

CHAPTER

# 8

## Nutrition



This chapter is part of the World Bank's 2020 Public Expenditure Review for Indonesia.

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## Key Messages

- A** Stunting rates in Indonesia are among the highest in the world but, fortunately, stunting interventions are among the most cost-effective investments for human capital.
- B** The GoI launched a new national strategy on stunting in August 2017, StraNas, involving 22 ministries across several sectors: health, water and sanitation, early childhood education, social protection, and food security.
- C** A forthcoming Public Expenditure Review on Nutrition (PER Nutrition) will assess: (i) the adequacy of current public spending on nutrition-related programs; (ii) the allocation of spending across interventions; and (iii) their overall effectiveness

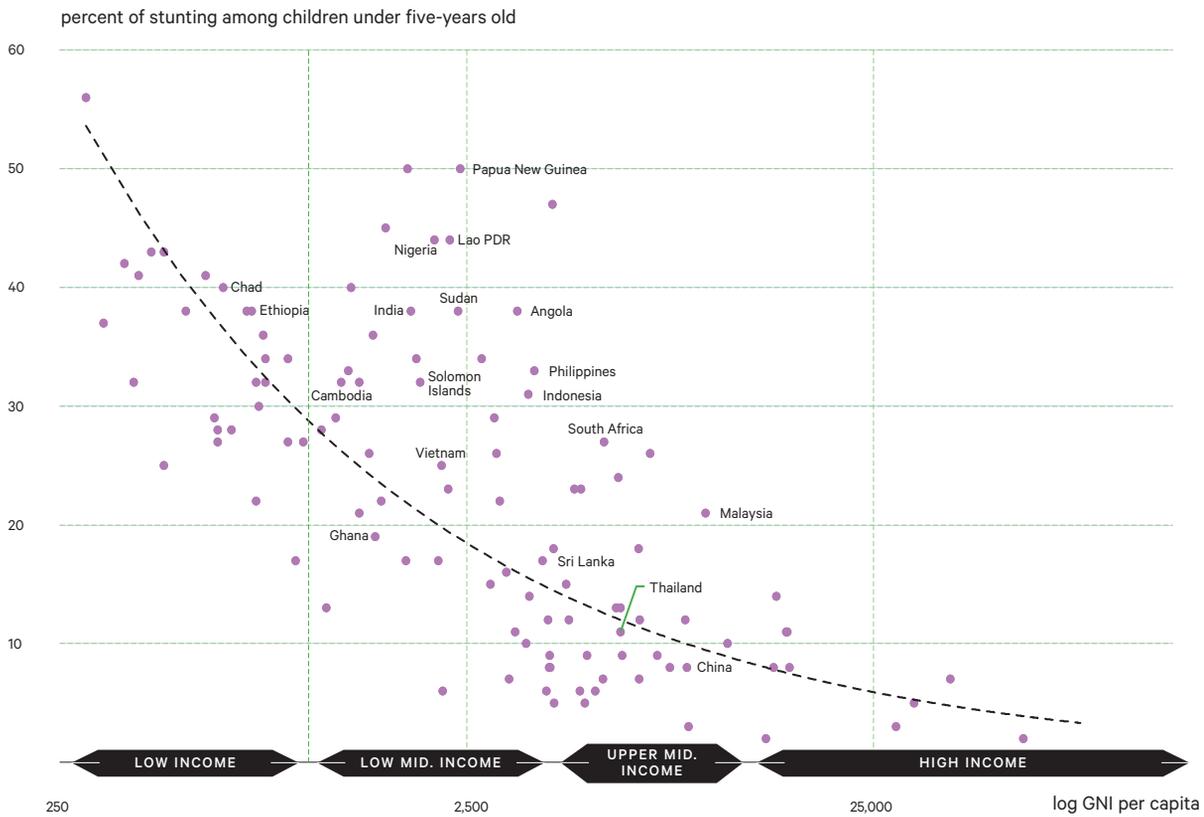
## Preliminary Findings

- A** The Nutrition PER faced considerable difficulty in collecting data, highlighting the critical need to invest in, and standardize, health information and accounting systems.
- B** The health sector is only responsible for 12 percent of nutrition spending. Most nutrition-related expenditures are allocated to nutrition-sensitive interventions delivered by other sectors, highlighting the need to establish processes for information exchange across all the relevant ministries.
- C** Based on preliminary estimates, it would seem that Indonesia's spending on nutrition is more than adequate to cover a full package of nutrition-related interventions.
- D** This suggests that tackling stunting in Indonesia may be less about spending more on nutrition, and more about improving the governance, accountability, and the allocation and use of resources.

