

The outlook for food prices in Asia

Macro factors point to modest food inflation in 2022 and beyond

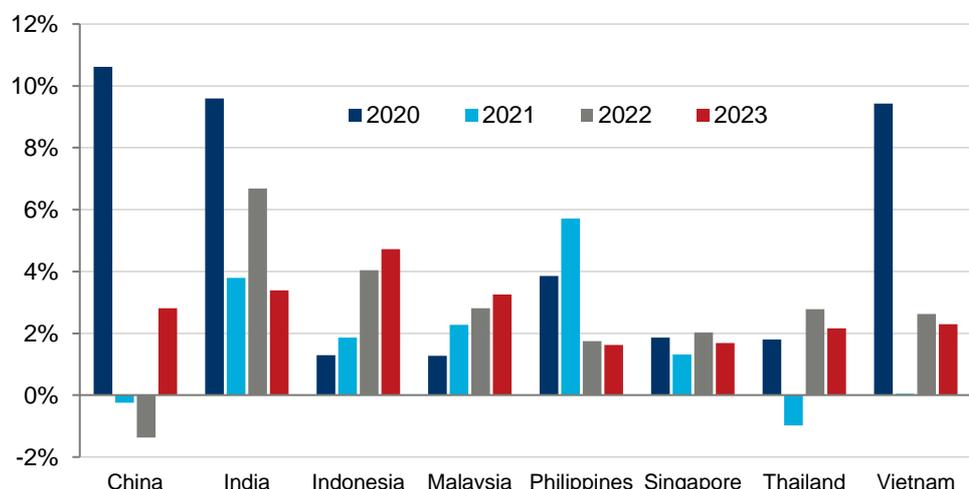
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- For Food Industry Asia, Oxford Economics constructed bespoke forecasts for the food component of the consumer price index in eight Asian economies. We find India and Indonesia can be expected to see faster food price growth in 2022, but food price inflation elsewhere should be much more contained.
- Our analysis of the cost structure of food manufacturers across Asia highlights several relevant macroeconomic drivers, including world food commodity prices, exchange rates, energy costs at home and in global markets, and labour and non-labour manufacturing costs at home.
- Many of these cost drivers will be more favourable for food manufacturers in the coming couple of years. We anticipate global energy costs easing modestly, as well as the gradual resolution of supply chain shortages. For some countries this will be augmented by stronger exchange rates, which lowers the domestic cost of imported commodities and goods.
- But as domestic activity unlocks (and eventually tourism restarts in earnest), demand for workers will accelerate, meaning an pickup in wage growth. For food manufacturers in some Asian economies this will offset the gains from cheaper physical inputs, and lead to accelerating consumer food price inflation in 2022.
- We expect India and Indonesia to see accelerating food price inflation in 2022, easing gradually thereafter (only gradually so in Indonesia’s case). But for most other Asian economies the outlook is for food price inflation at or below 3% per year for the coming couple of years.

**Figure 1:
Consumer food
price inflation in
Asia 2020-2023**

Consumer food price inflation on year ago



Source: Oxford Economics

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Majority of inputs to Asia's food manufacturing sector are domestically produced, meaning local economic conditions are a key driver of food prices.

Figure 2: Agricultural produce accounts for 40-65% of input costs for Asian food producers

A food production cost structure for Asia

With the exception of Singapore (which imports around 90% of its food), most countries in Asia produce the majority of food they consume. So a forecast for food price inflation begins with the cost structure for domestic food producers. Across Asia typically 50% or so of the purchase of intermediate inputs to food production is accounted for by domestic agricultural output, with a modest contribution (0-5%) from agricultural inputs from overseas. 20-30% of the food manufacturing sector's costs are accounted for by intra-sector trade, and 5-15% is on transport, packaging materials and fuel & chemicals.

There are wide differentials in cost structures across Asia, accounting for a range of geographical, economic and policy differences. Differential cost structures will impact on the relative importance of different cost drivers (for example food commodity prices versus energy costs, labour costs, or wider manufacturing cost pressures) in our forecasts for consumer food prices. More detail on the key cost drivers for food manufacturers in Asia are set out in the annex to this note.

