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Global Trade Shocks and Geopolitical Uncertainty: Implications for Food Security in Emerging Economies

Introduction

By Iacopo Maria Taddei[1]

The OEET, in collaboration with the Collegio Carlo Alberto (CCA), held its 11th Workshop on December 12–13, 2025, at the University of Turin. Titled *Global Trade Shocks and Geopolitical Uncertainty: Implications for Food Security in Emerging Economies*, the workshop focused on how international trade, external shocks, and conflict shape food security outcomes, with particular attention to emerging and developing economies.

The event was conceived within the framework of the STAPLES project (*Stable Food Access and Prices and Lower Exposure to Shocks*), funded by PRIMA, in which OEET and CCA are directly involved. Central to the project is the analysis of how global stressors—such as trade disruptions, price volatility, geopolitical tensions, climate change, and armed conflict—propagate through cereal and agricultural input value chains and affect food availability, access, and stability, especially in the Middle East and North Africa (MENA) region.

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The workshop was structured into four sessions—three thematic sessions and one round table—covering the main pillars of the STAPLES research agenda.

The first session focused on the role of international trade in shaping food security, highlighting both its potential benefits and its inherent risks. Chahir Zaki's article, *Who Pays the Price of Protectionism? Food Security in MENA*, examined how trade policies affect food security in a region characterized by high import dependence and structural constraints on domestic agricultural production. Drawing on household-level data from Egypt, Jordan, Sudan, Morocco, and Tunisia during the COVID-19 crisis, the study shows that trade restrictions tend to exacerbate food insecurity, particularly among the most vulnerable households, despite ongoing debates in the literature on the protective role of trade barriers for small producers.

Complementing this perspective, Sara Balestri, Andrea Crippa, and Luca Pieroni, in *Unveiling Hidden Drivers: A Latent Variable Approach to Food Security Dynamics in Africa*, explored the evolution of household food security in Sub-Saharan Africa. Using a dynamic framework centred on dietary diversity, the authors show that food security outcomes display strong persistence over time, while climate shocks—especially droughts—significantly hinder transitions toward more secure dietary conditions.

Antoine Castet's contribution, *The Conquest of the Desert: Land Investment in Egypt*, offered a longer-term structural perspective. The paper analysed Egypt's large-scale land reclamation policies in desert-bordering districts, showing that these interventions increased agricultural employment but slowed structural transformation by diverting labour away from more productive manufacturing and service sectors.

The second session addressed how shocks propagate through global food networks. Davide Del Prete's paper, *Market Power along the Coffee Global Value Chain*, documented the presence of market power across different stages of the coffee value chain, highlighting systematic differences in concentration and pricing dynamics between upstream and downstream actors.

Stefano Schiavo's *Food Connections: Global Trade, Shock Propagation and Food Security* adopted a network-based simulation approach to assess how production shocks in major cereals—wheat, rice, and maize—spread through international trade linkages. The results indicate that trade can amplify shocks in highly import-dependent countries, leading to sharp increases in the number of people exposed to malnutrition.

Related evidence was provided by Dela-Dem Doe Fiankor and co-authors, who examined how Italian pasta exporters adjust prices in response to global wheat price shocks. Their findings show that

international price shocks are systematically transmitted to export prices, though with heterogeneous effects depending on the nature of the shock.

The third session, organized as a round table, presented preliminary results from Work Package 1 of the STAPLES project (Understanding External Stressors and Shocks). CCA researchers Alessia Amighini, Giorgia Giovannetti, and Iacopo Maria Taddei illustrated descriptive results from a static network analysis of global trade in unprocessed cereals and fertilizers, highlighting patterns of import dependence and evolving trade clusters.

Together with representatives from partner institutions—POLIMI (Marta Marson) and UNISG (Donatella Saccone) —the discussion also addressed how these analytical results feed into the development of a Dashboard and Decision Support System (DSS). This tool aims to provide policymakers and value-chain actors in the MENA region with timely information on trade dependencies, exposure to external shocks, and alternative sourcing strategies during periods of crisis.

The final session focused explicitly on the relationship between conflict and food insecurity, emphasizing its bidirectional nature. Armed conflict disrupts food production, trade routes, and livelihoods, thereby worsening food insecurity; at the same time, high food insecurity and malnutrition can increase social tensions and the risk of conflict.

Julia Fisher's article, *Growth in the Aftermath of War: Aid Effectiveness in Post-Conflict Locations*, analysed African regions between 1995 and 2020 to assess how exposure to conflict affects economic growth and food security. Using nighttime lights as a proxy for local economic activity, the study shows that post-conflict recovery depends crucially on the intensity and geography of past violence. Locations indirectly exposed to war experience stronger post-conflict growth than areas directly affected by fatalities, underscoring the importance of targeted post-conflict policies and aid allocation.

