



Women's resilience to food price volatility: A policy response



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Ana Paula de la O Campos
Food and Agriculture Organization
Gender Equity and Rural Employment Division

Elisabeth Garner
Food and Agriculture Organization
Gender Equity and Rural Employment Division

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Abstract

In a high and volatile food price setting, two aspects determine rural women's ability to absorb and respond to shocks: the inequalities that create a gender gap in rural development and women's traditional roles in society and the household. This discussion paper points to these two aspects that, in general terms, reduce women's ability to cope with food price volatility. Rural women, traditionally responsible for providing food and health in the household, face major constraints in fulfilling their roles, rendering them more vulnerable to food price spikes. Major recommendations include building on rural women's resiliency and mitigating negative coping strategies by reducing gender inequalities in rural development, and by providing safety nets that are appropriately designed to address rural women's needs and limitations. Gender gaps in rural development refer to those in access to resources, better-paying jobs, infrastructure, public services, agricultural extension and technologies, as well as gaps in the levels of participation in farmers' organizations and other public institutions. Better design in safety nets and other social protection programmes involves including mechanisms that are culturally sensitive, that reduce women's time burden, and that provide the necessary transportation, child-care facilities, and other services and mechanisms to ensure their participation. Gender-transformative approaches in the implementation of policies and programmes, including capacity development on gender roles for the household as a whole, are essential for ending discrimination against women, which hinders their economic and social empowerment. Additional areas of research include gender-differentiated impacts of high food prices and volatility, both at the individual and household levels, and the effectiveness of safety nets and other social protection programmes designed to address rural women's specific needs.



1 Introduction

Rural women² experience shocks³ more severely than men do (Brydon and Chant Aldershot, 1989). To mitigate the negative effects of high and volatile food prices, policy design must account for the systemic barriers and social roles that determine the differentiated impacts of these shocks on women. Two main aspects determine these impacts and women's ability to cope with them:

- 1) Social inequalities that create a gender gap in rural development: these inequalities limit women's access to productive resources and better-paid jobs, hinder their social participation and political representation, and place them in a more vulnerable position in the face of food price shocks than men.
- 2) Gender-based social norms and intrahousehold power dynamics: these determine coping behaviours that can result in more harmful impacts for women, even if women have demonstrated better adaptive capacities than men in times of crisis.

The aim of this discussion paper is to analyse these two aspects that, in general terms, reduce rural women's ability to cope with sudden food price spikes. In addition, the paper provides recommendations on what can be done in order to prevent negative coping strategies (e.g. asset depletion, skipping and reducing meals, pulling children out of school) and mitigate their negative impacts (e.g. malnutrition, widening gap in education, increase in time burden, migration and family abandonment), while enhancing women's coping ability through social safety nets and access to better employment opportunities.

In order for countries to better respond to high and volatile food prices, it will be necessary to refine policy design by improving monitoring and research on the

2 While this paper most often refers to women, girls and female-headed households in general, it is important to recognize that the severity of high food prices' impacts on women differs, depending on important contextual factors – such as gender and equality indices, culture, and discrimination – as well as intrahousehold factors, including number of dependents, marital status, age, and power dynamics in terms of asset control and decision-making.

3 For this paper, unless otherwise specified, the term “shock” refers to negative shocks, as opposed to positive shocks such as winning the lottery. Also, given that the increase of food prices is a covariate shock, we generalize that the policy responses indicated in this paper may apply to other shocks, but particularly to covariate shocks.

gender-differentiated impacts of high food prices and volatility, and to conduct more evaluations of projects and programmes that aim to support rural women before and during times of crisis. Better research can also bring to light areas where rural women could benefit from mechanisms that strengthen their coping capacity, or even from higher food prices.

Impacts of the 2007/08 food security crisis on female-headed households

Although there have been price shocks before, price volatility in global agricultural markets is a relatively new phenomenon, and thus most studies look towards relevant findings from the sudden onset of high prices in 2007/08 to envisage the potential risks. Research into specific, gender-differentiated impacts on vulnerable groups, as well as their coping behaviours during the 2007/08 food price crisis is scarce. However, the little evidence available shows that female-headed households (FHH) were particularly harmed.

A review of the existing evidence on the impacts of the 2007/08 food security crisis shows that within the poor and marginal food consumption groups, FHH were 1.6 times more likely to be food insecure than male-headed households (MHH) (Compton, Wiggins and Keats, 2011). In addition, Kumar and Quisumbing (2011) support this finding, with empirical evidence from Ethiopia during the 2007/08 crisis showing that FHH experienced the food price shock more frequently, were more vulnerable to food price changes, and were also less able to recover their losses than male-headed households. More importantly, their analysis highlights the importance of households' pre-crisis resiliency: because of inadequate resources, specifically unequal access to land, FHH experienced greater difficulty on average in fulfilling their food consumption needs than MHH (Kumar and Quisumbing, 2011).

In order to supplement the limited information specifically on the implications of food price volatility, this analysis draws from observations and studies of household and individual responses in times of other shocks, including natural disasters, famines and economic crises, as well as seasonal adjustments made in food insecure households. Household behaviour during economic crises illustrates the adjustments made in response to reduced spending on food, as happened with the incidence of sudden spikes in food prices. Coping strategies adopted in response to natural disasters, such as drought and floods, relate to strategies that arise from shocks in food availability or agricultural production. Finally, adjustments made in food insecure households during times of famine demonstrate the desperation of food insecurity, as was reported during the 2007/08 crisis, and serve as a warning of the possible impacts of future global food price shocks. As a result of lack of evidence at the individual level, comparisons between male- and female-headed households⁴ are often used to illustrate the disparities in access to resources for building buffer assets and coping with crises.

4 Female-headed households include: de jure female-headed households, in which the female head is single or widowed; and de facto female-headed households in which the male partner, though not physically present in the household, continues to influence larger decisions (although generally not involved in day-to-day decisions and activities). Female-headed households may also be in a polygamous marital situation.

2 High and volatile food prices: How women are affected differently

Social inequalities in rural development limit the ability of producers not only to benefit from high prices, but also to respond and meet increasing food demands. While this is generally true for small producers, our focus is on rural women as they are disproportionately represented among those under-served by institutional support, and less likely to have quality income opportunities and access to financial resources. Furthermore, the stress of food security shocks affects rural women in particular, as they are traditionally responsible for food consumption and food preparation in the household.

2.1 The gender gap: decreasing rural women's resiliency

The gender gap in rural development creates strong barriers to women's resiliency. Equal and adequate access to resources would allow women to increase their productivity and earning potential, and help them in savings and investment. Without equal and improved access, women remain more vulnerable to shocks than men, with severe consequences for their households and communities.

