Food Insecurity and Conflict Dynamics:
A Theoretical Perspective

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Abstract

This study builds on the evidence that conflict and food insecurity share a reverse causal relationship. Where armed conflicts can certainly bring about dangerous conditions of food insecurity, evidences have shown that the reverse is also true. That is, food insecurity can precipitate violent political conflicts. The theories applied in this paper draw upon explanations based on human needs, rational choice and frustration-aggression hypothesis, which are used to map how a sudden change in the availability or price of basic foodstuffs can trigger an explosion of social unrest of a large magnitude. The potential effects of climate change also illustrate some of the applications of the theories, showing how the risk of exposure to harmful perturbations affects ability to cope with crises, especially among vulnerable socio-economic groups. In order to most effectively reduce the risks of conflict, this paper recommends that government policies should adequately and simultaneously address each of the major dimensions of food insecurity some of which are production, availability, stability and access. Paying careful attention to this will help alleviate some of the underlying rationale for violent conflicts and also promote the potentials for recovery.

Keywords: Food insecurity; climate change; conflict; sustainable peace

Introduction

As the 2011 *World Development Report* notes, conflict comes in many forms. Usually, the predominant nature of violent conflict includes fights between national armies, independence war, separatists' insurrection and/or fights for political control within nation-state boundaries. In contemporary times however, conflict has evolved into various forms of violence which involve non-state actors such as rebels and gangs. Conflict has also evolved into organised crimes, ranging from civil conflict to urban unrest (Hendrix and Brinkman, 2013). Unlike the World Wars

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and Cold War Era, most of the current forms of violence often have no clear military, political or ideological objectives but also include other variants that are latent, and have the potential to escalate into violence.

Indeed, as Reno (2011) points out, there are countless small wars with no front lines, no battlefields, no clear conflict zones, no distinctions between combatants and civilians, and no ideology. Some of these have been attributed to conflicts of interest arising partly as a result of incompatible ends which are permanent pervasive features of social life (Oyinloye, Badmos, Akinyoade, Balogun, Adedeji and Ariyo, 2021). A variant of this conflict is food insecurity inspired grievances which is increasingly becoming a global concern. Being a state in which people at all times do not have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life, it is a prevalent issue that is increasingly cutting across state lines (von Braun, 2008).

In 2018, for example, it was reported that 1 in 9 Americans suffered from food insecurity which is equivalent to 37 million people, more than 11 million of whom are children (Rudolfsen, 2021). Food Insecurity was also reported as a growing concern in United Kingdom (UK), when it was estimated in 2017 that 24% of UK adults aged 18–64 years were experiencing food insecurity (Perez-Escamila, 2008). France has also been reported to be facing serious food insecurity. According to a recent Senate report in the country, food insecurity affects eight million people in France; one in five according to the Ipsos-Secours Populaire survey, which also shows that 19% of French households struggle to pay for their children's school lunches, while 27% can rarely afford fresh fruit, vegetables, meat and fish (Elie, 2021). In the case of the US, the food shortages were initially triggered by wheat crop failure because of drought in 2012. But the ugly trend has also been influenced recently by the challenges faced over importation of some food items due to the ongoing 2022 Russian-Ukrainian crisis (Joshi, 2022). The conflict, according to Joshi (2022), has cut off supplies from Ukraine's ports of Odessa and Mariupol Ports and others, which once exported vast amounts of cooking oil as well as cereals such as maize and wheat. The conflict has also affected the production of bread and other staple foods across the world, thereby contributing significantly to world hunger.

