

Aid and poverty in Africa. Do well-being measures understate the progress?

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Addis Ababa, 11-13 November 2009

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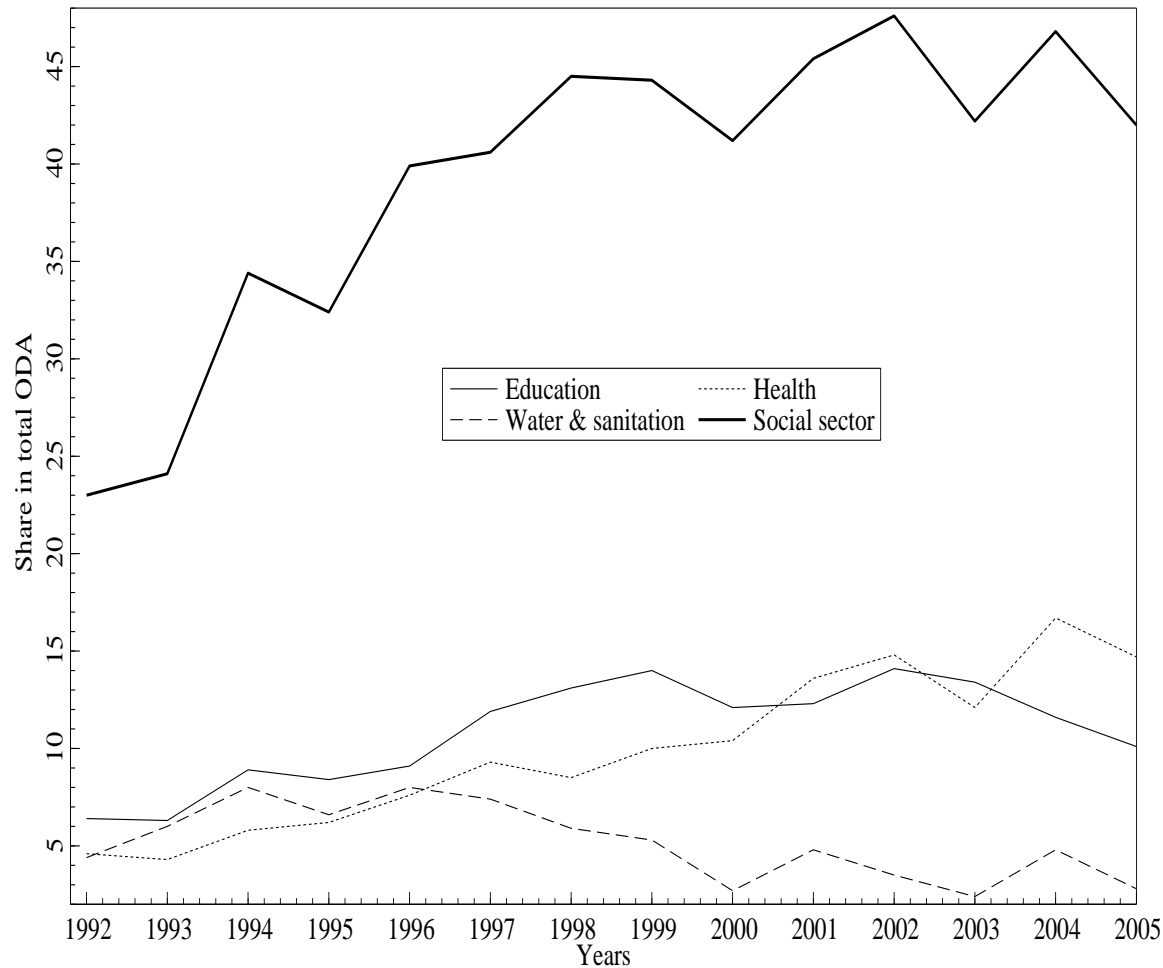
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- International aid for Africa has been substantially concentrated in health and education over the last 15 years.
- The share of social sector has dramatically risen from about 23% in 1992 to more than 40% in 2000s with a peak of nearly 50% in 2002.

Figure 1: The distribution (%) by year of sector ODA commitments in SSA, 1992-2005.



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● The optimistic views:

- ❖ Aid could have a direct impact on economic growth, depending on the quality of economic policies in the recipient countries (Burnside and Dollar, 2000; Collier and Dollar, 2002).
- ❖ Aid could reduce infant mortality and poverty (Collier and Dollar, 2002; Mosley, Hudson and Verschoor, 2004; Gomanee, Morrissey, Mosley and Verschoor, 2005).
- ❖ Aid effectiveness may be increased with better social policies (Verschoor and Kalwij, 2006) and stable aid's flows (Mosley and Suleiman, 2007).
- ❖ Aid is an important tool in the prospects of development of poor countries (Arndt, Jones and Tarp, 2009).

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● The skeptical views:

❖ No robust link between foreign aid and growth (Boone, 1996; Easterly, Levine and Roodman, 2004; Rajan and Subramanian, 2005).

