Why People Evade Taxes in the Czech and Slovak Republics: A Tale of Twins

Jan Hanousek
Filip Palda[*]

Abstract

The present paper uses a survey of 1062 Czechs and 524 Slovaks to ask why people evade taxes. We maintain that the Czech and Slovak Republics are "twins" separated at birth and that divergences between these countries since their separation in 1992 can explain divergences in their rates of tax evasion. High Slovak tax rates and lower Czech tax rates seem to explain little of the difference in evasion between the two countries. Rising Czech incomes seems the main reason that Czech Republic evades more taxes. We also look at detailed demographic and psychological reasons for tax evasion. We find that morality is a strong deterrent to evasion.

1. Introduction

This paper asks why people in the Czech and Slovak Republics evade taxes. We find that taxes may be of secondary importance in determining how many people evade. The morality of evaders and their opportunities for evasion may in practice take precedence in the decisions people make on how much to evade.

Why people evade is a growing field of empirical research, which is usually carried out with the help of questionnaires administered by professional survey departments. We followed the spirit of these past surveys and commissioned a survey of Czechs and Slovaks in the year 2000. Ours is the first survey of this sort for both countries and as such adds to the growing body of international evidence on tax evasion.

Our survey is unique in that it studies two countries that were nearly identical and which then broke apart in 1992. The Czech and Slovak Republics are an example of what Ashenfelter has called "twins." Twins separated at birth are ideal for the study of natural experiments. One twin can be viewed as the control, and the other as the experimental subject. When the Czech Republic and Slovakia had officially split in 1993 they shared similar demographics, culture, and language, but set out on different political and economic paths. Slovakia chose a policy of high taxes and stern enforcement, while the Czech Republic decided to keep taxes low and enforced their payment laxly. This divergence in tax policies between two nearly identical countries allows us to examine without complicated methods of control how tax policy influences tax evasion.

Control and experimental groups can only answer questions about how different policy treatment of the groups leads outcomes to differ. If we wish to understand other reasons why people evade taxes we must search our survey for a link between evasion and variations in demographics, and in beliefs about the morality of evasion and the chance of apprehension. Using simple cross-tabulations as well as more complicated multivariate methods we find much in our survey to confirm stylized facts about evasion which Andreoni et al. (1998) have catalogued.

We begin our paper by giving an overview of tax evasion in the Czech and Slovak Republics. We want to closely compare what our data tell us, with stylized facts about evasion that have emerged in the last 20 years of research. Our main benchmark against which we will compare our data is research done on US TCMP audits. US data are the best known and most studied. These data must figure in any comparison with data from transition countries. With several exceptions we find that Czechs and Slovaks evade in patterns similar to which Americans evade. Once we have established the ways in which our sample compares to stylized facts about evasion we see what light our sample sheds on the controversial questions in tax evasion.[1] One of the most contested issues in the analysis of tax evasion is whether high taxes encourage evasion. As Andreoni et al. (1998) write "Theoretical models generate no clear predictions on the effects of tax rates on compliance. The presence of both income and substitution effects complicates the analysis, and special assumptions about the form of penalties, distribution income, and shape of preferences are often required to identify any comparative static." Complicated econometrics have generally been required to isolate the effect of taxes on evasion. We believe that Czech and Slovak data may, with less arduous treatment yield information on the link

between taxes and evasion because of the possibility that both countries were "twins" when they separated. The latter part of our paper explains why we believe the Czech and Slovak Republics are similar enough to warrant being called twins. We explain that they resemble each other along dimensions which are relevant to tax evasion. We then discuss how separation between the two countries and the ensuing difference in tax policies influenced tax evasion. We find that the most important determinants of tax evasion in the case of the Czech and Slovak Republics was not a divergence between tax rates, but rather the difference in opportunity for tax evasion in each country.

2. Data Challenges and Survey Methodology

As Giles (2000) explains, there are several ways to measure tax evasion: tax audit surveys, money demand methods, latent variable techniques, tax overhang methods, labour force surveys, and surveys asking individuals how much they evade. Surveys are useful for understanding why individuals evade taxes at any point in time, whereas macro-methods such as latent variable analysis and tax-overhang approaches are more appropriate for time-series analysis of tax evasion.

At present the only estimates of the underground economy for the Czech and Slovak Republics are those of the Ministry of Finance which is primarily concerned about collecting unpaid-backtaxes from firms. Until our survey, there were no independent academic estimates of the size of tax evasion in the Czech and Slovak Republics. There is a similar dearth of such estimates for other transition countries, yet understanding how tax evasion is evolving and why it evolves as it does is crucial for

---

[1] An overview of related subject of corruption in the Czech Republic is exposed in detail by Lizal, Kocenda (2001)

governments wishing to provide public goods at a reasonable tax-plus-deadweight cost.

We have chosen the survey method of analyzing tax evasion because this method is rich in demographic information. We can use demographic information to see what characteristics of respondents are associated with evasion. The survey method also allows us to ask respondents what they believe is the probability of being caught evading and what penalties they believe they face, whether they believe evasion to be moral, and whether they believe their wealth needs to be safeguarded by tax evasion. These subjective data allow us to probe the effects of incentives on the decision to evade. Survey data suffer from the lies respondents tell. We shall see that even though lying may pervade the data, solid relations emerged between the questions we asked and whether people evaded.

