SPECIAL FOCUS 1

Price Controls: Good Intentions, Bad Outcomes

The use of price controls is widespread across emerging markets and developing economies (EMDEs), including for food and key imported and exported commodities. While sometimes used as a tool for social policy, price controls can dampen investment and growth, worsen poverty outcomes, cause countries to incur heavy fiscal burdens, and complicate the effective conduct of monetary policy. Replacing price controls with expanded and better-targeted social safety nets, coupled with reforms to encourage competition and a sound regulatory environment, can be both pro-poor and pro-growth. Such reforms need to be carefully communicated and sequenced to ensure political and social acceptance. Where they exist, price control regimes should be transparent and supported by well-capitalized stabilization funds or national hedging strategies to ensure fiscal sustainability.

Introduction

Price distortions are defined as instances "when prices and production are higher or lower than the level that would usually exist in a competitive market" (WTO 2019). One source of such distortions are price controls.[1] Price controls can be imposed in a variety of ways. They may involve price ceilings, or price floors, imposed on selected goods and services by the authorities.[2]

In emerging market and developing economies (EMDEs), price controls on goods are often imposed to serve social and economic objectives. They may be part of government efforts to protect vulnerable consumers, by addressing market failures or subsidizing the cost of essential goods. Or they may be intended to maintain the incomes of producers, as part of a price-support program. Alternatively, they can serve the purpose of price smoothing, especially for key commodities subject to high volatility in international markets. This can lower uncertainty about households' real incomes and firms' production costs.

This special focus seeks to answer two questions.

- How prevalent are price controls in EMDEs?
- What challenges do they impose for growth and development and government policies?

Contribution. The research adds to the literature on price controls in two ways. First, it presents findings from a new data set. Whereas earlier work is confined to advanced economies or selected emerging markets, this study covers an almost complete set of EMDEs.[3] Second, it reviews price controls on a wider range of goods.[4]

Use of price controls

Widespread price controls in EMDEs. Price controls are widely employed across advanced economies and EMDEs. They tend to be more pervasive in EMDEs than in advanced economies

Note: This Special Focus was prepared by Justin-Damien Guénette.

[1] Price controls have a long history with well documented examples stretching back to Revolutionary France (Morton 2001). In the 20th century, these policies were used extensively in several western countries during the Second World War, culminating with widespread controls in the United States and the United Kingdom in the 1970s (Coyne and Coyne 2015). Price controls were also ubiquitous in communist countries with planned economies, such as Poland (Tarr 1994). Generalized price controls fell out of favor in the 1980s, as inflation declined, and governments pursued deregulation. However, controlled pricing for certain goods and services, including rent and pharmaceuticals, remain in use to this day (Morton 2001).

[2] Government management of prices can also occur as a by-product of other policies. For instance, preferential exchange rates for certain goods and the imposition of non-tariff barriers can all push prices away from that which would prevail in a competitive market.

[3] The data set extracts the list of products subject to price controls from the latest available Trade Policy Reviews for each EMDE member country of the World Trade Organization. This list of products is compiled using existing legislation and additional material provided by country authorities. The data set provides a rough view of the prevalence of price control measures across countries, but does not include any information on the extent of these controls.

[4] The micro-founded theory of price controls was developed in part to examine the case of commodity producers in developing countries (Stiglitz and Newbery 1979; Newbery and Stiglitz 1982). More recently, for EMDEs, price controls for petroleum products have been studied extensively, while those on food products have received less attention (Verme and Araar 2017; Kojima 2013; Devarajan 2013; Murphy et al. 2019; Shi and Sun 2017; Clements, Jung and Gupta 2007; Ghosh and Whalley 2004). The World Bank's Energy Sector Management Assistant Program (ESMAP) has conducted in-depth studies of subsidy reforms for energy markets across EMDEs (ESMAP 2019; Ore et al. 2018). The use of price controls for pharmaceutical products, wages and rent has been widely studied in advanced economies (e.g., Coyne and Coyne 2015; Nguyen et al. 1994). Studies for individual EMDEs include China, Indonesia and several MENA countries (Shi and Sun 2017; Clements, Jung and Gupta 2007; Verme and Araar 2017). The OECD-WBG Product Market Regulation indicators provide summary statistics on price controls for a limited set of EMDEs.

