

# Food Price Volatility and the Worrying Trend in Children's Snacking in Indonesia

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**Abstract** Rising food prices, increasing urbanisation, rising numbers of working women and reduced time for care has led to more children eating more pre-prepared and instant food in Indonesia. Besides the durability of much packaged food, its price is also less volatile and often cheaper than fresh food. The rising consumption of pre-prepared and instant food is a worrying trend for Indonesia because this newly middle-income country faces a problem of hidden hunger. Among households who took part in the Life in a Time of Food Price Volatility study, we found widespread concerns about the quality, nutritional value and safety of snacks and other instant foods eaten by children. We also heard about the effect on children's relations with their elders. This article looks at links between food prices and changing food habits and argues that children's snacking, while appearing micro, is creating macro-dynamics related to nutrition security and social wellbeing.

## 1 Background

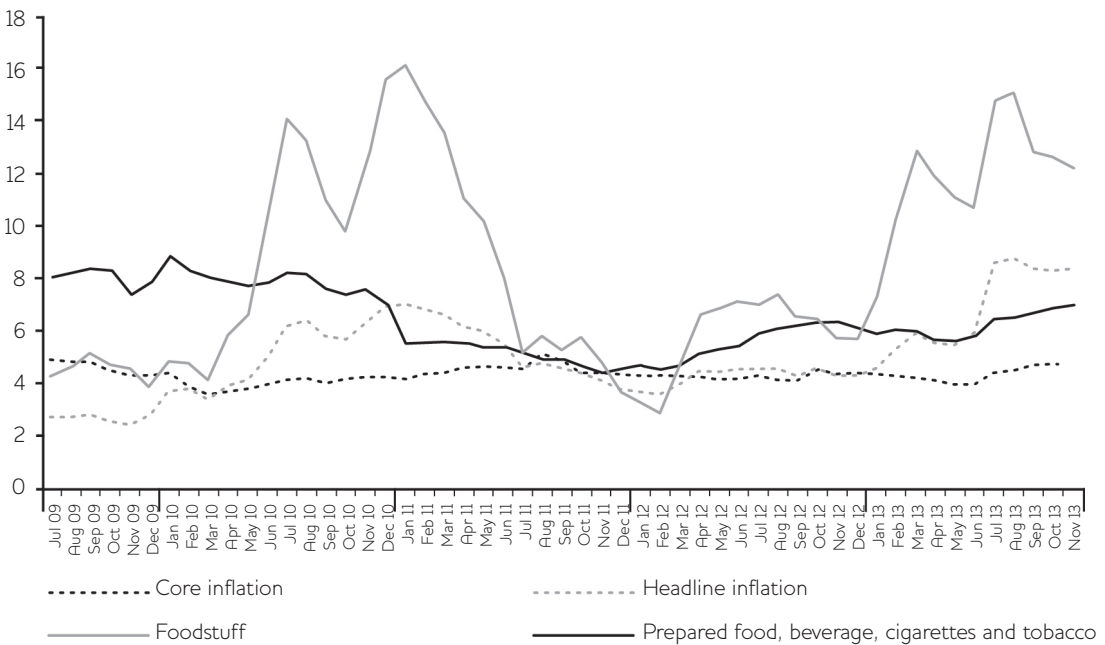
Countering the trend of the 1997/8 financial crisis and global downturn, Indonesia has shown convincing macroeconomic performance over the last decade. With year-on-year real gross domestic product (GDP) growth averaging around 5.7 per cent in 2006–10 and around 6 per cent in 2011–12 (World Bank 2014) and a considerable increase in income per capita, the country has upgraded its economic status and joined the lower middle-income group. In 2013, Indonesia's GDP per capita reached US\$3,475 – more than double that of 2003, which stood at US\$1,076.<sup>1</sup> The country has also been widely praised for its success in poverty reduction. The poverty headcount ratio (at national poverty lines) reduced from 17.4 per cent in 2003 to 11.4 per cent in 2013,<sup>2</sup> a change attributed to the Government of Indonesia's sound economic policies and its work to develop a comprehensive set of safety nets and social welfare programmes that include social assistance, community-driven development and programmes targeting micro, small and medium enterprises (Sumarto and Bazzi 2011; Perdana 2014).

