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# **More Trade, More Food**

## **Can the free trade food security framework live up to international standards of food security? A comparative analysis between FAO's definition of food security and the free trade approach**

*Raquel Munayer*

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### **Abstract**

Free trade advocates are certain: only an open and free international market that allows for the unrestricted flow of food products can guarantee global food security. They argue that the increased availability and variety of food that free trade can provide, as well as its resulting economic impact, play a central role in reducing hunger and forwarding global food security. However, does this understanding of food security do any justice to the official meaning of the concept? This article will investigate the definition of food security provided in the free trade context and compare it to the official and internationally recognized definition of food security provided by the Food and Agriculture Organization of the United Nations. The aim behind this research is to unravel discrepancies that can support the fine-tuning of food policies for the sake of addressing food security.

*Keywords:* Food Security, Free Trade, Liberalism, International Market, Food Availability

### **Introduction**

Food security is a constant topic in the global arena and is a priority in many political agendas, featuring high in international fora and global development strategies (World Economic Forum 2016; Sustainable Development Knowledge Platform 2018). However, when it comes to identifying the most adequate strategy to achieve food security, actors are divided – some root for

the opening, others for the closing of markets; some bet on the diversification of crops, while others invest in crop specialization; some believe in centralized systems, while others envision community-based solutions (Candel et al. 2014; Dev & Zhong 2015; Kumar et al. 2015; Schanbacher 2010; Klasen et al. 2016). The list of approaches to food security is, therefore, a diversified one and includes a variety of ideological, societal and political actors. However, leaving aside for a moment the path towards achieving food security, a more important question can be asked: what is food security? Can the state of achieved food security be defined? The answer to this question is yes. The international community, under the umbrella of the Food and Agriculture Organization of the United Nations (FAO), has gathered in conferences and summits since the 1990s and produced a series of briefs and reports that serve the ultimate purpose of defining and specifying the concept of food security, distinguishing among four dimensions that, together, constitute food security: access, availability, utilization and stability (FAO 1996; FAO 2006; FAO 2008). In this article, the international definition of food security offered by the FAO will be compared to the definition of food security offered by the advocates of trade liberalization, which will be addressed as the Free Trade Food Security Framework (FTFSF). The reason why the free trade approach was chosen over other approaches to be compared with the FAO's definition of food security is the seeming predominance of free trade as a modus operandi in international affairs, making it particularly relevant for any analysis on global food security. Firstly, a definition of both the FAO's four dimensions of food security (FDFS) and the understanding of food security in the context of a free trade framework will be outlined. Following the definitions, each of the FAO's dimensions and its compatibility with the FTFSF will be analyzed on a theoretical level, with the intention of understanding whether the FTFSF is in accordance to the international definition of food security provided by the FAO. The latter part of this article will then bring about practical examples that demonstrate the influence exerted by free trade on each of the FDFS, with the intention of highlighting discrepancies and similarities to the conclusions reached in the theoretical part, so obtaining a more concrete overview over the role of the FTFSF in each of the FDFS as defined by the FAO.

### **How is Food Security Defined?**

The idea that different societal actors approach the matter of food security through different frameworks is outlined by Candel et al. (2014) in an essay that sought to find a consensus frame regarding the European Union's Common Agricultural Policy debate. A similar idea is brought forward by Andrée et al. (2014) in the book "Globalization and Food Sovereignty", however, in this case, instead of presenting a variety of frameworks that exist within the concept of food security, the authors present food security itself as a free

trade framework and opposes it to other frameworks such as food sovereignty and food democracy. Schanbacher (2010) follows the same line while bringing forward polarizing aspects of both food security and food sovereignty in his book "The Politics of Food". Whether food security is a concept that entails a variety of frameworks, or it is a framework itself, is just a technical difference. At its core and in all cases, the discussion is actor-centered and highlights different interest groups and their proposed approach for providing global food security. For the purpose of this article, Candel et al.'s (2014) framework approach is chosen because his analysis of the actor constellation surrounding the food security takes under consideration more specific sets of actors, such as mentioned in the environmentalist and development frames, as well as differentiating between subsistence and profit-oriented producers. The FAO's definition of food security is chosen to be the 'anchor' definition against which the FTFSF will be compared in order to seek for similarities and discrepancies between them. Reason behind this choice are: 1) the FAO's nature as a non-national, non-economic entity, which main goals include promoting global food security (FAO 2018); 2) the agency's global expertise in regards to food and agriculture matters; and 3) the fact that it's definition of food security arose as the result of an international effort (see below), being therefore globally recognized. In order to make such comparison possible, this section will outline these definitions in detail.