In West Africa, for example, a report on Somalia given by the Food and Agriculture Organisation (FAO) indicates that the number of people that experienced crisis, emergency, or catastrophe levels of hunger surpassed 6 million by mid-2022 and it is poised to increase before the end of the year if food assistance does not reach areas of high concern. A similar 2022 report on Nigeria shows that about 14.4 million people were food insecure as of March same year and about 19.5 million people are likely to be food-insecure before the end of the year (FAO, 2022). Similar reports on this trend have also been projected in recent surveys by

FAO across countries in Africa and other parts of the world. All these indicate that the prevalence of food inadequacy and numbers of undernourished people are on the increase in the world. The situation has generated much research interest in an attempt to find solutions to the menace. The United Nations, for instance, introduced 17 Sustainable Development Goals (SDGs) which are benchmarked for the year 2030. Out of these, food security ranks as the second on the list. The aim is to achieve food security by improving nutrition, ending hunger and promoting sustainable agriculture (Persaud and Darger, 2021). This shows the level of concern the issue has generated globally.

In the midst of the popular attention that this phenomenon (i.e. conflict as a trigger of food insecurity) has engendered over time, there have been a lot of controversies about the reverse causality between the two. There is the controversy about whether food insecurity could in turn trigger conflict as a primary initiator of a conflict in itself. A lot of recent speculations only concede that there is the possibility that foof insecurity could escalate an on-going conflict but may likely not be a trigger on its own. To show that it could indeed be a motivating factor for participation in unrest, experts in the field of Peace Studies have carried out several empirical research and reported on food insecurity as possible source of many past and recent conflicts. For example, the findings of the quantitative analysis done on the country-month level in urban Africa in 1990–2014 indicate that food insecurity increases participation in urban unrest, especially demonstrations (Rudolfsen, 2021). Also quantitative analysis of original survey experiment of 608 respondents in Soweto and Alexandra, Johannesburg indicate that higher food prices increase willingness to participate in unrest (Rudolfsen, 2021).

So, recent empirical findings are increasingly providing evidences of the possible reverse causality between the two. For the sake of explaining the correlation between the two phenomena therefore, this paper addresses the link between food insecurity and conflict from a theoretical perspective, as well as the potential role of food security interventions in reducing the risk of violent conflicts. Before going into this however, the paper will discuss the two key concepts of conflict and food insecurity in order to put the work in a proper perspective.

Conceptual Clarification/Framework

Conflict

Conflict, according to Ikejiani-Clerk (2009), is a pervasive phenomenon that exists in all countries of the world. It can occur in every level of society, whether developing or developed. Etymologically, the concept is derived from the Latin word *confligere*, which means or can be interpreted to mean 'to strike together' or a clash (Oyinloye, Badmos, Akinyoade, Balogun, Adedeji and Ariyo, 2021). So, conflict is a situation which rises out of disagreements. Indeed, Schelling quoted in

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Choucri (1983) and Fisher (2011) buttress this point when they described conflict as a situation which arises from the interaction of individuals who have or think they have incompatible ends (needs) in which the ability of one actor to gain their needs is dependent on the choices or decisions another actor will make. This means that the perceived incompatibility might be real or unreal.

Poskitt and Dufrank (2011) further defined conflict as a collection of armed or unarmed confrontation between at least two organised groups, either state or non-state actors which could be as a result of one perceived grievance or the other. So, conflict is assumed to be often rooted in people's beliefs and perceptions about goals and not just objective facts. However, such beliefs and perceptions could be right or wrong, imaginary or manifest, real or unreal. Hence, within a given unit, whether a nation-state, a religious group, or an ethnic aggregate, people can be in conflict when one group or individual perceives the other as a barrier or threat to its own goal. Conflict then creates a gap or divergence between the parties concerned (Oyinloye, Badmos, Akinyoade, Balogun, Adedeji and Ariyo, 2021).

As validly emphasised by Asaju (quoted in Yakubu, 2000), conflict could occur at various levels in society. It could be interpersonal (occurring as a strain between two or more people in an organisation or any level of association), intrapersonal (occurring within an individual as a result of dilemma and confusion), intragroup (occurring within a particular group) and intergroup (arising from disharmony in working relationship or the coexistence of two or more groups). The intergroup level which is of utmost concern to this research could occur at a national or international level. When it occurs at the national level, it can either occur just in one part of the nation but with severe consequences for the whole country at large. Examples of this kind of crises are the Niger-Delta crisis, the Ife-Modakeke crisis and the recent farmer-herder crisis between nomadic Fulani herdsmen and their host communities in Nigeria. It could also involve the whole country in the form of a civil war as it was the case with the Nigerian civil war. At the international level, conflicts occur between two or more countries and have severe implications for the world at large as shown in the ongoing 2022 Ukraine-Russia crisis, which has caused refugees implosion and food insecurity in several other countries.