(OECD and World Bank 2018). And among EMDEs, they are more prevalent in LICs (Figure SF1.1). In EMDEs that have become middle-income countries (MICs) since 2001, price controls are somewhat less common than in the average EMDE, especially in goods other than energy, food, and construction materials.[5]

- *Energy.* Virtually all EMDEs impose price controls on energy products, including electricity and petroleum products such as liquified petroleum gas and gasoline.
- *Food.* Price controls are frequently applied to basic foodstuffs. This practice is more widespread in LICs than in other EMDEs: virtually all LICs impose price controls on some food items, compared with three-quarters of other EMDEs. Products often subject to price controls include water, sugar, and rice.[6] Since food expenditures represent nearly 60 percent of the consumption basket in LICs, compared with 42 percent in other EMDEs, a larger portion of the LICs basket is typically subject to price controls (Laborde, Lakatos, and Martin 2019). Virtually all LICs and other EMDEs impose price controls on petroleum products.
- *Construction materials.* Nearly 20 percent of LICs impose price controls on construction materials. These include cement, reinforcing bars, and metal sheets. Beyond LICs, controls on construction materials are most common in the Middle East and North Africa (MNA) and Sub-Saharan Africa (SSA).

Price controls on traded goods. EMDEs, including LICs, apply price controls on export and import goods.[7] Governments often impose controls on the domestic prices of imports to maintain real incomes of domestic consumers, hold down costs to producers, or smooth domestic price volatility.

- *Energy imports.* In LICs, about 67 percent of energy imports—about 6 percentage points more than the average for other EMDEs—are potentially subject to domestic price controls (Figure SF1.2).[8]
- *Food imports.* In both LICs and other EMDEs, only a small share of food and beverages imports are potentially subject to controls.
- *Construction material imports.* The largest difference between LICs and other EMDEs lies in the share of construction-related imports that are potentially subject to price controls: in LICs, they amount to one-quarter of imported construction materials, compared with almost none in other EMDEs.

Commodity exports. LICs often impose price controls on exportable commodities. This may involve a monopoly marketing agency, which purchases from domestic producers at a fixed price, and resells to foreign purchasers at the world price. This arrangement implicitly taxes producers when the resale price exceeds the purchase price (Ghosh and Whalley 2004) or subsidizes producers when the resale price falls below the purchase price. About 25 percent of EMDEs that rely heavily (with more than 10 percent of goods exports) on a single export commodity group impose price controls on it. For example, Burundi imposes controls on the price of coffee while Benin imposes controls on cashew nuts.

[5] The set of LICs in 2001 that are now MICs includes Angola, Armenia, Azerbaijan, Bangladesh, Bhutan, Côte d'Ivoire, Cameroon, Republic of Congo, Comoros, Georgia, Ghana, Indonesia, India, Kenya, Kyrgyz Republic, Cambodia, People's Democratic Republic of Lao, Lesotho, Republic of Moldova, Myanmar, Mongolia, Mauritania, Nigeria, Nicaragua, Pakistan, Sudan, Senegal, Solomon Islands, São Tomé and Príncipe, Turkmenistan, Ukraine, Uzbekistan, Vietnam, Zambia and Zimbabwe.

[6] Almost all LICs, including Ethiopia, Mali, Niger, Guinea and Rwanda impose some form of price controls on petroleum products. As for food products, LICs such as Burkina Faso and the Democratic Republic of Congo impose price controls on sugar. Chad, Haiti and Guinea-Bissau impose controls on rice, and Benin, Ethiopia and Niger impose controls on bread. Burkina Faso imposes controls on cement, reinforcing bars and metal sheets. In addition to goods, price controls are also often imposed on public transportation services such as bus, train, and ship fares.

[7] Unregulated prices depend on the world price, transport costs, local monopoly power or other hurdles to the movement of goods, and harvest conditions (Aksoy and Ng 2010).

