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Tracking the Cost of Living, for Whom and at What Price? A Political Economy of Price Indicators in Madagascar

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Abstract

This paper studies the production and meaning of price indicators in Madagascar, a post-colonial context characterized by a weak state, the prominence of international aid, and repeated food crises. We observe a profusion of indicators, data, and analyses related to prices. Such profusion illustrates not only different meanings of the cost of living but also fragmented economies and a fragmented mode of government in which NGOs and international organizations play a leading role. Whatever their efforts, these initiatives struggle to capture the specific features of the cost of living in a context where the subsistence economy remains hardly convertible into numbers. Our analysis confirms the close links between statistical production and modes of government. The Malagasy Consumer Price Index coexists with many disparate initiatives aimed at coping with inequalities and emergencies, reflecting a country in the throes of repeated political, economic and social crises.

Introduction

Measuring the cost of living is a crucial aspect of a country's economic, social and political life, and at the same time a source of much controversy: who defines what is meant by "cost", who measures, how, for what purpose and for what use? An indicator is never neutral. It involves conventions (and therefore values), technical devices (and therefore skills and dedicated resources) and power relationships (Martin, 2020). What is more, the statistical tools and indicators in use in a given context at a given time are both a reflection of and a catalyst for modes of government (Desrosières, 2014; Stapleford, 2009; Tooze, 2001), including post-colonial ones (Glasman, 2019; Hibou, 2011; Jerven, 2013; Samuel, 2011). These involve numerous actors at different scales, including international organizations (Iversen et al., 2023; Naudet, 2000) and increasingly, the humanitarian world (Glasman, 2019).

Among public statistics tools, the Consumer Price Index (CPI) is probably the most controversial because it has a prominent "retroactive" role on reality (Desrosières, 2014). The CPI is used both as a *reflection* of reality (inflation indicator, parameter in the measurement of poverty rates and purchasing power parities, deflator for the share of GDP corresponding to the informal sector, etc.) and to *index* or negotiate wages, pensions, social transfers, aid programs or financial obligations (Jany-Catrice, 2020). These two roles vary significantly according to time and place. The CPI is nothing more than an index tracking the evolution of consumer market prices. This is quite different from the cost of living, defined in a broad economic sense as "the cost of maintaining a given standard of living" (Graf, 2020b, p. 1). The notion of 'standard of living' then lends itself to multiple interpretations, as does the idea of cost (which may or may not be monetary). Despite the many limitations of the CPI in estimating the cost of living (which we will detail in the paper), this indicator is still

used and understood by many as the least bad approximation of the cost of living, whether by economists (Deaton, 1998) or international institutions such as the International Monetary Fund (Graf, 2020a).

The socio-history of the CPI has been conducted mainly in the countries that have shaped it (Europe, North America) (Hayes, 2011; Jany-Catrice, 2020; Stapleford, 2009), in hyperinflationary contexts (Argentina, Brazil) (Daniel and Lanata Briones, 2019; Neiburg, 2011) or contexts of very strong contestation (example of Guadeloupe, a French overseas department) (Boris, 2014). This socio-history reveals the CPI's pivotal role in the making of welfare states and the regulation of wage and social conflicts. Its successive transformations over the past century clearly reflect the shifts of power relations between capital and labor (Hayes, 2011; Stapleford, 2009), the uneven role and autonomy of experts over time and space (Neiburg, 2011), the highly variable influence of social reformers, trade unions, consumer associations and other civil society bodies (Hayes, 2011; Jany-Catrice, 2020; Neiburg, 2011). It also reveals the unequal but often key role weight of private players (Daniel and Lanata Briones, 2019; Stapleford, 2009) and the growing role of financial markets (Jany-Catrice, 2020).

Nevertheless, what role does the CPI play in fragmented economies, where self-subsistence persists and partly escapes the market due to self-consumption farming, hunting and gathering? How can we measure the cost of living in a context of chronic food insecurity and recurring famines, where it is rather the absence of goods, services and expenditure that are problematic and threaten the very reproduction of life? What place is there for national indicators when the State is failing, under an aid regime and when many policies are driven by international organizations? This article proposes some answers to these questions, using the example of Madagascar, a former French colony that combines chronic food insecurity, extreme poverty and a fragile state under an aid regime.

