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HONDURAS: THE IMPACT OF COVID-19 AND OTHER SHOCKS, AND POLICY IMPLICATIONS

FINAL REPORT

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1. INTRODUCTION

Two previous reports (Díaz Bonilla, Laborde and Piñeiro, 2021, and Diaz-Bonilla, Flores, Paz, Piñeiro, and Zandstra, 2021) covered the evolution and impacts of the pandemic on food systems in Honduras until the time of their writings (which together cover from the start of the pandemic in early 2020 until October 2021). This third report concludes the assessment of the impact of the COVID-19 pandemic on food systems in Honduras, recapitulating the previous ones and updating the analysis until the end of May 2022. This country and its food systems, however, have been also affected by other events since the pandemic started in early 2020, such as the tropical storms Eta and Iota in November 2020. Subsequently, in 2021 the strong world economic rebound due to expansionary fiscal and monetary policies in the USA and other countries, generated strains on value chains, leading to increases in transportation costs and the prices of food, energy and fertilizers. In the case of agricultural products, those increases were compounded by adverse climate events in some important producing areas, particularly in South America. Finally, the Russian-Ukraine Conflict (RUC) on February 24, 2022, has added further pressures on prices of energy, fertilizers, and some food products (such as wheat and vegetable oils).

Therefore, the specific impact of the pandemic on food systems in Honduras has been interacting with the other developments mentioned. From the point of view of policymakers, they need to respond to the overall impact of the conditions affecting the population, whatever the converging main causes may be. Therefore, this final report, while emphasizing those aspects linked to the pandemic will also discuss the overall conditions in Honduras, affected by those many factors.

This report is structured as follows. First, it summarizes the main policy responses, costs, and financing related to the COVID-19 shock. Second, it brings up to date the evolution of the pandemic, using different indicators. Third, it updates the evolution of key economic and nutritional variables. Fourth, there is a brief discussion of the implications of RUC for food systems. Fifth, the report continues with a more specific analysis of the evolution of some food value chains that are central to food consumption in Honduras. The next section discusses policy considerations for health, poverty and nutrition, and food value chains, in light of the updated analysis. A final section concludes.

2. POLICY RESPONSES

Due to the global pandemic generated by COVID-19 the government of Honduras declared a “state of emergency” in February 2020 (“Estado de Emergencia en el Territorio Nacional a través del Decreto Ejecutivo Número PCM- 005-2020, 10 de febrero 2020). The country suffered the first confirmed COVID-19 case on March 12, 2020. The first death was registered on March 26, 2020.

The Government of Honduras (GoH) took a series of measures, which are presented here and organized in four groups:

1.The general legal and organizational framework to confront the pandemics

2. Policies and interventions that address the health problems

3. Policies and interventions that sustain incomes and demand through social safety nets

4. Policies and interventions that operate on the supply side, focusing on production and employment

They were covered in a previous report up until about October 2021. Here is a brief recap and update until the end of May 2022.

2.1. General legal framework and governance

A basic requisite to confront the pandemic is to have a general legal framework for the needed policies and interventions to be defined, and a coordinating mechanism for decision-making and implementation.

State of Emergency

As noted, the government declared the “state of emergency” relatively early on February 10, 2020. It was considerably wide in the coverage, suspending work, in the Public and Private Sector; prohibiting “events of all types and numbers of people are prohibited;” suspending the operation of public transport; suspending as well face-to-face religious celebrations; prohibiting the operation of businesses including shopping centers; and closing “all air, land and sea borders in the national territory.”

But at the same time, there was a large list of exceptions, as noted in previous reports. The combination of strict policies but also with many exceptions and perhaps lax enforcement produced mixed results.

Central coordination

Honduras has an emergency management system, called Sistema Nacional de Gestión de Riesgo (SINAGER), which operates as a coordinating mechanism within the public sector.

On May 16, 2020, the Council of Ministers approved the Decree PCM-045-2020 that established a multisectoral body integrated by the private sector, civil society, churches, academia, maquiladoras, farmers, and the Government, with the task of advising SINAGER about the process of opening and reactivating the economy.

2.2. Policy responses related to health aspects

Health-related policies were initially discussed in three main categories: a) those designed to prevent or reduce contagions; b) those designed to track and isolate existing cases; and c) those designed to treat the sick. Later, with the development of vaccines, a fourth category of policies was included: the advances in the vaccination program.

Policies to prevent or reduce contagions

As noted, the government of Honduras implemented a series of measures that basically closed the economy on March 16, 2020, with only essential services allowed to operate, and access to retail grocery stores was restricted to certain hours and depending on the day and the last digits of the document of identification.

Since April and May 2020, the government started a process of re-opening some other activities including hardware stores, maquila activities, restaurants with delivery services, construction (depending on the priority of projects), and some government services. But some of these authorizations were reversed during June 2020, due to increases in cases.

Then around mid-2020, the opening of the economy would work according to a plan that divided the country into three regions, which need not to be contiguous, based on the number of confirmed cases and population sizes in the municipalities included in each region. The regions with municipalities with the fewest cases were supposed to implement a three-phase reopening (with 60 percent of workers returning to their jobs), while the region with most cases had implemented five phases (starting with 20 percent workers returning).

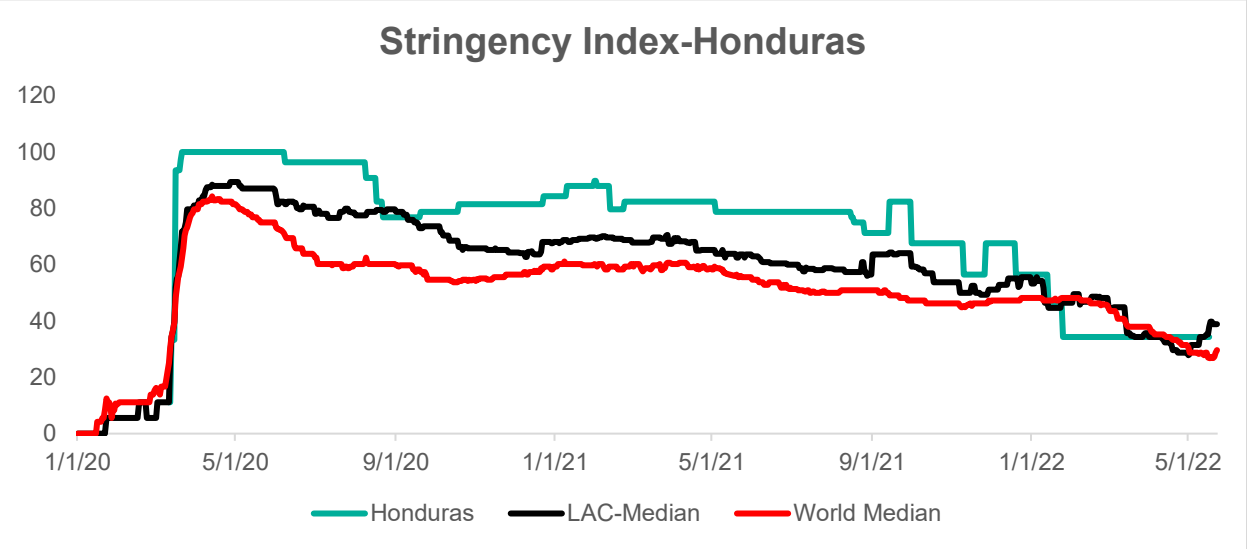
The country started Phase 1 in late July (except for some municipalities that remained in Phase 0 due to high rates of incidence of COVID-19), but there have been returns to previous phases, depending on the evolution of the pandemic. The two main cities (Tegucigalpa and San Pedro de Sula) were the ones with the most restrictions.

In August 2020 the government reopened national frontiers (with people entering the country having to present negative Covid test results), and in October 2020, restrictions on freedom of movement were largely lifted and the duration of the nighttime curfew was reduced. However, the national state of emergency remained in place for a longer time. The night-time curfew was extended in some regions in November after tropical storms Eta and Iota, and since January, because of some surge in Covid cases.

The lifting of restrictions in August 2020 and then in early 2022 can be appreciated visually using the "stringency index" calculated by the Blavatnik School of Government of Oxford University (Chart 1).[1] The chart compares the value of the index for Honduras with the median of values in the database for LAC countries and for the world.

Honduras seems to have been applying stricter controls to movements and activities compared to the median of the world and LAC, even after the relaxation of measures in August 2020 and until the further relaxation in early 2022. Then the stringency index dropped below the world and LAC. But because the comparators have been also reducing their restrictions, in May 2022 Honduras was in between the stringency indices of the LAC and the world. However, the data on mobility discussed below paints a somewhat different view of the real application of those controls.

Chart 1. Stringency Index-Honduras

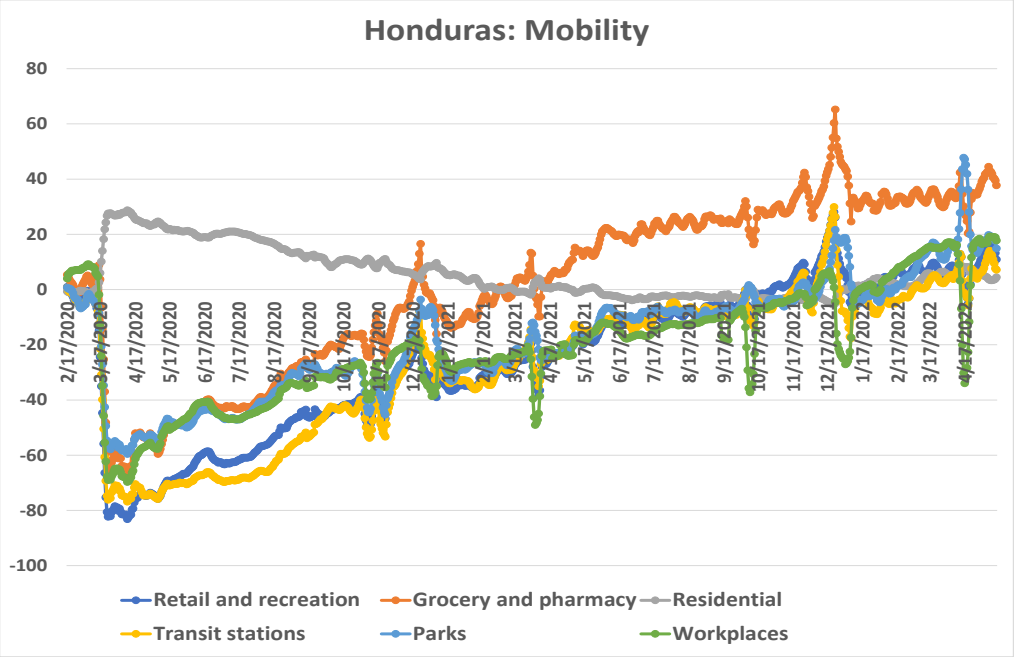


Source: authors using Oxford University "stringency index"

The impact on mobility (and therefore on economic activity) of these restrictions can be seen in Chart 2.

[1] See the project by Oxford University "COVID-19 GOVERNMENT RESPONSE TRACKER" https://www.bsg.ox.ac.uk/research/research-projects/covid-19-government-response-tracker. The indicators included in the index include a) closings of schools and universities; b) closings of workplaces; c) canceling of public events; d) restrictions on gatherings (by the number of people involved); e) closing of public transport; f) stay at home requirements; g) restrictions on internal movements; and h) restrictions on international travel.

Chart 2. Changes in Mobility (Percentage from Baseline)



Source: Google COVID-19 Community Mobility Reports

The data tracks mobility trends and compares them with pre-pandemic values for six categories of activities “Retail and recreation” (places like restaurants, cafes, shopping centers, theme parks, museums, libraries, and movie theaters); “Grocery and pharmacy” (places like grocery markets, food warehouses, farmers markets, specialty food shops, drug stores, and pharmacies); “Parks” (places like national parks, public beaches, marinas, dog parks, plazas, and public gardens); “Transit stations” (places like public transport hubs such as subway, bus, and train stations); “Workplaces” (mobility trends for places of work); and “Residential” (mobility trends for places of residence) (see details in https://support.google.com/covid19-mobility/answer/9825414?hl=en). It shows mobility compared to the previous period without COVID-19. Negative, zero, or positive values indicate that mobility for the category considered was below, equal, or above, respectively, compared to the levels of the equivalent time of the year before the pandemic.

Chart 2 shows the daily values of those indicators, starting with February 2020 and ending in May 2022, with the last data reported at the time of writing this report. In February 2020, when no measures of containment were in place, it is clear there were no visible changes with respect to the baseline mobility. In March and April, however, there was a large drop in mobility, in line with the strict lockdown conditions. Over time, and notwithstanding the continuation of apparently strict controls on mobility (as measured by the “stringency index” shown before), people started to circulate more, particularly for groceries and pharmacy in general, and for the other indices around the time of end-of-year festivities in

2020. The index for groceries and pharmacy moved above pre-pandemic levels in the first quarter of 2021 and by late 2021, all indices were above the levels before COVID-19.

Policies designed to track and isolate existing cases

Policies about testing are usually classified into four levels: a) No testing policy; b) Only to those who (1) have symptoms and also (2) meet specific criteria (e.g., key workers, admitted to hospital, came into contact with a known case, returned from overseas); c) Testing of anyone showing COVID-19 symptoms; d) Open public testing (e.g., “drive-through” testing available to asymptomatic people). Honduras during 2020 was in the b) category (Hale, Webster, Petherick, Phillips, and Kira (2020)). The availability of tests increased in 2021, but there was no data on the number of tests to be able to compare Honduras with the LAC and the world.

Policies designed to treat the sick.

The government took in 2020 a series to measures to strengthen health services as shown in Box 1 (from IFPRI Policy Tracker).

Box 1. Health Measures

Financial support for health sector	3/23/2020	The Honduran Government has estimated an investment of 25 million dollars to face the national emergency, aimed at reinforcing health personnel, medical supplies, and construction of 90 hospitals.
Financial support for health sector	7/27/2020	The Government, through the Ministry of Health, will make a disbursement of 12 million lempiras to the Gabriela Alvarado Hospital for its strengthening and thus provide a greater response to the demands of medical personnel and patients.
Financial support for health sector	7/27/2020	Government Delivers 2 million Lempiras In Medical Supplies And "MAIZ" treatments for Hospital Gabriela Alvarado. MAIZ is the government treatment of treating those with moderate COVID-19 symptoms with an experimental combination of microdacyn, azithromycin, ivermectin, and zinc.
Financial support for health sector	7/27/2020	Five million lempiras will be delivered to the El Paraíso health region to further strengthen the health centers, as well as the acquisition of medicines, oxygen and medical supplies, the hiring of medical personnel and the assembly of the two triage centers in Danlí.

Financial support for health sector	8/7/2020	The Government has transferred more than 8 million lempiras to the mayor's office of Cedros to address the pandemic Mayor’s Office of Cedros to Attend The Pandemic.
Financial support for health sector	8/7/2020	Fuerza Honduras in the department of Olancho begins with an investment of 29,489,179.50 lempiras, distributed in its 23 municipalities to open triages, hire medical personnel, biosecurity equipment, oxygen, stretchers, beds, tests, medical brigades.
Health information dissemination	3/19/2020	TIGO and CLARO will allow, for a period of 30 days, the more than 7 million users free of charge, access to navigate on those platforms enabled by the Government of Honduras to be informed about the evolution of COVID-19.
Health information dissemination	4/10/2020	Transparency portal with COVID-19 information; there will be a Citizen's Accountability module.
Hiring more healthcare workers	4/20/2020	Cuban doctors and nurses arrive to assist Honduran colleagues.
Importation of test kits	3/18/2020	Received reagent for 4,200 COVID tests.
Importation of test kits	3/18/2020	Received 90 phlegm suction machines.
Importation of test kits	5/5/2020	International Organization for Migration, working with USAID, delivered 15,000 COVID-19 tests to Honduras.
Importation of ventilators	3/18/2020	Received 140 ventilators from Government of New York.
Importation of ventilators	4/14/2020	Purchased 130 ventilators, 90 respirators and 90 mechanical phlegm suckers from Partners Medical Supplies, Inc., in the United States, and delivered to the Ministry of Health for distribution based on the priorities of the emergency.
Importation of ventilators	7/3/2020	The Mario Catarino Rivas Hospital received this day 40 mechanical-pulmonary ventilators for the intensive care units of patients with covid-19, which were acquired through Strategic Investment of Honduras (Invest-H).
Importation or donations of PPE	4/14/2020	Acquisition of the alcohol-based gel corresponding to 317,101 gel units in 4oz presentation and 18,286 units in a gallon presentation.
Importation or donations of PPE	8/25/2020	WHO / PAHO Donates 1.5 million Masks and Other Supplies To Face The Pandemic.

Importation or donations of PPE	11/4/2020	The Ministry of Health together with the Humanitarian Assistance Bureau (BHA) of the United States Agency for International Development (USAID), GOAL Honduras, municipal authorities and the Metropolitan Region of San Pedro Sula today inaugurated hand washing stations as part of the Community Rapid Response Project to the Covid-19 Pandemic.
New facilities for care	4/14/2020	Two primary care centers acquired from DXL Enterprises LLC
New facilities for care	6/12/2020	Doctors Without Borders/Médecins Sans Frontières (MSF) starts caring for critical COVID-19 patients in Tegucigalpa.
New facilities for care	7/6/2020	Triage center enabled at Catholic University.
New facilities for care	7/10/2020	Authorization of more triages and care centers in conjunction with the municipalities, churches, private sector and others "to continue facing the pandemic and reinforcing hospitals with more equipment and supplies."
New facilities for care	8/15/2020	New Triage Center Starts Operating In La Ceiba with Investment from Fuerza Honduras.
New facilities for care	8/27/2020	With Mobile Hospitals, Honduras Will Go From 71 To 530 Intensive Care Units.
New facilities for care	9/5/2020	An intensive care unit was inaugurated in the physical facilities in the Hospital de Especialidades San Felipe del Distrito Central to serve patients with complicated COVID-19 cases. 2 million lempiras donated by Government of Taiwan for infrastructure.
PPE regulations/production	4/8/2020	Masks mandatory when leaving the house and inside authorized businesses
PPE regulations/production	5/25/2020	Use of face masks in public compulsory; New regulations require all individuals to follow and implement social distancing and hygiene measures in both public and private meetings exceeding five people; Penalties, including fines, community service, and/or jail time will be levied for failure to comply with the measures.
PPE regulations/production	7/7/2020	Government Will Deliver 50,000 Masks to Residents of The Cerro Grande Neighborhood.
PPE regulations/production	7/8/2020	Acquired with State Funds: Government Delivers Biosecurity Equipment to Hospitals and Triage Centers In The Capital.

Vaccination protocols	7/23/2020	Honduras ensures its access to the Covid-19 vaccine through the Gavi Covax Mechanism.

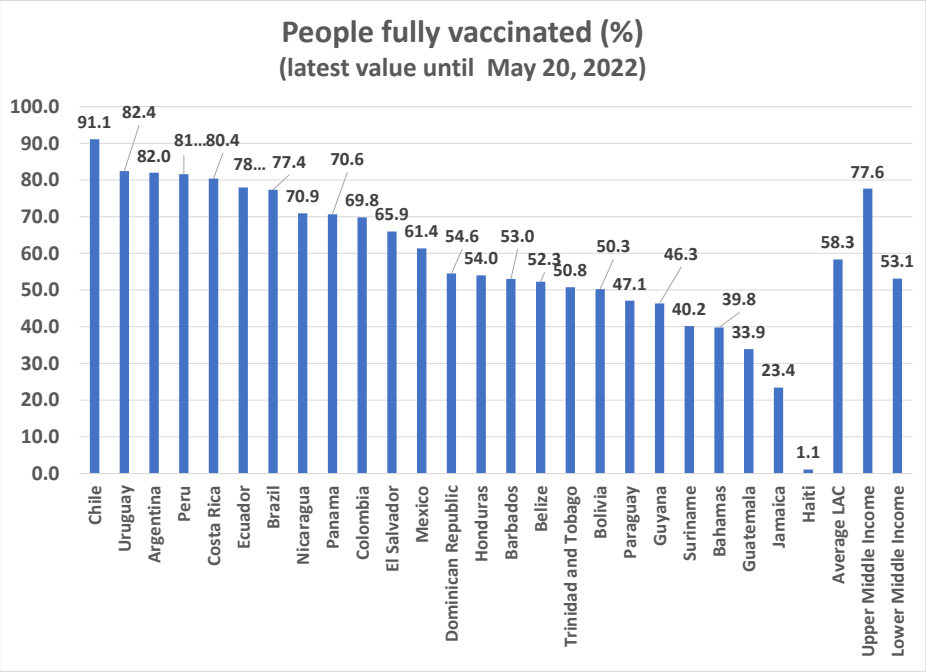
Source: IFPRI COVID Policy Tracker

Programs related to treatments continued in the following months.

Vaccination program

The next Chart 3 shows the advance in vaccinations measured as the percentage of the population with two doses.

Chart 3. Share of people with dose of the COVID-19 vaccine per 100 people



Source: Authors with Our World in Data

In the previous report, it was argued that Honduras' vaccination program was advancing slowly. The country began vaccinating in February 2021, later than other countries in the region and in the world. In early June 2021, Honduras had about 4% of the population vaccinated with at least one dose, clearly below the comparators: 17% at the world level and 22% in LAC. However, by May 2022 Honduras had increased the percentage of vaccinations with two doses to 54% of the population, which, although still somewhat lower than the average for LAC, is slightly above the average for lower-middle income countries at the global level (Honduras' income category).

2.3. Policy responses related to safety nets

These are basically policies and interventions oriented to sustaining incomes and crucial expenditures of vulnerable populations, separate from the productive activities discussed in the following section.

The main programs in this category in Honduras included the following: [2]

*Cash transfers (conditional and unconditional). Honduras created a “Bono Unico” targeting independent workers who would become “new poor’ because of the pandemic. It was a one-time payment of Lempiras 2,000 (somewhat more than USD 80) using a card (e-transfer); it excluded public employees and pensioners who received support through other programs. The existing cash-transfer program (“Bono Vida Mejor”) was also reinforced, expanding it to rural areas. Other programs included cash transfers to those needing to repatriate bodies of relatives that died due to COVID.

*In-kind transfers. There have been several programs of distribution of in-kind food and some hygienic products, as part of Honduras Solidaria, the School Feeding Program, and also distribution to elderly in nursing homes, by the Secretaría de Desarrollo e Inclusión Social (Sedis) and the Secretaría de Educación.

*Access to public services. The National Telecommunications Commission (CONATEL) issued a moratorium on suspensions for fixed and mobile telephones, mobile and residential internet services in the country during the COVID-19 pandemic; it allows more flexible payment options.

*Health insurance. The government issued a decree to ensure that workers had access to health care benefits through the Honduran Social Security Institute (IHSS) even when contributions are suspended due to the suspension of work. Also, a fund was created to support the "Plan para la Promoción Solidaria y del Auxilio Recíproco" to increase social protection coverage and access to essential services, particularly for people in vulnerable conditions.

*Social security contributions. The Private Contribution Scheme (RAP) was supposed to offer its affiliates advances related to the values they have in their Individual Capitalization Account, based on the certification by the companies affected. Also, there was a moratorium on the collection of worker and employer contributions.

[2] Based on the World Bank report on “Social Protection and Jobs Responses to COVID-19: A Real-Time Review of Country Measures.” “Living paper” version 15 (May 14, 2021.By Ugo Gentilini, Mohamed Almenfi, John Blomquist, Pamela Dale, Luciana De la Flor Giuffra, Vyjayanti Desai, Maria Belen Fontenez, Guillermo Galicia, Veronica Lopez, Georgina Marin, Ingrid Veronica Mujica, Harish Natarajan, David Newhouse, Robert Palacios, Ana Patricia Quiroz, Claudia Rodriguez Alas, Gayatri Sabharwal, and Michael Weber

The government also enacted in March 2020 a freezing of prices of basic products and personal and household hygiene and health products. Later it instituted maximum prices for 30 products of the basic food basket; this program was discontinued in 2021.

2.4. Policy responses related to production and employment

Here the focus was on policies and initiatives oriented to maintaining production and employment, which sustain the supply side of the economy. But, to the extent that those productive activities generated incomes, they also contributed to strengthening the demand side of the economy.

Credit and banking facilities and regulations[3]

Some of the measures implemented were the following, mainly through BANHPROVI (a public bank, that operates as a "first- and second-floor" institution) which was authorized "to take measures to guarantee financing to facilitate access to the productive sectors and to promote risk management and/or refinancing and readjustment of debts to natural or legal persons who are debtors of the financial system belonging to them":

*As part of that broad mandate BANHPROVI implemented the following initiatives: a) provided different levels of guarantees to cover potential losses on new loans to SMEs and other companies (valued at 1.1 percent of GDP); funding came from CABEI, the Central American public regional bank; b) allocated liquidity for about 0.9 percent of GDP to finance loans to SMEs and other sectors affected by the pandemic; funding was also from CABEI; c) created a rediscount facility funded with accumulated profits of the bank for loans restructured as a result of the pandemic (0.7 percent of GDP); d) announced a 3-month moratorium on service of its bank loans (which covered about 5 percent of total bank credit to the private sector) and later reprogrammed the loans in the case of borrowers that had been affected longer-term in their payment capacity; and e) made available to banks 200 million lempiras (about 8 million USD) to reactivate the construction industry.

*The government also decreed different schemes of temporary debt service relief to companies and individuals with incomes affected by the pandemic, which financial institutions must comply with. These debt service relief was to be extended without penalties or impact on credit classification.

*There were expanded credit options through Crédito Solidario and the Entrepreneurship Service (SENPRENDE) to serve 5,000 entrepreneurs.

[3] The list of programs comes mainly from the IMF and IFPRI COVID policy trackers. Guarantees and monetary programs are different from the fiscal measures shown later in Table 1.

* The government announced financial support for private companies. About 3,000 million lempiras (or some 120 million USD) was supposed to be available to lend for small companies of less than 10 workers to allow employers to provide salary payments during this emergency period.

Monetary policy

In 2020 and 2021 the Central Bank of Honduras cut the policy rate several times starting in February 10 by 25 basis points to 5.25%; after the first deaths and with the beginning of the lockdown, it cut it a further 75 basis points to 4.5% on March 24; and on August 3, a further cut of 75 bps, to 3.75%. It continued cutting the policy rate in December 2020 and January 2021, for a cumulative cut of 225 bps (and now is 3%). The Central Bank also expanded liquidity through different mechanisms by about 3.5 percent of GDP (IMF, Policy Tracker).

Employment.

There were several measures to support employment and wages. Some of those included:

*Wage support/subsidies. Through the “Ley De Auxilio Al Sector Productivo y a Los Trabajadores Ante Los Efectos de la Pandemia Provocada por el Covid-19 – Decreto 33-2020” it was instituted a “Solidarity contribution to the temporary maintenance of jobs and income for workers during the validity of the national emergency.” The main objective has been to maintain jobs and the sustainability of companies, “in order to mitigate any measure that leads to the definitive termination of employment contracts and closure of companies during the validity of the national health emergency.” Workers who were subject to a suspension of contracts due to force majeure derived from the National Health Emergency would receive a temporary solidarity contribution (up to a certain limit), financed in different ways by the governments, the private sector and the Private Contribution Scheme (RAP in Spanish).

*Other measures related to labor markets included the following: a) employers were allowed to grant on account of vacations, the days that workers do not show up to work in their ordinary day due to the State of National Health Emergency; b) the GoH provided training for employment in a variety of activities (such as tourism, administration, information and communication technologies), office automation and entrepreneurship; c) authorization of teleworking for employees of public and private entities; and d) authorization to employers and workers to use holidays and vacations, with guarantees that holidays recognized in the Labor Code be accepted and paid during the time of national emergency.

Agriculture.

The sector received special attention.

*Early on it was declared that the food-producing sector and the food agribusiness were a national priority. The "Food Security and Sovereignty Assurance Program" was created under the Secretary of

State in the Agriculture and Livestock Offices (SAG) with the purpose of achieving an “orderly” system of national food production, with registration and traceability of the farms and the categorization of national and foreign producers.

*BANHPROVI made available lines of credit to banks, cooperatives, microfinance companies and rural savings banks, so that they could process the applications for a special agricultural credit program.

*There was a special allocation of 200 million lempiras (about 8 million USD) to provide technical assistance to producers of the Dry Corridor.

*A Productive Solidarity Bonus was granted to 190,000 small producers planting beans, corn, rice, vegetables, fruits, and other products.

*A registry of ejidal, fiscal and national lands was created under the Secretary of State in the Offices of Agriculture and Livestock to monitor the effective use of the land and ensure the land was available to national producers for food production.

• A single permit was established for the operation during the pandemic of agricultural production projects, food collection and distribution centers and economic agents in the food supply chain.

•The Honduran Institute of Land Transport was directed to authorize all pending resolutions and permits for transportation of food products within 10 business days.

• The obstruction of public roads that impeded the passage of workers from the agro-industry and the food supply chain was prohibited.

*The National Congress approved a decree authorizing the National Development Bank Agrícola (BANADESA) to grant to farmers whose farms were auctioned since 2005, the first purchase option to that land. The producers would also receive credit under favorable conditions to reactivate their productive units.

Tax changes

The government of Honduras implemented a variety of tax changes to support firms and households affected by the pandemic.

The “Law of Assistance to the Productive Sector and Workers Faced with the Effects of the Pandemic Caused by Covid-19 (Decree 33-2020) determined the extension of terms and additional relief in terms of tax obligations. The law was approved in March 2020. An extension was granted to taxpayers categorized as small and medium taxpayers and to natural persons and independent professionals for the presentation and payment of a variety of taxes from 2019. The extensions varied by taxes and by the

dates due, but many were moved to June and then some extended further to August, October and December, depending on when they were due in 2020.

For taxpayers who kept their employee payroll respecting the payment of wages and rights, an additional 10% was recognized as a deductible expense for the 2020 fiscal period.

Other measures include a) small and medium taxpayers who submitted a declaration and payment by April 30, 2020, would get a discount of 8.5%; and b) some procedural lenience to those that were not in compliance or missed deadlines; c) taxpayers who did not operate within the months decreed as a state of emergency were granted an extension of the deadlines for filing and paying the VAT return.

Finally, the Legislative Decree Number 85-2020 established facilities for the payment of Municipal Taxes, authorizing the municipalities to grant discounts (up to 10%) for prompt payment of the taxes on goods and on real estate of the year 2020, and some postponement for the dates of payments under certain conditions.

Other measures

There were other measures aimed at simplifying administrative procedures such as the implementation of electronic commerce mechanisms and electronic signature authorization to import raw materials and supplies in free zones; the recognition of the electronic signature and certificates of foreigners; and the celebration of contracts and commercial business through virtual mechanisms during the quarantine.

