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EXPLAINING FAMINES: A CRITICAL REVIEW OF MAIN APPROACHES AND FURTHER CAUSAL FACTORS

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CEPS/Instead

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Abstract

Famines are not a new element in human experience. All along people have always suffered from starvation, but this was mainly linked to the general poor conditions in which people lived. Nowadays, famines are no more acceptable because of different reasons, mainly since mankind has finally reached the ability to produce enough food for all its members. Moreover, you have only to think that at the same time as the poorest part and the vast majority of the world starves, the richest ones suffer over-feeding. Many different theories have been proposed to explain why famines happen: from Malthus's theory to food availability and intervention decline; from Sen's entitlement failure to complex humanitarian and political emergencies. Each of them points out particular aspects in order to understand why famines happen, trying to find out what to do in order to prevent these shocking events. Several international institutions and agencies, non governmental organizations and governments, are strongly involved in trying to solve this question. Some steps forward have been made, but in many countries, especially in sub Saharan Africa and South Asia, people still suffer famines. In order to contribute to improve the models reviewed in this paper, three different cases of famine in Malawi, Zambia and Zimbabwe in 2002 are considered. Existing models result useful to interpret famines, but on their own they can not fully explain modern famines. Then a further proposal considering market failures is advanced. It seems much more plausible that the interaction between different models can better contribute to the explanation and the prevention of new famines.

Keywords: famine approaches, food security policies, market failures.

JEL Classification: F52, I3, I18, O19, O55, Q18.

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1 Introduction

Everybody knows that people die from starvation and famine in different parts of the world, but very often this “notion” remains purely an abstract information for the well-nourished and healthy world. Dwelling upon the estimates of this huge phenomenon is astonishing. The present worldwide population comes to 6,5 billion but more than 70 million people died from famines during the 20th century.

Nowadays, at the start of the 21st century, famine still persists. It remains endemic in the Horn of Africa and it seems to be spreading to parts of Africa that were previously famine-free. This data is partial because it is very difficult to make precise estimates of famine death because of definitional and measurement difficulties and inadequate data. Problems in estimating famine mortality arise for numerous reasons. Firstly, in the absence of comprehensive records of births and deaths in poor countries, even basic demographic statistics are often unreliable or even unavailable. Moreover, estimating excess mortality during a famine requires scaling up mortality rates in monitored population groups to the national population with all relative methodological problems. Finally, it should be noted that mortality does not capture the full demographic impact of famine, which, for example, involve also lost births due to fertility decline. Food insecurity not only leads to human suffering, but also to substantial productivity losses and to a misallocation of scarce resources due to diminished work performance, lowered cognitive ability and school performance, and inefficient or ineffective income-earning decisions. Efforts to become food secure may also exact a heavy toll from regional environment and natural resources as well as from households if, for example, most of their income and time is spent on obtaining food.

In any case, it is wrong to think that people die for starvation or famine in the same way, anywhere, since dimensions, causes and consequences of food insecurity differ widely from country to country, and even within the same country (De Waal, A., 1989). That is to say that there is no general theory explaining famines, but each famine should be considered specifically.

But if the twentieth century was the historical moment when the technical capacity to eradicate famine was first achieved, and famine was seemingly ending in many historically famine-prone countries - Russia, China, India, Bangladesh (Devereux, S., 2002), why do people still die from famine?

These observations and questions make us much more involved in the analysis of famine, suggesting us to explore new paths in order to eradicate it.

Although attempts to explain why famines occur go back much further than Malthus in the late 1700s, at the beginning of the 21st century there remains a lack of consensus among analysts as to why famines happen. One reason for this is suggested to be disciplinary specialisation: “William

Dando, a geographer, wrote *The Geography of Famine* (1980), Amartya Sen, a liberal economist, focused on the links between *Poverty and Famines* (1981), Martin Ravallion, a World Bank economist, argues for market failure in *Markets and Famines* (1987), Alex de Waal, a human rights activist, blames governments and the international community in *Famine Crimes* (1998)¹. Actually, there is a growing consensus on the idea that famines are too complicated to be explained by a single factor or a single academic discipline, and many attempts have been proposed in order to overcome this fragmentation. The object of this work is to review the main theories suggested to explain famines and trying to find out hints in order to deal with contemporary famines.

The paper is structured as follows. The first section deals with the food security notion and the different definitions of famines. Following, the main approaches to explain famines are presented in third section. This section focuses mainly on Malthus's theory, food availability decline, food intervention decline, Sen's entitlement failure, complex humanitarian emergencies and complex political emergencies. Finally, the fourth section focuses on the description of three cases of famine which interested South-Eastern Africa in 2002. The aim of this section is to try to point out new causal factors which can help to explain modern famines. Countries analyzed are Malawi, Zambia and Zimbabwe, three major nations of the interested region.

2 Conceptualizing food security and famines

In order to review the history of 20th century famines, it is useful to go along the footsteps of those social scientists dealing with this phenomenon. Devereux notes that most definitions characterize famine as “a discrete event that is triggered by food shortage and results in mass death by starvation.”² Famine theories evolve out a long period of intellectual processing under different paradigms which influenced time by time proposed analysis and policies. In an historical perspective, a major role has been played by influential views of Thomas Malthus, even if in 1980s a series of studies challenged some of his assumptions. It is the case of Amartya Sen³, which elaborated an alternative approach to famine that described food crises as failures of “entitlements”. In so doing, he shifted the analysis from an exclusive focus on food shortages to an emphasis on people's inability to access food, whether or not a shortage was a contributing factor. In a series of articles critiquing Sen's approach, Rangasami went further, arguing that “famine

¹J. Edkins, *Whose hunger? Concepts of famine, practices of aid*, Minneapolis: University of Minnesota Press, 2000, p. 9.

²S. Devereux, *Famine in the twentieth century*, IDS Working Paper 105, Brighton: Institute of Development Studies, 2000, p. 4.

³A.K. Sen, *Poverty and Famines: An essay on entitlement and Deprivation*, Oxford: Clarendon Press, 1981

should be viewed as a process with distinct phases, rather than an isolated, aberrant event”⁴. In another work, Alex de Waal⁵ contested the definitional association between famine and mass death by starvation.

While these studies challenged western conceptualisations of famine, there was an increasing recognition of the role of conflicts in newly emerging crises in the 1990s: for the first time there has been the clear perception that the very nature of famine had changed, from essentially “natural” to predominantly “political” phenomena. A number of studies of the newly identified “complex political emergencies” (CPEs), emphasized the socio-political dimensions of famine, demonstrating how some groups actually garnered benefits from the creation and perpetuation of famine conditions (Edkins, 2000). Devereux argues that two significant shifts characterised 20th century famines over famines of previous eras. First, in terms of causality they were immensely more complex than ever before, when famines were interpreted as natural disasters, being superseded by complex negative synergies between natural triggers and political culpability. Second, during the latter part of the century, food crises became concentrated in sub-Saharan Africa, where interactions between drought and civil war, in particular, became the dominant causal trigger of famine.

Moreover, it should be noted that the persistence of hunger in many countries in the contemporary world is related not merely to a general lack of affluence, but also to substantial inequalities within the society. In fact, the dependence of one group’s ability to command food on its relative position and comparative economic power *vis-à-vis* other groups can be especially important in a market economy.

Furthermore, recent times have witnessed not only a rapid expansion of market exchange, but also significant developments in the conditions of “exchange with nature”, i.e. production. On the one hand, advances in agricultural technology have increased the potential for improving living conditions in rural areas. On the other hand, environmental degradation poses a grave threat to the livelihood of the rural population in many countries.

Finally, the state has got an important role in combating world hunger. Anyway, we should remember that: “hunger is a common predicament, but this does not indicate the existence of one shared cause”⁶.

In order to come to grips with the problem of hunger in the modern world, it is necessary to get a clear understanding of the different issues that constitute it. The distinction between the problem of food security and that of famine is particularly important.

⁴quoted in P. Howe, Reconsidering “Famine”, IDS Bulletin, 2002, vol.33, n. 4

⁵A. de Waal, Famine that kills, Darfur, Sudan, 1984 - 85, Oxford: Clarendon Press, 1989

⁶J. Drèze and A.K. Sen, Hunger and public action, Oxford: Clarendon Press, 1989

2.1 Assessing food security and famine

Food security is a widely debated and much-confused issue. This term became prominent in the 1970s and has been a topic of considerable attention since then: it is enough to say that thirty definitions of it have been identified by Maxwell and Frankenberger (1992). One of the most influential definitions of food security was identified by the World Food Summit in 1996 which defined it as the “access by all people at all times to sufficient, safe and nutritious foods to meet their dietary needs and food preferences for an active healthy life”⁷. However, access to the needed food is a necessary but not sufficient condition for a healthy life. A number of other factors also come into play, such as the health and sanitation environment and household or public capacity to care for vulnerable members of society.

In theory, two types of household food insecurity - chronic and transitory - can be distinguished, but in reality they are closely intertwined. Chronic food insecurity is a persistent and inadequate diet caused by the continual inability of households to acquire needed food and it is rooted in poverty. Transitory food insecurity is a temporary decline in household’s access to needed food instead, due to factors such as instability in food prices, production or incomes (World Food Summit, 1996). Transitory food insecurity can be further divided into temporary food insecurity and cyclical or seasonal food insecurity. Temporary food insecurity occurs when sudden and unpredictable shocks (such as drought or epidemics) affect a household’s entitlement. Seasonal food insecurity occurs when there is a regular pattern of inadequate access to food. Transitory food insecurity may lead to chronic food insecurity, depending on how severe it is and how frequently it occurs. In its worst form, transitory food insecurity can result in famine (Thomson and Metz, 1999).

There have been numerous attempts to establish what is meant by famine and to determine which causes might give rise to it. Many authors consider the search for an adequate definition an essential preliminary to both theoretical analysis and practical action. In his book focused on this topic, *Theories of Famine* (1993), Stephen Devereux regards as important “to establish a rigorous definition of the phenomenon under study”, and to avoid “weak or misleading definitions that reflect an implicit theory which is deficient or incorrect.” Moreover, “for diagnostic purposes - a famine has to be identified as such before institutional responses are triggered.”⁸

Taking into account the Malthusian approach, famines are seen as a question of excess of population over the means of subsistence. It is an instance where population growth has outstripped food production. Massive starvation almost inevitably follows until the balance is restored.

⁷Declaration on World Food Security (World Food Summit, Rome, 1996)

⁸S. Devereux, *Theories of Famine*, Hemel Hempstead, England: Harvester Wheatsheaf, 1993, p. 9

On another side, Martin Ravallion defines famine as a widespread, unusually life-threatening, hunger. In fact, he says that “a geographic area experiences famine when unusually high mortality risk is associated with an unusually severe threat to the food consumption of at least some people in the area.”⁹ In this way Ravallion points out two aspects of famines:

1. famines are not strictly linked to a contraction in the aggregate availability of food;
2. people who experience a threat to their food consumption not necessarily have to face death too.

Considering the relationship between availability of food and famines, Amartya K. Sen argues that starvation is not necessarily linked to a decline in food availability. What is crucial in Sen’s view is whether particular individuals or households have access to sufficient food. “Starvation is the characteristic of some people not having enough food to eat. It is not the characteristic of there not being not enough food to eat.”¹⁰ In other words according to Sen starvation was not about food as a commodity, but about the relationship of people to that commodity.

Famine is defined by Sen “a particularly virulent manifestation of starvation causing widespread death.”¹¹ Sen’s work was an important move in three respects. First, it stressed the need to examine each famine in its own particularity because it does not exist a general theory of famine but a framework in which individual famines could be analysed. Second, it involved moving from the examination of overall “populations” in the malthusian mode, to the study of specific “persons” or households. Finally, it focused attention on relationships. In order to understand starvation it is necessary to look at the structure of ownership relations and other forms of entitlement relations within any particular society (Devereux, S., 1993).

But Rangasami disagrees with this definition on two grounds. First, she argues that mortality is not a necessary condition of famine but only its biological culmination. Instead, she suggests that famine should be seen as a protracted political-social-economic process of oppression comprising three stages: dearth, famishment and mortality. If the process is halted before people die, it is nonetheless still a famine. Second, famine cannot be defined solely with reference to the victims: in this process “benefits accrue to one section of the community while, losses flow to the other.”¹² In this way, just studying the responses or coping strategies of victims, while paying

⁹M. Ravallion, Famines and economics, *Journal of Economic Literature*, Vol. XXXV (September 1997), pp. 1205 - 1242.

¹⁰A.K. Sen, *Poverty and famines: an essay on entitlements and deprivation*, Oxford: Clarendon Press, 1981.

¹¹A.K. Sen. *ibidem*, p. 40.

¹²quoted in J. Edkins, Mass Starvations and the limitations of famine theorising, *IDS Bulletin*, Vol. 33, n. 4, 2002

no attention to the actions of the rest of the community, we are at risk of missing what is going on.

Finally, according to Alex de Waal famine is a process: he examined the strategies employed by the people suffering from famine at different stages: he stated that famines could be better understood if we discard the “traditional” notion of famine, by adopting the concepts used by the people who have experience of suffering famines instead.

Concluding, modern famines can be characterized as short-term dramatic events caused by complex processes. Sen provided a very interesting framework to analyse a famine, but this analysis needs to be combined by considering recent economic, social and political evolutions. “Famines always had political dimensions, but most were triggered by natural disasters that operated in contexts where local economies were weak and the political will and logistical capacity to intervene were lacking”¹³

3 Famine mortality models

Since famine is by definition a food crisis, the conventional wisdom is that people who die during famines, die of starvation. It is certainly true that the risk of dying rises steeply as nutrition declines. But mortality in famines reflects complex interactions between malnutrition and infection. Nevertheless, Cornia points out that after a famine, mortality rates return quickly to their pre-crisis level and have a modest impact on long-term mortality trends (Cornia and Paniccià, 2000). Moreover other studies, reviewing the historical impact of famines and major epidemics on demographic change, also stress the rapid return to baseline mortality and their modest long-term impact on demographic variables (Cornia and Paniccià, 2000). For these reasons Cornia describes famines as short-term mortality crises characterized by large and rapid surges in death rates followed by a rapid return to the long-term trend. For these reasons, in order to analyse a famine, he suggests considering:

- mortality causes (food related, violent, epidemic);
- mortality raising profile (frequency, impact and retreat of mortality crises);
- time profile (crises length);
- threshold point;
- reaction and adjustments to mortality crises;

¹³S. Devereux, P. Howe and L. Biong Deng, The “New famines”. IDS Bulletin, 33 (4), 2002, p. 3

- most stricken group (males, females, children or elderly people).

In order to describe and characterize a famine focusing on the most damaged groups and regions, it is useful to consider each of these factors.

In this way, Cornia offers a useful guide-line in interpreting events and finding out suggestions to understand the causes that determine famines, and consequently to point out some suitable policies to solve the crisis. Finally, collecting these kinds of data is useful in drawing up models to prevent future famines.

Several models have been suggested in order to explain famines, each focusing on different aspects, following mainly the academic background of their proponents. Nonetheless, there is a growing recognition that all famines have multiple causes and we can assist a trend towards the “systems” approach to famine analysis. It should be noticed that this approach is not new: “early in the century, before development studies became dominated by “specialists” rather than “generalists”, it was still possible for observers to write about famines holistically. Subsequently, generations of demographers, geographers, climatologists, economists, sociologists and political scientists offered increasingly sophisticated yet reductionist theoretical frameworks”¹⁴: malthusianism and neo-malthusianism, food availability decline, food intervention decline, entitlement failure, complex humanitarian or political emergencies, are only a few examples of the proliferation of different models.

Recently, there is a growing consensus on the idea that different models apply to different cases. The main approaches could be grouped into four distinct categories:

1. demographic theories (malthusian and neo-malthusian);
2. climatic theories (food availability decline);
3. food policies failures (food intervention decline);
4. Sen’s entitlement approach;
5. Complex Emergencies (humanitarian and political emergencies).

The remainder of this section reviews the key contributions to the debate on models to explain famines.