The gender gap in rural labour and the implications of male migration

Since the 1980s, major policy shifts have occurred in the agricultural landscape towards more commercial agriculture and away from smallholder family agriculture. In addition, decreasing state support has contributed to an increase in rural households' diversification of livelihood strategies, as these increasingly pursue non-farm employment, both rural/urban and formal/informal (Razavi, 2009). In this context, income from wage employment has become essential to supporting family agricultural practices (Smith and Stevens, 1988) and diversifying risk, as well as substituting for the frequent lack of formal finance opportunities in rural settings (Hernandez, Reardon and Guan, 2010). However, evidence has shown that it is more difficult for women to access this form of employment. For them, limitations in access to salaried employment (which has a higher probability of having both better pay and employment benefits) come mostly from inequalities in education, training and access to markets,

and are compounded by the time burden of domestic unpaid work, making much of women's work seasonal, unpaid, subsistence-based and small-scale (FAO, 2010).

Similarly, men's inability to access rural employment affects household food security. This can become more acute in times of high food prices when males migrate in search of higher income or additional employment, leaving behind de facto female-headed households. For example, IDS (2009) reported that in Kenya male migration was a common strategy during the food security crisis of 2007/08; however, women complained of their husbands' abandonment, as they did not return nor send remittances. Although these payments may provide great support to female-headed households, these need to reach them in a constant, reliable manner, and in response to price volatility. Thus households who have recent outmigrants owing to food price shocks may not be able to rely on remittances, as these may reach them much later than needed.

Male migration also has implications for agricultural labour and farm productivity, diminishing women's ability to respond to food price changes: women suddenly faced with the family farm's management may have to wait for their husbands' approval before making decisions, such as planting a different crop or hiring labour (Coon, 2008). Cases similar to that in southeastern Mexico (Radel *et al.*, 2012), where it is not socially acceptable for women to work in the field during their husbands' absence (even when they are not able to hire labour), or in places where religious codes prevent women from leaving the family holding without being accompanied by male household members, illustrate how social roles and values prevent women from acting as independent farmers, worsening their constraints in times of crisis.

The gender gap in productive resources

Female farmers often lack key productive resources, such as land and capital, and the ability to hire labour, purchase inputs, and access marketing channels (Razavi, 2009). Land in particular is a crucial resource for food security in rural areas, yet women tend to manage smaller plots of land than men, often of inferior quality and with insecure tenure⁵ (FAO, 2011a). Insecure property rights are a factor in women's inability to access appropriate credit services, as they limit the collateral women need to access these formal institutions of financial support (Fletschner and Kenney, 2011).

Observations from the 2007/08 food security crisis conclude that those who are able to profit from high price levels are those with a large market share, substantial access to credit or other financial resources, and infrastructure (FAO, 2011b). Thus, women farmers' reduced access to productive resources in agriculture means that they are poorly equipped to increase farm productivity (FAO, 2011a; World Bank, 2011) and unable to benefit from high prices or to meet increased food demands. Faced with these systemic biases against ownership and control over productive resources, many women are unable to invest during food price shocks, even if inclined to do so (Holmes, Jones and Marsden, 2009).

5 Insecure tenure means that women are much less likely to have land titled under their name, even when their families own land, and are less likely than men to have control over land, even when they do formally own it (Agarwal, 2011).

6 This paper refers to credit and financial services through formally accredited institutions. It does not speak directly to the dangers of black market credit services, which often offer damagingly high interest rates, and result in severe debt.

The gender gap in financial services

Formal credit⁶ becomes more important in times of high food prices, as alternative mechanisms and resources such as community support and social capital can be strained. Accessible credit can not only help households adjust to higher prices and maintain food consumption, but also improve their purchasing and investment opportunities for future production. It also allows households to purchase larger amounts up front, and enables them to make investments in order to improve food storage. In fact, credit (both formal and informal) was a major source of income used to buffer against the high food prices in 2007/08, and was also an important support for production (Compton, Wiggins and Keats, 2011).⁷ Unfortunately, minimal access to formal credit and savings often keeps poor households from easily protecting themselves in such periods of high food prices (Prakash, 2010; Compton, Wiggins and Keats, 2011; IDS, 2009). When not able to buy food in large quantities, households are more likely to pay higher prices over time for the same quantity of food (Anriquez, 2008).⁸

Women tend to have unequal and inadequate access to financial resources (credit, savings and insurance), to not hold bank accounts, and to not have collateral such as land. Institutionally, women may be at a disadvantage given the following: a) credit institutions do not fund activities usually run by women; b) credit requirements are not widely known; c) women guarantors are not accepted; and d) women receive smaller loans for similar activities than men do (Fletschner and Kenney, 2011). Fostering access to cheaper financial services for female farmers, as well as creating financial packages that take into account female asset limitations and risk aversion, can improve rural female farm production and food security during times of high food prices and price volatility.

The gender gap in participation and representation

Lack of voice in the household and in rural organizations, as well as weak political representation, are also major limitations for women's ability to build resilience to future food price spikes. Although income-generating employment and improved access to productive resources have been shown to increase women's participation in the financial decisions of the household (Chant, 1994), this transition may pose some challenges for the men of the household as they reconcile the changing roles and responsibilities (Chant, 2000).

Farmers' organizations and collective bargaining groups are becoming more prevalent in the discussion of empowering smallholder farmers in market participation. While there have been key successes in this respect (FAO/IFAD, 2012), there are also important challenges to enhancing female participation and recognition in these groups. Female participation goes beyond membership: flexible meeting times, awareness-raising about the importance of women's participation, and mechanisms to strengthen women's confidence to voice their opinions are also important (Holmes, Sadana and Rath, 2011). Their participation in these organizations can prove essential in furthering gender equity and rural development, as they also increase access to

7 Similarly, Carter and Maluccio observed this in household panel data in response to economic shocks South Africa (2003).

8 During the price spike of 2007/08, buying rice by the cup was up to 32 percent more expensive than by the bag in Monrovia, Liberia (Compton, Wiggins and Keats, 2011).

technology and market information (Kumar and Quisumbing, 2010) and create linkages to political participation, which in times of high food prices can be key to improving dialogue on policy responses.

For male and female smallholders with fewer resources, the time that elapses between production decisions and implementation increases their susceptibility to price volatility (Prakash, 2010). Price signalling for farmers can be diluted, muted and latent, depending on trade-oriented policies, but also on farmers' knowledge of the market. This is particularly true for rural women, who face participation restraints and tend to get their market information from informal networks.⁹ Therefore, in addition to strengthening female farmers' voices, farmers' organizations can also increase access to informal education and knowledge sharing, and serve as points of market information (Peterman, Behrman and Quisumbing, 2011).

An important final word in this section is that all gender gaps in access to economic and social assets are widened by the gender gap in education. For rural women to seize available economic assets and opportunities during times of crisis, they need to have adequate skills and knowledge in order to do so.

