

# The Effect of Education on Informal Sector Participation in a Post-Communist Country

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**Abstract:** This article examines participation in the informal economy in Albania, a post-communist country in transition. In particular, it focuses on the effect of education while considering other individual, social, and institutional factors. Two factors that can be central in the educational effect on informal sector participation are considered. The human capital factor, referring to the income-related returns of education, may lead to less participation due to lower financial incentives to do so. The other factor, referring more to the role of education in forming moral attitudes and values, may also lead to less participation but primarily through broad and civic norms affected by education. Using survey data, we find a strong negative relationship between education and informal sector participation. The role of education in shaping broad civic attitudes explains relatively more of this relationship than the human capital factor. Importantly, the effect of education is independent of income, which suggests that education shapes moral values independent of whether these values are developed to legitimize one's advantaged position in society. These findings provide a somewhat optimistic view of how to deal with the social inequality caused by participation in the informal sector.

## Introduction

Starting from complete neglect, the phenomenon of informal economy has grown to be a subject of study by many researchers, focusing on developing and developed countries, as well as on post-communist countries (Schneider and Enste, 2000; Gërkhani, 2004a). The academic thought about this phenomenon has developed from the earliest studies (Boeke, 1953; Swaminathan, 1991), which contemplated the informal sector as a marginal or residual activity, to later ones (Harding and Jenkins, 1989; Williams and Round, 2009), that consider it a central aspect of the economic and social dynamics of any country, but especially of the less developed ones.

The informal sector concept originates from a study in a Third World context (Hart, 1973). 'Due to its large impact in developing countries' (Charmes, 1990), there are many studies on the informal sector in these countries. Although these studies show that the informal sector has a significant impact in the society, it was neglected in the first years of transition of the post-communist countries. There have been disputes

about whether this neglect was due to the perceived unimportance of the informal sector or it was purposely pursued by governments due to its tremendous effect as an absorber of poverty and social chaos (Kesner-Skreb, 1997). In fact, a distinction between informal sector in developed and less developed countries (i.e. developing and post-communist countries) emphasizes the importance of 'survival' in the latter group (Gërkhani, 2004a). The main conclusion is that contrary to developed countries, the informal sector in less developed countries generates low income and little accumulation. Furthermore, it is characterized by labour-intensive and low technology. These characteristics are inter-related. Due to the informal sector is mainly a survival sector, it is labour-intensive and yields little accumulation (Neef, 2002). As a consequence, the allocation of resources will be distorted, resulting in enlargement, rather than moderation of social inequality (Ditton and Brown, 1981; Leonard, 2002; Ferrer-i-Carbonell and Gërkhani, 2011).

This relationship between social inequality and the informal sector is our primary motivation to focus on

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the study of the informal sector in post-communist countries. In addition, the larger magnitude of the informal sector in these countries (compared with developed countries) (Schneider, 2005) and the complexity of factors involved in their transformation process make the study of such a significant phenomenon a challenge but moreover, a necessity.

These motivations lead us to the following question: What are the dynamics underlying participation in the informal sector? We aim to answer this question through an empirical analysis of the mechanisms driving individual participation in the informal sector in a post-communist country. In particular, it focuses on the effect of education while considering other individual, social, and institutional factors. It is relevant to examine the impact of education in order to differentiate between two different factors plausibly affecting informal sector participation. First, education is an indicator of *human capital* that decreases the need for individuals to be involved in the informal economy. Second, education is also known to affect *normative standpoints* of individuals, by which people may morally refute informal sector participation. Therefore, we examine whether the effect of education on informal sector participation in post-communist countries is mediated through income, which would be expected if education has its impact because of the human capital it entails, or through norms that are affected by education. It is through such an empirical analysis that we are able to systematically understand the mechanisms through which education affects informal sector participation and its implications for social inequality.

Albania, the post-communist country chosen for this study, is a particularly interesting case because it was the last country in Central and Eastern Europe that opened itself up to democratic changes in the beginning of the 1990s. While other Central and Eastern European countries had in one way or another introduced slight changes with respect to private property, as well as some moderate openness to international exchange of interests, Albania was in all aspects, a completely isolated country. As a result, when Albania entered the process of transition, it was struck not only by a deep economic crisis, but also by an institutional shock. Former institutions, established during four decades of communism, vanished before fundamental new institutions had time to develop and be accepted. This gap was filled by the emergence and rapid increase of the informal economy, which initially started as an emergency exit from the numerous problems of the formal sector, but later became an inevitable part of society. A combination of these economic, social, and institutional factors created suitable conditions for the informal sector to

be prevalent in Albania (Marc and Kudatgobilik, 2003; Ruli, 2003). Until recently, numbers on informality in Albania were mainly based on anecdotal evidence and small-scale sample surveys.<sup>1</sup> Two recent macro-economic studies estimate the average size of the Albanian 'shadow economy' to be 33.4 per cent in 1999/2000 (Schneider, 2005) and 48–65.4 per cent of the total economy for the period 1989–2000 (Feige, 2002), based on diverse macro approaches. These studies also show that the size of the shadow economy is on average higher in post-communist countries than in developed countries.