3.1 Malthusian and neo-malthusian approach

The malthusian approach dominated the economic thinking until recently and is rooted in Malthus theory which assumes that rapid acceleration in

¹⁴S. Devereux, *Famine in the twentieth century*, IDS Working Paper 105, Brighton: Institute of Development Studies, 2000, p. 16

the world's population - during the twentieth century population grew up from 1.6 billion to 6.0 billion - would provoke mass starvation as the limits to global food production would be reached. Thomas Malthus, argued that population could not continue growing indefinitely in a world of fixed natural resources emphasizing that famines are due to a food supply decline regard to food demand.

In particular, Malthus argues that population increase would generate a further food demand which would be satisfied in two ways:

1. cultivating more lands, but new lands have a lower marginal productivity;
2. increasing the exploitation intensity of cultivated lands, which results in a marginal and average productivity decline of work.

Malthus concludes that at a certain point in time, the average productivity of work would decline below the subsistence wage - the wage which guarantees a household survival (see fig. 1).

At this point, the equilibrium will be restored by famines, epidemic disease, mass migration and a reduction in marriages and in fertility. All these processes will restore the original structure of families and the cycle will start again. In the malthusian view, famine acts as a natural check on population growth, equilibrating the demand for food with food supplies.

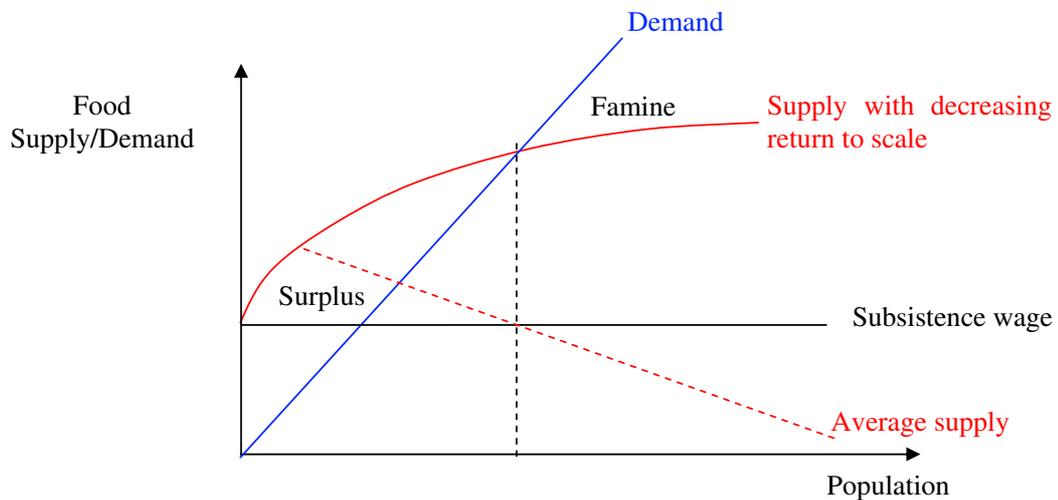


Figure 1: The malthusian approach (Source: Cornia, G.A., Appunti delle lezioni, marzo 2006)

Malthusianism peaked during the 1960s and 1970s when the popular perception that the world was running out of food was widespread. In 1970s, it

was newly advanced in the famous report “The Limits to Growth”¹⁵ and actually is especially suggested by the Worldwatch Institute and Lester Brown. These new proposals differ from the original malthusian argument because the constraint on population growth is not only represented by cultivable land and food scarcity, but also by availability of water, energy supply, raw materials, and by land and air pollution. From this point of view, neo-malthusian approach is strongly supported by increasing awareness about the protection of environment and its resources. Consequently, it is experiencing a growing consensus among the population, but it is still not enough considered by policy-makers and is often criticized as too catastrophic.

The malthusian approach is susceptible of five criticisms:

1. Malthus wrote thinking of the English agricultural situation in the 18th century when people had a subsistence agriculture. The agrarian revolution enabled to raise soil productivity lifting up the food supply curve;
2. the author did not forecast the possibility of mass migration that were usual in the 19th century;
3. Malthus failed to foresee the agricultural, transport, industrial revolution and the demographic transition;
4. geografically marginal land is not necessarily less fertile, even if it is the furthest;
5. famine did not act as a “malthusian leveller”.

Despite these critiques, this family of models should still be considered quite actual because, focusing on the safety and availability of natural resources, and on non polluted air and water, it emphasizes the environmental and social constraints of our planet. A major problem that new generations have to deal with is the distribution of resources among developed and developing countries.

3.2 Food availability decline

The food availability decline (FAD) approach assumes that famines are caused by a sudden reduction of per capita food supply. It is usually triggered by natural disaster (drought, floods, pest infestation, etc.), wars, and epidemics determining a contraction of food supply. As a consequence, food prices go up and people, who are not able to bear such an increase, consume less calories. This sequence of events is graphically presented in fig. 2 where

¹⁵D.H. Meadows, D.L.Meadows, J. Randers, A. Peccei, F. Macaluso, W.W. Behrens, I limiti dello sviluppo - rapporto del System Dynamic Group Massachusetts Institute of Tecnology (MIT), Edizioni scientifiche e tecniche Mondadori, Milano, 1974.

the x-axis shows quantities of food and the y-axis indicates prices. Supply and demand curves are supposed linear. In case of a fall in food supply, the supply curve shifts on the left reflecting less availability of food and the relative increase in food prices. Consequently, the most vulnerable people start reducing their food consumption because of price selection. In case of a prolonged exposition to a crisis, this may culminate in an increasing mortality due to starvation and infectious diseases.

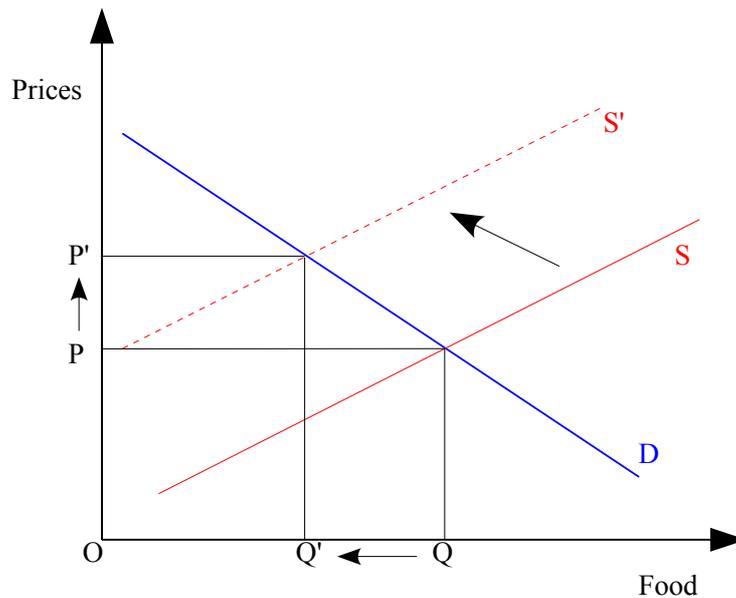


Figure 2: Food availability decline (Source: Cornia, G.A., Appunti delle lezioni, marzo 2006)

This model points out the insufficient production and availability of food as the main cause of famines and starvation. In focusing on this two aspects as elements of a famine crisis, this approach implicitly assumes an equal division of the available food. That is to say that adequate food supply is taken to mean adequate nutrition for all. Unfortunately, such an assumption fails to reflect reality. In fact, if it was true, people would be indifferently hit by a crisis. Instead, analysing the impact of famines numerous authors (Sen, 1981; Cornia, 2006) find that famines involve primarily the lowest social classes while the wealthier classes are less damaged. Thus, FAD approach does not supply any information in this regard.

Moreover, the FAD hypothesis imply that food security is essentially a matter of expanding food availability. As a solution it argues to rise the supply, and consequently the availability, of food; to improve imports of food; and contemporarily to promote sanitary improvements. Unfortunately, such a solution has been strongly criticized by Sen (1981) who states that famines may have many causes and may happen also in regions that had not expe-

rienced a decline in food production or availability (e.g. Bengal in 1943, Ethiopia in 1973 and Bangladesh 1974). In this sense, the FAD approach fails to identify this wider set of causes and consequently to suggest suitable policies.

Considering these aspects, Sen denies the necessity of the FAD hypothesis and of the FAD approach. Nonetheless, he recognizes that famines can be caused by food availability decline as well as he subsumes this hypothesis in its entitlement approach.

From an empirical point of view, this model has been proved to be useful. In certain cases (the great Irish famine, the Ethiopian famine, the French subsistence crisis during the 18th century), it helps to explain observed phenomena: increasing prices and mortality.

3.3 Food intervention decline

An interesting approach to face famines is the so-called food intervention decline (FID). This quite new framework originates from the recent and growing awareness that governments, and more generally political institutions, humanitarian agencies and non governmental organizations (NGOs), have the responsibility to protect all citizens promoting direct public interventions. Such an assessment seems quite astonishing actually, but considering Malthus's theory, it is not so obvious. The famous economist explicitly asked for a non intervention to prevent and tackle famines arguing that this would have only brought a temporary relief to people starving. In the long run interventions would have simply prolonged their sufferings: people had to die in order to restore the original equilibrium between food production and the number of persons. Similar positions were expressed by Jean-Jacques Rousseau and David Ricardo (Webb, 2002). Since then, many conditions have changed and actually the so-called "Millennium Development Goals"¹⁶ confirm the global recognition that people have the right to be food secure.

Food intervention decline approach argues that people starve because food policies and services fail to guarantee a sufficient nutrition. In particular, when these policies lack or decline people start suffering and severe malnutrition may result in famines: people are no more able to maintain a balance between their food needs and what they are able to eat, and they start starving.

This approach, being focused on policies, identifies as main actors all those institutions deputed to produce and implement actions to secure nutrition and a healthy feeding. For example, governments, national and in-

¹⁶The Millennium Development Goals (MDGs) represent a global partnership that has grown from the commitments and targets established at the world summits of the 1990s. MDGs promote poverty reduction, education, maternal health, gender equality, and aim at combating child mortality, AIDS and other diseases.

ternational organizations and agencies (such as FAO¹⁷, WFP¹⁸, etc.), and non governmental organizations.

Addressing nutritional deficiencies is recognized as fundamental because it is commonly acknowledged (World Food Program, 2006) that:

- acute malnutrition is a strong predictor of excess mortality among people and especially among children;
- even moderate malnutrition raises mortality in emergencies because a larger share of the affected population is yet commonly malnourished;
- micronutrient deficiencies contribute to disease-mediated mortality in emergencies;
- the timely arrival of food assistance contributes to the prevention of mortality through its impact on reducing malnutrition.

Definitely, insufficient nourishment is one of the root causes constraining future development of countries affected. In fact, prolonged low levels of nutrition reduce the ability of people to work, to study, to procure further feeding, to take care of sick people, and, in general, to invest in the future. All these effects undermine the ability of a society to recover even in the long run and national and international institutions may play an important role in tackling these problems.

Consequently, the FID approach suggests a number of different policies that may be broadly grouped in two depending on their target: on one side, there are ex-ante policies aimed at preventing malnutrition and implemented in vulnerable regions; in that case when food policies fail people may start starving. On the other side, there are ex-post policies which are aimed at tackling an on-going crisis.

Interventions to prevent famines may involve individuals as well as households or higher social aggregates. For example, WFP focuses mainly at individual and household level assessing that “to be effective, prevention has to start at the community level with improvements in the care of women during pregnancy, complementary feeding, infant feeding and weaning practices, child care, and women’s status and entitlements more broadly.”¹⁹ This requires communities to be involved in problem analysis and identifying local practices to be encouraged. As an example, in El Salvador preschool children obtain supplementary food through day-care centers organized and managed by local institutions. From the educational point of view, there are many examples of programmes in which women receiving supplementary feeding also receive nutrition training.

¹⁷FAO: Food and Agriculture Organization of the United Nations.

¹⁸WFP: World Food Program.

¹⁹quoted in World Food Program, Food for nutrition: mainstreaming nutrition in WFP, Food and nutrition bulletin, The United Nations University, Vol. 27, n.1, 2006, p. 52

On the other side, governments and NGOs usually play an important and broader role in this phase of pro-nutrition interventions by promoting:

- public health conditions: promoting a safer environment is important to reduce related illnesses (e.g. scurvy and pellagra) and infection risks;
- freedom and democracy: for example the role of media in bearing witness to suffering is increasingly recognized;
- improving efficient early warning systems to be able to prevent crisis;
- reducing horizontal and vertical inequalities undermining social stability and cohesion;
- adopting social safety nets, including protection against food price volatility;
- longer-term welfare mechanisms, such as insurance, pensions, tax and incentives targeted to the poor;
- investing in future development: education, health and labor services.

Considering policies aimed at tackling an on-going crisis, experience coming from different countries suggest a wide range of proposals:

- injection of public food stocks into key markets at free or subsidized prices;
- labor-intensive public works;
- mixture of food supply and price control policies;
- cereal banks;
- direct transfer based intervention;
- credit support schemes;
- poor law provisions (workhouses);
- shelters and camps for the destitute;
- augment imports;
- development of communication infrastructures and of an independent press.

Further, two more policies have to be mentioned: the so-called Kornvereine (literally grain associations or cooperatives) which represents a form of self-organized food aid association purchasing food abroad without going through state or national channels. In this way, Vereine members purchase “tokens” from the membership secretariat in order to buy food at subsidized prices (Webb, 2002).

Another proposal is to reduce food exports. This policy is based on the assumption that keeping available food within a country would alleviate the problem, but this is not always true. On the one hand, the export ban do not always make food more accessible to the local poor who still have no purchasing power. On the other hand, the control of food movement even across internal borders often results in greater hardship for those regions experiencing harvest failure, while other parts of the same country may have a surplus to share.

More generally, in case of acute malnutrition the first kind of international policy adopted is to intervene through food aid, that is to say bringing food in regions necessitating it. Such interventions have to be carefully planned following the nature of each crisis and seeking to address underlying causes. One of the main risk is to damage close economies with abundant food supply further depressing food prices affecting agricultural incomes: the outcome could be further reducing poor people purchasing power.

3.3.1 Critiques to the FID approach

The main merit of food intervention decline is to focus on policies and institutions failures in securing a safe and healthy food supply. This is an important feature especially because it highlights that market solutions to famines are not sufficient to address the point.

Nevertheless, an implicit hypothesis of this approach is that institutions planning and implementing food policies are benevolent. Unfortunately, this is not always true especially in poor countries where governments are not accountable (Carbone, 2005) and may have a their own private agenda which does not care for people concerns.

A further critical factor arise considering intervention of foreign institutions or associations which are external to interested countries. In this case, agents have to pay great attention to make interested people participating in the planning and developing interventions. This is a very important factor to avoid dropping solutions in frameworks unable to receive them. For example, when planning food aid interventions, international actors should pay particular attention to religious and cultural habits of interested populations in order to not deliver food that they “can not eat”(Webb, 2003).

Moreover, local institutions and governments preparedness to crisis is fundamental to propose an efficient policy. Recent crisis are sudden and very rapid: in order to deal with these characteristics food policies have to

be translated in standard procedures to be adopted as rapidly as possible in case of crisis. From this point of view, an early warning system may have a very important role.

Anyway, it should be highlighted that FID approach still lacks a well structured formulation. In fact, until now it has always been suggested as a complement to other explanations rather as a unique cause of famines. For instance, food intervention decline may lead to a food availability decline and consequently to a food crisis. It can also be considered as included in A.K. Sen's theory. As it will be shown later, food policies to prevent famines can be part of what Sen calls *entitlements*. When such entitlements decline people start suffering hunger. In that sense, the "entitlement failure" approach is a more inclusive framework. The main advantage of FID approach is its direct focus on policy interventions against malnutrition and crisis, leading to consider it more useful in developing actions to address famines rather to explain why famines happen.

In conclusion, this approach needs further investigation. It is useful in developing food policies and because focuses on new subjects that may have important roles in managing crisis. Its weak aspect is that it does not help to completely explain why malnutrition happens: it needs further causal relationships to explain famines and to address their underlying causes.

3.4 Sen's entitlement approach

"The entitlement approach, which contrasts with the more usual food availability approach, concentrates on the ability of people to command food through the legal means available in that society"²⁰.

A.K. Sen's work was firstly outlined in an article²¹ in 1981 and subsequently presented in his famous book "Poverty and famine."²² Since then, the so-called "entitlement-failure approach" animated a great debate endorsing the central role of this new theory in the subsequent literature.