In Western countries, survey companies usually call respondents on the telephone. Czechs and Slovaks distrust phone surveys. The firm MEDIA carried out face-to-face surveys on a random stratified sample of 1062 Czechs and 524 Slovaks. We include the questionnaire in the appendix B to the present paper. The standard demographic questions need no explanation.

The main problem we faced was in knowing how much tax people evade. The obvious problem when asking people about their participation in the underground economy is that they will be reluctant to confess their participation. Our survey tackles this problem in stages. First we ask respondents whether they know of anyone who has participated in the underground economy. Respondents might not feel

ashamed about answering this question honestly. Knowing people who participated in the underground economy could be a weak signal that the respondent also participates. Next we ask whether the respondent has ever bought goods or services in the underground economy. Finally, and this is perhaps the question to which respondents will give the least honest reply, we ask whether they have themselves ever participated in the underground economy and what is the nature of this participation.

Table 1 summarizes the first ("soft") level of inquiry of our survey. Rows 1 and 2 show the answer to what people thought about the size of the underground economy. If people are rational observers of their surroundings, their opinions about the size of the underground economy might be a fair estimate of the actual underground economy. Giving an opinion about the size of the underground economy is not likely to threaten a respondent so that we can expect the answers to be honest. Slovaks had a significantly larger estimate of the size of the underground economy than had Czechs. This is a first, tentative sign that Slovaks evaded more taxes by the end of the 1990's than did Czechs. This judgment rests on the assumptions that people can form consistent estimates of the size of the underground economy and that Czechs and Slovaks are similar in the way they form their judgments. We will justify the latter assumption later in the present paper.

Table 1: "Soft" measures of participation in the underground economy

Survey question	CR	SL	Significant difference
Percentage of adults in country having unreported income (variable **A7** in appendix)	38.3	42.7	**
Percentage of neighbors having unreported income (variable **A8** in appendix)	33.2	38.8	**
Ever bought undeclared goods/services (variable **B1** in appendix)	49.4	50.0	

Source: Survey data, authors' computation

Row 3 of Table 1 summarizes the answers to more intimate questions than those summarized in rows 1 and 2. Here we ask whether the respondent has ever bought goods in the underground economy. The level of threat to respondents is greater here than in the questions in rows 1 and 2, but still fairly mild, as there is no effective legal sanction for those who buy goods from producers who evade taxes unless the law forbids sale of these goods. There is no significant difference between what Czechs and Slovaks answered. Both groups claim with equal frequency to have bought from the underground sector. There is no contradiction between the finding that Czechs and Slovaks buy equally from the shadow sector and the earlier finding that Slovaks believe the percent of people with income from the shadow economy is higher than for the Czech Republic. Our questions to respondents up to this point in the discussion have been sufficiently vague to allow for several interpretations. Czechs and Slovaks may buy equally from the black market but Slovaks may spend more in their purchases. To get a more precise idea of how much tax people evade than the answers given to the questions in Table 1 we need to put the question of evasion to respondents baldly and hope that some respondents accept to answer our questions.

The most intimate questions in our survey ask the respondent with what frequency he has worked and not declared his income and how much money he earned from activities upon which he did not declare to the publicans. Table 2 shows that Czechs declared working with greater frequency on the underground economy than did Slovaks consistently throughout the 1990's. For all three categories and each period the difference between the Czech and Slovak Republics was significant at least the 5% level.

Table 2: Percent of respondents answering "Have you ever been engaged in the undeclared sector?" (Variable C01 in appendix)

Intensity of participation	CR 2000	SR 2000	CR 1999	SR 1999	CR 1995	SR 1995
Often	3.5	1.3	3.3	1.3	2.7	1.1
Occasionally	21.7	13.5	17.3	10.4	12.7	8.0
Never	74.8	85.2	79.4	88.3	85.4	90.9

Source: Survey data, authors' computation

Table 3 breaks down undeclared income into different income categories. Once again all differences are significant.

Table 3: Percent of respondents admitting to undeclared income within certain ranges (Variable C12 in appendix)

Income range	CR	SR
<10,000 Crowns	34.8	44.4
10,000-15,000 Crowns	10.8	6.0
15,000-20,000 Crowns	11.1	7.0
20,000-25,000 Crowns	5.5	3.0
25,000-30,000 Crowns	7.3	4.4
30,000-35,000 Crowns	3.3	0.5
35,000-40,000 Crowns	4.6	4.1
>40,000 Crowns	5.6	3.6

Source: Survey data, authors' computation

Finally, we asked people the number of hours on average which they evaded per week. For the Czech Republic the average among those who answered this question was 3.2 hours and for the Slovak Republic this number was 5.7 hours. This result, combined with Table 3 suggest that even though Slovaks work more hours on average in the underground economy, Czechs engage in a greater degree of high level tax evasion than do the Slovaks. The columns in Table 3 do not sum to one hundred because some of those surveyed did not respond to our questions. How do we piece these findings with the finding in Table 1 that Slovaks estimate the number of people deriving shadow income to be higher than what Czechs estimate? We can interpret these results as saying that more people may be engaged in the shadow economy in Slovakia, but that in the Czech Republic the level of tax evasion is higher.