Many studies have based their notion of the informal sector on its consequences for the labour market. Based on this criterion, the informal sector or 'informal employment' (Williams and Round, 2008) is defined as: '... all legal production activities that are deliberately concealed from public authorities for the following kinds of reasons: to avoid payment of income, value added or other taxes; to avoid payment of social security contributions; to avoid having to meet certain legal standards such as minimum wages, maximum hours, safety or health standards, etc.' (OECD, 2002: p. 139). As in Williams and Round (2008), who draw lessons on informal employment in Ukraine, we also adopt this definition here because, this type of activities is rather typical for post-communist countries in Central and Eastern Europe.

## Participation in the Informal Sector

According to Renooy (1990), there are two groups of factors which determine the decision to become active in the informal sector, more specifically, the 'structural' and 'opportunity' factors. The structural factors consist of financial pressure, socio-psychological pressure, and (formal) institutional constraints. The opportunity factors consist of individual background: skills, education, contacts, and living situation; or non-individual components: environment, cultural tradition, values and standards, and geographical factors. The author suggests that these factors explain why different sorts of informal economies exist. For example, in an atmosphere in which the government loses the trust of the population and people no longer feel that government supports them, a step into the twilight economy will be taken much more easily.

Though the existing literature has not yet established the effect of education on informal sector participation, some studies in post-communist countries find that evasion (one aspect of the informal sector) increases with

the level of education (see Stulhofer, 1997 for Croatia; and Hanousek and Palda, 2004 for the Czech Republic; and). Other empirical studies (e.g. Torgler, 2004 for Costa Rica and Switzerland) find, however, that tax compliance increases with level of education. Studies focusing more directly on the labour market aspect of the informal sector (see McKeever, 1998, 2006 for South Africa and Dimova *et al.*, 2005 for Bulgaria) emphasize the 'survival' characteristic of the informal sector where credentials matter less, which is reflected in a negative relationship between education and informal sector participation.

We do, however, know that more education means increased likelihood of obtaining a higher income, also in former communist societies (Fleisher *et al.*, 2005; Munich *et al.*, 2005). Income on the other hand is negatively correlated with tax evasion according to some studies (Isachsen and Strom, 1985; Franičević, 1997; Liebig and Mau, 2005). If individuals experience a high level of welfare, the argument goes, they are in less financial need to work informally and not comply with taxes.<sup>2</sup> Also, better educated may have more opportunities to find their way through the informal economy, although we expect that this may particularly be to the disadvantage of the low-skilled.

This discussion leads to the following hypotheses:

*Hypothesis 1:* education is negatively correlated with participation in the informal sector.

*Hypothesis 2:* the effect of education on informal sector participation is mediated by income.

Nevertheless, participating in the informal sector is a decision made not only based on an individual's human capital and income-related returns hereof, but also on the social and institutional context (Renooy, 1990). This context consists of formal institutions like laws, tax regimes, and labour regulations, and informal institutions like social norms, traditions, and established conventions (North, 1990; Nee, 1998). The interaction between these types of institutions appears to be particularly important for informal sector participation in post-communist countries (Feige, 1997; Pejovich, 1999; Helmke and Levitsky, 2004).<sup>3</sup> This is because, after the collapse of communism, the altered formal institutions were not (and could not) be immediately followed by the persisting cultural and social norms. As shown empirically by Gërxhani (2004b), the more formal and informal institutions are in conflict with each other, the higher the extent of tax evasion. Regarding their separate effects, the literature indicates a positive relationship between the share of the unofficial economy

and the ineffectiveness of formal institutions (Friedman *et al.*, 2000). In addition, tax evasion decreases with a higher trust in governmental institutions, a higher perceived fairness of the tax administration, and with a perceived equity of the fiscal exchange (Cummings *et al.*, 2009). Schneider and Enste (2000) attribute higher tax evasion to a long-term decline of civic virtue and loyalty towards public institutions. This relationship between individual perception of formal institutions and informal sector participation is of particular relevance for post-communist countries, where due to a 'dual society' from the past and inefficient and corrupted new governments, the level of distrust in formal institutions has increased significantly.<sup>4</sup> This leads to the following hypothesis:

*Hypothesis 3a:* a more negative perception of formal institutions is positively correlated with participation in the informal sector.

