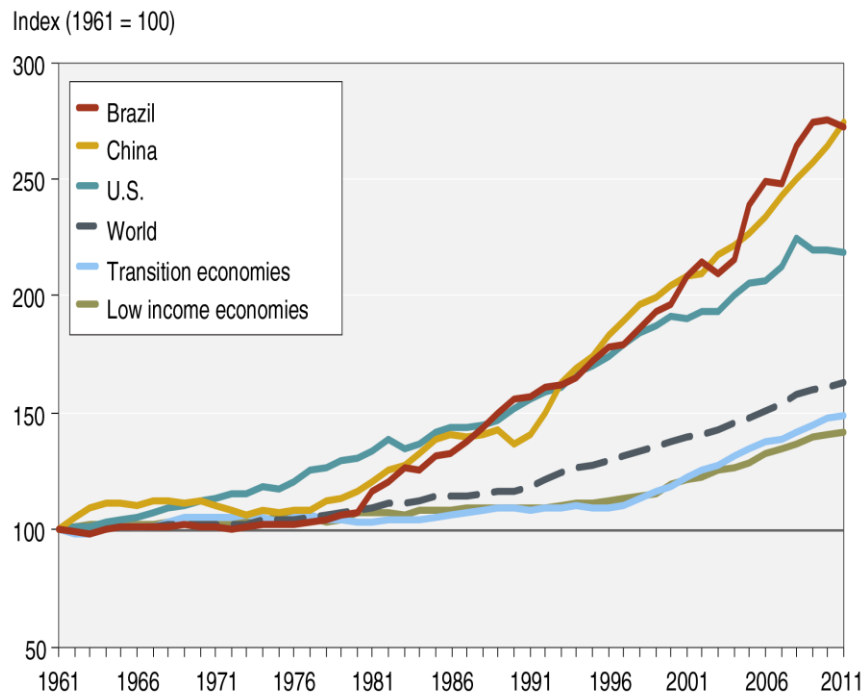
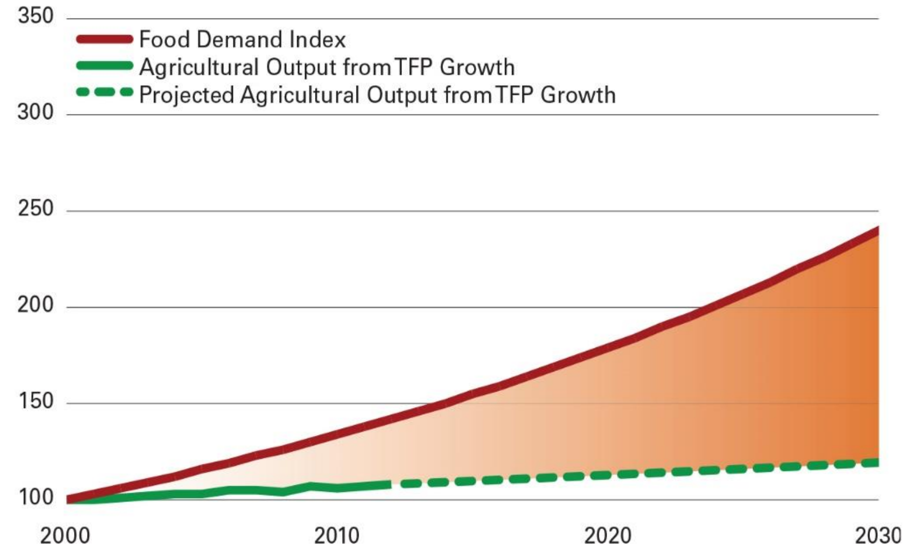
TFP growth & Food gap (SSA)

Total Factor Productivity growth (1961-2011) by country/regio



Note: Total factory productivity (TFP) takes into account all of the land, labor, capital, and material resources employed in farm production and compares them with the total amount of crop/livestock output. If total output is growing faster than total inputs, we call this an improvement in TFP.
Source: USDA, Economic Research Service, International Agricultural Productivity data product.

