

Agricultural growth in Ethiopia:

**How institutions and economics matter for
agriculture and
how agriculture matters for poverty**



1. Growth of agriculture

Estimates of cereal yield growth from alternative datasets, %

Survey	CSA	Ad hoc surveys	ERHS	CSA
Period	2005-2014	2008-2013	2004 – 2009	1997-2012
Number of surveys	Annual	8 surveys	2 surveys	Annual
Teff	5.8	4.7	1.7	4.2
Maize	6.2	6.2	0.4	3.4
Barley	4.8	6.8	10.1	-
Wheat	5.4	6.3	3.6	4.0
Sorghum	5.4	-1.8	-	4.5

1. Growth of agriculture

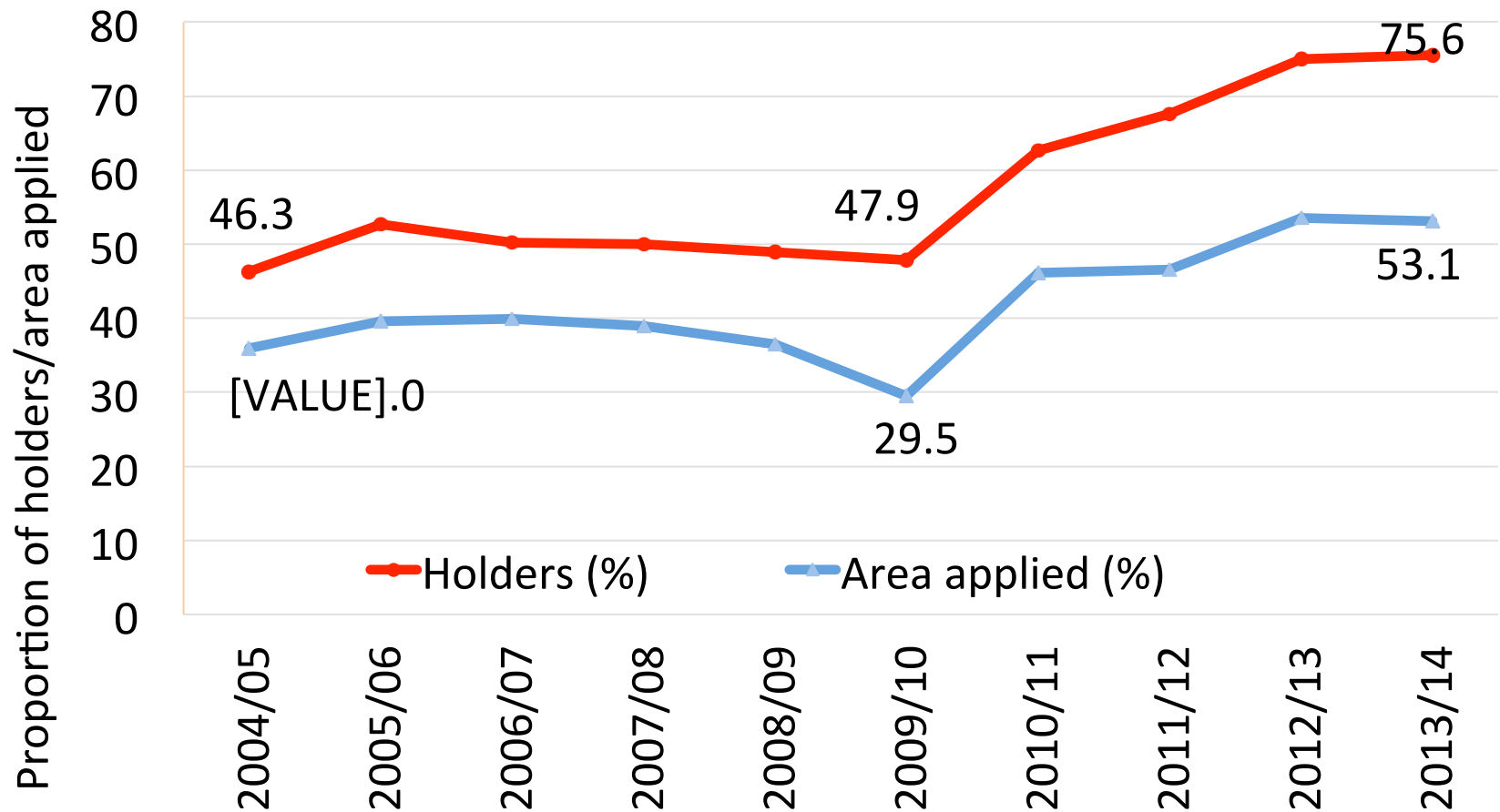
Maize and wheat yield levels (mt/ha) and growth rates, selected countries, 2004-2013

