

# Not so great expectations: Gas revenue, corruption and willingness to pay tax in Tanzania



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Huge reservoirs of natural gas have been discovered offshore the southern coast of Tanzania. There are high expectations that exploitation of natural resources will substantially increase Tanzania's national income. This brief presents results from a recent survey experiment of 3000 respondents in Dar es Salaam, Mtwara and Lindi regions. We find that while expectations about future gas revenue causally increase expectations about corruption, it has no effect on willingness to pay tax. We argue that successful handling of the gas discoveries should include strategies to keep people's expectations about future gas revenues realistic and to strengthen the control of corruption.

## Natural gas in Tanzania

Since 2010, large reservoirs of natural gas have been discovered offshore the southern coast of Tanzania. The size of the total confirmed gas reserves is currently standing at more than 57 trillion cubic feet and is expected to increase further in the years to come. International oil companies have already invested heavily in the exploration phase and the Tanzania Petroleum Development Corporation (TPDC) estimates that oil companies have invested almost USD 5 billion so far. However, a final decision about investments in extraction facilities and LNG infrastructure to facilitate gas export has not yet been made. Nevertheless, the deep-sea gas discoveries have received considerable attention and stories about potential revenues and other benefits from the extractive sector appear frequently in the media. Public expectations are high, and the management of expectations is an issue that warrants the attention of industry stakeholders and policy makers.

## The resource curse

A large literature has documented that the discovery of natural resources and subsequent export revenue management is a challenge for governments. Countries that are rich in natural resources perform no better in terms of social and economic development than their less resource rich counterparts, despite the large wealth the resources represent (Ross, 2012). This phenomenon is commonly referred to as the natural resource curse.

The challenge of resource revenue management has also been evident in Tanzania. There is a widespread view among people that the country has benefitted little from the massive mineral extraction that has taken place over the last two decades.

## The presence of natural resource revenue may change citizens' incentives

In a recent study, we empirically investigate some mechanisms through which natural resources might hamper economic and social development. More specifically, we focus on *citizens'* attitudes and behaviour and how these are affected by expectations about future gas revenues. We look at two different aspects.

### 1) Expected corruption

Corruption and rent-seeking is likely to affect societal development through productivity and distributional effects. The presence of future natural resource revenues might increase the attractiveness of engaging in corrupt activities since the expected payoffs from corruption become larger. We investigate how expectations about future gas revenues affect expected corruption because we believe it is indicative of the effect of natural resources on corruption. Expected corruption is also likely to be related to own corruption behaviour.

### 2) Willingness to pay tax

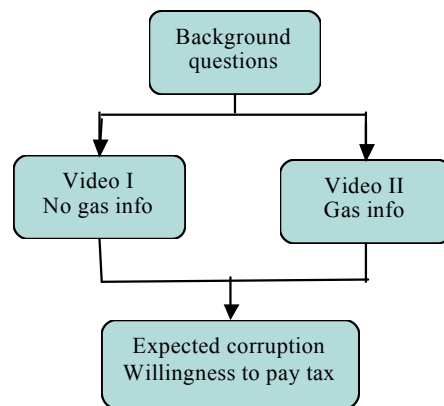
There is a strong argument in the literature that governments are held more to account when citizens pay tax. Bargaining over taxes is central to building relations of accountability between the state and citizens based on mutual rights and obligations, rather than on patronage and coercion. This idea of bargaining and negotiation over taxes is central to the concept of a social fiscal contract. A virtuous circle may be generated whereby the generation of tax revenues leads to improved service provision, which in turn increases citizens' willingness to pay their taxes. If taxpayers are dissatisfied with their terms of trade with the government, they may resist paying taxes (see CMI Brief No. 8, 2015). The presence of future natural resource revenues might reduce citizens' willingness to pay tax, because the government gets an alternative source of revenue, which leads to a drop in the demand for accountability. Thus, we investigate the effect of expectations about future gas revenues on willingness to pay tax.

## Methodology

The study takes advantage of the current situation in Tanzania - large reservoirs of natural gas have been discovered, but

production has not yet started - to experimentally manipulate citizens' expectations about gas revenues. This allows us to investigate the *causal effect* of expectations on expected corruption and willingness to pay tax.

To manipulate respondents' expectations about gas revenues, we designed two versions of an informational video (in collaboration with the creative design company DJPA Tanzania). The first version contained only general information about Tanzania (population, number of regions and GNI). The second version additionally contained information about gas discoveries, location and estimated gas revenues. The videos showed animated illustrations as well as Kiswahili text and voice-over.



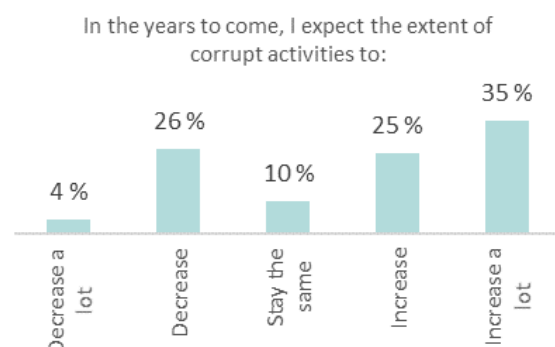
Respondents were randomized to watch one of the two videos before answering our questions about corruption and tax. The basic idea is that the gas information video increases the prominence of the respondents' expectations/cause them to form new expectations, while the no gas information video does not. Thus, any difference in mean outcomes between respondents who watch the gas information video and respondents who watch the no gas information video can be interpreted as a causal effect of expectations about gas revenue on the responses about corruption or taxation.