Indonesia's urban population is increasing at an annual average of 4 per cent, making it one of the most rapidly urbanising countries in the world (World Bank 2014). According to Badan Pusat

Statistik (BPS, Statistics Indonesia), the urban population was 49.8 per cent in 2010 and 53.3 per cent in 2015 (BPS n.d.a). From 2004 to 2014 women's labour force participation rate grew by an average of 0.78 per cent per year, while men's labour force participation rate shrunk by an average of 0.24 per cent per year (BPS).<sup>3</sup> With these changes, along with the growth of the middle classes (World Bank 2014) and rising numbers of working women, the way people eat has been evolving.

Between 2012 and 2014 a team of researchers tracked the effects of food price volatility on the lives of low-income households in three sites in Indonesia as part of the Life in a Time of Food Price Volatility study. Using qualitative approaches through interviews, group discussions and observations over three years from 2012 to 2014, the research was able to tease out what has happened to people's daily lives and how they cope with the situation when the price of food and other commodities increase or change unpredictably.<sup>4</sup> The study involved annual field visits to three communities: rural rice producers in Cianjur, rural rubber plantation workers in Banjar and peri-urban communities in Bekasi. Most of the respondents in Cianjur and Banjar rely on farm labouring or share-cropping, sell foods such as traditional rice crackers or have

Figure 1 Price movement 2009–13



Source BPS (n.d.c).

small farms or plantations. Some in Cianjur have family members who send remittances from abroad, usually the Middle East. In Banjar, people have small rubber plantations or have work linked to the rubber plantation industry, collecting rubber, driving motorcycle taxis or running shops. In Bekasi, located near to one of the largest industrial areas in South East Asia, people make their living in the industrial area as workers or running food stalls, as domestic laundry assistants, or as landlords renting out houses or rooms to other workers.

In 2014/15 our research teams specifically asked people about their experience of and views on healthy or unhealthy food and how the way they are eating is affecting them. As such, this article reports on findings pertaining to children's snacking habits obtained from the three community case studies.

Among other findings, we learned that householders have increasingly turned to pre-prepared and instant food, saving time from cooking and all the supporting activities such as shopping, preparing ingredients, washing dishes, heating the meal, as well as saving money. These findings are backed up by data on consumption released by BPS, which show that while expenditure on pre-prepared (manufactured or pre-cooked) food took up 17.3 per cent of the average household budget in 2003, by 2008 it had increased

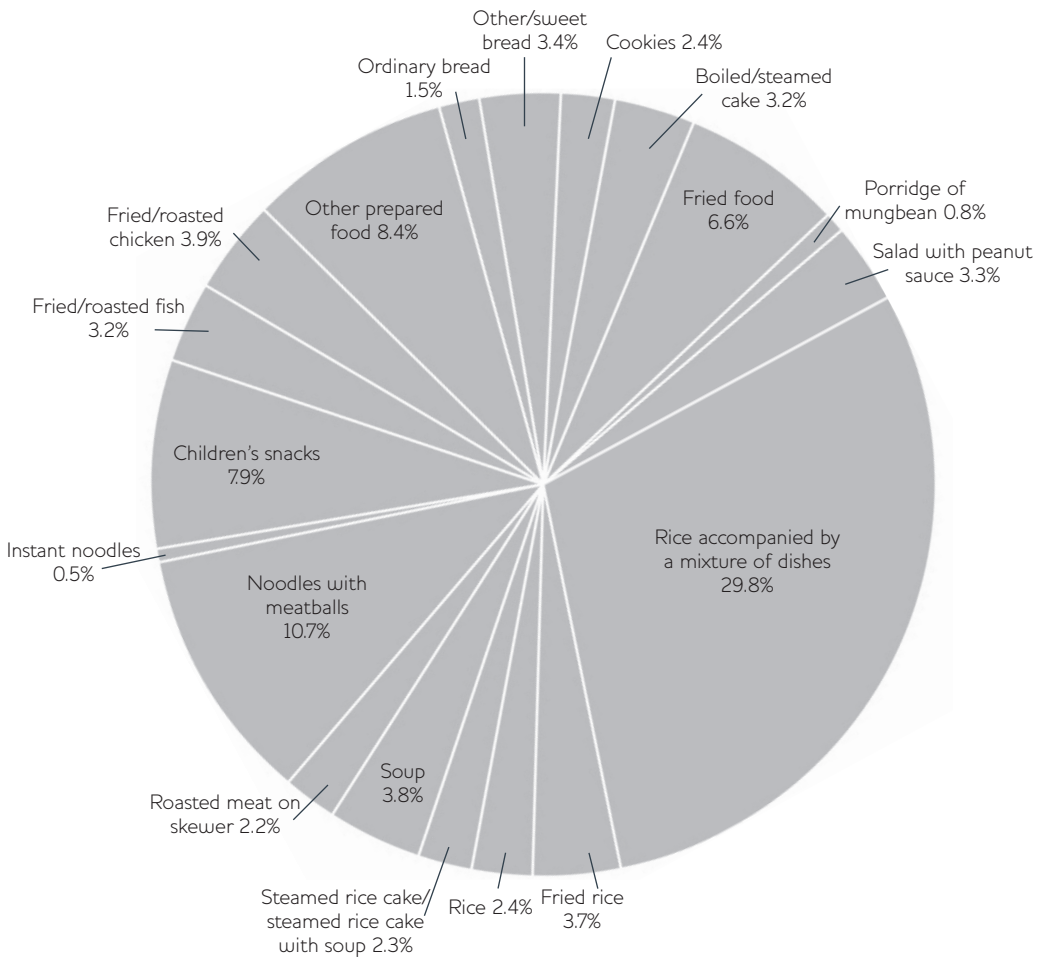
to 22.8 per cent and by 2013 had reached 26.1 per cent (BPS n.d.b). The availability of manufactured food is also increasing as a response to the increasing demand. Besides its durability, its price is less volatile and it is generally cheaper per calorie than other foodstuffs (see Figure 1).