Acknowledgements

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Who Pays the Price of Protectionism? Food Security in MENA

By Chahir Zaki[2]

Food insecurity is a development challenge that has intensified in recent years. Indeed, with trade war between the US and China in 2017, the pandemic in 2020, followed by the war in Ukraine in 2022, different conflicts and wars and the current geopolitical tensions, several countries have been suffering from an acute food insecurity. Indeed, according to FAO (2025), 8.2 percent of the global population may have faced hunger in 2024. In the same vein, the World Food Program (WFP) 2025 Global Outlook estimates that around 319 million people are facing severe levels of food insecurity in the 67 countries with WFP operations. These figures are likely to increase given the increase in the frequency of natural disasters related to climate change that can affect the productivity of the agriculture sector (AATM, 2024). Moreover, trade policy can play a significant role in food security as several low- and middle-income countries are net importers of agri-food products. This note summarizes the main channels through which trade policy can affect food security, with a special focus on the MENA region.

In the MENA region, food insecurity is an escalating issue due to volatile economic conditions, chronic water scarcity, unsustainable agricultural practices, and heavy dependence on food imports. These issues are also exacerbated by the effects of climate change (Mimoune & El Shehaby, 2023). Despite rising global and national food supplies, food insecurity remains one of the primary challenges faced by households in the region, particularly the most vulnerable. Recent estimates show that 59.8 million people, equivalent to 12.9 percent of the region's population, are undernourished (FAO, 2023). The region, which hosts some of the top food importing countries worldwide, has also been hit by a series of global and regional crises that have worsened food security outcomes. These figures are likely to increase as the number and the intensity of conflicts in the region has been increasing in Sudan, Palestine, Yemen, and Syria.

From a trade policy perspective, it is widely argued that governments should not impose trade restrictions on the imports of food during times of shortage and on exports during times of self-sufficiency (Gillson & Busch, 2015). During times of crisis, however, governments tend to impose barriers on food trade to protect consumers and domestic producers, which leads to distortions in domestic food markets and increases food price volatility and, potentially, food insecurity. This is why a strand of the literature argues that agricultural trade liberalization is crucial to enhancing food security

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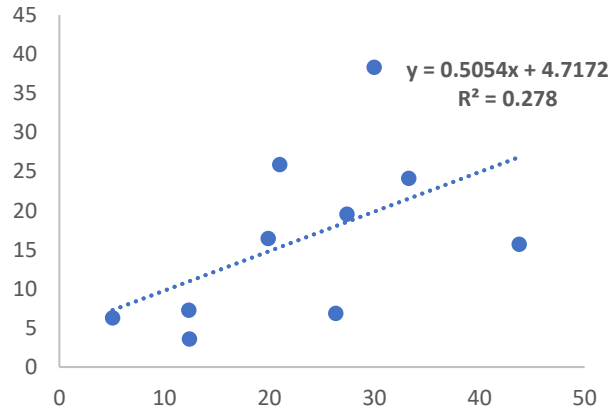
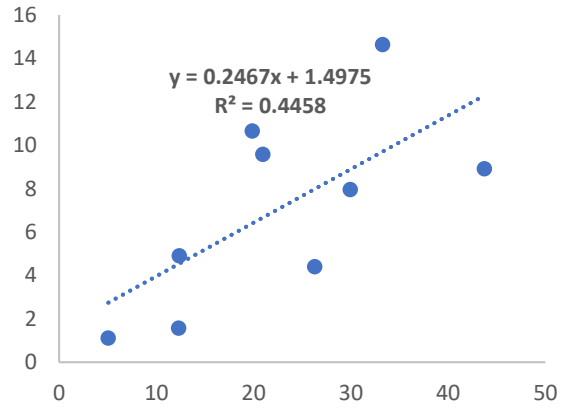
and therefore rejects restrictive trade policies, such as tariffs, non-tariff barriers (Yahaya et al., 2024), and export restrictions, even during times of crises (Espitia et al., 2020). A large body of research links trade liberalization to increased food availability and utilization due to the rise of per capita agricultural production and per capita supplies of nutrients and shows that liberalizing trade in staple food improves food access and affordability (Tanaka and Hosoe, 2011). However, another strand of empirical research provides evidence of the adverse effects of trade liberalization on food security due to the low competitiveness of smallholders in low-income countries, coupled with challenges from low infrastructure quality and limited access to technology and finance (Luo & Tanaka, 2021). Figure 1 depicts a positive association between tariffs and the prevalence of moderate and/or severe food insecurity. Indeed, tariffs are harmful to food security as they raise the price of imported food, making it less affordable. The consequences of restrictive trade policies on national welfare extend beyond typical price and quantity effects.

Figure 1: Tariffs and Food Insecurity

Tariffs and prevalence of moderate and severe food insecurity



Tariffs and prevalence of severe food insecurity



Source: Aboushady and Zaki (2023).

Note: This graph includes available data for MENA countries.