The Malagasy population's monetary standard of living has fallen steadily since independence (1960). After twenty years of "socialism" (1970-1990), the transition to a market economy failed to deliver the economic growth and social progress expected. Urban per capita consumption fell by half between 1962, the date of the first existing survey, and 2010 (Razafindrakoto et al., 2020: 14). Droughts, cyclones and endemic poverty cause repeated famines and chronic food insecurity, particularly in the South, nicknamed the land of "*kéré*" (famine). Monetization remains weak in this region. Coping with the cost of living means, above all, producing one's own food (rice, maize, cassava), having a small amount of livestock to sell in the event of a hard blow (Bidou and Droy, 2007; Blanarova et al., 2022), mobilizing social networks and negotiating eligibility for humanitarian aid, which has been massively present since the great famine of 1990-1992 (Gondard et al., 2021). On a national scale, Madagascar is characterized by high levels of aid in relation to public spending,¹ but relatively low in relation to other comparable countries (Naudet and Rua, 2018). Above all, the irregularity and "selectivity" of aid (i.e., conditional on "good" economic and political results, which the Malagasy state has often failed to achieve) have helped to shrink and weaken Malagasy state institutions over time (Razafindrakoto et al., 2020: 173–184). Since independence, political crises have succeeded one another, to the extent that they have been described as an "iron law" (Razafindrakoto et al., 2020: 3). In the aftermath of the Covid-19 pandemic crisis, UN agencies and humanitarian NGOs, mainly international, play a significant role (Berrou et al., 2020). They steered the timid beginnings of a social protection policy, promoting a pro "assistance" approach based on cash transfers, to the detriment of a universalist approach based on structural policies of access to rights. The Malagasy State is present via various ministries, but these mainly play the role of intermediaries, often in conflict with each other (Berrou et al., 2020).

Our analysis required in-depth statistical expertise, as a precise understanding of the technical underpinnings of price measurements is essential to identify and analyze their strategical implications properly. We also mobilized a political economy approach, which is a critical examination of the social and political construction of numerical data, recognizing that statistics are both tools of evidence and instruments of governance, shaped by societal beliefs, power dynamics, and historical contingencies (Labrousse, 2014). The article questions the making and use of indicators resorted to as an imperfect and unsatisfactory proxy to account

¹ In the 2000s, foreign aid accounted for 40% of government expenditure and two-thirds of revenue. World Bank data cited by (Razafindrakoto et al., 2020: 92).

for the cost of living, and shows that technical modalities reflect contrasting visions of what counts and who counts or not; and are also indicative of who governs and for what purpose. Roles were divided within the team of authors to promote both access to reliable sources and axiological neutrality: three authors had an insider experience of the study object and provided relevant information and a close understanding of the matter, while the two other authors had no involvement and emphasized a distanced and critical analysis. We therefore were able to draw on several sources: over twenty years' experience in the production of Malagasy statistics, including in collaboration with the Institut National de la Statistique de Madagascar (INSTAT) and a series of research-oriented household surveys (Razafindrakoto, and Roubaud), three months' participant observation in a humanitarian NGO as part of a doctoral thesis (Dazet), interviews with a dozen actors involved in the production and use of indicators related to the cost of living issue (INSTAT, Afristat, World Bank, AFD (the official French aid agency), NGOs) (Bédécarrats and Guérin).

Our analysis reveals three ways of grasping the cost of living: the National Statistical Institute's CPI, used for macroeconomic steering and negotiations with international donors; alternative analyses and sometimes surveys produced by research teams concerned with accounting for the persistence of poverty and inequality; indicators and surveys of humanitarian aid actors, aimed at steering aid distribution and focused on areas and populations at risk of famine.

This profusion of indicators, surveys and analyses – referred to here as "cost of living numbers", with little coordination between them, illustrates the different approaches to the cost of living. The latter can be understood as an average consumer price supposedly valid on a national scale (the consumer price index of the National Institute of Statistics); as the result of individual (or household) consumption behaviors that vary according to social groups, space and time (microeconomists specializing in poverty and inequality); or as a physiological minimum necessary to avoid malnutrition (humanitarian actors). The diversity of cost of living numbers also highlights the fragmentation and the incommensurability of the economic lives of the Malagasy population, in a context where the subsistence economy remains significant, combining material, social and symbolic values. Last and not least, the diversity of cost of living numbers illustrates a fragmented mode of government, in which NGOs and international organizations play a leading role (Lavigne Delville, 2017).

1. The CPI in Madagascar: An indispensable yet flawed official price tracking

The fitness of the CPI for the purpose of assessing the cost of living is a thorny issue among economists. Historians of economic thought have shown that the CPI emerged in North America and Europe between the end of the 19th century and the First World War as an attempt to assess the cost of living, primarily as a way to arbitrate wage disputes, and CPI calculation became from the outset one of the primary missions of national statistical offices (NSOs) (Goldberg and Moye, 1985: 34–38; Stapleford, 2009; Tooze, 2001). Interest in this aggregate grew even stronger during the 20th century, with the rise of Keynesian policies, which made lower unemployment conditional on higher inflation (through the price-wage loop), and then with the advent of neo-liberal approaches, which considered that low inflation was necessary to achieve sustained growth. Its central role in wage adjustment and key macroeconomic management led to the extension of the CPI by colonial empires to colonized territories, then to its improvement after independence.

Several features of Madagascar CPI show that its use for monitoring the cost of living has always been key. A price index restricted to European families dates back to 1949, and we had to wait until 1964 for an index specific to the Malagasy population living in the capital (Rakotomalala and Ravelosoa, 2000). Created in 1947, and having changed its name several times, the current Institut national de la statistique de Madagascar (INSTAT) has always included consumer price monitoring among its core functions (Conseil d'Etat, 1947, Article 28; Ministère de l'Economie et du Plan, 2017, Article 1). Until 1996, the INSTAT did not compute a single CPI, but instead kept on producing two separate ones: one index for "European and modern family consumption" and one for the "Malagasy or traditional family consumption" (Rakotomalala and Ravelosoa, 2000). This reflects the concern inherent to the colonial system that the remuneration of colonists and expatriates should be indexed appropriately, and the fact that local elites profoundly shifted their consumption patterns to adopt habits similar to the Europeans' (Tisseau, 2013). At the interface between the traditional and the colonial systems, plantation workers suffered steep stalls in their nominal wages and it is

only after the 1947 anti-colonial uprising (savagely repressed by the French) that worker unions started organizing and bargaining for nominal wages to follow the rise of staple prices (Waast, 1998).