Food demand compared to TFP Output growth (2000-2030)



Only 14% of SSA Food demand can be met by current TFP growth → **Growing Food Gap**

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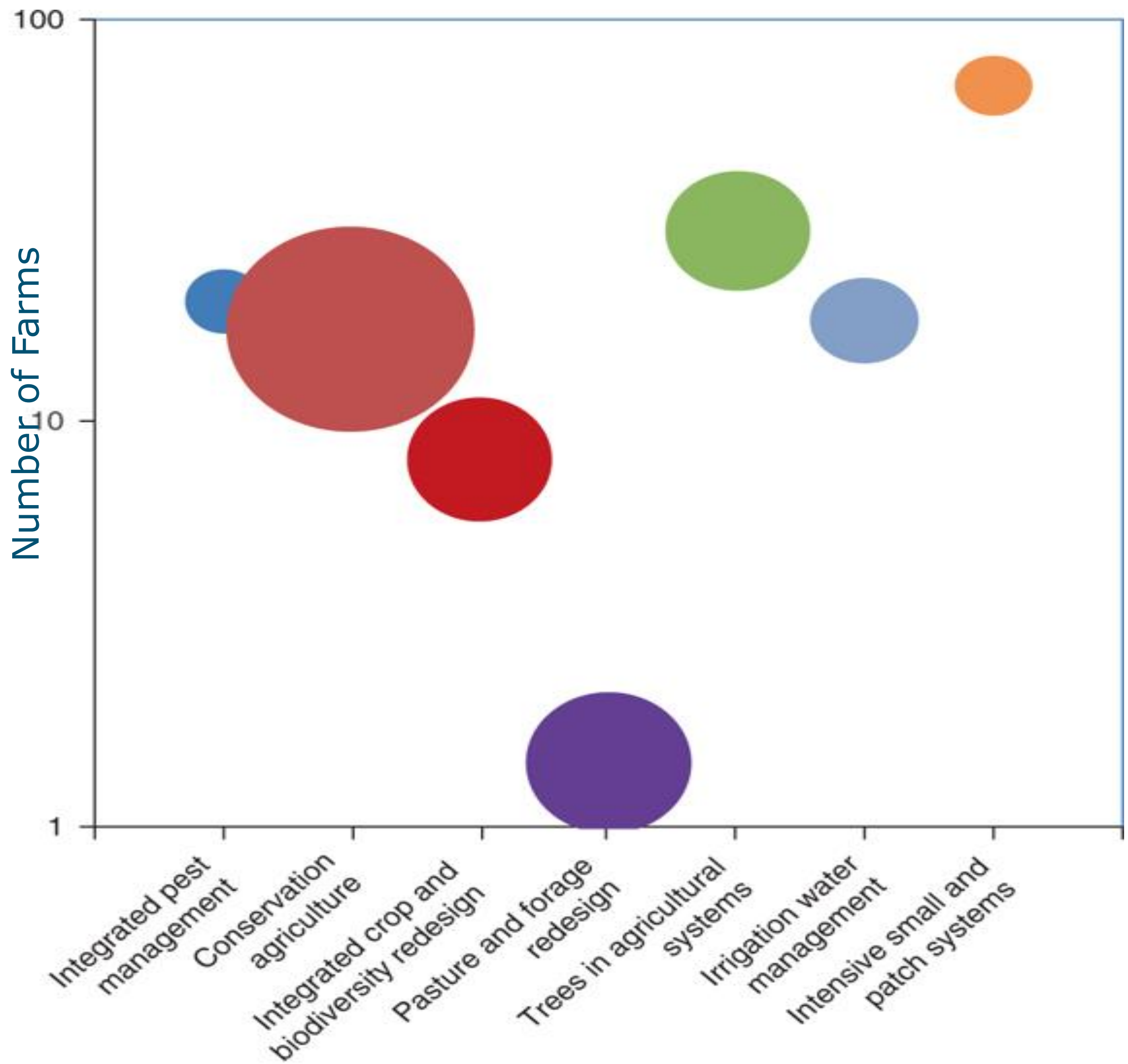
Global Harvest INITIATIVE

2015 GAP Report®

Sustainable Agricultural Intensification

163 million farms (29%) are practising some forms of sustainable intensification on 453 Mha of agricultural land (9% of world total).

Most initiatives are deploying one (25% of farms, 37% of hectares) or two (66% of farms, 52% of hectares) SI strategies.



Source: Pretty et al (2018) Global Assessment of Agricultural Systems Nature Sustainability (1): 441–446.