❖ Aid has no significant effect on the well-being of Africans. Instead, it has worsened the situation (Moyo, 2009).

● A more mitigated position:

❖ Despite the failures of aid, it could create opportunities for poor individuals by helping them to fill some particular needs in the areas of education, health and infrastructure (Easterly, 2007).

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- This paper aims to capture the impact of the shift in aid allocation on well-being and poverty in Africa.
- Unlike the previous studies, mainly focussed on the macroeconomic impacts of aid, this one intends to analyze its possible effects on multidimensional well-being at households level.
- Well-being dimensions are estimated using the structural equation models with latent variables borrowed from the psychometric literature.

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Figure 2: Trends in aid to some African countries, 1990-2005.

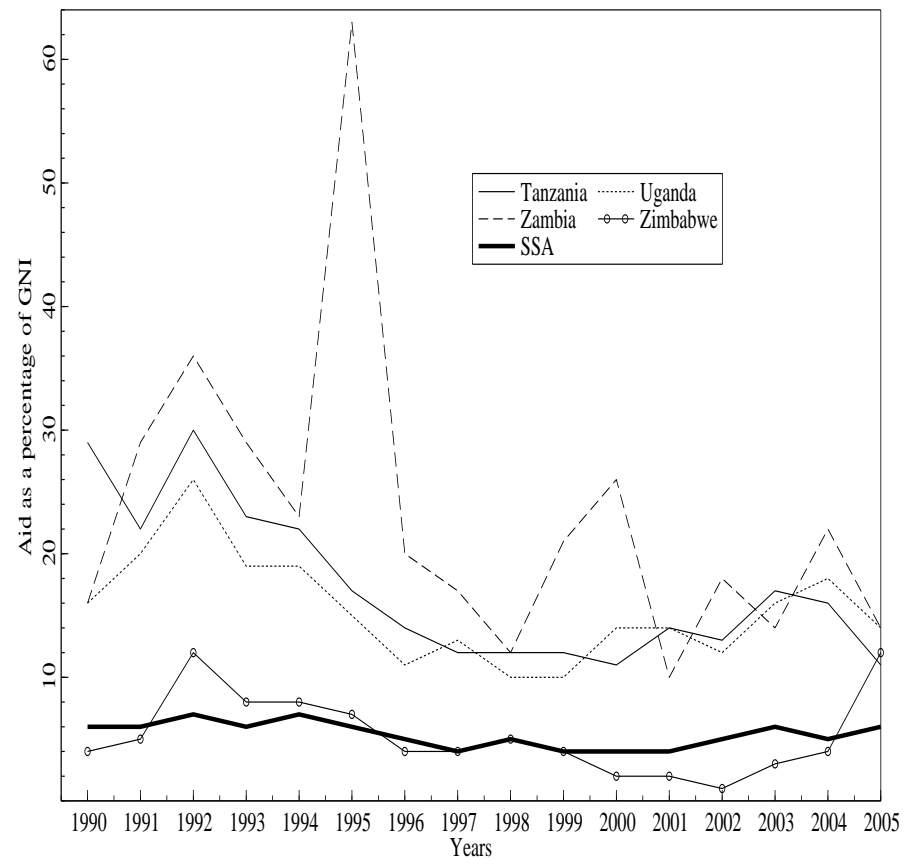
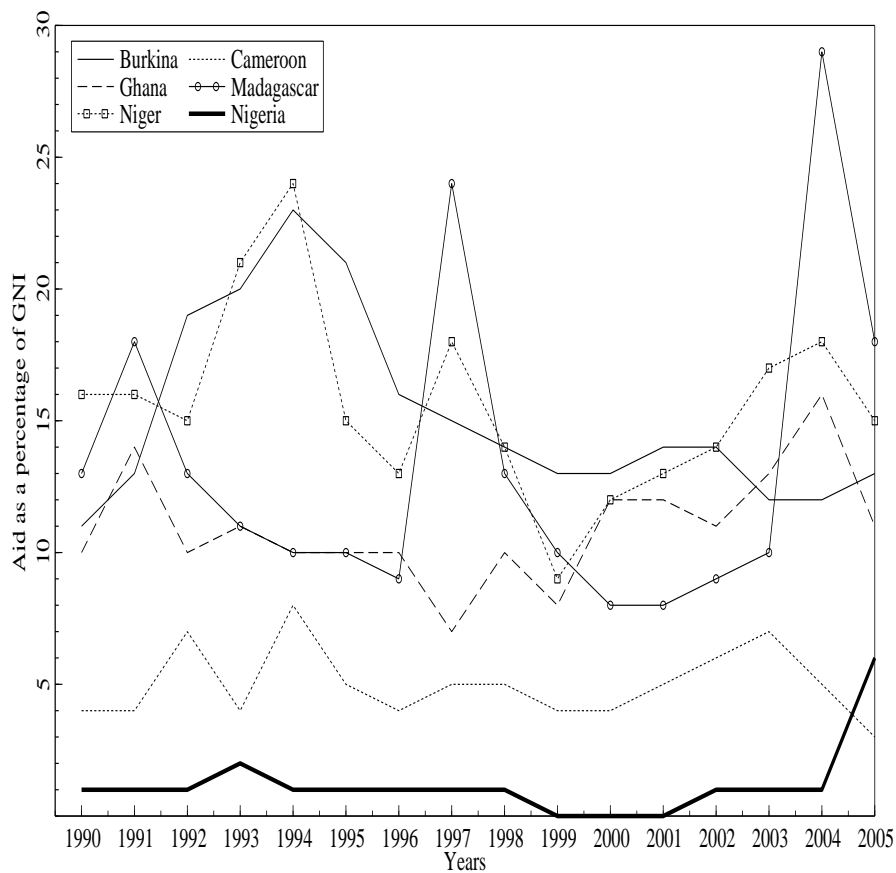