Substantial changes in CPI methods were introduced in 2000 in the wake of the devaluation of the CFA Franc. The West African Economic and Monetary Union, France and the European Union feared that this measure would destabilize West African economies and societies and cause populations to "spill over" - in the words of an Afristat expert involved in the discussions at the time². It was then decided to improve price monitoring techniques, and these were transposed over the following decade to Central African countries and then to Madagascar. These improvements included collecting prices in several towns and no longer just in the capital, diversifying and stabilizing the products and outlets monitored, and adapting the techniques to the particularities of local economies, with two notable innovations. Making actual purchases aims to take into account the omnipresent haggling that makes posted or declared prices meaningless. Weighing products aimed to capture the real price of products whose units of measurement (a cup, a heap, a bucket, etc.) are not standardized.

Today, the CPI is calculated by taking 19,000 monthly price collections for 539 "product varieties" at 1,810 sales outlets (supermarkets, specialty stores, grocery stores and weekly markets) in the capital and six major provincial cities. In each locality, on average, three agents are in charge of visiting the sales outlets at recurring times and on recurring days to collect sales prices. Aggregate price variations are calculated by applying to the variation of each variety-product a weight corresponding to the sum of consumption of this variety-product measured by a household consumption benchmark survey. The resulting index is referred to as a base 100 for a reference year.

The International Monetary Fund (IMF) establishes standards and best practices to bolster the credibility and global comparability of CPIs produced by NSOs. The CPI frequently garners media attention (Graf, 2020a) and in Madagascar, our interviews confirmed that it is a common topic in everyday discussions about the cost of living, at least among urban wage workers. Yet, there is a prevailing skepticism among journalists and the general public regarding the reliability of the price index published by INSTAT. Many often lean on the prices of specific goods and services, such as rice, gasoline, and public transport fares, as more trustworthy indicators. This public skepticism towards the CPI is frequently dismissed by professional statisticians. In our interviews, several experts from INSTAT and Afristat or other macroeconomists spontaneously drew an analogy to the "perceived temperature," suggesting that the public's sense of rising living costs might be analogous to a "wind chill" effect - a perception not necessarily aligned with the actual reality and biased by the specificity of their position. Well beyond public opinion, criticism is also coming from microeconomists, especially those concerned with issues of poverty and inequality.

2. Household surveys, microeconomic analyses and the mirage of a national cost of living index

Microeconomists regularly highlight the inadequacy of national indices that are blind to the extreme heterogeneity of Madagascar's economy and society. Criticisms relate to aggregation methods, the composition of the 'basket', and the ways in which public services, the informal economy and self-consumption are taken into account. These criticisms are based on household surveys carried out by various research teams specializing in poverty issues, mostly foreign, sometimes in collaboration with Malagasy universities and INSTAT.

The issue of aggregation refers to the way in which weights are established between the goods and services, making up the consumer basket (the "product varieties" referred to in the previous paragraph). INSTAT, like all national statistical institutes (NSI), uses a method referred to as "plutocratic" (Prais, 1959). The CPI draws on the relative importance of each good and service in the total expenditure of surveyed households. In so doing, it predominantly reflects the lived reality of rich households, who account for a larger share of the total expenditure covered by the CPI. Conversely, the method minimizes the lived reality of the poor, who

² Afristat is an international institution created in 1996, bringing together 22 sub-Saharan African countries, including Madagascar. Its aim is to contribute to the development of economic, social and environmental statistics in its member states, and to strengthen their skills in this field.

weigh only in proportion to the amount of their – smaller – expenditure. There is an alternative and "democratic" approach, which consists in calculating a ratio of expenditure per good and service at household level, and then averaging these ratios to calculate the weights. This method equally represents the rich and the poor. In Tanzania, Mkenda and Ngasamiaku (2009) show that the "plutocratic" method tends to underestimate inflation, which turns out to be higher on products proportionally more consumed by the poor. The International Monetary Fund admits that the plutocratic approach remains the norm for NSOs, as it is better suited to generating a macroeconomic measure of inflation and deflators³ for national accounts (Graf, 2020a: 5). But this means that it does not really reflect the cost of living, even when aggregated nationally. In Madagascar, the CPI is restricted to urban areas, while 85% of the urban population belongs to the two wealthiest quintiles of the national population⁴. The plutocratic bias is therefore particularly acute.