Period	China	Egypt	Ethiopia	Kenya	USA
	Maize				
2004	5.1	7.9	1.6	1.9	10.1
2013	6.2	7.2	3.2	1.6	10.0
Annual average growth (%)	2.3	-1.0	11.1	-1.8	-0.1
	Wheat				
2004	4.3	6.6	1.5	2.5	2.9
2013	5.1	6.7	2.4	3.0	3.2
Annual average growth (%)	2.1	0.2	6.8	2.5	1.0

3. Land intensification

1. Chemical fertilizer

Proportions of cereal farmers using fertilizer and cereal area applied with fertilizer



3. Land intensification

2. Improved seeds

Proportion of improved seed applying farmers (%)

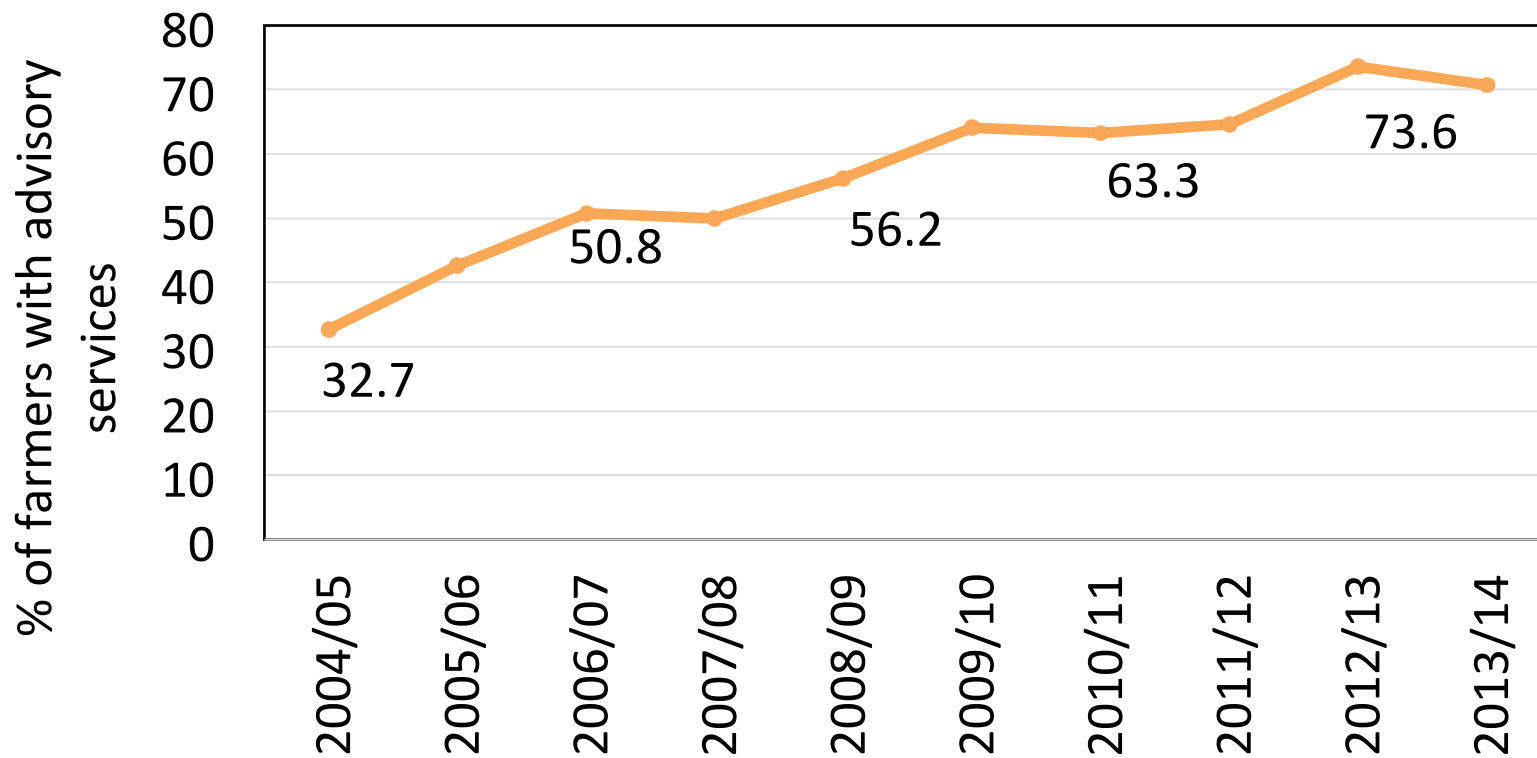
Crop	2004/05	2009/10	2013/14
Barley	0.8	1.2	0.8
Maize	11.6	15.7	27.6
Sorghum	0.9	1.8	0.4
Teff	1.0	2.4	4.6
Wheat	4.5	4.1	7.7
Cereals	10.1	11.3	21.5