Literature shows that social norms (e.g. tax morale) are also an important factor for tax compliance (Elster, 1989; Alm *et al.*, 1995; Schneider and Enste, 2000). Torgler (2004) provides field data, as well as experimental evidence of a positive relationship between a high tax morale and a high level of tax compliance. Thus, the following can be hypothesized:

*Hypothesis 3b:* higher levels of tax immorality are positively correlated with participation in the informal sector.

Given the presumed importance of individual perceptions of institutions for informal sector participation, the question is whether these perceptions play a mediating role between education and informal sector participation in a post-communist country. To study the importance of individual perceptions of institutions as an explanation of the effect of education, it is relevant to make a distinction in two views about the impact of education on attitude and value formation. One view, labelled the Enlightenment perspective, stresses that education affects attitudes and values in a very broad range, either through processes of cognitive development (Nunn *et al.*, 1978; Hyman and Wright, 1979) or socialization (Stephan and Stephan, 1984; Guimond *et al.*, 1989). The effects of education are wide-ranging, and include attitudes that cannot be explained by indirect versions of rationality and self-interest. Another view, however, stresses that education affects attitudes in a much more limited way. Through processes of 'ideological refinement' education affects attitudes as a legitimation of the advantaged position of the highly educated in society

(Jackman and Muha, 1984; Phelan *et al.*, 1995). Central to the ideological refinement perspective is that there is a basis of self-interest in the attitudes that are developed, unlike the Enlightenment perspective. We can test this element of self-interest, as our data contains information about the income position that people take. Moreover, the perceptions ('values') that we study are directly related to the behaviour of interest (i.e. informal sector participation).

Both these perspectives on the role of education assume that education reduces dissatisfaction with formal institutions and enlarges tax morality. According to the Enlightenment perspective, education enhances 'good citizenship' that creates an awareness that people should contribute to society, and furthermore enhances trust in institutions. The ideological refinement theory would hold that more highly educated individuals have a higher tax morality than persons with lower levels of education, as a strong state legitimizes their position. This in turn will lead to a more positive perception of formal institutions. Furthermore, following both perspectives, norms related to tax evasion are also expected to intermediate the relationship between education and informal sector participation. This leads to the following hypothesis:

*Hypothesis 4:* the effect of education on informal sector participation is mediated by individual perceptions of formal institutions and individual tax morality.

However, the Enlightenment model and the ideological refinement model differ in the relevance that can be attributed to income for the relationship between education, values, and participation. According to the Enlightenment model, we would expect that the effect of education on attitudes and values related to tax evasion and formal institutions is independent of income. A particular set of values is then generated by schooling, independent of whether one holds an advantaged position that needs to be legitimized. Extending this line of reasoning to the behavioural outcome of participation, it may also be plausible that more negative perceptions of formal institutions will increase the likelihood of participation independent of income.

The ideological refinement model, however, would predict that the education effect on such norms is stronger for persons with higher income. Only if one holds an advantaged position, it is—according to this theory—plausible that norms are maintained that legitimize one's position. Moreover, the likelihood of participation may more strongly be affected by norms of people with higher income.

This leads to the following hypotheses:

*Hypothesis 5a:* the effect of education on individual perceptions of formal institutions and individual tax morality is unrelated to income.

*Hypothesis 5b:* the effect of education on individual perceptions of formal institutions and individual tax morality is stronger for people with higher income.

*Hypothesis 6a:* the effect of individual perceptions of formal institutions and individual tax morality on informal sector participation is independent of income.

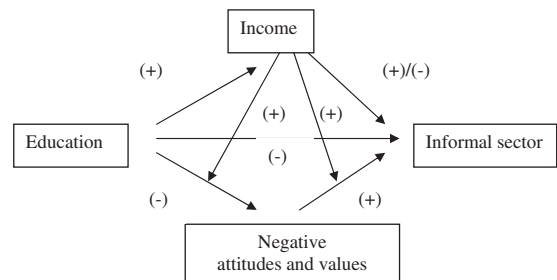
*Hypothesis 6b:* the effect of individual perceptions of formal institutions and individual tax morality on informal sector participation is stronger for persons with higher income.