Once again we must take care not to view the estimates of tax evasion in the above tables as being accurate. Respondents might tell us how much they evaded but there are two problems we must recognize while interpreting these responses. The first problem with the estimates in Table 3 is that people lie about their incomes. Horry, Palda, and Walker (1992) found that in surveys of consumer finances for Canada, respondents consistently underreported their incomes by 10%. They were able to arrive at this conclusion by comparing GDP imputed from the Canadian survey of consumer finances with GDP derived from the national accounts. If people lie about their legitimate income, chances are they will also lie about their shadow income. The second problem with the estimates in Table 3 is that some respondents chose to answer how much they evaded and others chose not to answer. The self-selection of responses is a warning that our sample of answers may not be representative of the

population of answers. The direction in which might go this potential selection bias is not clear. Those who answer may have less to hide than those who do not answer. In this case answers would underestimate the size of tax evasion. If the biggest tax evaders are also the least risk averse people then sample selection could bias upward our estimates of the underground economy. If those who answered how much they evaded are a random mix of the above two types then our estimate of the size of tax evasion will not be biased but may suffer from a large variance. These problems can damage attempts to measure the size of tax evasion but do not fuzz the answers to other questions. One question we seek to answer is whether the tax evasion of Czechs and Slovaks diverged after their countries split in 1992. Provided the direction of bias is the same in both countries then the bias will wash out when we measure differences between both countries.

Perhaps the most complicated problem posed by our measures of tax evasion is that it is difficult, if not impossible in a survey to ask people exactly how much they evaded. We can pose questions about the range in which their evasion might fall, but this form of question bunches all the highest evaders into one group. We have no idea of the upper limit of evasion in this highest group. Questions about how often people evade give us an idea of the number of people participating in the shadow economy, but once again, their answers do not accurately weigh the degree of their involvement. These potentially frustrating aspects of the survey data are standard in this area of research and force us to dose our findings with a heavy degree of interpretation and nuance.

3. Comparison to Established Stylized Facts

3.1 Demographics

Now that we have explained how we measure evasion we can look at simple averages of our data to see if evasion in the Czech and Slovak Republics is similar to what are now well-established stylized facts on international, and especially US evasion. The first question of interest is the influence of demographics on evasion. Tables 4(a) and 4(b) confirm several stylized facts known from analysis of US TCMP data. First, evasion seems to be mainly the business of men in both Czech and Slovak Republics. This is result is in line with Baldry's (1987) experimental work. Households whose head is married are strong evaders. In line with TCMP data is our finding that after the age of retirement tax evasion drops radically. The effect of education and age on evasion is not established in the research literature. We find no clear relationship between evasion and education, and age, at least at this very basic level of analysis. We find that those who are unemployed or own their own businesses are categories of workers with the highest proportion of evaders. This finding is in strong agreement with General Accounting Office (1990) analysis of 1985 TCMP data.

Table 4A: Structure of informal sector in Czech Republic: relative % shares

.	Total Sample		Active engagement in informal activities				Purchase of informal goods/services
			Total % of individuals	Informal Salary [CZK] [1]			Total % of individuals
				<10000	<10000, 25000)	>=25000	
Total	1062		267	93	73	54	524
% share of total sample	100%		25%	9%	7%	5%	49%
% share of informal sector			100%	35%	27%	20%	
		100%	100%	100%	100%	100%	100%
Sex							
Male	530	50%	67%	59%	71%	76%	52%
Female	532	50%	33%	41%	30%	24%	48%
Age							
18 to 24 years	183	17%	22%	31%	19%	19%	17%
25 to 39 years	338	32%	35%	27%	38%	41%	35%
40 to 59 years	440	41%	40%	40%	40%	39%	41%
Older than 60	101	10%	3%	2%	4%	2%	6%
Status							
Married	635	60%	55%	46%	62%	59%	60%
Single w. partner	61	6%	7%	9%	5%	9%	6%
Divorced/widow(er)	152	14%	13%	14%	15%	9%	15%
Single w/out partner	214	20%	25%	32%	18%	20%	19%
Level of education							
Primary	256	24%	26%	27%	26%	24%	25%
Without GCE	396	37%	51%	45%	58%	56%	40%
With GCE	49	5%	18%	18%	14%	19%	27%
Higher	14	1%	5%	10%	4%	2%	7%
Labor market position							
Full time job	633	60%	55%	56%	58%	59%	60%
Part time job	35	3%	4%	4%	5%	6%	4%
Entrepreneur (no empl.)	68	6%	12%	12%	5%	13%	9%
Entrepreneur (w. empl.)	23	2%	4%	3%	3%	6%	2%
Pensioner working	19	2%	2%	0%	3%	0%	2%
Pensioner not working	120	11%	4%	4%	5%	2%	8%
Unemployed	59	6%	10%	8%	16%	13%	7%
Student	65	6%	6%	10%	4%	4%	5%
Wife working in household	28	3%	2%	3%	1%	2%	3%

---

[1] The response rate for income range is lower than 100%: 47 respondents, i.e. 4% in CR and 22 respondents i.e. 4% in SR did not put down the income range