Figure 3: The comparisons of infant mortality in some SSA Countries.

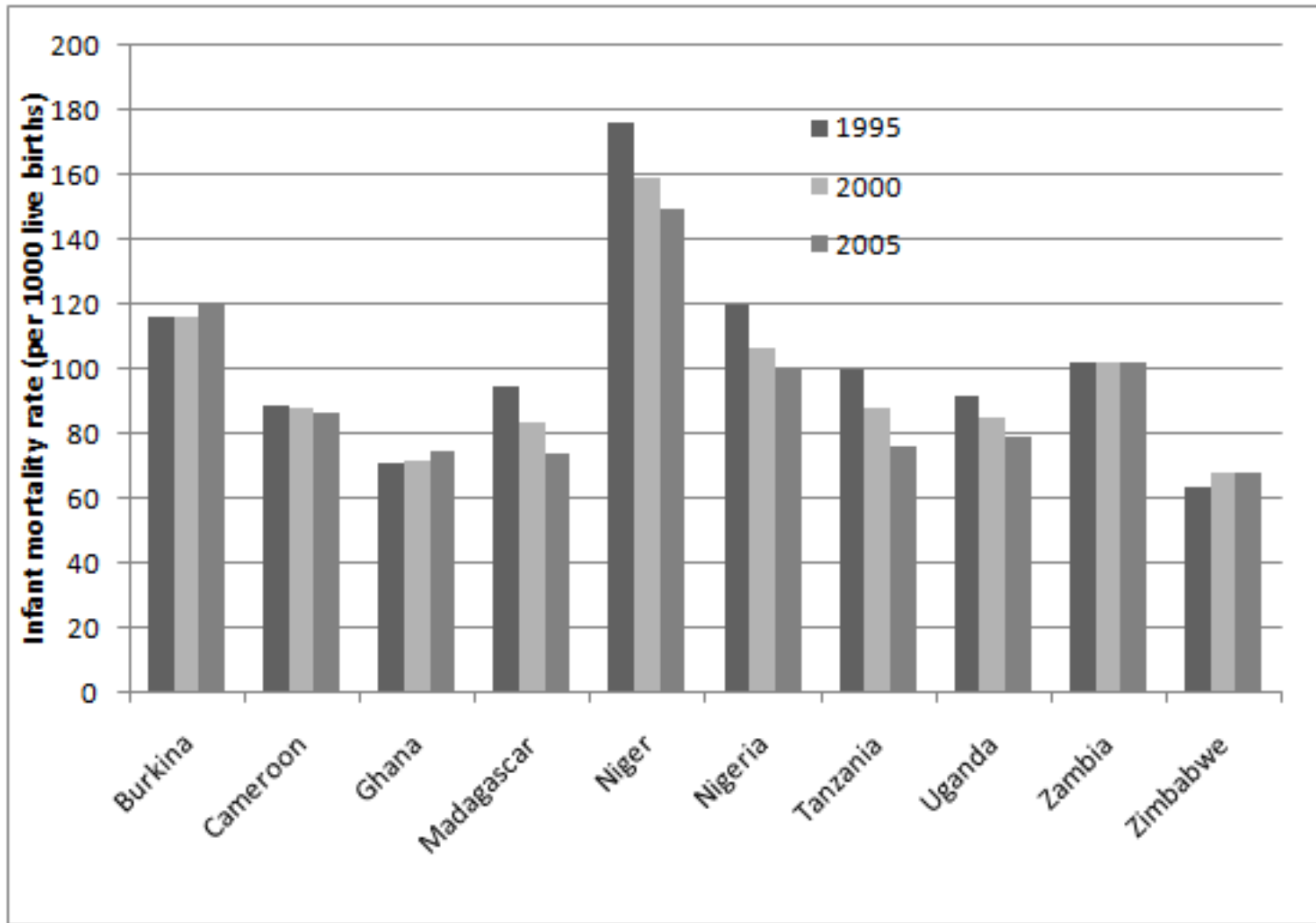
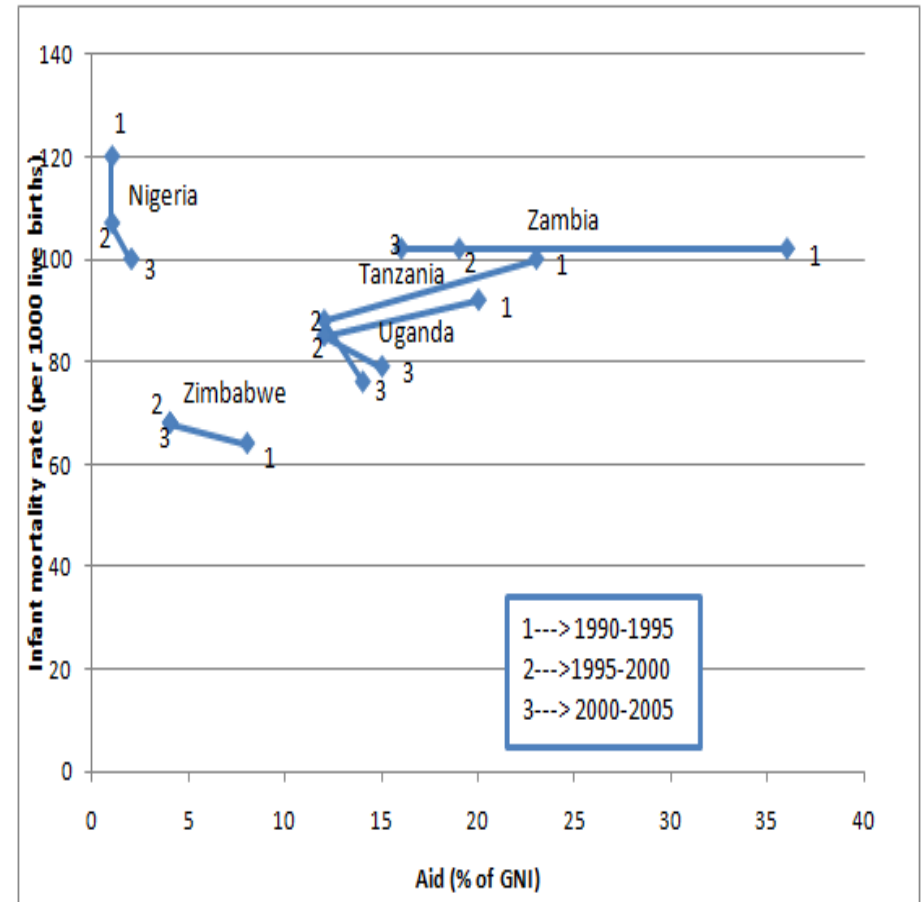
