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On the taxing of migrants' earnings while retaining a migrant workforce $\stackrel{\circ}{\sim}$

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ABSTRACT

We study policies that are aimed at retaining a migrant workforce in a Gulf State while introducing a tax on migrant earnings. We single out Qatar as a case study. We consider two types of migrants: target migrants, and non-target migrants. If migrants are target migrants, we show that in order to neutralize the effect of a tax on their earnings, Qatar needs to extend the length of time migrants are allowed to stay. Such a scheme can work even when the migrants experience utility loss from staying longer in Qatar. If migrants are non-target migrants, we show that implementation of a lottery scheme in which the prizes are life-long residency in Qatar can "compensate" for the imposition of the tax. In both cases, we present numerical examples that illustrate the magnitudes involved.

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1. Motivation

Last year, the idea of taxing migrants' earnings in the Gulf region in general, and in Qatar in particular, was raised with one of the authors of this note. The specific question posed was: can taxation of migrants' earnings be implemented in a way that preserves their incentive to work in Qatar? Presumably, what prompted this question was the considerable pressure on the six Gulf States (GCC countries) to cut public spending in the wake of the sharp decline in oil prices in the second half of 2014. The aim of this note is to outline a response to this question.

In 2012–2015, oil revenues in the GCC countries accounted for about 50–90 percent of total government revenues. From 2014 to 2015, government revenues from oil dropped from 33.9 percent of GDP to 21.8 percent of GDP (IMF, 2016). Lower oil prices are also likely to reduce the GDP and slow the pace of economic growth in the GCC countries (Nusair, 2016). For these reasons, the GCC countries started to search for policies that could increase government revenue while retaining the countries' economic model and its supportive labor force architecture. In this area, several reforms were proposed, such as the introduction of a five percent Value Added Tax in all GCC countries, an increase in corporation tax from 12 percent to 15 percent in Oman, and an increase in gasoline prices in Qatar. Here we study another possibility, namely taxation of migrants' earnings.

We distinguish between two categories of migrants. First, we list considerations based on the assumption that migrants are target migrants, namely that the purpose of migration is to accumulate a specified quantity of funds (the target), and then return home. Second, we consider a policy response when the target does not apply, as when, for example, the migrants do not have any need

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or desire to go back home. We examine how the identification of migrants as target migrants or as non-target migrants can inform public policy, here – the taxing of migrant earnings.

We focus on Qatar as a reference case study, assuming (if there were no tension between GCC countries) that taxation of migrants' incomes, if enacted, will be synchronized across the GCC countries, thus excluding the possibility of selecting a low-tax country within the GCC region, when such a selection is possible.

2. The case of target migrants

Suppose that migrants seek to accumulate x income units, and then return to their home country. The migrants want to accumulate savings that will enable them to buy a truck, a tractor, start a business, build a house, make it possible for a child to go to college, marry well at home, and so on. We refer to such migrants as target migrants. Suppose that in order to amass x income units, migrants need to work n years, and that their permit for work in the host country is specified for n years. Assuming a zero rate of interest, savings per year is x/n income units. Suppose now that the host country imposes income tax at the rate of τ , $0 < \tau < 1$. The amount saved in n years will therefore be only $x(1-\tau)$ income units. If when introducing the tax the host country extends the migrants' permitted stay to $n/(1-\tau)$ years, then the migrants will end up accumulating their target x income units. (An underlying requirement for this scheme to work is that the migrants do not experience severe utility loss from staying longer in the host country; see below). Thus, a concrete policy of taxing migrants while retaining the migrant workforce in the host country will, simultaneously with the imposition of the tax, correspondingly extend the length of the migrants' work permit. When this duration is synchronized with the tax rate (neatly configured as an increasing function of it), migrants will still want to stay.

2.1. A modeling framework

The preceding considerations can be summarized in the following utility function. (Later on in this sub-section we comment on the robustness of the results presented in this section to an alternative utility specification.)

Let the utility function of an individual as a would-be migrant be:

$$U = \max \left\{ \sum_{k=0}^{n-1} (y(1+\rho)^k) - x, 0 \right\},\tag{1}$$

where x are the target savings that the individual seeks to accumulate in the course of his migration, y is the individual's annual income as a migrant, and $\rho \in [0,1)$ is a discount factor. If the individual's utility as a migrant is 0, then the individual does not migrate. To illustrate our argument, we use a linear specification, while aware that the particular functional form to apply is an

empirical issue, which we do not explore here. Denoting
$$\rho^* = \sum_{k=0}^{n-1} (1+\rho)^k = \frac{(1+\rho)^n-1}{\rho}$$
 ($\rho^* \in [n,2^n-1)$), an individual will consider

migrating only if $y\rho^* \ge x$, namely only if his discounted accumulated income is as high as or higher than his target savings. An implicit assumption is that work at home cannot yield x. For given y and x, we can calculate the minimal length of stay at destination that will render it worthwhile for an individual to migrate. To this end, we need to solve the equation

$$\frac{(1+\rho)^{n^*}-1}{\rho}=\frac{x}{y},$$

which can be rewritten as

$$(1+\rho)^{n^*} = \frac{x}{v}\rho + 1. \tag{2}$$

Taking the logarithm of the two sides of (2) yields

$$n^* = \frac{\log\left(\frac{x}{y}\rho + 1\right)}{\log(1+\rho)}.$$
(3)

Therefore, if an individual is allowed to stay for a duration that is equal to or is longer than n^* , then migration will be attractive. Suppose now that migrants' earnings are subjected to income tax τ . Then, the utility function (1) will need to be reformulated to become

$$U = \max \left\{ \sum_{k=0}^{n-1} \left(y(1-\tau)(1+\rho)^k \right) - x, 0 \right\},\,$$

and the minimal length of stay that will render it worthwhile for an individual to migrate will be

$$n^{**} = \frac{\log\left(\frac{x}{y(1-\tau)}\rho + 1\right)}{\log(1+\rho)}.$$
(4)

¹ For example, income at home is sufficient for basic needs, but is not high enough to permit accumulating savings for a given target in a reasonable time span.

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