2.2 Gender-based social norms and intrahousehold power dynamics: Determining male and female coping behaviour

Existing gender roles in society¹⁰ and intrahousehold power dynamics determine the coping behaviours men and women adopt in response to shocks, sometimes increasing their negative impacts in detriment to one gender or the other, and also in detriment to the younger or older members of the household. Furthermore, intrahousehold *shock allocations* may be a function of individuals' relationships and how their roles in health or human capital and productivity are viewed within the household (Hoddinott, 2006). The impacts of these coping strategies may curb future income generation sources, as seen in the selling of female productive assets during famines in Africa (Corbett, 1988); pulling girls out of school in Brazil (HDN/PREM, 2008); or allocating more food to male household members in Indonesia, causing higher negative nutritional impacts on women and children (Block *et al.*, 2004). While certain changes in behaviour may be immediate and short-term, the inability to access food may also have long-term repercussions in health and education outcomes and may also reshape gender roles, such as when more women entered the work force owing to the economic crisis in Mexico (Chant, 1994). This will be discussed further below.

Women more vulnerable to a reduction in food consumption due to their nutritional needs and household responsibilities

One of the most commonly recorded behavioural adjustments made by households in response to high food prices is a change or reduction in household food consumption. Dietary changes as a response to shocks often include the following: eating less

9 Data from Paraguay comparing husbands' and wives' knowledge of financial markets found that rural women are 15 to 21 percent less likely than men to have basic information about the financial institutions in their communities (Fletschner and Kenney, 2011). Thus, the gender gap in access to information can be substantial.

10 In many regions of the world, women and girls still bear the major responsibility of preparing and providing food, in addition to performing the majority of households' reproductive labour.

preferred foods; eating smaller or fewer meals; decreasing food variety; and choosing more filling (and often cheaper) foods rich in macronutrients over foods richer in micronutrients. Women are of particular concern as, biologically and socially, they are more vulnerable to inadequate nutrition during food shortages.

Nutrition is of particular importance for prenatal and/or lactating women and their infants. Women have special nutritional needs during this time, and they are more prone to undernourishment (Block *et al.*, 2004): the first 1 000 days between a woman's pregnancy and her child's 2nd birthday are the most essential for protecting lifelong development for babies. For this reason, changes in diet for women and children are of special concern, as micronutrient deficiencies have been associated with heightened morbidity and mortality – particularly among preschool children and pregnant women (Block *et al.*, 2004).¹¹

Biologically, if not lactating or pregnant, women can eat less owing to lower nutritional requirements and higher body fat (Neumayer and Plümper, 2007); however, many endomorphic studies have shown that food scarcity directly impacts women's body mass more so than men's. One study by Hoddinott (2006), which interviewed over 400 households in rural Zimbabwe between 1984 and 1999, showed that women's body mass index (BMI) fell by about 3 percent after a drought in 1994-95; however, there was no apparent correlation between the drought and men's BMI. Meanwhile, women in wealthier households maintained a higher BMI, which demonstrates how relative wealth determined some women's ability to absorb the shock (Hoddinott, 2006).

In the context of male and female household responsibilities, meal planning often falls to women, a role that often has negative implications for them during periods of food insecurity, as they may resort to negative coping strategies in order to fulfil this responsibility. Slater and Mphale (2008), in their study of 25 focus group discussions and case study interviews with beneficiaries and non-beneficiaries of a cash transfer programme in Lesotho, found that:

“During food shortages, the main responsibility for meeting household food needs usually falls to women. The first strategy employed by households in the face of food shortages is a reduction in consumption. Households reduce both the number of meals they consume and the size of the portions. Whilst men are willing to reduce their own consumption so that their children can have full meals, there was no evidence from the research that men reduce their consumption to enable their wives to eat, even when their wives are pregnant or lactating. In contrast, women often forego meals so that their children and husbands can eat.”¹²

A recent qualitative study in Nicaragua also highlighted women's prioritization of scarce income resources for their children's food consumption, while men continued to spend incomes on alcohol and cigarettes, even during times of high food prices. The result was often lower food consumption among women (Marselles-Culleres, 2011).

In addition to health concerns, for women, sacrificing their own food intake translates into broadening the gap in education, in the labour market, and in socio-economic empowerment in general.

11 For example, a pregnant woman deficient in iron puts her child at risk of long-term developmental problems (Kilbride *et al.*, 1999).

12 Slater and Mphale, 2008, p. 8.

Women's health and education more likely to be affected during food price shocks, due to cultural perceptions and values

As behaviours shift in order to protect food consumption, household non-food related expenditures are deprioritized. This can harm investments in health and education, which consequently damages welfare in both the short and the long term.

There are observations that the use of health services decreases both in times of high food prices (IDS, 2009; Compton, Wiggins and Keats, 2011) and during economic crises in general (Chant, 1994; Sabarwal, Sinha and Buvinic, 2010). Women and girls are likely to be the traditional caregivers in many rural households. The increased strain on their time and attention is aggravated when decreasing household nutrition weakens immune systems and increases the household's likelihood for illness, while simultaneously reducing expenditures on health services. In this context, the responsibility of household females increases, oftentimes preventing girls from going to school or preventing adult women from engaging in more productive activities. In addition, by cutting health expenses and opting for self-diagnosis, families also expose the sick to worsening health conditions and treatment.

Shocks are also likely to impact the health of girls more so than boys. This is particularly evident in regions where preference of boys is common, such as in South Asia and some sub-Saharan African countries (Sabarwal, Sinha and Buvinic, 2011). Reports on the food, fuel and financial crisis in 2007/08 from Bangladesh and Indonesia state that the elderly, young children, and women who are pregnant or lactating received less clinical medical attention in order to give preference to the breadwinning male (IDS, 2009).

Pulling children out of school is a common coping behaviour in response to shocks, and was also reported during the 2007/08 food price spikes (HDN/PREM, 2008; Sabarwal, Sinha and Buvinic, 2011; Compton, Wiggins and Keats, 2011). Several studies from Bangladesh record a higher proportion of girls dropping out of school than boys as a result of the food security crisis. For example, Raihan's surveys of 1 250 households in Bangladesh found that more than half (and over 80% of FHH) had their children drop out of school in response to the food price rises (2009). Similarly, because of food price pressures in Brazil, a study showed that in households where the heads had lost their job, girls were 50 percent more likely than boys to be pulled out of school to look for work (HDN/PREM, 2008). This forfeiting of education investments for immediate contributions to the household will prevent the ability of youth, particularly of girls, to overcome poverty in the future through better-paying jobs.

How a household prioritizes education expenditures depends on the cultural view of female–male education (Sabarwal, Sinha and Buvinic, 2011; Carter and Maluccio, 2003); the value of education in the labour market (Corbett, 1988); intrahousehold power dynamics (Gitter and Barham, 2008); and also the availability of social protection programmes that prevent this coping behaviour (Soares *et al.*, 2007).

