Poverty in Ethiopia: Welfare Improvements in a Changing Economic Landscape

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Questions

1. What are the levels of poverty in Ethiopia, and how have they changed?
2. Do the snapshots of poverty from household surveys (2000, 2005 & 2011) represent…
   - long term trends?
   - short-term shocks?
   - both?

How has monetary poverty changed?

Measurement depends on consistency of...

a. Surveys over time

b. Construction of consumption aggregate

c. Poverty lines

- *Specificity & Consistency*
- Original poverty lines
  - Calculated in 2001 (CBN)
  - Adjusted for inflation & regional price variation
- Note: Poverty lines – cost of living indexes that allow interpersonal welfare comparisons

Utility-Consistent Poverty Lines

Based on Arndt & Simler (2010) – *PLEASe*

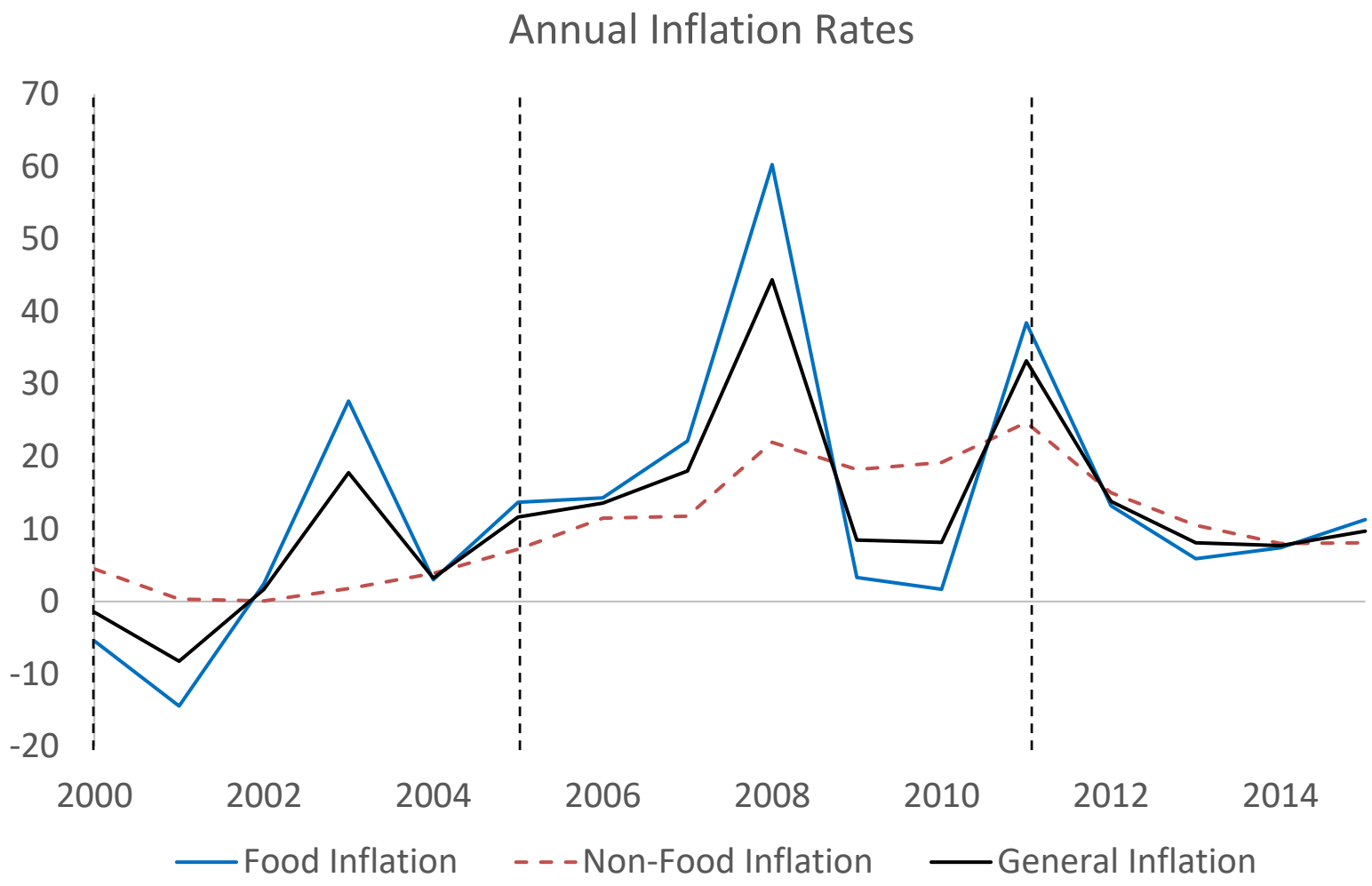
- Calculate food poverty lines for spatial domains
  - anchored to domain-specific calorie requirements
  - least-cost bundle reflecting domain cons. patterns
  - *Specificity*
- Revealed preference tests – utility *consistency*
  - *Do the consumption patterns in other spatial domains cost no less than the own-domain consumption patterns when both are evaluated at own-domain prices?*
- Food poverty lines scaled up – region-specific poverty lines