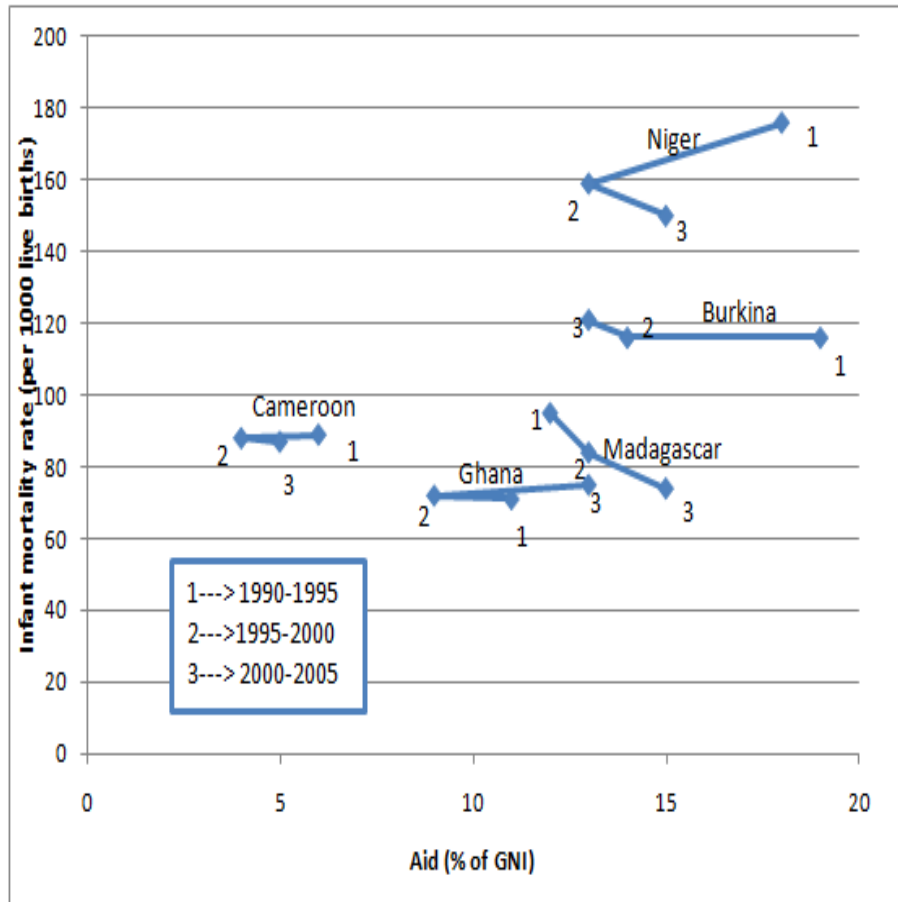


Figure 4: Evolution of infant mortality in relation to aid ratio in some SSA Countries.