4. Drivers for change

(a) Changes in informational efficiency and the role of extension workers

Share of farmers covered through public extension

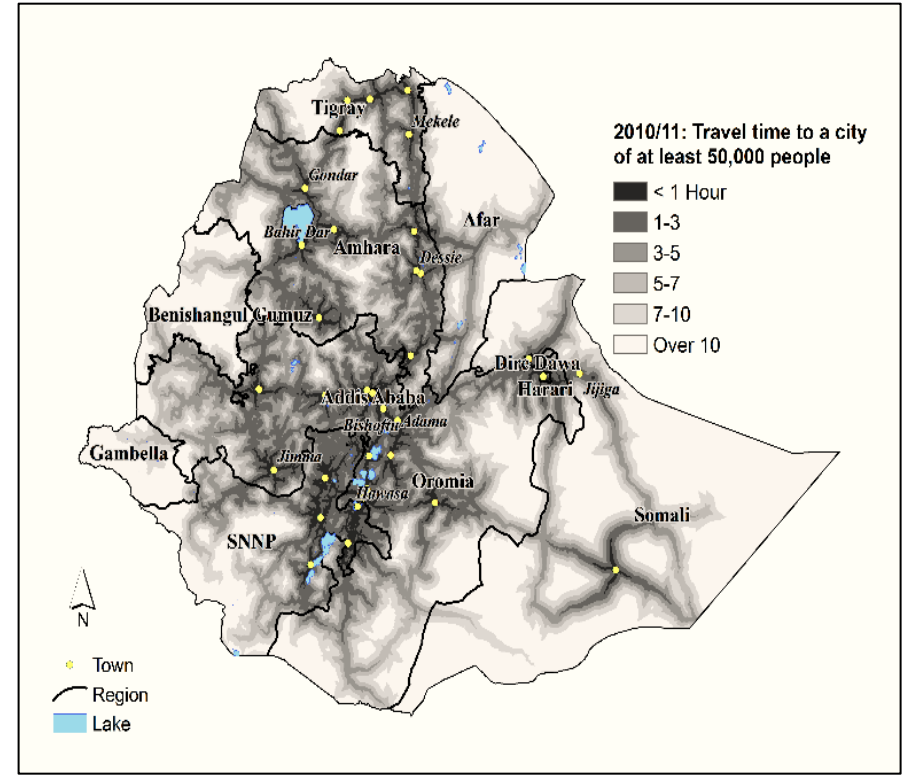
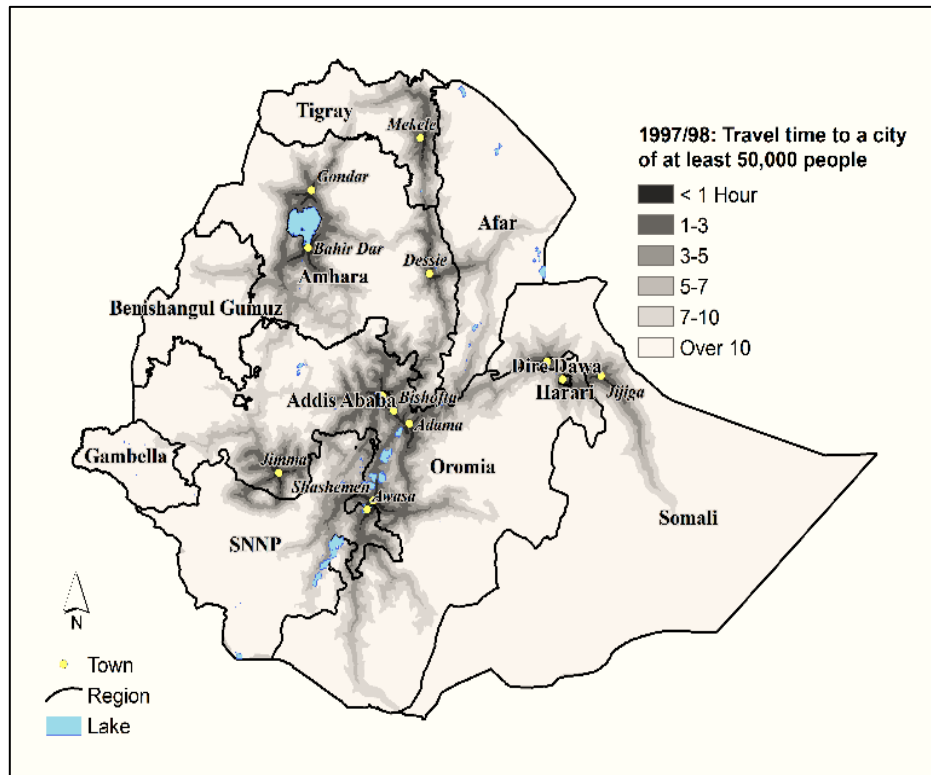