Trade

There was a temporary export ban on certain dried leguminous vegetables, including specifically red beans. The export of red beans had been controlled since the price increase of 2016. As one of the top food items of the basic consumption basket, every shipment of beans outside of Honduras requires an approval letter by the Minister of Agriculture. The complete ban was discontinued early on, even before the ETA and IOTA storms. However, every time there is a climate alert (drought or excessive rain), the ministerial authorities do not process requests for exports. In the period from August 2019 to August 2021 only 68MT of red beans appeared to have been shipped by sea (see the previous report).

2.5. Costs and Financing

The different fiscal measures mentioned above are estimated to have increased the public budget deficit of the Non-Financial Public Sector to 4.6% of GDP in 2020, when in 2019 the budget was almost in balance (IMF, Fiscal Monitor, 2022).

The additional spending related to the pandemic is estimated in 2.3% of the GDP, allocated as shown in Table 1.

Table 1. Fiscal Expenditures for COVID-19 (% GDP)

	Total	Health	Non-health
Honduras	2.3	0.9	1.4
Average LAC	3.8	0.8	3.1
Median LAC	3.1	0.5	2.7
Average Developing Countries	3.9	0.9	2.9
Median Developing Countries	2.9	0.6	2.1

Source: authors with data from IMF Covid19 policy tracker

In total COVID-related additional expenditures (health and non-health) in Honduras were below the average and median for developing countries and LAC. But this was related mostly to non-health expenditures, while health ones were above LAC expenditures, and above the median for developing countries. The non-health expenditures included temporary unemployment benefits to formal workers (0.6% of the GDP), food aid to poor families (0.2%), cash transfers to informal workers (0.4%), plus others (0,2%).

It is estimated that there has been a decline in taxes because of the economic recession (1.5% of GDP), plus the reductions approved by Congress (corporate income tax for about 0.5% of GDP; temporary VAT exemptions for medical supplies for about 0.1% of GDP; and the one-off income tax credit of 10 percent of salary expenses for companies maintaining pre-crisis employment levels) (IMF, Policy tracker).

Part of these additional fiscal costs were supposed to be covered by reassigning nonpriority spending. But other part was financed by additional borrowing.

Congress approved additional public borrowing in the amount of 2,500 million dollars in 2020-21 (or about 10% of GDP), increasing the Non-Financial Public Sector deficit to 4% and 3% of GDP in 2020 and 2021, respectively. Later in November 2020, the fiscal deficit limits were increased to 5% and 4% of GDP in 2020 and 2021. After tropical storms Eta and Iota, the maximum deficit was further increased to 5.6% in 2020, but it was maintained to 4% for 2021. But in May 2021, allowed deficits were revised up by Congress to 5.4% and 2.3% percent of GDP in 2021 and 2022 respectively, before returning to the 1% deficit in 2023 (see Section 8 for more details).

The Central Bank of Honduras also increased liquidity through different measures (plus reducing the interest rates as discussed before) to help finance the additional lending mentioned in previous sections). The IMF estimates that direct liquidity operations (by April 2021) represented 2.1% of GDP, with 1.2% in guarantees and 0.9% in other operations.

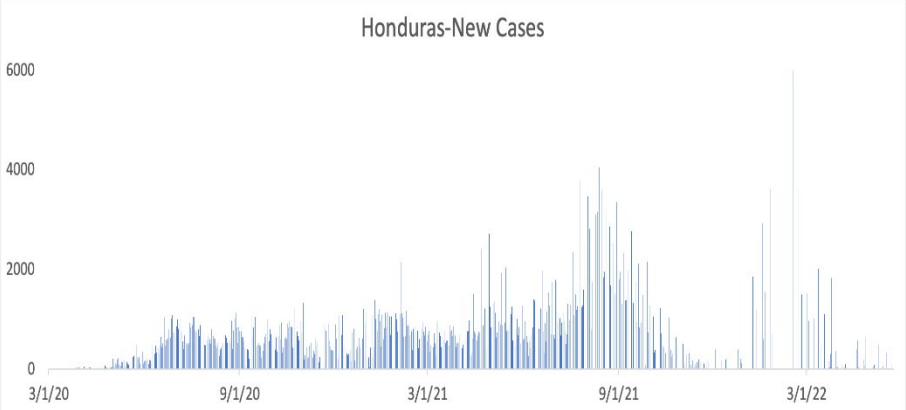
The fiscal stimulus, financed through increased indebtedness and money printing, has been a necessary policy response to expand health services and investments and to avoid a larger breakdown in economic activity and social conditions.

3. EVOLUTION OF THE PANDEMIC

Since the beginning of the pandemic and until late May 2022 there have been almost 425,000 confirmed cases of COVID-19 and close to 11,000 deaths (see Charts below).

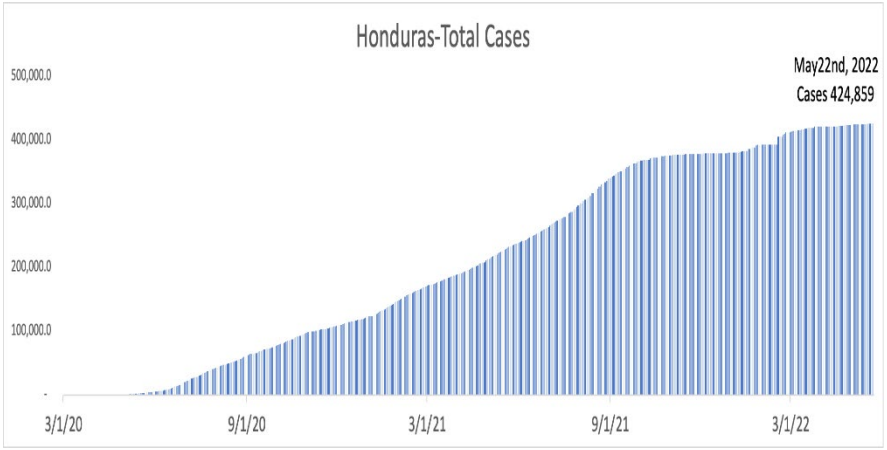
Charts 4 and 5 show the evolution of daily COVIC-19 cases and the cumulative value of those cases. Then Charts 6 and 7 show the evolution of daily deaths related to COVID-19, and the accumulated number of deaths.

Chart 4. Daily Evolution of Cases Related to COVID-19



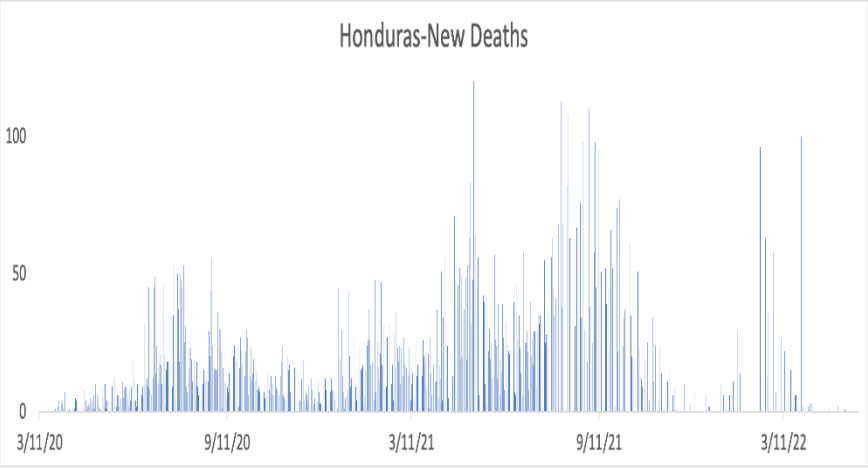
Source: Our World in Data

Chart 5.Cumulative Value of Cases Related to COVID-19



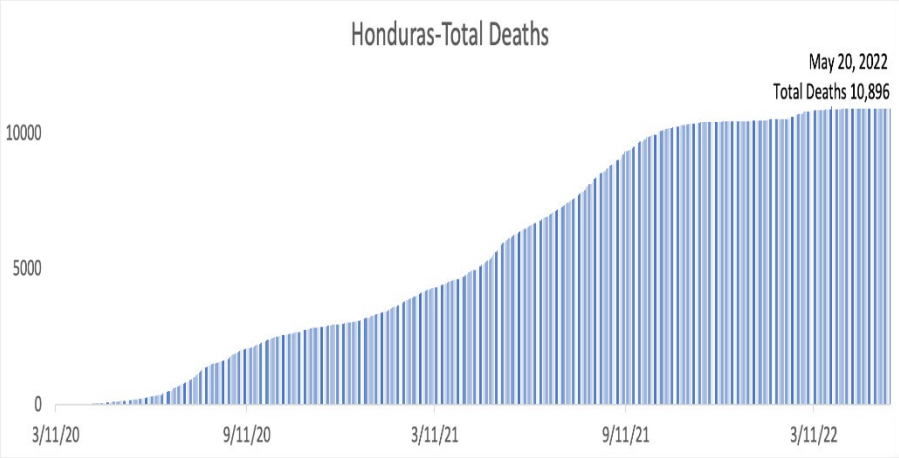
Source: Our World in Data

Chart 6.Daily Evolution of Deaths Related to COVID-19



Source: Our World in Data

Chart 7. Cumulative Value of Deaths Related to COVID-19

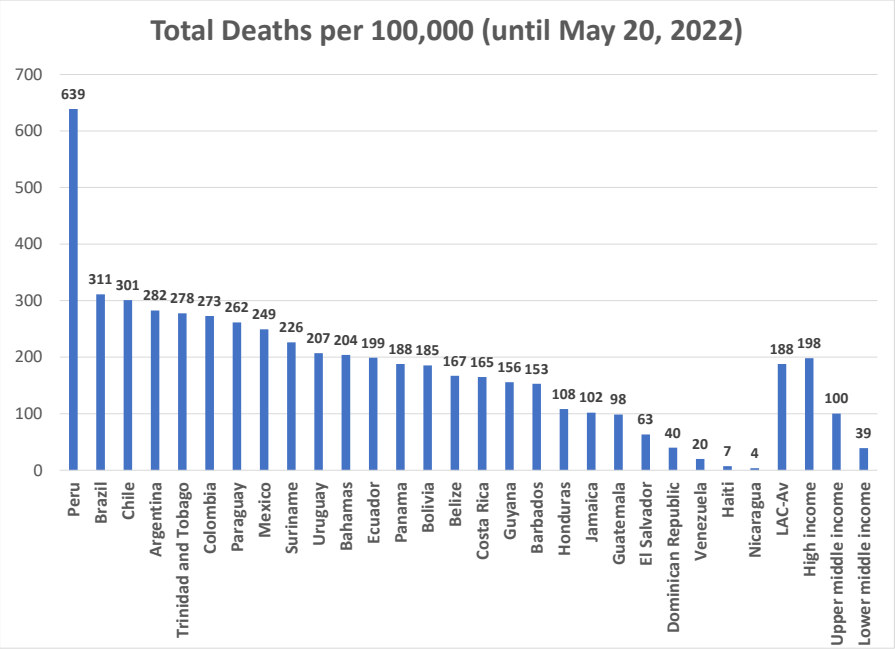


Source: Our World in Data

After several waves of different intensity in 2020 and 2021, the evolution of daily cases and deaths showed a significant decrease by May 2022. The decline may be the result of several factors, such as improvements in diagnosis and treatments, some increases in herd immunity, and that after late start, the program of vaccination has been advancing.

Chart 8 shows the indicator of death per 100,000 population in Honduras and compares it with the world and Latin America and the Caribbean (LAC).

Chart 8. Deaths per 100,000 Population

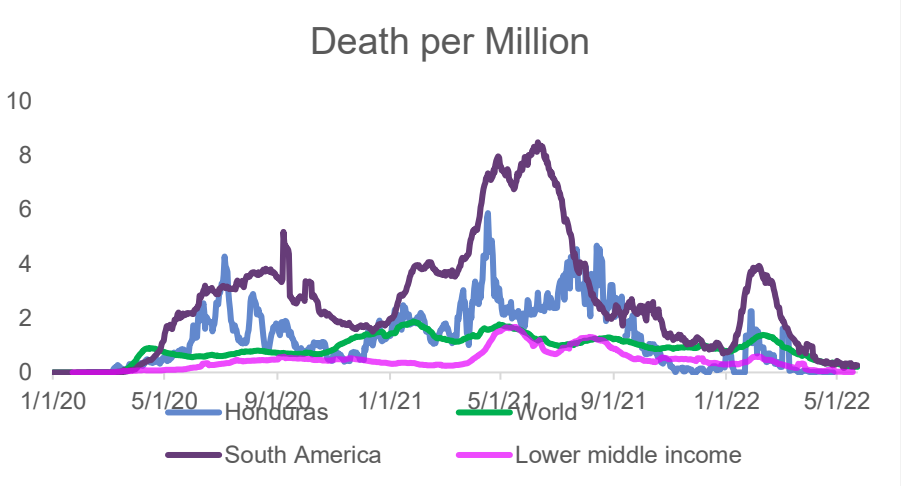


Source: Our World in Data

Honduras has one of the lowest levels in LAC of accumulated deaths as a proportion of the population (measured by 100,000 people in the Chart); the indicator is below the average for the region and high-income countries, but it is clearly above the average for upper and lower-middle-income countries.

Chart 9 shows the evolution of deaths per million compared to South America, the world, and lower-middle-income countries. The deaths have been declining and currently (late May 2022) Honduras shows the lowest coefficient of daily deaths as proportion of its population.

Chart 9. Daily deaths per million people



Source: Our World in Data

4. ECONOMIC AND SOCIAL CONDITIONS

4.1. Background

Before the pandemic the economy of Honduras was growing above the average for LAC as a whole: about 1.8% annual growth in GDP per capita between 2010-2019. During the same period inflation (measured by the consumer price index) was about 4.6% annually. The country has multiple strengths, such as a strategic location, a growing industrial base, an open economy with diversification of exports, and a young and growing population. On the other hand, even previously for COVID-19 the country faced high levels of poverty: somewhat more than 50% of the population at 5.5 USD PPP/capita/day (average last 5 years before 2020), compared to about 24% for LAC; it is also highly unequal; suffers from high levels of violence (more than 41 homicides per 100,000 inhabitants in 2017), and is very exposed to adverse natural events and climate change (World Bank, 2020 https://www.worldbank.org/en/country/honduras/overview). Honduras is also very dependent on remittances (close to 20% of the GDP on average in the 2010s), with emigration pushed by inequality, climate shocks, and violence.

In the next sections there is a brief discussion of some key economic and social variables during the pandemic.

4.2. GDP growth

Table 2 shows the actual rates of the total GDP growth in 2019 and 2021, and the estimates by the IMF in 2022 and 2023.[4]

Table 2. GDP growth (2019-2023)

Real GDP (% growth)					
Average 1980-2018	**2019**	**2020**	**2021**	**2022**	**2023**
3.4	2.7	-9.0	12.5	3.8	3.5

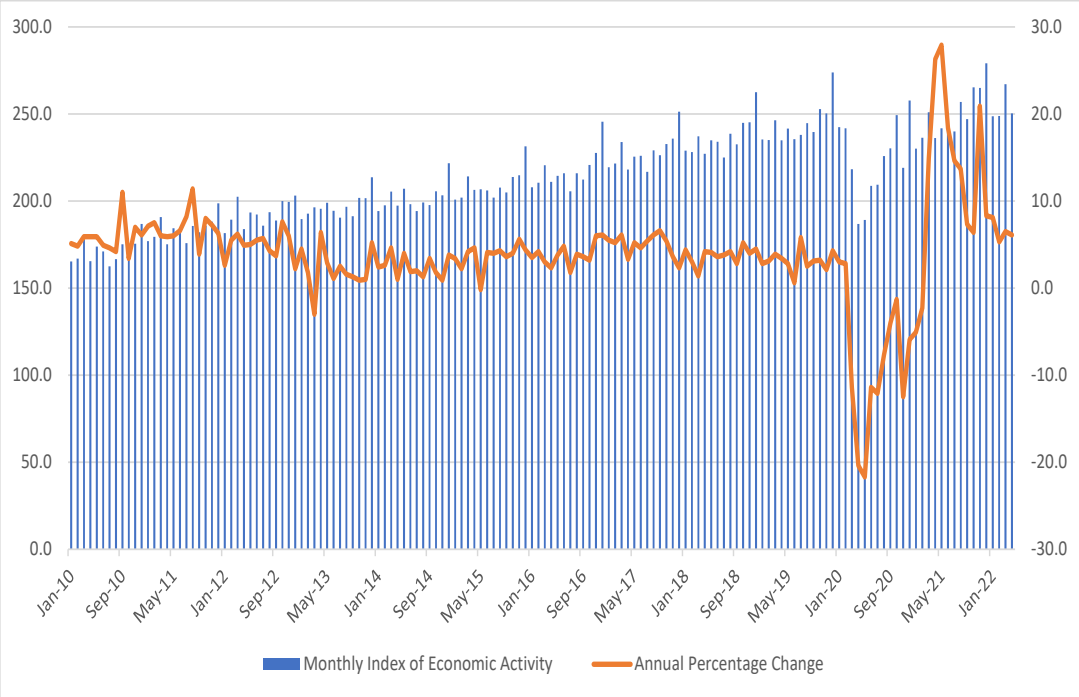
Source: Authors with data from WEO/IMF

[4] In the first report (Díaz-Bonilla, Laborde, and Piñeiro, 2021) we presented simulations for 2020 to 2023 using the MIRAGRODEP model with epidemiological adjustments (see that report for more details). The simulations included three scenarios: optimistic, intermediate, and pessimistic. They were performed around October 2020, with the information available at that time, and without including governments' policy responses. The average of IFPRI projections for 2020 were more optimistic because they were done before hurricanes Eta and Iota hit Honduras almost back-to-back in early and mid-November 2020.

The pandemic and the measures related to mobility, along with the two hurricanes in 2020, impacted very negatively the economy: the economy contracted that year by about 9% (-8.96%, without rounding) in total GDP and -10.4% in GDP per capita. However, it has rebounded strongly in 2021 and it is projected to revert to the previous growth trend in 2022 and 2023 (which is different from the trend in levels). Therefore, although the GDP per capita in 2021 had not recovered the level before the pandemic, it is projected that in 2022 it would go above that value.[5]

Chart 10 shows the evolution of the Honduran economy since 2010 until the last data from the Central Bank (April 2022). The columns indicate the level of the index of economic activity, while the line shows the monthly rate of change compared to the equivalent month the year before (i.e., is the annual rate of change for that month).

Chart 10. Index of Economic Activity (January 2010-April 2022)



Source: Authors with data from Banco Central de Honduras

The large decline in economic activity started in March and reached the lowest point in April. After the decline in economic activity in the first part of 2020, from which the country was recovering, there is a

[5] In the first report (Díaz-Bonilla, Laborde, and Piñeiro, 2021), even though as noted the decline simulated for 2020 was smaller than the one that took place, the projections estimated that by 2022 total GDP would have been above the pre-pandemic level by 2022. This is different than recovering to the level of GDP that would have existed if the pandemic would have never happened. To get to that counterfactual level the economy would have to grow for a period faster than the previous growth trend.

second drop in November because of the hurricanes Eta and Iota. Then there has been a strong rebound in 2021 and a return to more moderate growth lately.

Table 3 shows the growth rates from the same index of economic activity but disaggregated by productive sectors. Data for 2022 are the average growth rates for the period January to April 2022 (the latest data as of this writing), compared to the same period of 2021.

Table 3. Growth rate: Index of economic activity (January 2010-April 2022)

	Agricultura, Ganadería, Silvicultura y Pesca	Minas y Canteras	Industria Manufacturera	Electricidad y Agua	Construcción	Comercio	Hoteles y Restaurantes	Transporte y Almacenamiento	Correo y Telecomunicaciones	Inter. Financiera, Seguros y Fondos de Pensiones	Otros Servicios [2/]
2020	-5.8	-19.2	-15.2	-4.6	-24.9	-12.2	-47.0	-17.3	4.0	-0.6	-12.9
2021	0.6	18.6	21.3	10.4	17.6	15.9	61.8	12.9	1.8	16.2	4.7
2022	3.3	3.3	6.9	4.1	9.1	5.5	34.3	14.0	2.5	15.6	-8.9

Source: Authors with data from the Banco Central de Honduras

All sectors, except Telecommunications (which in fact increased its activity due to the pandemic), declined in 2020 compared to the equivalent month the year before. Agriculture had been relatively less affected than other sectors during the first months of the pandemic, but in November 2020 it suffered the negative impact of the back-to-back hurricanes, and the impact carried over to 2021.

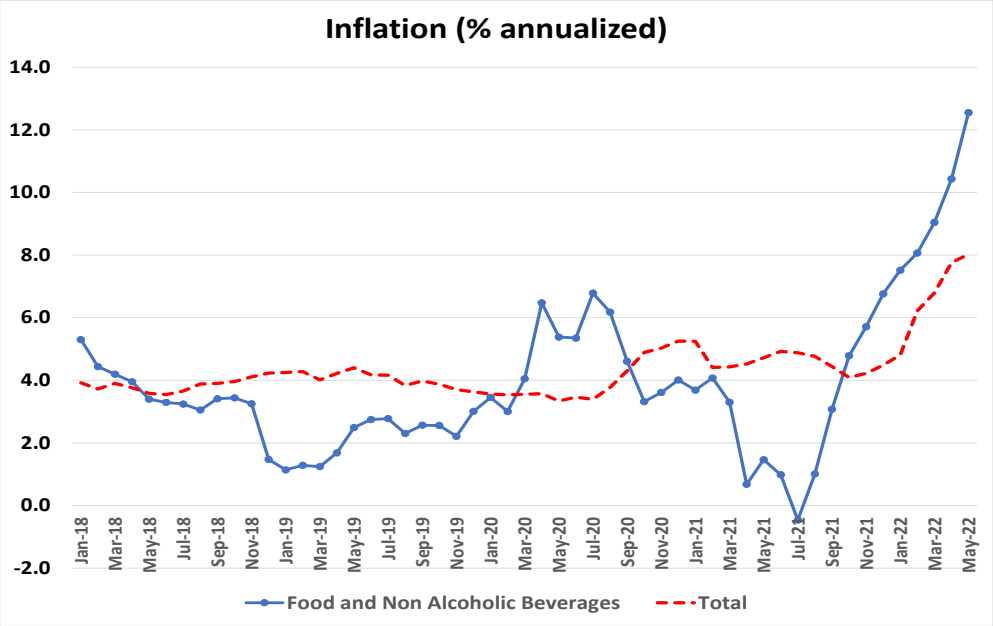
As expected, due to the nature of the policy responses to the pandemic (quarantines and lockdowns, mainly in face-to-face activities), the declines were particularly deep in Hotels and Restaurants during 2020. Other sectors that were badly hit include Construction; Mining; Transportation; and Other Services. But those sectors also rebounded strongly in 2021 and maintained their strength during early 2022. Agriculture appears to be recovering from the previous cumulative impacts of the pandemic and climate events.[6]

[6] From the sectoral point of view, the previous IFPRI simulations showed that the agricultural sector would have been less affected than industry and services, which is what eventually happened. However, the hurricanes mentioned before, hit Honduras by the end of the year, causing agriculture to close 2020 in worse shape than projected initially. Also, the simulations suggested a slower growth of the agricultural sector in 2021 compared to the other sectors, which is what happened.

4.3. Inflation

Chart 11 shows the annual rate of inflation for the consumer price index (CPI), by month, compared to the equivalent month of the previous year, both total and for food products.

Chart 11. Inflation (monthly annualized values %)



Source: authors with data from Banco Central of Honduras

Total inflation is obviously more stable than food inflation. The initial recession related to the pandemic forced a deceleration in overall consumer prices: inflation that was around 4% in annualized terms, dropped to around 3.4% in May-June but then started to increase in the second half of 2020, reaching an annualized rate of 5.3% in December 2020. After that, inflation had been oscillating between 4-5%, about the range of the last decade or so, until January 2022. Since February 2022, however, there has been an acceleration of inflation reaching about 8% in May 2022 (latest data as of this writing).

Food inflation moved in the opposite direction with small increases at the beginning of the pandemic, and subsequent drops until mid-2021. Food prices started to climb in the second half of 2021, with the global acceleration in prices resulting from the large fiscal stimulus in the US and other developed countries (a demand push), combined with adverse climate events in important food exporters, strains in logistic chains, and the closing of China because of COVID-19 (supply constraints).

Table 4 shows the average of monthly annualized inflation for a variety of food items of the basic consumption basket. The data for 2022 is the average price during January-May 2022 compared to the same period of 2021.

Table 4. Monthly annualized inflation for products of the basic food consumption basket (average price January-May 2022 compared to January-May 2021)

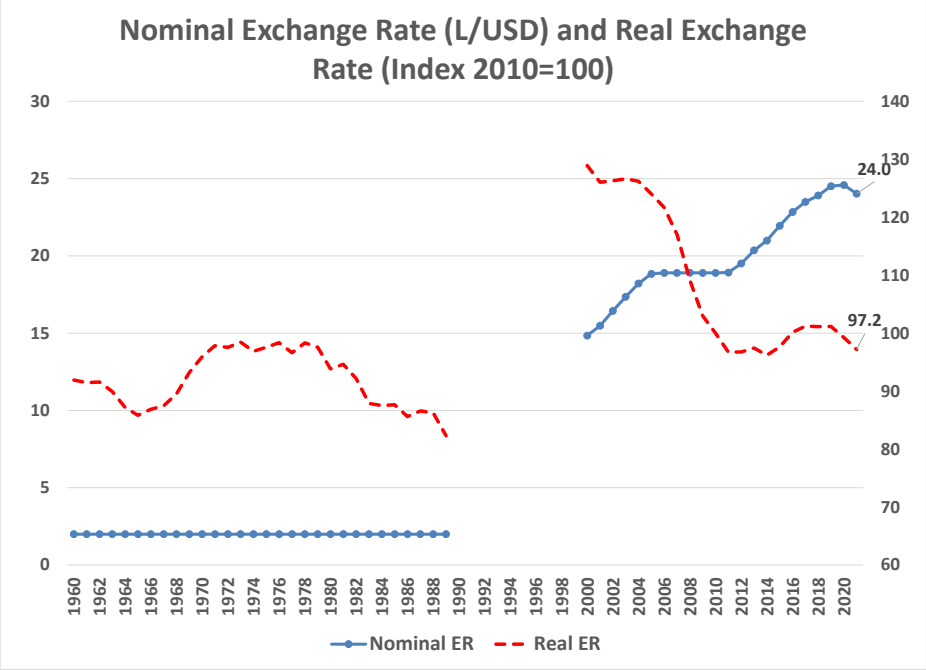
Products of Basic Food Basket	2020	2021	Early 2022
1. Arroz	3.7	3.0	8.9
2. Maiz Desgranado	2.6	-2.6	22.2
3. Pan Molde	3.9	4.0	10.0
4. Tortilla de Maiz	2.3	1.3	5.5
5. Costilla de Cerdo	3.2	10.0	6.8
6. Costilla de Res	2.9	3.4	10.6
7. Pollo limpio	3.4	3.1	8.5
8. Tajo de Res	1.6	1.7	8.4
9. Pescado Blanco	5.3	12.3	10.6
10. Huevos de Gallina	15.2	-5.0	11.7
11. Leche en Polvo	2.4	4.2	7.9
12. Leche Pasteurizada	5.6	2.3	9.8
13. Queso	1.3	2.6	10.8
14. Aceite Vegetal	5.7	5.6	15.3
15. Manteca Vegetal	4.5	5.0	22.5
16. Matequilla Crema	2.5	3.3	11.4
17. Banano	5.1	6.5	13.2
!8. Naranjas	7.1	10.5	1.1
19. Plátano	10.8	6.9	-0.2
20. Cebolla	-3.6	-3.2	2.3
21. Frijoles Rojos	16.6	-4.2	18.2
22. Repollo	17.3	7.4	7.8
23. Tomate Manzano	2.1	-4.8	-3.7
24. Papa Blanca	10.9	-5.0	-9.0
25. Yuca	10.6	0.9	4.5
26. Azúcar Blanca	4.4	0.4	4.4
27. Café	3.2	0.5	34.1
28. Sal	3.2	10.5	13.6
29. Salsa de Tomate	3.4	6.0	7.7
30. Refresco embotellado	4.8	5.4	7.4

Source: authors with data from the Banco Central de Honduras

During 2020 prices 12 items were above 4.5% (the average total inflation 2010-2021), one declined in price (onions) and 19 stayed below average total inflation. In 2021, food inflation declined further with only 11 items above 4.5%, 6 declining in prices, and 15 below the period average. However, in the first quarter of 2022, food inflation, that as mentioned started to accelerate in the second half of 2021, jumped further: 24 items were above 4.5% (and 22 were above the projected total inflation for 2022 by the IMF), while only 3 had negative inflation and 5 stayed below the 2010-2021 average. Therefore, while the pandemic and even combined with the hurricanes did not have a large impact on food prices, the recent evolution of world prices particularly after RUC appears to have a more sustained impact on the cost of food.

In analyzing the impact of the pandemic on food consumption it is also important to consider the exchange rate, given that most of the food products are tradeable internationally. Chart 12 shows the nominal exchange rate (Lempiras per US dollar) and an index of the real exchange rate (RER) against the US dollar (with base in 2010=100). An increase (decline) of the RER implies that the country's exports of goods and services are more (less) competitive in international markets. The last number in the Chart corresponds to 2021.

Chart 12. Nominal Exchange Rate (Lempiras/US dollar) and Real Exchange Rate (index)



Source: Authors with data from WDI/World Bank

Data from the World Bank shows a gap in the 1990s. The nominal ER rate is on the left axis (looking from the reader) and the RER is the broken line measured on the right axis. After the strong devalua-

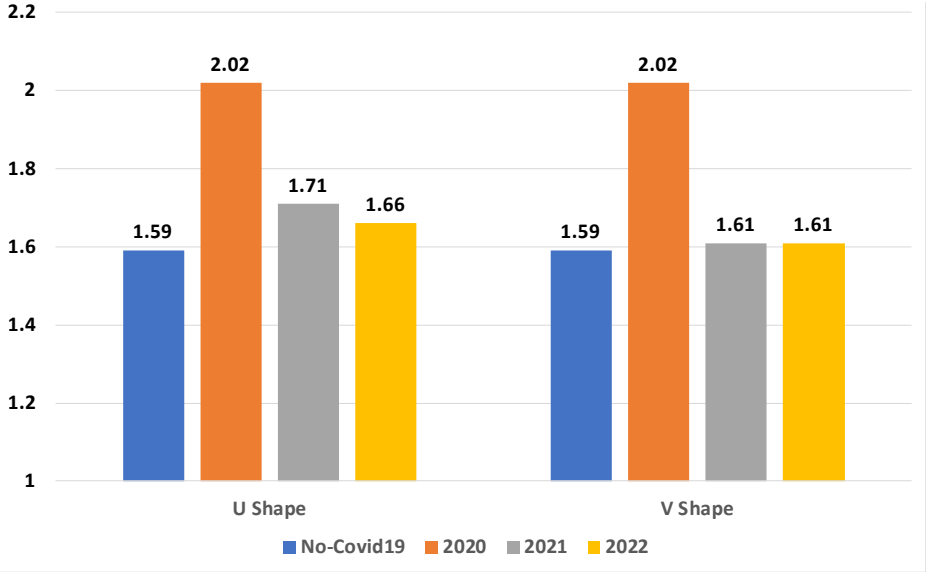
tion in the 1990s that placed the RER about 30-40% above the pre-1990s level (and therefore becoming more competitive internationally), it declined to the levels of the 1970s and has remained relatively stable (the nominal ER appears to have been adjusting with the inflation differential against the US dollar).