Table 4B: Structure of informal sector in Slovak Republic: relative % shares

.	Total Sample		Active engagement in informal activities				Purchase of informal goods/services
			Total % of individuals	Informal Salary [CZK] [1]			Total % of individuals
				<10000	<10000, 25000)	>=25000	
Total	**548**		**83**	**37**	**13**	**10**	**276**
% share of total sample	**100%**		**15%**	**7%**	**2%**	**2%**	**50%**
% share of informal sector			**100%**	**45%**	**16%**	**12%**	
		100%	100%	100%	100%	100%	100%
Sex							
Male	278	51%	80%	78%	95%	97%	55%
Female	270	49%	20%	22%	5%	3%	45%
Age							
18 to 24 years	104	19%	22%	27%	0%	40%	18%
25 to 39 years	192	35%	35%	19%	69%	50%	38%
40 to 59 years	199	36%	35%	41%	31%	10%	37%
Older than 60	53	10%	8%	11%	8%	0%	8%
Status							
Married	312	57%	46%	43%	69%	60%	58%
Single w. partner	18	3%	11%	8%	8%	0%	6%
Divorced/widow(er)	64	12%	13%	14%	15%	0%	10%
Single w/out partner	153	28%	31%	35%	8%	50%	26%
Level of education							
Primary	191	35%	35%	38%	54%	0%	36%
Without GCE	160	29%	37%	30%	38%	80%	33%
With GCE	146	27%	28%	30%	8%	30%	24%
Higher	51	9%	1%	0%	0%	0%	7%
Labor market position							
Full time job	285	52%	46%	41%	46%	40%	55%
Part time job	9	2%	4%	0%	0%	0%	3%
Entrepreneur (no empl.)	22	4%	10%	11%	0%	30%	3%
Entrepreneur (w. empl.)	2	0%	2%	0%	0%	0%	1%
Pensioner working	5	1%	0%	0%	0%	0%	1%
Pensioner not working	76	14%	10%	11%	15%	0%	11%
Unemployed	86	16%	28%	27%	46%	30%	17%
Student	40	7%	5%	8%	0%	0%	7%
Wife working in household	17	3%	0%	0%	0%	0%	2%

---

[1] The response rate for income range is lower than 100%: 47 respondents, i.e. 4% in CR and 22 respondents i.e. 4% in SR did not put down the income range

3.2 Perceived Penalties and Audit Probabilities

Scholz and Pinney (1993) surveyed individuals and found little relation to what people believed to be the probability of audit with the true probability of audit. In their research people tend to grossly overestimate the probability of audit. Czechs cited an average probability of being caught evading taxes of 43.6% while Slovaks cited a probability of 43.9%. Whether this is an accurate estimate or not is hard to gauge. Though we were not able to establish an accurate figure, discussion with Ministry of Revenue officials revealed that a minuscule fraction of tax returns in the Czech and Slovak Republics are audited. The case is similar to that of the US where according to Andreoni et al. (1998) in the mid 1990's 1.7% of returns were audited. But of those audited, a large fraction may be subject to penalty. Perhaps our respondents were thinking of the probability of being caught if one is audited. Our survey questions were not precise enough to refine our interpretation. Our data at not completely dumb on this point. Table 5 shows that those who evaded often had far more precise estimates of the probabilities of apprehension than those who evaded occasionally or not at all. This fits nicely with the view that those who are active in a market will have a better sense of the size of that market than those who prefer to get their news of the world from the morning papers. We also found that those who did not respond to the question of precisely how much undeclared income they earned had estimates of the penalties and probabilities of apprehension similar to whose responded that they evaded often or sometimes.

Table 5: Individual's assessment of how large is the underground economy cross-tabulated with his self–assessed frequency of evasion. Czech and Slovak Republics, 2000

Variable	TOTAL	Frequent evader	Evades sometimes	Never evades
Reaction of family and friends if they discover you have undeclared income (1=strongly agree, 5=strongly disagree) (variable **A10** in appendix)	2.98 (1.13)	1.79 (0.9)	2.4 (0.9)	3.2 (1.1)
What is the penalty for not declaring 100,000 crowns (variable **A11** in appendix)	30,200	32,800	30,800	30,000
What is the probability of getting caught (variable **A12** in appendix)	44.1	20.0	31.0	48.3
Correlation between above two cells (A11, A12)	0.04	0.03	0.02	0.05
How many hours a day are you engaged in undeclared work (variable **C05** in appendix)	3.85 (6.6)	4.69 (4.12)	3.7 (7.0)	Not applicable

Note: Standard deviations in brackets.

There are no studies of which we are aware that assess the accuracy of penalty assessments by taxpayers. In our survey we asked each respondent what he believed was the fine for delaying payment on 100,000 crowns of taxes owed to the state. The actual penalty is 20,000 crowns if the taxpayer himself bring to his evasion to the attention of the authorities, and 100,000 if the authorities discover his evasion. The average value cited by Czechs was 29,500 crowns while that cited by Slovaks was 28,600 crowns. Given that our survey question was not precise enough to distinguish between the two types of penalty, the answers given by Czechs and Slovaks seem remarkably well-informed. There was no statistical difference between the answer cited by either groups. We were not able to establish the average penalty but tax

evasion officials confirmed with us that the estimates survey respondents gave us were not far off the mark.