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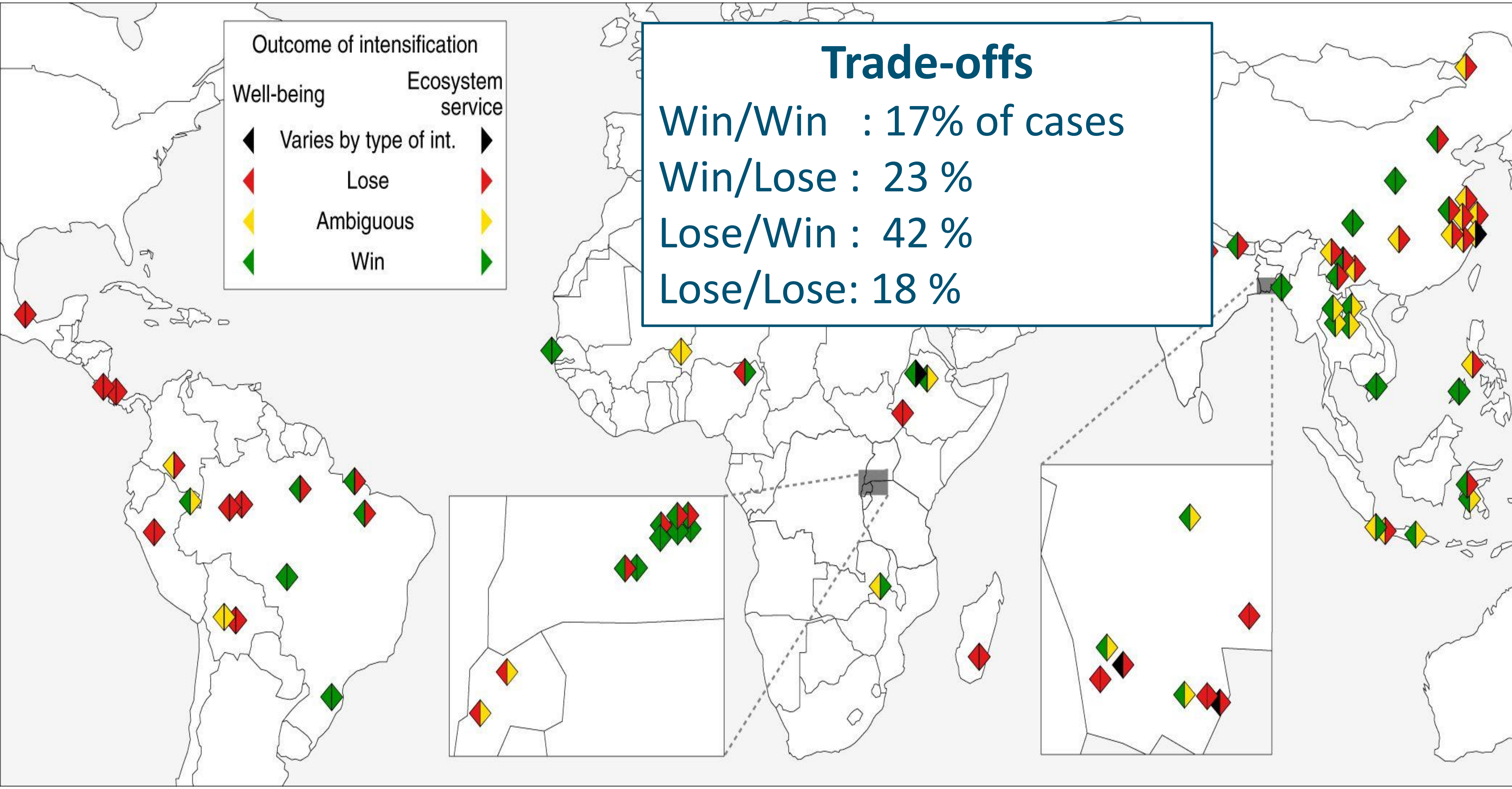
Agricultural Intensification: Trade-offs & Risks



Trade-offs

Win/Win : 17% of cases
Win/Lose : 23 %
Lose/Win : 42 %
Lose/Lose: 18 %

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Source: Rasmussen et al. (2018). Socio-economic outcomes of intensification. Nature Sustainability (1) 275–282