### Further key reading

World Bank (2020). "Spending Better to Reduce Stunting in Indonesia" (Nutrition Public Expenditure Review), <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/207941593673280120/spending-better-to-reduce-stunting-in-indonesia-findings-from-a-public-expenditure-review>

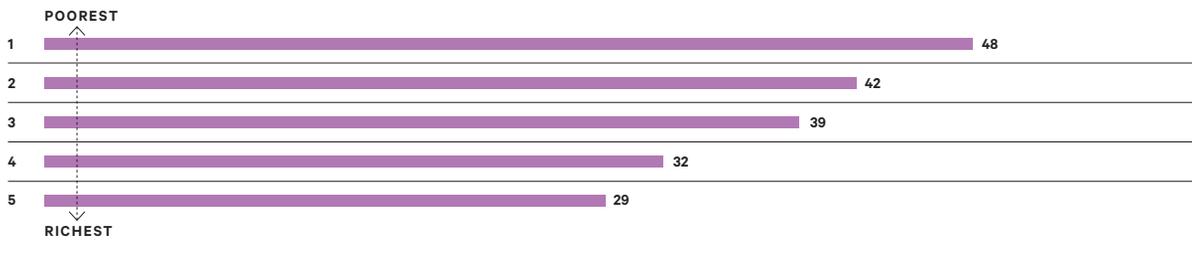
**FIGURE 8.1.** High stunting rates are found in both rich and poor households



Note: Indonesia's stunting figure using Riskesdas 2018  
Source: World Development Indicators, 2019

**FIGURE 8.2.** High stunting rates are found in both rich and poor households

Percent of stunting among children under five by consumption quintile



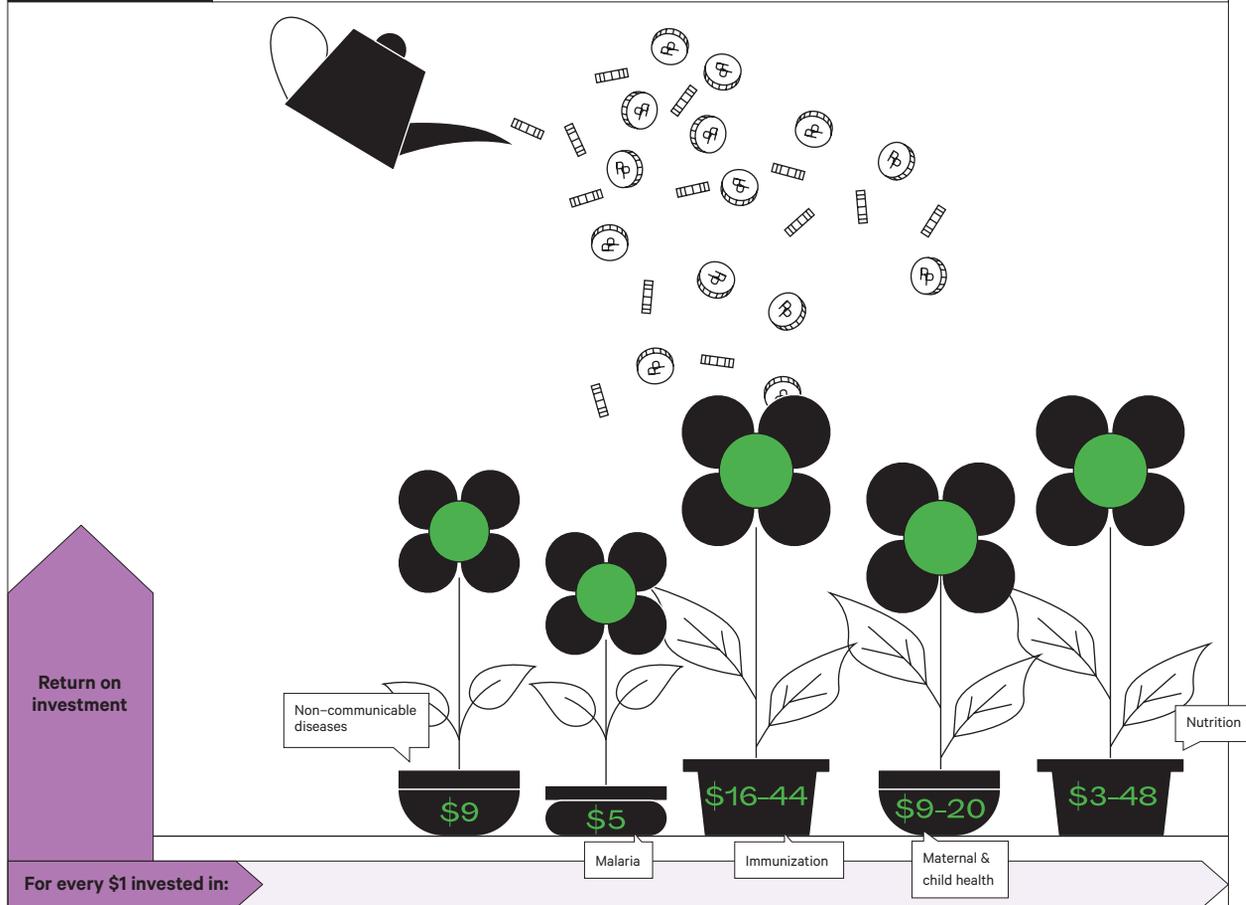
Source: World Bank staff calculations from Riskesdas, 2013