[8] Data on price controls on tradable goods combines the information on controlled prices from the World Trade Organization's Trade Policies Reviews with 4-digit HS trade values from the World Bank's World Integrated Trade Solutions database.

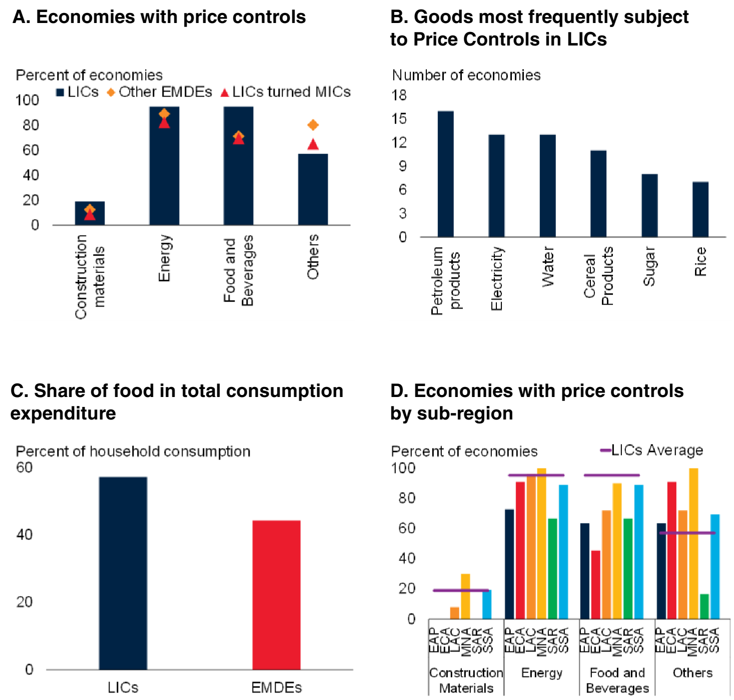
Price controls on financial services. While not covered in the price control data set, the financial sector is also often a target of price controls. Around 60 EMDEs have imposed ceilings on interest rates. These measures are often motivated by a desire to provide targeted support to strategic industries or to shield consumers from financial exploitation. For example, in the case of Zambia, controls were implemented from 2012 to 2015 to reduce the perceived risk of over indebtedness and broaden access to credit (Maimbo and Gallegos 2014).

Decline in price controls. Starting in the 1980s, several EMDEs reduced the scope of price controls, opting instead to strengthen their competition policies and regulation (WTO 2000-2019). In some cases, the liberalization of prices was supported and encouraged by policy lending programs and debt relief efforts in highly indebted poor countries (HIPC). The removal of controls often become more feasible following an easing of the conditions that led to their imposition. For example, after 2011, as food prices declined from cyclical highs, some countries eliminated controls. EMDEs such as Mexico, Rwanda, and Côte d'Ivoire took advantage of the sharp decline in oil prices in 2014-16 to reduce petroleum subsidies (Baffes et al. 2018; Stocker et al. 2015).

Reforms in MENA. Under pressure from social tensions during the Arab Spring, some countries in the region introduced or tightened food price controls in 2011 (Ianchovichina, Loening and Wood 2014). Conversely, however, high oil prices and fiscal pressures encouraged a few MENA countries, including the Arab Republic of Egypt, Morocco, and Tunisia, to reform price controls and related subsidies on energy between 2010 and 2014 (Verme and Araar 2017).[9] The reforms were associated with improvements in the ease of doing business. Within two years of the reform, enterprises in all three countries reported easier access to electricity (Figure SF1.2.D). The programs, however, differed substantially in their scope, and speed of implementation. They also varied with respect to compensatory transfers to disadvantaged population groups. Morocco reduced the fiscal burden of petroleum subsidies, while at the same time avoiding severe adverse consequences for poverty and inequality. Egypt, however, took a sequential, gradual, approach to reform especially for products such as liquified petroleum gas (LPG), which account for a disproportionately large expense for the poor.

FIGURE SF1.1 Price controls

LICs use price controls more extensively than other EMDEs, especially for energy products such as petroleum and electricity, and basic foodstuffs such as cereal products and sugar. A large portion of the LICs consumption basket is subject to price controls given the elevated share of food in the consumption bundle. Across EMDEs more broadly, price controls are most prevalent in MENA and Sub-Saharan Africa and least prevalent in South Asia.

