Citizens' preferences for taxation of internationally mobile corporations: Evidence from Tanzania

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Abstract. The legitimacy of the tax system is likely to be compromised in the absence of public support. This article presents evidence from a discrete choice experiment designed to elicit the tax preferences of ordinary citizens on how corporations should be taxed. We find that respondents prefer higher taxes on more internationally mobile companies, which is inconsistent with the prescriptions of optimal tax theory. Moreover, it is at odds with the tax policy in many countries, which may reduce political support for taxation among citizens. The experiment was conducted in Tanzania, making this result all the more striking as developing countries are particularly sensitive to location decisions of corporations. We also find that citizens favour higher taxes on foreign owned companies compared to domestic ones, and lower taxes on companies that have more local employees.

Keywords: Tax policy, corporate taxation, tax preferences, tax legitimacy, Tanzania

JEL Classification: H21; H25

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1. Introduction

One of the gravest challenges to state and public policy legitimacy of our time is the continuing reduction in corporate taxation resulting from the high international mobility of and competition for capital (Devereux, Lockwood & Redoano, 2008; Keen & Mansour, 2012; Steinmüller, Thunecke, & Wamser, 2018; Turina, 2018). Low capital taxation has the potential to increase inequality (Huber, 2009; Mahon, 2012) and undermine the social contract on which our societies are based (Levi, 1988; Bertram, 2003). The literature on tax competition largely suggests that international tax competition is negative, resulting in reduced tax bases with which to fund necessary public goods (Wilson, 1986; Zodrow & Mieszkowski, 1986; Avi-Yonah, 2000; Rodrik & van Ypersele, 2001; Hines, 2007). Yet, governments all over the world have lowered corporate tax rates and in many countries also provide generous incentives to foreign investors. This 'race to the bottom' in order to lure and boost investment is most notable in Africa (Abbas & Klemm, 2013).

From the perspective of any individual country, optimal tax theory points out that taxing corporations according to the inverse of their geographical elasticity will lead to the highest level of GDP, and lower taxation of more mobile firms may hence be rational for individual countries (Sørensen, 2007; Devereux et al., 2008). While a number of studies argue that the welfare consequences for ordinary citizens of reduced taxation on mobile firms are negative compared to a better coordinated international tax regime (Klemm and van Parys, 2012; Madies & Dethier, 2012; Crivelli, Mooij, & Keen, 2015), there is little systematic study of the extent to which citizens agree or disagree with low taxes for mobile capital. One possibility is that while citizens may see the negative sides of such a policy, they might view it as a necessary or unavoidable strategy to remain competitive in an increasingly globalized economy.

This paper presents the results from a discrete choice experiment designed to elicit the views of citizens on the appropriate bases for corporate taxation. The experiment was conducted among ordinary citizens of Kinondoni municipality in Dar es Salaam, Tanzania. In the experiment, respondents were presented with pairs of hypothetical companies differing on a number of attributes, including international mobility, profitability, sector, local employment, country origin, and export orientation. They were asked to choose which of the pair of companies ought to be taxed the highest, and from their responses we could then analyse which of the attributes affected tax choices and how. The results show that respondents do not make choices consistent with optimal tax theory nor do they agree with the tax policies used towards international companies; in fact, they prefer significantly higher taxation of more mobile corporations. Our approach ensures that this result is not due to a perceived correlation of mobility with profitability, sector or foreign ownership, which might otherwise confound findings. For the other attributes, we find strong preferences for lower taxes on companies with many local employees and for higher taxes on foreign owned companies. There is in other words a strong home bias in citizen preferences for corporate taxation.

We also explore mechanisms behind our main result of preferences for higher taxation of mobile corporations. Since the discrete choice experiment controls for the profitability of the corporations, this indicates that inequality aversion is likely not what drives the result. Consistent with this, we do not find significantly greater preferences for taxing mobile companies among respondents who are more inequality averse. We do, however, find that preferences to tax mobile companies more heavily are stronger among more risk averse respondents. This suggests that our respondents, in deciding which companies to tax the hardest, may see cutting mobile companies a tax break as a riskier investment of foregone tax

revenue. The reasoning behind this mechanism is as follows. One way to view a tax allocation task between two companies is as an investment decision; which company would you allow to retain the most profits (or capital) after taxes? If mobile companies are seen as riskier investment opportunities of foregone taxation, we would expect to see more risk averse respondents favour higher taxes on these companies, which is what we find.