**S**tunting rates in Indonesia are among the highest in the world (see Figure 8.1). Nearly 9 million children under the age of five (or 31 percent) are stunted, that is, they are short for their age. This is higher than most regional and income-level peers, and on a par with many fragile Sub-Saharan African countries such as Sudan, Ethiopia, Chad and Angola. While the prevalence of stunting varies across Indonesia, it cuts across socioeconomic backgrounds, affecting boys and girls, rural and urban households, and the rich and poor alike—although children

from poorer families are 1.7 times more likely to be stunted than those from richer backgrounds (Figure 8.2).

Fortunately, stunting interventions are among the most cost-effective investments for human capital. First, they are highly affordable. A priority package of nutrition interventions<sup>216</sup> costs just US\$2.3 per child per year, while a full package costs US\$7 per child per year. Second, the returns on investment are significant. Every dollar invested on nutrition yields up to US\$48 in return (see Figure 8.2).

<sup>216</sup> Priority\* and full package of nutrition interventions includes: antenatal micronutrient supplementation\*; infant and young child nutrition counseling\*; balanced energy-protein supplementation for pregnant women; intermittent presumptive treatment of malaria in pregnancy in malaria-endemic regions\*; vitamin A supplementation for children\*; prophylactic zinc supplementation for children; public provision of complementary food for children; treatment of severe acute malnutrition among children\*; iron and folic acid supplementation for (i) non-pregnant women 15-19 years old in school only\* and (ii) all non-pregnant women; staple food fortification (i) wheat and maize flour\* and (ii) rice; pro-breastfeeding social policies\*; national breastfeeding promotion campaigns\*.

**FIGURE 8.3.** Investing in nutrition has high economic returns


Source: Authors' rendering of Yamey G, Beyeler N, Wadge H, Jamison D. Investing in Health: The Economic Case. Doha, Qatar: World Innovation Summit for Health, 2016

**I**n a renewed effort to improve its nutrition outcomes, the Government of Indonesia (GoI) launched a new national strategy (StraNas) on stunting in August 2017. Recognizing that tackling stunting in Indonesia will require a complex and multi-sectoral effort spanning all levels of government, the stunting StraNas committed 22 ministries and an estimated US\$3.9 billion per year to converge priority interventions across several sectors: health, water and sanitation, early childhood education, social protection, and food security. To assess the success of this effort, it is essential to monitor and evaluate nutrition outcomes and expenditures. The World Bank thus initiated a Public Expenditure Review (PER) on Nutrition to assess: (i) the level of current public spending on nutrition-related programs; (ii) the allocation of spending across interventions; and (iii) their overall effectiveness. While an in-depth report is forthcoming, preliminary findings are listed below:

**1. The GoI cannot assess what it cannot measure. The PER on Nutrition has faced several difficulties in collecting data.** First, nutrition-related activities are scattered across several ministries and agencies.<sup>217</sup> Between 2015 and 2018, an average of 92 percent of all stunting-related activities were captured by three sectors: social protection (45 percent); water and sanitation (35 percent); and health (12 percent). Second, expenditure and outcome data at the district level, where more than half of nutrition expenditures takes place, have been difficult to collect. Reporting protocols, budget formats, and information systems are not standardized across all 514 districts. This not only makes aggregation at the central level a monumental undertaking, but also limits the generalizability of any findings. *This highlights the critical need to: (i) invest and standardize health information and accounting systems; and (ii) establish processes for information exchange across the relevant ministries, as the MoH is responsible for just one-eighth of all nutrition-related expenditures.*

