



The United Republic of Tanzania
Agriculture Sector Lead Ministries

4TH ANNUAL AGRICULTURAL POLICY CONFERENCE [AAPC]

Integrating Food and Nutrition Security into Economic Transformation and Industrialization Agenda:

How can agriculture be the driver rather
than follower of economic transformation in
Tanzania?



New Dodoma Hotel, Dodoma

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Synergies between small and medium scale farmers in Tanzania

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Background and Motivation of the study

- Guided by the **theory of change**
- Commercialization in agriculture has a potential to lead to employment of smallholders in **agro-industry**- (land preparation, planting, post-harvest mgt)
- **While, assuring the agro-industry investors with consistent availability of labor.**
- Therefore, the GoT is promoting endorsed agriculture commercialization (as an intervention) for industrialization, better income, FNS.



Background cont'd

- In the literature, debate on large vs medium vs small production gives mixed feelings.
- Some argue that small and medium scale farms are more efficient **than large scale farms** (Deininger and Byerlee, 2011)
- Others argue that there is a spillover effect **from large/medium to small farms** (SAGCOT and BRN models).

Background Cont'd

- Others argue that large scale farms have less potential than small and medium scale commercial farmers (www.future-agriculture.org-Policy Brief 84, July 2016).
- ✓ More concentrated land distributions will be owned by fewer large and medium farmers, who are not former small farmers.
- ✓ Targeting large scale farming will lead to transferring of public competitive resources and services to larger farmers (Deininger and Byerlee, 2011; World Bank, 2011).
- ✓ Displacement of villagers.



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Changes in farm structure in Tanzania (2008-2012) LSMS/National Panel Surveys

Farm size	Number of farms (% of total)		% growth in number of farms between initial and latest year	% of total operated land on farms between 0-100 ha	
	2008	2012		2008	2012
0 – 5 ha	5,454,961 (92.8)	6,151,035 (91.4)	12.8	62.4	56.3
5 – 10 ha	300,511 (5.1)	406,947 (6.0)	35.4	15.9	18.0
10 – 20 ha	77,668 (1.3)	109,960 (1.6)	41.6	7.9	9.7
20 – 100 ha	45,700 (0.7)	64,588 (0.9)	41.3	13.8	16.0
Total	5,878,840 (100%)	6,732,530 (100%)	14.5	100.0	100.0