In mapping citizen preferences on tax policies, our paper makes three main contributions. First, the discrete choice experiment approach explicitly permits analysis of how respondents trade off different tax subject characteristics in reasoning about appropriate tax burdens. We see this as an advantage over the approach used in Fisman, Gladstone, Kuziemko, & Naidu (2017), where respondents are asked to set appropriate tax rates for one taxpayer at a time. While Ballard-Rosa, Martin, & Scheve (2017) use a discrete choice experiment to analyse respondent choices between personal income tax systems characterized through tax rates for different income brackets and revenues generated, the approach has to our knowledge not been used to elicit preferences over other taxpayer characteristics nor for company taxes.

Second, our results complement an experimental literature examining whether efficiency or equality considerations drive people's distributive choices (Fehr, Naef, & Schmidt, 2006). We contribute to this literature by examining the efficiency-equality trade off in choices not involving individual subjects in a lab setting, but corporations, and in a context where the explicit focus is on public policy. Our respondents do not appear to endorse efficiency arguments related to mobility. Moreover, in the practical setting examined, citizen views of tax policy may have a basis in considerations of risk as much as in efficiency-equity trade offs typically discussed in this literature.

Third, while a considerable literature suggests that the presence of multinational corporations confer important advantages on host economies, in particular in terms of knowledge transfer (Markusen & Venables, 1999), our study documents that widespread protectionist sentiments towards trade (Mayda & Rodrik, 2005) also extend to tax policy preferences. Our results suggest that our respondents do not seem to agree that attracting foreign corporations is particular important, preferring instead to tax them more heavily than domestic ones. These findings speak to ongoing debates about the distribution of gains and losses from globalization (Stiglitz, 2002; Lakner & Milanovic, 2016), and international electoral trends towards protectionism (Autor, Dorn, Hanson, & Majlesi, 2016). Interestingly, we find no difference in citizen views of Western and emerging market corporations in our data, British and Chinese companies are taxed on a par according to our results. This is relevant to the extensive literature on the relative merits of Western and Chinese companies in promoting development in host economies (Kolstad & Wiig, 2012; Busse, Erdogan, & Mühlen, 2016; Chen, Dollar, & Tang, 2018), and suggests that citizens of the economy we study do not perceive much of a difference.

The choice of a developing economy as the location for our experiments provides a strong test of the level of agreement between citizen preferences and current tax policies, since these economies are particularly sensitive to the location decisions of footloose industries employing highly interchangeable unskilled labour (Goldberg & Pavcnik, 2007). If the citizens of any economy should be concerned about tax disincentives to mobile corporations, we should find them here. As a matter of policy, the Tanzanian tax regime incorporates substantial tax incentives to attract mobile, international investors, in the form of tax holidays and reduced tax rates (CRC Sogema, 2013; Therkildsen & Bak, 2019). Our results suggest that

citizens disagree with such preferential treatment. The legitimacy of the tax system is likely to be compromised in the absence of public support. Analyses of this kind are of importance in increasing the perceived fairness of taxation, which a number of studies link to tax compliance (Spicer & Becker, 1980; Luttmer & Singhal, 2014; Besley, Jensen, & Persson, 2014). Creating a legitimate tax system has been argued to be particularly important for state building processes, however, fairness in taxation seems key to the social contract of any society (Carroll, 1992; Smit, 1992; Ali, Fjeldstad, & Sjursen, 2014).

The article is structured as follows. Section 2 discusses the theory and contextual factors which have informed our experiment and generated our hypotheses. Section three presents our empirical approach and data. The main results from our discrete choice experiment are presented in Section 4. Robustness of the results is discussed in Section 5, and Section 6 concludes.