Using data from the Combined COVID-19 MENA Monitor Household Survey constructed by the Economic Research Forum for five countries (Egypt, Jordan, Sudan, Morocco, and Tunisia), we explore the status of food insecurity during the pandemic, as an example of crisis times. We combine the data with data on tariffs on food products to estimate the impact of trade policy restrictions on the different dimensions of food insecurity (affordability, availability, and utilization), with a special focus on vulnerable categories including females, blue-collar workers, and informal workers. The findings suggest

that restrictive trade policies worsen food security through the channel of market shortage. The outcome is worse for the most vulnerable, especially low skilled labour and informal employees by reducing their demand for food and compromising its utilization. From a policy perspective, these findings suggest that protectionism does not effectively protect domestic consumers during shocks. In fact, it appears to worsen food security outcomes for the most vulnerable of the population, who are the very individuals these policies were intended to protect.

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Unveiling Hidden Drivers: A Latent Variable Approach to Food Security Dynamics in Africa

By Sara Balestri[3], Andrea Crippa3, Luca Pieroni3

Recent years have witnessed a marked slowdown in global progress in reducing hunger and malnutrition, with food insecurity remaining persistently high, particularly in Sub-Saharan Africa (FAO, IFAD et al., 2024). In this region, households are frequently exposed to overlapping and reinforcing shocks, including climate-related events, economic instability, and demographic pressures (Barrett, 2021). Among these, droughts are especially relevant for low-income, agriculture-dependent economies, as they affect food security not only by reducing food availability, but also by constraining incomes, disrupting markets, and weakening purchasing power (Myers et al., 2017; IPCC, 2023). Understanding how household food security evolves over time in response to such shocks therefore remains a central empirical challenge.

Much of the existing literature has relied on static measures of food security, often focusing on caloric intake or food availability, while paying less attention to diet quality, dietary diversity, and intra-household dimensions (Costlow et al., 2025). Moreover, empirical analyses are frequently constrained by limited longitudinal data and by econometric approaches that rely exclusively on observed indicators, potentially overlooking the multidimensional and partly unobservable nature of food security (Hangoma et al., 2024; Izraelov and Silber, 2019). These limitations raise concerns about measurement error, omitted variables, and the ability to capture persistence and mobility in food security status over time (Ahmadzai et al., 2025).

Against this background, this study examines the dynamics of household food security in Sub-Saharan Africa by focusing on dietary diversity and on transitions across different food security conditions in response to climate shocks. The analysis draws on panel data from the Living Standards Measurement Study (LSMS) for Ethiopia, Nigeria, Tanzania, and Uganda, covering four survey waves between 2010 and 2020 and comprising 25,502 household observations. Household food security is proxied by the Household Dietary Diversity Score (HDDS), a widely used indicator that reflects both the quality and quantity of food consumption through the number of food groups consumed in the previous 24 hours (Swindale and Bilinsky, 2006). Following Vaitla et al. (2017), the continuous HDDS is recoded into four

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ordered categories, ranging from scarce to plentiful dietary diversity, to facilitate interpretation while preserving meaningful variation in diet quality.

To account for the dynamic and multidimensional nature of food security, the empirical strategy adopts a latent variable framework based on a Hidden Markov Model (HMM) (Bartolucci, 2017). In this setting, household food security is conceptualized as an unobservable state that evolves over time, while the observed HDDS categories provide imperfect signals of that state. The model jointly estimates the probability of households starting in a given latent food security condition and the probability of transitioning between conditions across survey waves. By explicitly modelling unobserved states, this approach helps to address some of the limitations of classical econometric analyses based solely on observed outcomes, including measurement error and unobserved heterogeneity. At the same time, the inclusion of observable covariates—such as age and gender of the household head, exposure to drought shocks, and distance from urban centres—in both initial and transition probabilities makes the latent variable approach complementary to standard analyses of determinants rather than a substitute for them.

Model selection based on information criteria supports the identification of three latent food security states, which can be interpreted as a scarce variety diet (food insecure), a middle variety diet (somewhat secure), and a plentiful variety diet (food secure). The estimated conditional response probabilities reveal a strong correspondence between these latent states and the observed HDDS categories, lending substantive meaning to the classification. Most households assigned to the scarce variety diet state report low or middle-scarce dietary diversity, whereas households in the plentiful variety diet state are much more likely to exhibit high dietary diversity.

The estimated transition dynamics point to the relevance of both demographic characteristics and environmental conditions. Older household heads display a slightly higher probability of transitioning towards the most food-secure state, while female-headed households face a substantially lower likelihood of moving to a plentiful variety diet. Greater distance from urban centres is also associated with a reduced probability of reaching high dietary diversity, consistent with constraints related to market access and food availability. Drought shocks emerge as a particularly important factor: exposure to drought markedly reduces the probability of transitioning from a scarce variety diet to a plentiful variety diet, indicating that climate-related shocks can hinder improvements in diet quality over time. These effects are identified within a dynamic framework that accounts for state dependence, highlighting how shocks influence not only current outcomes but also future food security trajectories.