Sen's starting point was to explain some "paradoxes" that he noticed observing 20th century famines. In particular, the author perceived that famines have been occurring in regions of countries which had food surpluses elsewhere, in countries that continued to export food, and in not all countries experiencing the same "exogenous shock." Moreover, he noticed that subjects in societies were hit differently.

As suggested by Devereux (2001), this approach provided a general analytical framework (the entitlement approach) for examining all famines

²⁰A.K. Sen, Resources, values and development, Oxford: Basil Blackwell Publisher Ltd., 1984, p. 452

²¹A.K. Sen, Ingredients of famine analysis: availability and entitlements, Quarterly Journal of Economics, Vol. 96, n. 3, August 1981.

²²A.K. Sen, Poverty and famines: an essay on entitlement and deprivation, Oxford: Clarendon Press, 1981.

whether caused by demand or supply shocks and, at the same time, put forward a “new” theory of causation: that certain famines are characterized by declines in access to food for identifiable population groups irrespective of food availability at national level (“exchange entitlement failure”).

Considering, ownership of food one of the most primitive property rights, Sen assesses that in each society there are rules governing these rights. As a consequence, the entitlement approach concentrates on each person’s entitlements to commodity bundles including food, and views starvation as resulting from a failure to be entitled to any bundle with enough food.

In this context, hunger relates not only to food production and agricultural expansion, but also to the functioning of the entire economy and of the political and social arrangements that can, directly or indirectly, influence people’s ability to acquire food and to achieve health and nourishment.

In order to understand why famines start up, the attention should not be focused on the total food supply in the economy but on the “entitlement” that each person enjoys. In this way, the author suggests an analysis that assumes the single agent as its central element, with its own preferences, culture, social position, etc. This allows to consider social inequalities among individuals in big and small societies (households) advancing a demand-side analysis of famines.

Entitlements have been defined by Sen as “the set of alternative commodity bundles that a person can command in a society using the totality of rights and opportunities that he or she faces.”²³ These legal sources of food, are grouped by Sen (1981) into four categories of entitlement relationships²⁴:

- *production-based entitlements*, meaning that people are entitled to what they produce;
- *trade-based entitlements*, which entail that individuals are entitled to what they can obtain by trading physical assets;
- *labor-based entitlements*, which mean that individuals are entitled to what they can obtain through the sale of their labor power;
- *transfer-based entitlements*, meaning that people are entitled to what is willingly given to them through legal transfer, be it formal (from government) or informal (from friends and relatives).

People suffer from hunger when they cannot establish their entitlement over an adequate amount of food (Devereux, 2001).

²³A.K. Sen, Resources, values and development, Oxford: Basil Blackwell Publisher Ltd., 1984, p. 497

²⁴A.K. Sen, Poverty and Famine: an essay on entitlement and deprivation, Oxford: Clarendon Press, 1981, p. 2

A household's entitlement depends on various distinct influences. First, there are the *endowments*: the ownership over productive resources as well as wealth that commands a price in the market. Second, an important influence consists of *production possibilities* and their use. These are determined by the available technology and, consequently, by available knowledge as well as the ability of the people to apply it. Third, an important role is attributed to the *exchange conditions* representing the ability to sell and buy goods and the determination of relative prices of different products. These exchange conditions can change dramatically in an economic emergency, leading to the threat of a famine.

Summing up, Sen suggests that “in an economy with private ownership and exchange in the form of trade (exchange with others) and production (exchange with nature), the entitlement set of person i in a given society, in a given situation (E_i) can be characterized as depending on two parameters: the endowment vector x and an exchange entitlement mapping $E_i(\cdot)$, which specifies the set of commodity bundles any one of which person i can choose to have through exchange”²⁵. The exchange entitlement mapping will, in general, depend on the legal, political, economic and social characteristics of the society in question and the person i 's position in it. Moreover, it would be characterized by different factors including employment opportunities, wage rate, the cost of productive resources, the value of what a subject can sell and wish to buy, as well as social security and taxation.

For example, a blacksmith owns his labor power and, let us suppose, he also owns the furnace to forge iron. Both his labor power and his furnace, neither of which he can eat, constitute his endowment. He has to exchange the result of his work for an income, with which he will be able to buy food. There may occur some changes either in his endowment (e.g., loss of his furnace because of an accident or loss of labor power due to illness) or in his exchange entitlement mapping (e.g., reduction in the price he receives for his job, increase in iron prices or in food prices). In this situation, unless he can find another job or access social security benefit, the blacksmith may experience a reduction of his income up to the point where he will no longer be able to establish command over any commodity bundle with enough food. He will then go hungry, even if there happens to be enough food supplies in the economy.

3.4.1 Famines as entitlements failures

Each person owns an entitlement set composed by:

- its endowments (vector x): assets and resources, including labour power;

²⁵A.K. Sen, Ingredients of famine analysis: availability and entitlements, The Quarterly journal of economics, Vol. 96, n. 3, August 1981, p. 435

- its exchange entitlement mapping $E_i(\cdot)$.

“Person i can be plunged into starvation either through a fall in the endowment vector x_i , or through an unfavourable shift in the exchange entitlement mapping $E_i(\cdot)$ ”²⁶. The distinction is illustrated in fig. 3 “in terms of the simple case of pure trade involving only two commodities, namely, food and non food.”²⁷

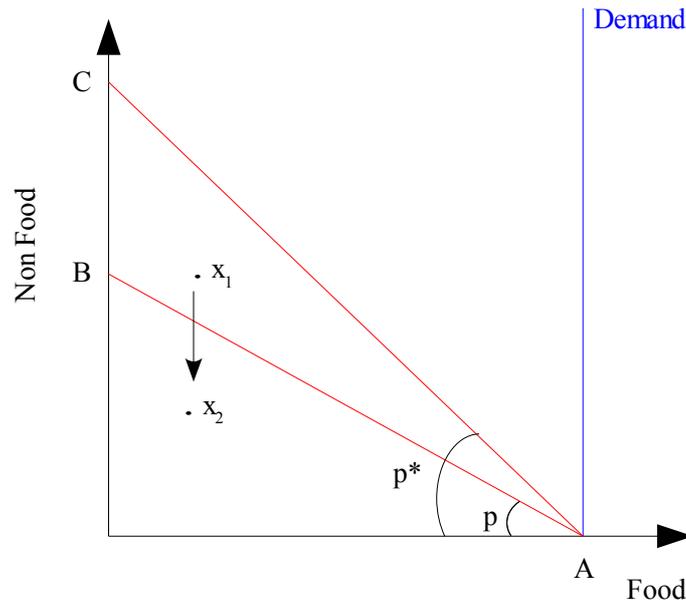


Figure 3: Entitlements and exchange entitlements failure (Source: Sen, A.K., 1981, p. 437)

On the x-axis of fig. 3 we measure the quantity of food, while on the y-axis there is the amount of non food. The segment OA represents the minimum food requirement and, given the relative price of goods, the exchange entitlement mapping is assumed having a linear form. The region OAB is called starvation set S_i and depicts all the endowment vectors which don't allow to establish command over any commodity bundle with enough food. “If the endowment vector is x_1 , the person is in a position to avoid starvation. This ability can fail either through a lower endowment vector, e.g., x_2 , or through a less favorable exchange entitlement mapping, e.g., that given by p^* , which would make the starvation set OAC ”²⁸.

²⁶ A.K. Sen, Resources, values and development, Oxford: Basil Blackwell Publisher Ltd., 1984, p. 456

²⁷ A.K. Sen, Ingredients of famine analysis: availability and entitlements, Quarterly Journal of Economics, vol. 96, n. 3, pp. 436-437.

²⁸ A.K. Sen, Ingredients of famine analysis: availability and entitlements, Quarterly Journal of Economics, vol. 96, n. 3, p. 437.

This situation may be really dangerous for those people - like the blacksmith - who sell their work and buy food. Even if the rising price lasts only a few months and then is reversed, it may produce a strong malnutrition and starvation to those people not having any other entitlement.

The maximum food entitlement of a specific group (F_j in Sen's notation) can fall either because one has produced less food for own consumption, or because one can obtain less food through trade exchanging one's commodity for food. The former is called by Sen a "direct entitlement failure" and will arise when the quantity of food (q_f) falls for some food-producing sub-group. The second one is a "trade entitlement failure" and can occur either because of a fall in the food exchange rate of a particular group ($e_j = \frac{P_i}{P_f}$), or because of a fall in the amount of the non-food commodity (q_j) that people sell in order to buy food. Such a fall in q_j can occur either due to an autonomous production decline, or due to insufficiency of demand.

F _j collapse due to:	Direct entitlement failure :	q _f decreasing
	Trade entitlement failure :	e _j decreasing
		q _j decreasing

Table 1: Causes of food entitlement collapse

Summing up, the amount of commodity j each member of group j can sell or consume (q_j) may fall down because of:

- an autonomous production decline (e.g. cash crop being destroyed by a drought). In this case, people should promote policies to prevent calamities and to develop insurance and credit mechanisms.
- an insufficiency of demand (e.g. a laborer being involuntarily unemployed). Accordingly, programs to sustain occupation and, broadly, to safeguard entitlements should be advanced.

The occupation j 's food exchange rate (e_j) may worsen because of different reasons.

These may include:

- a decrease on the supply side and a constant demand - e.g. caused by a drought or a flood;
- lesser inputs on the market with a constant supply - e.g. hoarding
- an increase on the demand side and a constant supply - e.g. caused by an increase in incomes of different groups

Now, if for some reason - foreign demand, drought, war, black-market hoarding - the price of grain go up, some of the participants will find their entitlement retreat. This may be so drastic that they may not even get a subsistence bundle. They may starve. But even within this context of deficiency, caused either by demand shock (war, hoarding) or supply shocks (droughts, floods, locusts), we must examine the mode of income receipt to appreciate the irregular incidence of famine in different people. Consequently, whatever the macro-economic dimensions of food shortage, the micro-economic frequency of starvation would depend on how individual households are placed in terms of their endowments, and through these endowments, in their exchange entitlements (Sen, 1984).

3.4.2 Critiques to the entitlement approach

In literature the entitlement approach has been analysed by different perspectives and is still seen as one of the pillars for studying famines. Moreover, this approach is still largely studied, tested and, when possible, enlarged. As a consequence different critiques arose, sometimes because of a misunderstanding of the message and of the objectives of Amartya K. Sen. In fact, as it will be highlighted later, the main goal of the author was to provide a general framework useful to study and interpret different cases of famines in order to analyse them in coherent way. Subsequently, from an ex-post point of view, this study may be useful to detect the main factors inducing the crisis and to identify feasible policies to intervene. Conversely, in an ex-ante viewpoint, the entitlement approach could help to identify the crucial variables that should be monitored in order to foresee a famine. This kind of information is also important because allows the adoption of policies to prevent crisis.

One of the main advantages of this approach is its focus on markets and institutions. In particular, Sen recognizes the limits of market economy especially in less developed countries and, consequently, asks for the intervention of institutions to prevent famine, by adopting structural policies and reforms (e.g. agricultural reform, promoting democracy, improving early warning systems, adopting public food stocks, etc.), and to cure crisis with short term programs of intervention (e.g. high labor intensive public work programs, money transfers, food aid, etc.)

This point of view is contested by Edkins (2000) who states that the entitlement approach privileges the economic aspects of famine and excludes social and political aspects. In particular it would ignore the importance of institutions in determining entitlements, famine as a social process and violations of entitlements rules by others. Under these conditions, the entitlement approach can help to explain only a small part of a very complex phenomenon. For that reason the author asks for a complementary social and political analysis to meet the economic one. This argument is quite

different from the previous one, because here Edkins is asking for a more comprehensive framework which may consider simultaneously social, historical, political, and economic aspects leading to a famine. Such an approach would be really interesting for social research in general and for famine analysis in particular, but it involves wide topics which are difficult to analyse simultaneously.

Nayak (2000) suggests that Sen doesn't want to propose a new hypothesis (either specific or general) about the causes of famines, instead he proposes a new framework for analyzing famines.

Devereux (2001) states that "perhaps the most valuable contribution of the entitlement approach to famine theorizing is that it shifts the analytical focus away from food availability (the malthusian logic of "too many people, too little food") towards the inability of groups of people to acquire food. A famine can occur even if food supplies are adequate and markets are functioning well. Equally important is the insight that famine can be caused by "exchange entitlement decline" (adverse shifts in the exchange value of endowments for food, e.g. falling wages or livestock prices, rising food prices) as well as by "direct entitlement decline" (loss of food crops due to drought, for instance)"²⁹

Anyway, as previously suggested, the entitlement approach is not without critiques. Sen (1981) himself identifies four "limitations" of its approach:

1. the specification of entitlements can be ambiguous. "In many cases the appropriate characterization of entitlements may pose problems, and in some cases it may well be best characterized in the form of "fuzzy" sets and related structures"³⁰. The existence of property regimes (e.g. communal land tenure) makes entitlement relations not so definite about two aspects: over the unit of analysis, and over the nature of property rights. The entitlement approach is conceptually grounded on private property regimes and in cases of - say - collective resources it can't be applied. The entitlement approach is inapplicable in contexts where individual access to resources is mediated by non-market institutions.
2. some transfers involve violation of rights within the given legal structure in a society. The entitlement approach can analyse the disruptive effects of war on societies, but it fails to explain violations of property rights "such as looting grain or raiding cattle. Nor can it explain "unruly practices" such as deliberate starvation, or the use of famine as a

²⁹S. Devereux, Sen's entitlement approach: critiques and counter-critiques, *Oxford development studies*, 29 (3), 2001, p. 246.

³⁰A.K. Sen, *Resources, values and development*, Oxford: Basil Blackwell Publisher, 1984, p. 457

weapon”³¹. In these cases, especially when these aspects are predominant, the entitlement approach will be defective.

3. choosing to starve. De Waal (1989), citing the famine of Sudan in 1984-85, assesses that in certain cases people deliberately chose to starve in the short run. In this way he contests the fact that a food shortage should automatically triggers a behavioural response: the conversion of endowments into food for survival. In reality, as Devereux (2001) observes, endowments are not always exchanged for food, because selling assets could threaten future survival. “This issue can be accommodated in the entitlement approach only in a relatively long-run formulation.”³² While “choosing to starve others”³³ within the household requires an understanding of intrahousehold power relations that cannot be captured within the entitlement framework. “In concentrating on entitlements, something of the total reality is obviously neglected in this approach, and the question is how much of a difference is made by this neglect.”³⁴
4. starvation or epidemics: the entitlement approach focuses on starvation, which has to be distinguished from famine mortality, since many of the famines deaths are caused by epidemics. Increased exposure to disease might not be hunger-related since epidemics may be even induced by other famine characteristics, such as population movement and breakdown of sanitary facilities. But if this exposure is due to social disruption triggered by a food crisis, then entitlement decline remains as the underling cause of death.

Devereux (2001) suggests that all four “limitations” discussed by Sen share two common underlying themes: first, a failure to recognize individuals as socially embedded members of households, communities and states, and second, a failure to recognize that famines are political crises as much as they are economic shocks or natural disasters.

Bowbrick³⁵ argues that famines cannot be discussed without taking into account aggregate food supply and contends that, by focusing exclusively on distribution, Sen ignores aggregate shortage. The problem with Bowbrick’s critique is that he considers a limited space of causes and effects of famines

³¹A.K. Sen, *Resources, values and development*, Oxford: Basil Blackwell Publisher, 1984, p. 457

³²A.K. Sen, *ibidem*, p. 458

³³S. Devereux, *Sen’s entitlement approach: critiques and counter-critiques*, Oxford Development Studies, Vol. 29, n.3, 2001, p. 258

³⁴A.K. Sen, *Resources, values and development*, Oxford: Basil Blackwell, Publisher, 1984, p. 458

³⁵quoted in P. Nayak, *Understanding the entitlement approach to famine*, Journal of Assam University, Vol. 5 (1), 2000.

attributable to Malthus's view. Moreover, also the second Bowbrick's sentence is inexact, because Sen focuses mainly on distributional problems but doesn't ignore in his framework the possibility of absolute shortages of food (FAD hypothesis).

From another point of view, Pattanaik (1991) agrees with Sen's idea that food shortages in the short period are unimportant for explaining famines, but warns that it would be an error to ignore long term decline in food availability. Even this critique is correct, but it should be noticed that in case studies proposed by Sen, the author doesn't find any significant fall in food availability and this is why he focuses mainly on distributional aspects.