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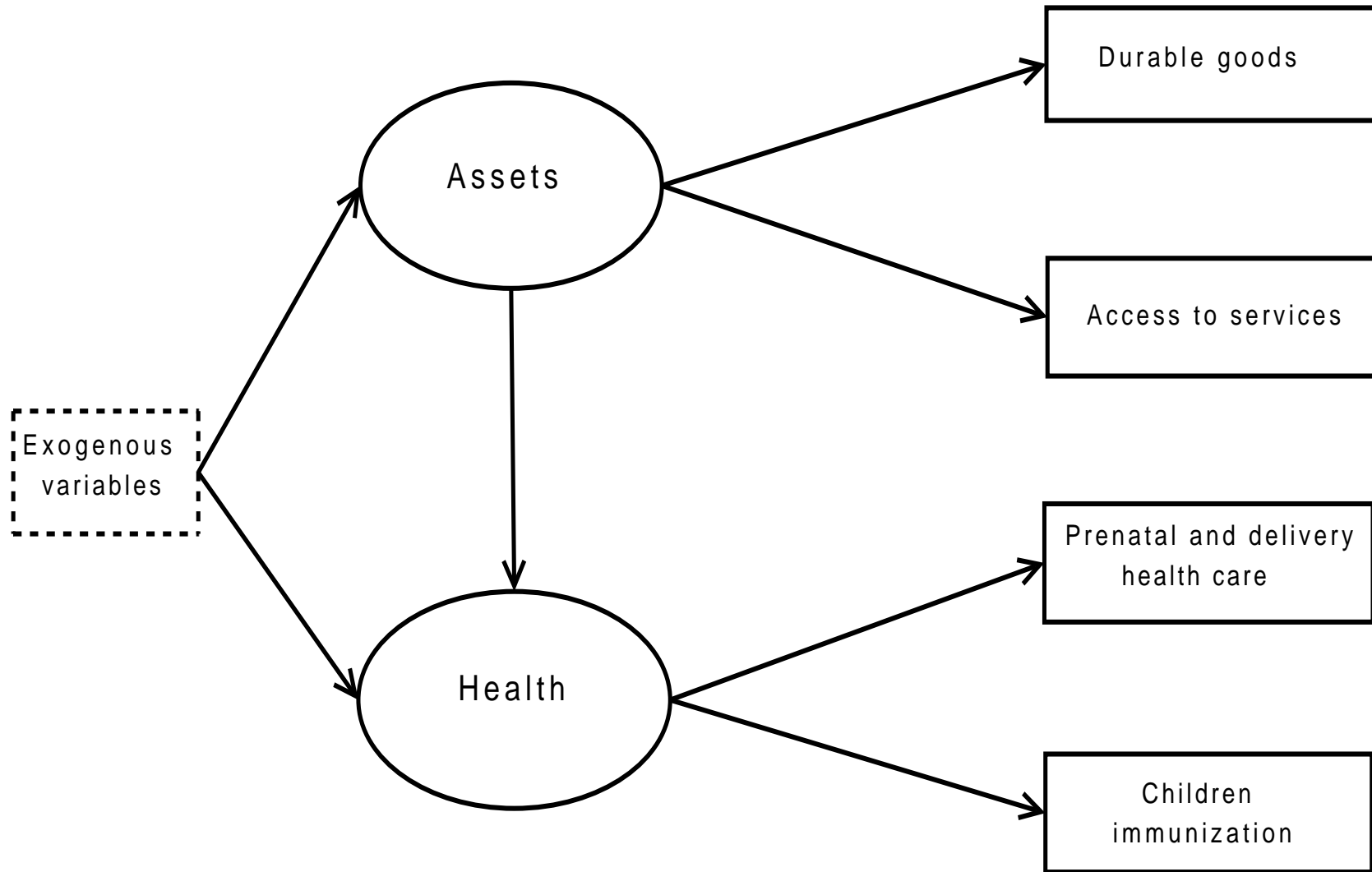
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- Two dimensions are considered: assets (possession of durable goods and access to basic services) and health (Prenatal and postnatal health care).
- The estimation is based on structural equation models with latent variables (Muthén, 1983; 1984). Applications in welfare are done by Wagle (2005) and Krishnakumar and Ballon (2008).
- The model is presented as follows:

$$\begin{aligned} f &= Bf + \Pi x + \epsilon \\ y &= \Lambda f + u \end{aligned} \tag{1}$$

Figure 5: The multidimensional well-being model diagram



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- Consider one dimension (assets or health) and the following functions (Davidson and Duclos, 2000):

$$D_F^s(z) = \frac{1}{(s-1)!} \int_0^z (z-x)^{s-1} dF(x) \text{ for } s \geq 1. \quad (2)$$

$$D_G^s(z) = \frac{1}{(s-1)!} \int_0^z (z-x)^{s-1} dG(x) \text{ for } s \geq 1. \quad (3)$$

- Then, distribution G strictly dominates at order s distribution F if $D_F^s(z) > D_G^s(z)$ for all z . Tests follow the procedures suggested by Davidson and Duclos (2006).