These hypotheses are denoted in the Figure 1 below.

Although the issue of morality in relation to tax evasion is interesting, it must be recognized that many workers in post-communist societies are forced to take up multiple jobs to make ends meet. In the economics literature the phenomenon of holding multiple jobs is called moonlighting. This also involves the higher-educated, whose moral opinions will only become effective if basic needs are satisfied. This leads us to expect that the impact of education is stronger among those that only have one job. For moonlighters, who need more jobs in order to make ends meet, education is expected to be less influential on informal sector participation, and the impact of tax immorality is also expected to be weaker.

*Hypothesis 7a:* the negative impact of education on informal sector participation is weaker for multiple job holders than for those with only one job.

*Hypothesis 7b:* the positive impact of tax immorality on informal sector participation is weaker among those with multiple jobs than among those with one job.



**Figure 1** Conceptualization of the effect of education on informal sector participation

## Data

The empirical analysis is based on data collected in a field survey conducted in 2000, in the urban area of Tirana, the capital of Albania [see Gërxhani (2007) for more details]. The method applied is the 'self-administered questionnaire', which combines personal contacts with written questionnaires. The survey sample consisted of 1,500 households living in Tirana, which represented ~1.1 per cent of Tirana households in 2000. The sampling was random and based on a geographical framework, covering the five—more or less equally sized—regions of urban Tirana. Since the focus of the questionnaire was tax evasion, the main income earner of the household was asked to respond to the questions. The 1,340 valid questionnaires that were returned represent a response rate of 89.3 per cent, which is exceptionally high compared with most surveys on tax evasion. The analytical sample consists of 1,175 individuals without missing values.

Given the absence of suitable data for the main income earners of households in Albania, it is virtually impossible to test if our sample is truly representative. However, we compared this survey with a study of the living standards of the urban population in Tirana in 1993–1994 carried out by the Albanian Institute of Statistics (INSTAT).<sup>5</sup> A comparison of the two data sets reveals very similar response rates, average ages of the respondents, average sizes of the households, percentages of children in the households, and gender division of adult members in the households. The Gini coefficient measuring household income inequality in our data is 0.37, which is similar to the Gini coefficient of 0.35 reported by the Worldbank for 2008 (the earliest available year).<sup>6</sup> In all, we are confident that the tax evasion survey conducted in 2000 is, to a large extent, representative of households in the urban area of Tirana.

The data set provides information on the sector in which individuals work, as well as other available information on reported tax payments. Given the core of the informal sector definition used here—employment not declared to the state for tax, social security, and labour law purposes (Williams and Round, 2009)—and the difficulty of capturing informal sector activities, we consider both information on working sector and tax evasion in measuring informal sector participation. The information on the sector in which individuals work is captured by asking respondents to report the sector they work in from a list of seven categories [e.g. public sector, private sector (with and without labour contract), and own business]. This is combined with various indirect questions that were used to gather

information and construct tax evasion variables [e.g. (non-)payment of personal income tax or small business tax]. For example, if the response to the question 'Does your employer (state or private) deduct your personal income tax from your monthly salary' is 'No', then this was considered as one indication of tax evasion; or if the response to the question 'Please indicate who pays your tax on personal income' is 'Nobody', this was another indication of tax evasion. In order to minimize the bias of dishonest answers or non-responses, we aggregated the answers to four or five such indirect questions each of which offers a possible indication of evasion. The result is a dummy variable indicating whether an individual works in the formal or informal sector. Individuals are classified as working in the formal sector if: (i) they work in the state sector; (ii) they work in their own business and they declare to pay taxes; (iii) they work in their family business and they declare to pay taxes; (iv) they work in the private sector with a labour contract; (v) they do occasional work and they declare to pay taxes; or (vi) they do other work and declare to pay taxes. Individuals are classified as working in the informal sector if: (i) they work in their own business and they do not pay taxes; (ii) they work in their family business and they do not pay taxes; (iii) they work in the private sector without a labour contract; (iv) they do occasional work and they do not pay taxes; and (vi) they do other work and do not pay taxes. In the sample, 31.9 per cent of the respondents work in the informal sector.<sup>7</sup>

In addition, the data contain information on individuals' socio-economic and demographic characteristics like education, age, gender, household monthly net income, taxes, and other information relevant for a post-communist country like Albania. After the fall of communism in 1991, human migration—both internal and external—occurred on a massive scale. With a cross-sectional local sample, we cannot examine labour market behaviour of people who left Albania. In any case, we aim to explain informal sector participation *in Albania*. Also within Albania, large numbers of individuals migrated, from Northern and Southern Albania to the central parts of the country, mainly Tirana, and more generally, they moved from rural to urban areas. Both aspects, whether they have lived in a rural area before transition—'urban locality'; or whether they have migrated to Tirana after transition—'migrated to Tirana' are captured by the data. We also have information on whether respondents had more than one job.

