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All that Glitters is not Gold: Polarization Amid Poverty Reduction in Ghana

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Summary. — Ghana is an exceptional case in the Sub-Saharan Africa (SSA) landscape. Together with a handful of other countries, Ghana offers the opportunity to analyze the distributional changes in the past two decades, since four comparable household surveys are available. In addition, unlike many other countries in SSA, Ghana's rapid growth translated into fast poverty reduction. A closer look at the distributional changes that occurred in the same period, however, suggests less optimism. The present paper develops an innovative methodology to analyze the distributional changes that occurred and their drivers, with a high degree of accuracy and granularity. Looking at the results from 1991 to 2012, the paper documents how the distributional changes over time hollowed out the middle of the Ghanaian household consumption distribution and increased the concentration of households around the highest and lowest deciles; there was a clear surge in polarization indeed. When looking at the drivers of polarization, household characteristics, educational attainment, and access to basic infrastructure all tended to increase over time the size of the upper and lower tails of the consumption distribution and, as a consequence, the degree of polarization.

Key words — Ghana, consumption expenditure, poverty and inequality, polarization, relative distribution, decomposition analysis

1. INTRODUCTION

Over the last two decades, several African countries experienced stable and sustained growth that did not translate, nonetheless, into rapid poverty reduction. Compared to other regions, particularly in the last decade, the growth elasticity of poverty of Sub-Saharan African (SSA) countries has been lower than in the rest of the developing world (Molini & Paci, 2015). The causes of this limited inclusiveness are numerous, but typically scholars point to the excessive reliance of many SSA economies on a limited basket of raw materials and the limited trickle down of this growth to the households' consumption.

At first glance, Ghana is an exception compared to the rest of Sub-Saharan countries. Ghana's rapid growth did translate into fast poverty reduction. Inequality increased over the last two decades (Aryeetey & Baah-Boateng, 2015; Cooke, Hague, & McKay, 2016) but, compared to other SSA countries, Ghana still fares relatively well. When ranking SSA countries according to the average Gini index over the last 20 years Ghana occupies the bottom 20% of the Gini distribution and despite some deterioration, in 2012, it was still below the median and among the lowest of rapidly growing African economies (Molini & Paci, 2015).

A closer look at the distributional changes occurred in the same period, suggests, however, less optimism. Like many other developing countries (Clementi, Dabalen, Molini, & Schettino, 2014, 2015; Clementi & Schettino, 2015) Ghana is experiencing a fast increase in polarization. Whereas inequality relates to the overall dispersion of the distribution and provides clues to whether a society's prosperity has been shared broadly or not, polarization is concerned with the division of society into subgroups. In the context of income distribution, this concept is typically equated with the "hollowing out of the middle", a situation where the society has a sizeable group of poor persons and there is also a non-negligibly sized group of persons with very high income and, in contrast, the size of the group occupying the center of the income distribution is rather low (see, for instance, Foster & Wolfson, 1992, and Wolfson, 1994, 1997). Within each group there is increasing "identification", which means income homogeneity and often declining income inequality, while between the two groups we have instead increasing "alienation" (Duclos, Esteban, & Ray, 2004). The combined effect of the forces of alienation and identification between two significantly sized groups would tend to lead to effective opposition, a situation that might give rise to social conflicts and tensions (Esteban & Ray, 1999, 2008, 2011).

The contribution of this paper is twofold. First, it uses a very intuitive method, the relative distribution (Handcock & Morris, 1998, 1999), to analyze the recent distributional changes occurred in the country. The strength of this method rests in providing a non-parametric framework for taking into account all the distributional differences that could arise in the comparison of distributions over time and that would not be detected easily from a comparison of standard measures of inequality. In particular, it facilitates grasping the very nature of the polarization phenomenon, which is inherently a dynamic process that is brought about by transition processes that transfer mass from the center of the distribution toward the extremities (Anderson, 2015). The relative distribution method has widely been used in the distributional analysis of both developed (Alderson, Beckfield, & Nielsen, 2005; Massari, 2009; Massari, Pittau, & Zelli, 2009a,b; Alderson &

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Doran, 2013; Borraz, González, & Rossi, 2013; Petrarca & Ricciuti, 2016) and transition economies (Alderson & Doran, 2011; Nissanov, 2017; Nissanov & Pittau, 2016) but, to our knowledge, only once in Sub Saharan Africa countries (Bertoni, Clementi, Molini, Schettino, & Teraoka, 2016; Clementi *et al.*, 2014, 2015).

Second and most importantly, the paper develops within the relative distribution framework a novel methodology to identify the covariates of distributional changes; the main value added being it enables a very granular analysis of the distributional changes that an analysis based on standard inequality decompositions would not allow.

The paper is organized as follows. Section 2 discusses the data and presents the methodology. Section 3 provides the results. Section 4 concludes.