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- Consider two bivariate *cdfs* $F(z_1, z_2)$ and $G(z_1, z_2)$. Their related poverty indices are following:

$$P(F, z) = \int_0^{z_1} \int_0^{z_2} \pi(x_1, x_2; z_1, z_2) dF(x_1, x_2) \quad (4)$$

$$P(G, z) = \int_0^{z_1} \int_0^{z_2} \pi(x_1, x_2; z_1, z_2) dG(x_1, x_2). \quad (5)$$

- The previous tests are performed by Batana and Duclos (2008) in the two-dimensional case.

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Table 1: Characteristics of samples from DHS

Country	Round1 (R1)		Round2 (R2)		Round3 (R3)	
	Years	Obs number	Years	Obs number	Years	Obs number
Burkina	1992-93	3600	1998-99	3178	2003	6411
Cameroon	1991	1965	1998	1663	2004	4263
Ghana	1993	1880	1998	2150	2003	2474
Madagascar	1992	3070	1997	2810	2003-04	3370
Niger	1992	3940	1998	3573	2006	5087
Nigeria	1990	4540	1999	2411	2003	3126
Tanzania	1992	4950	1996	3966	2004	5015
Uganda	1995	3608	2000-01	3601	2006	4417
Zambia	1992	3833	1996	3980	2001-02	3808
Zimbabwe	1994	2060	1999	2384	2005-06	3634

Table 2: Structural equations model results for Burkina

Variables	Asset index (f_1)		Health index (f_2)	
	Coefficient	P-value	Coefficient	P-value
Asset index (f_1)	—	—	0.117	0.000
Place of residence (x_1)	-2.199	0.000	-0.040	0.055
Education level (x_2)	0.128	0.000	0.012	0.000
Household size (x_3)	0.040	0.000	-0.004	0.000

Figure 6: Dominance in assets in relation with government effectiveness, aid ratio and GDP per capita average growth.

