

The impact of the targeted subsidies policy on household food security in urban areas in Iran



S.S. Hosseini^a, M.R. Pakravan Charvadeh^{a,*}, H. Salami^a, C. Flora^b

^a University of Tehran, Iran

^b Kansas State University, United States

ARTICLE INFO

Article history:

Received 14 June 2016

Received in revised form 30 December 2016

Accepted 11 January 2017

Available online xxxx

JEL classification:

Q18

I38

Keywords:

Food security
Targeted subsidies
Equations system
Iran

ABSTRACT

Ensuring food security is an important consideration in developing countries. It typically requires bringing people out of poverty and structural changes in the agriculture sector. A common policy tool to help reduce food insecurity is to subsidize food, but there have been insufficient analyses of the impacts of different subsidy regimes. In this study, we examined the effect of the implementing Targeted Subsidies Policy (TSP) on various food commodities on the household food security in urban areas of Iran. The changes in the elasticity of the calorie prices and expenditure following the TSP were considered for 13 food groups. The results showed that the TSP effect on food security in the urban households was positive for some food items (such as red meat and fish) and was negative for other items (such as poultry and cereals). The impacts result from substitution and complementary effects among the foodstuffs. Market regulation of the goods in the food basket of the country in urban areas is necessary and strongly recommended.

© 2017 Elsevier Ltd. All rights reserved.

1. Introduction

The role of nutrition in health, wellbeing, learning, workplace efficiency and its relationship with economic development has been established worldwide (Carletto, Zezza, & Banerjee, 2013; Smith, 2013; Renzaho & Mellor, 2010; Fengying, Jieying, & Xuebiao, 2010). Achieving food security is increasing a development priority (Babatunde & Qaim, 2010). Despite efforts to fight poverty and hunger, there are still unacceptable numbers of people not having food needed for an active and healthy life (FAO, 2015; Deaton & Lipka, 2015). Recent estimates show that about 795 million people in the world (about one-tenth of the global population) are malnourished, with about 780 million of the malnourished living in developing countries (FAO, 2015). About a quarter of these poor and food-insecure populations live in urban areas (Ravallion, Chen, & Sangraula, 2007).

Food security, as defined by the World Food Conference in 1996 and 2009, exists when all people, at all times, have physical, social and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life (Owusu et al., 2011). Food security is commonly described as requiring four attributes: food must be available, it must be accessible (e.g. is it affordable), it must be used well (stored and prepared and eaten in

such a way as to provide nutritional benefits) and all these attributes must be stable over time (Carletto et al., 2013; Anríquez, Daidone, & Mane, 2013; Renzaho & Mellor, 2010; Fengying et al., 2010). The interaction between these attributes is important to understand for delivering food security. Food availability and economic access clearly interact: if food availability decreases, the price of the markets will increase, decreasing food access (Anríquez et al., 2013). The complexity of the interactions in the food system is illustrated in Fig. 1.

Given the importance of ensuring food security, public policies often reallocate resources or targeted subsidies to vulnerable populations (Fig. 1). For example, several developing countries such as India, Bangladesh, Ethiopia, Zambia, Egypt, Algeria, Tunisia, and Iran, with different level of incomes and different economic structures, have tried to increase food security for their residents through the payment of subsidies (see, e.g., Farrar, 2000; FAO, 2015; Pinstrip-Andersen & Shimokawa, 2008). However, given the complexity (see Fig. 1), it is far from clear exactly how best to design an intervention that is efficient at achieving its aims and economical to implement. Often subsidy schemes impose a significant economic burden (Adams, 2000; Dutta & Ramaswami, 2004; Karami, Esmaili, & Najafi, 2012) and are often modified to reduce anticipated side effects and costs.

In an attempt to understand the complexity of response to subsidies to improve food security, we address the case study of Iran's efforts to increase household food security. Targeted public subsidies on sixteen items and services subject to international prices in Iran officially started on December 18, 2010 as other subsidies were removed. In five years,

* Corresponding author.

E-mail addresses: hosseini_safdar@yahoo.com (S.S. Hosseini), mpakravan@ut.ac.ir (M.R. Pakravan Charvadeh), hsalami@ut.ac.ir (H. Salami), cflora@iastate.edu (C. Flora).