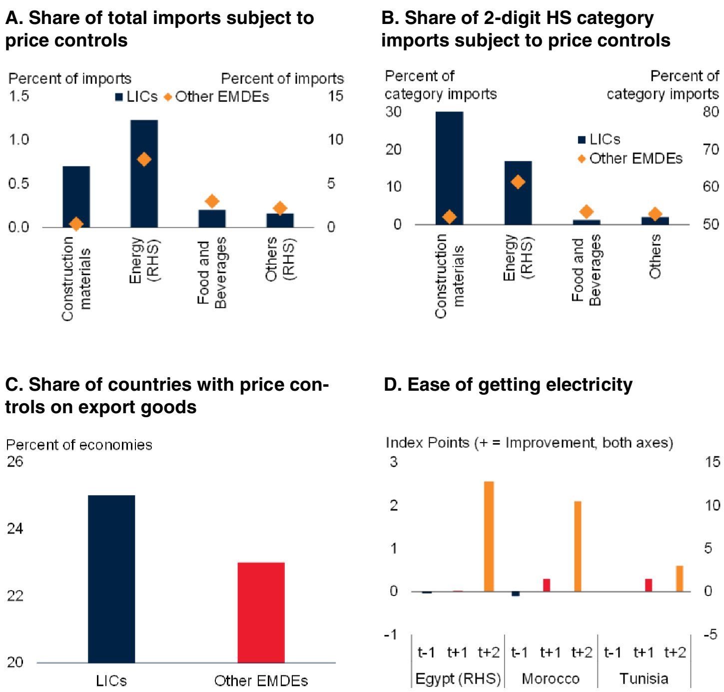


Source: World Bank; World Trade Organization.
Note: EMDEs = emerging markets and developing economies; LICs = low-income countries.
A. B. D. Listed price control policies are retrieved from the latest (2003-19) country Trade Policy Review publication.
A. C. D. Unweighted averages.
A. Sample includes 21 low-income countries, 23 LICs turned middle-income countries (MICs) since 2001, and 56 other EMDEs.
B. Sample includes 21 low-income countries.
C. Sample includes 23 low-income countries and 67 other EMDEs.
D. Sample includes 21 low-income countries and 79 other EMDEs. EAP = East Asia and Pacific, ECA = Europe and Central Asia, LAC = Latin America and the Caribbean, MNA = Middle East and North Africa, SAR = South Asia, SSA = Sub-Saharan Africa.
Click here to download data and charts.

[9] Djibouti, Egypt, Jordan, Libya, Morocco, Tunisia, and Yemen designed and implemented subsidy reform programs. These cases contrast with some other countries in the region, where social tensions during the Arab Spring, caused an increased use of food price controls in 2011 (Ianchovichina, Loening, and Wood 2014).

FIGURE SF1.2 Price controls on imported and exported goods

The shares of imports and exports potentially covered by price controls are higher in LICs than in other EMDEs. Reforms of price controls on energy products in Egypt, Morocco and Tunisia were associated with improvements in an index of the ease of getting electricity within two years of energy price reforms.



Source: World Bank; World Trade Organization.

Note: EMDEs = emerging markets and developing economies; LICs = low-income countries.

A.-C. 2017 data. Listed price control policies are retrieved from the latest (2003-19) country Trade Policy Review publication.

A. B. Sample includes 12 low-income countries and 63 other EMDEs.

B. Share of 4-digit Harmonized System (HS) category subject to controlled prices in high-level groupings of 2-digit HS categories. Construction materials aggregate includes HS68 and HS73, Energy aggregate includes HS27, Food and Beverage aggregate includes HS01 to HS22. Other aggregate includes all other imports.

C. Countries that rely heavily on a single export defined as a country in which exports of one or more 4-digit HS category represents 10 percent or more of its total exports in 2017. Chart shows the share of all LICs and other EMDEs that relying heavily on a single export whose price is subject to price controls. Sample includes 12 low-income countries and 61 other EMDEs.