The issue of composition refers to the contents of the consumer basket. The composition implies choices that cannot be neutral; they reflect spending that is deemed necessary and desirable or, on the contrary, problematic or undesirable. This in turn reflects both value judgments and political choices. The socio-history of the CPI shows the recurrent criticism of the omission to take into account certain expenses such as taxes, housing costs, so-called luxury expenses (including tobacco), etc. (Touchelay, 2014). Moreover, the composition of the basket is assumed to be relatively stable over time, and reference baskets are rarely updated: at the time of its revision in 1997, the INSTAT basket of goods was over 25 years old (Brilleau, 1996) and the one used in 2023 dates back from 2012. In line with a neoclassical economic understanding of behavior, these goods are assumed to reflect household "utility" (defined as the satisfaction derived from the consumption of a good or service), which is also assumed to be stable over time so that the basket reflects a constant standard of living. The underlying assumption is that of the "rational" consumer, who seeks to maximize her utility independently of constraints other than prices and incomes. However, we know that consumption is driven not only by the search for utility but also and sometimes above all by subsistence imperatives, social norms and imitation. The quality of goods may evolve more by constraint than by choice (Jany-Catrice, 2020), due to changes in product supply or social consumer expectations, which sometimes increase quickly.

The capacity of the CPI to adequately translate the cost of living depends on the representativeness of the spending patterns factored into the consumption basket and their weights, which are derived from household surveys (Graf, 2020b). The more frequent and reliable household surveys are, the better the CPI can reflect current population behaviors and living conditions. However, striking a balance between the quality of consumption data and the associated costs of regular, detailed surveys remains particularly challenging for an underfunded statistical apparatus such as the Malagasy one. Yet Madagascar faced significant changes in consumption patterns. For example, between the 1960s and 1990s, while the country was going through a severe economic recession, inflation, combined with an explosion of informal employment in services, led to a dramatic fall in real incomes (Ravelosoa and Roubaud, 1996). This in turn led to an explosion in the proportion of income spent on food (almost half in 1995, compared to 38% in 1961), and a substantial change in the type of food consumed. The share of cereals in the food budget increased on average from 28.4% to 46.4% between 1962 and 1995. During the same period, the share of meat fell from 40.1% to 24.2% (Ravelosoa and Roubaud, 1996). In other words, it is drastic changes in consumer behavior that made it possible to cope with a chronic crisis.

The CPI is supposed to reflect the price households must pay to maintain constant living conditions. In essence, it is not intended to include public services, which are considered free. However, the omission of public services poses three particularly acute problems in Madagascar. The use of public services is a first indicator of their quality, yet the rate of use of health and education services has fallen sharply in Madagascar

³ A deflator is a value used to adjust economic indicators to account for changes in price levels.

⁴ Data corresponding to the standard of living quintile estimated by working people in the DHS 2021 survey, on page https://www.statcompiler.com/fr/?cc=MD&ucc=&ic=HC_WIXQ_P_LOW,HC_WIXQ_P_2ND,HC_WIXQ_P_MID,HC_WIXQ_P_4TH,HC_WIXQ_P_HGH consulted on 25/06/2023.

over the last few decades⁵. Next comes the fact that public servants often demand payments from the users for services that are supposedly free, which is well documented through specific localized surveys (Garchitorea et al., 2017; Honda et al., 2011; Lesne, 2013). But national household surveys collect this information only partially and without regular follow-up over time⁶. By way of example, health represents 1 % of expenditure in the Malagasy CPI basket, whereas according to the World Health Organization (WHO)'s sector accounts, in 2020, 34% of the country's health expenditures were "out-of-pocket expenditure" (i.e., paid by households)⁷. The third problem relates to the travel and waiting times required to access public services; these represent significant "opportunity costs", which may change over time depending on the State of public administrations, roads or climatic variations (Evans et al., 2022).

The partial inclusion of the informal sector is an additional challenge and undermines the ability of CPI to properly aggregate prices at national and macroeconomic levels. Price collection is limited to weekly market outlets in major cities, obscuring a myriad of other outlets. The latest available data, in 2012, estimated the informal economy at 36% of non-farm market GDP and 93% of the working population (INSTAT, 2013). Faly Rakotomanana, a statistician at INSTAT (whom we interviewed for this paper) points out in his doctoral thesis (2011) the various biases related to the low coverage by the CPI of the informal economy. Based on an extensive survey, he shows that, in a period when the CPI increased by 65%, supply prices in the informal sector rose by 75% to 85%. Not only is the CPI biased in favor of the formal sector, but the calculation of macroeconomic aggregates is also biased. Thus, applying the classical CPI to the share of GDP devoted to the informal sector leads to an overestimation of the latter's volumes by 10 to 20%, or even by almost 40% when it comes to estimating the added value of informal businesses.

Self-consumption is another major issue that the CPI struggles to include. In subsistence economies, which persist in many parts of the world, self-consumption accounts for a large proportion of consumption. This is clearly the case in some parts of Madagascar. Household surveys measure self-consumption by asking each household how much of their agricultural and livestock production activity they consume. A 1994 national household survey estimated self-consumed rice production at 75% (Roubaud, 1997: 48). According to a regional 2015-2016 survey, depending on the time of year, the quantity of rice self-consumed each month varied between 18% and 98% (Bouquet et al., 2018). This can then be translated into monetary equivalents by comparing with "market" prices in order to obtain an estimate of the population's poverty levels and standard of living.