With more households depending on pre-prepared food bought from outside, either going out to eat, or cooking using packaged and semi-prepared ingredients such as instant noodles and instant seasonings, concerns about the quality, nutritional value and the safety of food have arisen especially in relation to children. Since Indonesia has not yet resolved its problems of nutrition security (stunting levels remain high at 37.2 per cent), according to the Basic Health Survey (*Riskesmas*) released by the Ministry of Health in 2013, our findings about how and why food habits are changing and with what benefits and dangers are of particular relevance for nutrition policy discussions (Kementerian Kesehatan 2013).

## 2 Trends in hidden hunger

Food consumption data from the National Food Security Council (Badan Ketahanan Pangan 2013) show that there has been a decrease in quality and diversity of national food consumption, indicated by a decline in the *skor Pola Pangan Harapan* (food diversity score) from 85.6 in 2011, 83.5 in 2012

Figure 2 Average weekly per capita basket of pre-prepared food items, 2014



Source BPS (2014).

and 81.4 in 2013 – still far away from the target of 91.5. Yet this masks a profound change in the route from production to plate and obscures questions about new dangers and benefits to wellbeing. Data show that in 2014 the greater part of expenditure on pre-prepared food bought outside the home was spent on rice and other high-carbohydrate foods, accompanied by a mixture of side dishes, children's snacks and fritters, i.e. even staples are now bought from outside.

Increasing levels of consumption of pre-prepared food is a worrying trend for Indonesia because this newly middle-income country is now facing the problem of hidden hunger; a deficiency in micronutrients in what may otherwise be a diet sufficient in macronutrients obtained from fats and carbohydrates. According to Jamman, Fan and MacSorley:

[E]ffects of hidden hunger include child and maternal death, physical disabilities, weakened immune systems, and compromised intellects. Where hidden hunger has taken root, it not only prevents people from surviving and thriving as productive members of society, it also holds countries back in a cycle of poor nutrition, poor health, lost productivity, persistent poverty, and reduced economic growth. This demonstrates why not only the right to food, but also access to the right type of food at the right time, is important for both individual wellbeing and countries as a whole (2014: 3).

Unlike famines in the past, this modern form of hunger often goes unnoticed. Hidden hunger is not easy to see, but indicators include stunting, anaemia due to iron deficiency, and low serum retinol levels

among pre-school age children (Muthayya *et al.* 2013). With more than one third of children under five suffering from stunting, Indonesia is among the countries with highest stunting prevalence in the world (UNICEF 2013). Data from *Riskesmas* released by the Ministry of Health in 2013 also shows that as many as 19.6 per cent of Indonesian children aged under five years were underweight, 21.1 per cent had suffered wasting, and 37.2 per cent stunting (Kementerian Kesehatan 2013). Micronutrient deficiency can also be observed directly in the high prevalence of children suffering anaemia: 28.1 per cent among children aged under five years and 29 per cent among children aged 5–12 years (Kementerian Kesehatan 2013). These worrying undernutrition rates are coupled with overweight prevalence at 11.9 per cent among children under five years old. Other countries in lower income groups than Indonesia have shown a relatively better nutrition performance, including the surrounding nations in South East Asia such as the Philippines and Vietnam (Bloem *et al.* 2013; Chaparro, Oot and Sethuraman 2014).