Moreover, Rangaswami³⁶ critiques Sen arguing that he accepted the traditional definition of famines as characterized by widespread starvation and high mortality. In this way he fails to consider the entire process leading to famine paying attention only to the very end of such a process.

One of the advantages of the entitlement approach, which confirms that Sen's idea is more a general framework rather than a particular hypothesis, is that it can explain different models of famine. In particular it seems that it includes the FAD hypothesis: the entitlement approach does not imply that food availability is unimportant in fighting hunger and malnutrition. It simply points out that it is one of many other factors affecting people's access to food, and sees this influence as operating through entitlement relations. For example, a decline in food production may lead, in the absence of adequate imports, to higher food prices, thus producing a shift in the exchange entitlement mapping of different occupational groups. This shift will be unfavorable for many and it may even result in a diminished food consumption. In the same way, when entitlement approach suggests to adopt policies to support food purchasing, or food aid, it is incorporating the food intervention decline (FID) hypothesis.

An interesting feature of entitlement approach is its focus on single agents. This aspect is always perceivable in his work and it is particularly clear when Sen argues that in order to understand famines the attention should be focused on the entitlement that *each person enjoys*. Paying attention to single conditions of individuals, the author proposes a micro-founded analysis: that is to say he considers the single units constituting a society. In this way he is able to take into account individual differences, as well as social and distributive inequalities, even among members of a household. In understanding why some people are not able to acquire enough food, the entitlement approach views them "not as members of the huge army of the poor, but as members of particular classes, belonging to particular occupational groups, having different ownership endowments, and being governed by rather different entitlement relations."³⁷ The entitlement approach calls

³⁶quoted in P. Nayak, Understanding the entitlement approach to famine, Journal of Assam University, Vol. 5 (1), 2000.

³⁷A.K. Sen, Poverty and famines: an essay on entitlement and deprivation, Oxford:

for a much greater refinement of categories than that of the “rich” and the “poor”. The use of these more refined classes or occupational categories unveils the entitlement relations by which different groups gain access to food.

The main difficulty in this case arises by the availability and reliability of micro-data on these topics.

In conclusion, the entitlement approach reveals as a rich framework useful to study famine crisis. As it has been assessed Sen’s proposal does not come without any criticism, but, as suggested, much of these critiques are due to different interpretations of Amartya K. Sen’s work. The broad perspective that it brings is useful to draw long-term and short-term policies in order to effectively prevent famines and to intervene during a crisis. The efficacy of such policies would be increased thanks to the analysis of the relationships among different actors and institutions in societies developed through Sen’s framework. Despite these indubitable aspects, it should be noticed that recently crisis became much more “complicated” than usual. Causal nexus resulting in famine crisis are not straightforward, crisis involve a large number of different subjects (inside and outside hit societies), institutions may play a growing role in preventing and solving crisis, and different factors (social, cultural, political as well as economic) have to be considered in order to fully understand mechanisms bringing to famines. These *new crisis* are increasingly linked with social strives, conflicts, natural disasters, international terrorism, financial crisis and may suddenly develop after a long period of rest without any warning sign (Cornia, 2006). In order to prevent these new emergencies and to intervene to relieve their effects, a new kind of analysis is needed. It is necessary to be able to combine famine models previously examined in a more articulated framework from which drawing out proper policies. For all these reasons, it was advanced the so-called “complex humanitarian emergencies” approach.

3.5 Complex Humanitarian Emergencies

Recently, literature moved towards models focusing on political strains and strives which, through the breaking up of cooperation, trust and peace among people, aggravate the access to food resources and cause their destruction, directly or indirectly. These tensions are generally included in a wider group of crisis called “complex humanitarian emergencies” (CHE) (Cornia, 2006).

Raimo Väyrynen defines a complex humanitarian emergency “as a profound social crisis in which large numbers of people unequally sie and suffer from war, displacement, hunger, and disease owing to human-made and natural disasters.”³⁸

Clarendon Press, 1981, p. 156.

³⁸R. Väyrynen, “Complex Humanitarian Emergencies: concepts and issues”, in E.

These emergencies are *complex* because a lot of different elements (economical, political and cultural) are involved and are *humanitarian* because focus mainly on the uneven effects on population (Bellanca, 2005).

Complex humanitarian emergencies are situations in which “physical fighting between people leads to a huge amount of human suffering, associated with large numbers of deaths arising both from the fighting and from the indirect effects of the conflict on food supplies and health.”³⁹

Complex humanitarian emergencies are characterized by shocks which are:

- unpredictable: there is no possibility to foresee the crisis and consequently remedies are less effective, usually on late and no prevention is available (e.g. AIDS);
- sudden: the shock reveals very rapidly reducing the possibility of an effective and well-timed reply;
- highly concentrated and then followed by hysteresis. After a deep impact at the very beginning, the shock is reabsorbed very slowly which implies a standing turning away from the long term trend;
- strong moving aside from the long term growth trend;
- erosion of stocks of productive factors (which is one of the causes of hysteresis). For example, recent conflicts, like in Afghanistan, led to the destruction of the public infrastructure, of lands (which have been mined), and of productive assets. This means that new crisis not only imply an immediate rise in poverty, but also reduce the possibility for future long term growth;
- high inequality of the impact on population, which negatively affects long term growth and well-being;
- inefficacy of traditional mechanism of policy response.

These complex crisis and famines are linked in different ways. First of all, it should be highlighted that in this approach famines are considered “a distributional conflict [...] anchored in the internal structures of societies.”⁴⁰ That is to say that these phenomena are mainly considered as social and

Wayne Nafziger, F. Stewart, R. Väyrynen, edited by, War, Hunger and Displacement, Oxford University Press, 2000, p. 49

³⁹F. Stewart, “Complex Humanitarian Emergencies: concepts and issues”, in E. Wayne Nafziger, F. Stewart, R. Väyrynen, edited by, War, Hunger and Displacement, Oxford University Press, 2000, p. 3

⁴⁰R. Väyrynen, “Complex Humanitarian Emergencies: concepts and issues”, in E. Wayne Nafziger, F. Stewart, R. Väyrynen, edited by, War, Hunger and Displacement, Oxford University Press, 2000, p. 64

political crises and are seen as a “phase in a sequence of events leading to a subsistence crisis.”⁴¹

Stating the centrality of politics in famines, this approach points to identify the various factors - social, political, economic - that allow large classes of population to starve. From this point of view, there is considerable evidence of the relationship between war and famines. Wars destroy crops, devastate the economy, ravage the stock of productive capital, damage transport facilities and disrupt movements of foods and other commodities. But conflicts in general are also indirectly linked with famines. In particular Cornia (2006) suggests that famines may be attributed to:

- armed conflict among different groups, and in particular among civilians, causing big damages to the economic activity and destroying stocks of productive factors;
- massive exodus of refugees and internally displaced people escaping from conflicts. These conditions lead to a falling of sanitary and alimentary conditions exposing people to risk of epidemics;
- the presence of economic incentives for some contenders to prosecute striving - e.g. black market activity, food speculation, control of humanitarian aids, etc.;
- the increasing insecurity, uncertainty, and unpredictability erode the actual degree of economic activity with long term effects.

Moreover during conflicts people lose their social networks: solidarity, trust and governance collapse threatening the possibility of a prospective upturn.

Comparing CHE approach with FAD and EF approach, it could be assessed that the first one looks at famines as a contemporary supply and demand crises followed by a weakened governance. In fact, considering fig. 4, when a shock happens, supply curve moves towards left induced by a drop in efficiency and a raising of risks associated with conflicts. Contemporarily, demand curve falls because incomes are dropping and families are increasing their savings. Finally, when production falls, fiscal revenue decrease and the State can not offer anymore those minimal services that may keep together a society (Cornia, 2006).

3.5.1 Causes of conflicts

Conflicts, which are the basis for subsequent food insecurity, may have different causes. Some cases, such as Angola, Congo, Sierra Leone, etc., suggest that the role played by physical factors such as primary resources (especially

⁴¹R. Väyrynen, *ibidem*, p. 65.

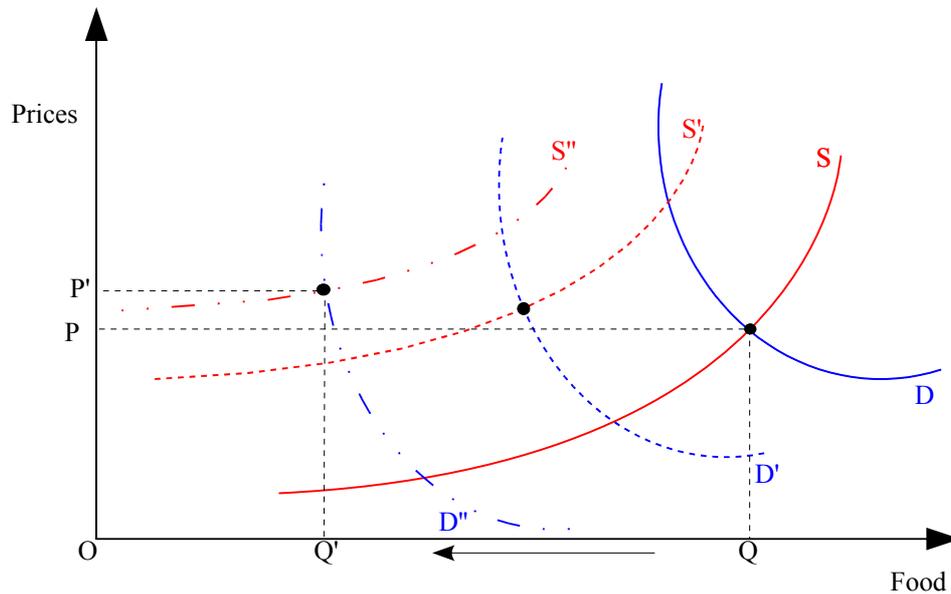


Figure 4: Complex Humanitarian Emergencies (Source: Cornia, G.A., Appunti delle lezioni, marzo 2006)

those energy giving), the control over water, and the availability of mining stocks should not be underestimated (Bellanca, 2005). Anyway, those who may be considered the most proximate causes of conflicts are exacerbating ethnicity, high “vertical inequality”, “horizontal inequality” among social, economic, religious or ethnic groups, welfare state collapse, and external shocks which can rapidly exacerbate fragile economic conditions.

From this point of view, P. Collier and A. Hoeffler (2001) propose an econometric model in order to evaluate the contribution of *greed* and *grievance* to the origin of conflicts. Grievance is a term coming from political studies literature which tries to explain rebellions as resulting from malcontent (grievance) circumstances whereby people want to riot. This family of causes is led by motivations: people demand rioting in order to pursue social objectives. From another point of view, economists try to explain rebellions in terms of opportunity: social strives are seen as a result of avidity (greed), the will to obtain richness and power as soon as it is possible. This time it is the private account between costs and benefits in allowing or not conflicts (Gudrun, 2005). Collier and Hoeffler suggest that the *greed* model is influenced by:

- the financing sources of rebels: black market activity, corruption, natural resources control and speculation, etc.;
- the low rebellion costs;
- the weakness of government military capacity;

- the degree of social cohesion.

while the *grievance* model is mainly involved when the society experiences:

- ethnic and/or religious hate;
- political repression and/or exclusion;
- economic inequality.

Finally, a common factor between the two models is the size of population: *greed* and *grievances* rise when population grows.

Subsequently, Frances Stewart suggests a model unifying the previous ones. The idea is that considering *greed* and *grievance* separately doesn't help to explain why people start to fight and propose to consider how the social position of one social group varies relatively to the other social groups (Stewart, 2000). The author suggests to use what she calls "horizontal inequalities" as opposed to the best known "vertical inequalities". "Inequality in income distribution is a summary measure of the incomes/employment dimension but fails to capture the others. Moreover, income distribution is generally defined as a *vertical* measure, that is, it takes every individual or household in the society from *top* to *bottom* and measures their incomes and the consequent inequality. What is needed for our analysis is a *horizontal* measure of inequality which measures inequality between groups, where groups are defined by region/ethnicity/class/religion, according to the most appropriate source of group identification in the particular society"⁴². From this point of view discontent does not arise when a previous social order gets in crisis, but when the position of the group to which people feel to own worsen relatively to other groups which are perceived as rival. Similarly, avidity arises when someone has to engage himself, in its group, to avoid to be overcome by other rival groups. Concluding, the main factors which may explain the outbreak of a conflict are:

1. a sudden widening of vertical (in a social group) or horizontal inequalities (among social groups) as related to income, wealth and power;
2. a growing uncertainty about future perspectives;
3. a weakening of the State.

Once assessed the main characteristics of complex humanitarian emergencies and the main causes of conflicts that may lead to famines and starvation, it is interesting to consider possible policy proposal. As Cornia (2006) suggests, the complexity and multidimensional aspects of these crisis ask for a differentiated intervention in order to solve problems they cause by:

⁴²F. Stewart, "The root causes of humanitarian emergencies", in E. Wayne Nafziger, F. Stewart, R. Väyrynen, edited by, War, Hunger and Displacement, Oxford University Press, 2000, p. 16

1. structural distortions or deficiencies predisposing the crisis (informative asymmetries, lack of institutional regulation and high horizontal inequality);
2. unpredictability and rapidity of shocks which are not insurable and preventible;
3. a strong social and economic impact of crisis asking for fiscal and social protection interventions;
4. productive factors erosion which undermines future growth;
5. high inequality of the incidence of crisis on population which undermine long term growth and well-being.

In the first case, structural intervention mainly ask for:

- adoption of a sustainable development model;
- institutional regulation in order to overcome moral hazards, informative asymmetries, adverse selection and free riding;
- conflict prevention through a more equitable horizontal distribution, providing public goods, avoiding long lasting stagnations.

In order to cope with uncertainty and risk it is necessary to develop effective early warning systems and insurance mechanisms (savings, social welfare, private insurance markets and international insurance mechanisms). Instead, when risks are not predictable, social security programs should be implemented through public work programs (e.g. cash for work or food for work), training (professional training, small firms or cooperative support, micro-credit programs) and income transfers to disadvantaged people (social care, family grant, emergency aid distribution, food subsidies, etc.). Furthermore, it is important to promote policies to preserve or restore stocks of productive factors, governance and its accountability.

3.5.2 Limits of the complex humanitarian approach

Although this approach successfully helps to explain the vast majority of contemporary famine crisis, it has not come without any criticism. One of the major advantages of such approach is the capability to consider in the same framework different aspects of social life: from political to economic instances, from cultural to historical issues. This multi-causal analysis is helpful in summarizing all the elements that may have lead to a crisis and consequently allows to adopt aimed correctives. In this way it is possible to build up long-term structural policies aimed at solving those problems causing vulnerability and, on the other side, to develop actions aimed at alleviating a compelling crisis.

Anyway, as it has been suggested, this approach is liable of some criticisms.

Firstly, there are some definitional problems: how are qualified crisis? Is there a threshold that must be overcome in order to speak of crisis or it should be considered also drawn-out disasters, whose costs accumulate only over a period of time? In order to solve this dilemma, Stewart (2000) suggests to distinguish between “accelerated and protracted humanitarian crisis” arguing that “economic and other structural factors require a long gestation period, and escalate only after trigger events transform a latent conflict into an emergency. The different rates of acceleration also mean that emergencies can move from one category of intensity to another.”⁴³

Another aspect linked to the preceding point is whether an humanitarian emergency may be well measured by the number of deaths. In fact, especially in protracted crisis, excess mortality may be low: “various coping strategies can keep the manifest costs of a crisis in check, even though its risk keeps growing.”⁴⁴ This asks for efforts aimed at developing broad sets of indicators to evaluate a humanitarian crisis.

Moreover, the focus on deaths fails to completely consider the dimensions of crisis. As Stewart (2000) suggests, there are also less drastic, but often prolonged forms of suffering, linked to displacement of people, hunger, disease, poverty and environmental degradation. This means that while developing proper indicators of humanitarian crisis the totality of suffering by vulnerable people should be considered.