Figure 1 illustrates the estimated impact of drought on the likelihood of households being in the plentiful variety diet latent state over time. The figure shows that households affected by drought

consistently exhibit a lower probability of being in, or moving into, the most food-secure state compared to non-affected households. This graphical evidence complements the regression-based results and underscores the role of climate shocks in shaping initial dietary conditions and subsequent transitions.

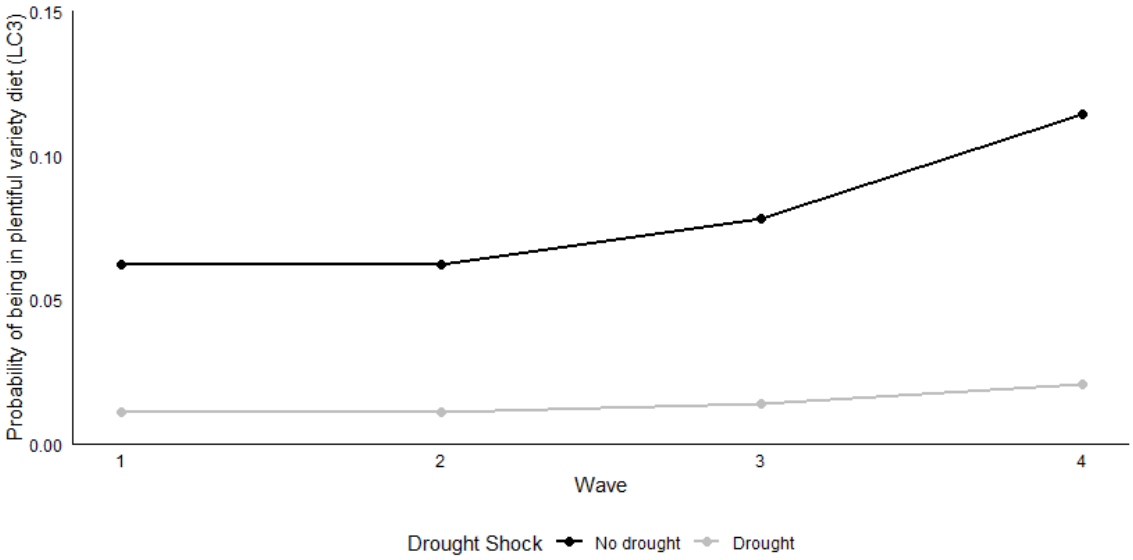

Figure 1: Effect of Drought on the Probability of Being in a Plentiful Variety Diet

Overall, the analysis provides evidence that household food security in Sub-Saharan Africa is characterized by marked persistence and non-negligible mobility across dietary diversity conditions over time. The results suggest that demographic characteristics and spatial factors are systematically associated with households' ability to reach and maintain more diversified diets, while climate-related shocks, such as droughts, substantially hinder improvements in dietary outcomes. By focusing on dietary diversity and on transitions between different food security states, the findings offer a nuanced picture of vulnerability and resilience in the presence of environmental stressors.

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The Conquest of the Desert: Land Investment in Egypt

By Antoine Castet[4]

My article examines the long-run economic consequences of Egypt's agricultural expansion into the desert, with a particular focus on its effects on structural transformation. Faced with rapid population growth and mounting pressure on the Nile Delta, successive Egyptian governments have promoted the "conquest of the desert" as a central development strategy. Large public investments in irrigation infrastructure and land allocation policies were intended not only to expand agricultural production, but also to foster settlement, industrialization, and the development of services in newly reclaimed areas. Contrary to these ambitions, the article argues that desert expansion has slowed structural transformation in the districts that benefited from it.

The analysis is grounded in the classical literature on structural transformation, which highlights the shift of labour from agriculture to manufacturing and services as a hallmark of economic development. While agricultural development is often seen as a catalyst for this process, by raising incomes, stimulating demand, accumulating capital, and releasing labour, theoretical and empirical work emphasizes the importance of the nature of productivity gains. In particular, land-augmenting changes such as irrigation can raise output without reducing labour demand, potentially encouraging specialization in agriculture rather than labour reallocation. In open economies, such specialization may hinder structural transformation, as predicted by Matsuyama's (1992) model.

The Egyptian case provides a compelling setting to test these mechanisms. Since the 1950s, the state has invested heavily in reclaiming desert land, but the most intense phase of expansion occurred after the enactment of the Desert Land Law (Law No. 143) in 1981. This law established state ownership of desert lands and enabled their large-scale allocation to smallholders, youth graduates, and, crucially, large agro-industrial conglomerates closely linked to the government. These actors combined irrigation with mechanization, creating a hybrid model that mixed labour-intensive crop production with capital-intensive farming.

The article combines newly harmonized district-level census data covering the period 1960–2017 with satellite-based measures of agricultural land expansion derived from Normalized Difference Vegetation Index (NDVI). These data document a clear spatial pattern: districts bordering the desert substantially

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increased their cultivated area by expanding into previously uncultivated lands, while districts in the core of the Nile Delta experienced stagnation or decline in agricultural land due to urbanization. Employment patterns mirror these trends, with agricultural employment rising in peripheral districts and declining inland.