In the research literature the question of how precisely people estimate the penalty for evasion has taken a back seat to the question of whether the estimates of this penalty vary with the frequency of evasion. Elffers, Weigel, and Hessing (1987) studied evasion in the Netherlands and found in the responses to their surveys that the perceived severity of penalty was unrelated to the whether someone evaded taxes. Elffers et al. (1987) also failed to find a correlation between the perceived severity of the penalty for evading and the perceived likelihood of apprehension. Our data show a result that differs from that of Elfers et al. (1987). Frequent evaders estimated an average penalty of 32,800 crowns whereas infrequent evaders cited 30,800 and non-evaders cited 30,000. There was also a positive and significant correlation (0.04) between the perceived likelihood of apprehension for tax evasion and the severity of the penalty for tax evasion. That experienced evaders tend to perceive a higher penalty goes against the notion of "penalty illusion" whereby those who underestimate the penalty tend to evade more than those who have a proper estimate of the penalty. The above figures may be telling us that experienced evaders know the two-tier structure of penalties for evasion and take an average of these two tiers weighted by some probability of apprehension to come up with their estimates. They may also be reporting the expected penalty for those who evade frequently, which is likelier to be 100,000 crowns than 20,000 crowns.

This is not random speculation on our part. As the previous paragraph indicated, frequent evaders seem to have a shrewder assessment of the probability of apprehension than do infrequent and non-evaders. This is the context in which judgments of the accuracy of penalties by class of evader must be assessed. If frequency of evasion improves the assessment of the likelihood of being caught then education might also have an effect, even if we do not hold all other forces constant. Our data did not confirm this speculation. Education was uncorrelated with the assessment of the likelihood of being caught for evading, and, as one could expect given the negative education result, income also bore no relation with the assessment of the likelihood of being caught.

3.3 Morals

The influence of morals on tax evasion is a recent but spreading field of study. The literature to date has focused on three possible social factors that influence evasion: feelings of guilt and shame, belief that tax burdens are unfairly distributed, feelings that the quality of government services is poor. Our survey allows us to address the first two factors and a third factor not studied to date (bandwagon effects).

Erard and Feinstein (1994) found that incorporating "moral sentiments" such as guilt and shame indirectly into an econometric model of tax evasion improved the model's fit. Their analysis did not use explicit information about whether people feel guilty or ashamed and relied on restrictive assumptions about the form of the utility function. We asked several questions that might proxy for shame and guilt. A question that proxies for shame is what a person believes will be the reaction of friends and family

should they discover he is evading taxes. Table 6 suggests that where the disapproval of friends and family is high, evasion tends to be low.

Table 6: Percent of respondents cross-tabulated by frequency of underground work and their assessment of its family reaction

Family reaction (1=surely agree, 3=do not know, 4=probably do not agree, 5=surely do not agree)	Frequency of underground work								
	Often			Occasionally			Never		
	CR	SR	Average	CR	SR	Average	CR	SR	Average
1	38,89	83,33	45,24	16,44	15,07	16,1	4,46	9,86	6,51
2	41,67	0	35,71	38,81	46,58	40,75	18,71	22,77	20,25
3	16,67	16,67	16,67	34,7	30,14	33,56	36,98	34,98	36,22
4	0	0	0	8,22	6,85	7,88	23,88	22,07	23,19
5	2,78	0	2,38	1,83	1,37	1,71	15,97	10,33	13,83

This was borne out in statistically significant correlation between family reaction and frequency of underground work for the Czech Republic and for the Slovak Republic.

A second proxy for shame is whether other people are also evading heavily. We asked each individual what percentage of adults in his country was evading taxes and what percentage of adults in his neighborhood were evading taxes. As Table 7 shows, both bandwagon variables show a strong positive correlation with an individual's evasion. Individuals who evaded frequently by far had the largest assessment of the underground economy. The most powerful correlation is between whether an individual evades and what percentage of people in his neighborhood he believes to be evading (0.23 correlation between intensity of evasion and what percentage of individuals in the country the respondent believes to be evading---variable A07 in the appendix---and 0.31 correlation between intensity of evasion and what percentage of

individuals in his neighborhood the respondent believes to be evading---variable A08 in the appendix). That the assessment of the underground economy falls as an individual evades less may be due to moral factors. An individual who believes few around him are evading may feel coerced by custom to evade little. Of course the causality may run in the other direction. Those who evade frequently may justify their evasion by saying that it is alright because "everyone else is doing it." Our data cannot resolve this point, but merely show a relation worthy of further study. We also found that the most frequent evaders are those who believe that there is little difference between how much people in their neighborhood evade and how much countrywide evasion there is. Frequent evaders may have wider contacts with the underground economy than have infrequent or non-evaders and so assess that the field of evasion is equally well trampled on both sides of the fence. Those who have little experience of evasion may form tribal loyalties and believe that their neighborhood is less sinful than those that surround them.

Table 7: Individual's assessment of how large is the underground economy cross-tabulated with his self–assessed frequency of evasion. Czech and Slovak Republics, 2000

Variable	TOTAL	Frequent evader	Evades sometimes	Never evades
According to you, what percent of adults in the country have underground income (variable **A7** in appendix) *correlation with intensity of evasion*	34.4 (20.4) -0.18	45.3 (24.5)	38.8 (21.3)	32.2 (19.4)
According to you, what percent of adults in your neighborhood have underground income (variable **A8** in appendix) *correlation with intensity of evasion*	23.4 (20.4) -0.27	39.2 (23.5)	30.4 (23.1)	20.1 (18.0)
Difference between top cell and cell below (A7-A8)	10.97 (15.6)	6.1 (12)	8.4 (15.8)	12.2 (15.6)

Note: standard deviation in brackets

A more direct approach to morals is not to seek out measures of guilt or shame but simply to ask people whether they believe evasion is moral and then to see if there is any link between this sentiment and the individual's evasion. Table 8 shows the correlation between the answer to whether the respondent works in the shadow economy often (value of 1), occasionally (value of 2), or never (value of 3), and the morality variable in which respondents rank between 1 to 5 whether having undeclared income is strongly immoral (5) or strongly moral (1).