Data

- Household Income, Consumption and Expenditure Surveys (*HICES*) & Welfare Monitoring Surveys (WMS) - 2000, 2005, 2011
- Nationally representative multipurpose surveys
- Sample sizes
  - 1999/2001: 17,332
  - 2004/2005: 21,274
  - 2010/2011: 27,830

Data Issues

- Questionnaires nearly identical, but food codes…
  - 2001: 252
  - 2005: 872
  - 2011: 653
- Timing of data collection
  - 2001: Two short periods: *July-Aug & Jan-Feb*
  - 2005: Two short periods: *July-Aug & Jan-Feb*
  - 2011: Yearlong: *8 July 2010 – 7 July 2011*


Annual Inflation Rates
70
60
50
40
30
20
10
0
-10
-20
2000
2002
2004
2006
2008
2010
2012
2014
Food Inflation
Non-Food Inflation
General Inflation

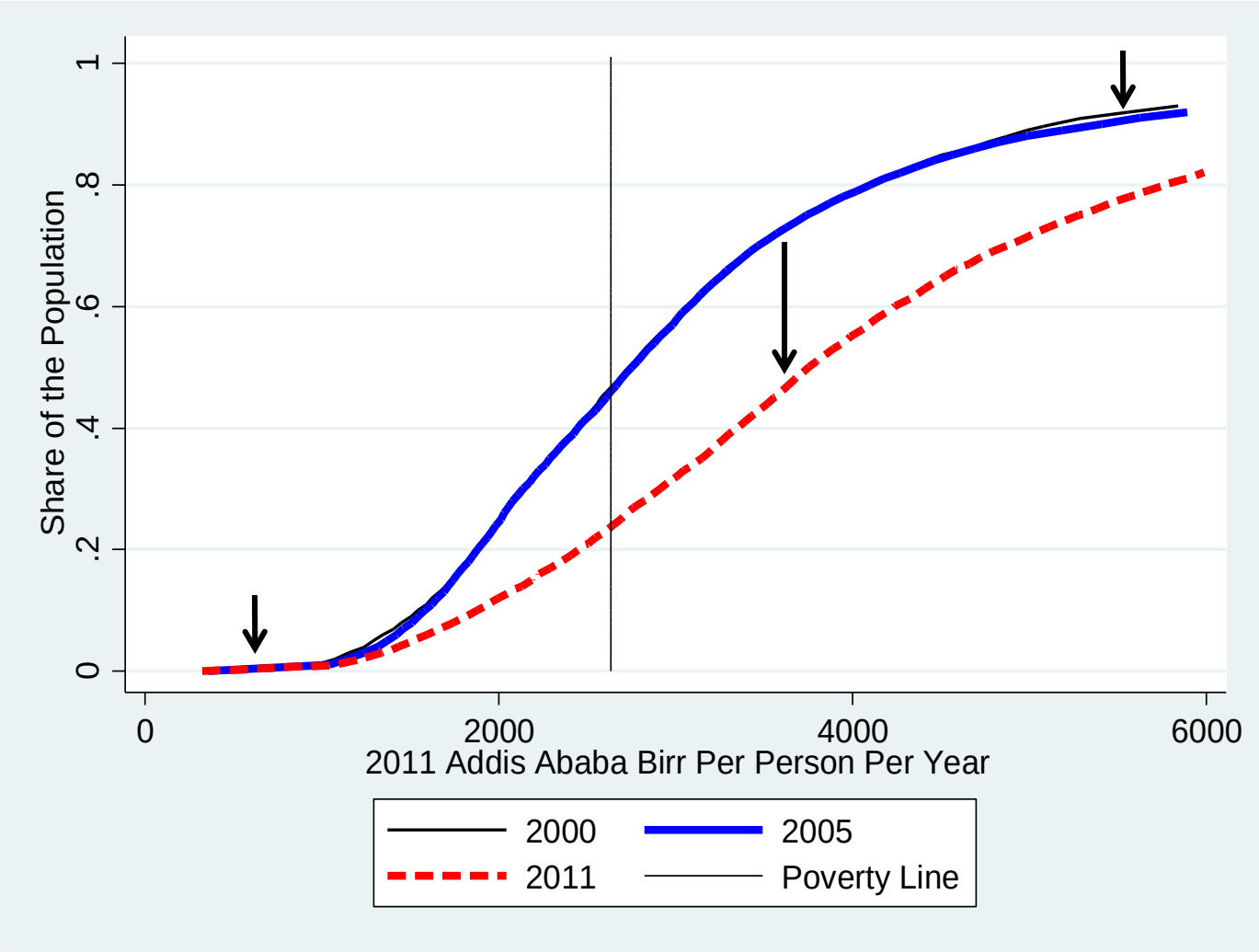
Poverty Estimates

	Levels			*Changes*		
	2000	2005	2011	*00-05*	*05-11*	*00-11*
National						
P_0	**46.8**	**46.0**	**23.8**	***-0.7***	***-22.3***	***-23.0***
P_1	12.6	12.3	6.3	*-0.3*	*-6.0*	*-6.3*
P_2	4.8	4.5	2.4	*-0.3*	*-2.0*	*-2.3*
Urban						
P_0	**39.0**	**22.7**	**13.3**	***-16.3***	***-9.4***	***-25.6***
P_1	10.8	4.7	3.2	*-6.1*	*-1.5*	*-7.6*
P_2	4.1	1.5	1.2	*-2.6*	*-0.3*	*-2.9*
Rural						
P_0	**48.0**	**50.0**	**25.9**	***2.0***	***-24.1***	***-22.2***
P_1	12.9	13.5	6.9	*0.7*	*-6.6*	*-5.9*
P_2	4.9	5.0	2.7	*0.1*	*-2.3*	*-2.2*