Descriptive evidence further shows that districts with a higher reliance on agriculture tend to be poorer, while districts with a larger services sector are more developed, patterns consistent with the broader literature on structural transformation. Building on these stylized facts, the article estimates the causal impact of desert expansion using a difference-in-differences strategy. Treated districts are those bordering the desert, which gained access to newly irrigated land after 1981, while control districts are located in the interior of the Delta and lack such expansion opportunities.

The results indicate that desert-bordering districts experienced a relative increase in the share of agricultural employment after the 1981 law, accompanied by a relative decline in manufacturing and services employment compared to control districts. While agriculture expanded successfully, non-agricultural sectors grew more slowly in treated districts. This pattern implies a slower pace of structural transformation in areas that benefited most from the expansion policy.

These findings challenge the government official narrative that desert development would generate comprehensive economic modernization. Instead, the expansion policy appears to have reinforced agricultural specialization in districts with access to newly reclaimed land. Consistent with theoretical predictions, access to abundant land, combined with irrigation-driven, land-augmenting productivity gains, proved to be a mixed blessing. By strengthening comparative advantage in agriculture, desert expansion reduced incentives for labour reallocation toward higher value-added sectors.

Overall, the study concludes that Egypt's desert expansion policy, while successful in increasing agricultural land and output, has slowed structural transformation in the affected districts, contributing to a two-speed development process within the country.

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Market Power along the Coffee Global Value Chain

By Davide Del Prete[5]

This paper studies the distribution and consequences of market power along the global value chain (GVC) of coffee. Motivated by a growing academic and policy debate on market power and concentration, the analysis addresses two central research questions: (i) whether market power differs systematically across stages of a global value chain, and (ii) whether there is a trade-off between local (stage-specific) and global market power when firms operate across countries and stages.

The coffee sector provides an ideal setting for this analysis. It involves more than 12.5 million producers worldwide and approximately one billion consumers, while international prices are highly sensitive to short-run supply and demand conditions. At the same time, the sector has experienced substantial consolidation, particularly among international traders and downstream firms, with more than 70 major mergers and acquisitions (M&A) since 2014. These features make coffee a natural laboratory to study how concentration and firm size shape prices and market outcomes along a GVC.

This paper constructs a novel and comprehensive global dataset that traces coffee transactions across all stages of the value chain: upstream production, midstream international trade, and downstream retail. Upstream data include intra-national flows for Brazil and Colombia from Transparency for Sustainable Economies (TRASE), complemented by farm-gate price data from the International Coffee Organization (ICO). Midstream data consist of transaction-level customs records with identified exporters and importers for 14 major producing countries, covering roughly 87 percent of global production between 2014 and 2020. Downstream data are drawn from Euromonitor's Global Market Information Dataset (GMID), which reports brand-level retail sales and volumes across about 100 countries from 2013 to 2022. In addition, the paper assembles a detailed dataset on 314 M&A deals in the coffee sector since 1974, allowing to study consolidation dynamics explicitly.

The descriptive analysis uncovers three main stylized facts. First, there is substantial price dispersion at all stages of the coffee GVC. Even after controlling for origin, destination, year, and product characteristics, prices vary significantly within narrowly defined markets, suggesting the presence of imperfect competition rather than purely competitive pricing. Second, the coffee GVC is highly concentrated, particularly at the midstream and downstream stages. The top 100 importers—

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approximately 1 percent of all firms—account for more than 90 percent of global coffee purchases. Third, the growth of large importing firms has occurred primarily through M&As, highlighting consolidation as a key driver of increasing market power.

The empirical analysis formalizes the relationship between market shares and prices at each stage of the value chain. Using regressions of log prices on firm-level market shares and using a rich sets of fixed effects, we document stark differences across stages. Upstream, higher exporter or importer market shares are associated with lower prices paid to producers, consistent with buyer market power. In the midstream, bilateral market shares matter for prices in asymmetric ways: exporters with larger shares tend to obtain higher prices, while importers with larger shares pay lower prices, reflecting bilateral bargaining power in international transactions. Downstream, higher retailer market shares are strongly associated with lower retail prices, consistent with dominant firms leveraging scale economies.

Overall, the paper makes three main contributions. First, it provides a uniquely detailed empirical picture of concentration and pricing across all stages of a major global value chain. Second, it documents that market power is present both in input markets (affecting producers) and output markets (affecting consumers), with systematic differences across stages. Third, it shows that mergers and acquisitions play a central role in shaping global market structure, particularly among large buyers. These findings have important implications for competition policy and development, suggesting that assessments of market power should adopt a global and multi-stage perspective rather than focusing narrowly on single markets or stages of production.

Food Connections: Global Trade, Shock Propagations and Food Security

By Stefano Schiavo[6]

The globalization of agriculture has intensified significantly over the past four decades, marked by a six-fold increase in trade in agricultural goods. As a result, approximately 25% of global agricultural production is currently exported (D'Odorico et al. 2014) and food imports feed between 2 and 3 billion people (MacDonald et al. 2015).