4.4. Poverty and malnutrition

In the previous IFPRI reports we presented simulations for 2020 to 2023 using the MIRAGRODEP model with epidemiological adjustments, performed around October 2020, with the information available at that time, and without including governments' policy responses.

Chart 13 shows the estimated evolution of extreme poverty (at 1.9 PPP dollars/capita/day) using IFPRI's model.

Chart 13. Honduras, Extreme Poverty (millions of people)



Source: authors based on MIRAGRODEP

Extreme poverty was estimated to increase to more than 2 million people in 2020 or somewhat more than 400,000 persons above the about 1.59 million that were calculated to be in that category in 2019. Then with the recovery, it was considered that the number of extreme poor would drop to between 1.71 and 1.61 million people (optimistic and pessimistic scenarios respectively) in 2021 and to between 1.66 and 1.61 million people (optimistic and pessimistic scenarios, respectively) in 2022. Therefore, the number of people in extreme poverty was estimated to remain even in 2022 above the 2019 levels.

A more recent report of the World Bank (2021b) estimates the difference in what would have been the poverty levels at 5.5 PPP dollars/capita/day (a higher poverty line than the one used in the mentioned IFPRI's simulations) during 2020, considering the situation without and with policy responses.

Table 5 shows the number of the poor population at that poverty line in 2019, and the range of estimates in the cases of no policy response, and with such responses for 2020. There are no projections for 2021 or 2022.

Table 5. Honduras: Population below poverty of line of 5.5 PPP dollars/capita/day

	2019	2020. No policy response	2020. With policy response
Number (millions)	4.78	5.54	5.50
Change in numbers (millions)		0.76	0.72

Source: authors with data from Annex 8 World Bank 2021

The policy response is estimated to have marginally reduced the number of additional poor generated by the pandemic (40,000 fewer persons).[7] Those numbers suggest a longer-lasting effect on poverty from COVID-19 even after the strong rebound of 2021 and the expected growth in 2022.

The simulations in the previous reports also compared changes in consumption, measured against a baseline without COVID-19. Food consumption in 2020 was estimated to decline compared to the baseline without the pandemic, but the drops were projected to be larger in products such as dairy, meat, fruits, vegetables, and pulses, compared to grains and sugar. This suggested a reallocation of consumption towards less healthy diets. The simulation for 2021 consumption of most products still

[7] The previous report (Díaz-Bonilla, Flores, Piñeiro, and Zandstra, 2021) presented results from 2020 high-frequency telephone surveys implemented by the World Bank in many countries in the world, including Honduras (https://www.worldbank.org/en/programs/lsms/brief/lsms-launches-high-frequency-phone-surveys-on-covid-19). It was shown that the number of people suffering from food insecurity problems declined from the first wave of surveys to the last one (in August). The surveys indicate that by June 2020, about 20% of the respondents have gone at least one day without food due to lack of money, about double (40%) were hungry but did not eat because of lack of money, and about 55% ran out of food due to lack of money (the questions are in inverse relation to the degree of hardship with not eating for a whole day the worse condition). The other question about being able to access staple foods (which more than 90% of the respondents said they were able to do) indicates that the problems were not related to supply issues but rather demand problems for lack of money. In any case, the percentages of households with food problems dropped in the next survey of August 2020 but still, some 12-15% went without eating for a whole day. There are no additional surveys for Honduras after August 2020.. If the percentages of August 2020 are extrapolated to the total population, the percentage in August of people not eating for a whole day would represent about 1.2-1.5 million people, and the number of people that were hungry would have been about 2.5 million, bracketing the numbers simulated for extreme poverty projected in the previous report and shown in Chart 11 (it should be noted that the poverty line is the one that allows food consumption for the minimally accepted levels of energy).

showed declines compared to the baseline. In summary, it was noted then that the simulations suggested both a decline in food consumption and a shift in composition towards less adequate diets continuing in 2021.

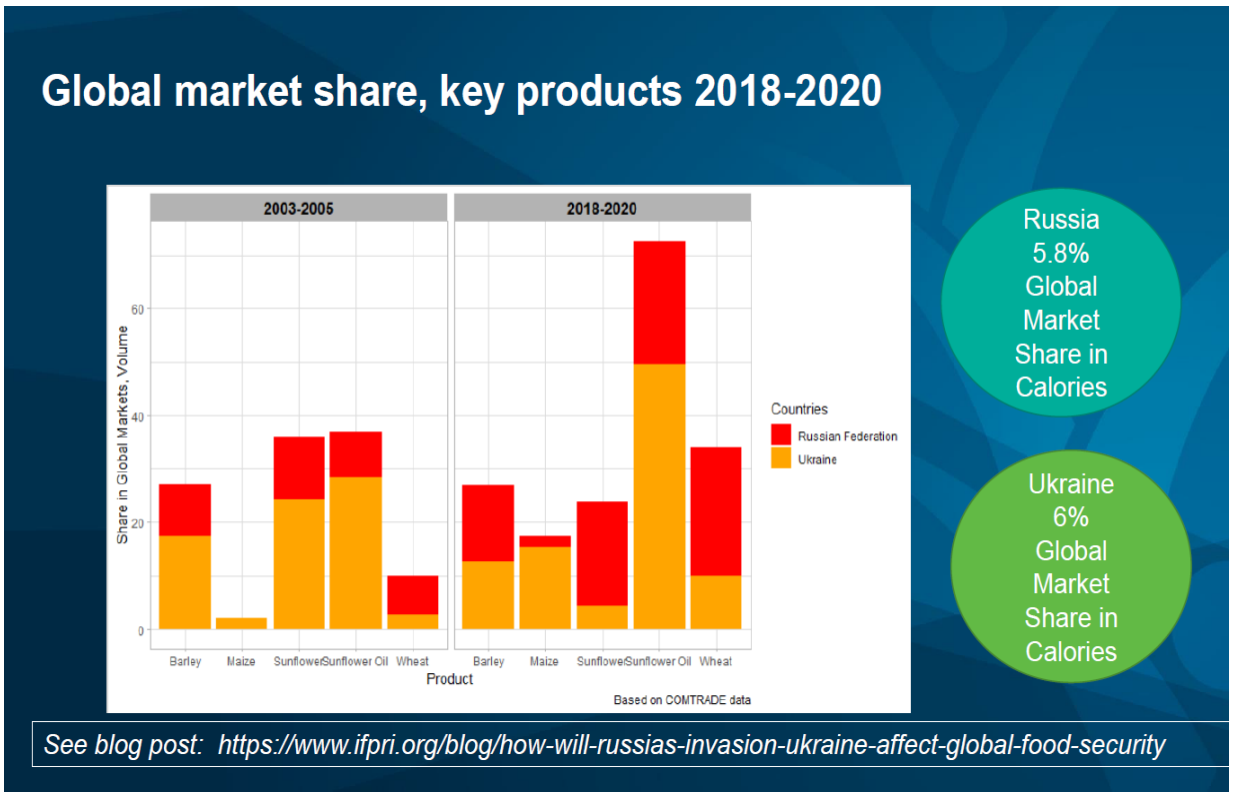
All this means that the previous problems of poverty and related deficiencies in nutrition in Honduras have been deepened by the pandemic and that even more powerful policy interventions will be needed soon. Furthermore, the impact of RUC must be considered (see next section).

5. SOME CONSIDERATIONS ABOUT THE RUSSIA-UKRAINE CONFLICT (RUC)

As mentioned before, in addition to the impact of the pandemic and the adverse climate events, since February 24, 2022, the world is feeling the impact of the Russia-Ukraine Conflict (RUC). As a background to additional comments later in the analysis of some food value chains, here some basic information is presented.

Chart 14 shows the importance of Ukraine and Russia in some key agricultural products.

Chart 14. Global market share, key products 2018-2020



Source: Laborde 2022

Both countries combined represent about 12% of the traded calories at the world level, mainly related to wheat, sunflower and sunflower oil, and to lesser extent corn (maize) and barley. While Russia appears to continue to be trading these products, Ukraine has been more affected.

Also, Russia represents 15% of the market of nitrogenous fertilizers, 14% of phosphates, and 19% of potash (to which it can be added the 18% of Belarus as this country has been involved in the war).

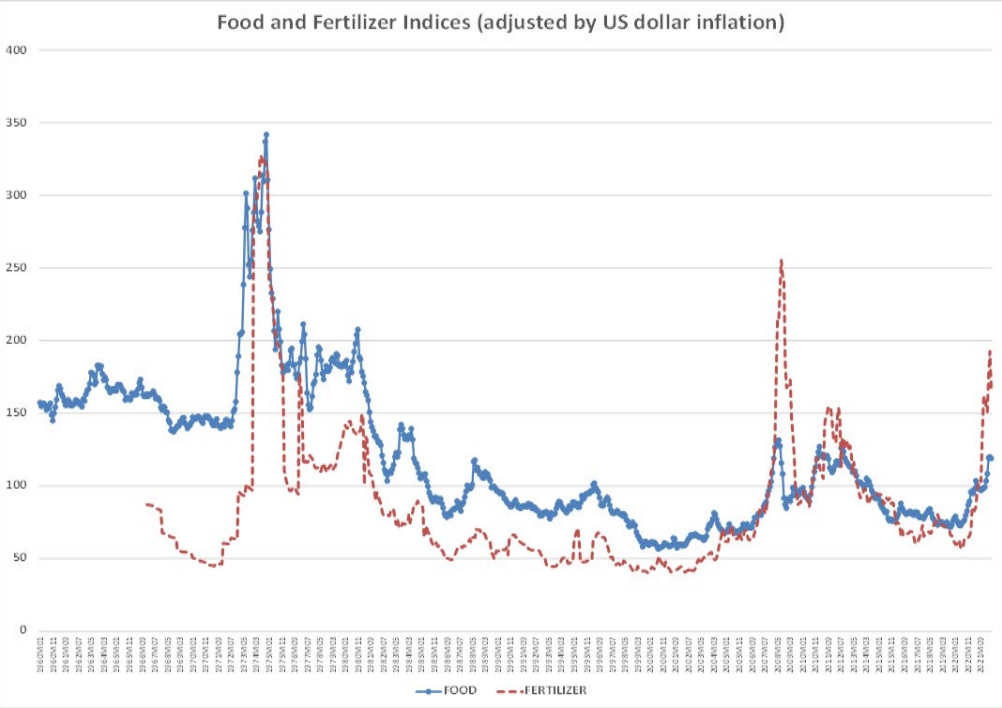
Further, Russia accounted before the war for 13% of global oil production and 11% of its trade, about 17% of gas production and some 19% of exports (considering LNG plus what is transported by pipeline).

Prices of different commodities were increasing before RUC, due to the strong acceleration of the world economy in 2021 (it grew 4.8% per capita that year, the highest rate in the World Bank database starting in 1960), a product of the expansionary fiscal and monetary policies followed until recently by many large countries, climate events in some key agricultural producers, and lockdowns in China related to concerns about COVID19.

Then the war, as it happened in the past with other conflicts such as Korea, Yom Kippur, and Iran-Iraq, led to a further spike in commodity prices.

Next Charts focus on food and fertilizers, presenting two views: one in levels adjusted by overall inflation (“real” prices) and the other as a change in nominal prices (inflation). Chart 15 shows the indices for food and fertilizers calculated by the World Bank, adjusted by the US inflation (i.e., the purchasing power of the US dollars, with base-year 2010, and ending in May 2022).

Chart 15. Food and Fertilizer Indices (adjusted by US$ dollar inflation)



Source: authors with World Bank "pink sheet" database; and US CPI

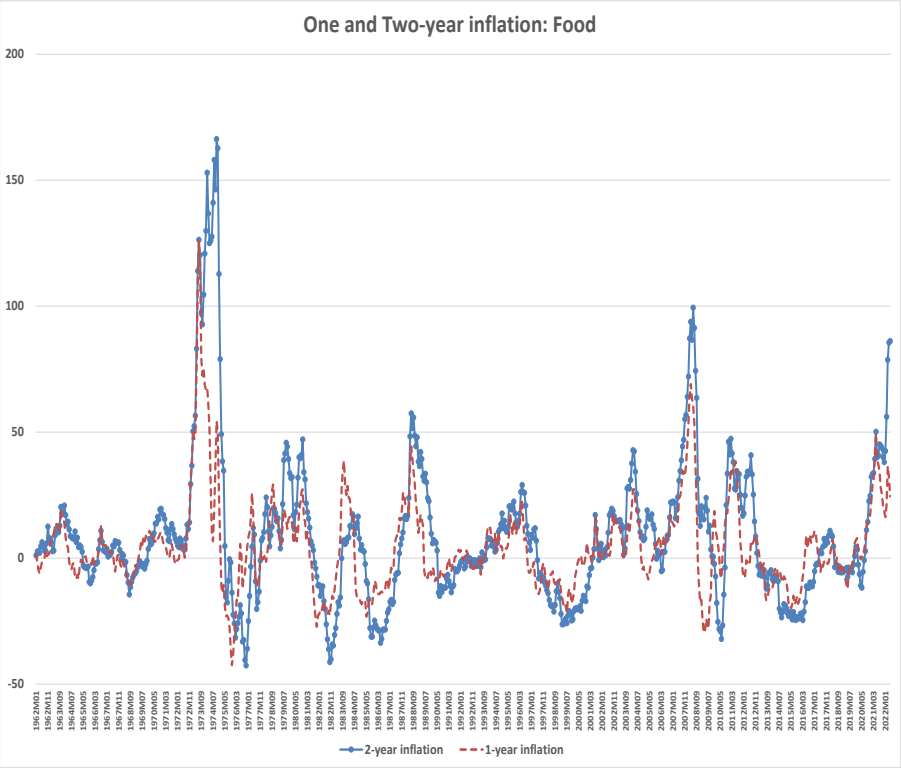
The inflation-adjusted index for fertilizers (broken line) has increased significantly in the last months, although, with the deflator utilized in the charts above,[8] it is still below the peaks in 2008 and in the mid-1970s. In the case of food (solid line), the increase has been smaller, with about the same levels of 2008 and 2011, but clearly below the real prices of the 1970s.[9]

Charts 16 (food) and 17 (fertilizer) show now the rate of increase in one-year (broken line) and two-year (solid line) windows for the same food and fertilizer indices but in nominal terms (i.e., not adjusted by purchasing power of the US dollar).

[8] Besides using US consumer inflation, another deflator commonly used is what is sometimes called the "manufacturing unit value," which reflects the export price of industrial countries. Obviously, different deflators may give different results.

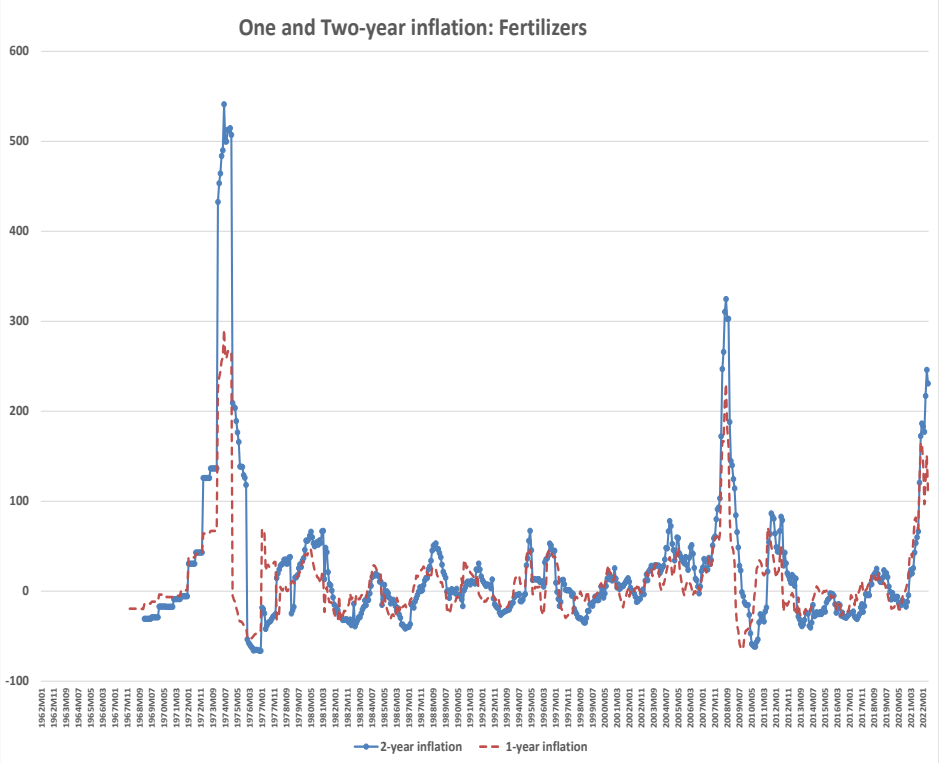
[9] A comparison of the 2008 price spike with the 1970s can be found in Diaz-Bonilla, 2010. A discussion of the different indicators that can be utilized to analyze the evolution of prices is in Díaz-Bonilla, 2015 and Díaz-Bonilla, 2016.

Chart 16. One and Two-year Inflation: Food



Source: authors with World Bank "pink sheet" database

Chart 17. One and Two-year Inflation: Fertilizer

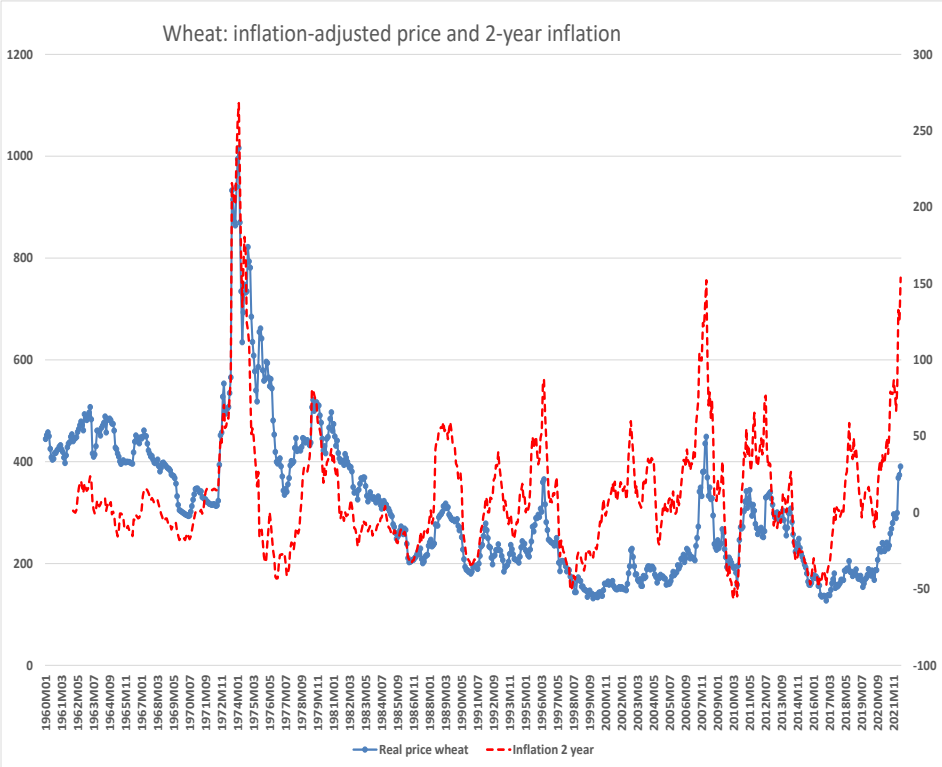


Source: authors with World Bank "pink sheet" database

In general terms, in both the case of food and fertilizers, the one and two-year jump in prices is important, but they are still below similar events in 2008 and the mid-1970s.

Chart 18 shows the inflation-adjusted price of wheat (solid line; on the left axis from the reader) and the 2-year nominal inflation (broken line; on the right axis from the reader).

Chart 18. Wheat: Inflation-adjusted price and 2-year inflation



Source: authors with World Bank "pink sheet" database; and US CPI

In the previous cases of price spikes, as shown in all charts, the inflation-adjusted price levels and the rate of change of nominal prices (inflation) tended to stabilize and then decline. Although the evolution of those prices must be continuously monitored, history suggests the need to avoid drastic policy reactions as if the prices were to stay high forever (or even worse, as if they would continue to keep increasing).

Table 6 presents a preliminary calculation of the potential impact of changes in prices on different exports and imports of agricultural products from Honduras in 2022, compared with the year 2020. We are using the 2-year inflation for May 2022 in each group of products, based on the World Bank "pink sheet" database for all products, except for the groups of meat and dairy which use data from FAO Food Price Indices. For wheat and corn (and products) we use the inflation for the primary product, and for oilseeds and products, we use the change in soybean oil. In the case of the rest of agricultural exports, we use the 2-year inflation from the World Bank aggregate index for agricultural products, but for

the rest of agricultural imports, we apply the World Bank aggregate index for food products, which is higher than for agriculture (that asymmetric valuation may be underestimating the additional value of exports and overestimating the increase in the costs of imports, but it is applied here as a conservative approximation).

Table 6. Estimate of the impact of prices on exports and imports

	2020		2022
	million USD	2-year inflation (%)	Increase in value
Banana	252.8	12.8	32.4
Coffee	980.2	73.8	723.4
Palm Oil	330.2	197.8	653.2
Subtotal	1563.3		1409.0
Rest of Agricultural Exports	1032.8	64.5	666.2
Total Agricultural Exports	**2596.1**		**2075.1**
Wheat and products	206.6	153.8	317.7
Corn and products	173.0	139.6	241.4
Oilseeds and Products	205.0	186.6	382.6
Rice	132.7	nil	0
Meat and products	161.2	28.4	45.8
Dairy and products	119.8	39.1	46.9
Subtotal	998.3		1034.4
Rest of Agricultural Imports	941.9	86.2	811.9
Total Agricultural Imports	**1940.1**		**1846.3**
Fertilizers	155.0	230.8	357.7
TOTAL	**2095.1**		**2204.1**

Source: authors with data from FAOSTAT, World Bank "pink sheet." Fertilizers are from COMTRADE 2018-2019

Honduras is a net exporter of agricultural products (and of food products), and while there have been price increases on imported products, the prices of exported ones have also gone up. Therefore, it is important to see the total effect, and not only the potential negative impact of higher food import prices. The three main products (about 60% of the exports) would increase in value by about 1.4 billion USD just through the price effect and considering all agricultural exports (which, as mentioned, are estimated at a lower inflation rate than imports), the value increase in 2022 would be about 2.1 billion. The costs of food imports also increase, but the total jump (about 1.8 billion USD) is less than the increase in the value of exports. Therefore, for agricultural/food products the net effect of the price changes for Hondu-

ras may well be positive. However, once the additional cost of fertilizers is considered then the net effect is negative by about 129 million USD (2075.1 million USD minus 2204.1 million USD). Further, these calculations do not consider the impact on the trade balance of energy prices, which would certainly be negative for Honduras.

Therefore, on the production side, it is important to follow the evolution in the market of fertilizers, where the overall impact so far has been on prices rather than availability (more details are in the analysis of specific value chains below). On the consumption side, the fact that food prices of export and imports are increasing implies that there would be a negative impact on consumers (as different from the mildly positive effect on Honduras' trade balance), particularly the poor and vulnerable. This negative impact must also be monitored and countered with stronger social assistance programs (see the section on Policy Conclusions). The final effect will also depend on how the growth and trade effects translate into employment and income. This analysis would require a specific simulation with an economy-wide model of Honduras, including other international developments, such as the evolution of remittances, which have been growing. This exercise is not attempted here.

6. SUMMARY ANALYSIS OF KEY FOOD VALUE CHAINS

This section includes a more detailed analysis of some food value chains, to determine whether the pandemic and the policies applied to control it, may have affected those products. At the same time, as noted in the introduction, the country has been hit by hurricanes Eta and Iota, and, recently, it is feeling the impact of RUC. Therefore, the narrative includes references to those other developments as well. The focus is on seven products: maize, beans, poultry meat and eggs (updating the analysis in the previous report), plus sugar, wheat and products, and bovine meat (which were added to this report).

Table 7. Products analyzed (average 2015-2019)

	Calories (kcal/capita/day)	% Total	Proteins (g/capita/day)	% Total
Maize and products	740.8	27.9	19.3	31.3
Beans and pulses	110.8	4.2	7.2	11.7
Poultry	95.2	3.6	7.1	11.6
Eggs	15.4	0.6	1.2	1.9
Sugar	445.8	16.8	0.0	0.0
Wheat and Products	269.4	10.1	6.9	11.2
Bovine meat	29.8	1.1	3.0	4.8

Subtotal	1707.2	64.2	44.7	72.6
Other	951.0	35.8	16.9	27.4
TOTAL	2658.2	100	61.6	100

Source: authors with FAOSTAT database

Table 7 shows the importance of those products in food consumption in Honduras, using calories (kcal/capita/day) and proteins (grams/capita/day): they represent about 64% of the calories and 73% of the proteins in the consumption of that country. The food value chains analyzed were selected both because of the importance in the diet, but also because they have a large domestic primary production component, except for the case of wheat which is basically imported. Still, some food value chains appear more relevant than others: for instance, corn and beans, a typical diet in the country, represents close to a third of the calories and about 43% of the proteins consumed in Honduras.

In what follows there is a description of the value chains selected and the channels through which the pandemic have impacted those products, and some references to other climatic and geopolitical events. Each food value chain includes a discussion of the evolution of prices in domestic markets. Finally, there are some policy considerations. Section 7 includes additional policy conclusions for agrifood systems in Honduras. Although food and agricultural production has been relatively less affected during the pandemic (because the government protected those operations), it was affected by the hurricanes in 2020, and now the increases in the prices of some food products and fertilizers need to be also considered, as briefly discussed before and in the following subsections.

Differentiating the effects of those events is a difficult task, considering that they overlapped in the period under consideration. Nevertheless, this report provides an outline of specific policies and timelines.

This brief description of the target value chains in Honduras focuses on the most affected functions of each value chain by COVID-19. These functions are access to inputs and technologies dealing with production conditions and limitations induced by social distancing and other infection prevention practices. Other areas shocked by the pandemic are demand and changes to commercialization schemes as well as support services.

The value chains analyzed showed what actors have undergone to procure inputs, deal with labor restrictions due to social distancing, and adjust to the shocks on the shifting demand. They faced the immediate impact of the declaration of a national state of emergency. But, as weeks and months passed by, value chain operators became more adept at dealing with the difficult conditions.

Overall, the news has been relatively more positive for the production of basic food staples under study compared to other sectors. Although the impact on tourism, maquila and other areas of the economy

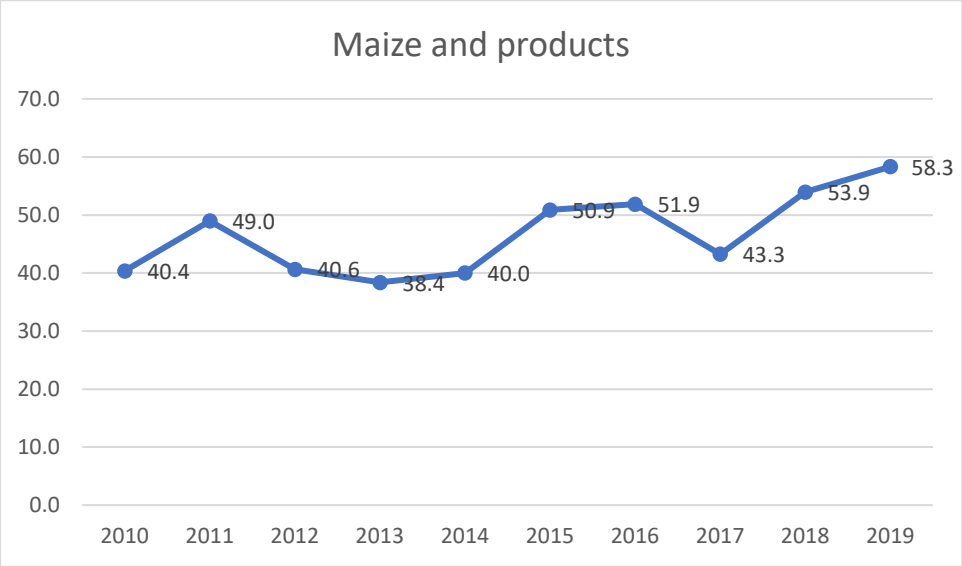
was devastating for jobs and for the population living in poverty, food production and consumption eventually stabilized. Still, the information collected in this paper with respect to the value chains analyzed is not definitive considering that even though the pandemic has been receding, the overall impact has been also compounded by climatic events and the RUC. Continuous collection of field data and interviews with GoH officials and the private sector and closer observation of trade flows concerning imported inputs, grains and feed would be needed.

6.1. Corn/maize

It is necessary to distinguish white maize that is for human consumption mainly in tortillas from yellow maize used as animal feed. The area planted with the latter is limited and the domestic use is from the imported product. White maize is produced by a variety of farmers, but most of them are subsistence farmers.

Next Chart 19 shows the percentage of imports over domestic consumption of maize and products. However, it does not distinguish between white and yellow maize, and the Chart also includes maize products.

Chart 19. Maize and Products: Imports as % of Domestic Consumption



Source: authors with FAOSTAT data

In what follows the analysis is focused on the white corn food value chain, considering that the yellow one is mostly imported (see Table 8).

.