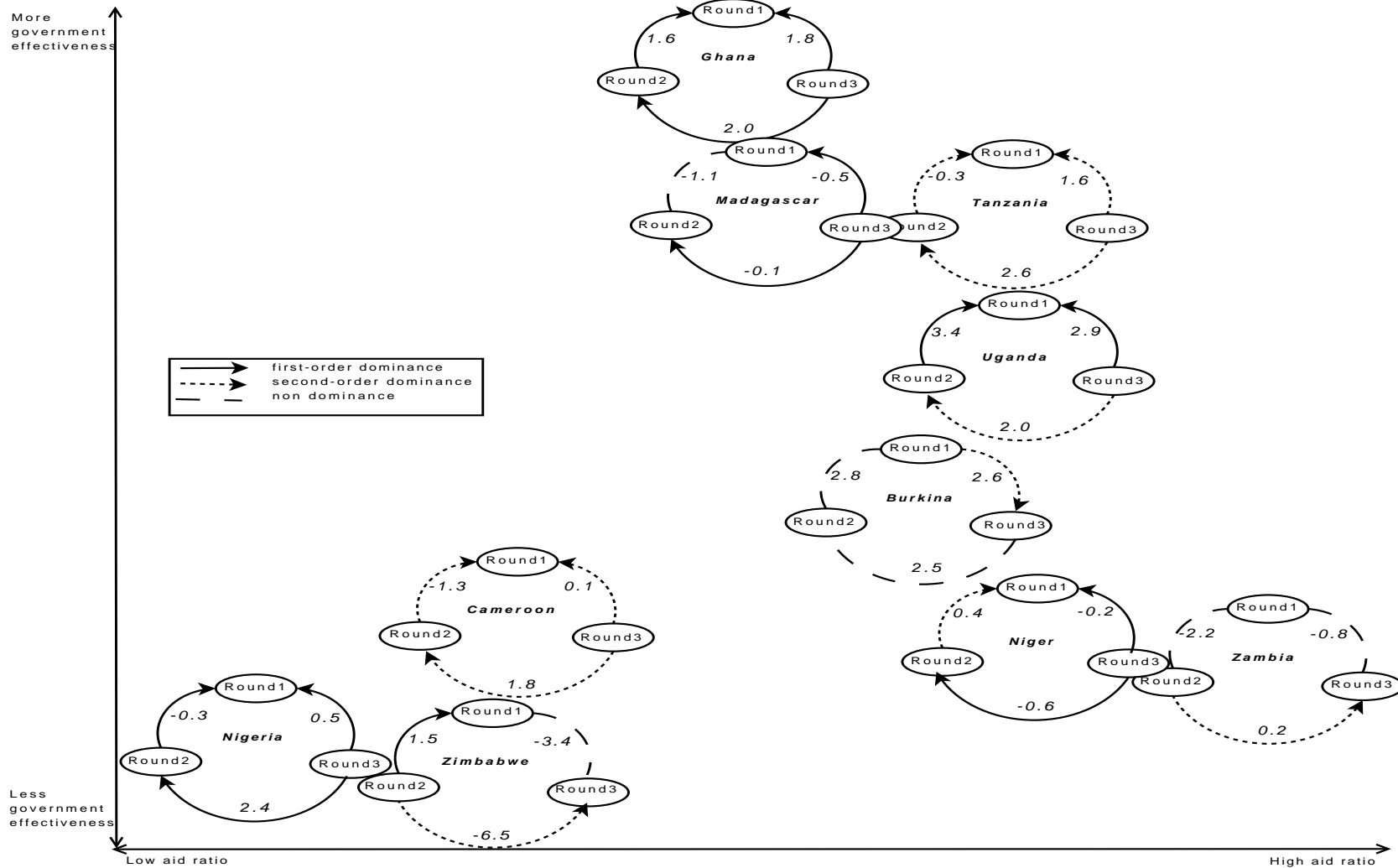


Figure 7: Dominance in health in relation with government effectiveness, aid ratio and GDP per capita average growth.