D. Chart shows the World Bank's index for ease of getting electricity in year before (t-1) and the two years after (t+1, t+2) energy subsidy reform (World Bank 2019b). Time t=0 refers to 2014 for Egypt and Morocco and 2012 for Tunisia.

Click here to download data and charts.

- *Egypt.* In July 2014, comprehensive reforms to fuel and electricity prices resulted in a significant rise in gasoline, natural gas, diesel, and electricity prices which contributed to a spurt of headline inflation. Initial price adjustments were followed by stepwise gradual increases to fully eliminate energy subsidies over a five-year period. While the initial price increases themselves are estimated to have raised the poverty rate and inequality, the government has put in place some mitigating measures for the poor, including expanding food subsidies (Verme and Araar 2017). Moreover, the government used a share of the proceeds from the reforms to increase expenditures on health care and education provision (ESMAP 2017a). However, attempts to communicate to the affected public that they might eventually benefit from the diversion of energy subsidies to more equitable uses failed, largely because the country does not have the social security net to implement an effective system of cash compensation (Verme and Araar 2017).

- *Morocco.* Starting in 2013, the government first transitioned to price indexation for petroleum products, and gradually moved to fully liberalize most energy products. In August 2014, prices of household utilities jumped as part of a multiyear effort to liberalize electricity prices. The reforms were implemented without triggering social unrest despite the absence of cash transfers to households. The fiscal savings from the reform were instead used to fund other reforms.

- *Tunisia.* The fiscal cost of Tunisia's energy subsidies had risen to unsustainable levels (7 percent of GDP in 2013), and in response the government gradually reduced them beginning in late 2012 in tandem with reforms to social benefits. Petroleum and electricity prices were increased over 2012-13 and an automatic price formula was introduced for gasoline in 2014. In 2016, the government agreed to further reduce subsidies as part of a reform program supported by IMF lending. Energy prices were increased several times since then, with the goal of fully eliminating energy subsidies by 2022. Over the years, measures were implemented to cushion the impact of reforms on vulnerable households, including expanded social housing and higher income tax deductions.

Reforms in other regions. In Ukraine in 2015-16, the government raised the price of natural gas, which had been heavily subsidized for decades. These reforms were coupled with a strong public communication campaign highlighting social assistance mechanisms targeted to cushion the impact on low-income households. The reforms were successful in allowing public utilities to achieve cost recovery, with the targeted support measures estimated to have reduced the poverty rate (ESMAP 2017b). In India starting in 2012, the government reformed its subsidy regime for liquified petroleum gas (LPG). LPG subsidies to households encouraged the formation of black markets where subsidized LPG distributed to households was diverted to the commercial sector. The government gradually increased the price of LPG for households while implementing a large-scale targeted cash transfer mechanism. The program successfully eliminated distortions in the LPG market, with limited adverse consequences for the poor, and the fiscal savings obtained from the reduction in subsidies fully offset the costs of the targeted cash transfer (ESMAP 2016).

Challenges of price controls

While they may be introduced with the best intentions to improve social outcomes, price controls often undermine growth and development, impose fiscal burdens and can weaken the effectiveness of monetary policy. At least in part, this is because price controls cause a shift in consumption towards the subsidized good, and away from other non-subsidized goods. Moreover, when there are trend increases in international prices, or when they interact with barriers to entry, price control measures frequently morph into distortive subsidy regimes. Important social, fiscal and environmental costs are likely to follow, as well as adverse consequences for investment and employment, and productivity growth.

Growth challenges. The use of price controls can have adverse consequences for growth for several reasons:

- *Stifled competition and reduced investment.* Price ceilings can depress producer margins and discourage domestic investment and entrepreneurial activity, as in Zimbabwe's transportation sector (Newfarmer and Pierola 2015). If margins depend on subsidies to local businesses to compensate for price controls, they can discourage foreign investment in those sectors by increasing the country risk premium facing global firms (Sabal 2005). In the opposite case, where the controlled price is above that required for a competitive return to investment, its maintenance requires barriers to entry or costly government stockpiling of excess supply (a common occurrence with price support schemes in agriculture). Price-support controls can depress competition and sustain high producer margins (e.g., Rwanda's transportation sector; Teravaninthorn and Raballand 2009).