Table 8. White maize

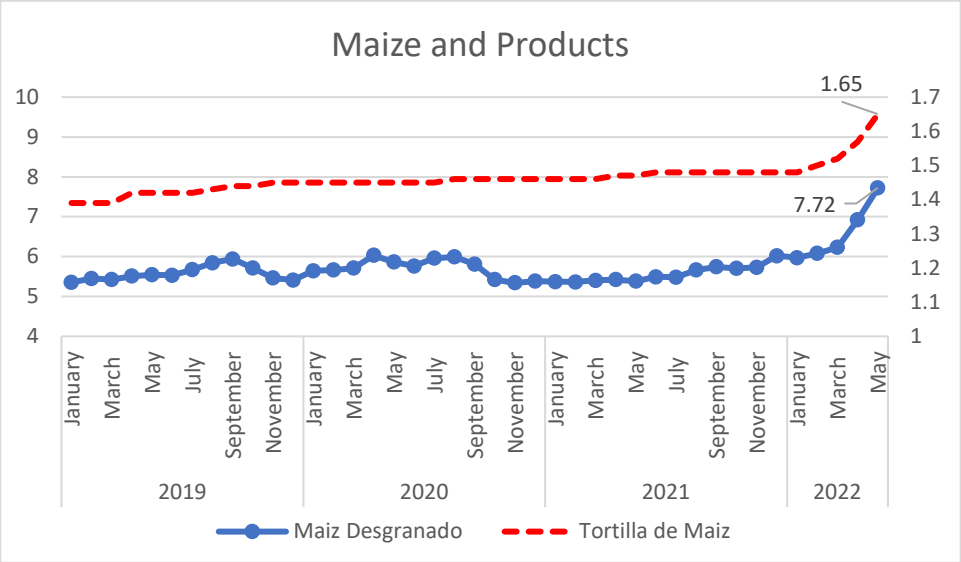
Value Chain Function	Critical value chain characteristics	COVID-19 effect (March 2020-Present)	Climate Change Extreme Events Effect (Eta and Iota from November 2020-May 2021)	Fertilizer Crisis Effect (February 2022 to Present)
Input supplies and production	Harvested white maize areas amount to 332,760 ha and 500,000 MT per year distributed in the main producing departments (Olancho, Yoro, Santa Bárbara and El Paraíso). Smallholder farmers have traditionally shown low productivity averaging 2.5MT/ha. In general, small farmers cultivate less than 5ha and contribute 41% of the national production. Most of this production comes from low-fertility, marginal lands cultivated with family labor. After decades of development of certified varieties by DICTA in collaboration with CIMMYT, it is reported that nearly 98% of the cultivated area is not with certified seed of improved varieties (DICTA 2020).	Inputs such as certified seed, fertilizers and pesticides increased on average 10-15%. Other imported inputs such as plastic bags, paper bags and post-harvest treatments for seed increased in price and were not available for months. Fear of not finding certain products in the usual 1-2kg features led to more purchases in bulk. This is the case of special pesticides and related inputs such as rodamina, a coloring agent in seed treatment. In general, 2020 was a good year for maize production thanks to a well-distributed rain pattern along the agricultural year.	The Honduran Institute of Agricultural Marketing (IHMA) issued new purchase orders for seed and grain until early 2021 in response to the aftermath of Eta and Iota.	Ammonium nitrate, a major synthetic fertilizer formula recommended at a rate of 238kg/ha, increased circa 100% as a result of RUC. Urea, another common fertilizer formula increased circa 150%. Honduras is the only country in Central America that has measured the impact on fertilizer prices on planted area contraction. A 26.3% reduction with respect to the 2021 planted area of maize was reported by the GoH Technical Unit for Food and Nutrition Security (UTSAN, 2022). The study is based on a sample of households producing less tan 3.5ha, representing 56% of the maize household farming units. From this proportion of farmers, 5.8% decided not to plant maize while 19.4% will plant only 50% or less that their traditional annual area.
Commercialization	Most of the maize is sold to intermediaries, but some 100,000 small producers are organized in 20 farmer associations grouped affiliated to the Honduras Coordinating Council of Farmer Organizations of Honduras	When the market experiences higher than normal demand, the pressure on quality goes down. There have not been many		No data available yet for the 2022 first production season.

	(COCOCH) and the National Confederation of Paysans (CNC). An additional 20,000 farmers are organized in the National Federation of Farmers and Ranchers of Honduras (FENAGH) and PROGRANO with a planted area of 84,600 hectares (numbers vary 5-10% more or less per year). Honduras is not self-sufficient in maize. According to FENAGH, Honduras consumes 1.3M MT of maize of which about 800,000 MT are imported.	complaints about quality. In other words, the market is more tolerable in terms of quality.		
Retail	Because of this chain's vertical disintegration with informal contracts, it is not possible to define a single way of retail. Vertical integration from production to consumer is found in the maize flour value chain led mainly by Mexican company MASECA which operates in Guatemala and Honduras.	Given the disintegrated nature of this chain (except for maize flour for tortilla), there is little information gathered at the producer level in addition to the price increase to consumers (see later). In addition, Honduras enacted this governmental decree to minimize the effects of the pandemic on the poorest sectors of the population: Decreto Nº 31-2020 — Ley especial de aceleración económica y protección social frente a los efectos del coronavirus COVID-19.Date of text: 13 March 2020		

Source: Authors

Chart 20 shows the evolution of prices for corn for human consumption (per pound; on the left axis from the reader) and corn tortillas (per unit; on the right axis).

Chart 20. Price of Food Corn and Products



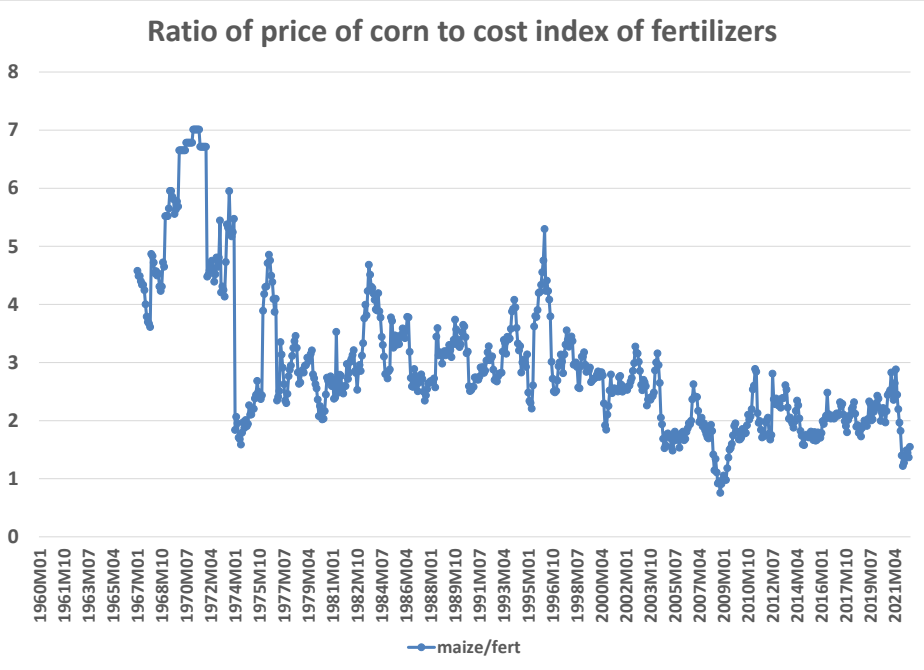
Source: authors with data from the Banco Central de Honduras

The chart shows that the consumer price of these key products had increased about 11.6% (corn fresh) and about 6.5% (the tortilla per unit) between January 2019 and January 2022, before the start of the RUC. Up to that point. the increase was below total accumulated inflation (measured by the overall consumer price index) which was about 15.4%. Therefore, even with the pandemic the inflation-adjusted price for these products had in fact declined until just before the RUC. However, since the latter event the price of fresh corn jumped 29.3% between January and May 2022, for an accumulated of 44.3% since January 2019, being now clearly above the accumulated inflation for the same period, which was 19.9%. This was reflecting the impact of the global geopolitical turmoil on world food prices. In the case of tortillas, the price increase was smaller: 11.5% between January and May 2022, for an accumulation of 18.7% since January 2019. This means that until May 2022 at least, the price increase of tortillas in Honduras had remained below overall inflation. It remains to be seen when the processed product catches up with the jump in the price of the raw material.

Another point to be considered for the supply of corn is the impact of the price of fertilizers and of energy on production costs. An indicator is the relation of the price of the product compared to the price of fertilizers and of energy. If the ratio goes down it means that the input (fertilizers or energy) is getting more expensive compared to the price of the product, signaling a cost push, and, potentially, leading to a reduction of profit margins. However, as there are other components of production costs, these ratios give only a partial idea of the pressure on profit margins. Further, in the case of white corn, the use of fertilizers and energy inputs may be marginal.

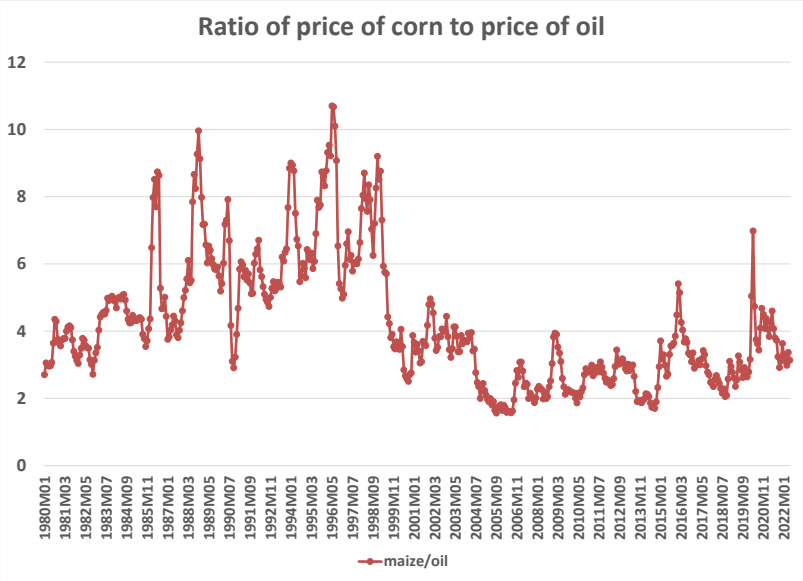
The next Charts 21 and 22 present those ratios using world prices for yellow corn (which may not track the domestic price of white corn in Honduras).

Chart 21. Ratio Corn price / Fertilizers Cost



Source: authors with World Bank "pink sheet" database

Chart 22. Ratio Corn Price/Oil price



Source: authors with World Bank "pink sheet" database

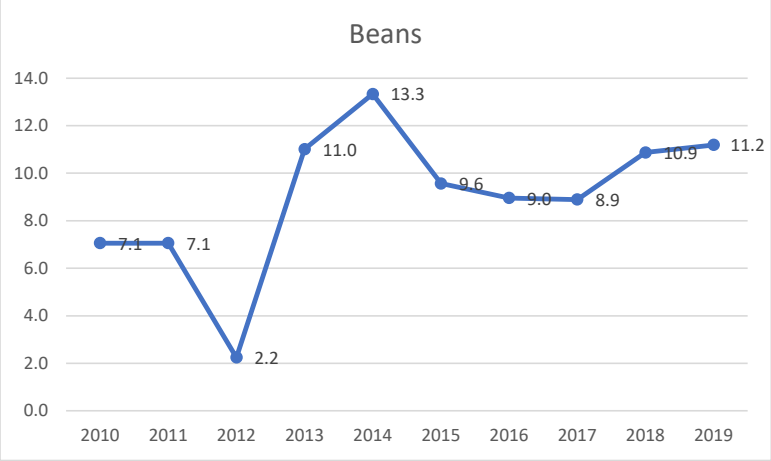
The ratio of the price of corn to fertilizers is close to the low values of 2008 and it is clearly below the long-term average, signaling a cost pressure. In the case of oil, it is declining but above the average

since the 2000s. The charts suggest the need to continue monitoring the impact of fertilizer and energy prices on production costs.

6.2. Red beans

Chart 23 shows the percentage of imported beans (and pulses) in domestic consumption. Basically, Honduras consumption of these products depend on domestic production, but as noted later, in some cases there is a component of imports that makes that world prices also influence the domestic market of this product.

Chart 23. Beans: Imports as % of Domestic Production



Source: authors with data from FAOSTAT

Table 9. Red dry bean value chain

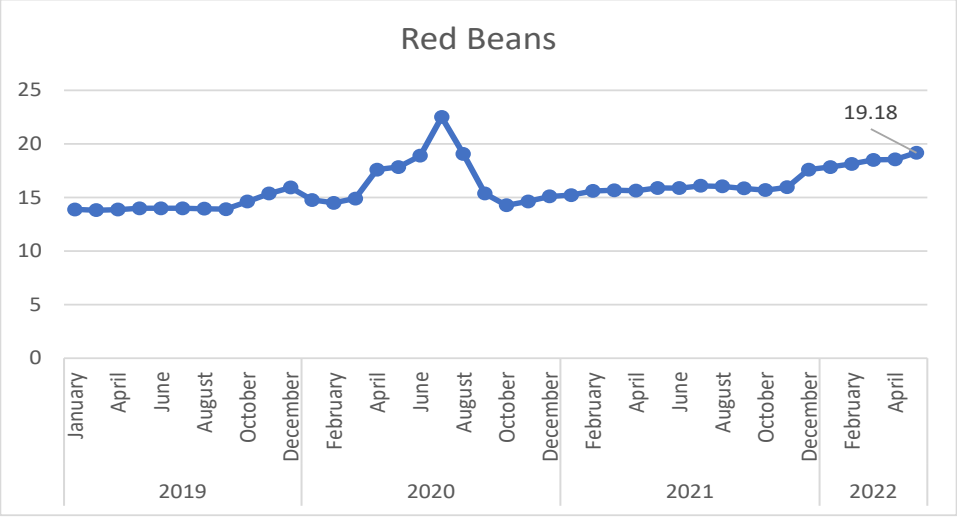
Value Chain Function	Critical value chain characteristics	COVID-19 effect (March 2020-Present)	Climate Change Extreme Events Effect (Eta and Iota from November 2020-May 2021)	Fertilizer Crisis Effect (February 2022 to Present)
Input supplies and production	It is essential in the diet of the population and is cultivated throughout the country, except in the coastal areas of the Atlantic and Pacific of the national territory. It is grown for two annual periods (first and second) and an additional period that begins in the same calendar year (sowing date between November and January but is harvested in the following year) and that have cultivated area and differentiated productions.	Bean scarcity was forecast in May 2020 by state and NGO outlets and a potential increase in demand from El Salvador. Fortunately for Honduras, the first production season favorable thanks to an even rain pattern and higher adoption of certified seed.		Bean production is recommended a combined 320kg/ha of three major synthetic fertilizers during production (diammonium phosphate, ammonium nitrate and potassium chloride. All three fertilizers experienced increases of 100% in prices as a result of RUC. UTSAN (2022) reports that 22.2% of

				red bean producing households were planning to reduce their planted area from which 4.6% decided not to plant and 16.2% were considering planting only half or less than half of their area planted in 2021.
	According to the National Statistics Institute (INE), estimates, approximately 143,000 hectares are planted annually under this crop, obtaining an approximate production of 2.5 million quintals based on an average yield of 17.5 quintals per hectare (INE 2020).	More area was planted in 2020 following the encouragement of the government to focus on food security.		
Commercialization	Generally, bean production in the country is sufficient to meet domestic consumption. In years of considerable climatic variability, manifested in droughts or excess rainfall, a deficit in production is observed, affecting the internal supply of this grain; for the case, the foreign trade figures of the INE (INE 2020). Grupo CADELGA, an agriculture inputs distribution company, purchased more than 400 c.w.t.	The Agriculture Secretariat (SAG) announced in April 2022 that IHMA was going to buy the 42kg bag of dry red beans at L1250 (25% above the start-up price in May 2020 which led to more area planted.		

Source: Authors

Chart 24 shows the evolution of the price of red beans per pound.

Chart 24. Price of Red Beans



Source: authors with data from the Banco Central de Honduras

Red beans jumped in prices (Lempiras per pound) in the first part of 2020. This behavior in prices was explained by some level of panic demand in several countries, and shortages in world markets during the pandemic. The supply of beans in Honduras, as noted, is mostly domestic, but supermarkets also import some amounts to smooth availability for consumers, and there were supply problems in world markets in 2020. The combination of these factors led to world prices in mid-2020 jumping some 20% above the 2019 levels, but they declined afterward.[10]

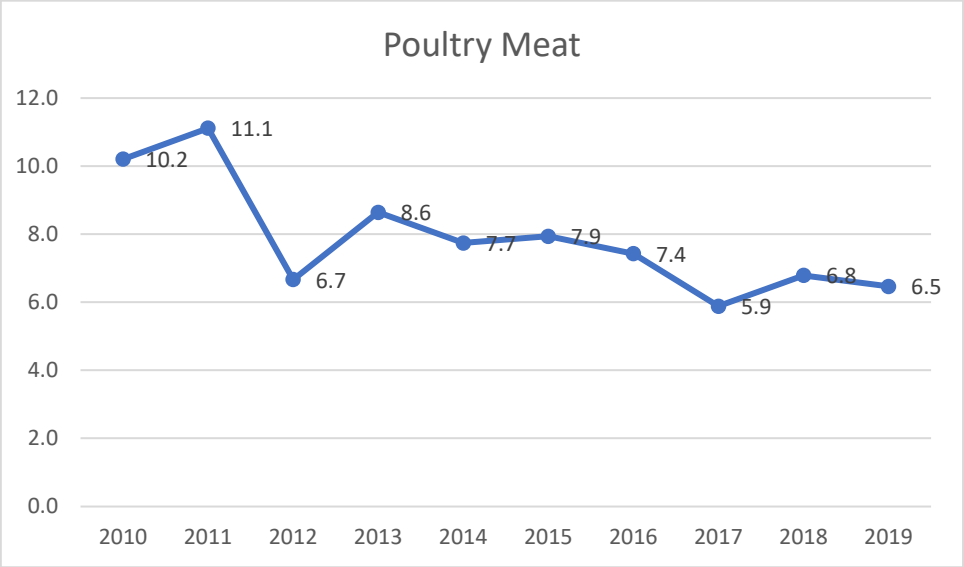
Since then, there was a small trend increase in 2021, and prices jumped in December 2021 (10% over the previous month) and then continued the slow upwards trend from that higher base.

All in all, accumulated inflation for red beans since January 2019 until May 2022 has been 38%, almost double the accumulated inflation during the same period. The timing of the increase preceded the RUC but combined with the inflation-adjusted higher prices for corn indicates that the traditional diet of these two products, so important in Honduras' food consumption, has become more expensive.

6.3. Poultry meat and eggs

Next chart shows imports of poultry as percentage of domestic consumption.

Chart 25. Poultry Imports as % of Domestic Consumption



Source: authors with data from FAOSTAT

[10] The world's largest producers and exporters of dry beans are the USA (North Dakota, Michigan, and Idaho), China, Argentina, Brazil, and Ethiopia. Inventories were running low due to strong sales in early 2020, while the next harvest in the US and China started later in October 2020; and in Argentina and Brazil with the harvesting season being only in April 2021, both countries were hit by droughts affecting supplies. The prices estimated from inquiries with traders in 2020 were a) Ethiopia red and black US$ 975 / TM; b). Michigan Polished Red US$ 1190 / MT; and c) Argentina Red $ 950-1000.00 / TM.

Most of the national consumption of poultry meat and basically all of eggs (for the latter FAOSTAT shows an average of less than 1% for the period 2010-2019) are supplied by domestic producers.

Table 10. Poultry meat and eggs value chain

Value Chain Function	Critical value chain characteristics	COVID-19 effect (March 2020-Present)	Climate Change Extreme Events Effect (Eta and Iota from November 2020-May 2021)	Fertilizer Crisis Effect (February 2022 to Present)
Input supplies and production	There are about 100 poultry farmers in the region, of which 50 are dedicated to meat production and another 50 to egg production. In both cases, they are largely semi-technical production systems.[11] The broiler value chain is dominated on a national scale by vertically integrated companies, present in all functions of the chain. Production systems are intensive, based on a high-tech level, covering from the production of breeders and the elaboration of concentrated feed, to processing and storage. In some cases, these companies integrate horizontally through supply contracts with independent producers. These companies are Cargill Honduras, CADECA (Pollo Rey) and El Cortijo, and operate out of the Comayagua region (PYMERURAL 2014, DICTA 2020).	The poultry meat and egg chains suffered a 40% market contraction in April and May of 2020. Recovery was slow, but up to 2019 levels in December. No growth forecast has been found for 2021 as the tourism and hospitality sector is still operating under heavy COVID-19 restrictions (SAG, Swiss Contact 2014, DICTA 2020).	The sector did not report negative effects associated to these extreme weather conditions.	There is no evidence that fertilizer prices have affected the poultry meat and eggs sector.
	The egg chain is fragmented, with a low level of vertical integration. However, horizontal integration is observed in the formation of a mega distributor made up of the twenty largest egg producers in the country. There are regional organizations, but there are several at the national level. These are the Federation of Poultry Farmers of Honduras (FEDAVIH), the National Association of Poultry Farmers of Honduras (ANAVIH) and the Association of Poultry Producers of Honduras (PROAVIH).			
Commercialization	Vertically integrated companies supply chicken meat to supermarkets, restaurants and hotels visited by urban consumers in the main cities of the region. These are arrangements regulated by explicit contracts.	Honduran poultry farmers reduce sales of poultry products by	According to the Honduras National Federation of Farmers and Livestock Producers (FENAGH 2022), the poultry sector has remain stable in supplying circa 350M pounds of poultry meat	

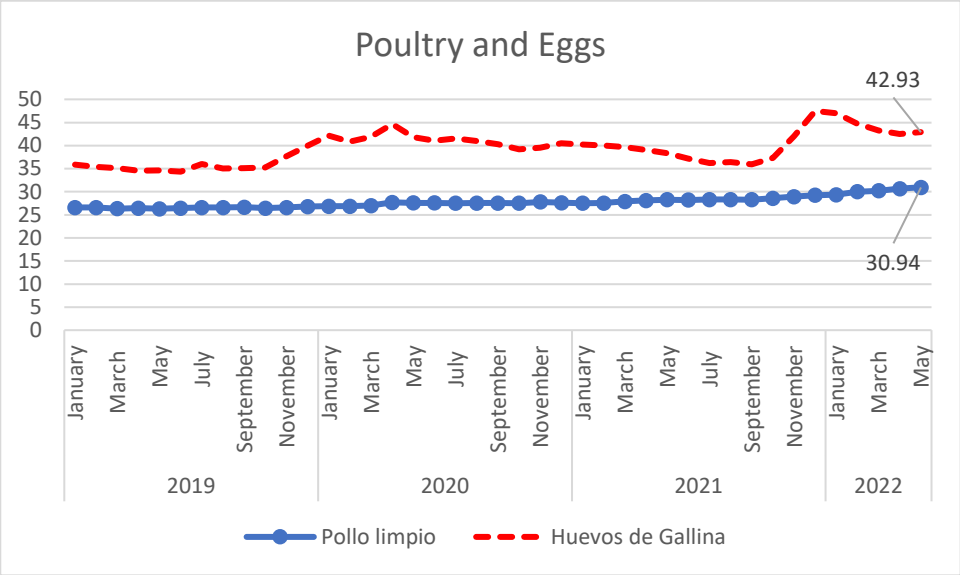
[11] http://www.agronegocioshonduras.org/wp-content/uploads/2015/06/Cadena-Avicola-Comayagua.pdf

	The table egg is sold individually, in cartons of 12, 18 and 30 eggs. The mega-distributor and some independent producers supply —through agreements regulated by contracts— to supermarket chains, restaurants, and hotels. Meanwhile, the region's producers distribute it independently in the local market, mainly in municipal markets, grocery stores and delivering directly to bakeries.	40% due to coronavirus (AviNews 2020)[12]	and 73M eggs annually registering a 2.7% annual growth in 2021.

Source: Authors

Chart 26 shows the evolution of the price of poultry (per pound) and eggs (dozen).

Chart 26. Price of Poultry and Eggs



Source: authors with data from the Banco Central de Honduras

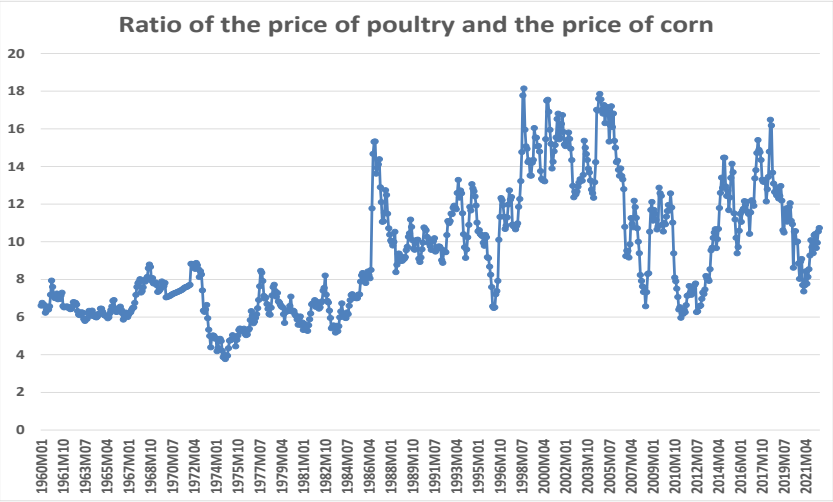
Poultry represents 3.6% of the consumption of calories and 11.6% of proteins, while eggs account for 0.6% of calories and 1.9% of proteins. The eggs at the consumer level jumped at the beginning of the pandemic, then declined slowly until the third quarter of 2021, but increased again at the end of 2021 and early 2022, trending down until May 2022. In this month the price of eggs was 19.6% above the levels of January 2019, which was about the same as the accumulated inflation (19.9%) during that period (i.e., although, with fluctuations, eggs cost now about the same as at the beginning of 2019 in inflation-adjusted prices). The price of poultry was more stable, with a small upward trend: by May 2022 the

[12] https://www.anavih.com/noticias/boletin-informativo-6ta-edicion-agosto-2020/ and https://avicultura.info/honduras-reduce-ventas-productos-avicolas-40-coronavirus/

price was 16.9% above the level of January 2019, indicating that in inflation-adjusted terms that product has become less expensive.

Another consideration is related to production costs: next Chart 25 shows a ratio of the price of poultry and the price of corn in world markets, as an indicator of pressure on profits.

Chart 27. Ratio Poultry Price/Corn Price



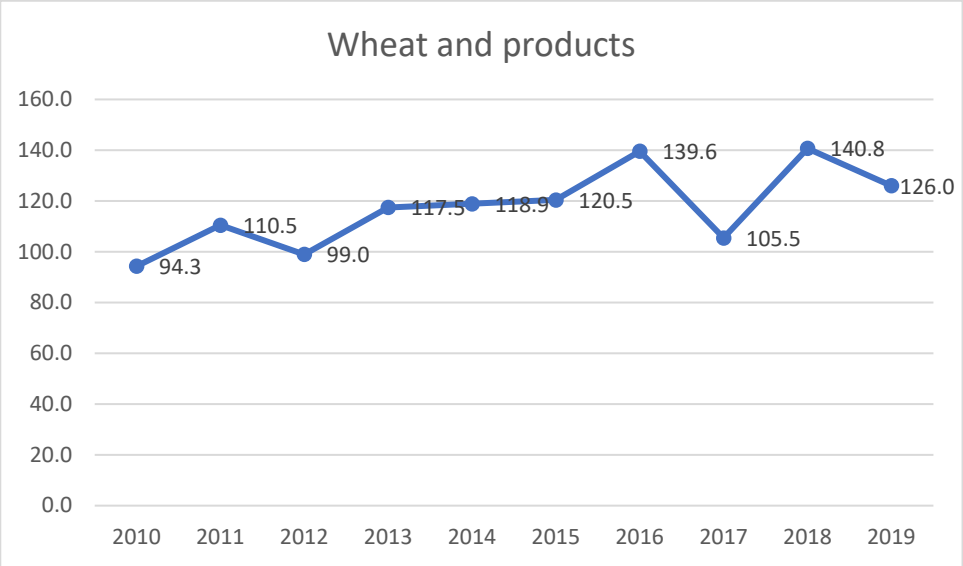
Source: World Bank commodity prices database

As mentioned before, a lower ratio would indicate loss of profit margin (the price of poultry would be lower compared to the price of corn). Currently, the ratio is in middle level values, considering history.

6.4. Wheat

Chart 28 indicates the levels of imports of wheat and wheat products as percentage of domestic consumption.

Chart 28. Imports of Wheat and Wheat Products as % of Domestic Consumption



Source: authors with data from FAOSTAT

Basically, all wheat and wheat products consumed in Honduras are imported. The fact that imports are more than 100% imply that part of the wheat and products is processed and reexported.

Table 11. Wheat

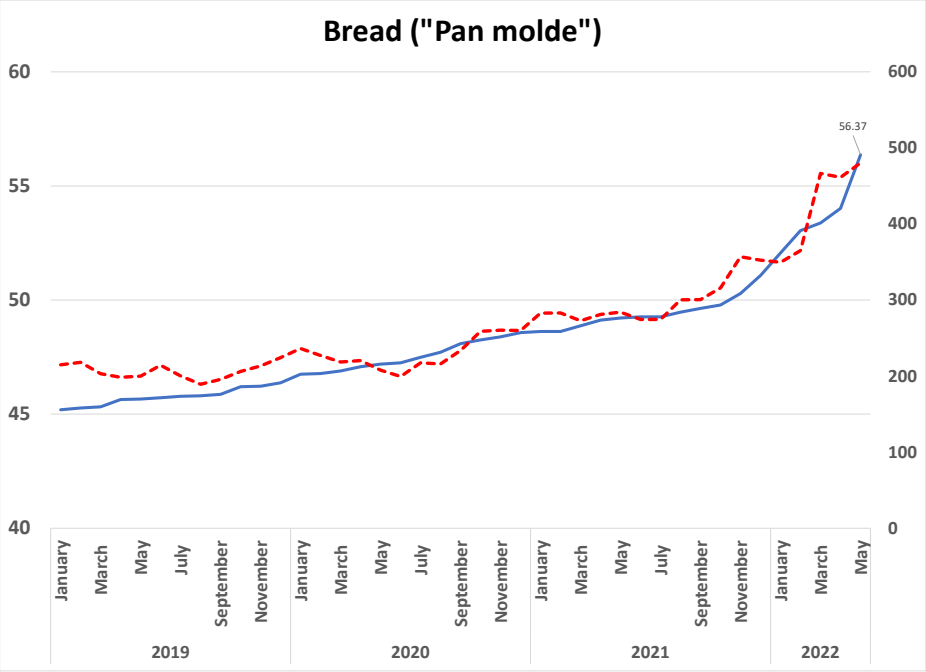
Value Chain Function	Critical value chain characteristics	COVID-19 effect (March 2020-Present)	Climate Change Extreme Events Effect (Eta and Iota from November 2020-May 2021)	Fertilizer Crisis Effect (February 2022 to Present)
Input supplies and production	Honduras a net importer of wheat like Guatemala. Molino Harinero Sula is the leading wheat flour mill, followed by Industrias Molineras SA. These companies are the responsible for 85% of wheat -based products (bread and pasta). Prices (Figure 1) have also affected Honduras	COVID-19 brought about significant changes not experienced before in the bakery sector. Sales stayed stable, but new areas of expenses to deliver bread to consumers. The price of bread was among the first ones to suffer the impact of COVID-19-related price hikes.	No specific change associated to climate.	The combined effect of the crisis on price of wheat has resulted in a 175% increase in wheat prices from May 2020 to June 2022 in world markets. Complementary ingredients such as vegetable oil and sugar also increased in price, further contributing to the increase in the final product.