#### *FAO's Four Dimensions of Food Security (FDFS)*

In 1996, 178 countries and 57 international/regional organizations met in Rome at the World Food Summit to debate global food matters and devise plans of action for solving global problems of food security (FAO 1996). The meeting has contributed to the food security discussion by creating a definition of food security to which the participating states have actively subscribed and accepted to enforce:

*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 and healthy life. In this regard, concerted action at all levels is required. (World Food Summit Plan of Action, FAO 1996)*

In what can perhaps be considered an attempt to narrow down food security to a less general definition, the FAO has come up with a specification that demonstrates the notion of food security in four concepts, called the 'four dimensions of food security' (FDFS): availability, access, utilization and stability. The following table outlines and clarifies each dimension:

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Physical AVAILABILITY of food	Food availability addresses the "supply side" of food security and is determined by the level of food production, stock levels and net trade.
Economic and physical ACCESS to food	An adequate supply of food at the national or international level does not in itself guarantee household level food security. Concerns about insufficient food access have resulted in a greater policy focus on incomes, expenditure, markets and prices in achieving food security objectives.
Food UTILIZATION	Utilization is commonly understood as the way the body makes the most of various nutrients in the food. Sufficient energy and nutrient intake by individuals is the result of good care and feeding practices, food preparation, diversity of the diet and intra-household distribution of food. Combined with good biological utilization of food consumed, this determines the <i>nutritional status</i> of individuals.
STABILITY of the other three dimensions over time	Even if your food intake is adequate today, you are still considered to be food insecure if you have inadequate access to food on a periodic basis, risking a deterioration of your nutritional status. Adverse weather conditions, political instability, or economic factors (unemployment, rising food prices) may have an impact on your food security status.

Source: FAO 2008: 1

It is important to highlight the fact that the FAO would only consider food security as having been ultimately achieved when the four dimensions of food security are simultaneously met (FAO 2008). Although still only outlining how food security would look like once it is established, the FDFS can be helpful when analyzing any path taken in the direction of achieving food security (according to the FAO's definition) by serving as elements of control against which the actions towards food security taken by a specific groups of actors can be compared, as will be done in next section of this article.

### *The Free Trade Food Security Framework (FTFSF)*

As mentioned in the beginning of this section, the FTFSF is an adaptation of Candel et al.'s (2014) assessment of the actor constellation surrounding food security and the frameworks these actors utilize to explain and promote food security, focusing particularly in their assessment of the framework promoted by free trade advocates. The FTFSF counts on the free trade setting's capability of guaranteeing food security through the liberalization of food markets by taking measures that allow for a free flow of food trade, such as loosening trade regulations and eliminating government intervention in trade processes. In academic literature, free trade comes up rather as a *modus operandi* (Langley 2002), making of Candel et al.'s condensation of the free trade perspectives on food security into a framework easier to work with in a comparative study, given the amount of studies focusing on the role of trade over a wide range of areas. In Ritchie's (1993) analysis, which is widely cited in literature regarding food security, free trade shows up as a promoter of food security because of its function of increasing food availability for the whole of society. Given that food availability is one of the FDFS and is crucial for achieving overall food security, the capability that free trade has in increasing food availability arguably brings free trade closer to the role of a 'food security provider'. It should be noted at this point that free trade does not exist to promote or improve global food security, as it is the case of the FAO. This disparity makes a comparison between the definitions of food

security provided by the FAO and found in the FTFSF particularly complicated, since the FTFSF technically does not carry the responsibility of working towards food security and, therefore, to creating a definition and a framework for the concept. Nonetheless, the instrumentalization of the concept of food security by free trade advocates makes this scrutiny necessary. In other words, when free trade proponents try to push forward free trade agreements and gain public acceptance for them through claiming to offer solutions regarding food security (which is the essence of the FTFSF), then the framework becomes a central actor in food security discussions and its accuracy should be investigated. Even though the FTFSF does not offer a final definition of how food security would look like once it is achieved, there is enough academic literature on free trade that point to a focus on the increase of production and exchange (Porkka, Kummu, Siebert & Varis 2013), which inevitably leads to an understanding of food security in FTFSF as a state of wide-spread food availability.