While trade offers benefits such as risk diversification and the ability to decouple population growth from local resource availability, it simultaneously increases countries' exposure to shocks originating elsewhere and fosters dependence on other nations.

These competing effects can be investigated using network-based simulations that study diffusion of global or local shocks affecting agricultural production (Grassia et al. 2022). Since three main staples -- corn, rice and wheat-- account for more than 50% of global caloric intake, these commodities represent a natural starting point for the analysis.

The network model simulates shock diffusion by tracking key steps: a production shock causes a global price increase, which reduces import demand. If the shock is not fully compensated, countries reduce exports to meet domestic needs, propagating the shortage across the network. Countries use up to 50% of their existing reserves to compensate for shortfalls. Finally, any remaining demand deficit is absorbed via a reduction in consumption, allowing the ultimate impact on caloric intake and food security to be computed.

Two scenarios are simulated, both caused by extreme weather events: a severe localized shock and a system-wide disturbance. The first replicates the major draught that hit the US in the 1930s (aka Dust Bowl) and would result in substantial production losses in American agricultural production: -40% for corn, -30% for wheat, and -20% for rice (Glotter and Elliot, 2016). The second scenario involves a

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This piece summarizes results from work with Emile van Ommeren (University of Trento), Giuseppe Mangioni and Marco Grassia (University of Catania). It is based on the project "Food Connections. Intended and unintended consequences of trade on food and nutrition security", funded by the European Union Next generation EU, mission 4, component 2 (CUP E53D23016430001 – Project code P202233ZTR).

simultaneously production declines across multiple regions (Lloyd's 2015), leading to a significant fall in global food supply: -10% for Corn and -7% for both Wheat and Rice.

In both cases, the shocks propagate globally, affecting even counties that do not directly import from producers directly hit by extreme weather events, and countries located very far from the epicenters of the crises. The number of countries facing a severe caloric deficit (above 250 kcal/day/per capita) ranges between 13 (Dust Bowl scenario) and 36 (Global shock scenario), generating an important increase in the number of people suffering from malnutrition. Back-of-the-envelope calculations suggest that the number of undernourished people would increase by 32 to 130 million globally, depending on the specific scenario.

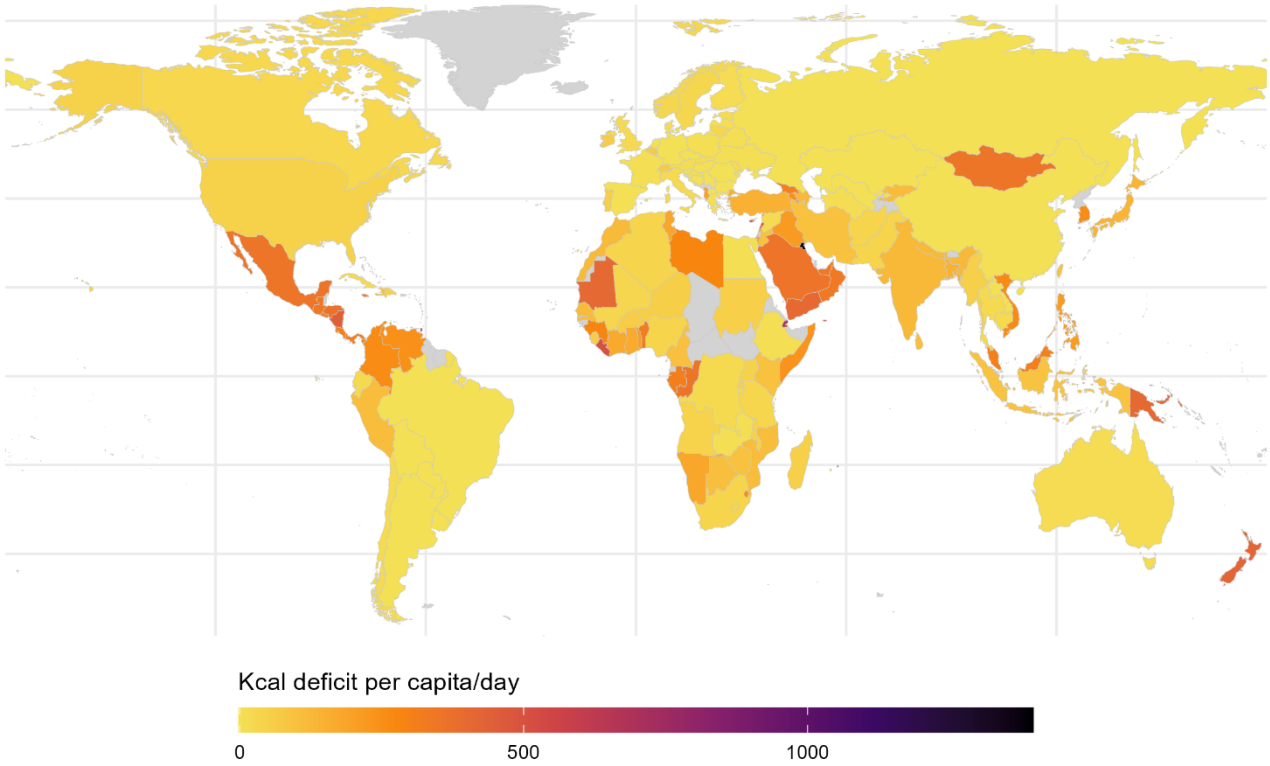

Figure 1 – Combined caloric deficit as a result of a global shock to corn, rice and wheat production. Own calculations based on simulation results.