At this juncture, it is quite important to state clearly that all conflicts are not necessarily negative or destructive. Conflict can be positive or constructive depending on the objective it seeks to achieve. For instance, there have been societal movements generated from constructive motives. These include: the 1943 protest for the liberation of arrested Jews in Berlin, Gandhi's Swaraj campaign for India's independence from 1947, Martin Luther King Junior's civil disobedience movement in the US from 1956, the 1986 Peoples Power movement in the Philippines and the anti-Vietnam movement among several others (Galtung, 1995). The liberation of the arrested Jews was largely due to the protest staged by their

loved ones in a rare united act of community opposition against the German government regarding the Holocaust, regardless of the threat of gun fire. The aim was to pressure the government through this demonstration to release the arrested Jews, which eventually was achieved. All these are examples of non-violent conflicts and they point to the fact that conflicts could be a vehicle of positive societal transformation. Hence, conflict is a pervasive element of all human relationships and it can either be a factor for creative progress or a cause of disruption.

Food Insecurity

To understand the concept of food insecurity, it is necessary to first discuss what food security means. The most established definition is from the Food and Agriculture Organisation (FAO), which states that food security exists when 'all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active healthy life (FAO, 1996). Hence, food insecurity would imply the lack of consistent access to enough food for an active and healthy life. According to Braun (2008), it is a state in which people at all times do not have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

A more comprehensive definition given by FAO (1996) describes it as a situation where people lack sustainable physical or economic access to enough safe, nutritious, and socially acceptable food for a healthy and productive life. Hence, it is classified as acute, occasional or chronic. Food insecurity is acute when there is severe hunger and malnutrition to the point that lives are threatened immediately (e.g. temporary gaps in access to food which can arise as a result of a variety of factors ranging from high prices to disruptions in delivery systems, recessions, natural disasters, extreme weather events, political turmoil, and violent conflict). It is occasional when food insecurity occurs due to a specific temporary circumstance. Food insecurity is also referred to as chronic when the ability to meet food needs is consistently or permanently under threat.

So, food security has three aspects: food availability, food access and food adequacy. It is possible for food to be available without people having access to it either due to lack of affordability, scarcity or insufficiency. A full examination of the impact of food isecurity, according to some scholars, is a range of health outcomes especially in developing countries. However, several theories are also increasingly showing that food insecurity could lead to social strife and even violence in some extreme cases (Fawole, Ilbasmis and Ozkan, 2015). Therefore, food insecurity as a potential risk multiplier is an issue that has generated much research interest. Against this backdrop, this paper attempts to examine food insecurity as one of the possible causes of conflict in society in order to address the perceived threat this might pose for countries and the world at large. To achieve

this, the next section discusses some theories which explain the possible connection between food isecurity and conflict.

Theoretical Perspectives

As mentioned earlier, conflict could result in food insecurity in society. This has been demonstrated by the Ukrainian-Russian crisis which has increased food insecurity because of the blockage on ports that once exported vast amounts of cooking oil as well as cereals such as maize and wheat, thereby hindering the production of bread and other staple foods across the world (Joshi, 2022). The point of contention however, is whether it is possible for food insecurity to cause conflicts in societies. So this study examines several relevant theories in that regard. However, it is of utmost importance to discuss what theory is and how it can generate a better insight for this research.

In common parlance, theories are generally considered as sets of carefully thought-out explanations for observing the natural world. So, they are viewed in layman's term as mental conception, speculation, reflection or consideration. However, in scientific research, theories are referred to as plausible or scientifically acceptable general principles or body of principles offered to explain phenomena that are already supported by data (Akinyoade, 2013). They are a system of constructs (concepts) and propositions (relationships between those constructs) that collectively present a logical, systematic, and coherent explanation of a phenomenon of interest within some assumptions and boundary conditions (Bacharach, 1989).