### **FTFSF vs FAO's FDFS: Theoretical Analysis**

In order to gain a deeper look into the FTFSF's claim of being able to promote and improve global food security, each dimension of food security from the FAO's definition will be analyzed against the free trade framework.

#### *Free trade and Food Availability*

When it comes to physical food availability, research consistently demonstrates that free trade is able to improve it. Increasing availability of products and services in general is a core idea of free trade (Corcos, Del Gatto, Mion & Ottaviano 2012) and there is no reason to suggest that it is different in the food industry. Beyond the sheer intention, an actual increase of food availability through or as a result of free trade agreements in various parts of the world can be observed (Porkka, et al.; Egbendewe, et al. 2017; 2013; FAO 2003). Considering the FDFS's definition of food availability as a matter that concerns the "supply side" (FAO 2008), it is clear that the FTFSF satisfies (or is, at least, able to satisfy) the FAO's expectations in regard to improving food availability.

#### *Free trade and Access to Food*

There is an access component to free trade that is widely recognized among scholars: the access to international markets, which is made possible by free trade even for small producers of developing countries (Moon 2011). This type of access, however, is not to be confused with the 'access to food' described by the FDFS, which clearly specifies household physical and economic

access to food (FAO 2008). Current research does not find a direct correlation between free trade and household physical access to food. It is possible, however, to assume – based on the increased food availability mentioned above – that such higher availability would at least facilitate a broader access to food among societal groups. This perspective is backed by reports and policy briefs of institutions and organizations dealing with the issues of trade and food security (IFPRI 2018; Brooks & Matthews 2015), although it does not appear to be significantly represented in academia. Nonetheless, when it comes to economic access to food, a relationship can be observed. Because free trade has economic activities at its core, the possibility of it causing economic shifts around its scope of action that ultimately lead to change on households' economic access to food is quite realistic. Wherever free trade is implemented, societal economic relations, work structures and even household management are profoundly changed, with both negative and positive repercussions. Many scholars would agree that the advent of free trade is responsible for creating gaps among social classes in favor of elite groups that profit from trade, so making it harder for poorer societal groups to possess the economic means to have sufficient access to food (Bello 2008; Andree, et al. 2014; Schanbacher 2010). A further argument that points to a worsening in households' economic access to food is the fact that, because free trade gives access to international markets for local producers, many of these opt for the more lucrative business of international trade, instead of providing for its own community, generating a problem for low-income households that must now look for (often more expensive) options (Andree et al. 2014; FAO 2003; Rahim 2011). A counter-argument arises, nonetheless, when analyzing an increase on food variety brought by free trade agreements, which introduces a wide range of products to national markets, many of these being often cheaper than local varieties (Brown, Murray-Rust, Vliet, Alam, Verburg, & Rounsevell 2014). The availability of these new, arguably more affordable products speaks for free trade as a helping factor in improving household economic access to food. Access to food appears to be directly influenced by the dimension of food availability, indicating that free trade should exert at least an indirect role in the access dimension. Nonetheless, given that research identifies positive and negative relationships between free trade and access to food, the matter as to whether the FTFSF is compatible with the FDFS's description of the access dimension is inconclusive.

### *Free trade and Food Utilization*

Food utilization is defined by FAO as a matter of nutrition, related to the way the available food is prepared and consumed in a household context, as well as its nutritional quality (FAO 2008). Although a tendency to increased food intake in societies after the introduction of free trade arrangements can be observed (Johnson 1998), this is probably a consequence of the increased

food availability as observed above, rather than an accomplishment in itself. Regarding free trade's influence over foods' nutritional value, there is overwhelming arguments that point to a negative tendency. These arguments lean on the standardization of food production stimulated by liberalization trends and free trade agreements, with variability loss in food supply as a consequence (Bezuneh & Yiheyis 2014). This development brings upon two challenges regarding nutrition levels/values for societies: the first is an apparent reduction of food variety on a local level, leading to a narrower variety of nutrients in the diets of societal groups that directly depend on these production activities (Westengen & Banik 2016). The second concerns a claim found in the realm of the natural sciences that ascribes a reduction in the nutritional value of crops subsequent to the introduction of monocultures, which is believed to trigger soil impoverishment (Plourde, Pijanowski, Fei & Niyogi 2012) and negatively affect the nutritional value of products (Khoury et al. 2014). Once again, the FTFSF seem to not be in complete alignment with the FDFS, leaving space to conflicting assumptions and hindering the achievement of a definitive understanding of the role of the FTFSF on the concept of food utilization as described by the FAO (FAO 2008).