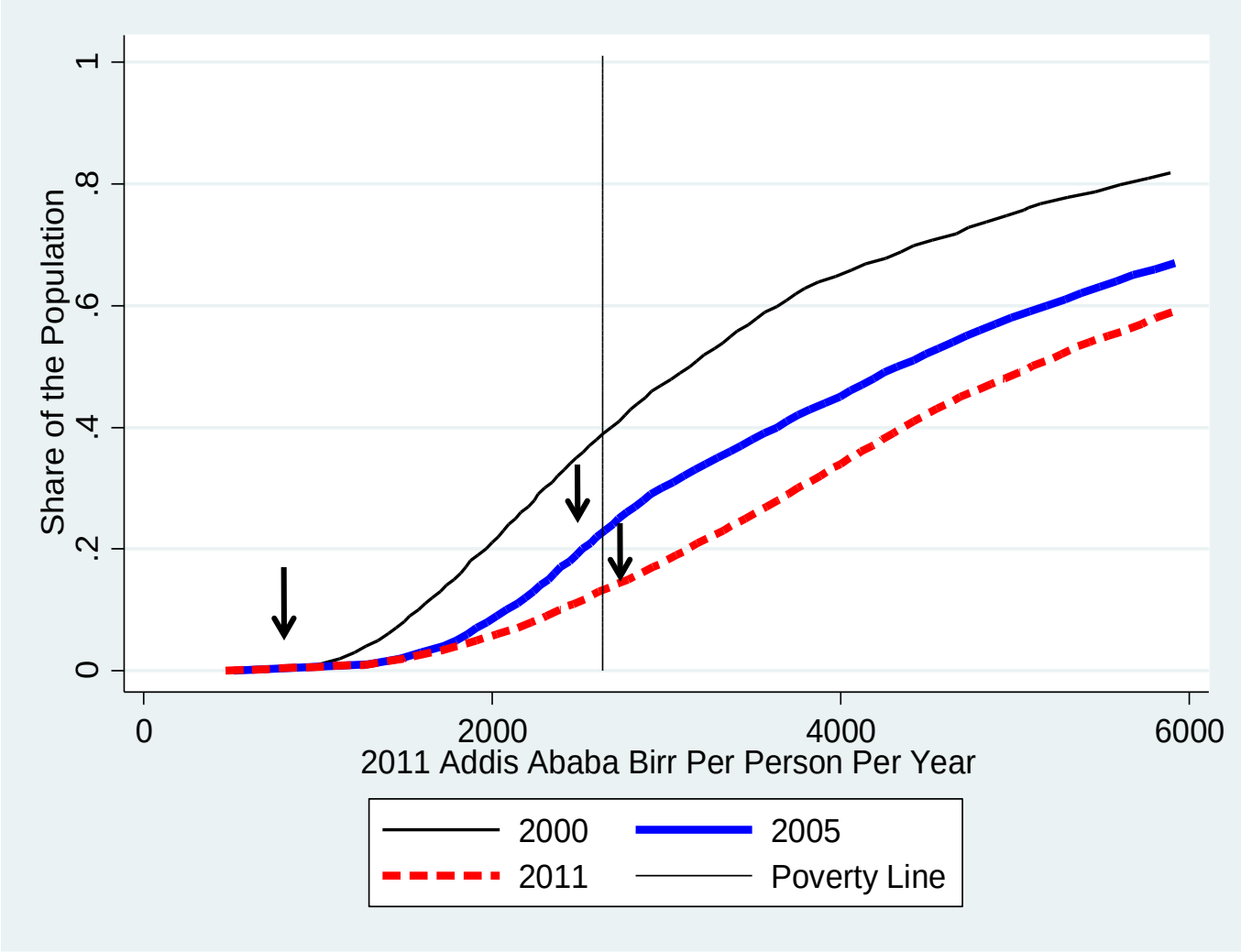
Regional Poverty

	Percent Poor			*Changes*		
	2000	2005	2011	*00-05*	*05-11*	*00-11*
Addis Ababa	34.6	10.9	10.7	*-23.7*	*-0.3*	*-24.0*
Afar rural	79.6	39.1	42.7	*-40.5*	*3.6*	*-36.9*
Afar urban	39.7	12.4	15.2	*-27.3*	*2.8*	*-24.5*
Amhara rural	52.6	51.2	33.2	*-1.4*	*-18.0*	*-19.5*
Amhara urban	38.9	31.1	14.8	*-7.8*	*-16.3*	*-24.1*
Benishangul rural	63.1	57.5	21.3	*-5.6*	*-36.2*	*-41.8*
Benishangul urban	36.6	32.8	13.7	*-3.9*	*-19.1*	*-22.9*
Dire Dawa rural	70.7	66.2	14.7	*-4.5*	*-51.5*	*-56.0*
Dire Dawa urban	44.2	16.6	22.2	*-27.6*	*5.5*	*-22.1*
Gambella rural	63.7		19.7			*-44.0*
Gambella urban	38.7		24.1			*-14.7*
Harari	41.9	17.7	7.5	*-24.2*	*-10.3*	*-34.4*
Oromiya rural	37.9	47.4	25.1	*9.5*	*-22.3*	*-12.7*
Oromiya urban	35.1	23.3	15.9	*-11.7*	*-7.4*	*-19.2*
SNNP rural	53.4	52.2	15.1	*-1.2*	*-37.1*	*-38.3*
SNNP urban	40.9	35.6	8.8	*-5.4*	*-26.8*	*-32.2*
Somali rural	59.2	40.8	33.8	*-18.4*	*-7.0*	*-25.4*
Somali urban	52.7	21.3	14.6	*-31.4*	*-6.7*	*-38.1*
Tigray rural	63.0	53.6	39.3	*-9.4*	*-14.3*	*-23.7*
Tigray urban	60.2	24.8	12.3	*-35.4*	*-12.5*	*-47.9*