Finally, the data provide information on individual attitudes to various statements related to formal and informal institutions. Respondents had to express their (dis)agreement with each statement on a five-point scale.



These attitudinal statements are used to capture informal institutions with respect to taxes (i.e. tax immorality) and individuals' perception of laws and regulations (i.e. formal institutions). A factor analysis (*principal-component analysis*) results in the following grouping of these statements, for which standardized factor scores for every individual in the sample are calculated:

I. *Pessimism about formal institutions*

- The tax system in Albania is quite applicable to the economic situation in the country.
- Taxes are low in Albania.
- The Albanian government deserves to be supported.
- Corruption in Albania is high.
- Our country is characterized by political stability.
- Audit rules on tax compliance are efficiently and equally enforced by the relevant state institutions.
- The Albanian public is continuously informed about tax legislation and any problems are quickly clarified.

Factor I 'Pessimism about formal institutions' means that when the score value increases, individuals have a more pessimistic view about formal institutions in Albania. For example, they will disagree that 'The tax system in Albania is quite applicable to the economic situation in the country' or agree that 'Corruption in Albania is high'.

II. *Tax immorality*

- People should pay taxes because if they do, they will benefit from them (e.g. better roads, more parks, more schools, etc.).
- Not paying social and health insurance today, would cause serious financial problems for me in the future (e.g. no pension benefits).
- I think everyone is morally obliged to pay taxes.

Factor II 'Tax immorality' means that when the score value increases, individuals demonstrate higher tax immorality. For example, they will disagree that 'People should pay taxes because if they do, they will benefit from them (e.g. better roads, more parks, more schools, etc.), or that 'I think everyone is morally obliged to pay taxes'.

Table 1 shows descriptive statistics of all used variables.

**Results**

We first investigate whether there is a relationship between educational attainment and informal sector participation. In Table 2 it is, first, shown that informal sector participation is strongly prevalent in Albania.

**Table 1** Descriptive statistics of all used variables

Variable	Mean	Std. Dev.	Min.	Max.
Informal sector participation	0.36	0.48	0	1
Gross household income (z-score)	0	1	-1	13
Education	4.37	0.66	1	5
Female	0.26	0.44	0	1
Age	45.02	10.75	17	89
Pessimism on formal institutions	0	1	-2	2
Tax immorality	0	1	-1	6
Urban locality	0.86	0.34	0	1
Migrated to Tirana	0.33	0.47	0	1

**Table 2** Informal sector participation by educational attainment

Education	Informal sector participation		Total
	No	Yes	
No education	0	2	2
Per cent	0	100	100
Elementary school	4	2	6
Per cent	66.7	33.3	100
Secondary school	29	59	88
Per cent	33.0	67.0	100
Gymnasium/ professional	343	200	543
Per cent	63.2	36.8	100
Higher education	424	112	536
Per cent	79.1	20.9	100
Total	800	375	1,175
Per cent	68.1	31.9	100

A total of 32 per cent of the sample participates in the informal sector. Second, we see a strong educational gradient in informal sector participation. Around two-thirds of people with a secondary school qualification participate in the informal economy, against about one-third among people with upper-secondary education, and 21 per cent among graduates from higher education.

In Table 3 we examine logistic regressions of informal sector participation. Given the fixed size of the residual variance in logit models, logit coefficients cannot be compared between models. Therefore, we show Y-standardized coefficients (Mood, 2010), that indicate the increase in the latent linear Y variable underlying logit models in units standard deviation, with a unit increase in the X variables.<sup>8</sup>