So theories are not mere explanations based on speculations and observations, they require causations, or the understanding of cause-effect relationships within some established set of boundaries. This means that they are set of principles analysed in their relation to one another, and used to explain why a cause would necessarily influence a certain effect (Ikejiani-Klark, 2009). This means that theories provide the underlying logic of the occurrence of natural or social phenomenon. So this paperexamines the relationship between food insecurity and conflict by engaging several relevant theories.

The Human Needs Theory and its Relevance

Abraham Maslow is often credited as the founder of the Human Needs Theory. He proposed a hierarchy of needs based upon the idea that everyone has the potential to make a contribution to society and be a good and likeable person, if their needs are fulfilled. Hence, it is a motivational theory in psychology comprising a five-tier model of human needs, often depicted as hierarchical levels within a pyramid (Mcleod, 2018). The needs lower down in the hierarchy, according to him, must be satisfied before individuals can attend to needs higher up. From the bottom of the hierarchy upwards, these needs include: physiological, safety, love

and belonging, esteem and self-actualisation. Maslow believes the fulfilment of these needs – in the correct order – would allow individuals to become self-actualised, fully able persons. So it is only after the basic physiological needs (the need for food, water and shelter) are met that individuals move on to the next stages; the need to feel secure, to be loved and accepted, etc.

The five-stage model of the human needs theory, according to Mcleod (2018), can be divided into deficiency needs and growth needs. He avers that the first four levels are often referred to as deficiency needs (D-needs), while the top level is known as growth or being needs (B-needs). According to him, deficiency needs arise due to deprivation and are said to motivate people when they are unmet. He also argues that, the motivation to fulfil such needs would become stronger for as long as they are denied. This means that the longer a person is deprived, the more desperate they will likely become.

Burton (1986) and some other needs theorists who have adopted Maslow's ideas, but they perceive human needs in a different way. These theorists are of the opinion that it is an emergent collection of human development essentials which do not have a hierarchical order. Rather, they are simultaneously sought in an intense and relentless manner. It should be noted that this was in reaction to Maslow's (1943) initial position that individuals must satisfy lower level deficit needs before progressing to meet higher level growth needs. However, Maslow later clarifies that satisfaction of needs is not an "all-or-none" phenomenon, admitting that his earlier statements may have given "the false impression that a need must be satisfied 100 per cent before the next need emerges" (Maslow, 1987). He also maintained that the physiological needs are the most important as all the other needs become secondary until these needs are met.

The relevance of the theory to this research is that it implies that people become motivated to take action when their needs are unmet and could be a cause of conflict as people use their power to try and meet these needs (Marker, 2003). Thus, Human Needs theorists offer a new dimension to conflict theory. Their approach provides an important conceptual tool that connects and addresses human needs on all levels as well as recognises the existence of negotiable and non-negotiable issues. So food insecurity would be classified as inability to fulfil one of the basic physiological needs, which according to the theorist is a major cause of conflict that needs to be addressed. Hence, the human needs approach supports collaborative and multifaceted problem-solving models and related techniques, such as problem-solving workshops or an analytical problem-solving process that take into account the complexity of human life and the insistent nature of human needs (Carroll, Jerel. Rosati, and Coate, 1988).

Some critics of the theory are however, of the opinion that many conflicts involve both needs and interests, and thus conflict resolution cannot come about

by just meeting needs but by also addressing interest. Using Palestinian/Israeli conflict as an example, Marker (2003), for instance, avers that needs on its own cannot result in conflict; rather it is usually accompanied by interest (i.e., resource allocation, international boundaries). She is also of the opinion that even if the needs of both parties are met, the conflict would probably not be resolved because resolution can only come about when both needs and interests are dealt with. This means that there is always an underlying interest involved even when unmet needs are said to have been a cause of conflict. Nevertheless, most scholars and practitioners agree that issues of human needs are critical in many or even most intractable conflicts (Burton, 1990). That is, ignoring the underlying needs and just negotiating the interests may at times lead to a short-term settlement, but it rarely would lead to long-term resolution. Hence, they are some of the important issues that must be dealt with if human needs related conflict is to be transformed.