### *Free trade and Stability*

The last of the dimensions defined by the FAO as a determinant of food security is stability. More precisely, it refers to the stability of the other three dimensions, since a state of ongoing food security can only be accomplished when food availability, economic and physical access to food and efficient utilization of food exist on a continuous, long-term basis (FAO 2008). When analyzing the role of free trade over the stability of the other three dimensions of food security, one must take under consideration the nature of free trade. As a *modus operandi*, free trade opens local, regional and national markets to external influences, creating new dependencies (Khoury et al. 2014). Whereas before producers could calculate their production to serve the demand of – often regionally limited – markets, with the advent of free trade, these producers will change their means of production to satisfy the needs of external markets. These shifts inherently lead to higher vulnerability, since the producers are now open to currency fluctuations, markets tendencies and political events, as well as a wider range of environmental threats caused by the switch to monocultures (Bezuneh & Yiheyis 2014; Sutopo, et al. 2012; Nath et al. 2016). One argument for a positive relationship between free trade and stability looks into trade openness as a catalyzer for economic growth through the long-term improvement of macroeconomic indicators (Semančíková 2016), which pertain to states' abilities to withstand shocks to food supply (Brooks & Matthews 2015). This perspective lacks however in consistency, given that researchers have difficulties controlling for all influencing variables (Baldwin 2004). Furthermore, even advocates of

the free trade as a stabilizing agent agree that there are pitfalls to this perspective. As the OECD puts it,

*There is ... an ambiguity about the stabilising role of trade. While the portfolio diversification effect contributes to price stabilisation, countries engaging in trade also run the risk of importing price instability. This risk is amplified when markets are thin. (Brooks & Matthews 2015: 26)*

Additionally, it is not self-evident that positive macroeconomic developments on a national level will translate into long-term stable socioeconomic stability of the most food insecure layers of societies, which can still be vulnerable to income inequality in a context of a prosperous economy (Michálek & Výboštok 2018). Finally, a resurgence of growing global hunger in the light of food price crises in the last two decades demonstrates that the stability of international markets is vulnerable to financial and environmental shocks (Gazdar 2015; Hajkowicz 2012). Evidently, there are more aspects weighing against a positive role of free trade over the stability dimension than otherwise.

### **Comparing FTFSF with FDFS: Practical examples**

To provide support for the arguments presented in the previous section, empirical examples that elucidate the applicability of the theoretical deliberations to real-life cases will now be explored.

#### *Food availability*

The matter of food availability in relation to trade is somewhat easier to observe than in the other dimensions of food security, and research seems to point to a positive correlation. The Finnish University Aalto has worked on an analysis about food availability in relation to increasing dependency on trade and has identified that food availability has, in average, doubled between 1965- 2005 in developing countries (Aalto University 2013). Regmi (2001), while looking into food availability between low, middle and high-income countries over time, has demonstrated a slight decrease on the availability of cereals and tubers – particularly in high-income countries. This decrease is, nonetheless, shadowed by a high increase in the availability of other food products, such as fruits, vegetables and meats, leading to a clear increase in general food availability in countries of different income levels. Bezuneh and Yiheyis (2014) have condensed extensive academic literature about the subject with statistical data about food availability in developing countries before and after the introduction and/or liberalization of trade, being able to

demonstrate a decrease in the food availability of the 37 investigated countries on a short-term, however with a small increase on a long-term.