It is worth noting that what microeconomists describe as self-consumption can also obey a long-term logic of sharing and giving, where value and "utility" are primarily social and symbolic. This is typically the case in southern Madagascar with zebus and rice. While Zebu breeding is considered by economists to be the main savings strategy, zebus are primarily intended as ceremonial gifts at funerals, and the animals are only sold in the event of prolonged food shortages (Bidou and Droy, 2007). In the same vein, part of the self-consumed rice is distributed as gifts. This includes gifts to ancestors during "turning over the dead" funeral ceremonies. It also includes gifts to relatives during other types of ceremonies, gifts to school teachers, or to farm workers. Long documented by anthropologists and a few economists, these practices seem incommensurable and are therefore ignored. Yet they are incompressible expenses that enable people to lead a life "worth living"

⁵ For example, the net primary school attendance rate fell from 77.9% in 2008 to 73.3% in 2021. Over the same period, among prenatal medical consultations, the share of doctor-led consultations fell from 26.2% to 12.8% over the same period. Statistics from demographic and health surveys carried out in the corresponding years, available at <https://dhsprogram.com/data/statcompiler.cfm> consulted on 13/06/2023.

⁶ According to questionnaires and reports available at <https://catalog.ihnsn.org> (consulted on 06/25/2023), expenditure on education and illness/injury is well collected and analyzed in periodic household surveys (1999, 2005, 2010 and MDG survey 2012), but without inter-annual comparisons. The LSMS survey carried out by the World Bank in Antananarivo in 2016 does not take into account school fees, which are nonetheless key according to previous surveys. None of the surveys mentioned here explicitly includes expenses related to pregnancy and childbirth follow-up, while they represent significant amounts of household budgets (Honda et al., 2011).

⁷ Madagascar, World Health Organization Global Health Expenditure database, available at <https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS?locations=MG>, consulted on 14/06/2023.

(Narotzky and Besnier, 2014), both for reasons of dignity and to maintain a material network of protection (Blanarova et al., 2022; Gondard et al., 2021). They are, therefore, at the heart of a substantive vision of the cost of living while being difficult to capture quantitatively.

Ultimately, and despite attempts to adapt it to the Malagasy context, the CPI reflects a partial reality, biased in favor of a formal economy, a well-off urban population and based on outdated consumption behavior, ignoring the failure and degradation of public services and the various costs (additional price, loss of “utility” or well-being, loss of time) that this implies for the population. The statisticians at INSTAT and Afristat are not fooled and readily admit the urban and formal bias. This was clear in the interviews conducted with them. However, given their budgetary constraints, they do not see any way of overcoming these limits, since multiplying the number of collection points would necessarily mean sacrificing quality. In other words, it seems that CPI experts prefer rigor on a small portion of Malagasy reality to an approximation of a more representative reality. Given INSTAT's current financial difficulties, one might even wonder what remains of the rigor to which its staff are committed. After Cameroon, Madagascar is the country with the highest number of graduates from the CESD⁸, the benchmark training course in public statistics (Charoy and Diop, 2000). However, INSTAT is suffering from a severe funding crisis: in 2023, the team in charge of calculating the CPI has around thirty employees, including three who centralize, calculate and disseminate the results. This is very little compared with other countries or even with local NGOs (see below). Due to a lack of funding, the agents have officially stopped buying the monitored products on the markets since 2016, which in turn degrades the quality of the data collected. Keen to produce a quality “public good,” as one of them told us, some use their own per diems to buy the products most subject to negotiation or non-standardized units of measurement. They remain convinced that the CPI, despite its imperfections, remains the least bad macroeconomic price indicator. Implicitly, the economy that “counts” is the urban and formal economy, as if the rest were insignificant or doomed to disappear in the long term.

Far beyond the cost of living, the CPI is supposed to reflect the economy's State of health and stability and plays a strategic negotiating role for multiple players: unions for wages (for formal jobs), with regular challenges on the plutocratic side of the CPI, but without, to our knowledge, any alternative indicators other than the price of rice; landlords to adjust rents; banks and the central bank for their interest rates; IMF, World Bank and bilateral cooperation for loans and aid granted to the Malagasy State. Here again, our interviews show that the experts from these institutions, or at least some of them, are well aware of the CPI's limitations but lack the means and the time to do better. As an executive from a bilateral aid organization told us, “To save time, people quickly forget that the figures are not of good quality; it is at the time of social unrest that the quality of the figures will be questioned”.

3. Humanitarian aid: alternative measurements to combat famine

Analyses and debates dealing with the cost of living most often omit the humanitarian perspective. Yet in contexts of high food insecurity, the two issues are closely linked. Today, quantitative expertise is essential in the humanitarian world, both to prove its legitimacy and its impartiality (Glasman, 2019). Madagascar is no exception, and the quantitative expertise deployed by humanitarian actors includes different kinds of price surveys. These actors include UN agencies (such as the World Food Programme, FAO, Unicef and WHO), NGOs, public administrations, sometimes including INSTAT, and Malagasy and international research teams, including the teams of microeconomists mentioned earlier.