2. Context, theory, and hypotheses

2.1 Optimal tax theory and main hypothesis

Preferences of citizens towards corporate taxation do not appear to be extensively studied. The idea that public opinion of taxation and actual tax policy may differ substantially, particularly with respect to corporate taxation, was noted by Sheffrin (1994). The tax preferences of ordinary people are important for the legitimacy of the tax system and the social fiscal contract between the state and citizens. Public opinion can serve as a mobilizing device and put electoral pressure on politicians in shaping tax reforms (Fairfield, 2013). The political context plays an important role on how mobilization influences policy (Jensen, 2013).

Evidence both from developing and developed countries suggests that public opinion plays a role in influencing tax policy (Flores-Macías, 2018).

Discrete choice experiments present an opportunity to study preferences along a number of different dimensions simultaneously, effectively comparing the strength of preferences for imposing taxes on different tax subject characteristics. Of course, these experiments do not offer unlimited options for which company attributes to include. Limits to respondent cognition means that having no more than six to eight attributes is typically recommended. Our experiment includes six company attributes for respondents to potentially use in deciding which of two companies to tax harder. These attributes were chosen based on theoretical arguments and on the Tanzanian context in which our experiment was conducted.

In the following, we derive some hypotheses from optimal tax theory for choices made in our discrete choice experiment. This is not to suggest that our respondents reason in any way like public finance theorists. Rather, it is to see whether their actual choices in our experiment correspond to those implied by the theory, which often form the basis of policy and the advice given by economic professionals on tax matters. Theories of optimal commodity or income taxes typically model this as a trade-off of efficiency and equality considerations (Diamond, 1975; Dixit & Sandmo, 1977). In theory, there are possible differences in the efficiency – inequality assessment that may lead to views of corporate taxation that differ from personal taxation. Firstly, if owners of corporations are generally wealthier than people exposed to personal income tax, diminishing marginal utility of income means that a redistribution of a dollar in corporate taxes yields less of a redistribution of utility. This in itself may make views of appropriate corporate taxation more focused on efficiency. Secondly, if capital is more

elastic to taxation than labour, this entails a high efficiency loss which also points in the direction of more efficiency-based taxes on corporations. Thirdly, the type of citizens we study have little or no investment in the corporate sector, which means that self-interest does not come into making tax allocations between pairs of companies. Again, this suggests that views on corporate taxation may be relatively more influenced by efficiency arguments than personal taxation.

The first two corporate attributes included in our experiment are profitability, which follows naturally from the above equity concerns, and international mobility, which is our main variable of interest. If our respondents have some level of aversion to inequality, we should see a preference for higher taxes on more profitable companies in our results. Importantly, when we control for profits, international mobility of corporations arguably becomes a pure efficiency issue. From standard models of optimal corporate taxation, even if we include an inequality element, the implication should hence be that mobile companies should be taxed less heavily than immobile ones. To be consistent with this, our respondents would then have to prefer lower taxes on more mobile corporations. This is our main hypothesis.

In the case where our respondents deviate from this (which we find), one possibility is that this reflects some perceived association between mobility and wealth of companies or their owners not captured by the profit attribute. We test for this by looking at whether preferences to tax mobile companies more heavily increase in the level of inequality aversion of respondents. An alternative possibility is that a preference to tax mobile companies more heavily is related to risk. One way of viewing the tax allocation task posed to our respondents, is as an investment decision by the state in the two different businesses. The respondent is in

a sense investing foregone taxes into the company chosen to be taxed less heavily. A reason for preferring higher taxes on internationally mobile corporations, could hence be a perception that these types of companies carry greater risk. We test this by analyzing whether preferences for taxing mobile companies more heavily increase in respondent risk aversion.