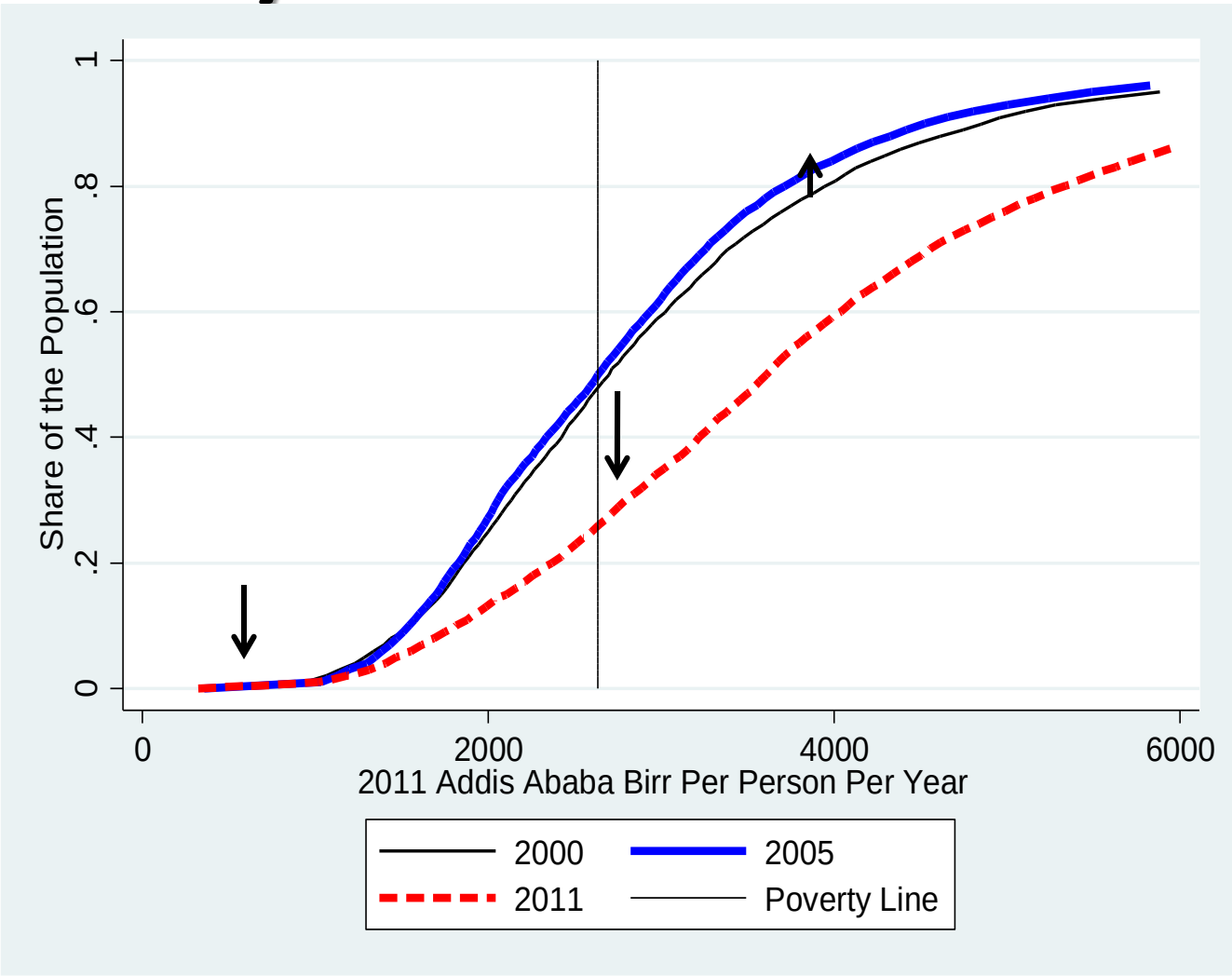
Poverty Incidence Curves - National



Poverty Incidence Curves - Urban



Poverty Incidence Curves - Rural



Inequality

	2000	2005	2011
Gini Coefficient			
National	**0.289**	**0.326**	**0.321**
Urban	0.384	0.438	0.387
Rural	0.263	0.254	0.282
Theil Index			
National	**0.158**	**0.259**	**0.208**
Urban	0.279	0.460	0.317
Rural	0.122	0.117	0.141
Percent due to…			
Within group inequality	95.1	80.2	88.9
Between group inequality	4.9	18.8	11.1

Some Context

- Since 2000:
  - Persistent weather shocks
  - Periods of high inflation
  - Post-election crisis in 2005
- "Ethiopia's changing economic landscape" (Dorosh & Scmidt, 2010)
- Agricultural Development-Led Industrialization (ADLI)
  - *"Rapid agricultural growth as a means of accelerating economic transformation and reducing poverty" (MoFED, 2008)*