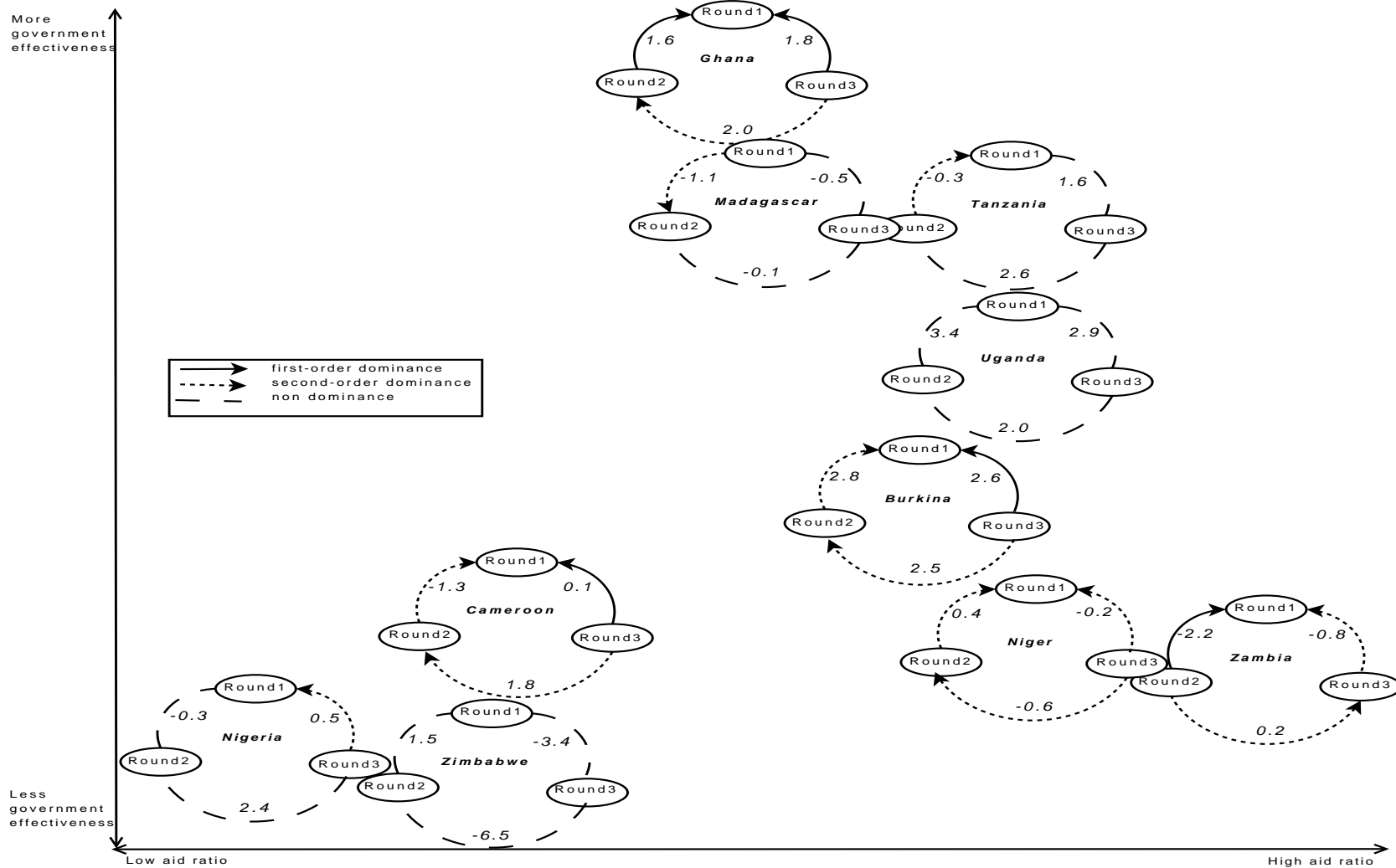
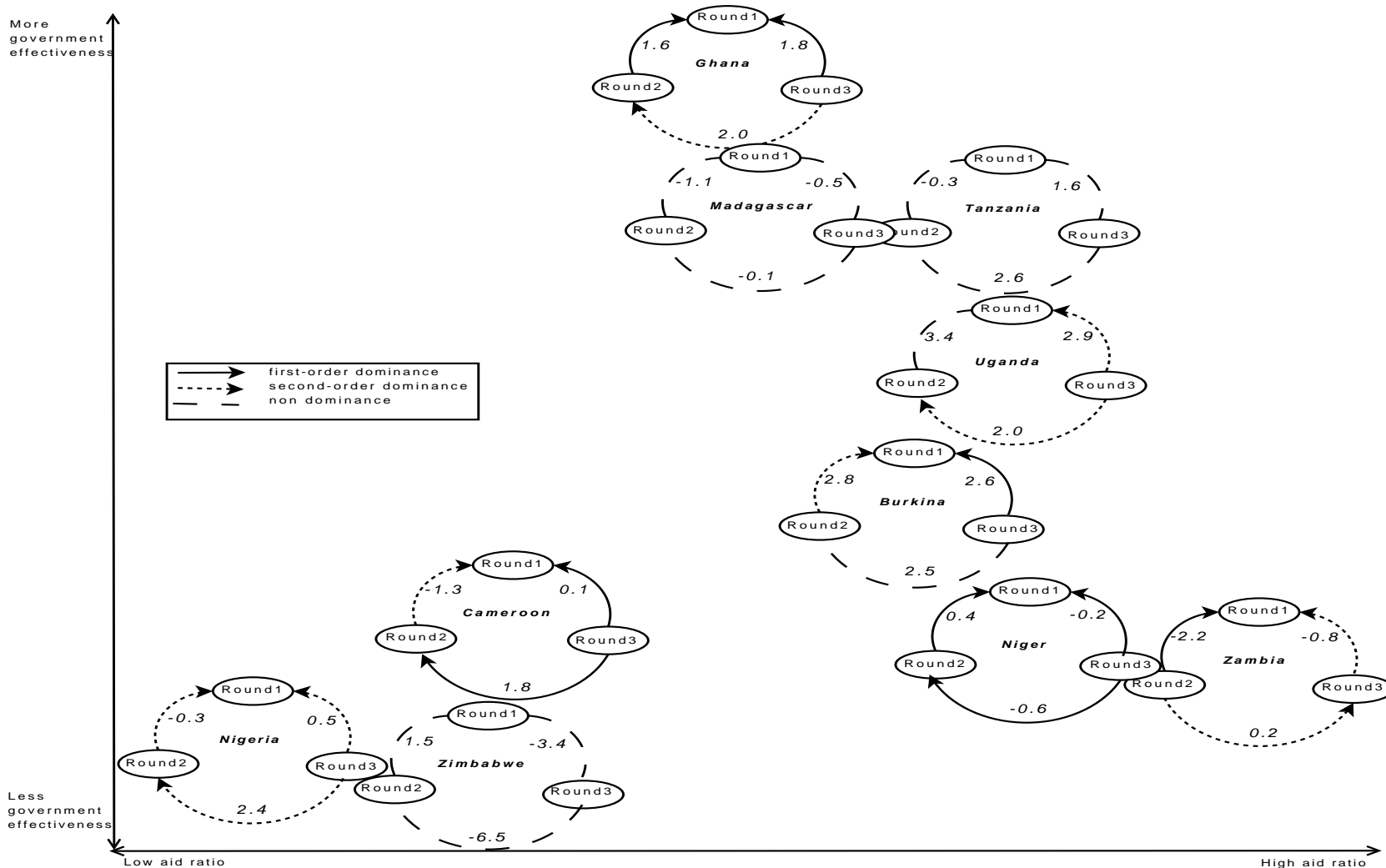


Figure 8: Multidimensional dominance (assets and health) in relation with government effectiveness, aid ratio and GDP per capita average growth.



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- The results do not suggest that aid has contributed significantly to improve the well-being in Africa.
- Could these results lead to advocate the elimination of aid?
- Aid failed in the sense that it did not and, in its current form, can not accomplish development in Africa (Easterly, 2007; Moyo, 2009).
- But, as Easterly (2007) emphasizes, aid could help poor individuals to fill some particular needs.
- Aid could be helpful (especially through NGOs) but it does not seem to be the *WAY* to achieve development in Africa.

Thank you!