2.2 Context and additional company attributes

We also include a number of company attributes that have been salient in recent debates on corporate activities and corporate taxation in Tanzania. This is both to isolate the effect of mobility from other attributes potentially associated with it, and to assess the effects of these other attributes on tax preferences in their own right. Over the last decade there has been an extensive debate among policymakers, civil society faith-based organisations, and the general public in Tanzania on what the country gets in return for foreign investment in the form of taxes and jobs. This debate, reflected in numerous media articles and reports published by civil society organizations (e.g. Curtis 2012; Curtis and Ngowi 2017), has largely focused on multinational mining companies. In a study of the gold mining sector, Lange (2011: 235) found that there was a strong feeling among people of having been 'betrayed' by their own government. Peoples' bitterness was fuelled by the perception that large-scale mining contributed little to the government coffers. The population in general – not only those directly affected by mining – became extremely resentful of large-scale mining (ibid., 251). In June 2012, the Interfaith Standing Committee published a report called "The One Billion Dollar Question: How can Tanzania Stop Losing So Much Tax Revenue" that echoed many of Lange's (2011) findings. The report provoked much public debate and laid the foundation for later tax policy reforms.

Since he came to power in late 2015, Tanzania's current President Magufuli has adopted a rather combative stance toward foreign investments (Amir 2018). The government has taken measures that have substantially changed investment conditions for foreign investors, especially those in the natural resources sector. The government's measures have earned them much popularity among the general public (Paget 2017). In particular, the dispute between the government and the Acacia Mining company, which owned three gold mines in Tanzania, was widely supported by many Tanzanians (Golubski 2017). Given the salience of mining in tax debates, we include the sector of companies as a third attribute in our experiment. Relatedly, there has been considerable debate on local content and employment effects of petroleum exploitation in Tanzania (Kolstad and Kinyondo, 2017), and we therefore also include local employment as a fourth attribute in the experiment.

Outside the mining sector, it is largely Chinese investments that have generated public debate. Round 6 of the Afrobarometer survey included questions of whether Chinese engagement in Tanzania was considered positive or negative by Tanzanians (Mwombela 2015). The survey, which covered a representative sample of Tanzanian citizens, found that China's economic and political influence in Tanzania was perceived mostly positive, in particular in relation to Chinese investments in infrastructure and the price of Chinese products. However, Chinese economic activities taking jobs and business from local people and low quality of Chinese products have led to negative perceptions. Despite this generally positive perception found in the Afrobarometer survey, corrupt practices and bribes related to procurement and natural resources have been widely reported by the media in relation to Chinese officials and projects in Tanzania, both nationally and internationally (Kelly et al. 2016). Based on the salience of Chinese investments in recent debates, we include country of origin as a fifth company

attribute, distinguishing Chinese companies from domestic ones but also from other foreign companies.

If citizens preferences include egalitarian elements, the nationality of a corporation (and hence its owners) should matter for imposed taxes only to the extent that owners from one country are wealthier than those from another country (and this is not reflected in the profit attribute). In our case, this could provide a reason for lower taxation of Tanzanian companies than foreign companies. However, this type of reasoning should also lead to a differentiation of taxes between foreign companies, implying that Western companies should pay more than companies from emerging economies such as China or India. By including all three types of companies we are able to address this possible mechanism through our experiment. In the more general formulation of the social welfare function used in optimal tax models, it is possible that citizens place higher weights on domestic owners than foreign ones. This could be for relational reasons, such as a shared nationality, or identity-based reasons. By including origin of companies in our experiment, we test for these types of effects. To avoid the results on origin being driven by perceptions that companies from certain countries are more export-oriented, and to test whether people have preferences consistent with theories of export-led growth (Balassa, 1978), we also include exports of the companies as our sixth and final attribute.

3. Data and empirical strategy

The data collection was conducted in November and December 2017, and took the form of a survey that embedded a discrete choice experiment eliciting the preferences of Tanzanian citizens on the appropriate bases for corporate taxation. For the survey, we randomly selected

50 polling stations in Kinondoni municipality in Dar es Salaam from the 2010 general elections. From each of these locations, eight enumerators fanned out in pre-specified directions on maps downloaded to the tablets used for data collection, interviewing a randomly selected member aged 18+ from regularly spaced households along the way, resulting in a sample of just over 800 respondents.