### 3 Changing food habits

In Cianjur and Banjar, increasing costs of agricultural inputs have led landowners to save money on hiring farm workers by doing more of the farm work themselves. Agricultural labourers reported that their incomes are falling. At Bekasi, the peri-urban site, hikes in fuel and electricity prices have caused many companies to cut back on wages and contracts. Many workers have returned to their home selling ready-cooked food to manufacturing workers. However, the increasing number of these stalls in the area has led to hectic competition and incomes are precarious. Some vegetable stalls have closed down as fewer people are buying uncooked food:

*I spend Rp20,000 (US\$2) a day for cooking... everything is expensive now... To save money, I just cook anchovies... Sometimes, we only have tempeh and tofu, without vegetables.* (Woman, 42 years, Cianjur, 2014)<sup>5</sup>

*If it is counted, monthly income does not balance with monthly expenditures.* (Male rubber farmer, Banjar, 2014)

For almost everyone, the main staple food is rice, which can be obtained from their own paddy field, the market, collecting leftover rice from harvested land, or by buying government subsidised rice (*raskin*). Families eat rice along with side dishes – main and additional dishes, which can be fish, salted fish, tofu, *tempeh* (fermented soybean cake), fritters, eggs,

vegetables, soups and *sambal* (chilli paste condiment). Side dishes are cooked at home with purchased or gathered ingredients, bought from local food stalls or given by relatives. Today, most householders eat bought food in the morning because they are in a rush for school and work. They tell us that there is an increasing trend in buying side dishes outside the house too, either as an extra side dish or main dish. Besides the main meals that they eat at home, children – and in some cases parents – buy snacks. As more and more food stalls appear in their area, even inside the school yard, children's snacking is rising rapidly.

In Indonesia, it is predominantly women who are considered responsible for putting food on the table, looking after children and doing household chores. However, price uncertainty has pushed women in all our research sites to take on more work to get income to meet household needs. Buying pre-prepared food from outside is part of their solution to stresses on their time. Many working women are still cooking after coming back from their work, but in some households there is no cooking at all, because all the female members of the family are working full time. In other cases, women are cooking rice and giving money to children to buy side dishes at a local food stall.

These changes have brought about the commodification of carework not only in urban, but also in rural areas. People can now buy instant noodles and powdered seasoning in attractive colourful wrappers and also other foods such as sausages, chocolate and snacks from stalls set up at every street corner. Copying big manufactured food producers, local food vendors make innovations too. In Cianjur, school children can now buy chocolate-coated fruit (strawberry, melon, banana and other fruit) in the backyard of their school. Local food such as meatballs are now presented with a bowl or plastic wrap. Busy workers have their clothes washed at local laundries and have their drinking water refilled and delivered by local water stalls. It is evident that people are experiencing changes in lifestyle, in step with wider economic change. In line with an overall increase in incomes, shops and convenience stores are mushrooming. The manufactured instant food they offer is both a symbol of the modern lifestyle – people see rich people consuming these kinds of products on television – and a practical solution to busy lives.

With a more uncertain income, price volatility has pushed people to adjust their daily spending,

especially on food. The study has revealed that over the period 2012–14 volatility has particularly affected foods such as onions, garlic and spices that people used to use as everyday seasonings. As a result, they tell us, they have turned to using cheaper flavourings from packets, such as monosodium glutamate (MSG). Confirming the national data, householders and market stall owners explain that prices of instant seasoning and instant noodles are relatively stable. In 2012, the price of a sachet of instant seasoning was around Rp500 (US\$0.05), in 2013 the price was between Rp500 and Rp1,000 (US\$0.05–0.1), and in 2014 the price was relatively unchanged at around Rp1,000 (US\$0.1). With average household daily spending ranging around Rp20,000–50,000 (US\$2–5) a day, it is still considered very cheap. Until 2014, instant noodle prices had never exceeded Rp2,500 (US\$0.25) per pack. In addition, another way to save money is buying pre-prepared food from local stalls. People save by not buying spice or cooking gas, the price of which has been both high and volatile in recent years.