Increases in women's time burden due to more work at home and in the labour market

Owing to already low or limited income, adjusting to food price increases may go beyond simple expenditure adjustments. Women therefore may seek additional income opportunities (Sabarwal, Sinha and Buvinic, 2010; Holmes, Jones and Marsden, 2009; Compton, Wiggins and Keats, 2011) and increase their hours spent working in addition to other domestic work (Hossain, 2011). For example, a study conducted by

the Self Employed Women's Association (SEWA) to monitor the impact of the 2008 global financial crisis in Gujarat, India, revealed that 50 percent of the 100 randomly selected female farmers interviewed in member communities were seeking to work harder or take a loan to start a business (PWESCR, 2011). In Bangladesh and Ethiopia, Uruguchi's study found that 65 percent of the 373 women in the study worked 20 percent more hours, in order to increase their income and/or increase food production and consumption in response to higher food prices (2010).

Rising food prices can also have important implications for women's free time and caregiving responsibilities. These come under more pressure when the need for cheaper food entails travelling further to find it, and when it requires more time-consuming preparation (IDS, 2009; Quisumbing, Meinzen-Dick and Bassett, 2008). In Ethiopia at the peak of the food price hikes, women reported spending additional time in search of cheaper food from distant areas and preparing food with different unprocessed ingredients, as well as working for more income (Uruguchi, 2010). In Lesotho, Slater and Mphale's study saw women increase their time begging and asking neighbours for maize (2008). During 2007-09, women in Nairobi, Kenya moved from domestic work and child care to spending their entire day working outside the home (IDS, 2009). This strain on women's time has negative consequences for child care and family well-being if public services such as crèches or additional caregiving help at home are not available. Extra work and time burdens correlate to higher stress levels, anxiety and sleep problems, which were also reported during the 2007/08 food security crisis (IDS, 2009). In addition, these burdens can also affect nutritional outcomes (Bouis and Hunt, 1999).

Women's tangible assets sold first owing to weaker bargaining power

The selling of assets is another coping mechanism that can create household income in response to high food prices. Asset selling is likely to occur in households spending 50-80 percent of their income on food, and is considered one of the most potentially damaging coping behaviours (Compton, Wiggins and Keats, 2011). However, due to lower bargaining power in the household, married women's tangible assets, such as jewellery or small livestock, are more vulnerable to stripping than their husbands' "lumpier" assets such as land, cattle, or transport (Quisumbing, Meinzen-Dick and Bassett, 2008; Holmes, Jones and Marsden, 2009; Quisumbing, Kumar and Behrman, 2011).¹³

The consequences for selling assets range from immediate and day-to-day to more long-term impacts. The loss of assets not only reduces women's welfare, but also decreases their bargaining power and financial independence, as well as increasing their work burden. The extent to which a woman can protect against the disposal of her assets without consent, the extent to which the assets can be recovered or restored, how the money from the sale is spent – are all issues that need greater attention.

13 Of the 2 272 households sampled in Bangladesh by Quisumbing, Kumar and Behrman (2011), 45 percent made asset adjustments in response to the food price shock of 2007/08. Though many had relatively good insurance on land against food price increases, there were still negative impacts on jointly held assets or wives' assets. Women's assets decreased in 2007 from 40 percent to 33 percent of households' total assets; their share of total livestock declined from 16 percent in 2007 to 9 percent in 2010.



3 How can policies better respond to the differentiated impacts of high and volatile prices on rural women?

In section 2 we have made the case that in order for countries to respond more effectively to higher and more volatile food prices, it will be necessary to both break down the systemic barriers affecting women's resilience *before crisis*, and to provide specific support *during crisis* to minimize women's coping behaviours that lead to negative impacts. Thus, for more effective responses to high and volatile food prices, policy-makers must not only enact policies and programmes that will protect the most vulnerable, but also reorient current policies towards gender-equality goals.

Gender equality has a strong relationship with increasing the capacity of rural households to adopt viable coping mechanisms to crises, as well as with overall effectiveness in poverty reduction interventions (Uraguchi, 2010). At the same time, by helping women earn higher incomes and access physical and human capital, gender-equitable policies and programmes also help women become more self-confident and able to increase their bargaining power within their households and communities, which is essential to adopting fairer and less detrimental coping strategies. If policies and programmes adopt both a “household approach” – meaning engaging all household members in the process – as well as a “gender-transformative approach”, which seeks to transform gender relations to promote equity, these become easier to implement in the short run, and their effects persist in the long run. In this chapter we give examples on how policy response to higher and more volatile food prices can become gender-responsive.

3.1 Closing the gap in rural development: building women's resilience before shocks occur

By reducing gender inequalities in rural development, policies can proactively address the barriers that keep rural women from building the necessary resources to buffer against fluctuating food prices. Furthermore, reducing the gender gap in rural development will not only improve individual and household food security, but also increase food supply in rural markets, and lower prices by increasing competition.

Policy-makers must remember that high food prices do not automatically translate into greater profits for rural producers, in particular women, who face the strongest barriers to accessing and acquiring assets to respond to changes in market demand. In fact, a price increase linked to a rise in cost of production inputs may make it difficult to maintain food production; therefore, addressing risk aversion and lack of access to credit and other financial resources is fundamental in helping female farmers invest in and improve their agricultural contributions. Securing land tenure, ensuring both primary and extension education, and gaining market access to inputs and value-added processes are also important for improving female farmer livelihoods.

Access to collective food reserves, credit and savings designed for rural women

Setting up local and regional food banks or food reserves are schemes that have been discussed by governments and international agencies for enhancing food security at lower regional levels (Agarwal, 2011). Other schemes include warehouse receipt systems and collective farming, which allow women to work together to overcome their lack of credit, benefit from higher prices, and access food reserves when needed. Collective action can also cultivate support networks and social capital for women, which can help curb anxiety and mental stress in times of crisis, and offer small-scale savings and credit services.

Examples of good practice come from India during the 2007/08 food crisis, as described by Nair and Shah (2007):

- 1) To combat price volatility, the Self Employed Women's Association (SEWA) in Gujarat, India started a "warehouse receipt" initiative, encouraging farmers to store their produce of castor seeds in a collective warehouse, against which they receive loans.
- 2) Women's federations in India bought food grains in bulk and sold them to poor members at a nominal price or on short-term credit, thus contributing to income smoothing as well as setting up community grain funds. Under this scheme,

BOX 1

Warehouse receipts and community-shared storage facilities

Warehouse receipt systems and shared storage facilities are two effective ways to help farmers access secure storage for their crops. In times of price instability and volatility, being able to buy and store staple grains in bulk can be a proactive step, which not only helps households buffer against sudden price spikes, but also can keep bulk grains safe for long periods of time, until they can be sold during times of high prices. They also minimize the amount of time that women spend looking for food, reducing their time burden during crises. Collective organization can also strengthen women's voices by improving their bargaining power over prices (Lacroix and Varangis, 1996), and by empowering female farmers' socially and economically.

farmers gets as much as 70 percent of the value of the produce stored, enough to satisfy their working capital needs for the coming season, and thus ensuring that they are able to take advantage of the subsequent price rise and make a greater profit on their stored produce.

Other examples of warehouse receipt systems come from Niger, Madagascar, Ghana, Uganda and the United Republic of Tanzania (FAO/IFAD, 2012).