Another criticism is about the causality nexus between conflicts and humanitarian emergency: wars produce economic and social disruption threatening the living conditions of people and increasing their sufferings; but from the other point of view, causality may be also reversed as non-military crisis can push violence. This is the case when social inequalities, in particular horizontal ones, are widespread. For instance, a deepening economic crisis may allow the acquisition of power by a minority which subsequently may pursue aggressive internal and external policies, depriving people of means to survive. “Frequently, rivals have promoted their political interests by omitting to deliver food to those in need, destroying storages and fields, or provided food only to politically obedient groups. Thus, humanitarian aid has been integrated into conflicts and may have even exacerbated them.”⁴⁵. This aspect highlights the fact that humanitarian emergencies may not be caused by the spread of disease or the lack of food, but by more funda-

⁴³F. Stewart, “The root causes of humanitarian emergencies”, in E. Wayne Nafziger, F. Stewart, R. Väyrynen, edited by, *War, Hunger and Displacement*, Oxford University Press, 2000, p. 55

⁴⁴F. Stewart, *ibidem*, p. 56

⁴⁵F. Stewart, “The root causes of humanitarian emergencies”, in E. Wayne Nafziger, F. Stewart, R. Väyrynen, edited by, *War, Hunger and Displacement*, Oxford University Press, 2000, p. 56

mental struggles for the control of power and resources in society. This last conclusion has led to the development of a further approach to the study of crisis called *complex political emergencies* highlighting the political nature of internal wars with their complex origins and multiplicity of players.

3.6 Complex political emergencies

“In the 1990s, after acute disasters attracted international media and political attention, the complex political emergency (CPE) approach to famine analysis gained increasing prominence”⁴⁶. By identifying civil conflict or wars as a principle cause of famines, the CPE approach directed attention to places of political tensions as the most likely location of famine. This approach focuses on the role of conflict in newly emerging crises arguing that the nature of famines had changed, from essentially “natural” to predominantly “political” phenomena. They are considered “protracted political crisis resulting from sectarian or predatory indigenous responses to socio-economic stress and marginalisation.”⁴⁷ As Stewart (2002) states, CPE “are not isolated events but linked with globalization, foreign policies and economic interest”⁴⁸. A recent example of such crisis can be drawn from Congo where in 2002 was recorded an excess mortality of 2,5 million people in about three years. Of these deaths 350 thousand were due to direct violence, while the vast majority died from malnutrition and disease. Similar examples can be drawn from recent events in Sudan, Angola, and Sierra Leone: in these and other similar cases, a few people gained from the prosecution of wars, while others suffered and died from “widespread violence, forced migration, human rights violations, and administrative, economic, social, and political collapse.”⁴⁹

These considerations induced some social scientists, and in particular Jenny Edkins, to assess that “definitions of famine as a failure of some sort is missing the point [...] famines, related deaths, and migrations or impoverishments produced by the crisis are enormously beneficial to their perpetrators.”⁵⁰ From this point of view, Edkins asks to look at famines as a success, rather than a failure, a normal output of the current economic and political system (Edkins, 2002).

This view of famines as a political process conduces to ask who receive some benefit from mass starvations. In such a framework, political process is supposed to be a process which involves relationships of power between

⁴⁶S. Devereux, P. Howe and L. Biong Deng, The new famines, IDS Bulletin, 33(4), 2002

⁴⁷M. Duffield, Complex Emergencies and the crisis of developmentalism, IDS bulletin, vol. 25, n. 4, 1994, p. 4.

⁴⁸F. Stewart, Root causes of violent conflict in developing countries, BMJ, vol. 324, 2002, pp. 342 - 345

⁴⁹E. Sondorp and A.B. Zwi, Complex political emergencies, BMJ, vol. 324, 2002, p. 310

⁵⁰J. Edkins, Mass starvation and the limitations of famine theorising, IDS Bulletin, vol. 33, n. 4, 2002, p. 17

people and between groups, that is to say, power relations between different social groups. From this point of view this particular kind of analysis is brought back to Frances Stewart's thesis. The core of CPE is that politics is seen as not separable from other social fields, thus have to be held together in a response planning. From this particular point of view, CPE approach is far from the traditional malthusian and FAD hypothesis. Less straightforward is the link with the entitlement failure approach (EF). As it has been said, Sen propose a framework in which he considers all the factors which influence the ability of people to obtain food, included political aspects of society. The difference between CPE and EF seems to reside in the role played by politics: in the first one it is considered as endogenous, deliberately bringing to determined conclusions, in the second one is taken as exogenous. This difference may be explained by considering that CPE looks at famines as long lasting processes, while Sen's approach focuses on the single events that lead to a crisis: the first approach is a long-term analysis, instead the second one propose a short-term analysis.

Another difference between the two models is that CPE points to produce a "detailed analysis, rather than a grand general theory"⁵¹: to study mass starvations as a political process, means examining how they arise, what actions or inactions make them happen, who is to be held responsible, who exactly are the beneficiaries and the victims, and, finally, which is the primary origin.

In order to be clearer about the particular point of view of CPE approach, Edkins suggests to replace the notion of famine with the phrase "mass starvations" evoking the parallel of mass killings and genocides. This strong and shocking term points out that famines are the result of deliberate actions or inactions by people who know what the consequences of those actions will be.

3.6.1 Causes of conflicts and possible policies

Analysis made about causes of crisis in CPE approach and in the complex humanitarian approach are not very different. Putting on one side political reason, in both viewpoints the complex political emergencies are fundamentally linked to conflicts and violence. In order to understand the reason for which groups of people start fighting it should be clear what push them together against others. From this point of view, as it has been said, the analysis is not so different from the CHE approach. Four different hypothesis have been advanced in order to explain conflicts:

- *group motivation*: group motives, resentments, and ambitions provide motivation for civil war (horizontal inequalities). Societies may be composed of different cultures, religions, classes, political parties, etc.

⁵¹J. Edkins, *ibidem*, p. 15

In this situation relatively deprived groups may want (or be persuaded by their leaders to want) to redress the situation, and when this is not possible, they resort to violence. It is also interesting to notice that the linkage may be reversed. That is to say: relatively privileged groups may also be motivated to fight to protect their privileges against attack from relatively deprived groups.

- *private motivation*: wars imply costs and benefits that may be unequally distributed (greed). The particular allocation of costs and benefits can motivate people to fight. “where alternative opportunities are inadequate, because of low incomes and poor employment, and the possibilities of enrichment by war are considerable, the incidence and duration of wars are likely to be greater.”⁵² Collier and Hoeffler tested the greed hypothesis and found a significant association with conflicts.
- *failure of the social contract*: when the government fails in delivering services and in providing sufficient economic conditions, people may reject it and violence may arise. Therefore, high and rising levels of poverty and a decline in public services may cause conflicts. “Econometric studies show that the incidence of conflict is higher among countries with low per capita incomes, life expectancy and economic growth” (E.W. Nafziger and J. Auvinen, *The economic causes of humanitarian emergencies*, in Nafziger E.W., Stewart, F., Vayrynen R., eds. *War, hunger and displacement: the origin of humanitarian emergencies*. Oxford: Oxford University Press, 2000, pp. 91 - 145.)
- *green war*: this motivation assumes environmental degradation as a source of poverty and, consequently, a cause of conflict (Homer-Dixon T., 1997). For example, a growing scarcity of water may lead to conflicts. Nevertheless, here evidence is much confused: “both environmental poverty and resource riches can be associated with conflict”⁵³ In fact, environmental stress may lead to desperate situations from which violence may arise. From the other side, resource rich countries may give strong motivation to particular groups to gain control over such resources.

In conclusion, it should be remembered that all probable causes cited until now, individually considered, can not explain all conflicts. Empirical evidence suggests that they only are hypothesis and just contribute in explaining conflict.

Throughout those analysis it is possible to draw some hints about policies, which could be usefully adopted to face complex political emergencies.

⁵²F. Stewart, Root causes of violent conflict in developing countries, *BMJ*, vol 324, 2002, p. 343.

⁵³F. Stewart, Root causes of violent conflict in developing countries, *BMJ*, vol 324, 2002, p. 343.

First of all, it could be argued that by adopting policies to tackle social and environmental degradation would reduce the motives for conflicts, and would represent the basis for future development.

Furthermore, horizontal inequalities as well as private incentives to fight should be faced with a better redistribution of incomes, with improved social services and improved labor public programs for periods of crisis. Policies towards investment, employment, education, health care, etc. should aim at reducing imbalances and inequalities.

Finally, there is a need to secure inclusive government so that most individuals and groups would gain from participation to public life.

3.6.2 Main findings

The CPE approach is a fascinating approach focusing on interests of agents. It argues that conflicts leading to hunger and starvation may be due to deliberately choices of some actors, without considering the costs for the society as whole. That is to say that it could be considered a particular case of the broader set represented by complex humanitarian emergencies. In this sense, it is partially subjected to same criticism. This may be summarized as follow:

- which elements should be considered to assess the existence of a crisis?
- how to evaluate the dimensions of a crisis?
- causality nexus between conflicts and emergencies: direct and indirect causation.

More specifically, complex political emergencies approach points to a long-term analysis aimed to consider social structures, social relations, history, politics and economics of a country focusing on structural elements that may have determined the conflict. As a consequence, the main policy suggestions that may be drawn-out are mainly long-term policies, which may be implemented only in the long run with structural interventions. Obviously, these kind of policies are needed and desirable, even because they are helpful for future development, but in the short-term, while a crisis is on, they don't offer useful insights to react immediately.

Consistently, Jenny Edkins proposes to adopt and improve a human rights approach while establishing robust anti-starvation political contracts locally. "Famines are not caused by abstractions - climate, food supply, entitlement failure, war - they are brought about through the acts or omissions of people or groups of people. These people are responsible for famine and mass starvation, and they should be held accountable."⁵⁴

⁵⁴J. Edkins, Mass starvation and the limitations of famine theorising, IDS Bulletin, vol. 33, n. 4, 2002, p. 17

4 Experiences from South-Eastern Africa

In this section we are going to observe a few cases of famines, namely: Malawi, Zambia and Zimbabwe, in order to evaluate how well the models outlined above explain contemporary famines. The South-Eastern part of Africa is periodically hit by food shortages and in 2002 many of these countries were simultaneously facing famine. In these cases the traditional models outlined above failed to prevent people sufferings. The aim of this section is to understand what went wrong in these experiences in order to refine existing models.

4.1 The Malawian famine in 2002

Malawi is a landlocked country situated in the South-Eastern region of Africa. It has a population of about 12.9 million people living on an area of about 118,500 Km². It is a chronically poor and food insecure country: 65% of the population lives below the poverty line of US\$1/day, rural unemployment is very high and rural wage rates are very low (ActionAid, 2002). Moreover, about 33% of people is undernourished and 14.2% of adults live with HIV/AIDS.⁵⁵

Malawi's main economic activity is represented by agriculture which accounts for about 38.4% of GDP (2003) and employs about 81% of total labour force (UNCTAD, 2005).

The agricultural sector is dualistic: on one side there are *small-scale farmers* producing the main food crop (maize), rice, sorghum, pulses, cassava and sweet potatoes; on the other side there is the *estate sub-sector* which is mainly devoted to the production of tobacco, tea and sugarcane (cash crops) employing about 11% of total agricultural workforce (FAO/WFP, Malawi, May 2002) and providing the main export goods since they contribute to an average of 82% of the malawian annual export earnings (FAO/WFP, Malawi, June 2003).

Recently the agricultural malawian production became very unstable and increasingly characterized by marked swings, mainly due to droughts. In 1996/97 there was a drop in maize production followed by a recovery in 1998/99 and 1999/2000 thanks to increased use of modern agricultural inputs. Subsequently the production fell down again in 2000/01 and in 2001/02 (FAO/WFP, Malawi, May 2002). This is astonishing if we consider that during 1960s Malawi was one of the strongest economic performers in Sub-Saharan Africa with an annual growth rate of about 6% mainly driven by an export-oriented agricultural sector (K. Sen, A. Chinkunda, 2002). Actually, the country is a net-importer of food depending substantially on inflows of economic assistance from the IMF, the WB, and individual donor nations (K. Sen, A. Chinkunda, 2002).

⁵⁵UNCTAD, Statistical profiles of the Least Developed countries, 2005

Since 1990s Malawi has become increasingly affected by food shortages and famines. Usually, these crisis were triggered by natural calamities such as drought or floods but not always they resulted in famines. For example “in 1991/92 a severe drought throughout Southern Africa reduced maize production in Malawi to 800,000 metric tonnes (less than half the 2001 harvest) but did not produce similar tragic impacts.”⁵⁶

In 2002, Malawi was affected by a severe flooding which reduced the production of staple food, killed livestock and destroyed infrastructures, such as roads (ActionAid, 2002). Food production shrank by 38.5% from a record high of 2.5 million of metric tonnes in the 1999/2000 season to 1539 million of metric tonnes in 2001/02 (FAO/GIEWS, December 2002). This natural shock combined with high levels of poverty, the declining agricultural productivity, the prevalence of HIV/AIDS and the breakdown of community solidarity contributed to the on set of a famine.

Estimates suggest that between January and April 2002 about 500 - 3000 people starved or died because of famine-related illnesses (ActionAid, 2002). The mortality peak was reached between February and March 2002. “Very young people, elderly and the already ill persons seems to be the most affected subjects of society. However it appears that healthy adults also succumbed”⁵⁷.

Official malnutrition estimates during the famine are not available, but cases of oedema and wasting in both adults and children, people spending as much as 4 days without a meal, food poisoning, widespread abdominal illnesses and anaemia were observed.

In the same period, due to the scarcity of food, prices grew up steeply. “Prices of maize in local markets have increased some 400% from their levels of a year ago. By October, a kilogram of maize was quoted at 18 Kwacha, against 2 to 5 Kwacha at the same time last year.”⁵⁸ As a consequence of food scarcity and of high food prices, people could no more access food and begun to starve. In order to overcome the shortage, several coping strategies have been adopted⁵⁹, mainly:

- rationing food consumption (smaller portions and fewer meals per day);
- consuming and selling premature maize (undermining the future food security);
- selling livestock;

⁵⁶FAO/GIEWS, Africa Report n. 3, December 2001

⁵⁷Devereux, S., State of disaster: causes, consequences & policy lessons from Malawi, ActionAid Report, June 2002, p. 19

⁵⁸FAO/GIEWS, Africa Report n.3, December 2001

⁵⁹Devereux, S., State of disaster: causes, consequences & policy lessons from Malawi, ActionAid Report, June 2002, p. 19 - 20

- stealing food.

As suggested above, a natural disaster reduced the availability of food in 2002, but the quantity of food produced was higher than in 1992 when there was no food crisis. Such a paradox could be explained if we consider a wider set of elements.

4.1.1 A possible explanation of the crisis

A first aspect affecting food availability in 2002 were excessive rains which, as shown above, contributed to the failure of staple food crops. A peculiar aspect of such natural shock was its covariance, that is to say it occurred simultaneously in the whole South-Eastern region of Africa threatening the food availability of the entire zone.

Such a shock took place in an already fragile situation. In fact, in order to fight poverty and macroeconomic instability, Malawi accepted IMF and WB “suggestion” to introduce a structural adjustment programme since 1979. This programme, which continued through the 1980s and 1990s, was supported by successive IMF stand-by operations and World Bank structural and sector adjustment loans (FAO/WFP, Malawi, May 2002).

The government reformed input market allowing the entry of private agents in the importations and distribution of inputs; reformed the agricultural credit market; removed fertiliser subsidies; liberalized prices and productions; ADMARC’s⁶⁰ quasi-monopsony power was eliminated (K. Sen, A. Chinkunda, 2002).

All these reforms were intended to improve malawian market competitiveness, but probably they were introduced too rapidly ignoring the effects they could have on the fragile malawian economy.

In fact, the removal of seeds and fertilizers subsidies, the liberalization of credit market and of food production reduced farmers’ incentives to engage in the production of staple food: production costs raised and most people could not afford them; price and production deregulation enabled small-holder farmers to grow cash crops allowing a modification in the structure of the production since many farmers preferred to grow up more profitable cash crops rather than staple food. Moreover, after the deregulation of prices, agricultural income became more volatile and, consequently, even the access to credit was restricted. Therefore, investments in agriculture reduced and so did food crops even independently from the natural shock.