Although the aim of these surveys may seem close to or complementary to that of the CPI, they are, in fact, very different in terms of the meaning of cost of living, methodological rigor, and the operational and political use of the data produced. Unlike the INSTAT CPI experts (and microeconomists), price monitoring by humanitarian actors is not intended to be representative and instead focuses on a particular population segment deemed to be at risk of food insecurity. Humanitarian actors focus both on the poorest populations and on localized markets, with the idea that there is not one national market but rather a multiplicity of fragmented local markets. As with microeconomists, the production of data and indicators aims at gaining a better understanding of behaviors, but with a focus on *eating* habits and a clear operational objective: in the

⁸ European training center for economic statisticians from developing countries.

short term, the purpose is to identify and target the segments of the population most at risk, and in the medium and long term, to anticipate crises and avoid or correct the malfunctions that are supposed to cause food insecurity.

In the history of food aid, nutritional objectives - feeding populations - and structural objectives - acting on the roots of hunger - were often dissociated, pitting "emergency" and "development" actors against each other. Today, this opposition has become blurred, giving way to a relative convergence in the way actors think about and combat food insecurity (which obviously does not exclude divergences between actors on other aspects), by placing it within a broader vision of assistance-type social protection. In short, the aim is to feed populations while correcting behaviors deemed "inappropriate," correcting market "imperfections" and avoiding "distorting" them (in line with long-standing concerns of international organizations (Razafindrakoto et al., 2020: Chap. 1)⁹). This fear of distortion raises the following questions for humanitarian actors: Should we give in kind or in cash? What to give, or how much? If in kind, should we buy locally or not? Should we subsidize prices or set minimum prices?

Humanitarian actors carry out numerous surveys on undernutrition (anthropometric observations aimed at objectively measuring the degree of undernutrition – height, weight, brachial perimeter) and food insecurity. In line with the profusion of international standards on this matter (Glasman, 2019; Leroy et al., 2015), we find a wide range of methods and indicators. Some of these surveys track the price of the basket of goods over time, but the selection of products differs from that of the CPI and is primarily based on nutritional requirements in terms of energy (2100 kcal per person per day) and nutrients¹⁰. Faced with INSTAT's inability to provide indicators of rural price trends disaggregated by region, humanitarian actors collect prices themselves, both to monitor the cost of the basket of goods and to avoid (or limit) market "distortions".

Since 2014, the Famine Early Warning Systems Network (Fewsnet), initially funded by the US Agency for International Development (USAID), has been responsible for monitoring prices on a monthly basis, albeit with varying resources, rigor and frequency depending on funding opportunities from international donors¹¹. In the absence of a permanent, stabilized monitoring system, what we have instead is a diversity of scattered initiatives, which it would be pointless to describe precisely and exhaustively, given their fluctuation over time. For the southern region, the World Food Programme (WFP) monthly price bulletin for 2022 includes six types of foodstuff (local rice, imported rice, cassava, corn, and imported oil). The program collects prices twice a month in 59 markets by telephone. The high variability of prices between markets confirm the value of micro-local price surveys. The WFP bulletin of December 2022, for instance, indicates that rice prices vary by 40% between markets. A one-off ACF/IRD/CIRAD survey (Blanarova et al., 2022) indicates similar spatial variability. The SISAV (Food Security and Vulnerability Information System), promoted by the FAO, also includes regular local market surveys carried out every two weeks by local community representatives, supplemented monthly by surveys at district level by the Agricultural Service Centers and then at regional level by FAO agents. Among the 98 indicators collected, several relate to food prices, availability and accessibility (stock levels, quantities on the market, origin). However, the methods deployed prevent any comparison with the CPI: the teams do not have the means to purchase or weigh foodstuffs. Some teams specify in their method that they exclude from their list foods whose sales units are too heterogeneous, but

⁹ Market distortions" include, for example, the resale of distributed goods, speculation by traders (who wait for projects to start before raising their prices), lower local prices when too much cash is injected, and so on.

¹⁰ For example, in the WFP monthly price statement, we read: "The standard food basket for one person per day is made up of 450g of cereals (local rice or imported rice, if available), 100g of legumes (beans/nebeans), 25g of vegetable oil and 5g of salt to meet the 2100 Kcal per day. In case of lack of local rice, imported rice is considered if available".

¹¹ Fewsnet was set up in the 1980s with the support of the U.S. government and has been implemented in various parts of the world. In Madagascar today, Fewsnet is managed by the Malagasy government (Bureau National de Gestion des Risques et des Catastrophes, BNGRC), whose role is to coordinate UN agencies (World Food Plan (WFP), FAO, OCHA, UNDP, UNICEF) and NGOs (ACF, CRS, MEDAIR, MDM, WHH, etc.).

this seems to be far from being the rule.