The study was conducted by a research team from CMI, REPOA and the Norwegian School of Economics in July- August 2015 and included 3000 respondents from Dar es Salaam and the two southern coastal regions Mtwara and Lindi.

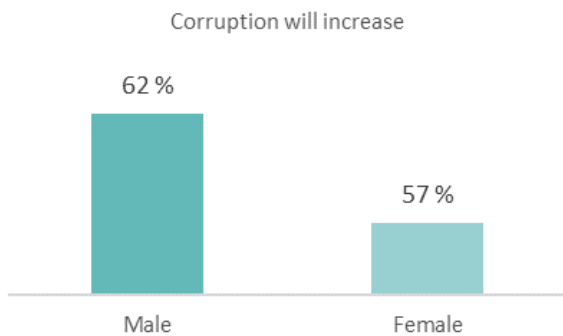
## Results

### 1. Expected corruption

FINDING 1: Most people expect corruption to increase.



**FINDING 2:** Men expect corruption to increase more than women.



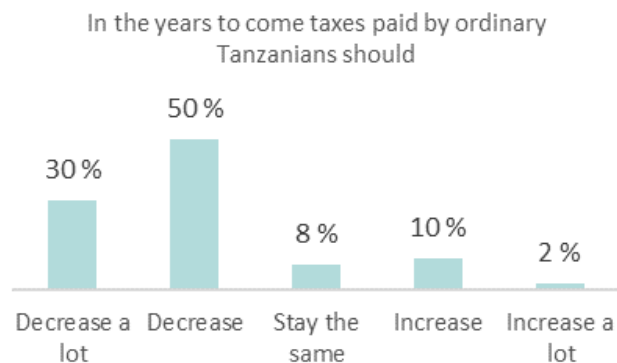
The effect of expectations about gas revenue on corruption

Using regression analysis, we find no effect of expectations about gas revenue estimates causally affect respondents to expect more corruption. This effect is driven entirely by older respondents defined as above 34 years, which was the median age in our sample.

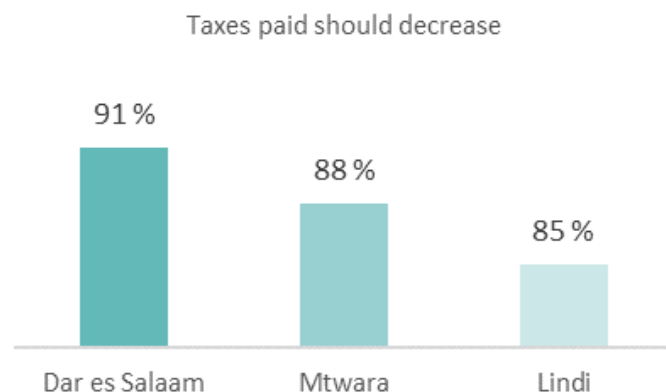
**FINDING 3:** Expectations about gas revenues increase expected corruption. The effect is driven by older respondents.

## 2. Willingness to pay tax

**FINDING 4:** Most people think taxes paid should decrease.



**FINDING 5:** Respondents in Dar es Salaam are least willing to pay tax.



The effect of expectations about gas revenue on willingness to pay taxes

Using regression analysis, we find no effect of expectations about future gas revenue on willingness to pay tax. However, the analysis show that individuals who have completed lower secondary school or more have a higher willingness to pay tax than the less educated.

**FINDING 6:** Expectations about gas revenues do not affect willingness to pay tax.

This finding could be a reflection of two opposite effects of expectations about future gas revenue. On the one side, they might lead to a reduction in willingness to pay tax because the government gets an alternative source of revenue. On the other side, they might lead to an increase in willingness to pay because public service delivery is expected to improve.

## Policy implications

In this brief we have presented results from a recent study that investigates two potential mechanisms through which natural resource revenues might hamper economic and social development: increased corruption and reduced willingness to pay tax.

We find that expectations about future gas revenues causally increase expected corruption. As such, the study provides suggestive evidence for a mechanism that could explain the resource curse: in the presence of natural resource revenues, people expect their fellow citizen to be more corrupt because engaging in corruption is more profitable. In turn, individuals who expect more corruption are likely to become more corrupt themselves for two reasons. First, when sufficiently many engage in corruption, it becomes more profitable since the risk of being detected and punished drops. Second, it creates a “social norm” justifying corruption.

Strikingly, we find that expectations about gas revenues only impact the expected corruption among older respondents. There are several possible explanations for this. One is that older respondents are coloured by their perceptions that the mining sector in Tanzania over the last decades has been managed poorly.

While willingness to pay tax is generally low among the respondents, we find no evidence that it is exacerbated by expectations about future gas revenues. In terms of socio-economic characteristics, we find that more educated respondents have a higher willingness to pay tax. One possible explanation for this finding is that education leads to a better understanding of the purpose of paying tax. Another is that more educated respondents have better access to the public services financed by tax revenue. Finally, we find respondents in Dar es Salaam to be least, and respondents in Lindi to be most, willing to pay tax.

CMI is an independent development research institute in Bergen, Norway. We address issues that shape global developments and generate knowledge that can be used to fight poverty, advance human rights, and promote sustainable social development.

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Based on these findings, the following recommendations for successful handling of gas discoveries in Tanzania should be considered:

1. Make clear, accurate and accessible information about the natural gas sector available to citizens to ensure realistic expectations about future benefits.
2. Continue efforts to control and reduce corruption. In addition to strengthening institutions of accountability, particular efforts should be tailored towards older citizens as well as men.

In terms of improving tax compliance, less educated individuals may be particularly important to target. However, more research is needed to explain why some subgroups of the population is less willing to pay than others, and what can be done to improve their compliance.

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