As shown in fig. 5 prices deregulation was followed by high volatility of staple food prices: in case of abundant yields, food prices slack off; when yields are scarce, food prices grow up. This imply that in normal harvest time small-holder farmers are disadvantaged by low prices reducing their

⁶⁰ADMARC: Agricultural Development And Marketing Corporation, state marketing board

possibility to invest and to secure production for the next season. Since the strong majority of the population receive its income from agriculture, their income are strongly affected by prices volatility. Conversely, when yields are scarce, prices grow up and, because of lower incomes, people does not have enough resources to secure food.

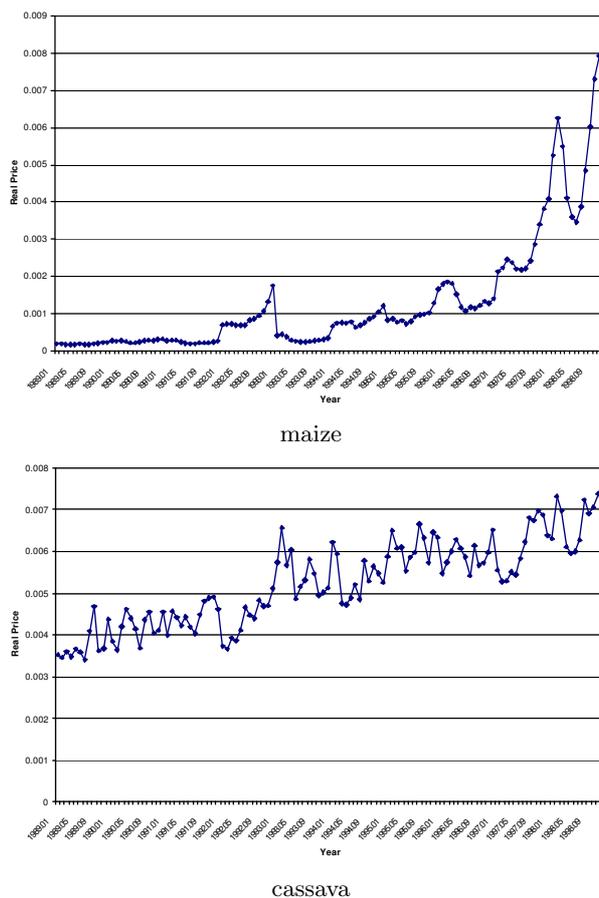


Figure 5: Real maize and cassava prices between 1989 and 1998 (Source: K. Sen, A. Chinkunda, 2002, pp. 12 - 14)

Another element which allowed the on set of the famine was the slow response by government and donors due to a wrong estimate of food production. In fact, until the end of 2000, maize production seemed good and about 2.5 million MT of cereals were expected. Subsequently, because of floods, estimates were revised downward three times (see tab.2), but it was quite ignored until June 2001 because roots and tubers production seemed sufficient to offset possible shortages.

Consequently, government failed to promptly recognize the crisis and donors were not alerted until it was too late to avoid famine and the subse-

Maize production estimates	Feb 2001	Apr 2001	Jun 2001
2.5 million MT in 1999/2000	-15%	-24%	-32%

Table 2: Maize production estimates in 2001 (Source: ActionAid, 2002)

quent intervention was inescapably slow.

The situation was further aggravated by the fact that, because of the precedent year crop failure, private stocks were inexistent or very low.

It is also interesting to focus on what happened to national security stocks, the so called Strategic Grain Reserve (SGR), in order to understand why there was not an effective government intervention to secure food availability and prices stabilization when the crisis was declared. SGR is one of the most common policy instruments to counteract and to prevent famines. It consists in storing up cereals in different zones of a country in order to grant a prompt availability of cereals in case of scarcity and to control food prices. Such a mechanism works well in case of necessity, but it implies high management costs, cereals stored are subjected to withering, and money spent can not be used for investments. For these reasons, international financial institutions propose the reduction of SGRs and the adoption of market-based food security system.

Consequently, in Malawi IMF and other donors advised that the national grain reserve should have been run independently and on a cost-recovery basis: in 1999 a National Food Reserve Agency (NFRA) was set up as an independent trust having the task to manage grain reserve, but it was not capitalized. Therefore, NFRA had to take a loans from commercial and government banks in order to purchase 167000 metric tonnes of cereals to store. “In 1999 and 2000, the SGR was stocked at near full storage capacity of 180,000 MT. This level of stock raised donor concerns about fiscal costs and sustainability.[...] The IMF also argued that holding 175,000 MT in the grain reserve was too expensive, and that the NFRA should not hold ‘excess stocks’.”⁶¹. Consequently, NFRA had to sell some of the SGR:

- in order to repay its debt;
- because storing maize was expensive, maize stored was old and losses were high;
- because NFRA was not capitalized and had salaries to pay.

Furthermore, since maize prices were low because of 2000 bumper harvest, “IMF advised to export this grain rather than ‘dump’ it on local markets

⁶¹Devereux, S., State of disaster: causes, consequences & policy lessons from Malawi, ActionAid Report, June 2002, p. 13

to avoid further depressing prices and undermining producer and trader incentives.”⁶²

In 2001 most of the SGR maize was sold to Mozambique and to Kenya and the stock was zero. Moreover, given that market supplies of food were abundant, NFRA and ADMARC decided not to buy maize in 2000/01 season. Consequently, when in 2001 and 2002 harvests failed, there was no maize available in stocks to deliver and to oppose to the rising of food prices.

Anyway, the system supported by IFIs did not fail only because the SGR was empty, but also because the grain reserve should have been replaced by food imports from neighboring countries. Unfortunately, this mechanism was not effective because there was not enough food available in the South-Eastern region of Africa. Those countries, as it will be shown afterwards, were all facing a contemporaneous food crisis and available food, especially in South Africa, was not sufficient to feed needy people in the region.

The scarce food availability in the region had to be shared among numerous countries facing starvation problems such as Zambia, Zimbabwe, Mozambique, and Lesotho. This pushed regional food prices upwards further reducing malawian possibility to import sufficient quantities of food.

Situation was further constrained by high inflation levels and the devaluating exchange rate (K. Sen, A. Chinkunda, 2002). The annual inflation rate between 1990 and 2000 heavily fluctuated averaging 30% (see tab. 3).

Year	1990	1994	1995	1996	1997	1998	1999
Inflation rate (%)	11.9	34.7	83.4	37.6	9.2	29.8	44.7

Table 3: Annual inflation rate in 1990s (Source: K. Sen, A. Chinkunda, 2002)

The exchange rate system was liberalized in 1994 to promote the country’s competitiveness in international trade but by the first half of 1995 the real exchange rate depreciated by 41.7% limiting the ability of the country to import goods from abroad. The Malawi Kwacha depreciated again by 15% in 1997 and by 60% in 1998 because of fiscal slippage, a slowdown in donor inflows and a decline in tobacco export earnings owing to a drop in export prices (see fig. 6). “The period between 1998 and 2000 has witnessed further depreciation of the Malawi Kwacha resulting directly from low foreign exchange earnings from the export sector reaching an average of 80 Malawi Kwacha per 1 US dollar in January, 2001.”⁶³

Furthermore, high inflation and prices volatility increased economic uncertainty reducing entrepreneurship, investments and further depressing national (food) productivity.

⁶²Devereux, S., *ibidem*, p.11

⁶³Sen, K. and Chinkunda, A., Economic reforms and rural livelihoods in Malawi, LADDER Working Paper, (20), July 2002, p. 9

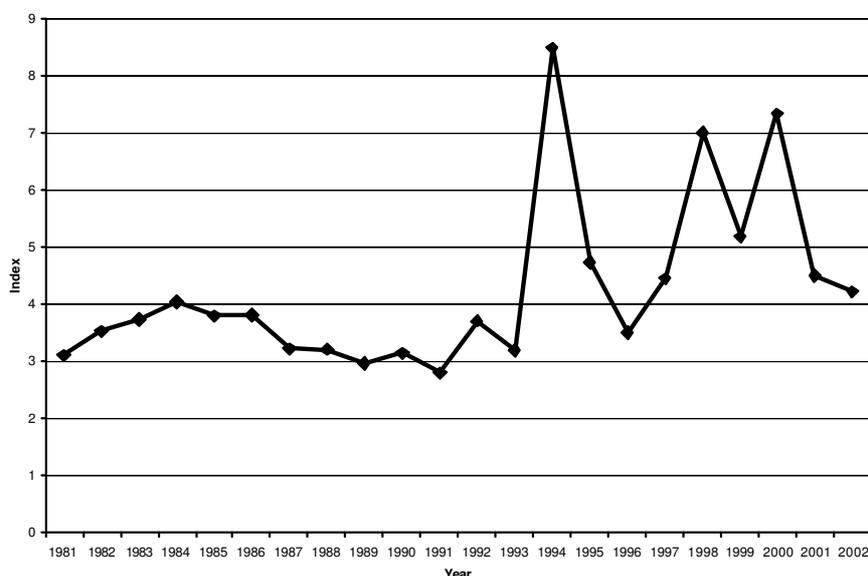


Figure 6: Real exchange rate from 1981 to 2002 (Source: K. Sen, A. Chinkunda, 2002, p. 10)

Finally, it was very difficult to deliver the small quantity of imported and available food in the inner parts of Malawi because food market integration at the national level was still not complete, in part due to inadequate rural infrastructure and in part due to the thinness of the market (K. Sen, A. Chinkunda, 2002). Moreover, the distribution of food was in private traders' hands, but since the poor quality of roads, these agents had little interest in entering markets in remote regions of the North.

A further source of failure is linked to the lack of transparency in the SGR management which allowed hoarding and opportunistic behavior. In fact, when in 2001 IFIs advised to sell the SGR, secretly the reserve was completely emptied. In early 2001, given the high level of food prices, ADMARC announced that it would no longer sell maize as a commercial crop and that it would only purchase maize at very low prices. "This created disincentives for farmers who switched out of maize production into other food crops and more lucrative crops"⁶⁴. Then maize was sold at 7 MK/Kg but it was hoarded mainly by rich and influential people waiting for the prices to go up. Later, ADMARC was obliged to import maize from abroad at much higher prices. "In september 2001, traders were stockpiling maize and waiting to hear at what price imported maize would be sold by ADMARC. When ADMARC announced its selling price - at MK/Kg 17, more than double its previous price for local purchases - this caused a dramatic

⁶⁴Devereux, S., State of disaster: causes, consequences & policy lessons from Malawi, ActionAid Report, June 2002, p. 10

impact on the market. Traders immediately followed suit, by raising their prices to ADMARC's level or above. Instead of a gradual evolution of maize prices, there was a price spike and grain simply became unaffordable for the poor."⁶⁵

Considering the above events and conditions, we can suggest that the 2002 malawian famine can be explained by the interaction of two failures: on one side we have a food intervention decline and on the other one there are market policies failures.

4.2 The Zambian famine in 2002

Zambia is a landlocked country situated on the west side of Malawi covering a surface area of approximately 750,000 Km². The estimated total population amounts to about 10.87 million people characterized by one of the lowest population density in the region (15 persons per Km²) (FAO/GIEWS, August 2002).

Similarly to Malawi, it is a chronically food insecure country where a share of the population between 78% and 85% live below the poverty threshold of US\$1 per day (FAO/WFP, Zambia, June 2002). Moreover, 2.3 million people living in rural areas and 185,000 people in urban areas are undernourished and 1 out of 5 zambian has (or live with) HIV/AIDS (FAO/WFP, Zambia, June 2002).

Zambia is endowed with abundant agricultural and mineral resources and its economy has strongly depended on mineral exports, mainly copper and cobalt (FAO/WFP, Zambia, June 2002). Since mid 1970s revenues from this sector have been reducing due to unfavourable external trade environment and falling output volumes. "This decline resulted from low international prices and a decrease in domestic copper production due to under-investment in the sector. The average international copper prices fell from US\$ 119/lb in 1990 to US\$ 81 in 2000. During the same period, copper production fell from 422,000 to 260,000 tonnes per year."⁶⁶

As a consequence of the slowdown of the mining sector, the share of agriculture to the national economy increased from about 15.5% in 1996 to 24.8% in 2000 employing the 67% of total labour force (UNCTAD, Statistical Profiles of the Least Developed Countries, 2005). Nonetheless, only 10 - 15% of total land resources are actually exploited leaving a vast part of the region unutilized. "When maize and fertilizer subsidies reached their peak in the late 1980s, the area under maize cultivation was about 1 million hectares accounting for about 70% of the total cropped area. During the past 10 years, the share of maize to both cultivated area and production has

⁶⁵Devereux, S., *ibidem*, pp. 10 - 11

⁶⁶FAO/WFP, Special Report: Crop and Food supply assessment - Zambia, 18 June 2002, p. 3

declined significantly”⁶⁷ reducing by 43% from 1989 to 1999.

Maize is the nation’s main staple food followed by cassava and sweet potato, while cotton and groundnuts are the two main cash crops.

Since 1990s food production started to fluctuate heavily partly because of the reduced cropped area and partly because yields productivity declined (FAO/WFP, Zambia, June 2002). Consequently, food insecurity grew up. In particular, 2002 experienced the second consecutive decreased harvest due to adverse weather conditions. “In 2001 floods destroyed crops in the eastern and southern provinces of Zambia [...]. In the 2001/02 growing season five of the nine provinces of Zambia have had erratic rainfall”⁶⁸. Because of prolonged dry spells during the 2001/02 growing season zambian cereal production drastically reduced. The 2002 output of maize was estimated at about 606,000 tonnes that is to say 24% lower than 2001 crop and 42% lower than 2000 normal crop.

About 2.5 million people were recognized in urgent need of food particularly in the South of the country where 60% of the people was in need of relief food. Anyway, also “Eastern, Western, Lusaka and Central provinces were badly affected”⁶⁹.

In normal periods, maize prices start rising towards the end of the year until February and then start to decline with the arrival of the new harvest. “During the 2001/02 marketing season, prices started to rise as early as July indicating a significant shortfall in the supply of maize.”⁷⁰ By December 2001 prices became so high that, for example, in “Kasempa, a maize deficit region, the real maize price increased by 300% from 1500 Zambian Kwacha (ZK) in November 2001 to 4500 ZK in February 2002. In kalomo, a maize surplus region, the price rose from 1500 to about 2500 ZK in the same period. In the capital city, Lusaka, a large consumer centre, the price doubled from 1500 in November to 3000 ZK in February.”⁷¹ As a consequence of food scarcity and of high food prices (see fig.7), people could no more access food and begun to starve.

Astonishingly, Zambia’s government did not recognize the crisis declaring that “the idea that Zambians are starving is far-fetched”⁷² and rejected food aid shipments containing genetically modified organisms.

The situation was further aggravated by the fact that households were exhausting their coping strategies mechanisms. “Families in Central Province have adopted new coping strategies such as poaching, fishing, asset and

⁶⁷FAO/WFP, Special Report: Crop and Food supply assessment - Zambia, 18 June 2002, p. 4

⁶⁸ChristianAid, South Africa food emergency, July 2002

⁶⁹BBC News, Tension mounts over Zambia’s food shortages, 3 Oct. 2002, p. 1

⁷⁰FAO/WFP, Special Report: crop and food supply assessment - Zambia, 18 June 2002, p. 10

⁷¹FAO/WFP, *ibidem*, p. 10

⁷²BBC News, Tension mounts over Zambia’s food shortages, 3 Oct. 2002, p. 2

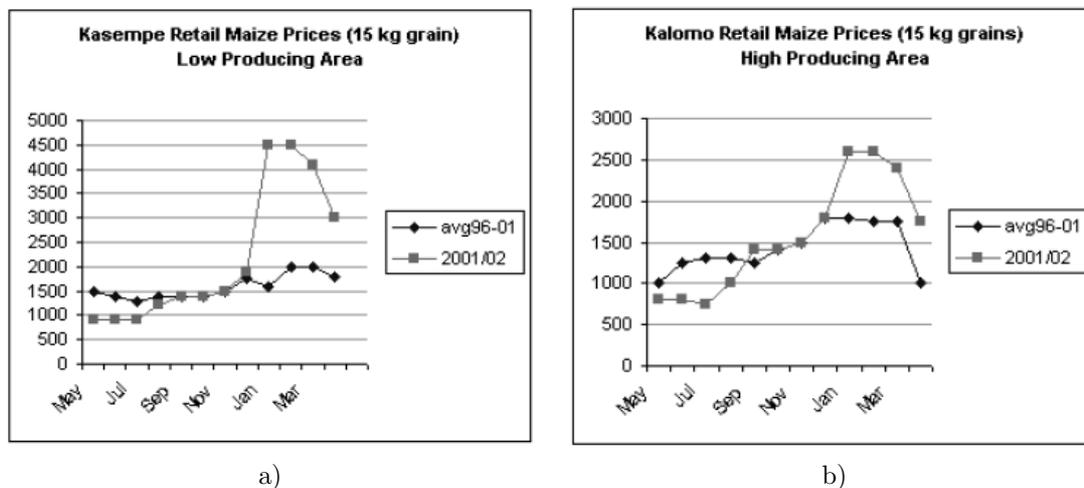


Figure 7: Retail maize prices in two different regions of Zambia (Source: FAO/WFP, Special report - Zambia, June 2002, p. 10)

charcoal sales, and agricultural labour for income and food. Migration to towns is also increasing in Central and Eastern. Border communities engage in cross border trading and piecework.”⁷³ Farmers started to harvest maize earlier than usual, to collect and consume wild foods and to sell livestock and other assets. Finally, food crisis was characterized by increases in theft, absenteeism from school, consumption of unfamiliar food and lack of water undermining the fish population for the next year (FAO/WFP, Zambia, June 2002).