**2. While the central government's nutrition-related expenditure is likely underestimated, preliminary estimates from a few districts suggest that overall government spending on nutrition may be adequate, and the issue is more about efficiency in the allocation and use of resources.** Central government spending on stunting interventions amounted to IDR 73,684 per capita (US\$5.5) in 2017 and was expected to increase to IDR 78,090 (US\$5.8) per capita in 2018. However, these estimates do not include subnational expenditures, where the bulk of nutrition-related spending occurs. In the six districts where subnational data were collected as part of the PER on Nutrition exercise, local government stunting-related expenditures averaged IDR 647,378 per capita (US\$48), ranging from IDR 124,532 (US\$9) to IDR 1,601,442 per capita (US\$120). *Based on these estimates, it seems that Indonesia's spending on nutrition is adequate to cover a full package of nutrition interventions. However, it is unclear how representative these six districts are of the rest of Indonesia*

<sup>217</sup> The Ministries of Health; Social Affairs; Education; Agriculture; Public Works and Housing; Fisheries; and the Family Planning and Food and Drug Agencies.

and there are likely wide variations in local government nutrition spending. Overall, the findings suggest that tackling stunting in Indonesia may be less about spending more on nutrition, and more about the allocation and use of resources.

**3. Most nutrition-related expenditures are allocated to nutrition-sensitive interventions.** The GoI's approach comprises nutrition-specific and nutrition-sensitive interventions. Nutrition-specific interventions address the immediate causes of undernutrition (e.g., inadequate dietary intake and disease or poor health status), while nutrition-sensitive approaches address the underlying determinants of undernutrition (e.g., food insecurity, inadequate care and feeding practices, unhealthy living environments, poor health services). While most nutrition-specific interventions are long-standing, highly cost-effective nutrition interventions, there is significantly less information on the cost-effectiveness of nutrition-sensitive interventions. This is mainly because they address multiple objectives other than nutrition, such as food security, income generation and women's empowerment, and are hence difficult to capture in a single measure. Over the period 2015-18, nutrition-sensitive expenses made up 90 percent of total expenditures on stunting. Of this, the largest share of expenses went to: (i) *Program Keluarga Harapan* (PKH)—a conditional cash transfer program (17 percent); and (ii) *Beras Sejahtera* (Rastra/Sembako)—a subsidized rice program that is gradually being replaced by an e-voucher that enables families to purchase subsidized eggs and rice (29 percent).

**4. At the central level resources could be better targeted.** In 2018, nearly IDR 930 billion was spent on supplementary foods<sup>218</sup>—the second-highest share of nutrition-specific expenditure. The MoH procures the program's goods and distributes them to

frontline primary-care providers (i.e., Puskesmas) via the District Health Office warehouse. The program targets undernourished (weight/height) children aged 6-59 months, underweight primary school children, and pregnant women at risk of chronic energy deficiency.<sup>219</sup> However, the 2018 National Basic Health Survey (Riskesdas) showed that the supplementary feeding was not well targeted, as only 10 percent of the program beneficiaries were malnourished children and 41 percent of beneficiaries were normal children. The study also found that only about 25 percent of pregnant women at risk of energy deficiency received supplementary food. *This highlights the need to improve targeting mechanisms and provide clearer intervention guidance and regular re-training to frontline health workers so that they can properly identify at-risk households and reinforce the quality of service delivery.*

**5. Although community health centers (Puskemas) are the backbone of the Indonesia public health system, many of the nutrition-related interventions are delivered at health service posts (Posyandu) at the community level.** Posyandu are run by a cadre (*kader*) of health volunteers recruited from the community and trained in basic disease prevention and primary care. At least five ministries and over 20 laws govern the management and operation of Posyandu. The MoH is responsible for providing guidelines and Standard Operating Procedures (SOPs) for health activities, and providing support for basic inputs such anthropometric tools, iron folic acid supplements, vitamin A and vaccines via the District Health Office. Midwives from nearby Puskesmas are meant to provide technical support and supervision. The Ministry of Religious Affairs, the Ministry of Home Affairs, the Ministry of Villages and the National Family Planning Coordination Board, as well as subnational governments (SNGs), support Posyandu functions by managing kader and ensuring

sufficient operational funds for Posyandu activities.