### *Access to Food*

As seen in the previous section, the safest bet for looking for a relationship between access to food and free trade is to focus on the matter of economic access. Unfortunately, there is very little research connecting this dimension to trade impacts. A study about food security in Tanzania has pointed to a lacking relationship, demonstrating the countries' policy developments towards market openness and even an increased availability of food, however exerting no positive influence in improving nation-wide nutritional intake (Haug & Hella 2013). Likewise, when analyzing the impact of the Green Revolution<sup>1</sup> on contemporary food security, Westengen & Banik (2016) point out the uneven distribution of economic and technological resources among different societal groups, leading to a worsening in the economic capacity of certain groups to obtain sufficient food. The OECD has stated that an overall improvement in access to food resulting from trade openness can be observed, however recognizing that certain societal groups are more negatively impacted by trade openness than others, and that alleged benefits might be preceded by shocks (Brooks & Matthews 2015). Because of insufficient data on both physical and economic access to food in light of the role exerted by free trade, the only argument that can arise in this regard is that the FTFSF might not actively work in the direction of promoting or improving access to food in the food security sense, given that data collected seems to look into observed or prospected impacts and outcomes, rather than actions towards its improvement.

### *Food Utilization*

The matter of food utilization is probably the hardest one to interlink with the socio-economic construct of free trade, because it is directly associated with nutritional value, something that must be measured in the scope of the natural sciences. If analyzing trends in food utilization that are prompted by free trade, an observed shift in agricultural models can provide a clue to a possible relationship. A switch from multi- to monocultures as a consequence of liberalization trends and the introduction of free trade agreements has been identified by researchers (Keyder & Yenal 2011; Palmisano 2018; Ochieng 2014), and there is a rich body of research looking at the different impacts of crop standardization over economy, the environment and society

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<sup>1</sup> According to Shelley, the Green Revolution was a global movement that sought to increase agricultural productivity in countries with lower levels of development by introducing the use of farming technologies (Shelley 2014).

as a whole. As early as the 1920s, trade orientation was pinpointed as a shaper of food production strategies among US American farmers (Tenny 1928). Ambinakudige (2006) has pointed out that the commodification of crops for economic purposes has been taking place in India for centuries, however, having been accelerated during the colonial period as a result of British interest in high-value crops such as coffee, tea and rubber. In regard to the dimension of food utilization, this reduction in crop variety is commonly associated lower levels of nutrients in food produces (Rahim 2011), which in turn exerts a negative impact over crops' resilience to environmental shocks (Frison, Cherfas & Hodgkin 2011) consequently impacting food security (Foley et al. 2005). Sarkar (2010) attributes the reduction of crops' nutritional value in Indian rice plantations to two developments brought by free trade: the choice for nutritionally poorer crops that offer higher profit margins and monocultures' increased need for chemical pest-control that affect crops nutritional balance. A very similar conclusion was reached by Pingali (2012) after an assessment of the decline of micronutrients in relation to the crop standardization brought by the Green Revolution through the introduction of monocultures. Klasen et al. (2016) compiled a series of data that associates loss of biodiversity and lower soil quality to the introduction of monocultures, a problem that is directly associated to lower nutritional value in food products, as seen above. There is still little research tackling the question as to whether increased income from trade-oriented agricultural activities influence food utilization. However, a study conducted in six developing countries looked into to household participation in cash crop schemes and concluded that related increases in household income had no significant impact over improvement in child nutrition. It is important to observe that these studies point only to an influence exerted by free trade over these developments. One can perhaps speak of a paradigm shift that lead producers to have different priorities (for example higher profits over regional food sovereignty), thus adapting their productions strategies to achieve new sets goals. With this, the role of free trade over the matter of food utilization is still inconclusive, nonetheless, available academic research does make a stronger case to a rather negative correlation.

### *Food Stability*

The influence of free trade over the stability of the other three dimensions of food security is more easily demonstrable than with the individual dimensions of availability, access and utilization. This owes to the fact that 'instability' is arguably a by-product of free markets, which can be often described as a high-risk-high-reward activity, demonstrated by its effect over price volatility and vulnerability to financial and environmental shocks (as seen in the theoretical analysis of stability). The example of Costa Rica and the economic impacts related to the adherence to free trade agreements with the USA and