Some NGOs also carry out their own price surveys, devoting considerable human and financial resources to the task. An NGO like Catholic Relief Service (CRS), for example, for its actions in the South region, has a team of almost the same size as INSTAT's IPC team in 2023: a field team of 23 people dedicated entirely to crisscrossing markets to collect weekly price and availability data on essential foodstuffs, plus a team manager and data analysts. It is also interesting to note that the list of food products differs from that used by the WFP¹². Those data provide near-real-time information on price dynamics and foodstuff availability. The team regularly revises the list of goods according to field observations, which probably explains the difference with the WFP, which is stable over time to enable comparisons.

There are also occasional price surveys designed to measure the “performance” or “functionality” of markets, either qualitatively or by means of scores (e.g. the “Market Functionality Index”). Basic market “functionality” criteria include product diversity and availability, as well as price variability (seasonal variation and spatial diversity), to which other criteria, such as competition, quality of goods, etc. can be added.

The production of surveys – including price surveys –, data and indicators is both abundant and impressive in terms of the degree of technicality (even if far removed from the “best practices” usually used for the CPI) and dedicated resources. For the year 2017-2018, there are no less than three periodic bulletins tracing price trends, along with market analysis and sometimes market forecasts (Fewsnet Food Security Outlook, WFP Monthly Bulletins, SISAV Bi-monthly Bulletins). In addition, there are other bulletins focusing on food insecurity, again combining strategic analysis and forecasting, classifying territories and populations in terms of severity of food insecurity and urgency of action. In addition to first-hand data, modeling and prospecting include secondary data such as satellite tracking of rainfall and harvests, macro data on import/export trends, exchange rates and growth, etc.

It is beyond the scope of this paper to examine in detail the actual use of this set of price indicators. We shall emphasize their disparate, scattered and sometimes contradictory dimensions. The Rice Observatory, a governmental entity gathering stakeholders and dedicated to ensuring better regulation of the rice market, has for several years communicated its price reporting to the Fewsnet network for its monthly price bulletins. These efforts at coordination do not prevent ongoing controversies over numbers. “Everyone pushes for their own data”, said a representative of the government's decentralized services, lamenting the profusion of data and the disdain for his own department's data. Although he was referring to a related issue, that of water, his testimony reflects a reality repeated many times over the course of participant observation carried out by one of us within a humanitarian NGO. Building and disseminating one's own data (even within the same organization and its various departments) is an integral part of the positioning strategies of humanitarian actors (we will come back to this in the conclusion). Furthermore, the volatility of funding prevents any long-term initiatives. The Rice Observatory, which had acquired legitimacy over time due to the quality of its price surveys, stopped its activities for lack of funding. We are unaware of the price sources now used by Fewsnet, yet their role is critical since the Fewsnet indices are used to negotiate the amounts of cash transfer programs. Populations, public authorities and humanitarian actors alike widely criticized the amounts set in the pre-covid period, reflecting an apparent lack of legitimacy of the numbers in use (Lallau and Gondard-Delcroix, 2020).

One may wonder how far the making of numbers related to the cost of living includes people's voice. Humanitarian initiatives include “participatory” approaches designed to gather perceptions of the local population. These methods often highlight the social and cultural dimensions of food. However, when it comes to taking action or producing data, these are more often than not set aside because of emergency constraints and the difficulty of translating such dimensions into numbers. Local populations most often

¹² Commodities monitored by CRS include Dolique, Maize, Niebe, imported rice, local rice, sorghum, cattle, goat, kid, chicken, water jerrican, manioc, sweet potato and oil. Commodities monitored by WFP: local rice, imported rice, maize, cassava, cowpea and imported oil. Commodities monitored by Fewsnet include local rice, imported rice, maize and cassava.

express themselves indirectly, by transgressing humanitarian policies and interventions according to their own standards of justice (Olivier de Sardan, 2021). In southern Madagascar, positions of power related to lineage, ethnicity, social class or gender commonly undermine the population coverage targets and eligibility thresholds humanitarian experts design through meticulous work on numbers (Gondard et al., 2021). Transgressive strategies also include challenging the units of analysis used for targeting, like the Fokontany (administrative subdivision on a village scale). For example, at an internal NGO seminar, an NGO representative mentioned that the number of Fokontany in their intervention zone multiplied by more than three in three years...¹³ According to NGO's staff, the feeling of exclusion from assistance programs would be the main explanatory factor, along with famine-related migrations and internal conflicts. People want their own administrative entity and, in a way, their own numbers.

Conclusion

The aim of this paper was to trace the various forms of expertise that contribute to the production of cost of living numbers. Each of these forms of expertise has its own *raison d'être*. Their promoters are rarely fooled by the weaknesses and limitations of their numbers, but they have a mission to accomplish and objectives to reach. They measure what they want to measure and what they can measure. As with any type of number, the numbers they produce serve as much to explain reality as to make it legible and to shape politics (Iversen et al., 2023; Naudet, 2000).

The socio-history of statistical indicators shows the extent to which they are co-constitutive of states, including post-colonial ones, while at the same time giving rise to various forms of appropriation and transgression. This includes, for example, tactics of cunning, concealment and negotiation, as in the Mauritanian case (Samuel, 2011). This includes using and distorting official statistics to stage an idealized display of the actual situation, as in the case of the so-called "Tunisian miracle" (Hibou, 2011). In the case of Madagascar, characterized by the collapse of public bodies, including INSTAT, and repeated famines, the profusion of indicators, surveys and analyses is both shaped by and constitutive of a fragmented mode of government (Lavigne Delville, 2017). The State, fragmented between several uncoordinated and sometimes conflicting departments and ministries, cohabits with various research teams and a myriad of humanitarian actors (Berrou et al., 2020).