The shocks cause major structural changes in the trade networks, with 30% to 55% of trade links being severed and the number of exporting countries falling by 30% to 60%. At the same time, the system shows a remarkable degree of resilience, as only a handful of countries are completely cutoff from trade. Clearly, the effects are not homogeneous across the world (see Figure 1). On average, countries that are

heavily dependent on food imports, especially from producers directly hit by the shocks, face higher caloric deficits. On the other hand, large stocks of reserves help coping with the disruptions and import diversification also acts as an important buffer.

Additional insights emerge from the comparison of the baseline model setup with a "non-cooperative" setting in which countries do not share their reserve stocks, that is, they restrict exports before deploying their reserves and thus only use food stocks to stabilize internal demand, not world markets. The simulation show that non-cooperative behaviour significantly exacerbates global suffering, increasing the average caloric deficit, the number of countries with a significant decline in food availability, and the number of additional undernourished people. This outcome underscores that international cooperation remains an important tool for mitigating the impact of shocks to agricultural production, and for preventing catastrophic humanitarian outcomes during a food crisis.

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Global Wheat Price Shocks and Firm-Level Export Price Setting

By Daniele Curzi[7], Dela-Dem Doe Fiankor[8], Roberto Solazzo[9], and Daniele Valenti7'[10]

Global agricultural markets have experienced recurrent spikes in wheat prices over the past two decades, driven by extreme weather events, rising input costs, tightening stocks, and, more recently, the COVID-19 pandemic and the Russia–Ukraine conflict. These developments have renewed interest in how firms that rely on wheat as a key intermediate input adjust their pricing strategies in response to large and persistent commodity price fluctuations. This paper examines how Italian firms exporting pasta and wheat-based derivatives adjust export prices when confronted with shocks to the global wheat market.

We combine a time-series analysis of global wheat price dynamics with firm-level trade data. Using the universe of Italian firm-product-destination export records over 2004–2022, we study how export prices respond to structural shocks identified in the international wheat market. To do so, we first estimate a Bayesian Structural Vector Autoregressive (BSVAR) model for the global wheat market, following Valenti et al. (2025), using quarterly data from 1970–2022. The model identifies five fundamental drivers of wheat price movements: supply shocks, global economic activity shocks, energy demand shocks, precautionary (inventory) demand shocks, and wheat-specific demand shocks. These structural shocks are then aggregated to the annual frequency and linked to firms' export pricing decisions.

In the second step, we estimate a panel model of firm-level export prices, proxied by Free on Board (FOB) unit values, for pasta and wheat-derivative exporters. The inclusion of firm–product–destination fixed effects allows us to isolate how unexpected changes in global wheat market fundamentals translate into within-relationship price adjustments. We additionally control for bilateral tariffs, destination income and market size, and remoteness, capturing standard determinants of export prices highlighted in the trade literature.

The baseline results show that global wheat shocks are systematically transmitted to export prices, but with notable differences across shock types. Positive wheat supply shocks reduce export price growth, consistent with lower input costs being passed through downstream. By contrast, demand-side shocks – particularly those linked to global economic activity and wheat-specific demand – lead to sizable increases

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in export prices. Energy demand shocks also raise export prices, reflecting cost-push effects operating through energy-intensive inputs such as fertilizer and transport. Precautionary demand shocks, associated with heightened uncertainty and inventory accumulation, are instead linked to lower export price growth, suggesting margin compression or delayed pass-through during periods of elevated risk.

Further analysis reveals important asymmetries in price adjustment. Firms raise export prices sharply in response to positive shocks that increase wheat prices, but reduce them only modestly when shocks operate in the opposite direction. This asymmetry is especially pronounced for global economic activity shocks, indicating that exporters respond more strongly to favourable demand conditions than to downturns.

We also document substantial heterogeneity in pass-through. Pasta exporters exhibit stronger price responses than firms producing other wheat derivatives, consistent with tighter technological and input linkages to durum wheat. Firms exporting to more distant destinations adjust prices less, suggesting partial absorption of shocks through markups. Larger and more diversified firms similarly display attenuated responses, indicating a greater capacity to smooth margins and buffer input price volatility.

Overall, the results highlight how upstream commodity price shocks propagate unevenly through food value chains. The origin of wheat price fluctuations and the characteristics of exporting firms both matter for the magnitude and direction of downstream price adjustments. These findings underscore the importance of accounting for shock heterogeneity and firm-level resilience when assessing food price transmission and the stability of agri-food export sectors in an environment of heightened global volatility.

