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## Resource rents distribution, income inequality and poverty in Iran

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#### 1. Introduction

The goal of this study is to examine and measure the effects of different natural resource rent<sup>1</sup> distribution policies on household income, income inequality, and poverty in Iran. The case study of Iran is justified by the significant position of natural resource rents in its political economy. On average, from 1960 to 2012, 80% of Iran's total exports depended on oil and gas. The average direct dependence of the government budget on oil revenues from 1965 to 2010 was 56% (CBI, 2017).<sup>2</sup> In long term, countries such as Iran with a high degree of dependence

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#### ABSTRACT

Our goal is to examine the income inequality and welfare effects of the direct distribution of resource rents and subsequent taxation in Iran. We use survey-based microdata that covers 140,000 individuals, which include more than 36,000 Iranian urban and rural households in 2009. We examine how direct distribution of oil and gas rents among all citizens and a subsequent direct income tax differ from distributional impacts of targeted policies on income inequality and poverty in Iran. Our analysis shows that the resource dividend policy with a subsequent direct income tax has a significant decreasing effect on the household Gini index while targeted policies are more effective in reducing number of households under the poverty line.

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on oil rents suffer from lower economic growth rates compared to the more diversified economies; the so-called curse of oil (Ross, 2013).<sup>3</sup>

The curse of oil for long term economic growth can be explained through a couple of transmission channels such as higher income inequality. Several studies have examined the relationship between natural resource dependence and inequality. According to Leamer et al. (1999), natural-resource-intensive sectors, especially permanent agriculture, absorb capital, which could be used in manufacturing. It is shown that there are learning by doing externalities in manufacturing (non-resource sector) (Bjorvatn and Farzanegan, 2013).<sup>4</sup> Leamer et al. (1999) then suggest that higher dependence on natural resource sector and marginalization of manufacturing depresses workers' incentive to





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<sup>&</sup>lt;sup>1</sup> We focus on the crude petroleum and gas value added (rents) which are publiclyowned and managed by the government in Iran. The value added (rents) refer to the difference between value of oil and gas production and the costs of intermediate consumption related to production of oil and gas.

<sup>&</sup>lt;sup>2</sup> For more details on the oil and economics of Iran, see Farzanegan and Markwardt (2009), Farzanegan (2011, 2013a), and Farzanegan and Raeisian Parvari (2014).

<sup>&</sup>lt;sup>3</sup> The long run negative effect of resource rents on economic growth has been questioned in recent literature. For example, Alexeev and Conrad (2009) show that "*the effect of a large endowment of oil and other mineral resources on long-term economic growth of countries has been on balance positive*". The recent literature also argues that a couple of intermediary factors are shaping the long run effects of resource rents on economic growth (see Farzanegan, 2014; Bjorvatn et al., 2012, 2013 among others).

<sup>&</sup>lt;sup>4</sup> Learning by doing in the non-resource sector is a standard assumption in the literature on the "Dutch disease" (van Wijnbergen, 1984; Krugman, 1987; Matsuyama, 1992; and Gylfason et al., 1999).

accumulate skill and delays industrialization.<sup>5</sup> Thus, countries with a high degree of dependence on resource rents lack the critical level of human capital for a sustainable transition to a knowledge-based economy, widening the income gap between the rich and the poor and increasing poverty. Others also suggest a positive association between natural resource rents and inequality (Auty, 1994; Sarraf and Jiwanji, 2001).

Following the 1979 Islamic Revolution, a firm social justice agenda was defined by the new government. The Constitution of the Islamic Republic requires the government to use all of its resources for the elimination of poverty and the removal of all forms of deprivation in the areas of nutrition, housing, labor, and health.<sup>6</sup> This constitutional agenda reflects itself in the establishment of a couple of foundations shortly after the Revolution (such as Bonyad-e mostaz'afan (Foundation of the Downtrodden) and Komiteh-ye emdad-e Emam Khomeini (Imam Khomeini Relief Foundation).<sup>7</sup> However, poverty and inequality remain the key issues of political debate in Iran (Salehi-Isfahani, 2009). Distributing oil and gas rents to the public on an equal basis has been a popular proposal in the political and economic discourse of Iran. During his campaign in the 2005 presidential elections, Mehdi Karroubi vowed to pay 500,000 rials (approximately \$50) monthly to every Iranian over the age of 18. Similarly, one of the promises of former Iranian president Mahmoud Ahmadinejad during his campaign in the 2005 presidential elections was "putting the petroleum income on people's dinner table"; that is, Iran's oil profits should be distributed among the people.

Using survey-based microdata that covers more than 36,000 Iranian urban and rural households in 2009, we investigate the quantitative effects of different oil and gas rent distribution policies on income inequality and poverty in Iran. We contribute to the literature by using a unique large household survey, providing new empirical evidence on the effectiveness of the direct distribution of resource rents in addressing inequality and poverty in Iran. We also compare the main proposal (the direct allocation of rents and subsequent taxation) with other possible policies and discuss their consequences for inequality, poverty, and the welfare of Iranian households. Our main results show that the direct distribution of resource rents among all citizens and the imposition of an additional direct income tax have a significant negative (i.e., decreasing) effect on the household Gini index (inequality). However, the targeted distributional policies are more effective in addressing poverty than resource dividend policy.