The Rational Choice Theory and its Relevance

The rational choice theory also called rational action theory or choice theory is based on the assumption that individuals choose a course of action that is most in line with their personal preferences. The theory was first propounded by a philosopher, Adam Smith, who wrote an essay in 1776, entitled, 'An Inquiry into the Nature and Causes of the Wealth of Nations,' in which he proposed that human nature's tendency toward self-interest results in prosperity. Smith had created the foundation of the theory using a metaphor known as the 'invisible hand' (the idea that individuals acting rationally in their own self-interest will benefit the wider economy as a whole) to explain outcomes based on self-interest. His work is claimed to have been largely influenced by the work of philosopher, Thomas Hobbes, entitled: "Leviathan" in 1651. Hobbes explains that the functioning of political institutions is a result of individual choices. So elements of this view are claimed to have been the foundational basis of Smith's work on rational choice.

However, a pioneering figure in establishing rational choice theory in Sociology is George Homans (1961), who set out a basic framework of exchange theory which he grounded in assumptions drawn from behaviourist psychology, which states that whenever an exchange occurs between two parties, an individual is looking out for their own economic and psychological needs or benefits. While these psychological assumptions have been rejected by many writers, his formulation of exchange theory remains the basis of all subsequent discussion. This was later expanded during the 1960s and 1970s by Blau (1964), Coleman (1973), and Cook (1978), when they developed more formal, mathematical models of rational action. These social theorists concluded that a rational calculation of an exchange of costs and rewards drives social behaviours in social interactions and explains why people enter into or end individual and group relationships (Coleman, 1990). So individuals anticipate the outcomes of alternative courses of action and calculate that which would be best for them.

Therefore, the rational choice theory is used to model human decision making, especially in the context of microeconomics, where it helps economists better understand the behaviour of a society in terms of individual actions as explained through rationality, in which choices are consistent because they are made according to personal preferences (Scott, 2000). Hence, most scholars who subscribe to this school of thought believe that people do not make choices because of unconscious drives, but that they rather use rational considerations to weigh consequences and potential benefits (Scott, 2000). So, social action can be seen as rationally motivated, since choices are construed as instrumental to the interplay of different, potentially conflicting motivations.

The relevance of the choice theory to this research is that it helps to explain how a decision (i.e., trade-offs) between two desirable goals could provoke a conflict, where obtaining more of one goal implies obtaining less of the other goal. For instance, in economics, a consumer is often shown to decide between the amounts of two goods subject to a budget constraint that determines quantities of the two goods that are affordable or possible. This negates the ability to meet certain preferences and force decisions that might escalate into violence in an attempt to meet these preferences (Morris Coats and Sanders, 2011). It means that since it is not possible for individuals to achieve all of the various things that they want; they must also make choices in relation to both their goals and the means for attaining these goals.

The theory helps in understanding individual and collective behaviours, especially in the aspect of food related social unrest. It helps to pinpoint why individuals, groups and society as a whole move toward certain choices, based on specific costs and rewards when they cannot have access to their various food preferences either because of reduced quantity or quality inspired by lack of affordability (Ritxar Arlegi and Miriam Teschl, 2012). So it explains all social phenomena in terms of the rational calculations made by self-interested individuals. It also helps to explain seemingly 'irrational' behaviour in terms of what drives such actions because it states that all behaviour is rational, and any type of action can be examined for underlying rational motivations (Blau, 1964). Hence, it sees social interaction as social exchange modelled on economic action motivated by the rewards and costs of actions as a result of psychological conditioning.