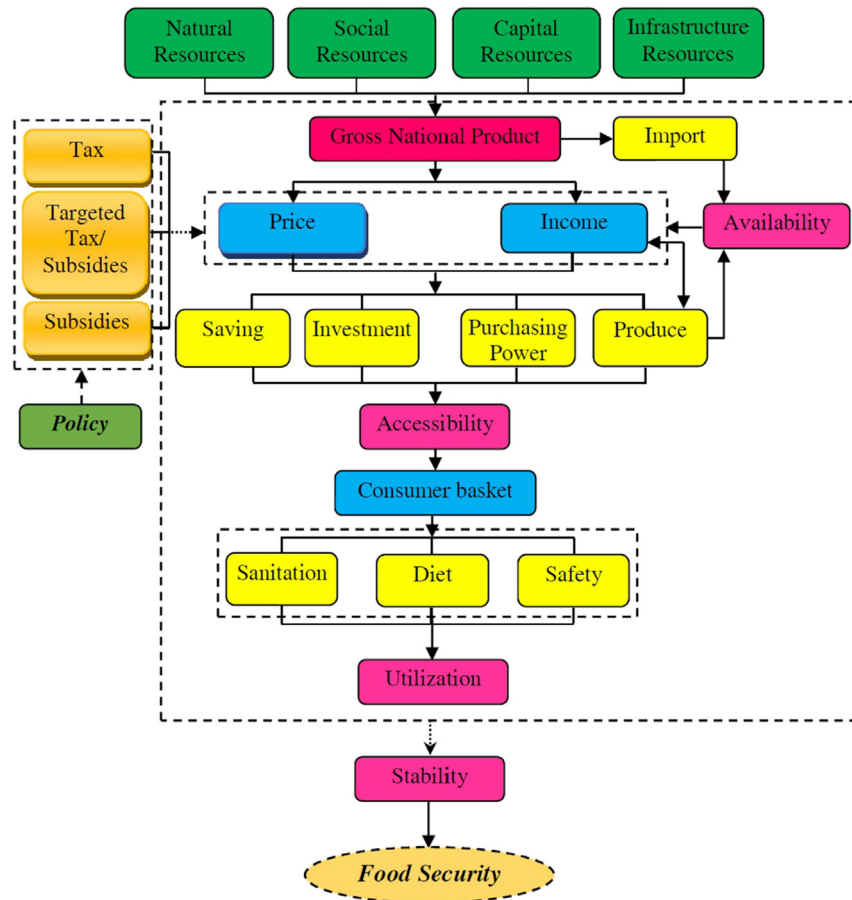


Fig. 1. The various dimensions of food security (with emphasis on targeted subsidy policy position).

subsidies on goods such as gasoline, gas, oil, electricity, water, wheat, sugar, rice, edible oil, and milk were no longer subsidized, as these goods were available at the market prices of Persian Gulf region. Reallocation of resources in accordance with price and income levels would affect the purchasing power of households, and as a result increase the access to food, diet, better food consumption, and consequently food security of all households (Scholes & Biggs 2004; Zezza et al., 2008; Dessus, Herrera, & de Hoyos, 2008). These effects would be apparent in two forms. 1) Consumers replace cheap goods with expensive ones that lead to a change in the composition of macronutrients and micronutrients consumed by family members. 2) The purchasing power of households increases to encourage consumption of healthier foods.

Extraction of income and nutrition price elasticities makes it possible to examine the effects of targeted subsidies policy on household food security. Many studies have examined the effects of food protection policies on food security in different parts of the world. In some studies, changes in welfare and surpluses analysis were considered as a result of changes in the prices and incomes (Alston, Smith, Acquaye, & Hosseini, 1999; Chellaraj, Brorsen, & Farris, 1992; Dutta & Ramaswami, 2004; Ahmed, 2001; Gutner, 2002; Nasser & Gomaa, 1998; Valero-Gil & Valero, 2008). A number of these studies used a general equilibrium approach in order to examine the effect of the implementation of the protection policies leading to food prices rising and influence on food security and welfare of households (Ferreira, Fruttero, Leite, & Lucchetti, 2013; Dyer & Taylor, 2011). The effect of changes in prices and incomes on the household food security has been analyzed by calculating the demand elasticity and indirect extraction of nutrition elasticity (Dhehibi & Laajimi, 2009; Huang & Huang, 2011; Zheng &

Henneberry, 2012). The effect of changes in price and income levels directly affecting the level of household food security has been analyzed and assessed (Anríquez et al., 2013; Gaiha, Jha, & Kulkarni, 2013).

2. Sample description

The data collected by the cost-income questionnaires from the Statistical Center of Iran (SCI) were converted into their calorie equivalent using the calorie values of National Nutrient and Food Technology Research Institute of Iran (NFTRI) during 2007–2014.

The original SCI survey included approximately 260,000 households located in the 30 provinces. This analysis includes data from usable food (we eliminated waste using the waste coefficient that was collected by the NFTRI) for these provinces. Household members are at different ages and the amount of individual consumption will vary according to the age. Gebre's method (2012) was used in order to determine a proxy for household size and age composition. The equivalent adults per household were calculated. As Deaton and Drèze (2009) emphasize, people do not buy calories and other nutrients but food commodities. However, if food choices are informed by their nutritional values, it is meaningful to talk about demands for calories and other nutrients

3. Methodology

In this study, the calorie was used as the main indicator to identify household food security. In order to estimate the amount of calories consumed per household with different compositions of food consumption, the calorie contained in 100 g of 168 groups of the

Download English Version:

<https://daneshyari.com/en/article/5108125>

Download Persian Version:

<https://daneshyari.com/article/5108125>

[Daneshyari.com](https://daneshyari.com)