For our original survey, Table A1 in Appendix A provides descriptive statistics. Respondents are young with an average age of 35 years, and while it is most common to have only completed primary education, about 50 per cent have secondary or tertiary education. In terms of wealth or assets, 89 per cent of respondents are from households that own a radio, 85 per cent a TV, 35 per cent a motor vehicle, and the mean household has a 4-room dwelling. The occupational background of our respondents is fairly typical of the poor, urban context in which we are conducting the study, with a substantial proportion working in the informal services sector. While this may mean that their personal experience with taxation is limited, this does not imply that they are indifferent to tax policies in the country. Additional survey questions show considerable variation in perceptions of the tax system in Tanzania, with the majority critical both of tax rates and the quality of public services they finance, of the tax evasion opportunities available to the wealthy, and the extent to which this undermines general tax compliance in the country.[1]

In the discrete choice experiment embedded in our survey, we randomized respondents into ten blocks, and presented the respondents in each block with a series of eight company comparisons of the type shown in Figure 1. Two companies, A and B, were described in terms

[1] Details on the additional questions are available from the authors on request.

of the six attributes listed in the first two columns. The full set of levels for each attribute is presented in Table A2 in Appendix A, and the comparisons or choice sets presented to the respondents were chosen through an efficient design approach based on prior estimates from a pilot conducted in February-March 2017. Since literacy levels are low among many of our respondents, we used symbols to represent the various attribute levels, as illustrated in Figure 1. The order of attributes were randomized across blocks to avoid order effects.

For each pair of companies, respondents were asked two questions:

1. "Which of these two companies do you think should pay the most in taxes?"
2. "If you were to distribute 100 million TSh in taxes between the two companies, how much would you take from company A?"[2]

Responses to the first question form the basis for our main dependent variable. The first question is a standard discrete choice formulation, resulting in a dichotomous dependent variable. The second question is more novel in this type of experimental approach, resulting in a continuous variable ranging from 0 to 100. Our reason for adding this second dependent variable is that when answering the first question, it is possible that respondents think that choosing one company over another for the heaviest taxation will result in larger total tax receipts. The second question avoids this by asking respondents to extract a fixed sum of taxes from the two companies. We use this in robustness tests to show that the results are qualitatively the same for this second dependent variable.[3]

[2] TSh = Tanzanian Shilling. Conversion rate at time of surveys was about 2500 TSh to 1 USD.

[3] Note that responses to the two questions are generally consistent in the sense that the company chosen to be taxed highest in question 1 is also the company assigned the greatest amount of taxes in question 2. 11.3 per cent of choices are inconsistent, and 33.9 per cent of respondents make at least one inconsistent choice,

***Figure 1**. Sample comparison first discrete choice experiment.*

		Company A	Company B
Local Employees	Part of workforce that are Tanzanians	None 	All 
Country of origin	The country the company is from	Great Britain 	Tanzania 
Sector	Type of business activity the company is conducting	Agriculture 	Services 
Profit	How much money the company makes after costs	13 billion Tsh 	10 billion Tsh 
Mobility	How easily the company could move all operations out of Tanzania	With Difficulty 	Easily 
Exports	Part of sales outside Tanzania	None 	A Quarter of sales 

The design of our experiment generates 16 observations for each respondent (eight choice sets, two companies in each), which brings the number of observations to 12848. We use conditional logit estimation to analyse the effect of the attributes on our first dichotomous dependent variable, with the attribute variables specified as reported in Table A2. Our main specification is:

$$\Pr(y_{ijt} = 1 | \boldsymbol{x}_{ijt}) = F(\alpha_{ij} + \boldsymbol{x}_{ijt}\beta) \quad (1)$$

however, our results are robust to dropping these observations or respondents from the analysis (results available on request).

where y_{ijt} is our dichotomous dependent variable and $\boldsymbol{x}_{ijt}$ the vector of attribute levels for individual *i*'s choice set *j* and alternative *t*. This is essentially a logit estimation with fixed effects at the choice set level, where F is the cumulative logistic distribution $F(z) = \frac{\exp(z)}{1+\exp(z)}$. Since choice set fixed effects essentially aggregate to individual respondent fixed effects, this means that all estimations control for individual characteristics. In addition to our main specification, we also run estimations where we interact the vector of attributes with respondent characteristics, notably inequality and risk aversion, in order to study heterogeneous effects of attribute levels.