- *Lower productivity.* Price control regimes may tilt the allocation of resources towards the subsidized sector. In LICs, this is often most visible in the agricultural sector where output price controls have been complemented by input (especially fertilizer) subsidies. Yet, such policies can end up reducing productivity, and worsening income inequality (Goyal and Nash 2017). They may lead to inefficient use of subsidized inputs (Jayne, Mason, Burke and Ariga 2016). They can also adversely affect incentives to adopt productivity-raising new technologies. Empirical evidence suggests that market-oriented structural reforms, including the reduction of price controls and their related subsidies, are strongly associated with improved firm-level productivity in EMDEs (Kouame and Tapsoba 2018). Conversely, in the case of petroleum products in the Middle East and North Africa, high subsidies that underpin price controls appear to be associated with lower per capita output growth (Mundaca 2017).

- *Increased informality.* Price controls that distort consumption towards price-controlled goods, can cause chronic shortages of these goods, the formation of parallel markets with higher prices, and substitution towards lower-quality alternatives (Weitzman 1991; Patel and Villar 2016; Fengler 2012; Winkler 2015). Similarly, producers of price-controlled goods may turn to black markets which have elevated transaction costs and lack basic regulation (Murphy, Pierru and Smeers 2019). In addition, the situation encourages production to shift to firms in the informal sector, which avoid regulation (De Soto 2000; World Bank 2019a).

- *Distorted financial markets.* Price controls in the financial sector, such as ceilings on interest rates can distort financial markets (Maimbo and Gallegos 2014). These measures reduce the supply of credit to safer borrowers and small and medium-sized enterprises, increase the level of non-performing loans, reduce competition and innovation in lending markets, and increase informal lending. Moreover, they can exacerbate inequality by limiting the poor's access to lending.

- *Increased vulnerability to climate change.* Price controls and subsidies on energy products may heighten vulnerability to climate change and inhibit the transition to a climate-resilient, low-carbon economy.

Social policy and political economy challenges. The use of price controls combined with large subsidies is an inefficient tool for redistributing domestic income (Devarajan 2013; Coyne and Coyne 2015). These policies tend to be inequitable, as wealthier segments of the population, usually urban consumers, benefit disproportionately given their greater consumption of the price-controlled good compared to rural consumers and producers. For example, subsidies and below-market prices for gasoline and liquid natural gas have proven highly regressive, with only a small share of the subsidy benefiting the poorest segments of the population (Baffes et al. 2015; IEG 2008; Coady et al. 2006).

Fiscal challenges. Price controls impose an explicit or implicit set of taxes and subsidies that varies over time, and their enforcement may require additional regulations to constrain consumption and production. Typically, a system of price controls on goods ends up as a growing burden on either the fiscal budget and public debt or the profitability of producers (Alleyne 2013; World Bank 2014a). Potential or implicit fiscal costs from price controls can be particularly high in LICs due to their more widespread use of these policies. Even in EMDEs, subsidies for products subject to price controls, such as petroleum, can be a large portion of government expenditures, in some cases exceeding 10 percent of GDP (Algeria, Iran; World Bank 2014b).

Monetary policy challenges. In all advanced economies, and in many EMDEs, monetary policy has played a major role in reducing inflation to a low, stable rate, often in the context of an explicit inflation-targeting regime. The key has been a transparent strategy aimed at the medium and longer term. This has largely stabilized longer-run expectations of inflation, in line with central bank objectives. In these circumstances, the one-off impact on the inflation rate of the removal of price controls can be handled with the help of careful communication from policymakers as to the strategy they will employ to get inflation back on track. In LICs, however, the monetary policy challenges go deeper. First, the wider use of price controls complicates the choice of inflation target by weakening the usefulness of the overall CPI as a measure of underlying inflation pressures (Patel and Villar 2016).[10] Second, it can raise inflation because the authorities tend to respond asymmetrically when faced with cost increases, as is often the case in response to food price shocks (De Mello 2008; Ianchovichina, Loening and Wood 2012). Third, it can increase the stickiness of the inflation process as changes in controlled prices often involve a lengthy regulatory process (Springer de Freitas and Bugarin 2007). Fourth, one-off changes in controlled prices can have persistent effects on inflation in LICs, where inflation expectations are less well anchored (Ha, Kose, and Ohnsorge 2019a; BIS 2003). Lastly, price controls in the financial sector, including ceilings on interest rates can reduce the ability of monetary policy to affect financial conditions.