Commercialization		As in other sectors dealing directly with customers, hygiene is high up the list of customer concerns as a result of coro-navirus. Although this is not a direct problem for wheat importers, it is an added cost for wheat millers and their network of cli-ents being forced to increase prices or reduce bread size.		

Source: Authors

Chart 29 shows the evolution of bread at the consumer level ("pan molde" of 650 grams; solid line) and the evolution during the same period of the world price of wheat (measured as US, SRW and HRW; broken line).

Chart 29. Price of Bread



Source: authors with data from the Banco Central de Honduras and World Bank commodity database ("pink sheet")

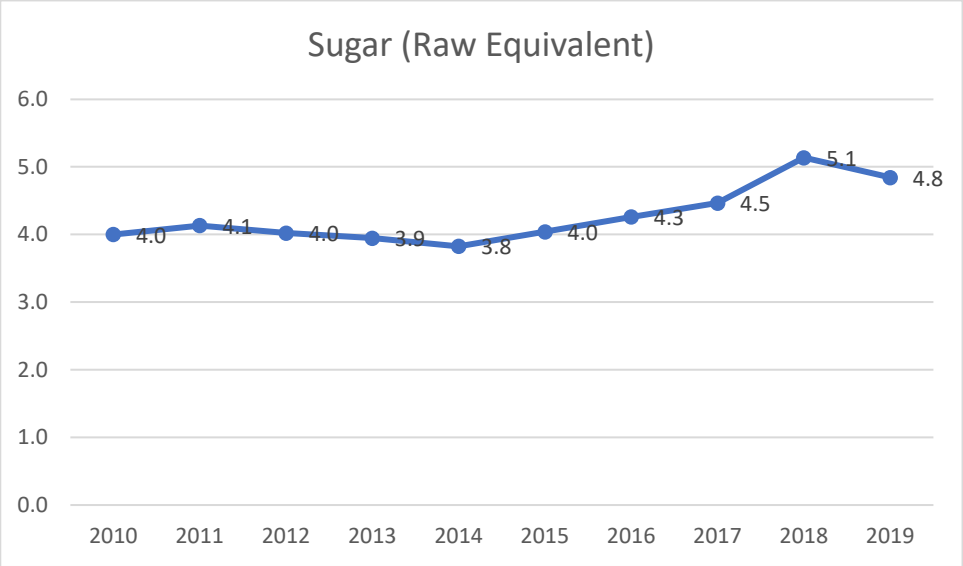
The price of bread has been increasing steadily since January 2019 along with the price of wheat in world markets; it jumped before the RUC and went further up after the invasion. It should be noted that at the time of this writing, wheat prices in global markets had started to decline, which could then be

also reflected in the price of bread in Honduras. In any case, until May 2022 (the last data from Honduras as of this writing), that product had increased about 25% over the levels of January 2019, which given that overall accumulated inflation for the same period was 19.9%, it implies that the inflation-adjusted price of bread has increased.

6.5. Sugar

Chart 30 shows the percentage of imports of sugar and products (in raw equivalent) with respect to domestic consumption.

Chart 30. Imports of Sugar and Products as % of Domestic Consumption



Source: authors with data from FAOSTAT

Sugar consumption in Honduras is mostly from domestic production.

Table 12. Sugar

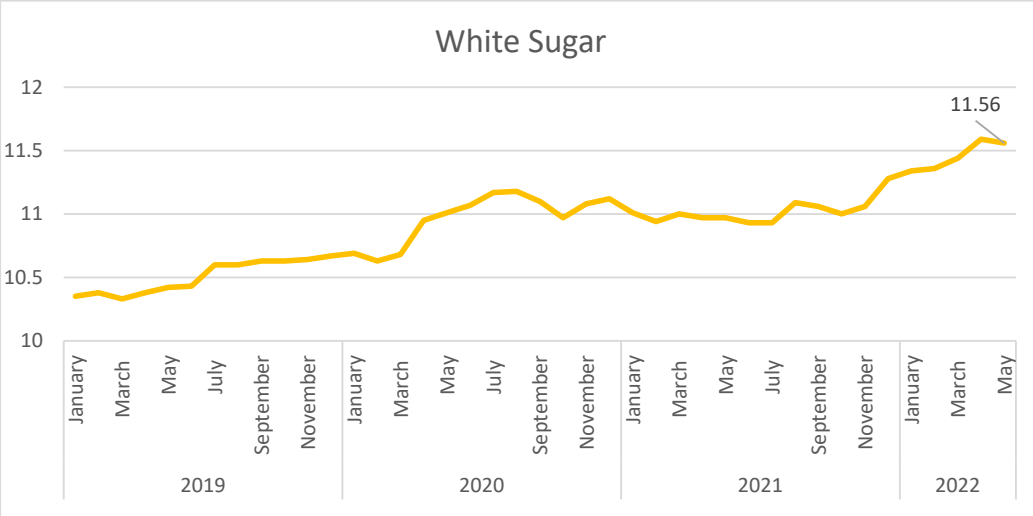
Value Chain Function	Critical value chain characteristics	COVID-19 effect (March 2020-Present)	Climate Change Extreme Events Effect (Eta and Iota from November 2020-May 2021)	Fertilizer Crisis Effect (February 2022 to Present)
Generalities of the value chain	Data on Honduras sugar sector	Labor transportation and social distancing affected the sector in the first months of the pandemic. The	There are limited reports on the impact of climate change on sugar production.	Processing information on the impact of the fertilizers and the energy costs crises for the sector. Although the processing of sugar is fed by electricity generated with burning of crop debris, sugar transportation

				and packaging still depends on imported commodities and petrol.

Source: Authors

Chart 31 shows the price of white sugar for consumption (Lempiras per pound).

Chart 31. Price of White Sugar

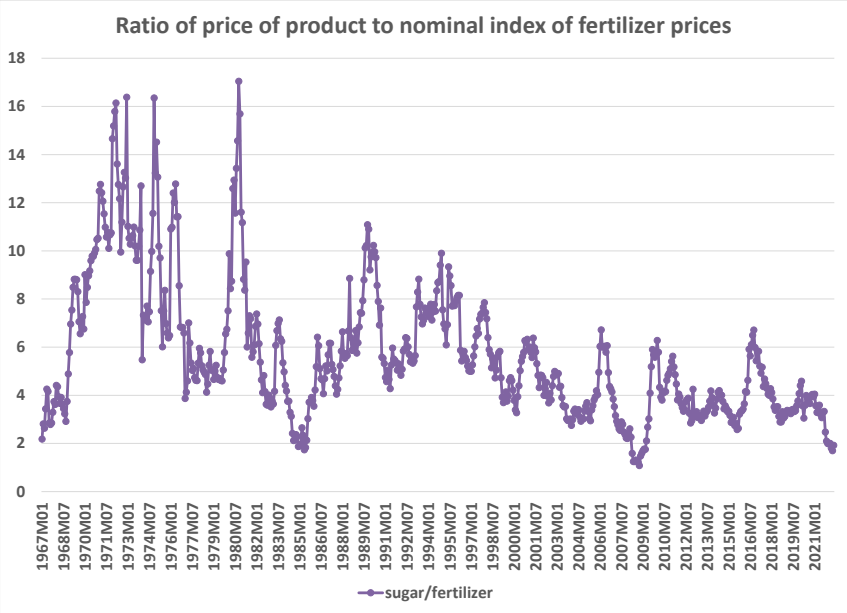


Source: authors with data from the Banco Central de Honduras

The price of white sugar increased during the pandemic, and then remained on a somewhat higher plateau until it started to jump again at the end of 2021 before the RUC, and further increased after that event. Overall, in May 2022, the price of white sugar is almost 12% higher than in January 2019; given that overall inflation for the period, as noted, has been 19.9% the inflation-adjusted price of the product has declined.

On the production side another consideration since the Ukrainian invasion is the relations between the price of the product and the price of fertilizers. Chart 32 shows the ratio using the index of nominal prices of fertilizers calculated by the World Bank.

Chart 32. Ratio of Sugar Price/Fertilizers Prices



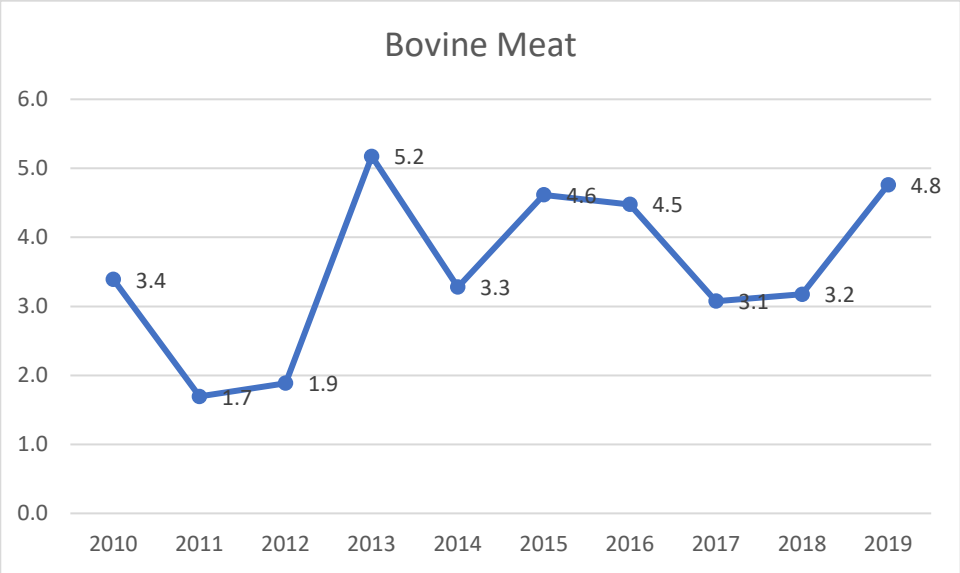
Source: authors with data from World Bank "pink sheets"

The ratio is close to the worse values for sugar during the period considered. This may have negative implications for its production going forward.

6.6 Bovine meat

Chart 33 shows imports of bovine meat as percentage of domestic consumption.

Chart 33. Imports of Bovine Meat as % of Domestic Consumption



Source: authors with data from FAOSTAT

Consumption of bovine meat in Honduras is basically supplied domestically.

Table 13. Bovine Meat

Value Chain Function	Critical value chain characteristics	COVID-19 effect (March 2020-Present)	Climate Change Extreme Events Effect (Eta and Iota from November 2020-May 2021)	Fertilizer Crisis Effect (February 2022 to Present)
Input supplies and production	The bovine inventory of Honduras was close to 840,000 animals (average 2015-2020), counting meat, milk, and double purpose (FAOSTAT). The Honduras National Livestock Federation (FENAGH)[13] has not carried out a more recent inventory but estimates that FAOSTAT statistics are significantly underreported. The latest estimations (for 2021) point out an animal population of 1.3M heads of cattle. The sector's heyday in the 1970s and 1980s reported populations of 2.5M heads of cattle, but those levels are more difficult to maintain due to land availability, pastureland affected by droughts, and lack of government policies to facilitate credit and industry expansion.	Beef production in 2020 was less than 2% below the average for the previous 5 years, but it may have been more related to the hurricanes (see next column)	The northern part of the country was the most affected by Eta and Iota, wiping out large extensions of banana, plantain, and palm oil plantations. The effect on the livestock sector was also significant as it left wet and muddy areas without working roads and bridges to access the farms. Despite the impact of the storms, beef cattle production and sales increased 15% in 2020 compared to 2019 (FENAGH 2022).	Not known for its heavy dependence on synthetic fertilizers, the livestock industry in Honduras has been affected by the increased fertilizer prices linked to RUC. Pasture managers rely on circa 200kg/ha of synthetic fertilizers, particularly formulas like diammonium phosphate and urea, both costing nearly 200% since March 2022 (compared to 2021 prices from March-August). The advantage for the livestock sector with respect to crop production is the planting of red clover and other leguminous crops that can help with nitrogen fixation in the soil. According to FENAGH, livestock owners are on average more cash endowed than crop producers, so this problem has not been reported as a barrier to growth in the sector. Even so, efforts to make beef cattle more independent from imported fertilizers are under discussion (FENAGH 2022).
Commercialization	The beef production sector in Honduras is represented by breeders, fatteners, packers or industrial processors, municipal and rural slaughterhouses, intermediaries, distributors, wholesalers, and consumers. Besides domestic markets, Honduras's largest beef market is Guatemala. About 10,000 bulls	Forecasts during the early days of COVID-19 indicated lower demand once the hospitality sector instituted health restrictions during lockdowns and curfews. During the first full month of the pandemic (April 2020), meat sales went down 70% with respect to the same	No known factors related to climate change affected the commercialization of beef. The rates of inflation are analyzed below FENAGH reported in 2019[15] that that circa 1500MT of meat (slightly 2.0% of the 60,000MT of meat produced annually in Honduras) is exported to the U.S. There is no evidence this proportion has changed with the economic shocks under study.	

[13] The Honduras National Livestock Federation (FENAGH) hosts different livestock associations in Honduras dedicated to dairy, meat, and double-purpose (dairy and meat) cattle.

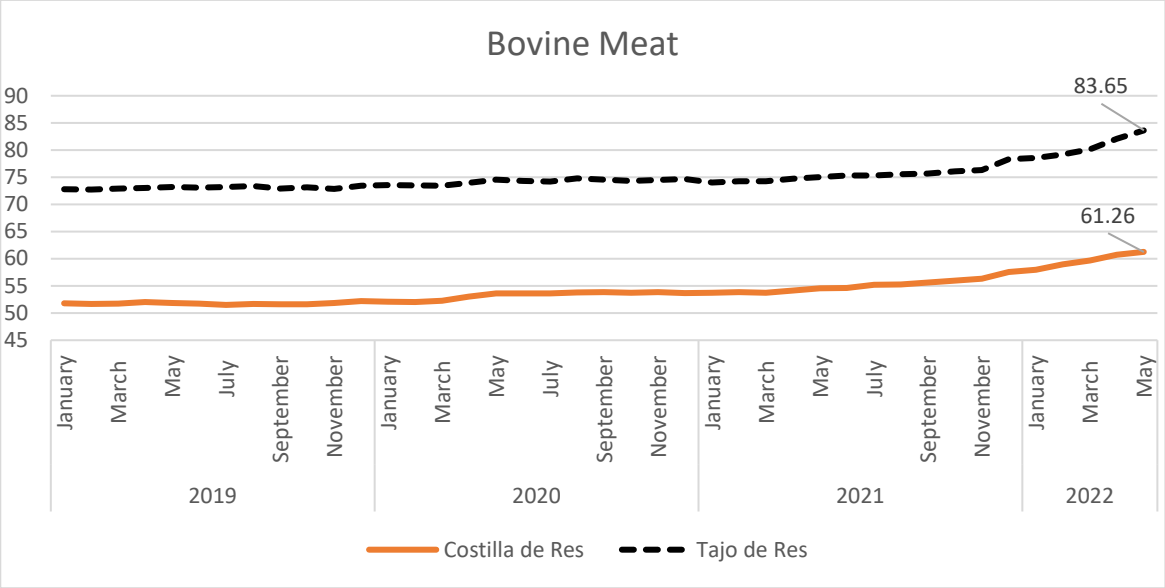
[15] Honduras importa más carne de la que exporta - Diario La Prensa

	cross the border monthly to be fattened and finished. Guatemala consumes most of the beef, but an undetermined amount is sold in Mexico through formal and informal trade. Other markets include El Salvador, Taiwan, Puerto Rico, Cayman Islands and the U.S. to which about 1,200 heads are slaughtered monthly (SARAH/ADUANAS 2022[14]).	month in 2019. By May 2020, however, demand recovered in rural and urban centers.	

Source: Authors

Next Chart 34 shows the price of two cuts of meat ("Costilla de Res" and "Tajo de Res" in Lempiras per pound) at the consumer level.

Chart 34. Price of Bovine Meat



Source: authors with data from Banco Central de Honduras

The prices of both cuts increased very little during the pandemic (May 2020 compared to May 2019, the increases in both cuts were between 2-3%), and remained relatively stable afterward, only beginning to accelerate somewhat by the end of 2021 and after the RUC. Still, the nominal price of "Costilla de Res" in May 2022 was only 18.3% above the price of January 2019; and in the case of "Tajo de Res," the increase was 15%. The nominal increase has been lower than the accumulated inflation (19.9%) for the same period, and therefore the price of meat has declined in inflation-adjusted terms.

[14] Sistema Automatizado de Rentas Aduaneras de Honduras (SARAH)/Administración Aduanera de Honduras (ADUANAS) y Factura y Declaración Única Centroamericana (FYDUCA)/Servicio de Administración de Rentas (SAR).

6.7. Some reflections about the operation of the selected value chains during the first year of the pandemic (2020)

The conditions under which the value chains in this assessment operated during the first two years of the pandemic can be divided in several periods. From April to June 2020, reports on disruptions in production costs and supply flows were limited as many industries were still grappling with what the pandemic restrictions meant to their business.

From July to September 2020, data started emerging on the struggles faced by producers, processors, and retailers as the first assessments were written and published by the local newspapers. The subsequent period (the six months from the last quarter of 2020 and early second quarter of 2021) continued to show stress in the tourism and hospitality industries, international travel and foodservice, but food demand in general recovered since then.

For the value chain actors in the staple products considered here, the biggest initial impact from COVID-19 was not a shortage of inputs, but a significantly decreased demand. Organized farmers and processors kept up with financing, input markets and logistics affected by the pandemic mostly on their own. The good news came at the end of the first three months of the pandemic when demand started picking up. This was certainly the case for poultry meat and eggs which, despite the loss of demand in the tourism and hospitality sectors, showed signs of recovery in the second half of 2020. This was less the case for maize and beans which then had only planted the first production cycle (“Ciclo de Primera” in agricultural year terms; it was also considered at that time that droughts in July and August have had a history of affecting yields and overall production).

While there were losses of jobs in different sectors, food production and consumption appeared to have been the least affected. Government policies that translated into actual programs offered positive support for the industry (including freezing payments on production and housing loans for three months and increases in lending).

Cash transfers to the poor were felt across the different food value chains, although the specific quantitative impact on supporting demand has been difficult to estimate. Demand did grow by the end of June 2020 leading to poultry producers (chicken and eggs) getting back to their original production plans before the pandemic.

Government focus on food security was favorable for all four food value chains

As discussed before, the Government of Honduras decided to strengthen food security safety nets through a variety of mechanisms. Because the COVID-19 pandemic started weeks before the planting of Ciclo de Primera of the agricultural year, the Ministry of Agriculture put together a campaign to promote food production (mainly maize and beans) at the onset of the rainy season in 2020.

A focus on boosting food security by planting more basic grains was the most accessible tool for the GoH to fend off potential food scarcity. The chicken meat and eggs value chains also acted closely with the Government alerting each other about the potential impact of limiting the mobilization of laborers on the capacity to produce food. As a result, Honduras imposed social distancing restrictions but declared all food handling personnel “essential workers” and therefore able to travel to their work locations. Therefore, the food value chains did not stop working.

Key informants interviewed from Honduras expressed that these changes in schedules, distancing and mask-wearing practices increased food handling costs by having to purchase large tents to accommodate sorting tables. Increased costs led to some anxiety, but rising prices for basic commodities ultimately sustained production. In addition, government measures in Honduras for the purchasing price per hundred-weight sac (or 45.4kg bags) of dry beans by the National Agricultural Marketing Institute (IHMA) went from L 1000 to L 1250. Not only was the price raised, but also the budget allocated to purchase bean reserves was increased. Originally, the plan was to purchase 1818MT, but was more than doubled to purchase 4535MT. This policy propelled planting in the first production cycle of 2020 from May to August and the goal was met (interview with Julio Guerrero, Red PASH, Honduras). As shown in Chart 22, after the increases in the first part of 2020, the prices of beans declined in the second half of 2020 and remained reasonably stable during most of 2021.

The impact on maize and bean production was not as big as expected

While some of the target value chains suffered significant adjustments on production due to expected lower demand and increased production costs, the most serious effects only lasted for a few weeks. A significant, positive factor was a benign rainy season that allowed for above-average harvests of maize and beans during the first production season from May to August. The second production season was also important, and, except for Honduras's storm-affected areas (DALA Honduras 2021), the country was able to plant a second season in 2020.

Poultry chicken and eggs have gained market share during the pandemic

During 2020, the poultry sector reacted first by cutting back production in response to a drop in consumption. At the same time, poultry operators rushed to secure several months' worth of feed supplies (soy and yellow corn) before bigger players induced a price hike with increased purchasing.

The reduction in production, however, only lasted three weeks (at the end of April) because urban and rural markets were buying chicken and eggs at higher-than-expected rates. By early May 2020, slight increases in demand compared to 2019 were registered, which were explained by consumer preference for lower-cost chicken and eggs as opposed to beef and pork. Orders to halt the purchase of fertile eggs were reversed and feed and other supply purchases were placed more aggressively to prepare for the upcoming months. By then, China and the big poultry players of the world were buying soy, micronutrients, yellow maize, vaccines, and other inputs leading to rising input prices.

Differentiated impacts on poultry growers, but overall resilience

Contacted key informants in medium or large companies in 2020 talked about percentage increases in costs, market shifts, the cost of inputs, etc., but small players in rural areas have not felt the effects on COVID-19 at the same rate. In rural areas, markets continued buying more while municipalities also became new players on the purchasing side. This helped to keep demand balanced during the pandemic helping food value chains become more resilient and showing early signs of slow, but steady recovery.

Despite these positive developments on the production side, the compounded effect of the pandemic on health and jobs, has been more worrying on the consumption side (as discussed elsewhere in this report).

6.8. Further considerations about the operation of the selected value chains in 2021 and early 2022.

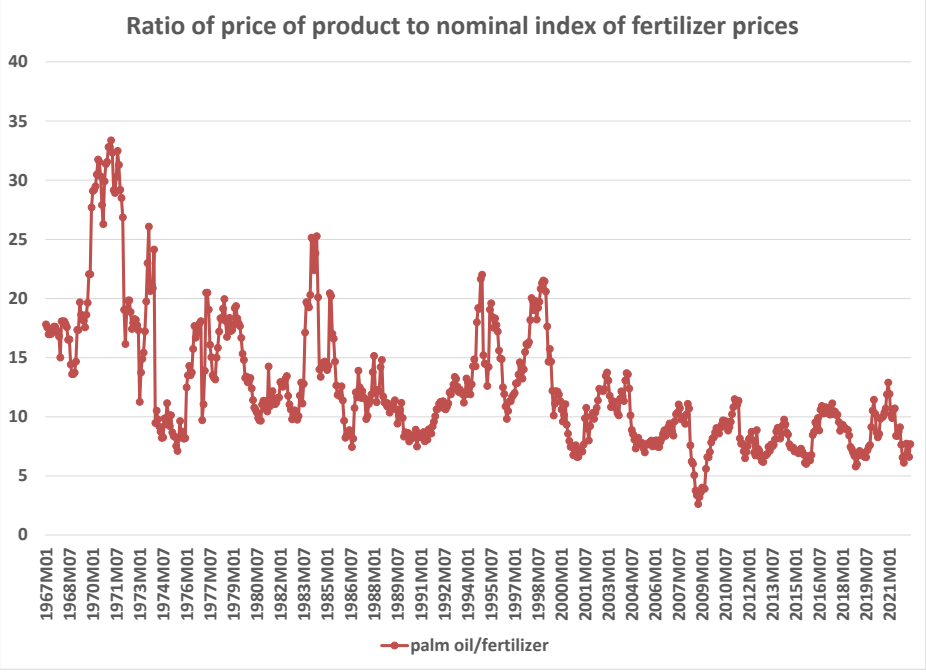
In 2021, all value chains started to normalize their supply operations, recovering not only from the pandemic but also from the impact of the hurricanes. The elimination of movement restrictions, the domestic stimulus package, and the rebound of the global economy (4.8% growth, the highest since 1960), driven by expansionary monetary and fiscal measures in developed countries especially the United States, benefited Honduras: the economy grew at a substantial 12.5% last year, and it is projected to continue growing in 2022 (about 3.8%; see Table 2).

The main problem that started to emerge even before the Ukrainian invasion was an acceleration of global inflation, a product of the still lingering effects of the pandemic on the supply side due to strained logistic systems and workers reluctant to return to work, and the acceleration of demand because of the enormous fiscal and monetary stimulus in developed countries (especially, as noted the United States).

With the war, there was a jump in the prices of fertilizers, already discussed. Here we present the ratio of the prices of three important products for Honduras (coffee, banana, and palm oil) with respect to the cost of fertilizers. They are not as relevant from the point of view of the consumption of calories and proteins as the products discussed before, but they are important for production and exports. All those products experienced price increases in world markets as well. Therefore, it is useful to consider the ratio of their prices against the fertilizers.

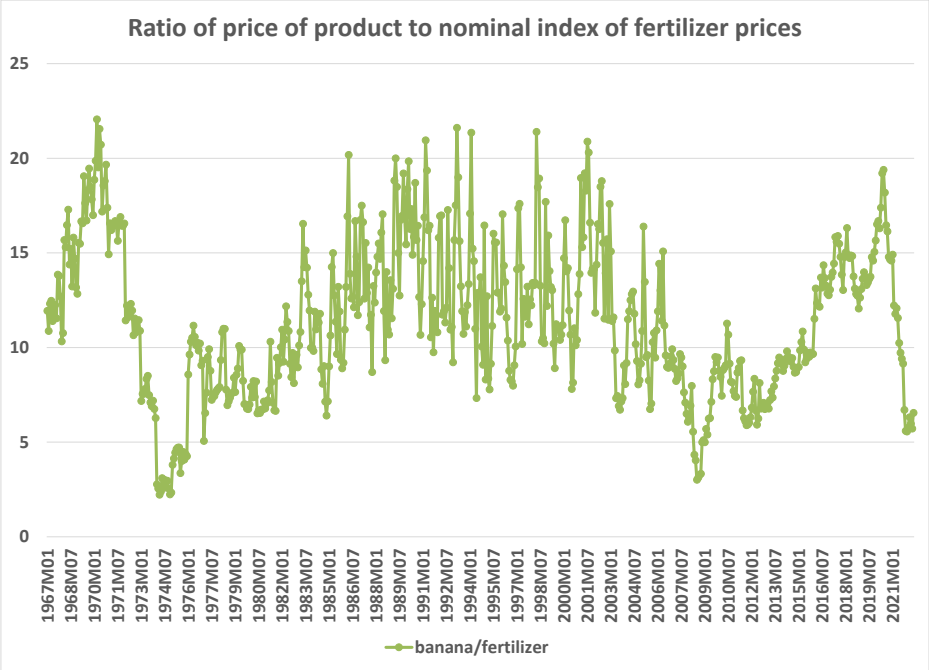
The next Charts 35, 36, and 37 show those ratios. As before, a lower ratio indicates some decline in profit margins, at least in relation to the price of fertilizers (other components may move in different directions).

Chart 35. Ratio Palm Oil Price/ Fertilizer Price



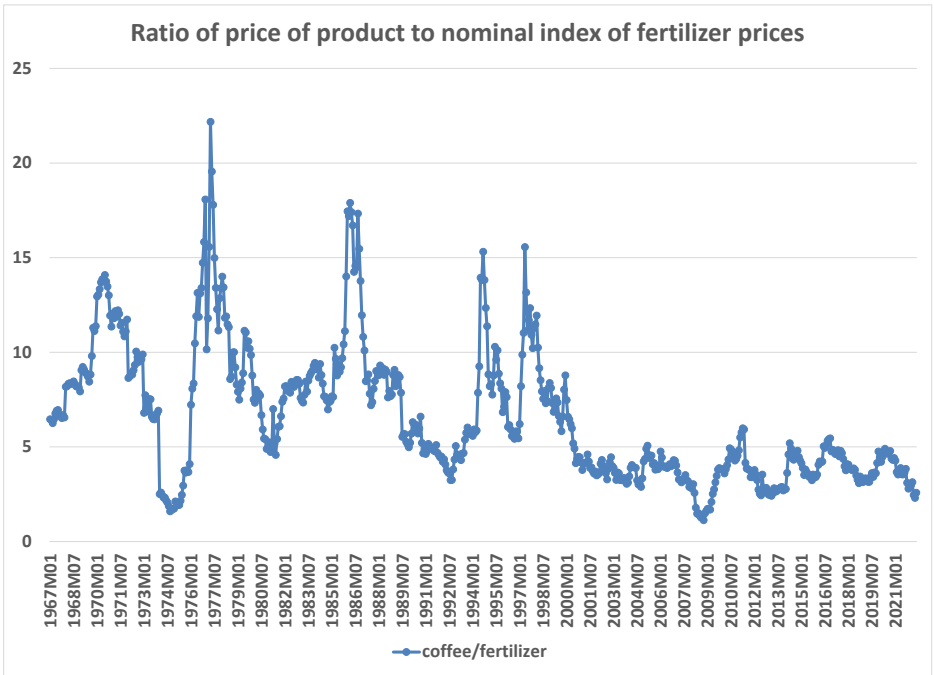
Source: authors with data from World Bank “pink sheets”

Chart 36. Ratio Banana Price/Fertilizer Price



Source: authors with data from World Bank "pink sheets"

Chart 37. Coffee Price/Fertilizers' Price



Source: authors with data from World Bank "pink sheets"

In all three cases, although the ratios are not the lowest in the period shown in the Charts (since 1967 until May 2022), they are getting closer to those values, indicating cost pressures from fertilizers prices.

Therefore, it is important to monitor the evolution of the prices and availability of fertilizers and ensure an adequate supply of those products (more on this in section 7 on Policy Considerations).

6.9. Final comments

Some of the main aspects to notice from the evolution of the value chains during the pandemic and also considering the impact of Eta and Iota, and some preliminary effects of the RUC can be summarized as follows. First, there was an initial impact of the pandemic on the production of several food value chains. However, the measures taken by the government declaring food production and commercialization as essential activities (and therefore exempted from strict mobility restrictions), plus additional support on the production and consumption side, led to the stabilization of production in the second half of 2020. In that year the impact on production was mostly related to Eta and Iota in November 2020. But afterward, production was recovering until late 2021 and early 2022. Then, prices of commodities started to increase even before the RUC, which led to further price increases, including fertilizers. Those increases, though, seemed to be abating by the time of this writing.