For our second and continuous dependent variable, we use a standard panel data approach with fixed effects at the choice set level (essentially using the options in each choice set as the "time" dimension). The main specification can be written as:

$$z_{ijt} = \alpha_{ij} + \boldsymbol{x}_{ijt}\beta + \varepsilon_{ijt} \quad (2)$$

where z_{ijt} is the amount of taxes assigned to alternative *t* in individual *i*'s choice set *j*.

4. Main results

4.1 Profitability, mobility and tax preferences

Our main results are presented in the first column of Table 1. The results are presented in terms of odds ratios rather than coefficients from the conditional logit estimation, to ease interpretation. In other words, estimates above one for a variable mean that a company with the corresponding characteristic is more likely to be chosen as the one to tax more heavily, estimates below one make the company less likely to be chosen. The results show that our

respondents prefer more profitable companies to be taxed more heavily, as expected, which is consistent with egalitarian preferences.

However, our respondents manifestly disagree with the prescription of optimal tax theory and current tax policy that mobile companies should be taxed less heavily, and instead prefer them to be taxed more heavily. The result suggests 23 per cent larger odds of choosing a mobile company for higher taxation, compared to the odds for choosing a less mobile company (the excluded category). The mobility result is a striking one in light of the widespread use of incentives to attract footloose manufacturing industries to low income countries (Abramovsky et al., 2018). The result is not due to an association of mobility with differences in profitability, sector, employment created, geographic origin, or exports, as these are all controlled for in the analysis. The results using the second, continuous dependent variable in Table B1 in Appendix B provide qualitatively similar results, suggesting almost 3 million TSh higher taxes are preferred for a mobile over a less mobile company. An interesting implication of these findings is that there is little popular support for hold-up policies, where taxes are increased if a company makes country-specific investments.

***Table 1**. Results first discrete choice experiment. Odds ratios from conditional logit estimation.*

	(1)	(2)	(3)
Dependent variable	*Company choice*	*Company choice*	*Company choice*
Profits	1.185***	1.186***	1.184***
	(0.02)	(0.02)	(0.02)
Mobile	1.234***	1.319***	1.132
	(0.03)	(0.12)	(0.11)
Manufacturing	1.195***	1.193***	1.195***
	(0.06)	(0.06)	(0.06)
Mining	1.541***	1.534***	1.542***
	(0.08)	(0.08)	(0.08)
Services	0.973	0.974	0.974
	(0.05)	(0.05)	(0.05)
Local employees	0.352***	0.352***	0.353***
	(0.02)	(0.02)	(0.02)
China	1.800***	1.797***	1.798***
	(0.10)	(0.10)	(0.10)
Great Britain	1.858***	1.860***	1.857***
	(0.10)	(0.10)	(0.10)
India	1.810***	1.808***	1.811***
	(0.09)	(0.09)	(0.09)
Export share	2.546***	2.550***	2.542***
	(0.27)	(0.27)	(0.27)
Mobile*Inequality aversion		0.990	
		(0.01)	
Mobile*Risk aversion			1.025
			(0.03)
Pseudo R2	0.069	0.069	0.069
N	12848	12800	12848