43.7%

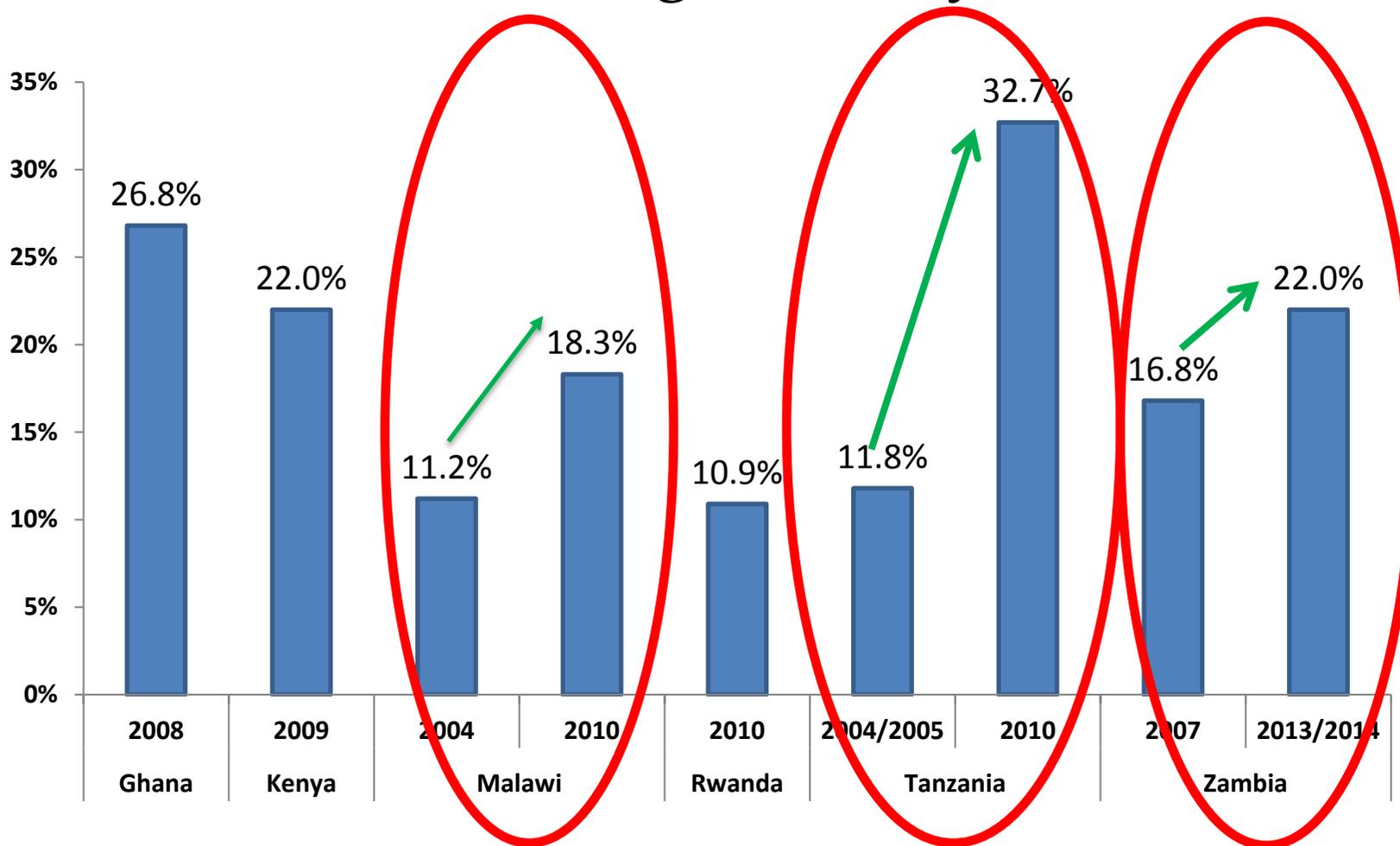
Source: Jayne et al ; 2017calculations



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% of National Landholdings held by Urban Households



Source: Demographic and Health Surveys, various years between 2004-2014; Jayne et al calculations

Research Questions

1. The paper strive to answer, if the SAGCOT model is an effective model for agriculture commercialization, poverty alleviation and food security.

○ Specifically; the study looks at the influence of distance (between small and medium/large farms) on:-

The level of commercialization (Commercialization Index).

Production (total value of crop output per hectare)

Specialization Vs Diversification

Soil quality (proxy for agronomic management practices)

Use of inputs, mechanization & extension services (proxy for market access)

Welfare in terms of food security (calories)

Research Question

2. In the co-existence of large and small-scale; who wins and who losses

Benefits and constraint from the synergy

- **Benefit-large scale**

Reliable and cost-effective labor, raw material

- **Constraint**

Conflict, poor labor market, unreliable inputs

- **Benefits small scale farms**

Employment---(what is the opportunity cost for labor---next best alternative(off-farm activities, non-farm activities); **markets (access to market-input and output); access to technology (tractor services, input or extension services); management practices**

Study Design

A cross-sectional study, conducted in eight districts (including the SAGCOT region) in Tanzania in October 2016

Participants

1200 farmers were randomly recruited from a cluster of large and small scale farmers; finally, 1188 completed the interviews

- Small scale farmers included farmers with < 5 hectares
- Medium between 5-100 hectares
- Large > 100 hectares
- Farm categorization was based on the most important field crop
 - ✓ where soil testing
 - ✓ GPS coordinates were taken

Findings- General Results

Spill over effects on small scale farms

- 82% claim to have large scale farmers around them; while
 - 17% claim not to have any large scale farmers around.
 - Of the 505 farmers who have access to large scale farms
 - 91% plant crops related/similar to large scale farmers crops
- ✓ Of those who produce crops similar to large scale farmers (462)
Only 19% sell their crops to large scale farmers
- ✓ Of the 88 who sell to large scale farms only 20% have formal contracts
✓ Other common arrangements included the spot market (82%) and pre - selling (10%)

Findings- Spill Over Effects

- ❑ Of small scale farmers (505) with access to large scale farmers;-
 - ✓ Only 24% have learned new technologies from the LS farms
 - ✓ And only 17% have adopted the new technology from LS farms
- ❑ Technology mostly adopted include:-
 - ✓ Good agronomic Practices.
 - ✓ The use of farm machinery including tractors.
- ❑ Some of the benefits from the adopted technologies include:- Increased yield; Increased income; Reduced drudgery ; Planting on time.

Findings- Benefits on the medium/large scale farms

❑ Technology/lessons from small scale farms

✓ only 15% claim to learn from SS (out of 403)

✓ Cheap labor; Trading and selling; knowledge exchange; security (wild animals, fire and theft)

❑ Of the 73 (14%) LS who buy produce from SS farms

✓ 29% have pre-selling arrangement; 71% spot market arrangement

Challenges include

✓ Price fluctuation; Poor quality products; breach of agreement.

THANK YOU



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Dalberg



Scaling up for food security in Africa