Second, the productive sector also suffers from long-standing problems on the supply side that precede the pandemic, which need to be addressed. A traditional one relates to access to credit programs. Interviewees complained that loan programs did not get to the neediest. They also argued that new credit programs for agriculture did not address the underlying challenges and they should be more creative to reach more producers with financing.

Inequality among men and women, land conflicts, different market failures, and low literacy levels are indeed disadvantages widely documented in Honduras, and these are more generalized in the resource-poor, spatially distributed, small-holder maize and bean growers (CESPAD 2020). Maize and bean seed and input distributors expressed that the GoH could do more in facilitating credit. The “bono productivo” has provided seed and fertilizers since 2006 (DICTA interview 2020), but there are more needs than that in terms of access to technology and market organization.

If the experience of the pandemic could leave a positive legacy in the agriculture sector in Honduras, it would be a more aggressive look at agricultural credit for production in the hands of SMEs. Agriculture credit is of course affected by transaction costs in rural populations, production, and market price risks, shifting levels of demand, and so on. Still food markets need financing. The missing link is a more adequate and effective policy to introduce insurance policies as adequate instruments to deal with risk.

Third, the impacts of the pandemic appear to have been more on consumption than production: a drop in household incomes led families to prioritize the purchase of basic foods at the expense of better-quality diets. Although government programs helped, still, a report by the World Bank (2021b) estimated that the

mitigation measures in Honduras only covered about 30% of the population, with the value of the transfers representing about 8% of the income pre-Covid.[19] This placed Honduras the fifth to last in terms of population coverage and also lower than the LAC average for transfers as a percentage of pre-pandemic income (17.6% for all 16 countries with data, and 14.5% if Brazil is excluded[16]). There were also other laws and regulations easing the delivery of food vouchers and negotiating average prices for the basic basket of foods with the leading, organized food industry. Yet, the damage to human capital due to the decline in the quality of nutrition is a problem that will need continuous attention.

The next section presents some policy suggestions related to the problems outlined so far.

7. POLICY CONSIDERATIONS

In this section, we analyze possible policies and investments needed to complete the transition from the pandemic and address, on one hand, the shocks coming from RUC while, on the other hand, improving welfare conditions in Honduras, in the middle to longer term, especially for the poor and vulnerable.

7.1 Health Issues

As noted in the first report (Diaz-Bonilla, Piñeiro, and Laborde, 2021), the simulations by LSHTM (see Annex 2 in that report for references) estimated a larger number of deaths absent health mitigation measures than what seems to have occurred in Honduras with the mitigation measures applied. Therefore, a preliminary conclusion in Diaz-Bonilla, Piñeiro, and Laborde, 2021 was that the health measures implemented would have had the beneficial result of reducing the death toll (from some estimated 22,000 deaths without mitigation measures for the period considered, to about 2500 recorded deaths at the time the report was written). Notwithstanding, it was also noted that the difference could have been not only because of the mitigation measures applied but due to a) the original model overestimated the number of deaths in the unmitigated case, or b) the number of true deaths has been higher than officially recorded.

The analysis in previous sections showed that, although starting slow, by May 2022 Honduras had increased the percentage of vaccinations with two doses to 54% of the population, which, although still somewhat lower than the average for LAC was slightly above the average for lower-middle income countries at the global level (Honduras' category). Also, although COVID-related additional expendi-

[16] This country implemented a very generous program of mitigation measures that covered 53% of the population with transfers that represented 64% of the pre-Covid19 income.

tures (health and non-health) in the country were below the average and median for developing countries and LAC, the health component was above LAC expenditures, and above the median for developing countries.

Perhaps reflecting the health expenditures and improvements in vaccination, the indicator of accumulated deaths as a proportion of the population places Honduras in one of the lowest levels in LAC, and below the average for the region and high-income countries, but above the average for upper and lower- middle-income countries (a global comparator for the country). The latest data (late May 2022) on daily deaths as proportion of the population also shows Honduras with lower ratios compared to South America, the world, and lower-middle-income countries. It should have helped that obesity, one of the risk factors for COVID-19, is lower in Honduras compared to the average in LAC (particularly among men) and that the country has more rural population as well.[17]

Going forward, Honduras should complete the vaccination campaign. As an additional component it would seem necessary to strengthen testing and contact tracing, and isolation of identified cases, to slow the evolution of the pandemic while updating the treatment protocols. This work should be part of the general strengthening of the health system: currently, Honduras spends about 187 US dollars per capita (current dollars of 2019; World Bank, WDI database), which is below the average of expenditures for developing countries (269 US dollars per capita), and far less than the average for LAC (662 US dollars/person) (although as a percentage of the GDP the difference is not that pronounced: about 7.3% for Honduras against 7.9% for LAC countries).

It can be defined as an objective to increase health expenditures to reach the same average percentage of the GDP as LAC. This would represent additional expenditures of 0.6% of the GDP. If a more ambitious objective is defined, such as achieving expenditures per capita similar to the average for developing countries in value, then the additional expenditures would be about 3.2% of the GDP. Of course, the definition of the health program and its costs requires a more detailed analysis.

7.2 Poverty, Nutrition, and Social Protection

a) Background

Table 14 presents some indicators related to poverty and nutrition for Honduras and comparisons for the world as a whole.

[17] The prevalence of obesity among men in Honduras is 16.2% against 21% for LAC; among women is 27.9% against 29.2%, respectively. Rural population as percentage of total population is 41% in Honduras when for LAC is less than 19%. Also, the percentage of population living in urban agglomerations of more than 1 million is 14.8% in Honduras, when for LAC is 38.4%.

Table 14. Poverty and Nutrition Indicators

	Honduras	World average	World median
Gini index	50.5	37.7	36.8
Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population)	15.9	13.0	3.1
Poverty headcount ratio at $3.20 a day (2011 PPP) (% of population)	30.8	25.6	11.4
Poverty headcount ratio at $5.50 a day (2011 PPP) (% of population)	51.6	41.3	33.0
Prevalence of stunting, height for age (modeled estimate, % of children under 5)	21.9	20.6	18.5
Prevalence of wasting, weight for height (% of children under 5)	1.4	5.7	4.7
Prevalence of undernourishment (% of population)	14.0	10.3	7.1
Prevalence of obesity (men)	16.2	17.7	18.3
Prevalence of obesity (women)	27.9	24.9	23.9

Source: Data on prevalence of obesity is from the database of the Global Nutrition Report and correspond to 2016. All other data is an average from 2010 to the latest current data (usually 2020) from the WDI of the World Bank.

Honduras is number 12 in the ranking of inequality measured by the GINI out of 156 countries, being, therefore one of the most unequal countries in the world. It also has higher poverty levels than the global average and median at all the poverty lines, and shows higher levels of undernourishment and children stunting, but not wasting. At the same time, the rates of obesity for women (but not for men) are above the world average and median.

One of the impacts of the pandemic related to lower incomes or no incomes, as argued in the simulations of the first IFPRI report, has been the decline in food purchases in general and some shifting of purchases towards cheaper and less nutritious products (buying starchier and calorie-intensive products and less of those rich in proteins, vitamins, and minerals) (Headey and Ruel. 2020). Those problems may be leading to a simultaneous problem of overweight and lack of basic nutrients, particularly in poor households. Diets need to be monitored at a more granular level and their long-term effects on human health evaluated. The combination of lower quality and quantity of diet, along with limitations in nutritional and health services, problems with water and sanitation, and population density in low-income urban areas, would weaken individual immune systems increasing the vulnerability and chances of dangerous contagion among the poor and vulnerable (Headey and Ruel, 2020).

A possible policy intervention in this regard is the expansion, strengthening, and redesign of social safety nets as discussed immediately.

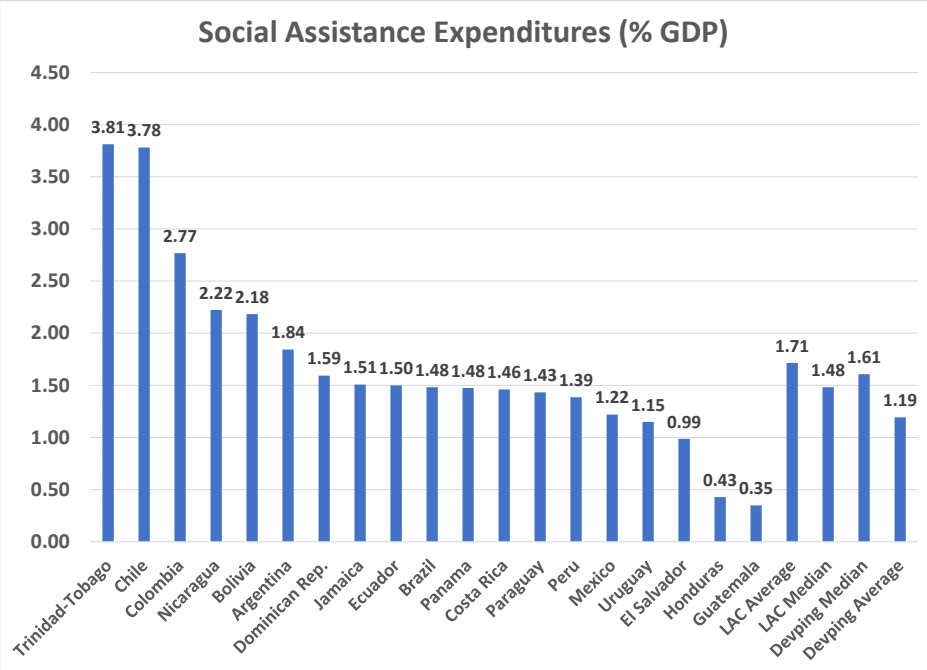
b) Social safety nets before the pandemic[18]

[18] This section draws on Diaz-Bonilla and Centurión, 2022.

This section focuses on social assistance (cash transfers and other non-contributory programs) and not on the contributory programs of social protection (also called social insurance programs).[19] It uses data from household surveys from the database ASPIRE (World Bank). That data may differ from administrative data (i.e. governmental data not from household surveys). Descriptions of the main programs in Honduras are in Annex B showing administrative data, translated directly from ECLAC, 2022).

Before the pandemic, Honduras had the second to last levels of expenditures on social assistance programs in Latin America and the Caribbean (about 0.43% of GDP according to the last data available in 2017), clearly lower than the average and median for LAC and developing countries in the Aspire database (Chart 38).

Chart 38. Social Assistance Expenditures (% GDP)



Source: authors with data from ASPIRE, World Bank

The next Tables and Charts show different indicators to evaluate the performance of those social programs. Tables 15 and 16 compare Honduras with averages and medians for three groups of countries: all the developing countries in the ASPIRE database (125 countries[20]); then for LAC as a whole (22 countries); and then for the Central American subregion (6 countries).

[19] Social protection is a broader concept including contributory and non-contributory programs for the whole society, while social assistance refers basically to non-contributory programs focusing on the poor and vulnerable. See Annex A for a list of the different types of programs.

[20] ASPIRE does not include developed countries.

Table 15 shows the coverage of social assistance programs: the percentage of the population participating in those programs (including direct and indirect beneficiaries). The indicator is reported for the population in poverty (at the PPP$1.9/day/person) and for the poorest 20% (poorest quintile) and richest 20% (richest quintile).21

Table 15. Coverage of Social Assistance Programs

Country	Year	PPP$1.9 a day (poverty line)	Poorest quintile	Richest quintile
Honduras	2017	60.9	59.1	17.0
Developing Countries-Average	2005-2019	51.2	52.4	21.5
LAC-Average	2005-2019	68.1	68.6	21.9
Central America- Average	2005-2019	76.6	74.8	24.6
Developing Countries-Median	2005-2019	56.2	52.8	17.1
LAC- Median	2005-2019	74.9	76.9	18.1
Central America- Median	2005-2019	79.6	77.7	20.1

Source: authors with data from ASPIRE, World Bank

Honduras appears to have less coverage of the poor (on average and as the median) than LAC and Central America but is better than for developing countries. The country seems to have lower coverage of the rich as well.

Table 16 shows the adequacy of the social assistance programs defined as the total transfer amount received by all beneficiaries (direct and indirect) in a quintile (or under the poverty line) as a share of the total welfare (consumption) of beneficiaries in that quintile (or under that poverty line).

[21] The indicator in the case of quintiles is computed as (Number of individuals in the quintile who live in a household where at least one member receives the transfer)/(Number of individuals in that quintile). In the case of poverty, is (Number of individuals under poverty live who live in a household where at least one member receives the transfer)/(Number of individuals under the poverty line).

Table 16. Adequacy of Social Assistance

Country	Year	PPP$1.9 a day (poverty line)	Poorest quintile	Richest quintile
		Post Transfer	Post Transfer	Post Transfer
Honduras	2017	18.0	17.9	2.3
World-Average	2005-2019	30.5	20.1	7.1
LAC-Average	2005-2019	36.9	19.6	4.6
Central America- Average	2005-2019	29.2	18.8	4.5
World-Median	2005-2019	23.7	17.3	4.1
LAC-Median	2005-2019	32.1	17.9	3.3
Central America- Median	2005-2019	25.9	18.2	3.6

Source: authors with data from ASPIRE, World Bank

Honduras also shows low values of adequacy compared to the other groups of countries (but also the actual support for the richest quintile is small).

Table 17 shows the impact of social assistance programs on three key indicators: the reduction in the Gini inequality index due to those programs as a percentage of pre-transfer Gini index;[22] the poverty headcount reduction due to those programs as a percentage of pre-transfer poverty headcount;[23] and the poverty gap reduction due to those programs as a percentage of pre-transfer poverty gap.[24] The poverty gap is the average difference between the income (or consumption) of the poor compared to the poverty line (i.e. how far below those individuals are compared to the poverty line).

[22] (Gini inequality pre-transfer- Gini inequality post transfer) / Gini inequality pre-transfer, transformed in percentages.

[23] (Poverty headcount pre-transfer - poverty headcount post transfer) / poverty headcount pre-transfer, transformed in percentages.

[24] (Poverty gap pre-transfer – poverty gap post transfer) / poverty gap pre-transfer, transformed in percentages.

Table 17. Impacts of social assistance programs on poverty and inequality

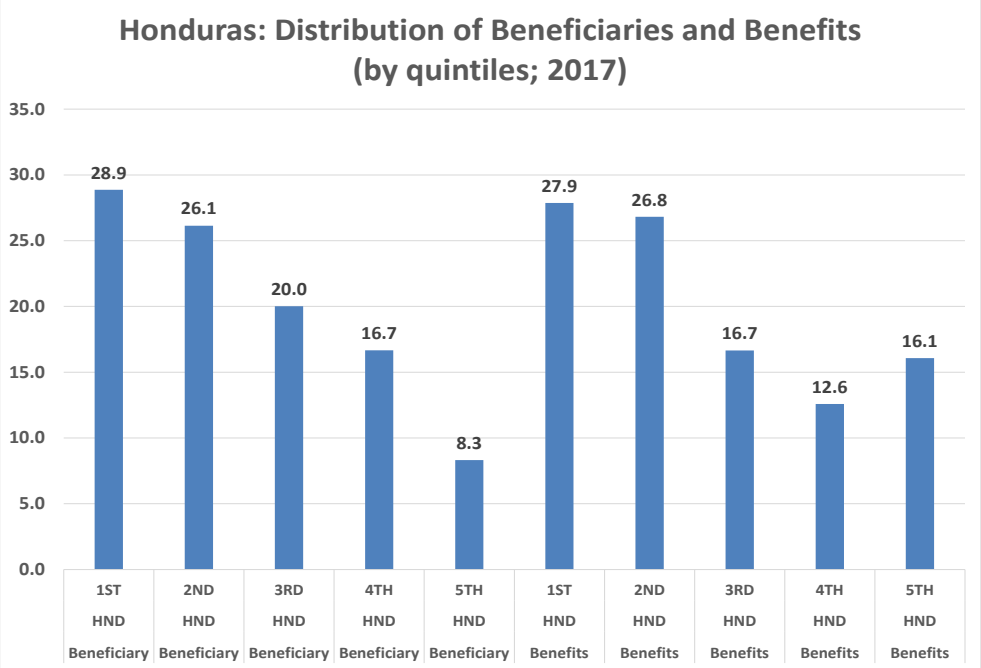
Country	Year	Gini Inequality Index (% reduction)	Poverty Headcount (% reduction)	Poverty Gap (% reduction)
Honduras	2017	1.66	7.67	15.55
World-Average	2005-2019	2.89	9.40	18.43
LAC-Average	2005-2019	1.84	7.71	14.77
Central America- Average	2005-2019	1.36	6.41	12.29
World-Median	2005-2019	1.64	7.15	14.69
LAC- Median	2005-2019	1.66	6.92	13.90
Central America- Median	2005-2019	1.26	5.91	12.74

Source: authors with data from ASPIRE, World Bank

Honduras' social assistance programs appear to have less impacts on reducing inequality, the poverty headcount, and the poverty gap when compared to the world average, and also for inequality and the poverty headcount against LAC and Central America. But the numbers for Honduras are better than the median for the country groups used as benchmarks.

Chart 39 shows the beneficiaries and benefits incidence by quintile to evaluate the precision of the targeting. Beneficiary incidence by quintile refers to how the total number of persons receiving transfers are distributed by quintile. That is the percentage of people in each quintile who have benefitted from a social assistance program, compared to the total population that has received those benefits (they must add to 100% for all quintiles). Benefit incidence refers to how the value of the total transfers is distributed by quintile. That is, of all the amount of money that was distributed by the social assistance programs, what percentage of that value was received by each quintile (which has to add to 100% for all quintiles). The percentages are presented based on the last survey with data on both aspects (beneficiaries and benefits) (in Annex C the same data is presented for the average since 2010).

Chart 39. Honduras: Distribution of Beneficiaries and Benefits of Social Assistance Programs (by quintiles; 2017)



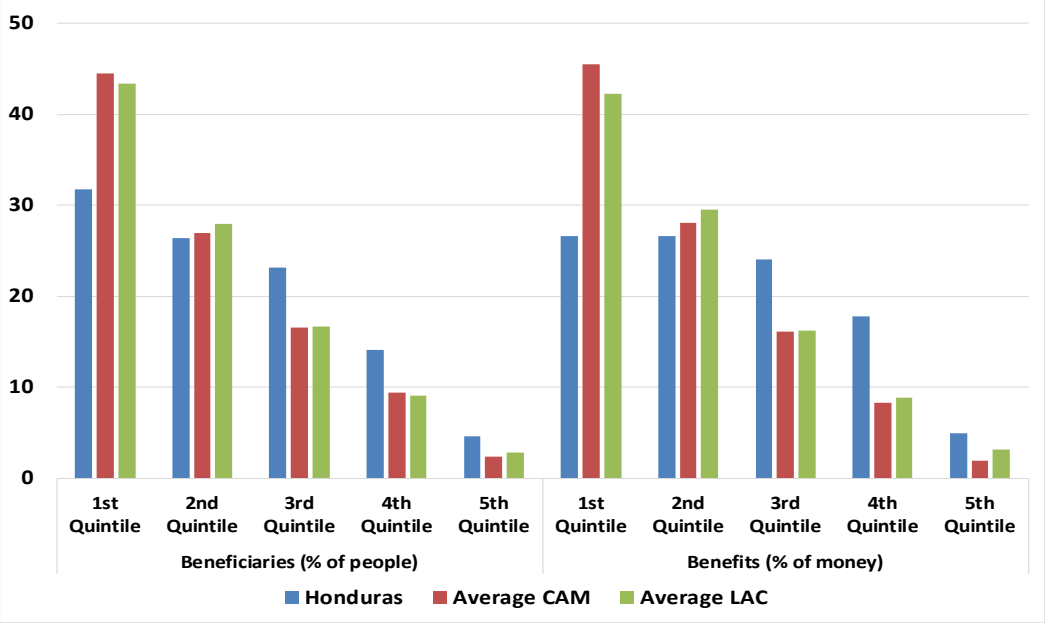
Source: authors with data from ASPIRE, World Bank

The main point to be noticed is that about 25-29% of the beneficiaries and benefits of social assistance programs involve people in the two richest quintiles, indicating problems of targeting (this topic will be discussed further in a later section that considers the financing of scaled-up social assistance programs).

The distribution of beneficiaries and benefits in the case of cash transfers (a subset of the social assistance programs analyzed in Chart 39) were discussed for Honduras in Díaz-Bonilla, Flores, Paz, Piñeiro and Zandstra (2021a) and is reproduced in Chart 40.

The incidence of beneficiaries and benefits in Honduras was compared to the average for Central America and Mexico (CAM) and for Latin America and the Caribbean.

Chart 40. Honduras: Incidence in beneficiaries and benefits in Cash Transfers

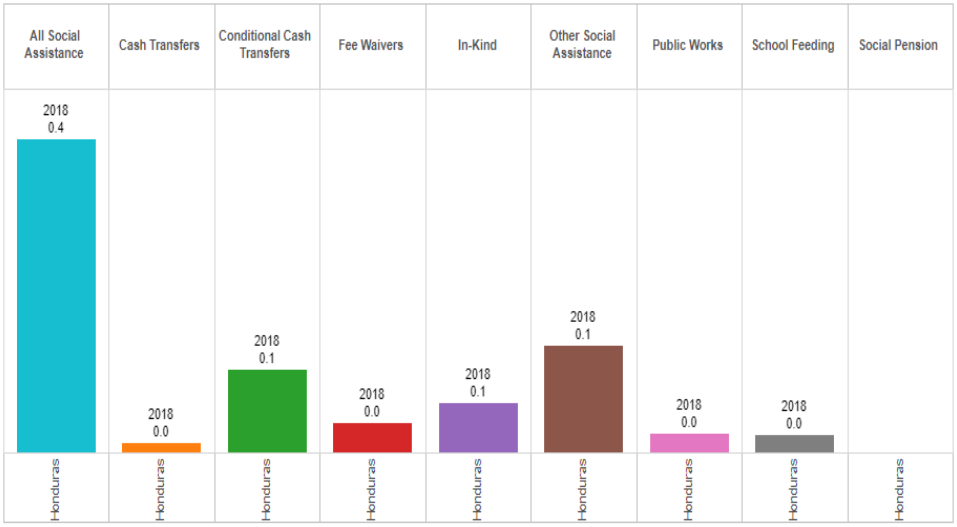


Source: DB et al 2021 with data from ASPIRE

Compared to CAM and LAC, Honduras has fewer beneficiaries in, and a lower value of benefits for, the two poorest quintiles (and especially the poorest), while there are a higher percentage of beneficiaries in rich quintiles, and therefore these groups receive more benefits than the average for the region and the subregion.

Chart 41 shows how social assistance programs are divided across the different categories of programs, using expenditures measured as percentages of the GDP (the values are rounded to one digit).

Chart 41. Public spending on social assistance programs



Source: ASPIRE Database, World Bank

The main programs are conditional cash transfers, a broad category of “other social assistance” and food in-kind.

However, as the country has very low levels of expenditures for social assistance programs in general, each one of the individual programs is at or below 0.1% of the GDP (rounded to the closest one digit). Overall, then, a problem, common in many developing countries, is the low level of expenditures on social assistance programs, which are usually further fragmented into smaller programs (with potentially overlapping beneficiaries).

Table 18 shows another indicator but now for all social protection (which includes social assistance and social insurance) and labor programs: the average transfer to beneficiaries in PPP dollars per capita and day.

Table 18. Honduras: Social Protection and Labor Programs: Average per capita transfer (daily PPP$/person)

Countries/Regions	**Average per capita transfer (daily PPP$/person)**	
	Urban	**Rural**
Honduras (2008-2017)	1.172	0.328
World-Av 2005-2019	2.98	1.83
LAC-Av 2005-2019	2.94	1.17
Central America- Av 2005-2019	2.30	0.86
World-Median 2005-2019	1.78	0.86
LAC-Median 2005-2019	1.78	0.73
Central America- Median 2005-2019	1.73	0.81

Source: Authors with data from ASPIRE

Per capita transfers in Honduras are below the comparator groups. A question is why given the low levels of expenditures and of transfers shown before the impacts on reducing poverty and inequality would not be worse than those shown in Table 17.

Recapitulating the information presented, it appears that in Honduras there are at least two problems with the social protection programs. First, the country is not spending a high percentage of GDP on those programs when compared to other countries (and this appears related to lower levels of support per capita rather than coverage). Second, the distribution of benefits among the different income quin-

tiles suggests that the poorest groups receive relatively fewer transfers than in other comparable countries (and, on the other hand, higher-income sectors receive comparatively more funds). Therefore, it would be possible with the same amount of public funds and better targeting to increase support for the poorest groups. Also, in addition to better targeting, the previous analysis also suggests the need to increase the levels of spending in social assistance.

Beside these two adjustments, a third aspect to consider is the reconceptualization of the operation of social assistance programs (and conditional cash transfers or CCTs, in particular) to address not only the livelihood challenges affecting particularly the poor and vulnerable, but also to focus on aspects such as improvements in nutrition, reduction of migration, and other possible side effects including a reduction in crime. These topics will be analyzed later. Before doing that, it is important to consider other social programs related to humanitarian interventions both pre-COVID19 and during the pandemic.

c) Humanitarian interventions before and during the pandemic

A topic that is getting more attention is the link between social assistance programs (discussed in the previous sections) and humanitarian programs, which differ from social assistance programs on several accounts. First, humanitarian programs are in principle, a temporary response to negative shocks such as natural disasters, wars and violence, and pandemics. Second, they tend to be financed by different types of humanitarian donors (such as international organizations, philanthropic and charitable foundations, and NGOs) through specific funding campaigns. Third, humanitarian assistance programs are implemented by different non-governmental channels, including international humanitarian agencies, international and national charities, and NGOs. In contrast, social assistance programs are responses to more permanent social problems and are financed and executed by governments.

Some of the more recent programs in Honduras have been the following[25]:

*Response to the hurricanes Eta and Iota. The program targeted about 60,000 households affected by the hurricanes, who received a one-time voucher of 5,000 Lempiras (about USD 200) if they were identified as severely affected by the hurricanes by the “Comisión Permanente de Contingencias” (COPECO, Permanent Commission for Contingencies). The humanitarian response was linked to the systems and delivery platforms of existing social assistance programs.

* UNICEF has worked with the GoH on an unconditional cash transfer for returned migrants, with payments of up to about 7,250 Lempiras per household (about USD 300). Targeting and identification were done in conjunction with CENISS (National Center for Social Sector Information), which is collecting

[25] The summary of those programs is based on Chapman et al, 2022.

data on returned migrants. Action Against Hunger was the implementing partner. The target of the GoH and UNICEF was to reach 1,700 households in 2021 and include them within the national system of social assistance.

The pandemic, as mentioned, also led to the administration of temporary cash transfers, leading to a further convergence of social assistance and humanitarian programs. As noted in Chapman et al, 2022 (in a comment referring to many developing countries and not only Honduras), “the COVID-19 pandemic proved an opportunity to pilot the use of the CVA[26] in new ways and drew on the expertise of different actors…. Governments were able to adapt targeting mechanisms, streamline databases, expand vendor systems, and evolve accountability and transparency mechanisms—elements which have enhanced national social protection programming overall” (page 2).

Therefore, from the operational point of view, the sequence of natural disasters in Honduras (and other Central American and developing countries), and lately the pandemic, have led to some convergence between the existing social assistance programs and the humanitarian ones along several dimensions: the types of beneficiaries; the instruments (based on cash transfers or vouchers); and in many cases the channels through which that assistance is being dispensed, with more presence of international organizations such as the World Food Program and a variety of humanitarian organizations and NGOs. There have also been institutional innovations such as the Cash Working Groups (CWGs), as coordinating mechanisms between the many international humanitarian agencies -mainly from the UN system- and NGOs related to cash transfers and related social interventions.

The interaction of permanent social assistance programs and the eventual humanitarian ones may take place along a continuum of options. These can range from stand-alone humanitarian programs separate from national systems of social assistance to fully integrated arrangements, led by, or entirely run through, the more permanent national systems, which then can be scaled up during emergencies (see a discussion in Seyfert, Barca, Gentilini, Luthria, and Abbady, 2019).

A question is what dimensions or topics to consider in the potential alignment of those two types of programs. For instance, Seyfert, Barca, Gentilini, Luthria, and Abbady (2019) consider the following dimensions: 1) Financing; 2) Legal and policy framework; 3) Setting eligibility criteria; 4) Setting transfer type, level, frequency, duration; 5) Governance and coordination; 6) Outreach; 7) Registration; 8) Enrolment; 9) Payments; 10) Case Management; 11) Complaints and appeals; 12) Protection of beneficiaries; 13) Information Management; and 14) Monitoring and Evaluation.

Problems of integration can occur along all or some of those dimensions (Chapman et al, 2022), including different legal and normative frameworks for disaster response and social assistance programs;

[26] CVA refers to cash and voucher assistance.

ministries or agencies working on the latter may not have a mandate for emergency response; there may not be legal norms that would allow governments to officially collaborate with the United Nations, and international and national NGOs in the case of humanitarian emergencies; the governmental institutions dealing with emergencies and those working on social assistance, which are usually different, may not coordinate their work; governments may lack a strong internal coordinating mechanism to centralize decisions and ensure collaboration, both within the government and between public sector institutions and NGOs and other humanitarian and charitable organizations; information about current and potential beneficiaries is fragmented and incomplete; the processes and criteria to identify the population in need of support may be different across institutions of the public sector, and in regards with NGOs and humanitarian organizations; a unified database of the people supported usually does not exist; there may not be budgetary lines that can be scaled up both horizontally (new beneficiaries) or vertically (additional cash, voucher or in-kind support) in case of emergencies; the government may not have monitoring and evaluation systems, or they do not operate together with those of NGOs and humanitarian agencies; operational procedures, and cash or vouchers delivery modes in the public sector may be very different from those utilized by NGOs and humanitarian agencies (Díaz-Bonilla, and Centurión, 2022).

On the positive side, governments can take advantage of the extensive network of UN and NGOs already operating in their territories with humanitarian programs and use them to implement permanent social assistance programs. This has created strong networks of institutions with significant experience and operational capabilities on the ground, which can be leveraged for the programs discussed below (Díaz-Bonilla and Centurión, 2022). Also, the ideal would be the integration of humanitarian programs with social assistance programs run by the government into a more unified system, that considers permanent conditions of social vulnerability but can be quickly scaled up (both in terms of beneficiaries and of the type of support delivered) when negative shocks occur (in what has been called “shock-responsive social assistance”).

d) The redesign of social assistance programs

In addition to the integration of social and humanitarian programs, it may be necessary to consider the reconceptualization of the operation of social assistance programs (including mainly the CCTs).