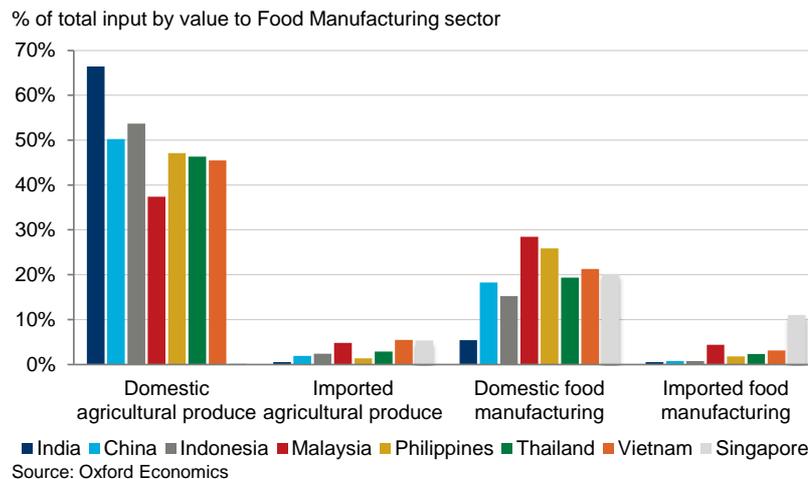
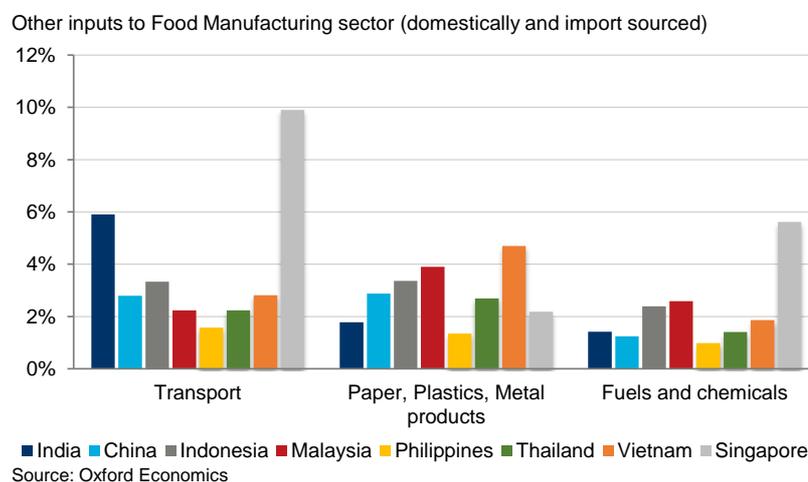


Figure 3: Transport, packaging and fuels and chemicals accounts for a further 5-15% of food producer costs



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Economic drivers of food production costs in 2022-23

We expect several key macro drivers for the food manufacturing sector to become more favourable through 2022-2023:

Cooling energy prices. Most raw materials for Asia's food manufacturing sector are sourced from domestic farms (Figure 2), but given the energy-intensive nature of agriculture, farm output prices are impacted by fuel costs. Having accelerated sharply through 2021, energy commodity prices are set to ease through 2022, on the back of improved global fossil fuel supply. This should provide some relief to agricultural producers (and on to food manufacturers) through cheaper fuel and electricity. Manufacturing firms will also benefit from easing fuel prices for their direct energy use.

Unlocking supply chains. Supply chain shortages have been a key challenge for global business through 2021. Moreover, in several sectors important to food producers - including materials relevant for packaging (paper and plastics), and processing (chemicals and fuels) - the situation looks to have worsened in the final months of 2021. But our latest Global Risk Survey finds a rising share of businesses (around 80%) expect the global supply chain squeeze to be much improved by Q4 2022. This should lower the cost of transport and logistics services and help slow whole-economy producer price inflation to more "normal" rates across the world economy, including in Asia.

Stronger outlook for Asian currencies. Slower roll-out of COVID vaccines has meant a more gradual reopening of ASEAN economies through 2021. But we expect critical vaccination rate thresholds for relaxation of social distancing measures to be met through 2022, and a faster recovery in domestic activity. This is expected to support currency appreciations, which will help further ease the cost of imported energy, other commodities, and in some economies (Singapore in particular) imported foods.

Faster wage growth. As domestic activity rebounds in earnest in late-vaccinating countries (especially those where tourism is a key employer) we expect wage inflation to accelerate through 2022-2023. China's especially tight labour market will also see continued rapid growth in wage costs. This will push up the cost of labour for food manufacturers, as well in the agricultural, manufacturing and transportation firms which supply the sector (see Figure 2).