In an analysis carried out in Niger following the 2005 famine, historian and political scientist Vincent Bonnacase already highlighted the diversity of surveys and indicators (then limited to nutritional surveys) and their often contradictory results (Bonnacase, 2012). He argued that there was nothing surprising about the uncertain, unstable and contradictory nature of the data: it simply reflected a specific use of data, less as a guide for action and decision-making than as a tool for negotiation between the multiple players involved in food and poverty eradication policies. His analysis is certainly valid for the Malagasy context. Nearly twenty years later, evidence-based policy has become a watchword (Bédécarrats et al., 2020; Naudet, 2006) while austerity policies have stripped the National Statistical Institutes, and the Malagasy case is a sad example of this. Not surprisingly, humanitarian actors devote a substantial proportion of their human and financial resources to data production and dissemination. The lack of legitimacy of INSTAT data, which reflects and crystallizes the weak legitimacy of the Malagasy State, authorizes and encourages aid agencies to produce their own data and, even more so, to set up complex data collection systems, some of which rival INSTAT's price surveys, at least in terms of resources, while responding to radically different objectives and methods. The resources injected into these systems, which evolve according to projects and funding, must be weighed against the crying lack of resources allocated to INSTAT, which is itself dependent on international funding.

Crudely affected by the structural adjustment plans of the 1990s and the associated budget cuts, INSTAT reflects a broader African reality, where unreliable international databases are tending to replace National Statistical Institutes, many of which are now languishing in the doldrums (Jerven, 2013; Naudet, 2000). Figures are lacking, but many qualified statisticians are leaving the Malagasy civil service for an international career. Lack of funding, legitimacy and attractiveness reinforce each other in a vicious circle that seems

¹³ It rose from 311 in 2017 (feasibility study), to 542 in 2018 (project launch) and to 1054 in 2020.

difficult to break. Following the anthropologist David Mosse (Mosse, 2004), one might wonder whether the production of data by NGOs and international organizations (sometimes with the support of researchers), although potentially useful in the short term to improve the distribution of aid, serves above all in the long term to "cultivate" the humanitarian and development world: following a self-poietic dynamic, the data produced justifies both the urgency to act and the indispensability of humanitarian and development actors.

The profusion of indicators and analyses also reflects the economic and social fragmentation of the country. The CPI is supposedly 'national', but represents only a narrow fraction of the population and the economy (urban and market-based). There is not one economy but a plurality of separate and sometimes incommensurable economies. We have seen the efforts made by research teams and humanitarian actors, sometimes in isolation, sometimes in collaboration, to gain a better understanding of this plurality. However, these efforts hardly account for the specificities of the cost of living in a context where the informal economy, self-consumption, social and symbolic expenditure, hunting and gathering represent a significant part of livelihoods and of a life worth living.

With the rise of nature conservation policies, these issues can no longer be ignored. In Madagascar, the proportion of the national territory dedicated to protected areas was 3% in 2003, 15% in 2017 and the target is 30% in 2030. This increase directly curtails the traditional means of self-sustenance for residents. A considerable segment of the population has historically depended on these lands for agricultural activities, hunting, and the use of pivotal resources such as wood, water, and medicinal plants (Amelot et al., 2011). However, extant mechanisms to compensate villagers for the access restrictions are often found to be inadequate (Bertrand et al., 2014; Rivière, 2017). Most statistical surveys struggle to apprehend self-consumption (including those mentioned earlier in the paper). They often restrict their focus on farming, neglecting substantial contributions from hunting and gathering. Specific surveys estimate that in certain conservation areas, the economic value derived from hunting equates to up to 57% of a household's monetary income (Golden et al., 2014). Consequently, as conservation initiatives expand, numerous households confront escalating living costs due to reduced access to these vital resources. This underscores the necessity to refine cost of living estimation methodologies to more accurately incorporate the human-environment relationship and account for non-market consumption behaviors, ensuring a more comprehensive representation of the economic realities faced by rural communities. This would also imply exploring incommensurable aspects such as the loss of a territory to which one belongs and is attached, the loss of interdependent bonds that forge livelihoods, but also identities and ways of inhabiting the world and the resulting feelings of dispossession and acculturation.

CPI experts may argue that adequately assessing the cost of living is too complicated and costly... which will encourage researchers, NGOs and international organizations to collect new data to account for the loss of well-being resulting from conservation policies. The cost of an indicator that adequately measures diversity and fluctuations in the cost of living is a recurring (and legitimate) argument (Council, 2002; Deaton, 1998). But the overall cost of fragmented and dispersed alternative initiatives needs to be considered. Above all, one wonders who ultimately pays the price of approximate and biased price indices. Clearly, it is the poorest people who lack the appropriate numbers to make their situation acknowledged and their voices heard.

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