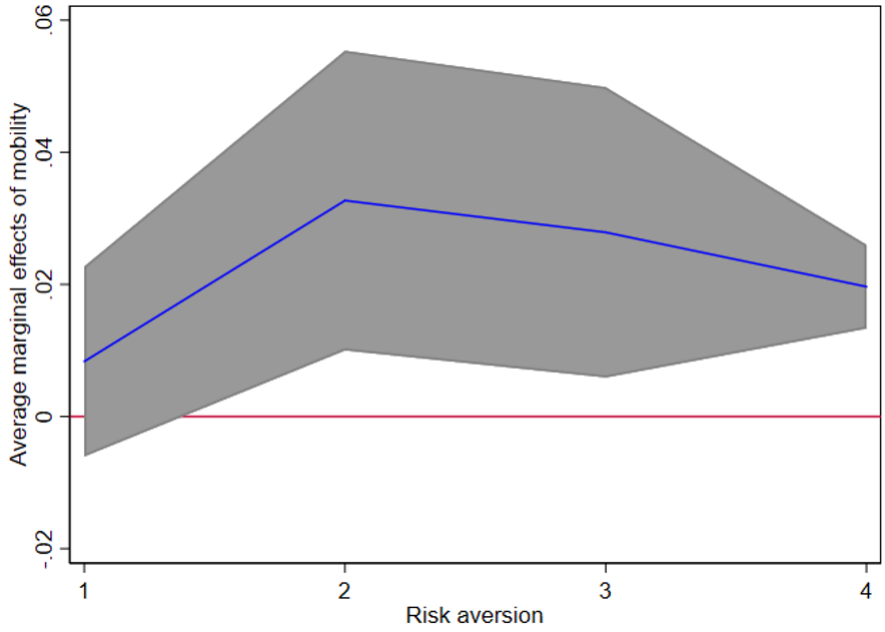
*Note: Odds ratios from conditional logit estimation, robust standard errors in parentheses, *** indicates significance at the 1% level, ** at 5%, * at 10%.*

Several reasons for the mobility result are possible. A simple egalitarian reason would be that people associate mobile companies with wealthier owners, but this is likely captured by the profits attribute. There could, however, still be some residual perception of association between wealth and mobility even if our respondents take profitability into account. In order to test for the possibility that inequality aversion is behind our result, column two of Table 1 presents an additional estimation where we include an interaction term between the mobility attribute and respondent inequality aversion (recall that the main inequality term is subsumed in the fixed effects). The inequality aversion variable is an 8-point scale constructed as explained in Box C1 in Appendix C. The odds ratio of the interaction effect is on the wrong side

of 1 for our results to be driven by inequality aversion, and is insignificant. In other words, egalitarian motives do not seem to drive the preference for higher taxes of mobile firms.

Another possible mechanism behind our result, discussed in Section 2, is that respondents see mobile companies as riskier propositions, and would therefore prefer higher taxes on the mobile corporation. In column three of Table 1, we test for this by including the interaction effect between the mobility attribute and respondent risk aversion, as measured by the four-point scale explained in Box C2 in Appendix C. The odds ratio for the interaction term is above one, which is consistent with this explanation, though it is statistically insignificant. Its inclusion, however, also makes the odds ratio of the main mobility term insignificant. To further trace out the marginal effect of the mobility attribute on company choice across increasing levels of risk aversion, Figure 2 provides a marginsplot of the relation (using log odds of mobility rather than odds ratios). The figure suggests that the positive effect of mobility is driven by the choices made by respondents above the minimal level of risk aversion, which is consistent with the risk mechanism. It should be noted, though, that this analysis is explorative and the mechanisms tested for here are not exhaustive of the potential explanations. Another possibility is that the respondents tax options rather than simply the current economic situation, a redistributive tax on positive freedom. Alternatively, to the extent that mobility is viewed as a choice, our result may also reflect a reciprocity motive where companies that are seen as loyal or invest in some form of commitment to the domestic economy.

Figure 2. *Marginsplot of marginal effect of mobility by level of risk aversion, 95% confidence interval*



4.2 Local employment and country of origin of companies

For the other attributes included in our discrete choice experiment, we see some of the strongest effects for local employment and the origin of companies. Judging from the results in Table 1, a company whose workforce is entirely local has one-third the odds of being selected for higher taxation than a company whose workforce is completely foreign. Moreover, foreign owned companies have 80 per cent higher odds of being taxed more heavily than domestic companies (the excluded category), with little difference between Chinese, British or Indian companies. There is hence a strong home bias in our results, in terms of employment created and in terms of ownership. The favouritism could be based on preferences for international redistribution in taxing companies from richer countries more heavily. However, in that case we should see a significantly higher odds ratio for British companies than for Chinese and Indian ones, which we do not.