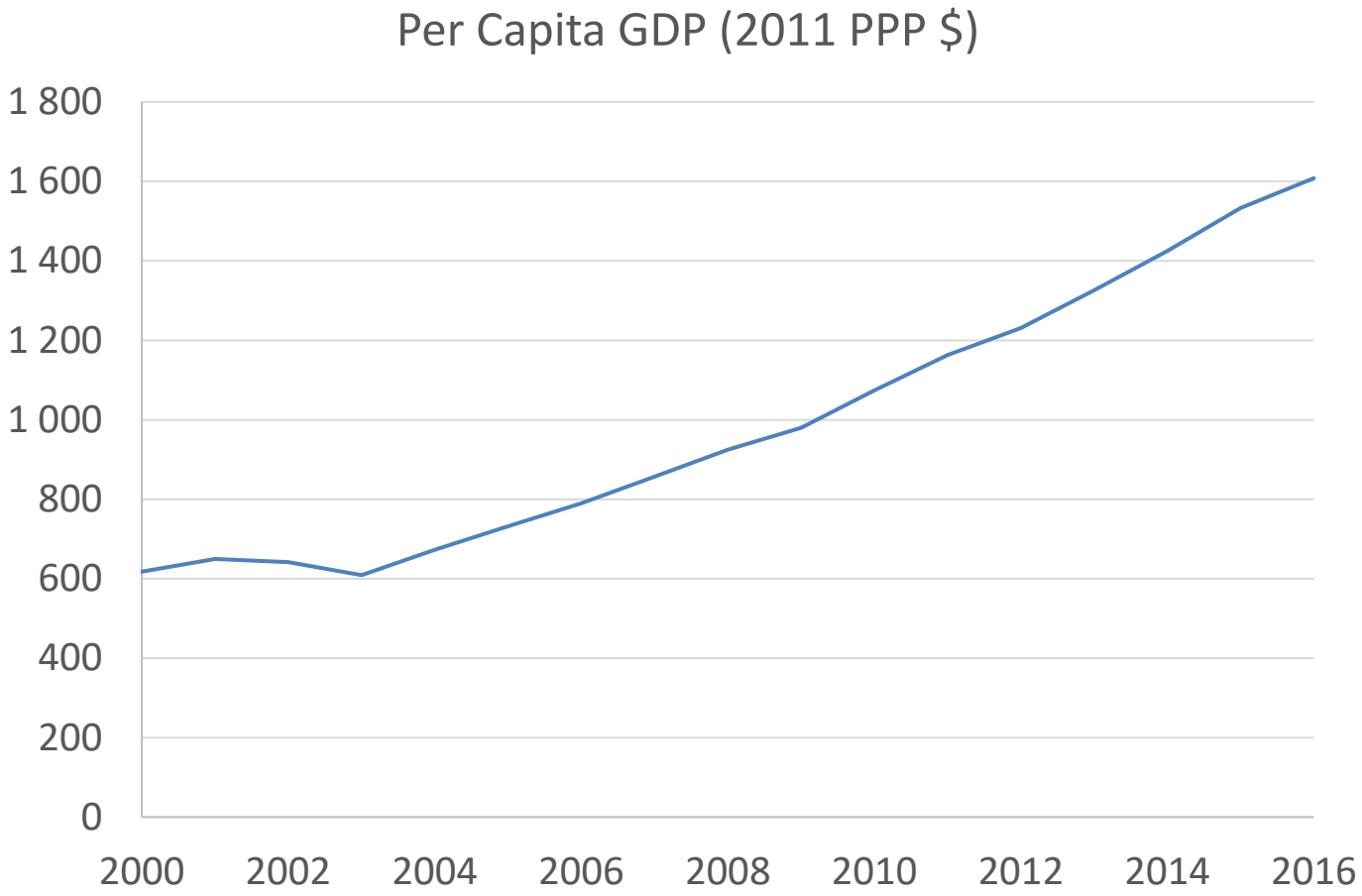
Ethiopia's Changing Landscape

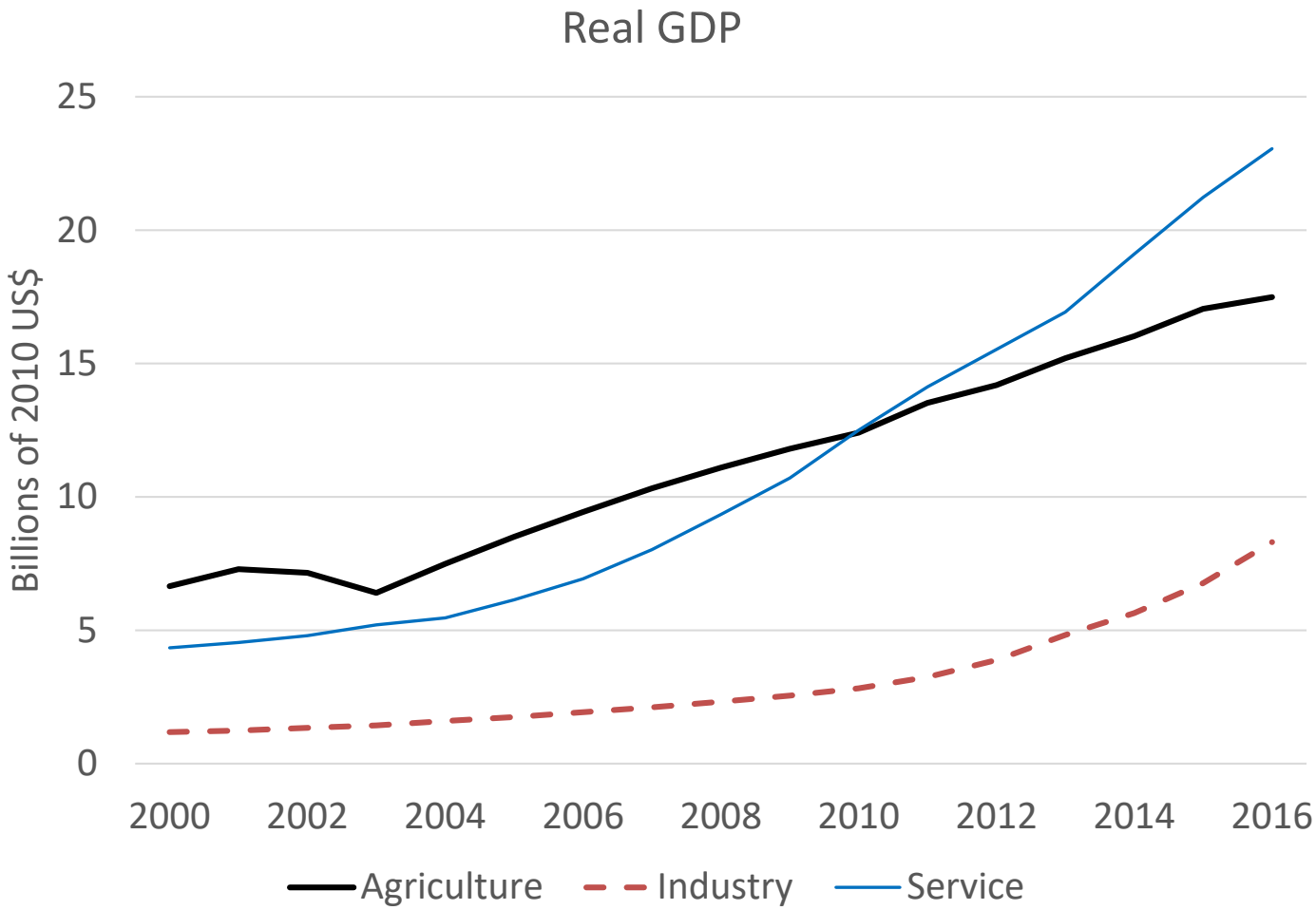
- Increased agricultural production
  - Expansion of cultivated area
  - 45,000 agric. extension agents – *3 per kebele (ward)*
  - Modern input use (maize & teff seeds, chem fertilizer)
- Improved physical infrastructure
  - Road sector development program
  - Hydroelectric dams
  - Telecommunications
- Productive Safety Nets Programme (PSNP)