The theory has however, been criticised on the basis of some of its shortcomings. One of such criticisms as identified by Scott (2000) is that it does not give account for intuitive reasoning or instincts, that is, decisions which must be instant such as decisions that influence survival that do not give room for time to weigh cost and benefit. Other scholars also maintain that preferences over outcomes are not sufficient to complete preferences over actions when actors are not certain about what outcomes each action produces (Herfeld, 2021). So lack of support for instinctive drives and uncertainty of outcome makes the theory of

choice very open to several criticisms. Regardless of this shortcomings however, what is notable is that the theory gives a tenable explanation of why individuals or groups will make decisions that have a slight chance of providing them with a desirable outcome no matter the level of uncertainty.

The Frustration Aggression Theory and its Relevance

Frustration–aggression theory, also known as the frustration–aggression hypothesis and frustration-aggression displacement theory, ranks among the most seminal and important theories in research on aggression. From its beginnings in the late 1930s until today, it has been applied and studied in a variety of areas, including social psychology, ethnology, sociology, criminology and medical research, among several other areas (Breuer and Elson, 2017). Within the discipline of psychology, frustration–aggression theory has been used in a variety of domains including the study of animal behaviour (Berkowitz, 1983; Scott, 1998). However, in relation to human behaviours, the hypothesis is mostly used to establish a link between human frustration and aggressive behaviour.

The original theoretical explanation for this relationship has developed and become more refined over the decades. For instance, the theory was initially proposed by John Dollard, Neal Miller, Leonard Doob, and Orval Mowrer, with additional contributions from Robert Sears in 1939 and further developed by Neal Miller in 1941, and Leonard Berkowitz in 1969. When it was first formulated, the hypothesis stated that frustration always precedes aggression; but when the source of the frustration cannot be challenged, the aggression gets displaced onto an innocent target. Two years later, Miller and Sears re-formulated the hypothesis to suggest that while frustration prompts a behaviour that may or may not be aggressive, any aggressive behaviour is the result of frustration, making frustration not sufficient, but a necessary condition for aggression. In 1989, Berkowitz expanded on the hypothesis by suggesting that personal attributions play a major role in whether frustration instigates aggressive behaviour or not contrary to the position that the existence of frustration always leads to some form of aggression (Berkowitz, 1989).

What is especially noteworthy in these definitions is that, unlike the use of the word in everyday language, frustration here is not understood as an emotional experience but as 'interference with the occurrence of an instigated goal-response' (Dollard et al., 1939). So, frustration according to the advocates of the theory is defined as an event instead of an affective state. It became very popular and widely accepted by a majority of social psychologists and was later taken up by other social scientists that use its basic assumptions to explain violence. For instance, in the realm of intergroup relations, the frustration-aggression hypothesis was used to shed light on the dynamics of group hostility by drawing in part on Freudian concepts of displacement, projection, and catharsis. As a scapegoating

and hate crime version, it holds that once frustration and the impetus for aggressive behaviour have occurred, it makes relatively little difference who receives the brunt of the violence as long as there is an outlet for the frustration, especially when the source of the frustration is inaccessible due to power relations (Breur and Elson, 2017).

The frustration aggression theory shows that if a goal is being blocked, people often become frustrated and as a result become aggressive which could escalate into violence. This view was emphasised by the Institute for Economics and Peace (2020), when it alluded that extremist narratives thrive in a society enmeshed in deprivation. This indicates that as sources of frustration accumulate – during an economic crisis, for example – frustrated groups may unleash their aggression on a convenient social target, often a minority group. Hence, the frustration aggression theory explains conflict as a consequence of the individual's goal response being blocked, which could be economic constraints in meeting basic needs (Morlan, 1989).