the EU highlights this effect. Here, 'even minor shocks to the domestic economy may lead to structural instability' - a phenomenon that accompanied the introduction of the free trade agreements - could be observed, pointing to a causal relationship between free trade and heightened economic vulnerability (DiCaprio & Santos-Paulino 2011). This tendency was already observed by Reynolds (1963) in the middle of the 20th century, when analyzing the development of Chile as trade-oriented economy and consequent economic fluctuations that lead to a series of internal crisis. Further studies indicate the direct influence of trade over economic indicators, with susceptibility to external economic influences leading to increased economic instability (Frolov & Savytska 2016). Notwithstanding this visible economic trend, the dimension of stability in food security addresses not economic stability, but stability of the other three dimensions of food security. Economic stability is highlighted here for being the aspect that is mostly relatable to free trade, and therefore can only demonstrate that the concept of stability appears to be mostly inconsistent with the overall nature of free trade activities. Nonetheless, if a negative influence caused by free trade over general economic stability is clear, so are the cascading effects caused by disruptions on the trading system over all food security dimensions, leading to the conclusion that free trade exerts an overall negative influence over the stability dimension of food security.

## **Conclusion**

Compared against the FDFS, the examples brought upon in this article show that the FTFSF's definition performs poorly. In three of the dimensions - access, utilization and stability - the FTFSF appears with conflicting roles, occasionally exerting positive, however mostly negative influence over food security. Rather than decisively determining whether the FTFSF works for or against food security, it points to a lack of action, or perhaps a lack of capability, towards ensuring that these dimensions are being fulfilled. On the other hand, the FTFSF is evidently capable of increasing food availability. Overall, both the theoretical arguments and the available data collected from the few empirical studies lead to a similar conclusion: it is difficult to determine whether the FTFSF is actually able to boost food security, albeit a clear negative tendency is visible. The attempt to make a comparative assessment between the definition of food security provided by the FAO and by the advocates of free trade has highlighted some problems: the first is the fact that proponents of free trade are not busy with understanding what food security actually means, as rhetoric often oversees the other food security dimensions that do not concern food availability. Secondly, there is little to none literature in the realm of free trade that demonstrate attempts of defining the state of accomplished food security - only how to accomplish it. Considering that free trade is often sold as a problem-solving tactic for matters of food securi-

ty by its advocates, the fact that they do not define the meaning of the term raises a few questions: is the FTFSF using food security as a strategy to push supporting policies and exert international pressure for the adherence to trade agreements? Or is this lack of definition a failure from free trade proponents, who for their stimulating activities in ever-changing environments fail to visualize a state in which global food security is ultimately achieved, pointing to an immaturity in their claims of being able to solve the problem? There are many further questions to be explored by academics. One of them concerns the environment and the climate. Since environmental impacts and climate change play a crucial role in food security, an assessment of the influence of free trade over the environment and the climate could highlight an indirect, however pressing influence over food security. Even after having used the FTFSF's arguments to construct the most probable definition of food security from a free trade perspective, it remains difficult to identify an intention of providing global food security from the part of free trade proponents. It is, however, not difficult to realize that their entire argumentation leans on the increase of food availability, which is a pillar of free trade, and very little attention is paid to other aspects of food security, so putting the role of free trade in the matter of food security in question.

**- I reflect -**

I have long wondered what role food trade plays on global hunger, malnutrition and poverty. As a Brazilian, the paradox of living in one of the biggest food exporting countries in the world, whilst knowing that a big portion of the population was food insecure has, in many ways, shaped me. On the one hand, food production has been increasing, agricultural models are being intensified and farming efficiency is on a constant rise – developments which can be, at least in part, attributed to the rise of a global food market. On the other hand, the food security of vulnerable populations has been improving at a very slow pace compared to the increases in food production. Furthermore, as food production continues to rise, hunger is now also rising globally. In my search to understand these disturbing dynamics, I have stumbled upon many determinants of food insecurity. Among causes such as conflict, natural catastrophic events and environmental degradation, most causalities for food insecurity identified in research relate, either directly or indirectly, to trade – price shocks, crop standardization and land grabbing are some examples. Additionally, research also shows that many of the ‘other’ causes for food insecurity – such as the aforementioned conflict and environmental degradation – can be caused or aggravated by the unstable economic dynamics provoked by trade. While I navigated a sea of research papers, case-studies and indexes, I couldn’t help but notice that a pattern between trade-oriented agricultural production and rising hunger was emerging, a pattern that becomes clearer the more localized the observation becomes. If trade is negatively influencing food security and hunger, I feel the personal duty to take a closer look and contribute to the elucidation of the problem. This article represents my first attempt of doing so.

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