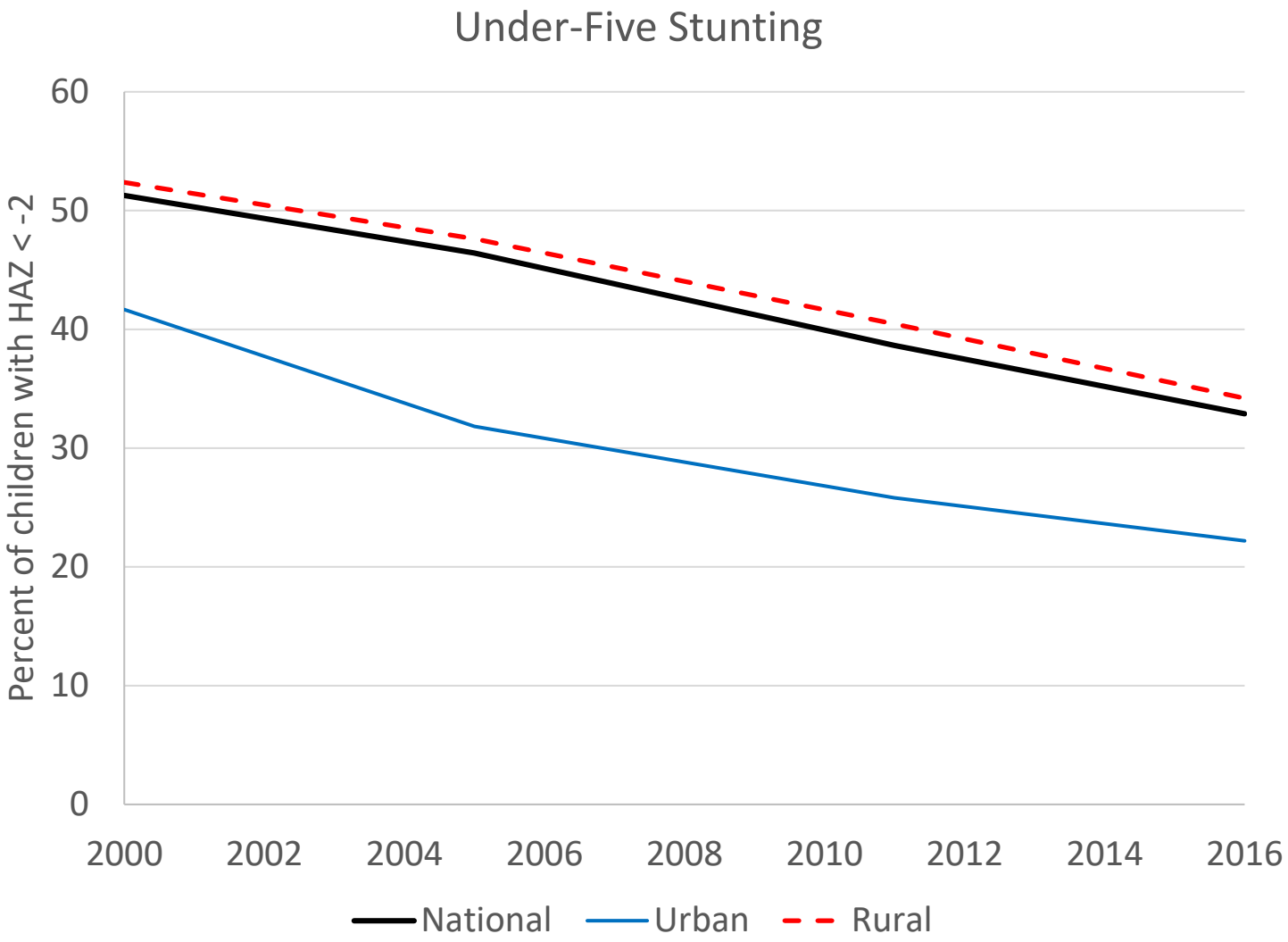
Complementary Data

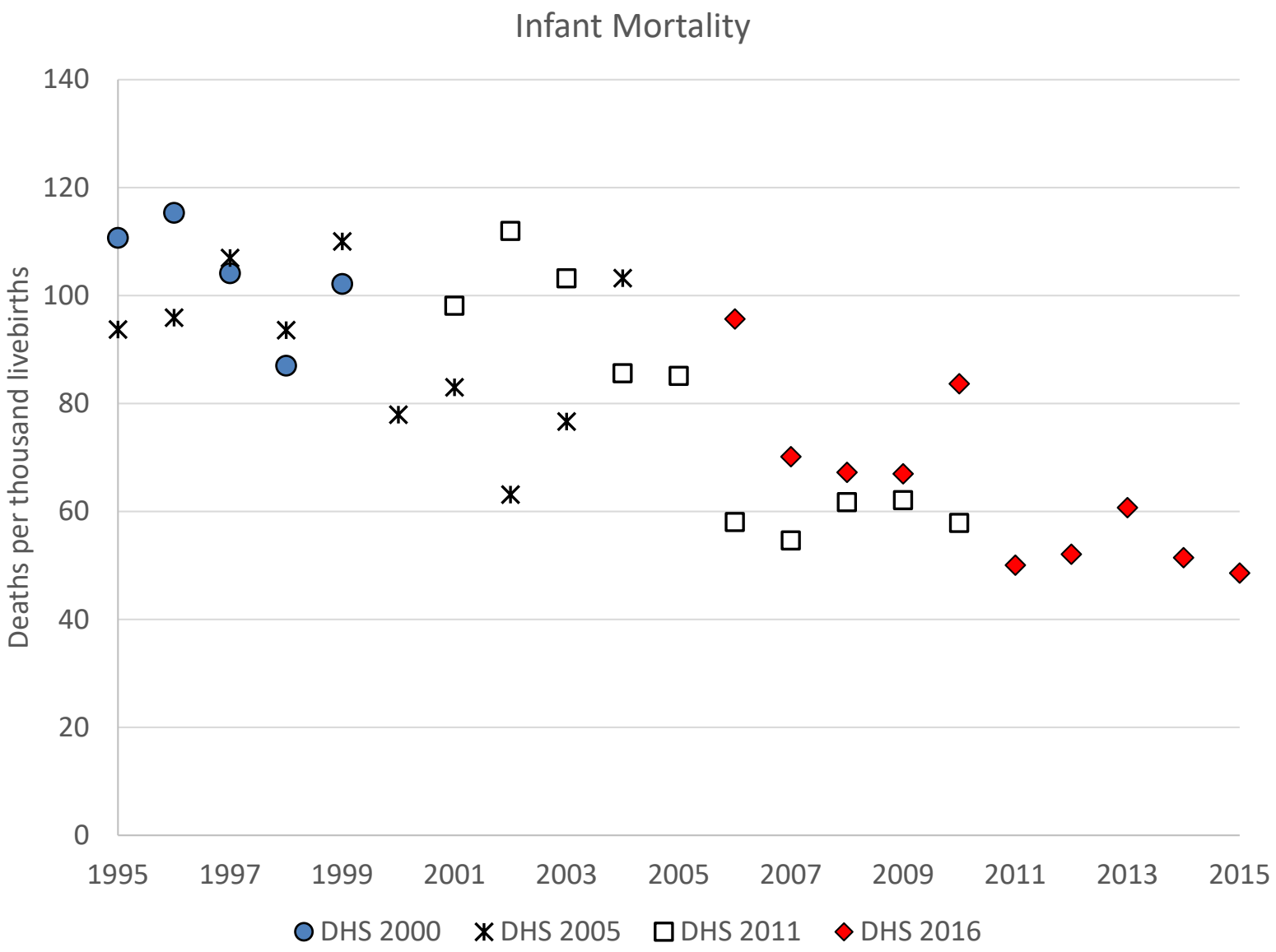
Time periods between HICE surveys…

1. National accounts
2. Non-nationally representative surveys
3. Non-monetary measures (DHS)


Per Capita GDP (2011 PPP $)
1 800
1 600
1 400
1 200
1 000
800
600
400
200
0
2000
2002
2004
2006
2008
2010
2012
2014
2016


Real GDP
Billions of 2010 US$
25
20
15
10
5
0
2000
2002
2004
2006
2008
2010
2012
2014
2016
Agriculture
Industry
Service


Under-Five Stunting
Percent of children with HAZ < -2
60
50
40
30
20
10
0
2000
2002
2004
2006
2008
2010
2012
2014
2016
National
Urban
Rural


Infant Mortality
Deaths per thousand livebirths
140
120
100
80
60
40
20
0
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
DHS 2000
DHS 2005
DHS 2011
DHS 2016

Non-Monetary Measures

1. Falling Under-five stunting
2. Falling Infant mortality rates
3. Rising net schooling enrolment rates
4. Diets
   - Increasing food quantities & caloric intake
   - Falling food shares
   - Shift toward high-value foods

Concluding Remarks

1. Utility-consistent poverty estimates - *snapshots*
   a. Steady but uneven progress from 2000, 2005, 2011
   b. Headcount: 51.9 → 44.5 → 30.0
   c. Urban – gains in 1st half of decade
   d. Rural – gains in 2nd half of decade
   e. Poorest of the poor no better off
2. "Ethiopia's changing economic landscape"

Concluding Remarks

1. Utility-consistent poverty estimates - *snapshots*
2. "Ethiopia's changing economic landscape"
3. Persistent improvements as measured by…
   a. National accounts
   b. Non-monetary measures
4. Snapshots of poverty from household surveys (2000, 2005 & 2011) appear to represent…
   - *Long term trends*