	Total percentage change in food cost driver over historical and forecast periods							
	Fossil fuel prices		Labour Costs		Exchange rate*		Non-labour production costs	
	2019-21	2021-23	2019-21	2021-23	2019-21	2021-23	2019-21	2021-23
China	8.1%	-8.1%	18.4%	16.3%	-6.6%	-1.7%	9.1%	-4.3%
India	10.8%	-18.3%	13.2%	19.9%	4.8%	0.6%	20.8%	-4.6%
Indonesia	16.3%	-6.5%	-2.5%	20.8%	1.0%	-2.3%	17.9%	-5.6%
Malaysia	-0.1%	-6.2%	0.4%	14.4%	0.0%	-5.7%	15.3%	-9.6%
Philippines	-6.8%	-14.7%	0.0%	15.8%	-4.9%	-2.2%	8.3%	-5.9%
Singapore	6.5%	-3.0%	4.1%	9.8%	-1.6%	-2.8%	12.7%	-6.3%
Thailand	-9.3%	4.8%	3.1%	8.2%	3.0%	-3.2%	14.6%	-4.8%
Vietnam	56.5%	-24.9%	3.9%	15.4%	-1.3%	1.2%	24.8%	-7.7%

* -ve = fewer local currency units per US \$, ie. appreciating local currency

Energy costs, supply chain pressures and exchange rate appreciations all help constrain food manufacturing costs in 2022

But reopening economies will lead to rebounding labour markets, and rising wage costs

Figure 4: Key macroeconomic drivers for food costs, 2019-2023

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Food price inflation to remain high in India, accelerate in Indonesia

But food price pressures across most of the rest of Asia look better contained

Outlook for consumer food prices in Asia 2022-2023

In **India**, manufacturing unit wage costs and broader producer prices have both accelerated through the second half of 2021. Moreover, disinflationary pressures from falling onion, potato and garlic prices look to have run their course. Our analysis suggests that sharply increasing costs of production and processing will dominate consumer price index (CPI) food inflation in 2022. After easing from 9.6% in 2020 to 1.7% in 2021, we forecast an acceleration in food price inflation to 9% in 2022Q1, easing gradually through the year thereafter. We forecast food price inflation for 2022 at 6.7%, easing back towards 3% over the following years as macroeconomic cost drivers ease.

In **Indonesia** CPI inflation in both aggregate and for food has trended gradually slower through the past decade. But we anticipate a pickup in both in 2022. We find average wages and broader producer prices to be key drivers of food costs in Indonesia, and both are set to accelerate through 2022-23. Reopening of the economy will boost labour demand, pushing up wage inflation. Meanwhile producer price inflation (reflecting a range of costs such as energy and logistics) will accelerate a little further before cooling only modestly later in 2022. We forecast consumer prices for food to accelerate from 2% in 2021 to just below 5% per year through 2022-2024.

Food prices in **China** were massively impacted by the swine flu epidemic of 2019-2020, which doubled pork prices. Base effect from pork prices falling through 2021 has meant overall food price inflation has been negative through H2 2021. Barring further supply shocks, food prices should evolve more in line with long-term drivers. The government recently announced an easing of electricity price caps, having tightly limited price rises through 2021. We expect electricity prices will rise 5% through 2022, and a 3% in 2023 (even as the cost of fossil fuels themselves falls). With a tight labour market, wage growth will remain solid at around 7-8% per year, pushing up labour costs for food producers. Our forecast is for the food component of CPI to fall a further 1% or so in 2022 as the pork effect lingers. But food price growth will rebound to 2.8% in 2023, and 4.8% in 2024.

Price pressures remained muted in **Malaysia** through the pandemic, with CPI inflation negative in 2020 and food inflation at historic lows. But the reopening of the economy through 2021, as well as supply-side cost pressures familiar around the world, have pushed inflation back up towards normal rates. Our equation for Malaysia finds a role for unit wage costs in manufacturing and broader producer prices. We find that supply-chain disruptions in Malaysia are more modest than in neighbouring economies, and we therefore expect a swifter deceleration of producer costs in 2022 than elsewhere. For wage costs the pickup will be more durable, with wage cost growth remaining around 3% as the labour market tightens. We forecast food price inflation to continue to gather pace through the coming year, but “top out” earlier and lower than in ASEAN neighbours. After food price inflation of 2.3% in 2021 we forecast 2.8% in 2022 and 3.3% in 2023.