**Table 3** Logit regression of informal sector participation (Y-standardized coefficients)

	Model 1 N = 1175	Model 2 N = 1175	Model 3 N = 1175	Model 4 N = 1175	Model 5 N = 1051
	coefficient	coefficient	coefficient	coefficient	coefficient
	P > z	P > z	P > z	P > z	P > z
Female	-0.194*	-0.214**	-0.177*	-0.197*	-0.378***
Age	0.027***	0.026***	0.027***	0.026***	0.006
Migrated to Tirana	-0.017	-0.016	-0.006	-0.006	-0.011
Urban locality	-0.228*	-0.214*	-0.264*	-0.249*	-0.239*
Education	-0.452***	-0.435***	-0.422***	-0.406***	-0.504***
Gross Family Income (z-value)		-0.121***		-0.117**	-0.061
Pessimistic perceptions of formal institutions			-0.004	-0.002	-0.037
Tax immorality			0.128***	0.125***	0.166***
More than one job					-1.477*
Education * more than one job					0.439**
Tax immorality * more than one job					-0.351**
Pseudo R <sup>2</sup>	0.109	0.1162	0.1175	0.1244	0.116
Proportion of education effect explained		0.039	0.069	0.110	

Notes: \*P < 0.05, \*\*P < 0.01, \*\*\*P < 0.001 (two-tailed).

No significant interaction effects were found between family income \* pessimistic perceptions, family income \* tax immorality, family income \* education, tax immorality \* education, and family income \* tax immorality \* education.

Model 1 of Table 3 shows that education has a significant negative effect on the likelihood to participate in the informal sector. The Y-standardized effect of  $-0.452$  equals to a logit coefficient of  $-0.915$  or an odds ratio of  $0.4$ . In other words, for every additional level of education, the odds to participate in the informal sector decline with a factor  $0.4$ . This strong association is in line with Hypothesis 1, but contradicts Stulhofer's (1997) findings on the effects of education on tax evasion. We attribute this result to the persistence in Albania of pre-transition norms that dictate a greater respect for rules and concern for one's reputation among more educated citizens than less schooled ones.<sup>9</sup>

In Model 2 (Table 3), gross household income is added. As expected, income is negatively related to participation in the informal economy. Richer households participate less in the informal sector than poorer households (cf. Franičević, 1997; Liebig and Mau, 2005). The effect of education declines to  $-0.435$ . This is a modest reduction ( $\sim 4$  per cent) compared with Model 1. Thus, although income partly mediates the effect of education, as expected in Hypothesis 2, much of the education effect remains same.

Model 3 replaces household income with the two subjective variables related to pessimistic perceptions of formal institutions and tax immorality. Pessimistic perceptions of formal institutions in Albania have no effect on informal sector participation, which refutes Hypothesis 3a. However, there is a strong and significant effect of tax immorality on informal sector participation. Individuals characterized by high levels of tax immorality are more likely to take part in the informal economy, which is in line with Hypothesis 3b. This model furthermore shows that the effect of education is reduced a little further ( $7$  per cent), as expected in Hypothesis 4, although the direct education effect remains strong (Y-standardized coefficient of  $-0.422$ ).

In Model 4, both the subjective variables and household income are included in the analysis. This model shows that the education effect is further reduced. Clearly, the income path and the subjective path are complementary in their (modest) explanation of the education effect; together they account for  $\sim 11$  per cent of the Y-standardized effect of education. The effects of income and tax immorality are of similar size as in the earlier models, indicating that these factors are largely additive in their impact on informal sector participation.

In Models 5a and 5b we investigate whether there is an interaction effect between income and the subjective measurements. Based on the Enlightenment perspective of education, we hypothesized that the effects of tax immorality and pessimism on institutions on informal sector participation are independent of income (cf.

Hypothesis 6a), whereas the ideological refinement model assumes that these effects should be particularly found among higher income individuals in order to legitimize their advantaged position (cf. Hypothesis 6b). We found no statistically significant interaction effect between income and the two subjective measurements. Clearly, the effect of subjective measurements is independent of income, thus supporting Hypothesis 6a.