4.2.1 How to explain the famine

“Zambian famine in 2002 was partly due to acutely irregular rainfall amount and patterns as well as more chronic problems [...], untimely access to fertilizer and quality seeds, recycling of hybrid seeds and heavy reliance on a single crop for income and consumption”⁷⁴. First of all it should be remembered that in the same period also Malawian food security was threatened by heavy rains and, as it will be shown later, the same was happening to Zimbabwe and in the whole South-Eastern region. Such a covariant shock affected harvests and reduced imports possibilities.

Nonetheless, the natural shock happened in an already fragile context characterized by high incidence of poverty and of HIV/AIDS, high inflation and a devaluating currency, a falling GNP and a growing foreign debt. In order to fight these structural problems, since 1992 Zambia was obliged to

⁷³FAO/WFP, Special Report: crop and food supply assessment - Zambia, 18 June 2002, p. 13

⁷⁴FAO/WFP, ibidem, p. 12

enact agricultural reforms as part of wider structural adjustment programme pushed through by the IMF and World Bank in the face of mounting debts and fiscal crises (Lawson, 2002). In particular, the government of Zambia was obliged to abolish the state marketing board, to remove maize and fertilizer subsidies, to reform the agricultural credit market and to end price-control policies.

Such reforms were intended to improve marketing conditions in Zambia and to favor its growth, but in practice they failed to achieve their goals. In fact, rapid agricultural liberalization failed to integrate poor farmers into the market: incomes became much more volatile; credit was no more widely available; seeds and fertilizers costs were too high, production costs raised and most people could not afford them. Finally, investments in agriculture reduced and so did food crops even independently from the natural shock (Lawson, 2002).

All these aspects contribute to understand the context in which the famine set on, but a much more direct effect was the slowness of the response to the crisis.

This slowness is due to the absence of private and public stocks, the late recognition of the crisis and the inability to import sufficient quantities of food.

Unfortunately, when the crisis became acute people had no private food stocks because they were largely exhausted by the precedent year crop failure and people had not the possibility to replenish them. “The food situation is particularly serious for vulnerable groups in remote areas which have exhausted their food stocks.”⁷⁵

Moreover, before economic reform in 1992, Zambia, similarly to Malawi, used to have grain reserves to store maize in case of food shortage and to control food prices. In fact, reserves play a fundamental role to fight food crisis in landlocked countries with poor roads. Anyway, as suggested above, they are very costly to maintain, often inefficiently managed, and represent a major drain on government resources (Lawson, 2002). For those reasons, IMF and WB suggested the government to scale down public food reserves to focus solely on emergency relief, but in reality zambian grain reserves resulted closed overnight. “In Zambia, the important role of remote state-run rural depots was given scant consideration during the agricultural reforms of the early '90s, with dramatic implications for the farmers who relied on them.”⁷⁶

Another element which allowed the on set of the famine was the late recognition of the crisis by the government that until October 2002 denied the crisis⁷⁷. As a consequence, the government was not prepared to face the

⁷⁵FAO/GIEWS, Africa report n. 3, December 2002, p. 61

⁷⁶Lawson, M., Death on the doorstep of the summit, Oxfam Briefing Paper, 29, August 2002, p. 8

⁷⁷Dale, P., Tension mounts over Zambia's food shortages, BBC News, 3 Oct. 2002, p. 2

food emergency and did not alert donors, public stocks were not replenished and no import channels were activated until too late. Moreover, when international aids started - by the end of 2002 - , the government of Zambia rejected donations accusing WFP of distributing genetically modified food to the people hit by drought and famine (BBC News, 6 November 2002).

A further failure of the food security system is linked to an excessive confidence on market functioning. In fact, the food security system had to be based on commercial imports from neighboring countries, but - just like Malawi - this mechanism did not work because food was lacking in the whole region. As suggested above, the countries of South-Eastern part of Africa were all facing a covariant natural shock which limited the food production and availability in the zone pushing food prices upward.

Imports were not only constrained by low availability of food and high prices in the region, but also by high inflation levels, the devaluating exchange rate and by the important role played by traders. In fact, rapid inflation combined with sharp devaluation of the Zambian Kwacha has been eroding the purchasing power of households reducing the possibilities to purchase and to import food. Inflation rates during 1990s have always been high averaging 60% and reaching a peak in 1993 when inflation rate was 183%. After 2000 inflation rate seemed to stabilize at about 25%.

Contemporaneously, the Zambian Kwacha was subjected to successive devaluations especially because of low foreign exchange earnings from the export sector: in less than 6 years it was devaluated by more than 350%. In 1996, US\$ 1 was exchanged for ZK 1200, against ZK 4000 in 2002 (FAO/WFP, Zambia, June 2002). Finally, zambian macro-economic situation was further depressed by growing external debt that in 2003 amounted to US\$ 6,424,900 equivalent to a debt service of 43.6% of exports (see tab.4).

Year	1980	1990	1995	2003
External debt (US\$ million)	3,261	7,265	6,853	6,424

Table 4: Annual external debt of Zambia (Source: FAO/WFP, June 2002 and UNCTAD, 2005)

High inflation and prices volatility, currency devaluations and high external debt increased economic uncertainty reducing entrepreneurship, investments, import capacity and further depressing national (food) productivity.

Furthermore, the distribution of food was constrained by inadequate rural infrastructure, particularly due to poor conditions of the roads, and in part by the thinness of the market. In fact, Zambia has the lowest population densities in the region and thus distances to markets are greater than in neighboring countries. This, combined with the poor state of roads in some areas, restricts trade and reduces incentives to reach the most remote regions (FAO/WFP, Zambia, June 2002).

Evaluating causes and effects of the elements presented above, it can be assessed that the zambian famine in 2002 was largely due to specific causes precipitating a chronic food insecure context. These aspects are mainly linked to an interaction of a mismanaged market reform and to a decline in food intervention policies.

4.3 The Zimbabwean famine in 2002

Zimbabwe is a country situated in the South-Eastern region of Africa not too far from Malawi and Zambia. It covers a surface area of about 391,000 Km² with a population of 12.9 million people and a GNP pro caput of US\$ 351 (UNCTAD, Statistical profiles of the Least Developed countries, 2005).

Similarly to the previous two countries, Zimbabwe is a landlocked country facing chronic food insecurity, but, astonishingly, in past years it was known as “the bread basket of Africa”⁷⁸ being traditionally “a major exporter of food to the region”⁷⁹. Malnutrition is an increasing problem in Zimbabwe: “According to the Demographic Health Survey (1999), national acute malnutrition is estimated at 6.4% with very high rates in Mashonaland West (19.4%), and Mashonaland East (12.7%). Rural areas have twice the rate of acute malnutrition (7.7%) compared to the urban areas (3.7%). More than one out of four children are chronically malnourished. About 5.6 percent of the women of childbearing age are underweight. Other data show the prevalence of children 12-71 months old with Vitamin A deficiency is 35.8%.”⁸⁰

Actually, about 75% of the population lives below the poverty line of US\$2/day and about 42% is considered very poor (less than US\$1/day). These estimates include mainly rural population of farmers, petty traders and farm workers, urban unemployed and informal sector operators. The situation is worsening because of high and increasing unemployment combined with the increasing cost of living over the past few years (FAO/WFP, Zimbabwe, May 2002). Moreover, “Zimbabwe is one of the worst affected countries by AIDS which has reached almost an epidemic proportion”⁸¹. About 33% of Zimbabwean adults is living with HIV/AIDS.

Agriculture is one of the most important sectors of Zimbabwe’s economy. It provides over 50% of the country’s total employment and contributes to the GDP for about 15%. It is strongly important for the country’s foreign exchange (contributing for about 40%) and provides the bulk of raw materials to the manufacturing sector (FAO/WFP, Zimbabwe, May 2002). “In

⁷⁸Rotberg, R. I. “The Starving of Africa.” Boston Globe, 26 June 2002

⁷⁹BBC News, Food aid arrives in Zimbabwe, 23 January 2002

⁸⁰FAO/WFP, Special Report: Crop and Food supply assessment - Zimbabwe, 29 May 2002, p. 22

⁸¹FAO/WFP, Special Report: Crop and Food supply assessment - Zimbabwe, 1 June 2001, p. 5

2000 agricultural exports represented about 42% of total exports (US\$ 1708 million) of which tobacco (26%) and cotton (6%) were the leading export earners.”⁸²

Anyway, the most important sector in Zimbabwean economy is represented by services constituting the 65% of the total GDP. This entails that a large part of the population in Zimbabwe - mainly in urban contexts - depends solely on their wages to buy food.

Recently, the situation worsened since Zimbabwe’s economy started to decline. Unemployment is growing, while main cash crops (tobacco and cotton) are slowing down as well as gold exports. As a consequence foreign exchange earnings are declining and the country is even less able to import food and other commodities to support industries (mainly fuel and electricity). The cost of living has increased while GDP is contracting: in 2000 GDP reduced by 4.2% and in 2001 by 8.6% (FAO/WFP, Zimbabwe, May 2002). “Business closures and downsizing and consequent job losses have been rampant [...]. With the population increasing, the decline in per capita income has been steeper than in the aggregate GDP.”⁸³

The economy is also undermined by persistently high inflation (see tab.5) which is expected to be over 113% in 2002 with consequent adverse impact on people’s already precarious livelihoods.

Year	1998	1999	2000	2001
Inflation rate (%)	32	58	57	55.8

Table 5: Annual inflation rate from 1998 to 2001 (Source: FAO/WFP, Zimbabwe, June 2001)

Finally, economic growth is further constrained by a growing external debt which in 2000 amounted to US\$ 4.37 billion and two years later went up over US\$ 5 billion.

A further aspect characterizing Zimbabwe and its economy is the land reform enacted since 1980s and still carried out in 2002 aimed at redistributing land from the commercial sector to the communal and resettled areas. Agricultural land in Zimbabwe is divided into three different sectors:

- large-scale commercial: 15.5 million hectares;
- small-scale commercial: 1.4 million hectares;
- communal: 16.4 million hectares.

Since independence, the distribution of land remained highly skewed: in 1995 “average size of large scale commercial farms (4700 in total) was 3000

⁸²FAO/WFP, *ibidem*, p. 6

⁸³FAO/WFP, Special Report: Crop and Food supply assessment - Zimbabwe, 29 May 2002, p. 5

hectares as opposed to less than 30 hectares for the communal and resettled area farms (862000 in total)”⁸⁴. Furthermore, large scale commercial farms were mainly owned by white farmers, who constituted less than one percent of the country’s population but produced the vast majority (about 80%) of the agricultural production, especially tobacco and cotton (FAO/WFP, Zimbabwe, June 2001). “In 2000 agricultural exports represented about 42% of total exports (US\$ 1708 million) of which tobacco (26%) and cotton (6%) were the leading export earners.”⁸⁵ Consequently, in order to increase the access of the indigenous people to land, the government implemented a land reform programme divided into three phases: the first one goes from 1980 to 1998 during which 3.5 million hectares of large-scale commercial farm land were acquired and redistributed; the second phase goes from 1998 to 2000 but only 0.17 million hectares were acquired; the third phase started in July 2000 and was called the ‘Fast track’ being intended to speed up the process of land acquisition and resettlement. During this last phase, a total of 2706 farms with 6 million hectares of land have been designated for acquisition and redistribution and by “February 2001, a total of 51543 households were settled on 2083301 ha of land. All of the large scale commercial farms that have been designated even if not yet acquired, no longer have access to credit from banks”⁸⁶.

Finally, aside from the official process, there have also been informal farm invasions.

The direct effect of such programme was to disrupt farming activities because many resettled farmers were lacking sufficient capital and inputs for the production. This aspect further contributed to the reduction of national production of food plumping the slow down of exports.

Normally, Zimbabwe exports its agricultural surplus to the neighboring countries but, since 1990s, its production became much more unstable and the country had to import maize (see fig.8).

Furthermore, in the same period, the country has become much more exposed to natural shocks which strongly affect food production and threaten people’s food security. Zimbabwe, a country known as the bread basket of Africa, has become increasingly affected by food shortages and famines. Such shocks have constantly happened but not always they brought to a famine. For example in 1991/92 a severe drought affected Zimbabwe strongly reducing its food production: “the main season outputs of all cereals and maize were, respectively, 463,000 tonnes and 361,000 tonnes”⁸⁷ but no famine set up. Conversely, when Zimbabwe was hit by another drought in 2002, cereal and maize harvests were 44% and 33% respectively higher than

⁸⁴FAO/WFP, Special Report: Crop and Food supply assessment - Zimbabwe, 1 June 2001, p. 6

⁸⁵FAO/WFP, *ibidem*, p. 7

⁸⁶FAO/WFP, *ibidem*, p. 6

⁸⁷FAO/WFP, *ibidem*, p. 4

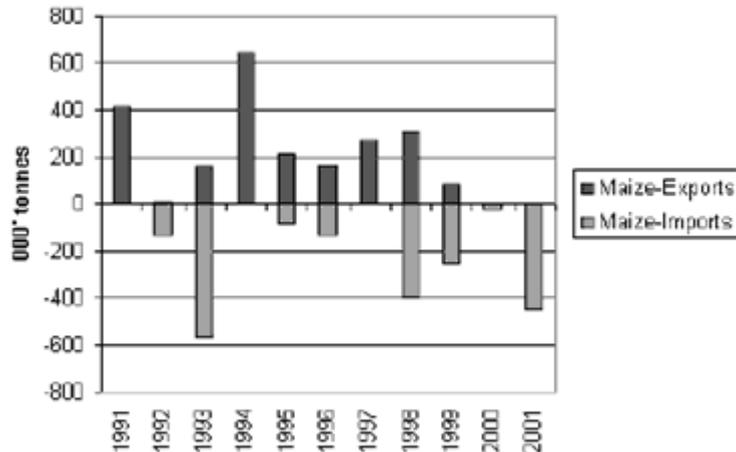


Figure 8: Maize imports and exports from 1991 to 2001 (FAO/WFP, Zimbabwe, June 2001)

in 1991/92 but this time people experienced famine (FAO/WFP, Zimbabwe, May 2002).

In 2002, Zimbabwe was affected by a severe drought which reduced the production of staple food. Cereal production amounted to about “0.52 million tonnes, 76% lower than 2.15 million tonnes produced in 1999/2000 and 73% less than the 1.9 million tonnes average of the last ten years”⁸⁸. The production of maize, the main staple food, was estimated at 0.48 million tonnes, down by 67% on last year basis and by 77% on 1999/2000. This food crisis happened right after 2001 food crop failure when cereal harvest amounted to 1.4 million tonnes.

The natural shock in 2002 combined with high levels of poverty, the declining agricultural productivity (partly linked to the land reform), the prevalence of HIV/AIDS and the reduced possibilities to import contributed to the on set of a famine.