Cooking at home, especially for simple food – such as salted anchovies, fried egg, fried *tempeh* or tofu – can be less expensive than buying from a local stall, but saving money on spices and vegetables sometimes means sacrificing the taste. A 54-year-old grandmother<sup>6</sup> opening a traditional food stall in Bekasi complained that her grandchild prefers to buy pre-prepared food and snacks outside rather than eating the food she cooks at home. She knows that she cannot provide tasty food because she does not have enough money:

*My grandchild does not want to eat the food I cook; he says that it is not delicious and [too] hot. He does not like salty fish; he asks for rice and fried chicken bought at that warteg [food stall selling home style cooked food]. What can I say? Those who buy the food I sell do not pay me immediately, so I do not have money to buy it [the better food ingredients to cook at home]. Maybe he gets bored with eating the food I cook, which is only soured soup and salty fish again and again. He does not want to eat at home, so he buys snacks.*

Food stalls offer a range of items that can be bought in flexible amounts. With just Rp2,000 (US\$0.2) customers can get three fritters (battered fried banana, sweet potatoes, vegetable mix or starchy paste) that can be used as a side dish with rice. If people do not have much money, they can buy a small portion. In this way, they get more variety than they would at home, as revealed by participants in a focus group discussion with Bekasi elites in 2014:

*Women nowadays prefer to buy their meals from the shop. They rarely cook at home anymore.*

*Cooking is more expensive than buying prepared food. Buying prepared food only costs me Rp10,000 [US\$1].*

*A woman usually goes shopping in the morning, she shops twice every day and usually spends Rp20,000 [US\$2] in the morning to cook for lunch. And she spends another Rp20,000 [US\$2] to cook for dinner...*

*Buying prepared foods usually costs only Rp5,000 [US\$0.5]. So it usually only spent Rp10,000 [US\$1] for one meal.*

#### 4 Children's snacking habits

Over the three years of our study, we noticed that children are eating more and more purchased snacks. Giving money to the child to buy snacks has a sizeable impact on the household budget among people on low incomes. Of total household expenditure, the budget for child allowances could be as much as half. Part of the allowance is used for school transportation cost, but the rest is for pocket money. In addition, children may still ask for extra money to buy snacks at a local stall once they get home from school.

*I am bothered when thinking of my son's pocket money. He does not understand whether I am working or not... or that I do not have money every day. I am tired... my heart is tired. If I have money, it is fine... but if I think about the next day, it is difficult. (31-year-old mother, Cianjur, 2014)*

There are push and pull factors at work: children's demands and the market's encouragement. Many parents complain that their children do not want to eat at home and just want to buy snacks outside. Those working long hours complain of tiredness and say that they give in easily when their children ask to buy a snack. Similarly, they often feel unable to provide food that is as tasty and interesting as fried snacks or packaged sweets.

*If she [my daughter] was not given money, she cried. She did not understand that the money was not available... So, I would be ashamed. (45-year-old mother, Cianjur 2014)*

Pull factors come from peer pressure, massive advertising, especially on television, and the convenience offered by food vendors who come around from house to house offering their 'homemade' snacks. In many interviews parents explain how they feel embarrassed in front of



**Table 1** Some parents' concerns towards the health and safety risks of children's snacking habits

Positive	Negative
<p>Sausage is healthy... because it is still delicious and has not yet expired. Crackers can be considered healthy... since they did not cause sickness. If you are still healthy after eating baslup [meatball], it means the baslup was delicious and healthy. It is healthy if it is delicious. If the meat is good it is healthy. If it is not healthy it will not [be] delicious, so it will not be consumed. (45-year-old mother, Cianjur, 2014)</p>	<p>Ice is not healthy because sometimes the water is not cooked. Most of children get stomach ache [after they drink the ice]. (39 year-old mother, Banjar, 2014)</p>
<p>My grandchild, when she cooks noodles she adds egg on top, so it is healthy since there is egg on it. (54-year-old grandmother, Bekasi, 2014)</p>	<p>It is true, Bu, our own cooking is better than buying snacks; when cooking ourselves we know what ingredients should be used; when buying snacks we do not know what the food is cooked with, what food colouring they used, maybe they used food preservative. (Mother A, 34 years, Bekasi, 2014)</p>
<p>Alhamdulillah [thanks God], my kids have never been sick from eating snacks they bought from street vendors. They like chuankie [starchy meatballs], and never were ill from consuming it. They're healthy, thank God. (42-year-old mother, Bekasi, 2014)</p>	<p>They eat many snacks, although it is not healthy, we still give them; the important thing is they are not crying. (Mother B, 34 years, Bekasi, 2014)</p>
<p>Soup, it is healthy since it was made in kampung style... The important thing is, there are no flies. There is nutrition in pentol [starchy meatball] even if only a little, as it is made of meat. Orange drink is healthy, as it contains vitamin C [it is said]. (39-year-old mother, Banjar, 2014)</p>	<p>There are foods that use preservative, for example tofu. It looks healthy, but we do not know if it contains formalin or not. (43-year-old mother, Cianjur, 2014)</p>
	<p>Children's snacks contain preservatives and that worries us. At times, we cannot control it, because they buy for themselves. They think it's more hip to buy such things in the kiosks. (Women at focus group discussion in Cianjur, 2014)</p>

neighbours when their children cry because they have not been given pocket money.