The remainder of this paper is structured as follows. Section 2 presents a background on implemented distributional policies in Iran and an analysis of the effects of such policies on income inequality and welfare in recent years. In Section 3, we discuss the literature on natural resource rent distribution policies. Section 4 presents our data and empirical methodology. We present and discuss the simulation results of the household survey in Section 5. Section 6 concludes the paper.

#### 2. Background on implemented distributional policies in Iran

The administration of Ahmadinejad (2005–2013) used different policies for distribution of oil rents. One of these initiatives was establishing of *Sanduq-e mehr-e Emam Reza* (Imam Reza Charity Fund) in 2007.<sup>8</sup>

<sup>6</sup> See Article 3 of the Iran Constitution at http://www.iranonline.com/iran/iran-info/ government/constitution-1.html (Retrieved 2 February 2017). According to its formal agenda, the Fund was planned to help "young people secure jobs, afford marriage, and purchase homes" (Farzanegan and Alaedini, 2016). The initial capital of the Fund was financed by a reduction in the National Oil Company (NIOC)'s share of oil revenues. The main financing sources of this Fund were oil revenues, credits in annual budgets, interest-free funds of banks, profits of governmental companies, and Fund membership payments (Farzanegan, 2009a). In 2014/15 and under Rouhani administration, this Fund altered to Sanduq-e Karafarini-e Omid (Hope Entrepreneurship Fund) to support small business formations and microfinance.<sup>9</sup> Another initiative under Ahmadinejad government was Saham-e-edalat (Justice Shares), distributing shares of state-owned companies at subsidized prices among needy people. It was planned to improve the distribution of income and wealth, privatization of government firms, and increasing ownership of properties among lower income individuals. In addition to earlier two main indirect resource rents distribution plans, the government of Ahmadinejad announced another scheme, the socalled Maskan-e-Mehr (Compassion Housing). The goal was to grant preferential housing finance and construction tax exemptions to homes constructed on planned public lands for low-income households (Alaedini and Ashrafzadeh, 2016).<sup>10</sup> Besides these populist schemes, a common method for distribution of resource rents in line with the government's social justice agenda has been large-scale subsidies on goods and services. According to the World Bank (2015), from 1999 to 2009, the share of subsidies and transfers in public expenses in Iran reached an annual average of 31.5%. High burden of subsidies for government budget in addition to economic sanctions forced the Ahmadinejad administration to implement the important project of the subsidy reform at the end of 2010. It replaced part of direct price subsidies (mainly on petrol, gas, and electricity, as well as on staples) with universal cash transfers to every Iranian citizen. This payment was 445,000 rials (about US\$45 when the reform was launched) per person (Sdralevich et al., 2014). In addition, it was planned to use part of earned income following subsidy reform to assist enterprises, facilitating their adjustment to the new price structure. Also, the government-affiliated firms received payments to cover parts of their higher energy bill. Over the first phase of reform, the price of all major petroleum products and natural gas, as well as electricity, water, and bread increased by 4 to 20 times. The universal cash payments funded by the revenue from these price increases was planned to compensate households, improving income distribution. The enterprises were receiving subsidized loans to invest in new and energy efficient technologies, reducing their energy intensity of production. Financial access also improved through increasing number of bank account-holders which was necessary for receiving the cash transfers. According to GFD (2017) survey, the share of respondents with an account (self or together with someone else) at a bank, credit union, or another financial institution in population beyond 15 years old in Iran increased from 74% in 2011 to 92% in 2014. The second phase of reform was planned to happen in 2012 by the elimination of another part of direct price subsidies. However, deterioration in economic conditions because of international sanctions and currency market crisis leads to postponement of the second phase by the Ahmadinejad state. Sdralevich et al. (2014) explain the positive income distribution effects of the first phase of subsidy reform and universal cash payments in Iran. The income of many large and poor families doubled within initial phase of reform, bringing per capita income above the poverty threshold of US\$2 per capita a day. The Gini index also showed improvement by falling from 0.41 in 2010 to 0.37 in 2011.

<sup>&</sup>lt;sup>5</sup> Leamer et al. are not exclusively focusing on "oil-industry" but overall natural resource sector and especially land abundance. We agree while oil industry is capital intensive but also employs high skilled technicians. Nevertheless, the employment opportunities of this sector are limited. Larger size of dependence on oil sector may not be able to address the demographic pressure within such economies, worsening the youth unemployment which can lead to higher income gap within such economies (Farzanegan, 2016a).

<sup>&</sup>lt;sup>7</sup> This foundation established 22 days after the victory of the 1979 Revolution. It was planned that this foundation helps to eliminate poverty, supporting the needy, and providing relief to the oppressed.

<sup>&</sup>lt;sup>8</sup> The bylaw of the Fund is available in Persian: http://rc.majlis.ir/fa/law/show/135176 (Retrieved 2 February 2017).

<sup>&</sup>lt;sup>9</sup> http://www.karafariniomid.ir (Retrieved 2 February 2017).

<sup>&</sup>lt;sup>10</sup> This project proved to be highly costly for the government budget besides other shortcomings such as remoteness of planned locations from urban and employment centers and lack of urban social services, and low-quality construction. The Iranian parliament and Rouhani administration terminated the continuation of this project after 10 years in 2017. See http://www.bbc.com/persian/iran-features-38532662 (Retrieved 2 February 2017).

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