The country of origin results could reflect a preference for domestic companies in itself, but it could in principle also reflect other greater perceived local impacts of domestic companies than employment. In a follow up study conducted in the same area, we examined these issues in an additional discrete choice experiment where in addition to country origin, we also included local financial contributions, and employment of foreign workers (which could be regarded negatively) as attributes.[4] The results show that even after controlling for these other local impacts, a strong preference for domestic over foreign companies prevails. Moreover, the preference for a domestic over a foreign company is strong in the sense that respondents would be willing to sacrifice a substantial number of local jobs to favour a domestic company over a foreign one.

For the remaining attributes, the fact that our respondents want to tax mining companies the highest (the differences to all the other sectors are significant at p=.0000) is not surprising. While this is in line with economic theory stressing heavy taxation of natural resource rents, it more likely reflects respondent views of the minerals extracted as being nationally owned, and a history of mining in Tanzania and other African countries where local benefits are perceived to be minor and adverse effects substantial (Berman, Couttenier, Rohner, & Thoenig, 2017). More surprising is the fact that citizens want to tax manufacturing industries more heavily than other industries, and companies that export higher than companies that do not. This is at odds with a development literature that sees manufacturing as a key sector in generating employment, and in increasing productivity and growth (Kaldor, 1967; van Wijnbergen, 1984; Rodrik, 2013). It also clashes with ideas of export-led growth as the appropriate strategy for development of a country economy. The preference for higher taxes

[4] The details are available in the working paper version of the article (Kolstad, Wiig, & Fjeldstad, 2018).

on manufacturing over services and agriculture (the omitted category) could in our case reflect the fact that most of our respondents work in the informal services sector, and have a close connection to agriculture through kin, history, and culture. The tendency to tax companies that export higher is more puzzling, but could reflect a historical political emphasis in Tanzania on import substitution and self-reliance (Coulson, 2013; Lofchie 2014; Gray 2018).

5. Robustness

Our discrete choice experiment was carefully designed and piloted to ensure comprehension of the attributes, levels, and choices among our respondents. The impression conveyed to us by our local enumerators was that not only did the respondents well understand the choices posed to them, many of them also regarded the experimental part of our survey as interesting and enjoyable. Comprehension may of course depend on educational background, but we did not find significant heterogeneities in tax preferences across educational levels that would suggest that this is the case. As noted, the order of attributes was randomized across blocks to avoid order effects. Our results are therefore unlikely to be due to artifacts of the design.

The inclusion of choice set fixed effects in all estimations means that our results are not driven by any observed or unobserved differences between respondents. As shown in Table B1 in Appendix B, our results are robust to using our second, continuous dependent variable instead of the traditional dichotomous one; these estimations also include choice set fixed effects. Table B2 in Appendix B shows that a mixed logit analysis produces similar results. Mixed logit makes it possible to look at heterogeneities in responses. As the standard deviations at the bottom of Table B2 show, there is considerable heterogeneity in most attributes, but greater agreement on taxing foreign companies more heavily than domestic ones.

6. Conclusion

The article has presented evidence from a discrete choice experiment designed to elicit the tax preferences of ordinary citizens on how corporations should be taxed. The results suggest that our respondents favour higher taxes on internationally mobile companies, contradicting current tax policies in many countries. It also contradicts a central implication of optimal tax theory that dates back to the model of Ramsey (1927). Moreover, we document that preferences for taxing mobile companies more heavily are increasing in respondent risk aversion, suggesting a potential need to also include risk preferences in assessing citizens views of taxation. While explorative, this finding should be further examined in future research. In addition, we find strong support for domestic favouritism in setting corporate taxes.

It should be noted that for each of the attributes included in our experiment, the effect might be due to correlation perceived by respondents with other unobserved company attributes, rather than the attribute itself. While we control for important attributes, there are inherent limitations in the number of attributes one can meaningfully include in this form of experiment. Furthermore, our sample is of an urban population from a developing country; responses may not generalize to other populations. As noted, however, the vulnerability of such an economy to corporate location decisions provides a strong test of the extent of agreement with current tax policies. One can of course ask how feasible higher taxes on internationally mobile companies are given their opportunities to shift income through transfer pricing. Nevertheless, the importance of tax policy legitimacy means further studies of tax preferences in this and other contexts are of interest.

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