Table 8: Cross-tabulation of morality with frequency of evasion for Czech and Slovak Republics 2000

Morality index (1=strongly moral, 5=strongly immoral)	Frequency of underground work								
	Often			Occasionally			Never		
	CR	SR	Average	CR	SR	Average	CR	SR	Average
1	17,65	16,67	17,5	2,7	0	2,03	0,41	2,32	1,13
2	26,47	50	30	18,92	27,4	21,02	7,19	12,53	9,19
3	50	33,33	47,5	59,01	61,64	59,66	43,57	50,35	46,1
4	2,94	0	2,5	18,47	10,96	16,61	40,11	28,07	35,62
5	2,94	0	2,5	0,9	0	0,68	8,71	6,73	7,97

Source: Survey data, authors' computation

Table 6 shows a positive tendency between evading taxes and the belief that such evasion is moral. We also calculated the correlation between the rows and columns of Table 6 and found it to be statistically significant. The strong correlation that emerges between morality and evasion may be due in part to the simultaneity of these quantities. A person who evades may justify his evasion by saying it is moral while a person who believes it is moral to evade may feel himself free to evade. This is how

morality and evasion may amplify each other. This does not invalidate the above result but underlines that the above correlations may not be uncovering purely structural relations.

Slovakia's average reported morality was higher than that of the Czech Republic, yet Slovaks estimated more of their countrymen participating in the shadow economy than did Czechs. For Czechs the correlation between the two rows of Table 8 was three times as high as that of Slovakia. Czechs who believed evading taxes was moral felt themselves far freer to evade those taxes than did Slovaks. What can we make of these seemingly contradictory findings? Without having performed a multivariate analysis conclusions are premature. Our strategy of presenting evidence in tabular form is meant to give a first impression. We will introduce regressions later and discuss their meaning. For the moment our conclusion is that morality is a force with contradictory and perhaps non-existent effects on tax evasion.

4. The Effect of Taxes on Evasion

As mentioned earlier, the effect of taxes on evasion is theoretically ambiguous and subject to contradictory empirical findings. In this section we tackle the question in a novel manner. We show how the separation in 1992 between Czech and Slovak nations can be used as a natural experiment that reduces the number of control variables needed to answer this question.

4.1 Background

After separating in 1992 the Czech and Slovak Republics took their finances along different paths. In the Czech Republic President Vaclav Klaus followed a policy of

vigorous privatization, deregulation, and low taxation. His opposite number in Slovakia was slow to privatize and followed a policy of vigorous taxation. Table 9 shows that throughout the 1990s the Czech government progressively lowered its tax burden while the Slovak government kept its taxes at relatively high levels right until the new millennium. Czechs lowered this burden by reducing the top marginal tax rate on income from 47% in 1992 to 40% in 1997 whereas it took the Slovaks until 2000 to lower this rate from 47% to 42%. Slovaks made up for the shortfall in revenue by increasing marginal tax rates in the middle ranges of income. Czechs have can constantly lower rates on these middle income levels than have the Slovaks. The same is true of the value added tax which in its lower tier was 5% in the Czech Republic in 2000 and 10% in the Slovak Republic and 22% in its upper tier in the Czech Republic and 23% in its upper tier in the Slovak Republic. Throughout the 1990's the Czech's lowered their VAT whereas Slovaks increased theirs. A more detailed view of the Czech and Slovak tax systems can be found in the appendix though we must warn that the tables found there do not reflect the intensity with which tax authorities of the two countries enforce collection. To date no single summary statistic of a tax system exists, so that our statement that the Slovaks have a more intrusive tax system than the Czechs must be recognized to have a subjective, or at least a less than perfectly defined objective component.

Table 9: Ratio Total Taxes/GDP

Country	1993	1994	1995	1996	1997	1998	1999	2000
Czech Republic	41.20	40.50	40.00	36.20	36.40	36.00	37.10	36.80
Slovakia	36.40	38.80	42.00	41.00	38.40	37.10	35.30	34.20

Source: Czech Statistical Office and Slovak Statistical Office

Differences in tax policies might lead to differences in tax compliance, though as we have emphasized earlier, the theoretical literature is ambiguous on this point. The relatively larger incursion of the Slovak government into the Slovak economy may be cause for Slovaks to evade taxes more vigorously than Czechs. The brief survey of tax evasion in Czech and Slovak Republics in section 2 suggested that Czechs evade more intensively than Slovaks even though their tax rates are lower. If we can believe that Czech and Slovak nations are identical in all but their tax policies then our findings that lower tax Czechs evade more than higher tax Slovaks may count as a further observation worthy of a notch in the international literature on the effect of taxes on evasion.

Before leaping to such a conclusion we must be aware that simple comparisons of tax evasion may not be appropriate for drawing conclusions about behavior if the subjects tested differ along some dimensions relevant to tax evasion. Differences in tax evasion between Slovaks and Czechs may be due not simply to different tax levels but may also be due to variables for which we have not controlled. How can we test whether identical twins, subject to different tax levels differed in the amount of tax they paid? If we can believe that the Czech Republic and Slovakia are "twins" then there is no need for complicated models which control for differences between the two countries. "All" we need to do is measure the degree to which Czechs and Slovaks evaded taxes ten years after separating and cross our fingers in the hope that our twins are truly identical. In the next section we justify why we believe that complicated controls are not necessary in our analysis of the differences in tax evasion between the two countries.