Estimates suggest that approximately 6.074 million people had insufficient production, income and other entitlements to be able to meet their minimum food requirements throughout 2002 (FAO/WFP, Zimbabwe, May 2002). “Severe food shortages were reported in southern, eastern and extreme northern parts of the country where the harvest was reduced by dry weather or excessive rains”⁸⁹.

Unfortunately, no official malnutrition estimates are available since until April 2002 the government refused to recognize the existence of a crisis. Only

⁸⁸FAO/WFP, Special Report: Crop and Food supply assessment - Zimbabwe, 29 May 2002, p. 10

⁸⁹FAO/WFP Special alert n. 320, 19 February 2002, p. 4

after April the President of Zimbabwe, Mr. Mugabe, declared a state of disaster as worsening food shortages threatened widespread famine (Rotberg, R.I., 2002).

In the same period, due to the scarcity of food, prices grew up steeply while inflation went up at a record of 113% (BBC News, 30 April 2002). Furthermore, price control policies tended to exacerbate the food supply problem because people owning some food for sale refused to sell it at government controlled prices. As a consequence, the few grain available was sold on the black market both in rural and urban areas. In these markets, maize prices were 2-4 times higher than the GMB price: while this one was Z\$ 634 per 50 kg bag of maize, the market price varied from Z\$ 3,000 to Z\$ 8,000 per 18 kg bag (FAO/WFP, Zimbabwe, May 2002).

Finally, people had quite no coping strategies since these were exhausted during the past year when harvests started to contract. "Many households in rural communities have exhausted their low-impact coping strategies and had to rely on unusual and more high-impact coping mechanisms such as gold panning, the slaughter or sale of breeding cattle; and sending children to live with relatives."⁹⁰ Unfortunately, cases of prostitution, theft, and migration have been reported as means to cope with economic hardships (FAO/WFP, Zimbabwe, May 2002).

People who had any other means to obtain food started to starve.

Similarly to what were happening in Malawi, also in Zimbabwe a natural disaster reduced the availability of food in 2002, but the food production was higher than in 1992 when people did not starve.

4.3.1 An explanation of the food crisis

An evident aspect of the Zimbabwean food crisis in 2002 was the "severe prolonged drought between January and March which wiped out crops in most parts of the country."⁹¹ At the same time, a similar natural shock were interesting the whole South-Eastern region of Africa making food scarcity no more a national problem but a regional question. Consequently, food availability was reduced, while private food reserves were scarce because of precedent year poor harvests, strategic grain reserves were low and import possibilities from neighboring countries were limited. Food prices grew up both in Zimbabwe as well as at regional level.

In a contest with high poverty, growing unemployment and diminishing incomes this entailed "hunger as an estimated eight million Zimbabweans can not afford to buy basic foodstuffs - like maize salt and oil."⁹²

⁹⁰FAO/WFP, Special Report: Crop and Food supply assessment - Zimbabwe, 19 June 2003, p. 16

⁹¹FAO/WFP, Special Report: Crop and Food supply assessment - Zimbabwe, 29 May 2002, p. 1

⁹²BBC News, Africa's famine: Country by country, BBC, 11 November 2002, p. 5

As perceived by intuition, such a shock took place in an already fragile situation. In particular, similarly to most countries in the region, since 1990 Zimbabwe launched a structural adjustment programme supported by World Bank and International Monetary Fund. This programme “was meant to herald a new era of modernized, competitive, export-led industrialization”⁹³ and was seen as “the only alternative to continued production bottlenecks, stagnant local demand and a worsening unemployment problem”⁹⁴. With IFIs’ auspices, Zimbabwe enacted “the usual collection of Bank-inspired reforms - trade and currency de-regulation, devaluation of the Zimbabwe dollar, movement towards high real interest rates, the lifting of price controls, chopping of ‘social spending’ and removal of consumer subsidies”⁹⁵. Anyway, it should be noticed that maize prices in Zimbabwe were still setted by the Grain Marketing Board (GMB), a parastatal institution which purchased and sold maize at fixed prices and was responsible for food imports and exports. The structural adjustment programme contemplated also the reduction of the national public deficit, the reform of civil service and the casting off of public enterprises. In exchange, Zimbabwe was able to obtain large loans and credit facilities from WB, IMF and other international donors while its foreign debt was increasing dramatically.

Similarly to Malawi and Zambia, these reforms were intended to improve market competitiveness, but probably they were introduced too rapidly following the “one size fits all” idea.

In fact, on one side structural adjustment programme reduced incentives for small farmers to invest in the production of both staple food or cash crop through the liberalization of food prices, the removal of seeds and fertilizers subsidies and the liberalization of credit market. These policies raised production costs and agricultural income volatility while reducing access to credit market. As a consequence, investments in agriculture reduced and so did food crops even independently from the natural shock.

From another point of view, agricultural production was affected by the land reform started in 1980s and still enacted until 2002. By 2000, with the “Fast Track” phase the land acquisition process was accelerated redistributing land to indigenous people. At the same time, remaining large-scale commercial farms had no more access to credit and this strongly constrained their productive capacity (FAO/WFP, Zimbabwe, June 2001).

This reform strongly affected the commercial sector reducing the overall agricultural production: maize production reduced by 67% from 1999/2000 harvest and by 56% from 2001 harvest. It is easy to understand that such a policy influenced not only food production and its availability, but also food exports and therefore foreign exchange availability, and finally people

⁹³Saunders, R., Economic Structural Adjustment Programme’s Fables II, Southern Africa Report, vol. 11, n. 4, July 1996, p. 8

⁹⁴Saunders, R., *ibidem*, p. 8

⁹⁵Saunders, R., *ibidem*, p. 8

employment.

Unfortunately, this reduction was not compensated by the increase in small-scale commercial farms because these were partly constrained by liberalization policies and in part because land was mainly distributed to the Zanu-PF party's officials⁹⁶ which had no agricultural experience.

From another point of view, violence events and farm invasions plunged Zimbabwe to international isolation which brought to the suspension of government-to-government aid programme. This status of isolation was due to human rights abuses and violent political conflicts perpetrated by the government of Zimbabwe and its supporters. In fact, as suggested above, Zanu-PF officials conducted land invasions expropriating and occupying large-scale commercial farms.

From another point of view, these acts of violence translated into the will of the government to physically isolate (and eliminate) its opponents blocking the distribution of food aid. "Evidence is [...] emerging that the government and its allies are stopping food aid reaching political opponents."⁹⁷

Another factor affecting food security in Zimbabwe was the monopoly of the GMB which obliged traders to buy maize from this institution at fixed prices and to trade it in food deficit areas by adding transportation and marketing costs to the purchase price. These prices did not reflect the true free market price giving incentives to abandon controlled market and to trade maize on the parallel market at higher prices. Furthermore, the mismanagement of resources by GMB entailed payment delays to small-scale farmers reducing their ability to cope with food scarcity.

A further element which allowed the development of the crisis was the late recognition of the existence of the crisis: until April 2002 politicians refused to heed early warnings of crop failure (Rotberg, R.I., 2002) and donors were not alerted. Finally, when the crisis was declared, in May 2002, it was too late for a prompt answer (BBC News, 2 May 2002). Anyway, it should be remembered that late food aid was not only due to a belated recognition of the crisis, since the alarm had been launched in January, but it was also affected by the government refusal to accept genetically modified food which were being provided by United States (BBC News, 11 November 2002).

Consequently, government not only failed to promptly recognize the crisis and to alert donors, but it was directly responsible for the famishing of a part of its population.

The situation was further aggravated by the fact that there were no security reserve stocks (BBC News, 2 May 2002). In fact, during 2001, in order to avoid bankruptcy, the government decided to export a vast strategic grain reserve for cash and did not replenish it. When in 2002 the crisis

⁹⁶Zanu-PF is the party of Mr. Mugabe, the president of Zimbabwe.

⁹⁷BBC News, Africa's famine: Country by country, 11 November 2002, p. 5

exploded, there was no grain available to distribute (FAO/WFP, Zimbabwe, May 2002) and the government was not able to replenish its stocks because of the scarce foreign exchange available. Consequently, GMB could no more act in order to secure food availability and to stabilize prices and people had no private stocks to rely on because largely exhausted by the previous year crop failure.

As suggested by IFIs, the reduction of the SGR was an important step towards the reduction of public spending as a part of the structural adjustment programme since it should have been replaced by a more flexible and cheaper trading system. The idea was to build up a trading-based web of relationships among Countries. Unfortunately, this mechanism could not operate because:

1. the covariant natural shock reduced food availability in the whole region further constraining national food imports that had to compete with the contemporary food demand from neighboring countries, namely Zambia, Malawi, Lesotho and Swaziland;
2. zimbabwean imports were limited by the extreme shortage of foreign exchange due to the reduction in exports, high inflation and a devaluating currency (FAO/WFP, Zimbabwe, May 2002);
3. the government's ability to import food was "extremely limited considering [...] competing claims to the available, extremely limited foreign exchange, by the critically needed import of fuel and electricity and the servicing of the external debt."⁹⁸

Furthermore, we have also to consider the scarce conditions of infrastructures limiting a prompt communication and transport among countries and hampering trading. As it happened in previous countries, only well connected markets were reached while the more distant one were served (when there was enough food) only at exorbitant prices.

Finally, considering this last case of famine, it can be assessed that the 2002 famine that interested three major countries in the South-Eastern region of Africa are mainly linked to a food intervention decline (particularly in Zimbabwe) and to market policies failures.

⁹⁸FAO/WFP, Special Report: Crop and Food supply assessment - Zimbabwe, 29 May 2002, p. 4

4.4 A possible interpretation

The analysis of what happened in Malawi, Zambia and Zimbabwe in 2002 reveals that there are some common elements among these three cases of famine that may contribute to explain such catastrophes (see tab. 6).

		Malawi	Zambia	Zimbabwe
Framework	surface area ('000 Km ²)	118.5	753	391
	population (million)	12.6	11.5	12.9
	pop. Density (ab/Km ²)	106	15	33
	rural pop. (%)	82.8	64	65
	urban pop. (%)	17.2	36	35
	GDP (million US\$, 2004)	2,078	5,315	4,546
	GDP p.c. (US\$)	165	463	351
	External Debt (million US\$, 2003)	3,134	6,425	4,445
	Debt p.c. (US\$)	259	594	345
	poverty rate (% of pop.)	65.3	72.9	42
	HIV/AIDS (% of pop.)	14.2	20	33
paved roads (%)	19	22	47	
Shock		Jan-02	Jan - Mar 2002	Jan - Mar 2002
		floods/droughts	drought	drought
Market failure		SAP 1979	SAP 1992	SAP 1990
		- high inflation; - devaluating currency; - low foreign exchange; - limited access to credit; - deregulation of prices, inputs & trading - reduced reserve stocks - low private trading	- high inflation; - devaluating currency; - low foreign exchange; - limited access to credit; - deregulation of prices, inputs & trading - reduced reserve stocks - low private trading	- high inflation; - devaluating currency; - low foreign exchange; - limited access to credit; - deregulation of prices, inputs & trading - reduced reserve stocks - low private trading
Food Intervention Decline		GMB mismanagement misleading prod. estim. late state/donors alert hoarding	GMB mismanagement crisis denied & ignored late state/donors alert GMO food refused	GMB mismanagement crisis denied & ignored late state/donors alert GMO food refused land reform & violence

Table 6: Components of famine in Malawi, Zambia and Zimbabwe in 2002

These terrible events are hardly interpreted solely on the basis of traditional models so far proposed. Nonetheless, it seems that dynamics observed are partly amenable to some elements of “classical” models. First of all, natural shock affecting agricultural production in the whole region recall the food availability decline model. In fact, rising pricing follow the fall in production, but - as suggested before - it is not sufficient to explain the on set of the crisis. Other aspects emerging from the study recall the food intervention decline model. For example, in some cases the crisis was completely ignored or denied until it was too late to avoid starvation to the vast ma-

majority of the population and the subsequent intervention was inescapably belated. Further, governments of Zambia and Zimbabwe rejected for a long time food aid containing genetically modified organisms. In the particular case of Zimbabwe an incautious land reform heavily affected national food production. Especially in Malawi some Cases of hoarding and stockpiling of food resources by most influential people and traders waiting for food prices growth are reported; in other cases production estimates were wrong and governments failed to organize their stocks and to secure proper food imports. Finally, in all three countries, grain marketing boards mismanagement negatively influenced the ability of political institutions to counteract the crisis. When food scarcity became severe and prices started skyrocketing, there was de facto no public stocks to distribute to help people. But also in this case reported events on their own are not sufficient to explain the onset of the famine.

An important role in predisposing the crisis and in limiting following intervention policies has been played by huge changes linked to economic reforms and structural adjustment programmes. Such effects are well documented in literature. In particular, Cornia points out that “the introduction of economic reform under conditions of incomplete markets and missing institutions”⁹⁹ can undermine future development by increasing personal uncertainty and anxiety and then affecting economic and social activities (Cornia, G.A., 2004).

In the analyzed context, the idea of a “one size fits all” economic policy to allow poor countries to develop seemed suggestive, but it forgot country specificities that turned eventually good policies into bad ones. In particular, evidence from the three countries analysis shows that incautious reforms failing to take in account the socio-economic context, further aggravated economic and social conditions predisposing an environment unable to prevent and counteract food crisis.

In fact, in order to fight poverty, underdevelopment and economic stagnation in South-Eastern Africa several reforms were enacted: for example input subsidies and price control were removed, markets were liberalized, and large privatizations were enacted. These policies were intended to stimulate growth but failed to achieve their target since they were introduced regardless the real conditions of different countries. The removal of input subsidies and credit programmes, for example, allowed increasing production costs and reducing investments affecting food production; liberalization of markets produced a shifting towards the cash crop sector reducing the production of staple food while low foreign prices of national exports reduced the foreign exchange constraining import possibilities. Furthermore, high public deficit and the reduction of public spending prevented the accumulation of reserve stocks and the adoption of food security policies. Such

⁹⁹Cornia, G.A., Rapid change and mortality crises, *Popolazione e Storia*, 2004/1, p. 22

components of crisis can be considered market-related failures and affected food security on both the long and the short run: from a structural point of view these policies discouraged investments and economic activity depressing prices, wages and productions; in the short run, economic reform prevented the adoption of proper actions to alleviate food scarcity, to support the purchasing power of families and to allow sufficient food imports.

In conclusion, we can assess that famines which happened in three major countries of the South-Eastern region of Africa at the beginning of the 21st century can be explained by the interaction of three different models: food availability and intervention decline, and what we can call market failure model.

5 Conclusion

At the beginning of the 21th century, many people in different part of the world still suffer famines. Nonetheless current famines are different from past famines mainly because the social, economic and political context has changed. Even if the triggers and effects may be similar, the causes seem wider and much more complex.

Many different theories have been proposed to explain such terrible phenomenon, each focusing on particular aspects or processes. In the present work main famine theories have been reviewed trying to understand how they evolved, which are their focuses and, consequently, what could be learnt about famines in order to develop proper actions to fight and prevent these catastrophes. From first models to more recent ones, there has been a huge development: it is sufficient to think to Amartya K. Sen's framework and to complex humanitarian approach to perceive the evolution from very simple models to much articulated and socially involved models.

All this intellectual production and the broad practical on-field work allowed the development of even more sophisticated policies and early warning systems to prevent and tackle famines enabling better human conditions to different people around the world.

Nevertheless, famines still happen, people still starve. Just like Sen argued, famines are a complex social phenomenon and as such they have to be tackled. Entitlement failure and more recently complex humanitarian emergencies increasingly have paid attention to social environment in the causation of "new famines" in which the way crisis develop has changed. In front of these partly new events, individual traditional models fail to offer a satisfactory explanation: the factors of famines became more complex depending on the interplay of different aspects.

In fact, the analysis of the three cases of famine in Malawi, Zambia and Zimbabwe in 2002 suggests that such terrible crisis can be better explained if we consider interactions between some "classical" models (FAD, FID) and

a relatively new approach which we can define Market Failure. In these cases famines appear as complex phenomena in which crucial factors have different nature: economic, political, social and environmental. This multiplicity of factors confirm the higher complexity of modern crisis since an action may have different outcome in different context. Policy makers in setting out proper policies to prevent and fight famines have to consider all these different dimensions of the problem. For this reason new crisis are much more difficult to forecast and to counteract asking for the development of new policies, mainly structural ones, in order to prevent similar future disasters.

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