2c) Supply chain integration: waste & losses

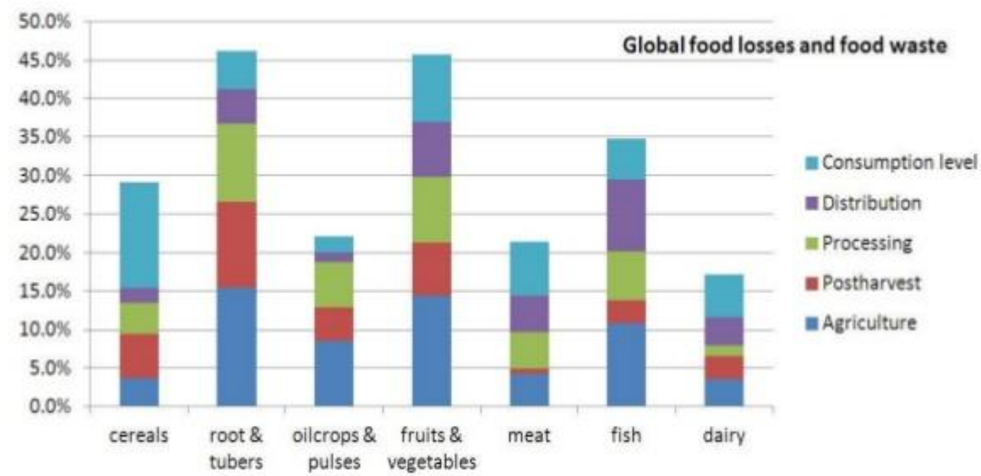
Larger food loss & waste in perishable products (F&V, fish, dairy, tubers)

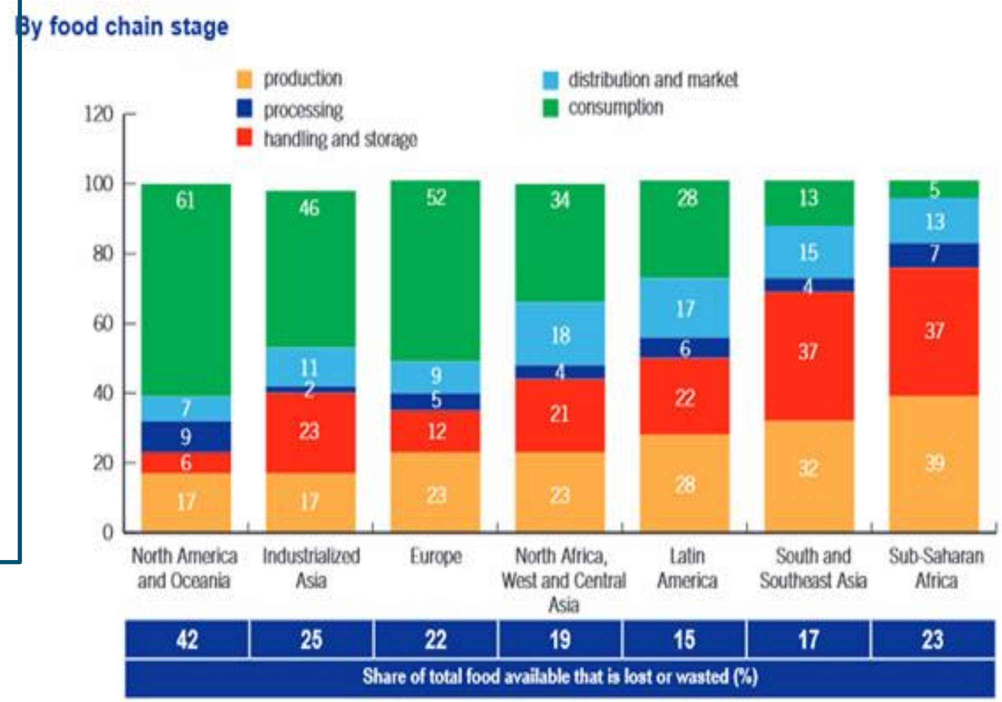
Many losses already occur at farm/field level

Most **waste** in developed economies; large **losses** in developing countries

PHL reduction requires **complex** (multi-stakeholder) cooperation

Data source: FAO (true?)





Supply chains: standards & certification

Certification gives positive price effects, but little (or negative) yield effects.