However, several criticisms have been thrown against the frustration aggression hypothesis. Critics challenged the premise that any interference with on-going goal-directed behaviour would evoke frustration. For instance, the American psychologist, Abraham Maslow, and few others claim that interferences do not necessarily produce frustration as only forms of interference that seem illegitimate would lead to frustration (Nickerson, 2021). Few others also claim that the nature of the connection between perceived frustration and the display of violence is more complicated than Dollard and his collaborators realised due to the fact that there are discrepancies between group reactions on such issues. In response to this, the effect of frustration, according to Morlan (1989), depends on the attitude of the individuals towards their frustration as well as their attitude and that of the society towards the expression of the aggression. This explains the reason why some issues which lead to crisis among groups in one society may not lead to violence in another. Regardless of this seeming uncertainties, however, what this theory has been able to show is that there is a possibility that frustrating situations like food insecurity may escalate into aggressive behaviours. So, if there is any doubt about the character of a situation and its possible consequences, it would be better to act based on this hypothesis.

The Role of Food Security Interventions in Reducing Violent Conflicts in Society

From the discussions above, it may be established that there is a nuanced relationship between food insecurity and violence. That is, food insecurity can be a source of grievances that motivate participation in rebellion. So, acute and severe food insecurity has a dampening effect on conflict behaviour. These events are increasingly being regarded as significant threats to social stability and peace by academics and policy makers (Bowa et al, 2011). Indeed, evidences of this have

been shown in the Arab Spring mass uprisings of 2007-2008 (Asongu, 2017). Also in Nigeria, food related grievances have been reported to be behind the recent farmer-herder crises as people migrate and source for alternative means of securing food, causing sexual harassment, rape, death and other forms of violence to almost 4,000 people as of 2018 (Yakubu, 2021). So grievances related to food insecurity either due to non-availability, limited supply or scarce means of procurement could be catalysts for conflict.

However, if food insecurity can be a threat multiplier for conflict, improving food security can reduce tensions and contribute to more stable environments. While the traditional security paradigm has focused attention on addressing conflicts as and when they occur, contemporary measures should be focussed on proactive interventions that can help address issues at the latent stage. For instance, government and other stakeholders should focus more attention on regulating some human activities that influence climate change. These activities include:

- Industrial Processes: Generating electricity and heat by burning fossil fuels such as coal, oil and natural gas causes large chunks of global emissions. These emissions affect the climate causing worsened problems of droughts, flooding, cyclones, heat waves, and pests for farmers by reducing the amount of food they can grow. The problem with this is that it causes displacement, especially for the local population as they migrate in search of greener pastures which in turn often generate violent conflicts between migrants and the inhabitants of the new territory as a result of competition for economic spaces for survival.

- The greenhouse effect: These cause gas emissions which blankets the earth. They act a bit like glass, trapping the sun's heat and stopping it from leaking back into space and causing global warming. This is also putting food production at risk as yield growth for wheat, maize, and other crops, for example, have been declining in many countries due to extreme heat. The adverse effect of this reality is hike in food price which could potentially lead to increased social unrest. Examples of such scenarios have been documented in the 2011 Arab spring riots.

- Sea and land pollution: Industries produce emissions, mostly from burning fossil fuels to produce energy for making cement, iron, steel, electronics, plastics, and clothes. etc. The waste from these activities is usually deposited both on the land surface and in the sea, contributing to the degradation of agricultural land and polluting the sea for marine life. Environmental pollution results in reduced crop yields and food wastage due to high levels of contaminants, loss of biodiversity and decreased water quality as well as eutrophication of the marine environment, In Nigeria, this has caused tensions between foreign oil

corporations and the people of Niger Delta's leading to ethnic and political unrest influenced by loss of means of livelihood.

- Deforestation: This causes emissions like carbon dioxide which ends up destroying the atmosphere. The direct impact on food security is through the loss of biodiversity which is a source of food for man, diminished income, and loss of food-generating capacity for forest-dependent communities. In some cases, deforestation-related conflict arises when the legitimate power and interests of different forest stakeholders like the government, investors, concession holders, local communities and NGOs interplay. Many of these conflicts as mentioned above arise when local people feel or perceive injustice due to outsiders' interventions in matters relating to their forest and land. Unfortunately, weak governance, unclear tenure, and economic development policies that prioritise global and national interests over local needs and aspirations only exacerbate the situation.