The debate about such reconceptualization has led to the development of models of social assistance that consider the specific characteristics of peasants, small farmers, informal workers, and vulnerable people in rural areas, while also broadening the focus towards productive and technological approaches that can contribute to improving the economic and environmental sustainability of the families involved (see, for example, de la O Campos et al, 2018; FAO, 2016, 2017 and 2018).

The combination of CCT and programs with support for livelihood activities have been shown to increase household productivity and income, diversify income, and help families to accumulate assets (see the brief review of programs in Peru, Colombia, Ethiopia, Lesotho, Malawi, Brazil, and El Salvador in Andrews et al, 2021). However, to achieve those enhanced results, the programs need to be well designed and effectively coordinated to provide a combination of interventions that address the multiple constraints faced by the vulnerable participants (Andrews et al, 2021)

Those programs can also be combined with public works for the development of community infrastructure (such as irrigation systems, road maintenance, cleaning, and environmental protection activities). Such programs can improve the natural habitat, lower transaction costs, improve market access, and increase incomes for small farmers and non-agricultural SMEs. These initiatives were found to provide additional incomes to households and, when well designed, to reduce migration as well[27] (see Díaz-Bonilla and Centurión for a review of different types of programs). They can also help to provide the youth with initial employment opportunities and reduce violence (also decreasing migration).

Further, the direct and indirect impacts of a combination of large-scale social assistance and livelihoods programs may generate spillover effects in the larger rural economy through general economic multipliers (Andrews at al 2021). Broader territorial development can improve the welfare of the population in the areas benefitted diversifying rural employment opportunities especially for women and young people.

In summary, it seems relevant to consider the analysis and creation of an instrument for the rural areas that can combine the social, productive, and environmental dimensions, with a percentage of cash transfers related to poverty levels. Another percentage can be used to cover the additional cost of implementing sustainable adaptation and mitigation technologies while another for environmental, forest, biodiversity, and ecosystem protection/restoration services. This instrument should also include other forms of productive, organizational, and commercial support for the poor and food producing families.

This would help in a whole series of dimensions for the economic and social development of rural inhabitants with a focus on strengthening assets (human, financial, technological, natural, physical, social, political) in the hands of vulnerable populations, reinforcing the resilience of rural communities.

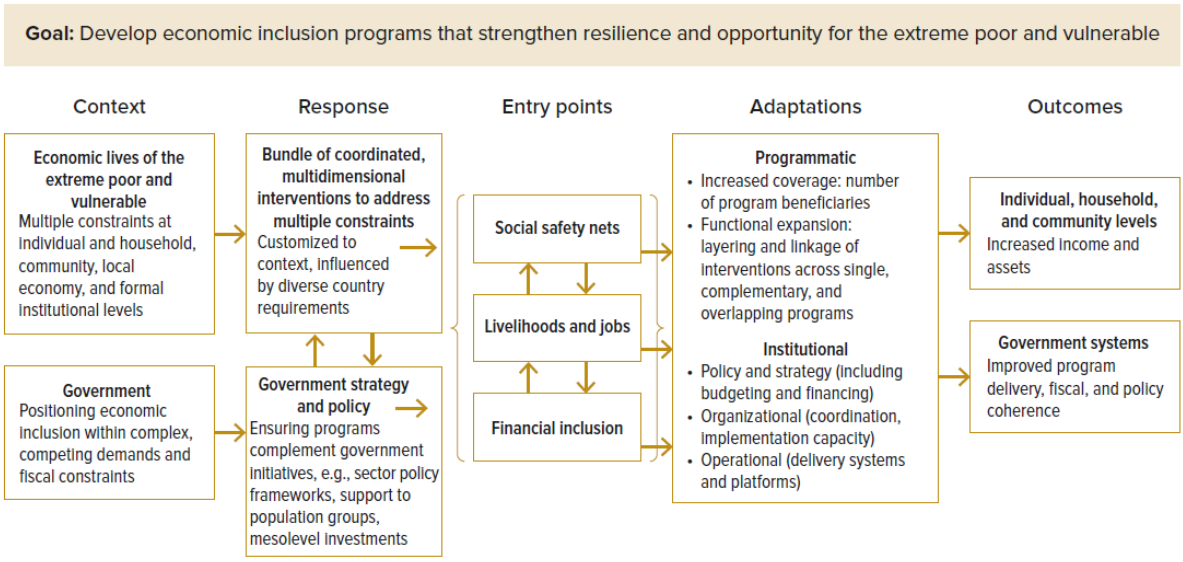
Besides enhancing the welfare of the families involved, these programs would address some of the aspects that can help reduce migration (Díaz-Bonilla and Centurión, 2022) and coping with environmental

[27] According to the Migration Policy Institute, using data from the 2017 US Census, there were somewhat more than 3.5 million migrants from Central American countries, and the largest number were from El Salvador (about 1.4 million), Guatemala (some 960,000) and Honduras (about 660,000).

shocks. They may also help to reduce crime, thus addressing another of the drivers of migration (see Machado, Rodrigues, Rasella, Lima Barreto, and Araya (2018), Lance, (2014) and Meloni, O. (2014).

More generally, recent work by the World Bank has expanded the framework for social inclusion, both in rural and urban settings, by defining multidimensional programs with social safety nets, livelihoods and jobs, and financial inclusion (see Chart 42, from Andrews et al. 2021).

Chart 42. A Broader Framework for Social Assistance and Inclusions Programs



Source: Andrews et al, 2021

Additionally, the emergence of the “new poor” from the current pandemic should also lead to expansion and reconfiguration to the urban programs.

Further, these policy instruments can help address food (and nutrition) insecurity, which has been a chronic problem in Honduras as well as in other countries in the region.

e) Possible costs

As discussed in the section describing the social security and assistance programs, Honduras spent before the pandemic a lower percentage of its GDP compared to other countries in the region and the transfers per capita were smaller than the comparators as well. Further, the distribution of benefits among the different income quintiles indicates that the poorest groups receive relatively fewer resources than in other comparable countries (and, on the other hand, higher income sectors receive comparatively more funds). Therefore, Honduras showed relatively small improvements in the indicators of inequality and poverty because of those programs. It was mentioned that these problems suggested at least three types of adjustments; a) better targeting with the same spending levels; and b) increases in the level of spending; and c) a reconceptualization of the programs of social assistance.

Given the low coverage mentioned of the current small and fragmented programs, the main limitation to achieve impact is that they do not have the adequate scale to address the problems they intend to solve.

Díaz Bonilla and Centurion, 2022 present a more detailed proposal for Honduras (and other countries in Central America) regarding the legal, operational, financial and institutional aspects of an expanded program of social assistance.[28] It includes the elimination of poverty at 3.2 PPP USD/capita/day (including a livelihood/environmental component); and support to the youth (from 15 to 24 years) not in education, employment, or training (NEET), a condition that makes them vulnerable to sexual exploitation, violence and also is a driver for migration (see for instance Isaacs, 2019; Clemens, 2017; and ILO, 2020).

Based on the number of people to be included in the programs[29] and the amount and duration of cash transfers per person, Díaz-Bonilla and Centurión, 2022 estimate that the whole program would cost almost 990 million USD in Honduras (4% of GDP). To those values, there would be an addition of administrative costs that need to be included in the costs.

7.3. Food value chains

This report has taken a more detailed view of some main food products in Honduras (maize, beans, poultry meat, eggs, sugar, wheat, and bovine meat) during the COVID-19 pandemic. There have been some considerations related to climate events and the recent disruptions generated by the RUC. As mentioned, the food value chains considered have shown resilience during the pandemic. Operators in the value chains have shown they can adapt to difficult conditions and move towards their gradual recovery.

Addressing COVID-19 disruptions and building better for the future involves addressing market failures that were already the norm prior to COVID-19, particularly for the basic grains sector.

[28] There are other estimates of social assistance programs for Honduras. For instance, Filgueira and Espíndola (2015), estimate various models of social assistance, but the more relevant here would be the one that considers an allowance equivalent to the poverty line for the first child and then 0.66 for the second and third, and no additional payments for the fourth, for children under 15 years and for households with incomes below 1.8 of the poverty line. The costs estimated are about 3.5% of the GDP in Honduras. Ortiz and others (2017) consider a different program of social protection, costing about 7.2% of the GDP. It includes the cost of a child benefit of 25% of the poverty line to all children (less than 5 years old); of a benefit of 100% of the poverty line to all orphans; of a benefit of 100% of the poverty line over 4 months to all mothers with newborns; of a benefit of 100% of the poverty line to all persons with severe disabilities; and of a benefit of 100% of the poverty line to all persons aged 65 and more.

[29] Estimated at about 2.8 million below the poverty line, or about 28.3% of the population; some 622,200 households supported with livelihood/environmental payments; and close to 575,000 NEETs.

Because of the mixed structure of target food value chains in this assessment, it is not possible to define specific policy responses for each one of them. Instead, a summary of policy recommendations is presented in Table 19, with some indications about their timeline and target actors.

Table 19. Honduras Suggestions On Possible Policy Responses And Investments To Address Current Problems

Area of Recommendation (in general to all food value chains)	Timeline (when)			Main Actor (who)	
	Short Term	Medium Term	Long Term	Public Sector	Private Sector
COVID-19					
1. Modernization of the seed system featuring public-private partnerships (SP1) to increase maize and beans. This is not entirely for import substitution purposes, but to improve the capacity of rural households to feed themselves for more weeks per year.	Major			Investments and Institutional Strengthening	Investments
2. Enable and incentivize private sector involvement in modern contract farming arrangements		Major		Incentives and Regulations	Investments
3. Support for institutional food procurement of commodities following the experience of IHMA in Honduras in the purchase of strategic reserves of maize and beans.		Moderate		Incentives	Investments
CLIMATE CHANGE					
4. Introduction of climate-resilient technologies using FAO's experience and borrowing models already in use by modern horticulture production present in the region.	Major			Investments and knowledge	Investments
5. Rehabilitation of access to better avian and bovine genetics in rural areas (40% of poultry meat, eggs and bovine meat is produced by smallholders).	Major			Investments	
FERTILIZER PRICE CRISIS					
6. Develop a long-term national fertilizer strategy for exploitation of minerals available in the region thereby reducing reliance on imports of non-nitrogen fertilizer.	Limited			Knowledge	
7. Support for collective purchasing of mineral fertilizers by coops and other organized groups.		Major		Investments	Investments
8. Promotion of climate smart fertilizer substitution programs.		Major		Investments and Knowledge	Investments

9. Support high-value agriculture programs where reliance on own staple food production is minimized. Honduras has experience and success stories on this aspect.			Major	Incentives and Regulations	Invest-ments
10. Facilitating learning from more advanced countries on how they will be coping with increased fertilizer prices now and in the future through the adoption of different mechanisms ranging from subsidies to national production and distribution of some fertilizers.		Limited		Knowledge	

Source: Authors. Expected impact: Major, Moderate, Limited. In approximate terms, short term is within the next 2 years, medium term is within the next 4 years, and long term is within the next 7 years. SP denotes strategic priority.

Since the suspension of activities due to the confinement measures to contain the spread of Covid-19 in April 2020, different observers alerted governments everywhere about the potential impacts of these restrictions on food security. Two years later, this study is sorting out the combined effect of the pandemic (measured in higher inflation rates and the logistics crisis), with the climate change events in Honduras, and the recent hike in fertilizer prices linked to the RUC. Table 19 listed some policy responses. In what follows we include further considerations related to food security, divided into two types of products.

a) Policies focused on commodities grown locally

Basic grains did not experience the effects of COVID-19 as immediately as food of animal origin (meats and eggs) and the time elapsed since the onset of the pandemic has shown their resilience to some factors, but their vulnerability to others (e.g., fertilizer prices). This means different value chains have actors that are more vulnerable to sudden changes in cost and availability of inputs and transportation costs. During the pandemic, Honduras encouraged smallholder farmers to expand area and increase output to avert a potential food crisis. These value chains have been winners, experiencing higher than usual demand. Except for the second season in 2020 affected by Eta and Iota, production cycles were favorable. It was only until fertilizer prices increased unprecedentedly in the first half of 2022 that producers in these value chains have been placed on the alert once again.

Policies focused on these specific value chains are included in the previous table of recommendations. Turning ideas into policy will mean that governments of Honduras decide quickly on investing to improve local capacity and output. While food imports help, they are not a fundamental solution, and there

is always the risk of not finding timely supplies of maize and beans. The advice here is to focus on supporting local production as the best bet to achieve food security in rural and urban settings.[30]

b) Policies focused on commodities that must be imported

Wheat and animal feed ingredients (maize and soybean) fall under this category. Together, they affect several items in the basic basket of foods (bread, eggs, chicken and beef). For instance, the price of maize in May 2022 was 107% higher than in December 2019, and soybean was about 88% higher in the same period (data from World Bank, commodity database). Along with higher energy costs and transportation, the increases in animal feed would eventually be reflected in consumer prices. Formulating policies for these value chains is difficult because international prices are set without any control by small countries leaving only subsidies and voucher programs as the only choices for indirect and direct support to the food insecure.

c) Other general considerations

Honduras needs to invest more in R&D in agriculture: the country has the second to lowest levels in LAC with just 0.17% of the agricultural GDP (rounded to 0.2%; see Table 20 average for LAC 0.71%) and only 13.2 full-time employed researchers by 100,000 farmers (average for LAC 71.3 FTE/100,000 farmers) (ASTI database). The additional investment is necessary not only to improve productivity and to adapt to and mitigate climate change but also, as the pandemic has shown, to make food value chains resilient to health shocks.

Table 20. Public expenditures in R&D as percentage of agricultural GDP (average 2010s)

1% or more		**0.5-09%**		**Less than 0.5%**	
Brazil	1.9	Bolivia	0.9	Nicaragua	0.4
Chile	1.7	Jamaica	0.9	Peru	0.4
Uruguay	1.4	Panama	0.8	Dominican Republic	0.3
Argentina	1.2	Belize	0.7	Paraguay	0.3
Mexico	1.1	Colombia	0.7	Venezuela	0.3
Costa Rica	1.0			Ecuador	0.2

[30] An option discussed in previous reports has been to strengthen the role and operations of the public purchases of some strategic products by IHMA. It could have a stronger role to play in incentivizing national production and as a broker of basic food items being purchased by municipalities, and NGOs. This could be considered a complement to enhanced agricultural credit programs since a common problem at the end of the production cycle is accessing attractive and better-organized markets.

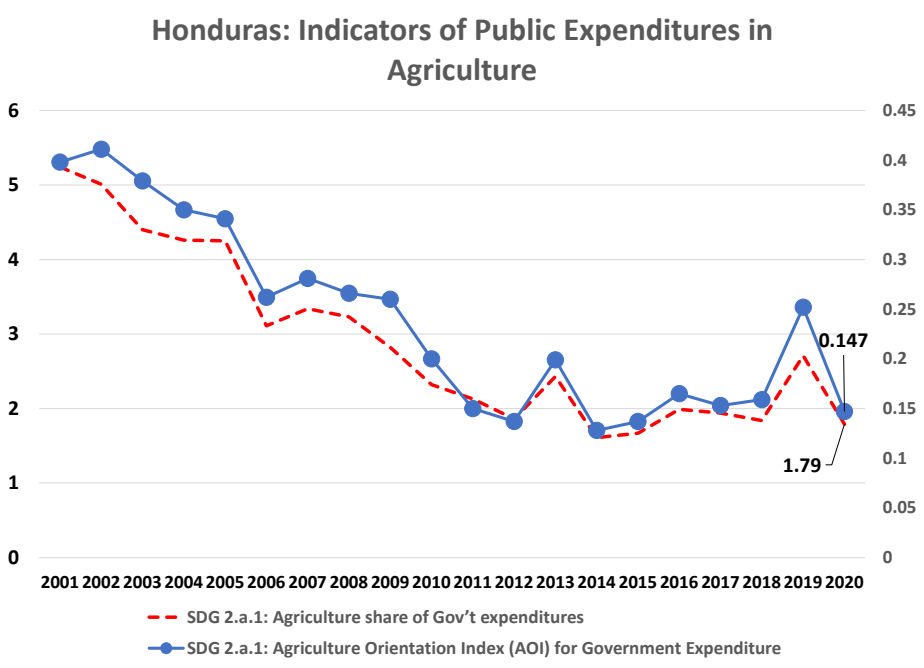
				Honduras	0.2
				Guatemala	0.1
Total of developing countries (with data in ASTI database)					
Average	0.9	Median	0.5		

Source: authors with ASTI database.

A more general question is whether Honduras is investing enough in the agri-food system.

Chart 43 and Table 21 give some information in that regard, using two indicators: the share of agricultural expenditures in the public budget and the agricultural orientation index (AOI) of public expenditures. The latter is the ratio of the share of agricultural expenditures in the public budget (the first indicator) divided by the share of the agricultural sector in total GDP: a value equal to 1 would indicate that the agricultural sector is receiving the same share of public expenditures as its importance in the GDP (and values less/more than 1 would indicate that the sector is receiving less/more than its importance in the GDP). In Chart 43 the share of agricultural expenditures in the public budget is the broken line (and the axis is the left from the reader) while the AOI is the other line (right axis from the reader).

Chart 43. Agriculture Public Expenditure



Source: authors with FAOSTAT data

Table 21. Agriculture Orientation Index-Share of Government Expenditure

Average 2010-2020	Agriculture Orientation Index (AOI)	Share of Gov't expenditures
Honduras	0.17	2.03
Caribbean	0.72	2.96
Central America	0.59	2.30
South America	0.26	1.38
World	0.49	1.99

Source: authors with FAOSTAT data

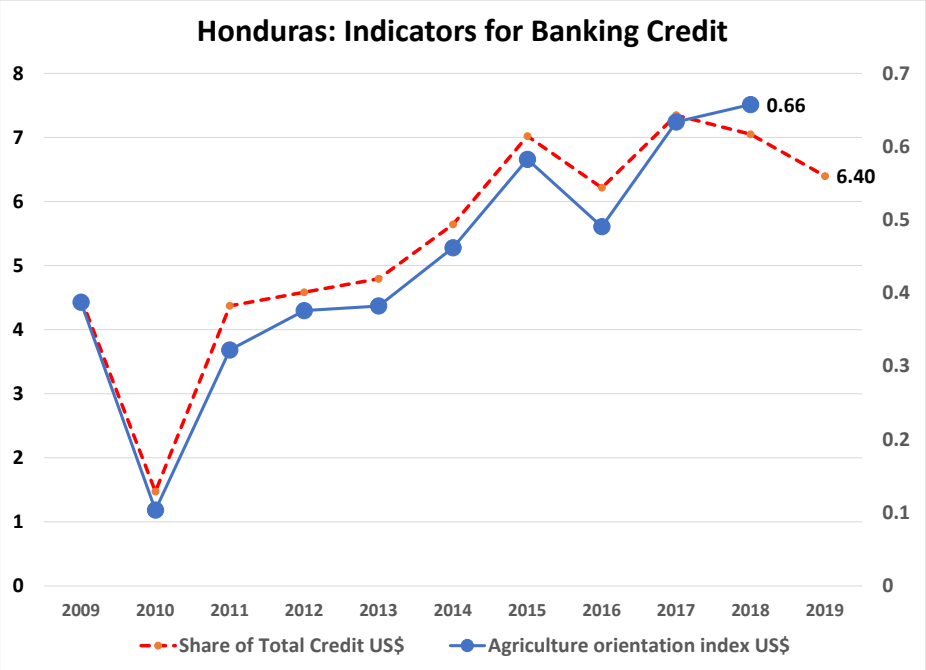
Honduras is spending very little in the agricultural sector (0.17 of AOI[31]; average 2010-2020) compared to the importance of the sector, and it is below all comparators. As a share of government expenditures, it is below Central America and the Caribbean, but above South America and about in line with the world. Further, both indicators show a declining trend. It would be important to revert that trend to help lift the constraints of small farmers for the uptake of the technological advances, in general, and related to climate-smart approaches, in particular.

Doubling the AOI for public agricultural expenditures, which would place Honduras above the average for South America but still below the world level, would imply additional expenditures for the sector of approximately 1.9% of total GDP.

However, it is not only public expenditures that need to be considered. Another problem is the lack of financing, both for producers and their associations and cooperatives and for the public and private institutions working in the sector. Chart 44 and Table 22 show indicators for the banking system, similar to the ones for public expenditures: the share in total credit and the AOI for banking credit, which is calculated as the AOI for public expenditure but now the share of agricultural credit on total credit is utilized (with the same interpretation as before: less than 1 means that the agricultural sector is receiving a smaller share of total credit than the importance of the sector in the whole economy). Chart 44 shows the share of agricultural credit as the broken line (left axis from the reader), and the AOI as the solid line (right axis from the reader).

[31] 0.166 with 3 digits.

Chart 44. Banking Credit



Source: authors with FAOSTAT data

Table 22. Agriculture Orientation Index- Agriculture Share of Total Credit

	Agriculture orientation index US$	Share of Total Credit US$
Honduras	0.44	5.40
Caribbean	0.59	2.48
Central America	0.70	2.72
South America	0.63	3.84
World	0.59	2.58

Source: authors with FAOSTAT data

In the case of banking credit, the indicators are increasing, but the AOI in Honduras is below the comparators (although the share in total credit is above the other groups of countries considered).

Honduras may need to consider a focused effort in aligning the sources of financing with a program to support agricultural and rural development, and more generally the transformation of the country's food system, following the commitments during the United Nations Food Systems Summit (UNFSS) and the climate change negotiations under the United Nations Framework Convention on Climate Change (UNFCCC), including the Paris Agreement and the Glasgow Climate Pact (COP26).

Those events highlighted the importance of food systems (from agricultural production to consumption and disposal of waste) for the attainment of the SDGs by 2030. Also, considering that food systems have been estimated to represent 34% of all greenhouse gas (GHG) emissions at the global level and 2/3 in the case of Latin America and the Caribbean (Crippa et al, 2021; estimates for 2015 with the latest data available), their climate-positive transformation is crucial to achieving the Paris Agreement objectives. Further, at the next COP27 in Egypt special attention will be placed on agriculture and food systems in relation to achieving the climate change mitigation and adaptation objectives of the Paris Agreement and the commitments in the Glasgow Climate Pact.

Both UN processes consider two types of operational approaches to implement the commitments: a) national programs: the "national pathways" discussed under the UNFSS, and the Nationally Determined Contribution (NDCs) and National Adaptation Plans (NAPs) for the climate change negotiations; and b) thematic coalitions which were formed both at the UNFSS and during COP26. Honduras presented a "national pathway" under the UNFSS[32] and also its NDC,[33] but not its NAP.[34] It should be noted that the NDCs are obligations under the climate change negotiations, while the NAPs are voluntary, with the objective of quantifying the financial requirements.

The current design of the national pathways is, in general, very preliminary, with many qualitative aspirations, but lacking the definition of quantitative objectives, policy instruments and investments, costs, financing, and institutional aspects for their effective implementation. Further, it is not clear how (or whether) those national pathways are coordinated with the NDCs and NAPs.

Honduras needs to consider the design of the national programs for food systems transformations as discussed in the UNFSS follow-up process: the final agreements at this summit included the commitment to present in two years the advances in the implementation of the needed transformation of food systems aimed at achieving the nutrition, health, employment, environmental, social inclusion, and related Sustainable Development Goals (SDGs) that were discussed at the UNFSS. But those national pathways need to also consider the NDCs and NAPs of the UNFCCC. Although the latter documents cover more than food systems it should be noted that for the LAC region the importance of food systems in GHG emissions is even more relevant than at the global level: they represent 2/3 of its total emissions, while, as noted, at the global level food systems represent one third (Crippa et al 2021).

[32] https://summitdialogues.org/explore-countries/?cl_pathway_uploaded=yes

[33] https://www4.unfccc.int/sites/NDCStaging/Pages/A ll.aspx

[34] https://www4.unfccc.int/sites/NAPC/Pages/national-adaptation-plans.aspx

Within that exercise it is also important to analyze the financing sources to implement that integrated plan: international development funds (multilateral and bilateral); public sector budgets; banking systems and capital markets (Díaz-Bonilla, Swinnen, and Vos, 2021). Bilateral and multilateral funds, as well as public sector budgets in many countries are constrained, but they can be used more strategically to mobilize the resources of the other two sources, support small farmers and scale-up productivity enhancing technologies, which also help with climate adaptation and mitigation, improving resilience. In the case of Honduras, there is a large fragmentation of public programs and lack of coordination among them.

Also, it could be explored the possibility of engaging global private investors in projects that, in addition to some levels of returns considered adequate, also include environmental and social objectives (Díaz-Bonilla, 2021). One of the problems, however, is the lack of projects and investable opportunities organized for small farmers and structured in ways that can attract financial resources (Sadler et al. 2016). Structuring these opportunities is a complex task, involving small and family farms with very site-specific constraints; operating in local communities that have a variety of social and productive profiles; involving, in the case of water projects, complex issues of water rights and environmental sustainability; and need other services and infrastructure support to produce and market the incremental production, among other challenges. Furthermore, involving private investors and the banking system would necessitate structuring the investment opportunities (as projects but possible as another type of investable assets too) to make them attractive at reasonable rates of return and risk profiles. All that work would require a cadre of specialists with the specific task of developing the needed pipeline of specific projects and investable opportunities, working with small farmers and their associations and the public and private organizations related to the sector, and linking the work to a solid base of science and technology (Díaz-Bonilla et al, 2018).

In what follows we discuss some aspects of the funding related to the public sector alone.

8. MACROECONOMIC AND FISCAL POLICY CONSIDERATIONS

8.1. General considerations

Table 23 shows the evolution of fiscal and debt indicators in Honduras.

Table 23. Fiscal and Debt Indicators (% of GDP)

			Estimated	Projections					
	2019	2020	2021	2022	2023	2024	2025	2026	2027
Central Government Finances									
Total revenue	25.8	23.4	25.0	25.6	26.0	26.1	26.2	26.2	26.2
Expenditure	25.7	28.0	27.8	27.6	26.4	26.2	26.2	26.3	26.3
Primary balance	0.8	-3.8	-1.9	-1.3	0.6	0.9	0.9	1.0	0.6
Overall balance	0.1	-4.6	-2.8	-2.1	-0.4	-0.1	0.0	-0.1	-0.2
Central Government Debt									
General government gross debt	42.6	51.0	48.2	47.6	45.3	45.6	44.9	42.1	40.0

Source: IMF Fiscal Monitor April 2022

Expenditures increased and revenues dropped because of the pandemic in 2020, generating a deficit of 4.6% of the GDP (-4.6%) from the small surplus in 2019. In 2021 revenues increased and expenditures declined as a percentage of GDP turning the deficit into a more manageable 2.8% of the GDP (i.e. -2.8%), which the IMF estimates will continue to be reduced over time. Gross government debt jumped significantly during the pandemic from 42.6% to 51% of the GDP, but the IMF, in line with the declining deficit, is also projecting that the percentage will return eventually to pre-pandemic levels by 2026. Those numbers suggest that Honduras has some fiscal space to address the social problems that pre-existed the pandemic and have been exacerbated by it.

Fiscal, monetary, and exchange rate policies will have to be managed in a consistent manner to ensure a sustainable macroeconomic path going forward.

8.2. How can those programs be financed? [35]

Before it was argued that the recovery from the pandemic, while addressing the previous and current serious problems of poverty, food insecurity and malnutrition, would require strengthening, reconceptualizing, and expanding programs related to health, safety nets, and agricultural/rural development and food systems. A detailed design of those programs is not intended here, although several ideas were presented in the previous sections. We will not provide either a granular analysis of the existent and potential public financial sources and their mobilization to finance the programs outlined before, but only sketch some possible approaches to do that.

Overall, there are two main approaches to finance the costs of the programs considered. The first one is to rationalize expenditures within the current fiscal envelopes, allocating more funds to the desired objectives, while reducing resources for other public programs or activities considered less relevant. If

[35] This section draws extensively on Diaz-Bonilla and Centurión. 2022.

that is not enough to finance the programs prioritized, then the next step would be to increase revenues and/or take up additional debt. For the part of the programs that represent recurrent costs, it would not be advisable to finance them with debt. Yet those components related to investments (for instance production and environmental improvements with quicker returns on growth and employment) can be financed with additional debt. Also, there is a very valid argument that even recurrent costs of poverty programs with health and education conditionality that help build up human capital are also investments. Therefore, those programs can start with loans from multilateral banks, but eventually, the funding must transition to local revenues.[36]

The first approach (streamlining expenditures within the current fiscal envelope) should be based on broad and rigorous public expenditure reviews. In what follows there are just some examples of areas to consider for those public expenditure reviews.

Reallocating expenditures

Before it was shown that an important part of the benefits of social assistance, which is supposed to focus on poorer and more vulnerable people, went to quintiles 3rd and up. Table 24 shows the allocation for Honduras in the last survey conducted with the relevant information (year 2017).

Table 24. Percentage of Benefits for Higher Quintiles

Quintiles	Honduras
3rd	16.7
4th	12.6
5th	16.1
Total	45.3

Source: Authors with data from ASPIRE, World Bank

More than 45% of the benefits go to quintiles 3rd and higher. This suggests the possibility of reallocating at least part of those benefits to the poorest and most vulnerable quintiles within the same budget envelope. For, instance, if half of the benefit of the 3rd quintile and all of the amounts now going to quintiles 4th and 5th could be reallocated to the lowest two, that would imply that about 1/3 of the benefits could be shifted within the same budget envelope, which would amount to about 0.14% of the GDP in Honduras.

[36] There may be a (small) percentage that can be money-financed, if certain amount of the seigniorage is assigned to finance those programs (but this option is not considered here).

There are other possibilities for reallocation of public expenditures. A specific case are fossil fuel subsidies, which are shown in Table 25 (they include explicit subsidies and foregone revenue of taxes not collected using the database of Parry, Black, and Vernon, 2021).[37]

Table 25. Fossil Fuel Subsidies

Explicit plus Revenue Foregone	Million USD	% GDP
Honduras	70	0.3

Source: authors using the database of fossil fuel subsidies by Parry, Black, and Vernon, 2021

There may be similar options to reallocate other public expenditures, applying criteria about their effectiveness, efficiency, and equity. For instance, the wage bill of the public sector as a percentage of GDP (average 2010-2018 from World Bureaucracy Indicators, World Bank) is 11.6% in Honduras, while the average for LAC is 8.1%. Part of the problem may be that the public sector wage premium compared to all private employees (i.e., the percentage of public wages above private ones; average 2010-2018) is also high in Honduras at 43.3%, when in LAC is 31.4% (World Bureaucracy Indicators, World Bank).