In addition, special credit and savings schemes can also be specifically designed for rural women, offering lower rates and easy access through local banks, rural cooperatives or women's groups.

Supporting producer organizations that provide women with more access to markets and market information

Supporting agricultural cooperatives that effectively incorporate female participation – particularly those that offer credit and financial resources, support in buying productive assets (e.g. land), and access to markets, in addition to providing information on food markets and prices using available cheap technologies (i.e. text messaging in mobile phones) – can help female farmers better cope with price shocks and even benefit from higher food prices. These organizations link small, otherwise isolated female producers at the grassroots level, and connect them not only to service providers but also to policy-makers (FAO/IFAD, 2012). The latter are particularly useful for supporting women's voices in political negotiations during periods of high food prices.

Creating quality and decent rural employment for women¹⁴

Creating jobs within the agricultural sector and in other sectors is fundamental for enabling rural women to earn higher incomes and cope with high food prices. Active Labour Market Intervention Programmes (ALMPs) for women can be designed to enhance their integration in the rural labour market, as these include identification of the targeted population's constraints in accessing or finding employment, specific training schemes, and an ad hoc design that adjusts to their needs. As new jobs are created, affordable social services need to be expanded as well so that the household responsibilities traditionally performed by women (i.e. child and elderly care, food preparation) are still taken care of.

¹⁴ Decent work has been defined by the International Labour Organization (ILO) and endorsed by the international community as being productive work for women and men in conditions of freedom, equity, security and human dignity. Decent work involves opportunities for work that is productive and delivers a fair income; provides security in the workplace and social protection for workers and their families; offers better prospects for personal development and encourages social integration; gives people the freedom to express their concerns, to organize and to participate in decisions that affect their lives; and guarantees equal opportunities and equal treatment for all. The Decent Work Agenda is a balanced and integrated programmatic approach to pursuing the objectives of full and productive employment and decent work for all at the global, regional, national, sectoral and local levels. It comprises four pillars: 1) employment creation and enterprise development; 2) social protection; 3) standards and rights at work; 4) governance and social dialogue (ILO/FAO, 2007).

Investing in rural infrastructure and public services to increase female farmers' market connectivity and reduce women's time burden

Investing in infrastructure is essential for rural development and can relieve the increased burden on women's time during high food prices. Basic infrastructure such as water pumps, transportation and better roads, among others, improve agricultural production and link producers and consumers. They also reduce women's time spent on reproductive and domestic activities such as gathering food and water, which in rural areas are not only time consuming, but also can have high risks.

Investments in public services such as affordable health clinics, daytime crèches, homes for the elderly and other services have a direct impact on women's domestic responsibilities. These services relieve the pressure on women's time, and allow women to engage in other activities that can better equip them to respond to high food prices, such as wage labour. They also minimize the support that female heads of household requires domestically, thereby decreasing incentives to pull girls out of school and minimizing human capital deficits for future generations.

Lastly, education services – not only on literacy and numeracy but also on price markets and marketing, among other topics – that are adapted to women's time constraints are essential for improving agricultural productivity and farmers' responses to price volatility.

3.2 Designing safety nets to help women avoid negative coping strategies

In addition to supporting women in building their resiliency, policies must mitigate the coping behaviours that households adopt which are detrimental to women's welfare. Safety nets work both ways: not only do they build women's assets before price shocks, but they also provide alternatives to negative coping strategies through income and consumption smoothing when the need is greatest. Thus, it is important that countries establish safety net systems during non-crisis times, as an established programme can be more easily scaled up and expanded to reach target households at the right time.

Certain safety net programmes and their design can be more beneficial to women than others during food price shocks. In this section, we summarize some schemes and design aspects that address women's constraints and imbalances in intrahousehold dynamics and rural development.

School feeding programmes: keeping girls in school

In general, school feeding programmes play a great role in student retention as well as in improving nutrition, which is linked to better school performance (Rogers and Coates, 2002). In addition, they may also play a vital role in fostering gender equality in education in the longer term. For example, these schemes have shown to increase the value of keeping girls in school in times of high food prices, where women's time is constrained and household expenditures decrease, and have also shown to ease the strain on household expenses associated with education. Evidence on their effectiveness in meeting these objectives comes from the Food for School Feeding Program in the Philippines (Demeke, 2009) and the World Food Programme's school feeding programme in southern Madagascar (IRIN, 2009).

Transfer programmes: reducing negative coping behaviour and gender inequalities

A considerable amount of evidence shows how cash transfer programmes that target vulnerable families with small children and/or pregnant women have the potential to reduce gender inequalities. The Social Cash Transfer Pilot Scheme in Malawi reduced women and children's risk-coping activities, such as engaging in transactional sex (Schubert and Huijbregts, 2006) or hazardous child labour, which worsen social inequalities. Also, in Brazil the Bolsa Familia Programme increased the labour market participation of female beneficiaries by 13.7 percent in a period of two years (CEDEPLAR/UFGM, 2007; Veras Soares, Perez Ribas and Guerreiro Osório, 2007). Conditional cash transfer (CCT) programmes focusing on child school attendance have also shown to increase girls' attendance in Nicaragua (Gitter and Barham, 2008). Finally, cash transfer programmes that put money directly in the hands of women have also increased women's status within the household, such as Brazil's Bolsa Familia (Suarez *et al.*, 2006), and promoted their self-esteem and economic empowerment, as with Mexico's Progresa/Oportunidades programme.

Public works programmes: increasing women's labour market participation and incomes, and reducing their time burden

Public works programmes (PWPs) provide an optimal mechanism for bringing additional welfare to rural women by providing employment opportunities; addressing shortages of rural infrastructure that decrease women and young girls' time burden; and promoting efforts to reduce gender inequalities in education and income.

PWPs have the potential to address gender inequalities in labour and promote women's capacities if their design explicitly takes into account decent work considerations, women's care responsibilities, and their need to participate on a flexible basis (Subbarao, 2003; Antonopoulos, 2009; Kabeer, 2008). Integrating family responsibilities with work¹⁵ (Antonopoulos, 2009) has been shown to increase female participation. Also, special training has been shown to increase female employability when the programme stint ends (Holmes and Jones, 2009; Subbarao *et al.*, 2010), as is seen in Public Works Plus¹⁶ models.

PWPs which develop infrastructure critical for women (e.g. wells, roads) can bring longer-term benefits by reducing women's time burden. Del Ninno, Subbarao and Milazzo (2009) document that in Yemeni PWPs, the selection of any subproject gave highest priority to schemes that benefited women and children most, such as water projects (which benefited women and children disproportionately). The same programme made special emphasis on building schools for girls' and women's training centres for income-generating activities to help reduce gender inequalities in education and income.

15 In South Africa, Antonopoulos (2009) argues for the Expanded Public Works Programme (EPWP) to incorporate social service delivery in health and education – traditional women's work – into its framing of “public works”. This would both increase the visibility in the policy arena of the labour-intensive unpaid work many women are already doing, as well as subsidize basic and social services.