*The snacks vary. He [my grandchild] bought snacks all day long. The last was after magrib [evening prayers], after Al Qur'an recital. Usually bakwan [meatball and other assorted ingredients served in clear soup] was the last snack... yes, there is bakwan vendor circling around here... I do not know, is it healthy or not... I am worried when my grandchild buys many snacks. I am worried the money will not be sufficient. (50-year-old grandmother, Cianjur, 2014)*

Many parents in the three research sites are aware that there are risks, but it seems that social pressure prevents them from taking action. Some pointed out that at least their children do not get sick after eating snacks they buy. However, it also appears that the knowledge of parents in our sites is fairly limited, as revealed through their response when asked about the health and safety risk of their children's snacking habits in Table 1.

## 5 Conclusions

Food price volatility has contributed to changes in lifestyle that are widespread and longstanding. Women are working more outside the home,

cooking has become more expensive and time more limited. These changes have, in turn, transformed the way people are eating. Pre-prepared and instant food is increasingly the answer to convenience, affordability and taste. Children like snacks and parents need quick, affordable food, yet they are also concerned about the quality and safety of these foods and they also worry about their effects on family life. These individual changes in children's snacking habits may seem very micro, but they accumulate to form a wider impact on society.

Packaged and pre-prepared foods often contain high quantities of sugar, fats, trans fats and salt. They may be cooked in unsanitary conditions. Excessive snacking also influences household finances. While each snack is cheap, the habit becomes expensive. The habit erodes parents' ability to save money, even for their children's future needs, such as education. Parents and grandparents are anxious too that giving children pocket money is affecting power relations between parent and child and they worry that this will affect the long-term relationship between them. They explain that their relationship becomes mediated by money, as pocket money becomes the sign of love and affection.

The Indonesian government has stipulated a number of policies and programmes to address the problem of food and nutrition security, which include increasing food production to reduce import dependency, providing nutritional supplements and food fortification to address the problem of lack of micronutrients, and promoting food diversification. The country has been considered to be quite successful in its efforts to improve the coverage of nutritional supplements in antenatal and postnatal care (Centre for Population and Policy Studies 2011; SMERU, BAPPENAS and UNICEF 2012). Regardless of the little progress achieved, the government has also put intensive efforts and priorities in disseminating exclusive breastfeeding until six months old (SMERU *et al.* 2012). However, the problem of poor micronutrition for children has yet to be tackled comprehensively. Government food safety and quality monitoring efforts are also still very limited.

### Notes

- 1 World Bank (2015a), World Bank data, <http://api.worldbank.org/v2/en/indicator/ny.gdp.pcap.cd?downloadformat=excel>.
- 2 World Bank (2015b), World Bank data, <http://api.worldbank.org/v2/en/indicator/si.pov.nahc?downloadformat=excel>.
- 3 Author calculation based on BPS data on labour force situation. See BPS (2005–14). Statistical

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The phenomenon of increasing snacking among children shows that there are still blind spots in government policy in relation to the reality of poor nutrition and stresses on care among people on low incomes. It requires a serious commitment from policymakers to really ensure the quality and safety of food available and the need for support in care-giving. It seems that with the commodification of food and other spheres of life, the quality of childcare is becoming increasingly a public issue. Until now, the quality of child-caring practice was regarded as a private sphere of family, not an issue in need of policy intervention. However, this study shows the relationship between food prices, the quality of care and family management and levels of child micronutrition. An important implication of this study is that children's snacking habits are not themselves micro, since there are macro-dynamics behind the phenomenon and macro-outcomes related to nutrition security and family wellbeing.

- information for August for the years 2005–14 was gathered from the SMERU Research Institute Library database.
- 4 Indonesia Country Report Year 1 and 2 and Indonesia Country Report Year 3 (Nurbani, Sulaksono and Sadaly (forthcoming a, b).
  - 5 In this article, we used US\$1=Rp10,000 conversion rate.
  - 6 Interview, 2014.

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