Options for scaling up expenditures

Table 23 before showed revenues, expenditures, deficits, and public debt as a percentage of the GDP. Honduras is at, or somewhat above, the percentages of LAC comparators in its income bracket. Therefore, and different from the case of Guatemala discussed in a separate document, the margin for increasing expenditures is not that high, and then the main task would be to analyze the equity, effectiveness, and efficiency of current public expenditures and evaluate the possibilities of reallocations. It was discussed already the topic of better focusing the programs of social assistance, and the margin for reducing fossil fuel subsidies.

Honduras has also some special characteristics both on the expenditure and revenue sides. Regarding the first aspect, Honduras shows a proliferation of trust funds and extrabudgetary mechanisms that channel significant public resources and that are not integrated into the control and information system on budget execution. These funds require an adequate analysis of their use and complete integration into the budgetary system and control of public spending. That process is part of the conditionality of the current IMF program to improve budget transparency and accountability (see IMF Honduras 2021).

[37] Parry, Black, and Vernon (2021) also calculate the costs and pricing of externalities related to the use of fossil fuels, such as climate change and health effects. The potential revenues of a possible carbon tax are discussed below.

Another aspect related to expenditures is the high incidence of salaries in public spending, already mentioned. This is in part related to another aspect, also noted before, and which is common to many developing countries: average public sector wages that exceed those in the private sector. The current IMF program with Honduras has included as conditionality the need to align public salaries better with private ones, through a centralized mechanism of labor negotiations.

A related issue is the proliferation of small and fragmented programs, in many cases with overlapping beneficiaries and functions.

On the revenue side, a relevant topic is the high cost in loss of resources due to tax exemptions (also called tax expenditures). Those exemptions, which are considered inequitable, have been estimated at about 7% of GDP in the mid-2010s (IMF, 2018). Their gradual reduction could potentially generate 1.5% of GDP in additional resources that can be used to expand spending for social assistance programs (IMF, 2018).

Also, taxing carbon emissions related to climate change can also collect additional resources calculated in about 0.7% of the GDP in Honduras (using the implicit costs related to climate change as shown in the database to Parry, Black, and Vernon 2021).[38]

Some concluding thoughts on costs and financing

Table 26 recapitulates the broad estimates of costs for the possible health, social safety nets and agricultural interventions suggested here as first approximation.

Table 26. Costs as Percentage of the GDP

	% GDP
Health	0.6
Social Safety Nets	4.0
Agriculture and Rural Development	1.9
	6.5

Source: Authors

[38] Parry, Black, and Vernon 2021 also calculate the costs of other externalities related to health and transportation. Focusing only on the cost of the carbon tax, it has been argued that it can be rebated to low-income households through cash transfers of the type discussed above (see for instance Zuluaga, Vogt-Schilb and Robles. 2019).

The brief analysis mentioned above shows that there is margin to finance the needed programs related to health, social safety nets, and agricultural/rural development, through a combination of better use of current expenditures and some increases in revenues.

It should be noted that the social assistance and productive programs outlined before would help reduce other costs such as those related to crime and humanitarian crisis linked to migration and environmental disasters, while also contributing to growth that would generate additional fiscal resources at existing tax rates.

Currently, the private sector identifies crime and related problems as serious constraints to their operations. Table 27 shows results from the Enterprise Surveys of the World Bank.

Table 27. Importance of Crime for the Operations of Private Firms

	Cost of crime as % of sales	Percent of firms identifying crime, theft and disorder as a major constraint
Honduras	11.9	29.7
LAC	7.5	25.3
All Countries	9.0	16.7

Source: Enterprise Surveys, World Bank

The percentage of firms identifying crime, theft, and disorder as a major constraint, and the related losses as a percentage of sales are worse than for LAC and all countries included in the Enterprise Surveys of the World Bank. The cost of crime is the sum of the answers related to how much are paying the firms as a percentage of sales for security, plus the costs of theft and vandalism at the establishment, plus the costs of theft with merchandise in transit. That is an implicit tax that can be compared to the operating margins of the firms: usually, EBITDA[39] margins over revenues of 10% are considered "good" (see comments in Diaz-Bonilla and Centurión, 2022; and Wiblin 2021, and INVESTOPEDIA TEAM. 2022); therefore, losses related to crime of the magnitude indicated above as a percentage of sales would absorb a good portion of the EBITDA margins in Honduras. Hence, the private sector should consider that increases in taxes that help finance adequate programs that besides helping to support the poor and vulnerable can also reduce crime and increase economic growth (such as the programs outlined before) would represent a good bargain.

[39] Earnings before interest, taxes, depreciation, and amortization.

The programs discussed before could also benefit from more focused concessional and grant financing from multilateral and bilateral development agencies to help attain full scale in their operations. Table 28 shows different types of developmental flows as the average for 2015-2020 (WDI/WB database): net aid by Development Assistance Committee members, both total value and the amount corresponding to the United States; net flows by multilateral development banks (concessional and non-concessional) and funds related to UN agencies.

Table 28. Net Development Flows (million USD) (annual average 2015-2020)

	Net bilateral aid flows from DAC donors, Total (current US$)	Of which, United States (current US$)	Net financial flows, multilateral banks (NFL, current US$)	Net official flows from UN agencies, Total (current US$)
Honduras	307.7	125.1	311.9	9.9

Source: WDI/WB

Net flows in the case of grants are also basically equivalent to the gross amount of financing received, but in the case of loans, the repayments of capital have to be subtracted (as is the case of most of the operations with multilateral banks). For Honduras, net flows from multilateral development banks are the most important source of funds followed by bilateral aid, with the United States as the main donor. But bilateral aid is basically in grant form and therefore does not have to be repaid.

In analyzing whether the United States could increase financing for the programs discussed, similar reasoning as in the case of the private sector applies: the economic costs of dealing with migration at the border and inside the United States (and not counting the humanitarian and political costs of the crises for this country as well) may justify using grants for several years to finance in part the programs mentioned above. Further, a region that is more stable politically and that is growing faster, would also provide economic opportunities for US exports and investments (see, for instance, Díaz-Bonilla, E., V. Piñeiro and S. Robinson, 2018).

In particular, the US can consider a more intelligent use of the “Special Drawing Rights” issued by the IMF to help guarantee a scheme of “zero hunger bonds” or “pandemic recovery bonds,” as explained in Díaz-Bonilla 2021.[40] This approach would multiply several times the financial impact (4 to 7 US dollars

[40] The specific design will have to be discussed with potential private and institutional investors, but some features to consider were discussed in Díaz-Bonilla, 2021: the “zero hunger bond” can be a console or perpetual bond; issued in dollars; paying an adjustable rate with a cap (say 5%); and callable, with call protection (for example, until 2050). In that approach it is suggested that 2% of the new allocation of SDRs of 650 billion dollars (13 billion dollars) can be assigned to a fund, which could be set up within the IMF, to guarantee the interest rate payments of zero hunger bonds issued by countries with programs to end hunger and recover from the pandemic.

of additional support per 1 US dollar in the guarantee fund; see the explanation in Díaz-Bonilla, 2021), and that use of the SDRs does not cost the United States. The current opposition by some Senators to the use of SDRs may be related to the current applications considered by the IMF for the Resilience and Sustainability Trust Fund; hopefully, their use to support Honduras, and more generally countries in Central America and LAC, through a guarantee fund that helps address food security, crime, migration, and other problems in the region, may be of greater interest to the Senators that are currently opposed to the utilization of USA's SDRs.

9. CONCLUSIONS

This document is the third and last of the work on the impact of COVID on food conditions in Honduras. The report recapitulates the relevant parts of the previous documents (Díaz Bonilla, Laborde and Piñeiro, 2021, and Diaz-Bonilla, Flores, Paz, Piñeiro, and Zandstra, 2021) and includes some additional considerations related the effects of the Russia-Ukraine Conflict (RUC). It presents several ideas about programs for the reconstruction post-pandemic, while addressing some of Honduras' long-standing problems regarding poverty and food insecurity.

Honduras, like most countries in the world, reacted with restrictions to mobility and other health-related policies. Those were implemented together with a variety of economic and social policy initiatives trying to mitigate the negative impact on families and firms of losses of incomes and employment (expanding programs such as cash transfers, food aid and subsidies, unemployment compensation, and the like). There were also policies shoring up the supply or availability of food, such as declaring the people working in the food value chains as essential personnel exempt from mobility restrictions and some support through reductions in interest rates, postponement or waiving taxes, farm credit, and other interventions.

To finance those policies, Honduras, as many other countries, increased its public expenditures and injected additional liquidity through monetary policies. However, Honduras has been below LAC and developing countries in terms of the size of the total fiscal package as a percentage of the GDP, although it was on the higher side in terms of the health component. The vaccination rate started slower than in many other countries in LAC but accelerated later, and while the country is still below the average percentages for the region, it is about in line with developing countries within the similar income bracket as Honduras. Yet, considering the accumulated COVID deaths since the start of the pandemic as proportion of the population, Honduras has been less affected than the average of LAC countries, and now it is showing a very low of daily deaths as a proportion of the population. This is one of the

various puzzles that need to be analyzed further and in a comparative perspective.[41] It may be the case that having lower levels of obesity and a more rural population than the average for LAC has helped Honduras to keep deaths lower than the region. A more detailed analysis would be required to determine the combination of factors that caused the pandemic to have had greater impacts in some countries than others.

Regarding economic conditions, the return to mobility plus the expansionary fiscal and monetary policies have supported growth in 2021 and 2022. The agricultural sector did not decline in 2020 as much as other economic sectors and it was growing in 2021 and the first quarter of 2022). The resiliency of the agriculture sector in 2020 was related to governments' support to the sector and to the fact that food production and distribution were considered essential activities and so faced fewer mobility restrictions. Then hurricanes hit. Further, declines in incomes and employment had negative impacts on the demand for agri-food products (see, for example, Graziano da Silva et al. 2021 for a more general discussion in LAC countries). Also, the pandemic seems to have affected more the commercialization of products rather than the primary production and processing.

Now, the impact of the Ukrainian invasion is being felt on a variety of products. From the point of view of Honduras' balance of trade, considering only changes in global prices of food and agricultural products, both exported and imported, we estimated that they would be mildly positive for the country. However, it would be slightly negative if the impact of higher prices of fertilizers is also considered, and of course, counting the impact of energy prices would be even more negative (not estimated here). At the same time, remittances jumped by 2 percentage points of the GDP in 2020 (from 21.5% in 2019 to 23.5% in 2020) and they are projected to continue growing due to strong growth in the US. Those additional remittances could help to finance the trade gap.

The effects on the international accounts are separate from the impacts on consumers, which need to consider changes in prices, but also incomes and employment.

The overall impact on Honduras's international accounts and growth and employment of the changed international economic conditions requires a more specific analysis using an economy-wide model, an exercise that is not attempted here.

Regarding prices, inflation in general and food inflation were subdued in 2020 because demand was constrained by the losses in employment and incomes and the support from the expansion of safety

[41] Of course, it is always possible that the data may not reflect accurately the number of deaths related to COVID-19.

nets during the pandemic was not that strong. However, there has been an acceleration of inflation in late 2021, due to a series of factors before the war,[42] and in early 2022 as a result of the RUC.

The perspective of acceleration in global inflation is leading to the phasing out of the current expansionary monetary policies in the United States, which may have a negative impact on many developing countries, if it leads to sustained increases in interest rates and a sharp slowdown in global growth.

While the economic rebound in 2021 and 2022 in Honduras should have helped to reduce poverty and malnutrition, the latest acceleration of food inflation will work in the opposite direction. As noted, corn, beans and bread have increased in inflation-adjusted prices, although the other products analyzed rather showed some declines once they were deflated by overall inflation.

A previous study by IFPRI also calculated the impact of COVID-19 on the affordability of three types of diets,[43] considering that one of the negative consequences of the pandemic was the deterioration of the quality of the diets. Also, IFPRI' s ex-ante projections and the actual estimates by the World Bank showed that the number of people in poverty and those that cannot afford healthy diets increased as a result of the negative shock of the pandemic. Therefore, the pandemic deteriorated the already inadequate conditions of poverty and food security in the country.

Even though food value chains appeared to have better withstood the negative impact during the pandemic and were growing after that, they continue to be affected by traditional productivity and competitiveness problems, particularly small farmers.

Therefore, the report suggested the strengthening, reconceptualizing, and expanding of programs related to health, safety nets, and agricultural/rural development and food systems, both to recover from the pandemic, and to address the serious problems of poverty, food insecurity and malnutrition, which existed before and were aggravated by COVID19. A detailed design of those programs was not intended here, although the report presents several concrete ideas about what can be done.

[42] As already mentioned, in the second half of 2021 the impact of the expansionary fiscal and monetary policies followed by many countries, led to further increases in global prices, driven by energy (whose production had been curtailed during the pandemic due to lack of demand), climatic events that interacted with energy prices to push oilseed prices high, and the African swine fever in China, among other factors. Also, some of the delayed effects of the pandemic were felt in disruptions in value chains (such as temporary closures of ports, lack of truck drivers), which in the context of expanded demand for goods, have increased the costs of transportation.

[43] Following the analysis in FAO, IFAD, UNICEF, WFP and WHO (2020) three different of diets were utilized. The "energy sufficient diet" (adequate calories for energy balance for work each day, using the least cost diet from the cheapest starchy staple available in a country); the "nutrient adequate diet" (adequate calories plus minimum levels of all essential nutrients); and the "healthy diet" (following nutrition recommendations).

Regarding health, it is important to accelerate the vaccination rate as part of a general strengthening of the health system considering that Honduras spends per capita only 28% of the average health expenditures per person on average in LAC. But that represents somewhat more than 7% of the GDP. Increasing the expenditures to the same level of the average percentage of the GDP for LAC countries, would represent an additional increase of about 0.6% of the GDP (while trying to get to the average expenditures per capita of developing countries would require a more substantial 3.2% of the GDP).

Regarding social safety nets, properly designed social assistance programs through cash transfers and related instruments can not only reduce poverty and increase resilience for a significant percentage of vulnerable populations in Honduras but can also diminish international migration. To achieve those results, they need to be implemented at a scale that makes a difference. Small and fragmented programs will not improve much the current situation. Also, it is important to integrate the more permanent social assistance programs and the humanitarian programs that are implemented in response to individual crises, in a more unified systems that has been sometimes called "shock-responsive social assistance" (or social protection). Several dimensions of the possible programs were analyzed with costs and financing following Díaz-Bonilla and Centurión, 2022. The program considered the elimination of poverty at 3.2 PPP USD/capita/day (including a livelihood/environmental component); and support to the youth NEET with further education and training for a first job. Based on the number of people to be included in the programs[44] and the amount and duration of cash transfers per person, Díaz-Bonilla and Centurión (2022) estimated that the whole program would cost almost 990 million USD in Honduras (4% of GDP). To those values, there would be an addition of administrative costs that need to be included in the costs. a poverty program with livelihood and environmental components, and a program supporting NEET youth.

With respect to strengthening the support to agri-food systems, it was noted the low levels of expenditures in Honduras for agriculture in general and for R&D in the sector, in particular. Doubling the AOI for public agricultural expenditures, which would place Honduras above the average for South America but still below the world level, would imply additional expenditures for the sector of approximately 1.9% of total GDP. However, it is not only public expenditures that need to be considered. Another problem is the lack of financing, both for agricultural producers and their associations and cooperatives and for the public and private institutions working in the sector, as discussed in the previous sections.

Overall, Honduras needs to consider an integrated program to support agricultural and rural development. More generally, it needs to pursue the transformation of the country's food system, following the commitments during the United Nations Food Systems Summit (UNFSS) (articulated in the "national

[44] Estimated at about 2.8 million below the poverty line, or about 28.3% of the population; some 622,200 households supported with livelihood/environmental payments; and close to 575,000 NEETs.

pathways” for food systems transformation) and the climate change negotiations under the United Nations Framework Convention on Climate Change (UNFCCC), including the Paris Agreement and the Glasgow Climate Pact (COP26) (which are embedded in the Nationally Determined Contribution (NDCs) and National Adaptation Plans (NAPs)). Honduras presented a “national pathway” under the UNFSS and also its NDC, but not its NAP. This last type of program is necessary for the country to obtain finance for its adaptation investments.

The current design of the national pathways in many countries is very general, lacking the definition of quantitative objectives, policy instruments and investments, costs, financing, and institutional aspects for their effective implementation. Further, it is not clear how (or whether) those national pathways are coordinated with the NDCs and NAPs. Therefore, Honduras needs to consider the design of the national programs for food systems transformations aimed at achieving nutrition, health, employment, environmental, social inclusion, and related Sustainable Development Goals (SDGs). But those national pathways must also be articulated with the NDCs and NAPs of the UNFCCC.

Within that exercise it is also important to analyze the financial sources to implement that integrated plan: international development funds (multilateral and bilateral); public sector budgets; banking systems and capital markets (Díaz-Bonilla, Swinnen, and Vos, 2021). Bilateral and multilateral funds, as well as public sector budgets in many countries are constrained, but they can be used more strategically to mobilize the resources of the other two sources. This will, in turn, support small farmers and scale up productivity-enhancing technologies, which also help with climate adaptation and mitigation, improving resilience.

The report did not provide a granular analysis of the existent and potential financial sources and their mobilization but outlined several approaches and possibilities related to different sources of funding focusing on the public sector. It was argued that the costs are financeable, and that the programs suggested, besides alleviating poverty, increasing resilience, and reducing migration, will have further positive effects such as encouraging growth (and therefore helping increase revenues), and reducing other expenditures (such as those related to reducing crime and addressing humanitarian crises).

Hopefully the ideas outlined here can be an initial step in an integrated program for reducing poverty and food insecurity, improving nutrition, and ensuring environmental sustainability and resilience. In order to achieve those results, the programs need to be implemented at a scale that makes a difference. As argued, small and fragmented initiatives will not improve much the current difficult situation.

ANNEXES

Annex A

Some definitions

The three main social areas for governmental intervention are social protection, health, and education. Social protection, in turn, is divided into social insurance (where workers and employers pay contributions that cover at least in part the costs of the programs; they are therefore called "contributory programs"); and social assistance (where the program is financed basically by the government and/or external development funds, without contributions from the beneficiaries; which are then called "non-contributory programs"). Table A.1 presents the classification of social protection and labor (SPL) programs used by the World Bank in the ASPIRE database.

Table A.1. ASPIRE Program Classification

SPL AREA	PROGRAM CATEGORY	PROGRAM SUB-CATEGORY
SOCIAL INSURANCE	Contributory pensions	Old age pension (all schemes, national, civil servants, veterans, other special)
		Survivors pension (all schemes, national, civil servants, veterans, other special)
		Disability pension (all schemes, national, civil servants, veterans, other special)
	Other Social Insurance	Occupational injuries benefits
		Paid sickness, leave benefits
		Health
		Maternity/Paternity benefits
LABOR MARKET	Labor market policy measures (active LM programs)	Training (vocational, life skills, cash for training)
		Employment incentives/wage subsidies
		Employment measures for disabled
		Entrepreneurship support /startup incentives (cash and in-kind grant, microcredit)
		Labor Market services and intermediation through PES
		Other Active Labor Market Programs
	Labor market	Out-of-work income maintenance (Unemployment benefits, contributory)
		Out-of-work income maintenance (Unemployment benefits, non-contributory)

	policy support (passive LM programs)	
SOCIAL ASSISTANCE	Unconditional cash transfers	Poverty targeted cash transfers and last resort programs
		Family/ children/orphan allowance (including orphan and vulnerable children benefits)
		Non-contributory funeral grants, burial allowances
		Emergency cash support (including support to refugees/returning migrants)
		Public charity, including zakat
	Conditional cash transfers	Conditional cash transfers
	Social pensions (non-contributory)	Old age social pensions
		Disability benefits/war victims noncontributory related benefits
		Survivorship
	Food and in-kind transfers	Food stamps, rations, and vouchers
		Food distribution programs
		Nutritional programs (therapeutic, supplementary feeding and PLHIV)
		In kind/non-food support (education supplies, free texts and uniforms)
	School feeding	School feeding
	Public works, workfare, and direct job creation	Cash for work
		Food for work (including food for training, food for assets etc.)
	Fee waivers and subsidies	Health insurance exemptions and reduced medical fees
		Education fee waivers
		Food subsidies
		Housing subsidies and allowances (and "privileges")
		Utility and electricity subsidies and allowances
		Agricultural inputs subsidies
	Other social assistance	Scholarships/education benefits
		Social care services, transfers for care givers
		What is left out from above categories

Source: World Bank (2018)

This paper focuses on social assistance, the non-contributory programs. In the ASPIRE database, those programs, in turn, are divided into the categories shown in Table A.1: Conditional Cash Transfers (CCT), Unconditional Cash Transfers (UCT), Social Pensions, School feeding, Public works, Food and in-kind programs, Health fee waivers, and Other social assistance.

Annex B

Honduras[45]

Conditional Cash Transfers Program

BONO VIDA MEJOR

The purpose of the Bono Vida Mejor, which is the continuation of the Bono 10,000 Education, Health and Nutrition Program,46 is to contribute to breaking the intergenerational cycle of poverty through the creation of opportunities, development of skills and competencies in education, health, and in particular the nutrition of families in extreme poverty in Honduras. This nationwide program seeks to promote intersectoral strategies and actions (health-nutrition) through coordination with other social programs related to employment, income, and family savings. The program has been running since 2010.

The Program has four subcomponents: 1) Nutrition Bonus, 2) Health Bonus, 3) Education Bonus, and 4) Basic Support. The Nutrition Bonus focuses on the adoption of a better diet using a voucher that allows access to diets and foods rich in micronutrients for boys and girls from 0 to 5 years old, pregnant women, and those who are within 40 days of the puerperium.

The mode of operation requires the registration of children and pregnant or lactating women in a Health Unit to carry out controls. The payment is quarterly and is made through the Bank of Honduras. The program implementation is done by geographical zoning, participants need to be registered through the Single Registry of Beneficiaries (RUB), and the community also participates through the Community

[45] Directly from ECLAC 2022- Database of non-contributory social programs

[46] These programs are based on the existence of previous conditional transfer programs such as the Family Allowance or PRAF (1990-2009) and two programs supported by the Inter-American Development Bank during subsequent periods, PRAF/IDB Phase II (1998-2005) and PRAF/IDB Phase III (2006-2009). PRAF II incorporated an experimental design that allowed various impact evaluations carried out by the International Food Policy Research Institute (IFPRI), becoming one of the main references for this type of program. All these programs covered the needs of families living in extreme poverty with children under 6 years of age at risk of malnutrition. In the case of PRAF/IDB, coverage was extended up to 12 years of age and/or pregnant or lactating women. The PRAF/IDB III Program presented a regional coverage covering the departments of Intibucá, La Paz, Lempira and Santa Bárbara. It consisted of two modalities: an initial intervention in which monetary transfers (Nutrition Bond) are granted without conditions but promoted the demand for education and health services and a second comprehensive intervention where a health bonus and another for education were delivered, subject to conditionalities.

School Committees (CEC). The households that meet the selection criteria of the Program are included. This program is also based on the information provided through the population census and household surveys to identify the geographical areas with the highest incidence of poverty. This information complements the single socioeconomic characterization file of the Single Registry of Beneficiaries (RUB) to identify households in extreme need. The responsible agency is the Secretary of State in the Presidential Office, and the executing agency is the Family Allowance Program (PRAF), through the Ministries of Health and Education.

The main sources of financing for the execution of this program are the Government of Honduras, the Inter-American Development Bank (IDB), the World Bank (WB), and the Central American Bank for Economic Integration (CABEI).

		2012	2013	2014	2015	2016	2017
Budget Execution							
US$		100,188,870	135,338,742	66,392,251	46,967,687	51,448,675	58,466,485
%GDP		0.55%	0.74%	0.34%	0.23%	0.24%	0.25%
Population Coverage							
Estimated number of people in recipient households		806,231	1,118,250	1,622,445	1,538,830	1,340,981	1,588,475
% Population		9.60%	13.09%	18.69%	17.46%	14.99%	17.51%
Cash Transfers (US$)-Monthly							
Minimum amount per capita (a)		3.7	3.5	3.4	1.8	3.8	3.7
Maximum amount per household.(b)		44.1	40.9	39.8	38.0	36.9	35.5

Source: ECLAC 2022- Database of non-contributory social programs

(a) The minimum amount corresponds to the monthly transfer of the urban domain scheme.

(b) The maximum amount corresponds to the monthly transfer of the rural domain scheme.

NOTE: The total minimum amount per family in rural areas is approximately 250 USD/year, and the maximum, about 455 USD/year.

Labor Programs

Con Chamba Vivis Mejor

The main objective of the program is to generate employment, forging job skills and developing skills within companies to meet the needs of the labor market. Program participants must be registered with the Honduran National Employment Service (SENAEH). The program will help generating direct and

indirect employment, providing also technical and professional training. The program provides participating companies with an incentive of half the minimum wage for three months for each new employee hired, which includes the 2 months of training allowance and 1 additional month as an incentive for job continuity. Companies must grant employees an Individual Work Contract for an indefinite period, register employees with the Honduran Social Security Institute and pay the worker at least the legal minimum wage (completing the difference of the monies already paid by the Government). In addition, the participants will be able to receive training in soft skills and life skills by the National Institute of Professional Training (INFOP). Beneficiaries: Companies will receive the incentive if they have at least 70% of their employees enrolled in the program at the end of the third month.

Chamba Comunitaria

A Committee will be in charge of evaluating the projects that are best suited for the development of communities and that have the greatest impact on job creation. Its objective is to provide support to unemployed people who have not had access to a formal employment opportunity. The program will support the execution of minor social works, forest conservation or agricultural improvement in their communities. These projects will promote economic and social growth through the generation of employment. The duration of the project is three months and can be extended only once.

Chambita

Its objective is to provide support to unemployed people, improving their abilities and skills to achieve an effective insertion into the labor market or promote entrepreneurship. Participants can access job guidance and advice, professional training, job skills certification, technical training, and professional internships, among others, to improve access to productive opportunities and employability conditions. The recipients receive a transportation and food incentive in the amount equivalent to USD 100 in periods of two months up to a maximum of three interventions; In addition, they can receive health insurance.

Chamba Joven

Participants in this program must be between 18 and 30 years old, high school graduates, university students, or unemployed graduates. The incentive will consist of the payment of the equivalent of USD 180 to young graduates that completed high school and USD 250 for young graduates with a university degree, for a period of up to five months. They should work at least 4 hours per working day in a company or productive units. The beneficiaries should complement their work with professional or technical training modules under the concept of dual training.

Beneficiaries of all labor programs: Unemployed in a situation of poverty and social exclusion at a national level. The beneficiaries should be registered in the Unique Registry of Beneficiaries of Social Programs (RUB). All the labor programs are under the responsibility of the Office of the Presidency and the funding is provided by the Government of Honduras.

	2014	2015	2016
Coverage			
Effective- All Labor Prog.	30,326	46,290	79,756
Con Chamba Vivís Mejor	30,326	23,600	23,474
Chamba Comunitaria		22,690	33,666
Chamba Jóven			22,616
% Population of all Labor Programs	0.38%	0.56%	0.95%

Source: ECLAC 2022- Database of non-contributory social programs

Another program is **"Formacion professional para jovenes en riesgo de exclusion social – Pro-Joven." It tries** to improve the effectiveness and coverage of the training system for vulnerable young people to help them achieve greater insertion in the labor market by improving their skills through integration into vocational training processes. The program also tries to improve the quality and coverage of the Popular Workshops (training modality of the National Professional Training Institute -INFOP- through local civil society operators) and adapt the training to the demand of dynamic sectors such as construction and tourism through specialized Training Centers.

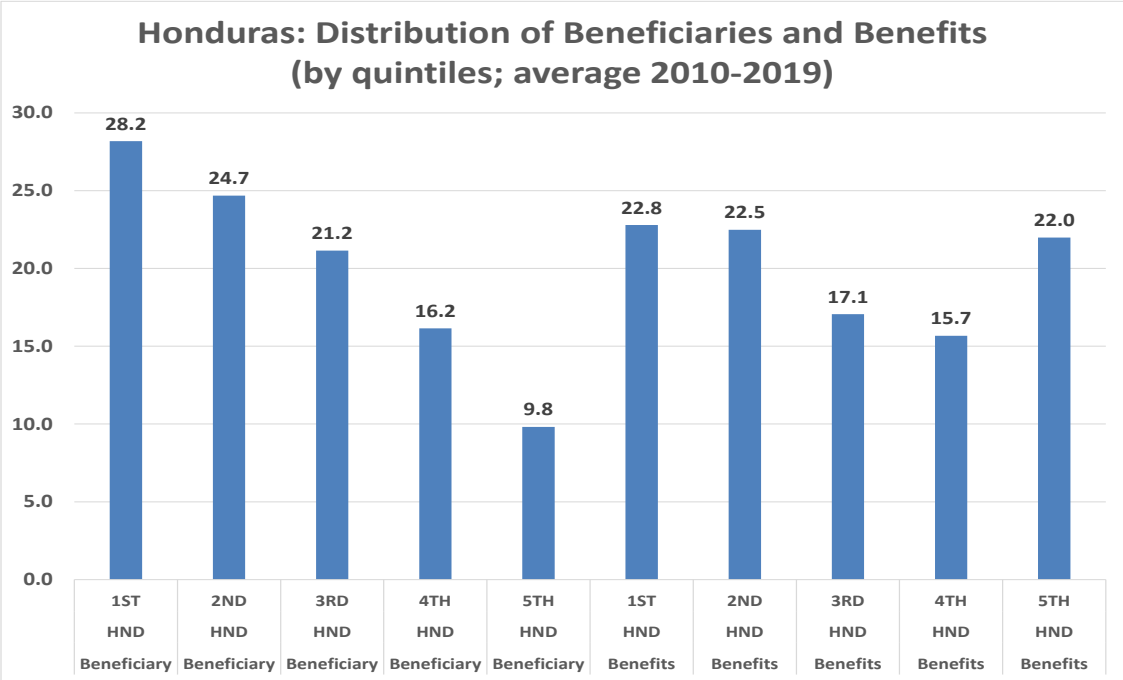
Beneficiaries: Men and women between 16 and 30 years old who are at risk of social exclusion, living in violent and marginalized neighborhoods in big urban areas of Honduras.

Geographic coverage: Tegucigalpa, San Pedro Sula, Puerto Cortés, Santa Rosa de Copan, Trujillo, Tela, Comayagua, La Ceiba.

The Organization in charge of the project is Agencia Suiza para el Desarrollo (COSUDE) and it is also the one that provides the funding. The program indicates that in 2019, 1962 young people participated in the training processes in different regions. 1596 jobs were created, of which 42% (838) achieved a six-month tenure. An additional 38% (758) landed a job or enterprise of less than six months.

Annex C

Figure C.1. Honduras: Distribution of Beneficiaries and Benefits (by quintiles; average 2010-2019)



Source: authors with data from ASPIRE, World Bank

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