Higher income from certified plots, but no higher full income (substitution effects)

Scarce direct effects for wage labourers; some indirect effects (job security).

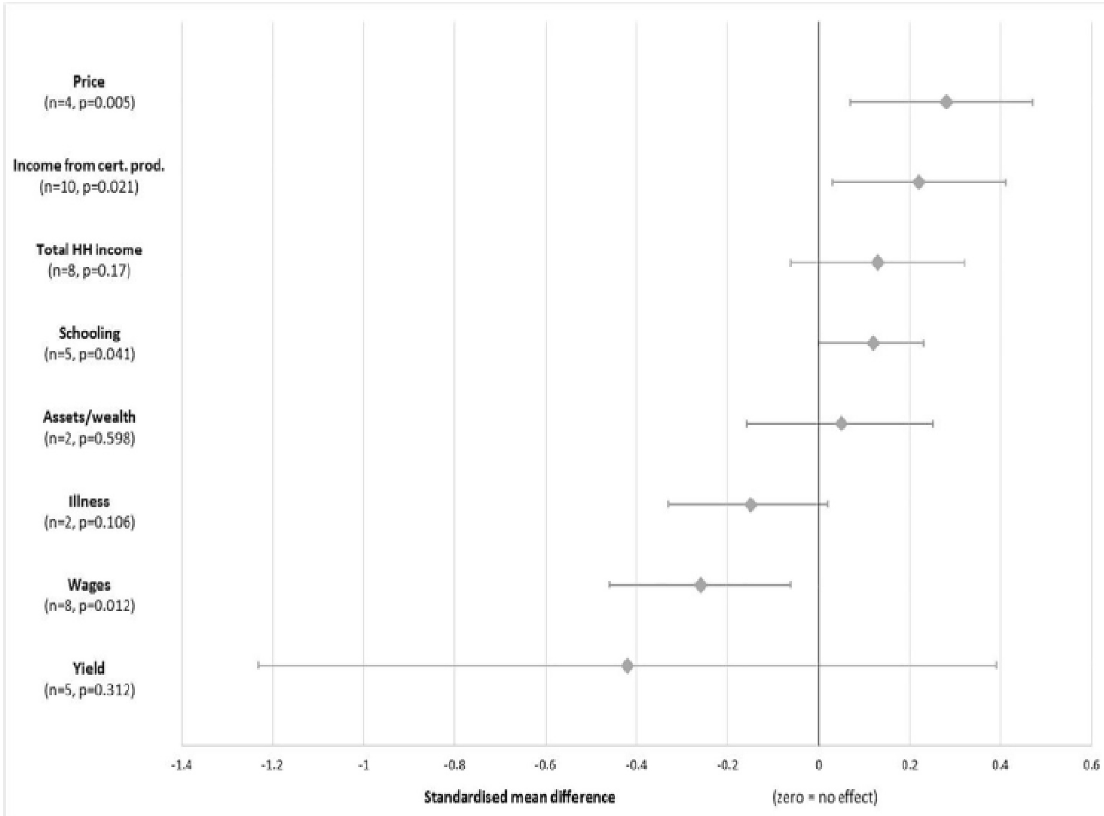


Fig. 6. Overview of pooled effects and their 95% confidence intervals for all outcomes.

C. Oya et al. (2018) The effectiveness of agricultural certification in developing countries, World Development 112: 282-312