4.2 Justifying the Assumption that Czechs and Slovaks are Twins

As explained earlier, the present paper explores how tax evasion changes under the pressure of changes in taxes. Our means of exploring these changes is to compare tax evasion in two countries that are similar but that fell under different government policies. If we can believe that both countries are the same then we need not worry that differences in demographics, wealth, and culture can explain any difference we might observe in tax evasion and morality. To make our exercise credible we must give some evidence than in 1992, when the Czech Republic split from Slovakia, both countries were "twins." Czechs and Slovaks speak a similar tongue. At the start of the 20th century this common cultural heritage of language was the main uniting feature of these two peoples. On other dimensions Slovaks and Czechs differed significantly. In 1920 Slovaks had a literacy rate of 72.3% whereas Czechs had a literacy rate of 96.7%. By the 1960's these literacy rates had converged to close to 100%. Literacy was not the only meter on which Czechs and Slovaks converged. As Table 10 shows, newborn mortality converged over the century, as did the number of people per doctor, the number of high schools per thousand people, and the average wage in both countries. The main message of Table 9 is that as the century wore on Slovakia and the Czech lands converged on the above-mentioned indicators. The final great push toward convergence came during the communist era. Part of communist strategy for holding power was to flatten differences between groups of people, perhaps so that no concentrated interests could form to oppose their regime. By 1991 Czechs and Slovaks were so at ease with each other that they had a very high level of intermarriage. Of married Czech men 7.4% took Slovak wives.

Table 10(a): Newborn mortality per hundred thousand

Years	Czechia	Slovakia
1921-25	148.1	169.5
1936-40	92.0	142.0
1960's	20.0	28.0
1990's	10.8	12.0

Source: Czechoslovak statistical yearbooks 1921-1990

Table 10(b): Number of people per doctor

Years	Czechia	Slovakia
1960's	535.0	675.0
1990's	265.0	274.0

Source: Czechoslovak statistical yearbooks 1960-1990

Table 10(c): Number of pupils in middle school

Years	Czechia	Slovakia
1960's	221,657	90,322
1990's	304,748	149,385

Source: Czechoslovak statistical yearbooks 1960-1990

Table 10(d): Average wage in Slovakia as percentage of Czech Republic wage

Year	
1920	64.33%
1947	81.15%
1960	96.73%
1990	99.08%

Source: Czechoslovak statistical yearbooks 1921-1990

Table 11 gives some summary statistics from our survey on demographic and economic variables for the Czech and Slovak Republics

Table 11

Sample characteristics	2000 Czech Republic	2000 Slovak Republic	Significant difference
Divorce rate	10.5	7.3	**
% working full-time	59.5	51.1	
% Gypsies	0.2	0.6	
% ethnic	6.4	10.3	*
Average age	39.9	38.6	*
% population with high school or greater	9.2	9.2	
% living in towns of more than 20,000 inhabitants	45.7	40.9	*
% women	49.9	50.7	
Average size of household	3.0	3.7	**

Source: Survey, authors' computation

Table 11 shows that there are some differences in our survey between Slovaks and Czechs. There is a slightly higher percentage of ethnic populations in Slovakia than in the Czech Republic. Slovaks tend to be more "rural," though this must be qualified by noting that a detailed cross-tabulation shows that the difference arises largely from the fact that there are fewer towns of more than 100,000 in Slovakia. Detailed cross-tabulation showed that the percentage living in villages of fewer than 1000 inhabitants---the true rural setting---are identical in Slovakia and the Czech Republic. Slovaks have lower divorce rates in our survey and larger families than do Czechs. Whether these differences disqualify our sample as representing twins is not clear, but the possibility must be kept in mind. Variables that seem likely to be associated with tax evasion such as education, job satisfaction, and percentage of Gypsies, are the

same in our sample for both countries. The main difference arises from the structure of incomes. A detailed cross-tabulation showed lower average income for Slovaks.

The above tables show that the Czech Republic and Slovakia were twins only on some very broad demographic and economic aggregates. Since our study focuses on all factors, which might influence tax evasion, we must also consider moral factors. There are objective and subjective variables that can cast light on morality in both countries at the start of the 1990's. One objective variable to consider is adherence to religion. Table 12 shows that even as far back as the 1930's there did not seem to be strong differences between the countries except in the percent of people who claimed to have no beliefs. Far more Czechs claimed to be without belief than Slovaks. On this score at least there is some call to be concerned that the twins differ in their moral outlooks. This conclusion softens when we consider the answers given by Czechs and Slovaks to *subjective* questions about their views on society. Examination of a social survey from 1992 shows that for most questions Czechs and Slovaks have similar views.