16 “In some countries, public works programs [sic] have been used to accomplish other goals that go beyond the traditional role of PW programs. For example PW is used in some countries not only as a vehicle for short-term employment and infrastructure development, but also as a vehicle to graduate participants out of poverty, either via encouragement of savings or via a training component.” (Subbarao *et al.*, 2010, p. 3).

Integrated nutritional assistance in safety net schemes: preventing women (and children) from decreasing food consumption during crises

While food assistance can play a significant role in guiding households through food crises, the need to better integrate it with nutritional assistance programmes has recently been recognized by Latin American states (among others) as one of the priorities for coping with food crises (Aguirre, 2011; Skoufias, Tiwari and Zaman, 2011). Not only must nutrition be incorporated into the selection of foods for distribution during crises, but it must also be accompanied by nutritional education to improve household decisions even in less severe times. Interventions can include the provision of targeted food supplements and micronutrients for those who are most in need, notably children and women of reproductive age. Other safety net programmes (e.g. CCTs and PWP) can also include micronutrient supplements such as iron, calcium, and vitamin B1. This would also diminish the negative coping strategies of women (and other household members) that involve eating less food, or less nutritious foods.

Tailoring safety net programmes to address women's needs

The inclusion of women in safety net programmes is not enough. An adequate design is needed in order for women to participate and benefit effectively in both the short and long term. Some considerations in the programme design thus include the following:

- Cautioning against the time burden that conditional cash transfers might place on women, since they tend to condition against female responsibilities (i.e. children's health, schooling, etc.).
- Addressing mobility constraints, by reducing the need to travel long distances to retrieve transfers or aid, and facilitating transportation when necessary.
- For public works programmes: offering flexible hours, crèche facilities, toilet facilities for women at work sites, and options of wage payment modalities (e.g. piece wages) as mechanisms to ensure women's participation in the scheme.

BOX 2

Food or cash?

In times of high food prices, and depending on the country context and crisis situation, women may prefer food assistance rather than cash for several reasons: it eases women's responsibility for household nutrition, increases their participation in aid programmes (Subbarao, 2003), and also increases their control over family food distribution (Quisumbing, Meinzen-Dick and Bassett, 2008; Sharma, 2006). For example, in Ethiopia women involved in public works programmes largely preferred to receive food instead of cash payments, because intrahousehold dynamics diminished their control over cash (Holmes and Jones, 2010). Nevertheless, project implementers who decide whether to give food or cash should be cautious to not increase gender inequalities, or reinforce gender roles and expectations, in a crisis setting by providing food to women and cash to men. Thus, active participation and input of beneficiaries is needed in order to provide the best solution.

- For programmes that provide transfers: also providing access to adequate financial services, either through savings groups or bank accounts that allow women to receive and store transfers independently, thus helping women make independent decisions on the use of the transfers they receive.
- For public works programmes: challenging gender roles by providing labour opportunities to women which are not typically performed by them (i.e. construction, managerial roles), and including specific training and education opportunities that enhance women's employability in similar jobs when the scheme reaches its end.
- Promoting women's participation in the implementation of safety net schemes, for example by undertaking supervisory roles in the selection of beneficiaries and project location, in monitoring, and in social auditing, among others. This gender-transformative approach could enhance other women's participation in the scheme and ensure that gender equality in implementation is reached.
- For public works programmes: setting decent work standards (e.g. ensuring safe working conditions, child labour prevention, and considering the effects of the PWP's wage rate on local wages) and establishing equal pay between men and women performing similar tasks, thus raising the work standards of other employment opportunities beyond the scheme.

3.3 Education: a key aspect for success

The role of education requires special mention. As we have seen in previous section, there are several initiatives that can be undertaken to help rural women and their households cope with food price volatility; however, their success lies heavily in the capacities of the beneficiaries to seize these opportunities and carry on their benefits in the long run. Both formal training and “gender training” are important in this sense. Formal training for both men and women, as well as the young and the old, is necessary for them to broaden their understanding of prices and the market, use available technologies, and adapt to other more innovative and productive agricultural practices. Gender training, on the other hand, promotes an environment of non-discrimination, and challenges detrimental gender roles that limit rural women and other groups when accessing the resources they need in order to cope in times of crisis.



4 Conclusions and recommendations

In this discussion paper, we have seen that rural women and their families were particularly vulnerable to food price spikes during the 2007/08 food security crisis. In order for policies responses to prevent growing gender disparities in future food price shocks, they must improve women's resilience and help them avoid negative coping strategies. A twin-track approach is proposed in order to do so: closing the gender gap in rural development, and establishing effective safety net schemes that address women's specific constraints and needs.

Closing the gender gap in rural development requires improving women's access to assets and other productive resources; creating decent rural employment for women, and promoting their access to the labour market; and promoting women's participation and representation in farmers' organizations and agricultural institutions. Investments in infrastructure and public services in rural areas can also play a key role in connecting female farmers to markets and in providing food, input and energy price information.

Safety net schemes, such as cash transfers and public works programmes, are important mechanisms for providing immediate support and avoiding negative coping strategies during food security crises. It is vital that they be established *before crisis*, as they not only increase women's household resources (and thus women's resilience) before a shock occurs, but also can then be scaled up and expanded *during crisis*, according to the severity of the shock.

Furthermore, governments need to tailor safety net programmes to address women's specific needs and constraints, using a gender-transformative approach. This calls for the implementation of policies and programmes that strengthen women's household bargaining position and create incentives to maintain female health and education during consumption shortfalls, with the help of household members as a whole. In responding to food crises, policies and programmes must acknowledge the important roles that women play, both in maintaining household food security and in reproductive labour, by incorporating flexibility into working hours and responsibilities. Additionally, an understanding of intrahousehold dynamics will improve a programme's success, for example when determining whether policy-makers should aid families through cash or food and through whom distribution should occur.

The current context of price volatility and severely increasing food prices makes government and policy response critical and urgent. Given the experience of past food price spikes, policy-makers must be better informed on the gender inequalities and sociocultural aspects that could jeopardize the effectiveness of policy responses to another food security crisis. It is not enough to make women the sole recipients of aid or to ensure their participation and representation; policy responses must address both the social and economic inequalities that worsen in times of food price shocks. For this reason, future areas of research should include context analysis that addresses gender dynamics and issues in rural development, and programme evaluations of country responses to high and volatile food prices, with an emphasis on the impacts on rural women.

Women are important agents of food security. A woman's ability to face food price shocks independently and productively will ensure her household's welfare and the future of rural development.