2. DATA AND METHODOLOGY

(a) *The Ghanaian household survey data*

The data used in this paper come from the Ghana Living Standard Survey (GLSS), a nation-wide survey conducted by the government-run Ghana Statistical Service that provides information for assessing the living conditions of Ghanaian households.

The GLSS has emerged as one of the most important tools for welfare monitoring in Ghana. It provides detailed information on approximately 200 variables, including several socioeconomic and demographic characteristics, and information on household consumption of purchased and home-produced goods as well as asset ownership. Each of the waves is organized into 4 modules (individual, labor force, household and household expenditures), for which survey questionnaires are readily available.

The Ghana Statistical Service has conducted six rounds of the GLSS since 1987, thereby providing over 20 years of comparable data. However, only the last four rounds, from 1991/92 (GLSS-3) to 2012/12 (GLSS-6), have been based on a very similar questionnaire and are therefore comparable. [1]

The availability of comparable and extensive information represents a success in itself. Ghana is one of the few countries in Africa that has produced comparable, high-quality household data covering over two decades. This is an important achievement because the availability of such rich and comparable information beginning in 1991, as well as the quality improvements of the surveys over the years and the fact that they collect data on both the monetary and the non-monetary dimensions of welfare, permit the establishment of an accurate picture of inequality and polarization over time, including the drivers behind these phenomena.

As a measure of well-being we will use household consumption. The quality of income measures that one can obtain from the GLSS data motivates the choice. In economies where agriculture is an important and established sector, consumption has indeed proven preferable to income because the latter is more volatile and more highly affected by the harvest seasons. Therefore, relying on income as an indicator of welfare might under- or over-estimate living standards significantly (see, for instance, Deaton & Zaidi, 2002, and Haughton & Khandker, 2009). From a theoretical outlook, since consumption gives utility to individuals, the analysis of its distribution should be the most natural approach to study well-being. Income matters insofar as it gives access to consumption, which is the ultimate source of individual welfare. Consumption is a better measure of long-term welfare also because households can borrow, draw down on savings, or receive public and private transfers to smooth short-run fluctuations. The GLSS collects sufficiently detailed information to facilitate estimates of the total consumption of each household. It relies on consumption per adult equivalent [2] to capture differences in need by age and economies of scale in consumption. The Ghana Statistical Service computes scales of consumption by age and sex.

The GLSS is based on a two-stage (non-stratified) sample design. Therefore, when the data are analyzed, sampling weights are used to account for the survey design. Besides, to enhance the comparability of consumption data over the four waves, all expenditures have been deflated [3] across both space [4] and time and expressed in 2005 constant prices—as well as converted, when necessary, from Ghanaian second cedi (GHC) to Ghanaian third cedi (GHS), i.e., for GLSS-3 to GLSS-5.

A summary of the distributional statistics obtained from the GLSS data sets is given in Table 1. Besides the growth of the real mean and median consumption expenditures, the most notable feature is the picture that emerges across different indicators of inequality. The consumption shares of the poorest percentiles of the population decreased between approximately 0.9 and 1.4% a year in the period examined, in contrast to what is observed for the richest percentiles, whose shares experienced average yearly increases of around 0.2%. Inequality in household consumption was initially constant, but widened considerably between 1998/99 and 2005/2006—a jump of about 7% in the Gini coefficient and 20% in the Theil index. [5] Inequality has remained constant after 2005/06, but the trends in the shares of consumption of the bottom and top quintiles have continued in the same direction.

However, the narrative about inequality is more nuanced than the summary measures suggest. These latter only partially capture the changes at various points of the consumption distribution. The results of a simple inter-quantile analysis can provide more detailed information on the changes occurring at all points of the distribution (see Table 2). For example, they show that the ratio of average consumption among the top 10% of the distribution to the average consumption among the bottom 10% had risen considerably even before 1998/99, suggesting that the more well-off had benefited more than the poorest decile from the economic growth in 1991–98. Over the years, the consumption levels of the top and the bottom of the distribution continued to diverge at a steady rate so that the gap expanded by 30% over the full period. [6] The divergence widened because the bottom 10 was being left behind, rather than because the top 10 gained disproportionally compared with the rest of the population. The average consumption of the 90-th percentile rose little relative to the median, while the average consumption of the bottom 10 had deteriorated by nearly 20% by 2005/06. The bottom 10 appears to be losing ground also compared with other households in the bottom 25, who are also losing ground to the median but only half as quickly.

These preliminary findings denote a clear tendency toward rising polarization over the period. The notion of "polarization" commonly refers to the case where there is a significant number of individuals who are very poor but there is also a non-negligible share of the population that is quite rich. Such a gap between the poor and the rich implies evidently that there is no sizeable group in the middle. [7] As we will see later when applying relative distribution methods, the distributional changes that occurred between 1991/92 and 2012/13 hollowed out the middle of the Ghanaian household consumption distribution and increased the concentration of households around