4. Drivers for change

(b) Changes in input and output market efficiency

1996/1997

2010/2011



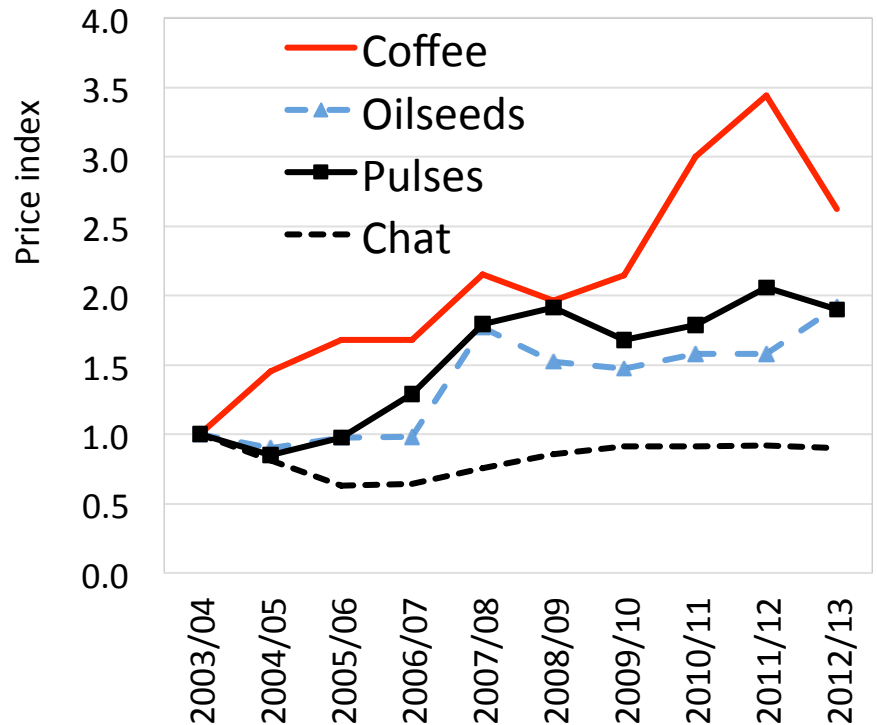
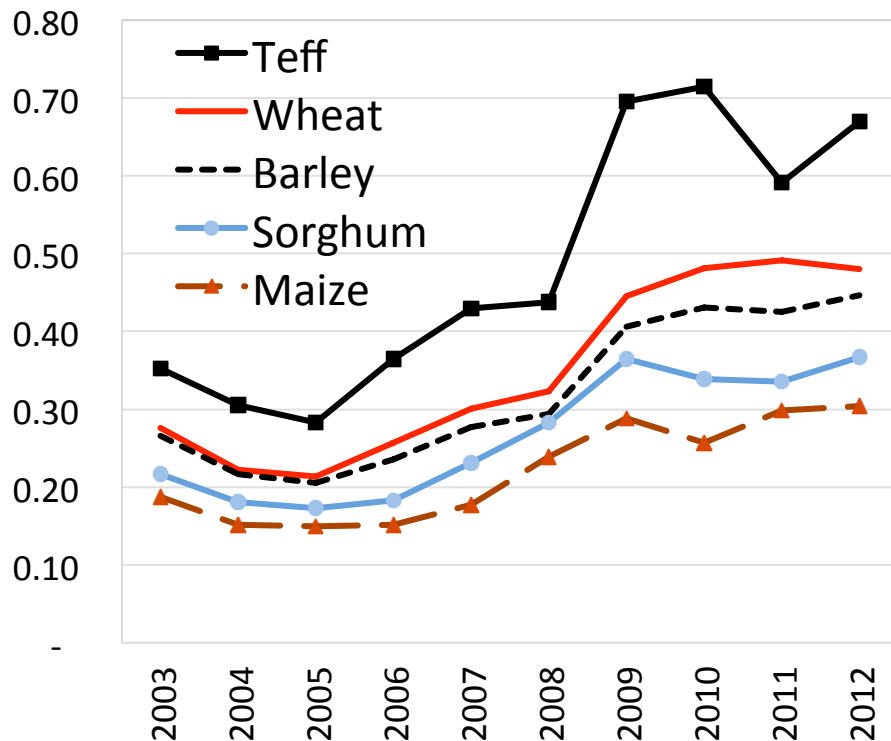
4. Drivers for change

(c) Changes in human capital accumulation and labor

- Share of illiterate farmers declined annually at 1.8%

(d) Improved incentives

Output/fertilizer price ratio (left) and export price indices (right)



5. Welfare changes in Ethiopia

	1999-2000	2004-2005	2010-2011
National: - Poverty head count (P0)	44.2	38.7	29.6
Rural: - Poverty head count (P0)	45.4	39.3	30.4
Urban: - Poverty head count (P0)	46.7	35.3	27.9

6. Conclusions

- Total output more than doubled because:
 - Area expansion and an increase in number of farmers
 - Rapid uptake of improved technologies
 - Growth in total factor productivity (TFP)
- Four major drivers of modern inputs adoption
- Changes driven by changes in incentives and institutional changes; important to pay attention to those
- Large effects of agricultural growth on poverty
- Contestations: yield levels, differences consumption and production, and land use