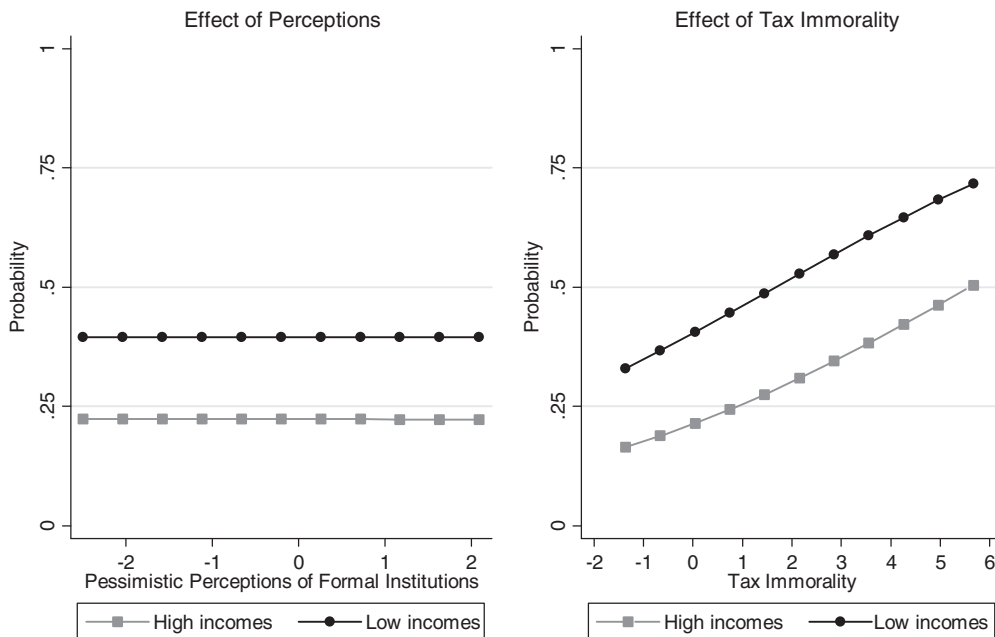
Figure 2 shows the effect of tax immorality and perceptions of formal institutions for two income groups, based on the models with interactions between income and the two subjective indicators. The low-income group is set at the average income among those with one standard deviation below the mean income or lower; high-income group is set at the average income among those with at least one standard deviation above the mean income in the sample. This figure shows that tax immorality has a clear positive effect on participation, although the differences in the slope between high- and low-income groups are negligible.

We also tested for a three-way interaction between income, education, and subjective measures, but it appeared to be non-significant. In Table 4 we report the results of an analysis of whether there is a differential impact of education on the subjective measures by levels of income. Also here, the effect of education on pessimism on formal institutions and tax immorality is constant across income levels. These combined findings illustrate that the 'subjective path' connecting education and informal sector participation is invariant across income levels. Thus, we find stronger support for the theoretical argument that education affects attitudes and values in a more general fashion, as implied by the Enlightenment perspective of education, than for the theoretical reasoning that education affects morality and perceptions only for people whose advantaged position needs to be legitimized. Yet, it must be stressed that most of the education effect remains after inclusion of explanatory variables, which indicates that our results have not fully explained why education has such a profound effect on informal sector participation. To stress this point we have also estimated linear probability (OLS) models which lead to comparable reductions in the education effect across models ( $3.4$ ,  $6.7$ , and  $9.5$  per cent respectively).

Although support is found for the Enlightenment perspective, suggesting that education affects norms and behaviours independent of income, we put another test to this perspective by further examining the role of having more than one job. More specifically, we address the question whether education and norms have different associations to informal sector participation for those who have only one job compared with 'moonlighters' who hold more than one job to make ends meet. It is



### Probability to Participate in Informal Sector



**Figure 2** Predicted probabilities of participation in informal sector for different levels of formal institutions perceptions and tax immorality. *Note:* Derived from models with interaction effects between the subjective indicators and income, fitted for mean scores on other variables. High incomes are defined as the average income among those with at least one standard deviation above the mean income, and low incomes are defined as the average income among those with at least one standard deviation below the mean income.

**Table 4** Ordinary least squares regression of tax immorality and pessimism on formal institutions

	Pessimism on formal institutions Coefficient (SE)	Tax immorality Coefficient (SE)
Female	0.211*** (0.062)	-0.153* (0.062)
Age	-0.004 (0.003)	-0.003 (0.003)
Migrated to Tirana	0.028 (0.063)	-0.092 (0.063)
Urban locality	-0.260** (0.088)	0.256** (0.087)
Education	-0.023 (0.041)	-0.209*** (0.041)
Gross household income (z-value)	-0.006 (0.004)	-0.004 (0.004)
Gross household income * Education	0.057 (0.035)	0.031 (0.035)
Constant	0.393 (0.218)	0.873*** (0.216)
R <sup>2</sup>	0.0274	0.042

Notes: \*P < 0.05, \*\*P < 0.01, \*\*\*P < 0.001 (two-tailed).

evident from Model 5 in Table 3 that, among those with more than one job, the effect of education is close to zero [the underlying (unstandardized) logit coefficients are -1.024 for the main effect of education, plus 0.892 for the interaction effect between education and having multiple jobs]. This supports Hypothesis 7a. Also the

effect of tax immorality, strongly positive in Model 4, appears to turn to a negative coefficient for those with multiple jobs. Among moonlighters, immorality does not increase the likelihood to be active in the informal economy, supporting Hypothesis 7b. These results indicate that, although the effect of education and morality

are independent of income, providing support for the Enlightenment perspective on how education shapes individuals, Enlightenment does not hold when multiple jobs are needed to get by.