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Growth in the Aftermath of War: Aid Effectiveness in Post-Conflict Locations

By Julia Fischer[11]

Armed conflict remains a daily reality in many parts of the world. While the trend of conflict outbreaks is increasing (Pettersson et al., 2021), there is reason to expect that peace eventually materializes after war. Within the past 25 years, approximately half of African countries experienced war, followed by periods of peace, the so-called post-conflict periods. However, due to the acute instability, a country's economy contracts during war because of factors such as capital flight, disinvestment in human capital and physical property destruction. This not only shapes a country's post-conflict development as a whole, but these consequences of war are likely very local. While some locations within a country experience an influx of displaced people and their savings are spent on necessities there, other locations experience higher destruction of physical property and infrastructure, increased capital flight and a large outflow of human capital.

Furthermore, a location's economic outlook after a war is not necessarily clear. There are two competing hypotheses on how countries fare after war. The war ruin hypothesis posits that, on average, institutions are weaker after war, the economy is destroyed, and any post-conflict reconstruction is lengthy and costly, hindering growth. In contrast to this grave outlook, the phoenix factor hypothesizes that such locations arise from the ashes. After war, functional and efficient structures supersede outdated institutions, infrastructure is rebuilt better and with new technologies, and devastated economies are replaced by competitive systems (Nkurunziza, 2019). Existing findings are either at the aggregate level (Collier, 1999; Collier & Hoeffler, 2004; Donaubauer et al., 2019) or on a case-study basis (Miguel & Roland, 2011; Redding & Sturm, 2024; Yamada & Yamada, 2021). As local dynamics potentially matter, this article studies how those past local conflict dynamics shape economic conditions.

For any development interventions targeting post-conflict locations, it is important to be aware of these differing local economic settings. Thus, I apply this local post-conflict framework to investigate how this affects the impact of post-conflict interventions. So far, previously conflict-ridden and peaceful countries compete for the same pool of development assistance. However, anecdotal evidence from aid agencies themselves indicates a lack of systematic conflict analysis for any location-specific context in post-conflict countries. This pattern is also visible in the data. The data show that locally disbursed World Bank aid mainly goes to peaceful destinations or countries with minor conflict. Even countries with

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outright war — defined as more than a thousand fatalities a year — receive larger disbursed amounts than post-conflict countries. A look within post-conflict countries gives a similar picture, locations within post-conflict countries that did not experience any involvement in fighting during wartime receive more than 50% of the locally disbursed foreign aid by the World Bank in the period from 1995 to 2020[12].

The first step is to identify post-conflict countries and subsequently, within these countries, a location's exposure to fighting during wartime. To do so, all African countries are categorized based on the number of conflict fatalities in a year into a state of war, minor conflict or peace. Periods after war, during which they do not experience any fighting anymore, are considered post-conflict periods. Data for conflict fatalities is based on the Uppsala Conflict Data Program (UCDP) georeferenced event dataset. In the next step, an intensity index for past local war exposure is calculated. For each subnational location, it measures the exposure to fighting, respectively fatalities, during the war period[13]. Using a district-level panel with more than 5400 African districts for the years from 1995 to 2020, I estimate the effect of a location's indirect exposure to war on growth, as well as the differential effect for those locations that were directly exposed to different intensities of fighting on growth, namely the change in nighttime lights. Additionally, I estimate the effect of post-conflict foreign aid interventions on growth dependent on a location's exposure to fighting[14].

Results indicate that the so-called post-conflict peace dividend largely depends on local involvement in past fighting. Locations that were only indirectly involved in the country's past war and never experienced any fatalities on their territory do experience significantly higher growth in nighttime lights in comparison to fully peaceful entities. Also the impact of aid is significant and positive in these cases. However, for those who did experience fighting, not only is growth hindered, but also post-conflict development interventions have a smaller impact and are less effective in pushing growth.

These findings show that local context matters. And this is particularly relevant to policies in post-conflict locations. Within-country dynamics and local war exposure can lead to differential outcomes and differing growth trajectories. When development projects are designed, implemented and evaluated, decision-makers have to explicitly account for wartime exposure and local conditions, as disregarding these differences can lead to adverse effects.

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[12] The data is sourced from the Geocoded Official Development Assistance Dataset (GoDAD) and refers to any World Bank aid disbursements that can be localized at the ADM2 (district) level for the period from 1995 to 2020.
[13] To do so, it accounts for all battle deaths over the whole war period, while discounting battle deaths that are longer in the past and considering the intensity of past war experiences in the case of war recurrences.
[14] The empirical model uses extensive fixed effects such as district, country and year fixed effects, and additionally controls for district- and country-specific trends. Furthermore, controls such as population, precipitation and temperature at the district and total population at the country level are included. Results are robust to a battery of robustness checks as well as alternatively using two different instrumental variable strategies.

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