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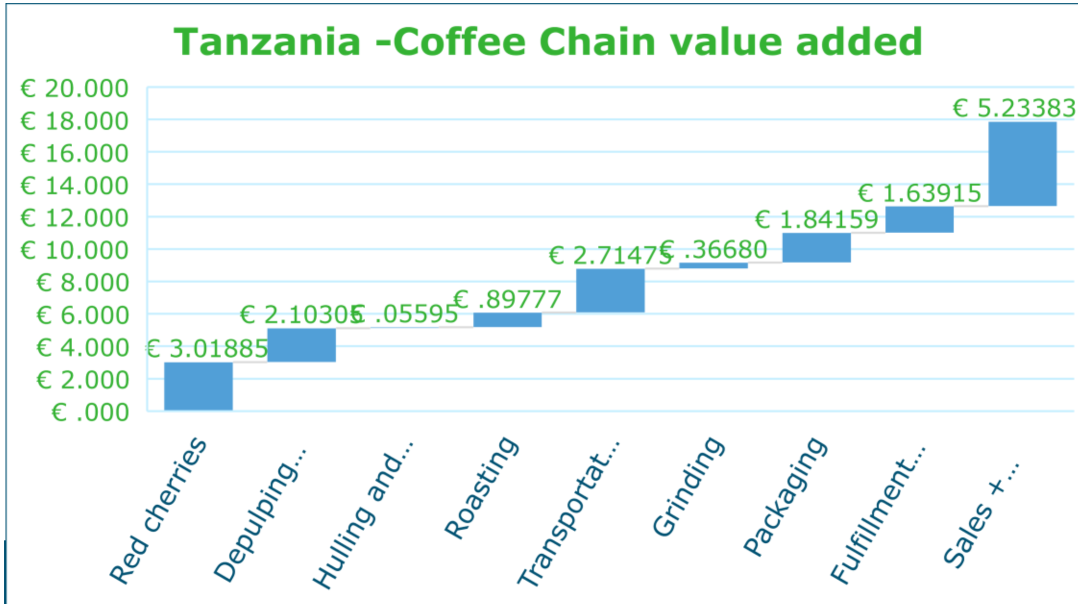
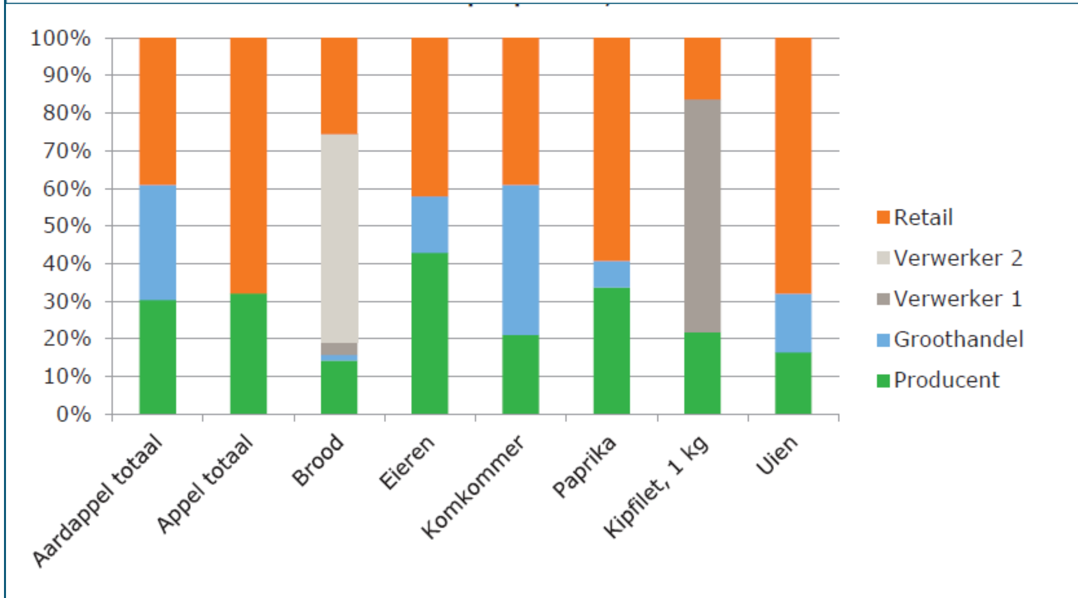
Supply Chain: Value added distribution

Farmers' share in total VA is usually no more than 10-15 %

Higher farmers' shares in fresh produce (eggs, apples) that need little processing

Large margins in stages of processing, packaging & retail (shelf space)





3. Knowledge & Information Gaps

- Improve availability of **accurate data** (i.e. urban consumption, prices, value chain losses, etc.).
- Training in **higher quality data collection** (for DHS and LSMS).
- Conduct **experiments** (RCTs) to generate insights in responses to incentives.
- Engage into robust **impact studies** to assess the effects of large-scale public programs.

Outlook for Rural Development Strategies

1. Focus on investment to improve **labour productivity** in rural areas (within & outside agriculture).

2. Ample margins for reducing losses and increasing value added generation in **agri-food supply chains.**

3. Reinforcing the **food environment** through improved agrologistics and better price transmission.

4. Incentives for **internal market development** towards local production for healthier food choices.

Thanks for your attention

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