References

- Agarwal, B. 2011. *Food crises and gender inequality*. DESA Working Paper No. 107. New York, USA, DESA (United Nations Department of Economic & Social Affairs).
- Aguirre, M. 2011. Back to Office Report on FAO Policy Seminar in South America to Address High Food Prices. 20 June 2011. Rome, FAO.
- Alinovi, L., D'Errico, M., Mane, E. & Romano, D. 2010. *Livelihoods strategies and household resilience to food insecurity*. Paper prepared for XLVII Convegno di Studi – “L'agricoltura oltre le crisi”, Società Italiana di Economia Agraria, Campobasso, Italy, 22-25 September 2010.
- Anriquez, G. 2008. *A back of the envelope estimation of the effect of soaring food prices on world hunger*. Agricultural Development Economics Division, ESA Working Paper 08-04. Rome, FAO.
- Antonopoulos, R. 2009. *Promoting gender equality through stimulus packages and public job creation: lessons learned from South Africa's Expanded Public Works Programme*. Public Policy Brief 101. New York, USA, The Levy Economics Institute of Bard College.
- Basu, K. 2006. Gender and say: a model of household behaviour with endogenously-determined balance of power. *Economic Journal*, 116(511): 558-80.
- Block, S.A., Kiess, L., Webb, P., Kosen, S., Moench-Pfanner, R., Bloemb, M.W. & Timmer, C.P. 2004. Macro shocks and micro outcomes: child nutrition during Indonesia's crisis. *Economics and Human Biology*, 2: 21-44.
- Bouis, H. & Hunt, J. 1999. Linking food and nutrition security: past lessons and future opportunities. *Asian Development Review*, 17(1, 2): 168-213.
- Brydon, L. & Chant Aldershot, S. 1989. *Women in the Third World: gender issues in rural and urban areas*. Edward Elgar Publishing. 327 pp.
- Carter, M. & Maluccio, J. 2003. Social capital and coping with economic shocks: an analysis of stunting of South African children. *World Development*, 31(7): 1147-1163.
- CEDEPLAR/UFMG. 2007. *Primeiros resultados da análise da linha de base da pesquisa da avaliação de impacto do Programa Bolsa Família*. Ministério do Desenvolvimento Social e Combate a Fome, Secretaria de Avaliação e Gestão da Informação, Departamento de Avaliação e Monitoramento. May 2007. Brasília.

- Chant, S. 1994. Women, work and household survival strategies in Mexico, 1982-1992: past trends, current tendencies and future research. *Bulletin of Latin American Research*, 13(2): 203-233.
- Chant, S. 2000. Men in crisis? Reflections on masculinities, work and family in northwest Costa Rica. *European Journal of Development Research*, 12(2): 199-218.
- Compton, J., Wiggins, S. & Keats, S. 2011. *Impact of the global food crisis on the poor: what is the evidence?* London, ODI (Overseas Development Institute).
- Coon, K. 2008. *The food crisis and gender*. Foreign Policy in Focus, 1 November 2008 (available at www.commondreams.org/view/2008/11/01-3).
- Corbett, J. 1988. Famine and household coping strategies. *World Development*, 16(9): 1099-1112.
- Del Ninno, C., Subbarao, K. & Milazzo, A. 2009. *How to make public works work: a review of the experiences*. Social Protection & Labor, SP Discussion Paper No. 0905. Washington, DC, World Bank.
- Demeke, M., Pangrazio, G. & Maetz, M. 2009. *Country responses to the food security crisis: nature and preliminary implications of the policies pursued*. Initiative on Soaring Food Prices. Rome, FAO.
- Enarson, E. 2000. *Gender and natural disasters*. In Focus Programme on Crisis response and Reconstruction, Working Paper 1. Geneva, Switzerland, ILO (International Labour Organization).
- FAO. 2010. *Gender dimensions of agricultural and rural employment: differentiated pathways out of poverty. Status, trends and gaps*. Rome.
- FAO. 2011a. *The State of Food and Agriculture 2010-2011. Women in agriculture: closing the gender gap for development*. Rome.
- FAO. 2011b. *Guide for policy and programmatic actions at country level to address high food prices*. Initiative on Soaring Food Prices. Rome.
- FAO/IFAD (International Fund for Agricultural Development). 2012. *Good practices in building innovative rural institutions to increase food security*, by D. Herbel, E. Crowley, N. Ourabah Haddad & M. Lee. Rome, FAO.
- Fletschner, D. & Kenney, L. 2011. *Rural women's access to financial services: credit, savings and insurance*. Agricultural Development Economics Division, ESA Working Paper No. 11-06. Rome, FAO.
- Gitter, S.R. & Barham, B.L. 2008. Women's power, conditional cash transfers, and schooling in Nicaragua. *The World Bank Economic Review*, 22(2): 271-290.
- HDN (Human Development Network)/PREM (Poverty Reduction and Economic Management Network). 2008. *Rising food and fuel prices: addressing the risks to future generations*. Washington, DC, World Bank.
- Hernandez, R., Reardon, T. & Guan, Z. 2010. *Rural Nonfarm Employment and Agricultural Modernization and Diversification in Guatemala*. Paper prepared for presentation at the AAEE, CAES & WAEA Joint Annual Meeting, Denver, Colorado, USA, 25-27 July 2010.
- Hoddinott, J. 2006. Shocks and their consequences across and within households in rural Zimbabwe. *Journal of Development Studies*, 42(2): 301-321.
- Holmes, R. & Jones, N. 2009. *Gender inequality, risk and vulnerability in the rural economy: refocusing the public works agenda to take account of economic and social risks*. Background Report for SOFA 2010. London, ODI (Overseas Development Institute).