With the effects of climate change becoming increasingly impactful, it is clear that reversing them would be largely beneficial. Some of the major ways this can be addressed is for government to pressure people, and businesses to:

- Stop extracting fossil fuels: The argument from some environmentalist circle is that if we stop using fossil fuels today, global warming would certainly slow. However, this is not just a long-term investment to slow climate change — it will also protect human health and environmental ecosystems, while at the same time help to reduce the risk of food insecurity in the society

- Invest in renewable energy: renewable energy typically emits less carbon dioxide (CO_2 than fossil fuels. In fact, experts claim that renewables like solar and wind power— apart from construction and maintenance— do not emit any CO_2 at all. Hence, they will have no negative effect on the climatic conditions. The use of sustainable renewable energy can also in a short period increase energy supply and access to rural farms. It is more affordable and reduces greenhouse gas emissions to the environment. So with renewable energy, there will be likelihood of reduced food related tensions in the society.

- Improved farming: Organic farming prohibits most synthetic inputs, which means reduced greenhouse emissions, as well as cleaner soil, water, and food. The organic and sustainable techniques also bring additional benefits for farmers, such as increased soil health and fertility, which leads to additional climate-friendly benefits.

- Promote Afforestation: Land management practices such as reforesting rangelands, restoring riparian zones, and planting hedgerows and other perennial plants serve many benefits, such as providing shelter for wildlife and attracting beneficial insects for pollination and natural pest control. On the climate front, the woody vegetation also store carbon in their biomass, protects the soil from erosion, and conserves water.

Aside from the roles of these climate friendly policies, another major contributory factor to food insecurity whose role needs to be addressed properly is the hike in food prices. For instance, as reported by the FAO (2022), at the end of 2007, 90% of 923 million people worldwide were under-nourished because the high food prices prevented 75 million from having sufficient quantities of food while forcing another 100 million into poverty. The consumers are however, not the only ones at the receiving end of the price hike; it affects all stages of the supply chain. Unexpected price volatility decreases farmers' productivity; thus, they reduce their investment. Additionally, agricultural inputs become subject to price volatility, driving retailers and processors to adjust their supply strategies to mitigate the supply uncertainty (Abdallah et al, 2020). So policymakers should try to weaken price volatility and mitigate its negative impacts on market actors (i.e., consumers and producers) by implementing strategies in the market or public interventions. Such interventions could include efficient price management in the food market to ensure the stability of food supply chains in order to avoid price shocks. Giving more people benefits through nutrition assistance programmes, increasing benefit amounts, and addressing unemployment would also go a long way in helping to reduce food insecurity.

The list of causes is inexhaustible and the points raised above are just some of the numerous possible ways of reducing the incidence of food insecurity in societies. Since human security is complementary to national security in the same way that national security complements international security, the way forward is to put in measures that can help control this disruption. The interventions would help turn the vicious cycle of food insecurity and conflict into a virtuous cycle of food security and stability that provides peace dividends, reduce conflict drivers, enhance social cohesion, rebuild social trust, and the legitimacy and capacity of governments.

Conclusion

Food insecurity occurs when food systems are stressed so that food is not accessible, available, or of sufficient quality. This situation results from a variety of factors ranging from temporary gaps in access to food, high prices and disruption in delivery systems, recessions, natural disasters, extreme weather events, political turmoil and violent conflicts. From a theoretical perspective, the negative effect of this is that it often increases social grievances, providing a motive for engaging in

rebellion. So, in as much as violent conflict is established as a major driver of food insecurity, acute food insecurity can be a motivation for popular mobilisation and a risk multiplier itself. It can trigger interstate and major civil wars including other forms of political violence – such as rioting, communal conflict, and violence linked to organised crime. All these pose threats to human security and may diminish government capacity to respond to protracted crises. Hence, this paper concludes by proposing a range of options for consideration by government and stakeholders to redress chronic and transitory food insecurity. Recommendations for immediate action include regulating some human activities which influence climate change and as a result act as major contributory factors to food insecurity in the society. The need to weaken price volatility in order to mitigate its negative impacts on market actors was also emphasised.

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