**However, the quality of nutrition-related service delivery needs to be improved.** In 2016, a comprehensive and nationally-representative survey of the Puskesmas and Posyandu service delivery system was conducted—the Quantitative Service Delivery Survey. The survey found a shortage of equipment, training and adequate supervision at Posyandu. While most had traditional hanging scales, only 59 percent had infant scales, half of which were properly calibrated. Length boards and measurement tapes were available at 30 and 67 percent of Posyandu, respectively. The survey found that, while most Posyandu opened every month and held an average of one session per month (85 percent), less than half were staffed by the required minimum of five kader (49 percent) and these volunteers worked less than five hours per month. Only 35 percent of kader reported conducting any kind of home visits; for those that did, they saw between one to five households in the past month for less than 10 minutes per household. On one hand, kader cited insufficient funds to do more outreach—typically receiving less than IDR 50,000 (US\$3.7) per village meeting, which is also meant to cover travel expenses. On the other hand, they reported difficulties in getting caregivers to understand and gain support for the message being delivered. This may be partly due to the lack of training and supervision received. Only a limited number of staffs in Puskesmas have received training in nutrition and are unable to provide adequate supervision at the community level. And just one in 10 kader received any training before starting work at their local Posyandu. Poor implementation of nutrition-related interventions directly impacts key nutrition-specific indicators (Table 8.1). *Improving quality will require a greater focus on developing SOPs and securing resources for more communication materials, training, and supervision of kader.*

<sup>218</sup> There is an ongoing debate about investing in food supplementation versus other more cost-effective interventions.

<sup>219</sup> Chronic Energy Deficiency showed by upper arm circumference (LLL) measurement smaller than 23.5 cm.

**FIGURE 8.4.**

**Most nutrition-related expenditures can be considered 'nutrition-sensitive' interventions that are not under the purview of MoH**

Unit: Share of total nutrition expenditure, 2018 (percent)

**Specific**

Exclusive breastfeeding promotion	0.0%
HIV for pregnant mother	0.0%
Immunization	10.0%
Calcium and Iodium	0.0%
Deworming	0.4%
Integrate Management Childhood Illnesses (MTBS)	0.0%
Malaria	0.6%
Malnourish management	0.0%
Infant Young Child Feeding (PMBA)	0.0%
Supplemetary feeding (PMT)	4.3%
Growth monitoring	0.2%
Antenatal care	0.2%
Diarrhea treatment	0.0%
Iron Folic Acid	0.0%
Vitamin A	0.0%

**Sensitive**

Access to clean water	18.7%
Access to sanitation	13.0%
Access to hygiene facilities	0.0%
Access to materials to pen animals	0.0%
Access to family planning services	0.0%
Delivery of JKN	1.2%
Delivery of Jampersal	0.0%
Provision of parent counselling	0.1%
PIS melalui Pendekatan Keluarga (PIS-PK)	0.0%
Promosi kesehatan masyarakat	0.0%
Provision of universal ECED services	2.3%
Provision of youth sexual and reproductive counselling	0.0%
PKH dan Bantuan pangan non-tunai Total	24.5%
Rastra/BPNT	19.4%
Increase nutritious food security	4.9%
Pendidikan gizi masyarakat	0.0%

**TABLE 8.1.**

**Key nutrition-specific service and behavior indicators**

Priority service packages / Intervention indicators	Riskesdas 2013	Riskesdas 2018
<b>Maternal and child health indicators:</b>		
Antenatal Care visit K4 (at least four)	70.0%	74.1%
Took 90+ Iron Folic Acid tablets during pregnancy	32.7%	38.1%
Supplementary feeding for pregnant women	14.7%*	25.2%
Children weighed at least 8x at in past 12 months	44.6*	54.6%
Children (6-59 months) received complete Vitamin A supplements in past 12 months	n.a	53.5%
Complete immunization (up to one year)	59.2%	57.9%
Children (12-59 months) received deworming tablets in past 12 months	n.a	26%**
<b>Nutrition, hygiene and stimulation counseling</b>		
Early initiation of breastfeeding	34.5%	58.2%
Exclusive breastfeeding	41.5%	37.3%
% infants (6-23 months) fed diverse diet (>4 types of food from 7 food groups in past 24 hours)	n.a	46.6%
Supplementary feeding for children 6-59 months	28.8%*	41%

Source: Riskesdas, except those marked with \*(Sirkesnas, 2016) and \*\* (IDHS, 2012)