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Our analysis finds a stronger role for the exchange rate (combined with world food commodity prices) **for Philippines** than for any other country in our study. As the peso depreciated through 2021, in conjunction with rising global commodity prices, this contributed to food price inflation in Philippines accelerating above 6%. We expect the peso to recover through the second half of 2022 and into 2023, providing a restraint on food prices. But recovery will also underpin wage growth. So, while food price inflation will slow due to falling import commodity costs, we see a floor at around 2%. From 2023 onwards, these counterbalancing effects are both forecast to ease, keeping food price inflation around 2% in the medium term.

Food price inflation **in Singapore** has been low and relatively stable for the past decade – even through the initial pandemic period, when a small, import-dependent economy might have been expected to see much greater price volatility. Unit labour costs have fallen in Singapore over the past year, but with an exodus of skilled migrant workers during the pandemic we forecast wage pressures will rebound during the economic recovery. But as the Monetary Authority of Singapore allows the dollar to appreciate this will accelerate the falling cost of food imports providing a powerful downward force to consumer food prices. Overall, we expect food price inflation to gather pace modestly through 2022 - peaking around 2% - before easing in the following couple of years.

Thailand has seen a structural improvement in its inflation performance through the past decade and averted an acceleration in food prices during the pandemic (although some specific commodities did see sharper increases). Our estimations find broader producer prices and weekly earnings to be two key drivers of food price growth in Thailand. We expect producer price growth to accelerate a little further in the near term as shortages persist and energy prices edge up further. But more important will be the rise in wages, which we expect at around 5% per annum in the medium term, as labour demand catches up with a shrinking workforce (Thailand's working age population has been falling since 2019). We forecast these two effects to largely offset each other in 2023, keeping food inflation around 2% on an annual basis – modest by regional standards but an acceleration on recent years for Thailand.

Food prices in **Vietnam** were more heavily impacted by COVID supply disruption in than in other ASEAN economies, with the closure of wholesale markets and slaughterhouses particularly impacting on meat supply. Food price inflation accelerated to 12% in June 2020. But as restrictions on business operations were eased through the 2020 H2 prices stabilised and have remained stable through most of 2021. Nevertheless, we forecast an acceleration in food price inflation in the coming couple of years. Our econometric analysis finds producer prices for electricity and wage costs in manufacturing to be two key drivers of food prices in Vietnam, and both will gather pace into 2022-2023, easing from late 2023 onwards. We forecast CPI food inflation to pick up to a modest peak of around 3% in late 2022, easing back towards a longer-term rate of around 2% in the medium term – broadly consistent with the average rate seen between 2012-2018.

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Annex 1: Our bespoke food price equations for Asia

Our equations for forecasting the food component of the consumer price index use a standard methodology from our Global Economic Model (GEM). The framework is known as an Error-Correction Mechanism (ECM), where the error/residual from a long-term relationship plays a role in determining short term movements, alongside short-term economic shocks. In our modelling, we take as broad a view as possible on price pressures facing food manufacturers. We include world food prices (converted to local currency), unit wage costs in manufacturing, whole economy average earnings, producer prices at the whole economy level, producer prices for electricity, domestic fuel prices (i.e., coal, oil and gas prices), and a broader measure of non-labour costs in the manufacturing sector (to account for packaging costs). In Figure 5 we illustrate which variables are found to be key drivers of food prices in our econometric analysis across the countries in our study.

We do not attempt to forecast the evolution of, or shocks to, food supply chains - as important as these have clearly been in several Asian economies in recent years. This is because anticipating e.g., when the next outbreak of Swine Fever in China will be, or whether this year's monsoon will be longer and wetter or shorter and dryer is not an area where economic forecasters have the expertise. In our forthcoming work with FIA, we will explore the economic impact of climate change on food prices in Asia through an additional bespoke analysis. In this report we only concern ourselves with the economic and financial drivers of food price pressures, and how these will impact on food prices in the years ahead. However, using "dummy" variables which account for one-off shocks in specific periods and locations we can account for historical supply shocks.

Using the analysis of the cost structure of the food manufacturing sector (Figures 2 and 3) we estimated the relationship between consumer food prices and a range of macroeconomic variables. Our equations pass standard econometric tests and predict between 44% (India) and 72% (Vietnam) of historical variation in the rate of food price inflation over the past couple of decades.

	CHN	IND	IDN	MYS	PHL	SGP	THA	VNM
World food prices in local currency								
Manufacturing wage costs								
Electricity prices								
Non-labour production costs								
Producer price index (whole economy)								
Goods import prices								
Average weekly earnings								
Domestic fuels price								

Figure 5: Key econometric drivers of food prices in Asia