- Holmes, R. & Jones, N. 2010. *Rethinking social protection using a gender lens*. Working Paper 320. London, ODI.
- Holmes, R., Jones, N. & Marsden, H. 2009. *Gender vulnerabilities, food price shocks and social protection responses*. Background Notes. London, ODI.
- Holmes, R., Sadana, N. & Rath, S. 2011. *An opportunity for change? Gender analysis of the Mahatma Gandhi National Rural Employment Guarantee Act*. Project Briefing No. 53. London, ODI.
- Hossain, N. 2011. *Understanding the real costs of the food crisis*. Institute of Development Studies, Relief Web, 31 January 2011 (available at <http://www.reliefweb.int/rw/rwb.nsf/db900SID/KKAA-8DN5TM?OpenDocument>).
- IDS (Institute of Development Studies). 2009. *Accounts of crisis: poor people's experiences of the food, fuel and financial crises*. Report on a pilot study in Bangladesh, Indonesia, Jamaica, Kenya and Zambia. London.
- ILO/FAO. 2007. *Toolkit for Mainstreaming Employment and Decent Work*. Geneva, Switzerland, ILO.
- IRIN (Integrated Regional Information Networks). 2009. *Madagascar: starting to count the humanitarian cost*. Relief Web, 18 March 2009 (available at <http://reliefweb.int/node/301598>).
- Kabeer, N. 2008. *Mainstreaming gender in social protection for the informal economy*. Edited by T. Johnson. London, Commonwealth Secretariat.
- Kilbride, J., Baker, T.G., Parapia, L.A., Khoury, S.A., Shuqaidef, S.W. & Jerwood, D. 1999. Anaemia during pregnancy as a risk factor for iron-deficiency anaemia in infancy: a case-control study in Jordan. *International Journal of Epidemiology*, 28(3): 461-468.
- Kumar, N. & Quisumbing, A. 2010. *Does social capital build women's assets? The long-term impacts of group-based and individual dissemination of agricultural technology in Bangladesh*. CAPRI (CGIAR Systemwide Program on Collective Action and Property Rights) Working Paper No. 97. Washington, DC, IFPRI (International Food Policy Research Institute).
- Kumar, N. & Quisumbing, A. 2011. *Gendered impacts of the 2007-08 food price crisis: evidence using panel data from rural Ethiopia*. IFPRI Discussion Paper 01093. Washington, DC, IFPRI.
- Lacroix, R. & Varangis, P. 1996. Using warehouse receipts in developing and transitioning economies. *Finance & Development*, September 1996, pp. 36-39.
- Marselles-Culleres, H. 2011. *Conduites d'affrontement féminines (coping behaviour) et inégalités de genre dans la sécurité alimentaire et nutritionnelle. Cas de deux villages du Nicaragua*. Institut des Sciences et Industries du Vivant et de l'Environnement (AgroParis Tech) et l'Universitat de Lleida. 11 February 2011. (Ph.D. thesis)
- Nair, A. & Shah, P. 2007. Self-help works. *Times of India*, 27 December 2007.
- Neumayer, E. & Plümper, T. 2007. The gendered nature of natural disasters: the impact of catastrophic events on the gender gap in life expectancy, 1981-2002. *Annals of the Association of American Geographers*, 97(3): 551-566.
- Peterman, A., Behrman, J. & Quisumbing, A. 2011. *A review of empirical evidence on gender differences in non-land agricultural inputs, technology and services in developing countries*. ESA Working Paper No. 11. Rome, FAO.
- Prakash, A. 2010. *Price volatility in agricultural markets*. Economic and Social Perspectives Policy Brief 12. Rome, FAO.

- PWESCR (Programme on Women's Economic, Social and Cultural Rights). 2011. *Global financial and economic crisis and its impact on women: a human rights perspective*. New Delhi.
- Quisumbing, A., Kumar, N. & Behrman, J.A. 2011. *Do shocks affect men's and women's assets differently? A review of literature and new evidence from Bangladesh and Uganda*. IFPRI Discussion Paper 01113. Washington, DC, IFPRI.
- Quisumbing, A., Meinzen-Dick, R. & Bassett, L. 2008. *Helping women respond to the global food price crisis*. IFPRI Policy Brief 7. Washington, DC, IFPRI.
- Radel, C., Schmook, B., McEvoy, J., Mendez, C. & Petrzalka, P. 2012. Labour migration and gendered agricultural relations: the feminization of agriculture in the Ejidal Sector of Calakmul, Mexico. *Journal of Agrarian Change*, 12(1): 98-119.
- Raihan, S. 2009. *Impact of food price rise on school enrolment and dropout in the poor and vulnerable households in selected areas of Bangladesh*. London, DFID (Department for International Development).
- Razavi, S. 2009. The gendered impacts of liberalization: towards "embedded liberalism"? In S. Razavi, ed. *The gendered impacts of liberalization: towards "embedded liberalism"?* pp. 1-36. New York, USA, Taylor & Francis Group. 374 pp.
- Rogers, B.L. & Coates, J. 2002. *Food-based safety nets and related programs*. Food Policy and Applied Nutrition Program, Discussion Paper No. 12. Medford, USA, Tufts University.
- Sabarwal, S., Sinha, N. & Buvinic, M. 2010. *How do women weather economic shocks? A review of the evidence*. Policy Research Working Paper 5496. Washington, DC, World Bank.
- Sabarwal, S., Sinha, N. & Buvinic, M. 2011. *How do women weather economic shocks? What we know*. Economic Premise 46. Washington, DC, World Bank.
- Schubert, B. & Huijbregts, M. 2006. *The Malawi Social Cash Transfer Pilot Scheme: preliminary lessons learned*. Paper prepared for the conference on "Social Protection Initiatives for Children, Women and Families: An Analysis of Recent Experiences", New York, USA, 30-31 October 2006.
- SEWA (Self Employed Women's Association). (No date). *Effects of the global financial crisis on agriculture (with a special focus on small and marginal farmers): a SEWA experience*. Ahmedabad, India.
- Sharma, M. 2006. *An assessment of the effects of the Cash Transfer Pilot Project on household consumption patterns in tsunami-affected areas of Sri Lanka*. Washington DC, IFPRI.
- Skoufias, E., Tiwari, S. & Zaman, H. 2011. *Can we rely on cash transfers to protect dietary diversity during food crises? Estimates from Indonesia*. Poverty Reduction and Equity Unit, Poverty Reduction and Economic Management Network Policy Research Working Paper 5548. Washington, DC, World Bank.
- Slater, R. & Mphale, M. 2008. Cash transfers, gender and generational relations: evidence from a pilot project in Lesotho. Report for World Vision International by the Humanitarian Policy Group. London, ODI.
- Smith, C. & Stevens, L. 1988. Farming and income generation in the female-headed smallholder household: the case of a Haya village in Tanzania. *Canadian Journal of African Studies*, 22(3): 552-66.

- Soares, S., Guerreiro Osório, R., Veras Soares, F., Medeiros, M. & Zepeda, E. 2007. *Conditional cash transfers in Brazil, Chile and Mexico: impacts upon inequality*. Working Paper No. 35. Brasilia, IPC (International Poverty Centre)-UNDP (United Nations Development Programme).
- Suarez, M. Libardoni, M., Texeira Rodriguez, M., Cleaver, A. J. T., Ribeiro Garcia, S., & da Silva Chaves, W. 2006. *The Bolsa Familia Programme and the tackling of gender inequalities. The challenge of promoting the reordering of the domestic space and women's access to the public space. Prepared for the Ministry of Social Development, Brazil and Department for International Development, UK.*
- Subbarao, K. 2003. *Systemic shocks and social protection: role and effectiveness of public works programs*. Social Protection Discussion Paper Series No. 0302. Washington, DC, World Bank Institute.
- Subbarao, K., del Ninno, C., Andrews, C. & Rodríguez-Alas, C. 2010. *The Design and Implementation of Public Works Programs: A Toolkit for Practitioners*. Draft. Washington, DC, World Bank.
- Uraguchi, Z.B. 2010. Food price hikes, food security and gender equality: assessing the roles and vulnerability of women in households of Bangladesh and Ethiopia. *Gender and Development*, 18(3): 491-501.
- Veras Soares, F., Perez Ribas, R. & Guerreiro Osório, R. 2007. *Evaluating the impact of Brazil's Bolsa Família: cash transfer programmes in comparative perspective*. IPC Evaluation Note No. 1. Brasilia, IPC-UNDP.
- World Bank. 2011. *World Development Report 2012. Gender equality and development*. Washington, DC, World Bank.