Price controls in times of hyperinflation. The use of price controls has often coincided with historical episodes of hyperinflation. In Brazil in the 1980s, for example, the use of price controls

[10] In addition, volatility in headline CPI inflation is amplified by the high proportion of food in the LIC consumer basket. Food prices are liable to frequent large fluctuations from variations in local harvests, and in international supply and demand.

has proved ineffective at addressing hyperinflation in Brazil (Cardoso 1991). More recently, in the case of Zimbabwe, widespread shortages of goods in part due to excessively accommodative monetary policy were accompanied by extensive price controls (Munoz 2006; Coomer and Gstraunthaler 2011). Similarly, high inflation in República Bolivariana de Venezuela was accompanied by highly restrictive price controls (Vera 2017; Contreras and Guarata 2013).

Collateral damage from foreign price controls. LICs are also more vulnerable to the collateral damage from other countries' price controls on food and energy, because of the high share of food and energy in their consumption baskets and trade. Policies by individual countries to contain the effects of spikes in global commodity process in their local markets have been shown to have had the perverse effect of raising global prices (Laborde, Lakatos, and Martin 2019). Export restrictions in major commodity producers exacerbate global shortages, thus contributing to higher prices on the international market. In the case of the 2007-08 surge in food prices, a majority of EMDEs put in place policies to insulate domestic markets from the rise in international prices (World Bank 2009).

Policy implications

Price controls have been used to mitigate the impact of commodity price volatility on the most vulnerable members of society. For instance, the use of temporary stabilization funds, as introduced in Chile and Peru, or national hedging strategies, as introduced in Mexico, have been used to protect domestic consumers and firms from spikes in the prices of basic commodities on international markets (Kojima 2013; Ma and Valencia 2018). However, most governments have had difficulty designing frameworks that deliver lasting benefits. Over time, price stabilization policies often result in costly and distortionary subsidies, posing important challenges to growth, development, and macroeconomic policy suggesting that other policy instruments may be more effective in achieving social protection objectives.

Comprehensive reforms of price control policies and related subsidies. Replacing price controls with expanded and better-targeted social safety nets, coupled with structural reforms, can be both pro-poor and pro-growth. Indeed, policies to lower subsidies that underpin price controls appear to be associated with higher per capita output growth, in part because savings generated by lower subsidies can fund productivity-enhancing education and infrastructure (Mundaca 2017). The removal of price controls needs to be coupled with targeted support for those segments of the population that might be adversely affected (World Bank 2014a).[11] In India, for example, the removal of price controls was accompanied by targeted cash transfers and in Brazil by targeted assistance to low-income households for energy conservation (Deichmann and Zhang 2013).The different prongs of reforms, however, need to be carefully sequenced and communicated.

Enhanced competition. Improving the competitive environment can be a more effective means of lowering costs to consumers and producers than the use of price controls. Carefully-designed and properly enforced antitrust laws and consumer protection legislation, are essential components of institutional frameworks that support market mechanisms. A sound legal and regulatory framework favoring competitive markets provides a more effective response to many of the problems that price controls attempt to address (Kovasic 1995). For example, the removal of price controls and barriers to entry in the transportation sector significantly increased competition and lowered transportation costs in Rwanda (Teravaninthorn and Raballand 2009). Even in the case where incumbent firms maintained outsized market shares, the presence of competition, and the potential for new entrants, significantly lowered their markups (World Bank 2006).

[11] Despite the regressive nature of price controls and subsidies, poor households spend a higher share of their income on products subject to price controls and are liable to suffer distressful real income losses when price restrictions are lifted (World Bank 2014a).

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