## Conclusion

In this article, we examined informal sector participation in Albania, a post-communist country on which little empirical sociological research has been done to date. We were particularly interested in the question whether and how education affects participation in the informal economy. The informal sector is quite sizable in many post-communist countries. A better understanding of informal sector participation and its underlying mechanisms is important to investigate how social inequalities are formed in former communist societies, as the informal sector has a survival character and is thus a less attractive option than the formal sector (Ferrer-i-Carbonell and Gërçhani, 2011).

After having assessed strong educational gradients in informal sector participation in Albania, with more highly educated individuals participating less in the informal sector, we examined three theoretical models that may help to explain these education differentials. First, education may negatively affect informal sector participation because the more highly-educated receive higher income-related returns, which diminish the financial need for informal sector participation. In addition to this economic explanation, two other theoretical perspectives—the Enlightenment perspective on education, and the ideological refinement theory—are more strongly geared at explaining education effects through the formation of attitudes.

Our results, using a probability sample of households in Tirana, the capital of Albania, show that there is a strong negative relationship between education and informal sector participation. The subjective indicators seem to be slightly more important in the explanation of this education effect than the human capital explanation referring to economic resources. Yet, most of the effect of education is unaffected by including income or attitudes to the model, so the explanatory power of the theories is rather modest.

The results support the Enlightenment perspective on how education shapes attitudes, which in turn affect informal sector participation. Education reduces tax immorality, and persons with higher tax morale participate less often in the informal sector. These outcomes are independent of household income, suggesting that these attitudes are not necessarily shaped to legitimize the advantaged position of the well-educated, as the ideological refinement perspective would hold. This

support for the Enlightenment perspective of education buttresses the strong emphasis on increasing education to raise civic engagement of citizens, as has, for instance, been promoted by non-governmental organizations such as the Open Society Institute (e.g. Silova and Steiner-Khamsi, 2008).

Support for the Enlightenment perspective appeared, however, less adequate among workers who needed more than one job to get by. Such a pattern of associations conforms to Bertold Brecht's notion that '*Erst kommt das Fressen, dann die Moral*' (first comes food, then morality). Thus, in order to more fully address the powers that education may have to socialize children to become citizens who feel responsibility towards society, wages should be alleviated to a level that reduces the need for having multiple jobs and for working in the informal sector. Economic growth therefore seems a relevant 'policy target' as well.

## Notes

1. For example, the European Bank for Reconstruction and Development (EBRD) Transition Report (1996) claims that 70 per cent of the households in Albania do not pay their utility bills (tax bills included). In addition, a study of the Albanian Center for Economic Research (ACER, 1999) reports that 73 per cent of the surveyed enterprises (the sample unit) do not declare all of their profits. On average, this underreporting constitutes 20 per cent of their profits. According to United Nations Development Program (UNDP) (2000), the informal economy accounts for an estimated 50 per cent of GDP.
2. One study has shown experimentally that tax evasion *increases* with income (Giese and Hoffman, 1999). This finding is explained by individuals' risk attitudes.
3. More generally, Centeno and Portes (2006) argue that the character of informality is dependent on the relationship between the state and civil society.
4. Based on a survey run across several cities in Albania, De Soto *et al.* (2002) find that 'people in all areas generally lack confidence in government'. Only 25 per cent of people appear to trust public institutions. The highest level of trust is expressed towards family members.
5. Note that there are no other comparable data sources that measure tax evasion and informal employment in Tirana or Albania.

6. World Development Indicators, <http://data.worldbank.org>, accessed 30 June 2011.
7. Although our measure, using several indicators, succeeds to a large extent in assessing a reliable and valid indicator of informal sector participation, we do not exclude the possibility that there is some underreporting of participation, and that this underreporting may be associated with educational attainment. The total participation rate is however very similar to the estimated share of the shadow economy (as a proportion of GDP) in Albania in 1999/2000 (see 'Introduction' section).
8. The more commonly used unstandardized logit coefficients can be obtained from the authors upon request.
9. We also checked whether the effect of education is non-linear. Distinguishing three educational categories [secondary school or less; gymnasium/professional; and higher education (Table 2)], we find the logit effects are almost linear. The coefficient of secondary school relative to gymnasium/professional is 0.92, and the coefficient of higher education relative to gymnasium/professional education is  $-0.99$ .

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