Table 12 Structure by religion in 1947

Religion	Czechia (Moravia)	Slovakia
Catholic	74.78% (78.40%)	71.61%
Orthodox Catholic	0.11% (1.90%)	6.42%
Missing or without belief	5.2% (10.04%)	0.61%

Source: Czechoslovak statistical yearbooks, 1950

The list of variables we have presented in Tables 10-12 is not exhaustive. An important critique of our list is that it fails to measure some intangible barrier such as "national spirit" which may come between the twins in our story and make them as

different from each other as is France from England. Why did Slovakia and the Czech Republic split if not for some deep-rooted difference between the two countries? Was not the similarity between the two an artificial condition embalmed by a dictatorial communist regime? To answer such a question in detail would take us deep into the annals of historical scholarship, but some answer must be given to the critique that both countries split because they were fundamentally different. In 1992 the Czech Republic and Slovakia separated suddenly. Slovak politicians asked Czech politicians for the right to separate and Czech politicians granted their wish with little hesitation. No referendum was held to decide the future of both parts of Czechoslovakia and many Czechs and Slovaks were genuinely surprised that their country was breaking in two. According to the Institute for Public Opinion Research, the majority of citizens would not have voted for the breakup of Czechoslovakia. Those citizens who did not agree with separation tended to see separation as the work of distant politicians belonging to the Civic Democratic Party on the Czech side and the Movement for a Democratic Slovakia on the Slovak side. Forty five percent of Czechs and forty four percent of Slovaks believed that a referendum was the only acceptable way of dissolving their country.

The experience of Quebec's two referendum campaigns on separation, in 1980 and 1995 suggest that as campaigns unfold and information about the consequences of separation are revealed, popular support for separation plummets. Referendum campaigns on separation seem more like times to discuss the grievances of all parts of the country and to come to some form of understanding and accommodation. Much of the surprise and dismay with separation was seen on the face of Czech businessmen who had sold goods on credit to Slovak businesses. After the split Slovak businesses

defaulted heavily on their obligations to their creditors. This anecdote is one of many which suggests that Slovaks and Czechs were not seriously thinking about separation, and that the split was engineered or perhaps stumbled over by a few politicians.

By the end of the millennium Czechs and Slovaks still resembled each other on demographic and social dimensions but differed in their average incomes and unemployment rates. By 2000 Slovakia's average income had fallen below that of the Czech Republic and Slovakia's unemployment rate was higher. These differences in economic variables pose a problem for our analysis. We wish to ask how changes in taxes change tax evasion in the Czech and Slovak twins. If the incomes of both countries differ significantly, how can we know that changes in tax evasion and tax morality are due truly to changes in taxes and are not due to changes in income? Czech incomes are higher on average than Slovak incomes and it is well established in the evasion literature that evasion rises with incomes. We can meet the critique head-on by controlling for income through some statistical technique such as regression. This, of course is what we had wished to avoid. Perfect twins need no statistical controls to establish the effect of an outside force which drives a wedge between the behavior of the twins. All is not lost. Having to control on just a few dimensions is always preferable to controlling on many dimensions because one can never be quite confident of the quality of controls one is using. The next and final section plunges us into a multivariate analysis which the similarity of the Czech and Slovak Republics allows us to make it as economical as anything that has appeared in the previous literature on evasion.

4.3 Untangling the effects on evasion of income and taxes

The results of this paper so far are that Czechs seem to evade more taxes than do Slovaks but that more Slovaks work in the underground economy than do Czechs. Why do these twin countries differ in their degree of tax evasion? More precisely, why, if taxes are so much higher in the Slovak than in the Czech Republic, is the Slovak Republic not a clear-cut leader on all dimensions of tax evasion? We have already seen that Slovaks seem more bound by morality than Czechs, but we noted the possibility of a strong simultaneity between self-reported morality and self-reported evasion. This leaves income as the major divider between the Czech and Slovak twins. Perhaps this difference in income accounts for the difference in tax evasion more does the difference in taxes. As mentioned earlier, theory and empirical research are in agreement that evasion rises with income.

Table 13 is a cross-tabulation of income and the frequency of underground work where row percentages appear above each column percentage.

Table 13

Income third	Frequency of underground work		
	Often	Occasionally	Never
Lowest	3.3	20.1	76.6
	90.5	87.4	88.4
Middle	2.4	22.1	75.5
	8.4	12.6	11.4
Highest	20.3	n.a.	79.7
	1.2	n.a.	0.2

Source: Survey data, authors' computation

Table 13 shows that among those who evaded often and occasionally, the intensity of evasion drops off with income, and that, controlling for the number of people in each income group (looking at row percentages), those with high incomes tend to evade

most. This suggests that the tendency for Czechs to intensively evade taxes is high because the Czech Republic has more high income people than does the Slovak Republic.

So far we have been content to present our results in tabular form because of our confidence in the "twinness" of the Czech and Slovak Republics. The value of the twins analogy comes from taking the Czech and Slovak Republics as our units of analysis. Our survey allows us to deepen our insights into the reasons for tax evasion by turning our heads from the perspective of countries and focusing on the individual. The natural experiment we explored for the Czech and Slovak Republics was one which allowed us to see whether changes in taxes led to changes in tax evasion. The only variable for which we had to control was income. Our natural experiment did not allow us to delve into the many reasons for which individuals of both the Czech and Slovak Republics evade. A multivariate analysis of both countries allows us to seek such knowledge. While we would expect the results from our natural experiment at the macro-level to carry over to the individual level, we must also be careful not to fall into a "fallacy of composition," also known as the "ecological fallacy" which researchers make when they leap to conclusions about the whole from findings on the individual, or vice versa. Table 14 shows probits taking intensity of work on the underground economy (1=frequently, 2=sometimes, 3=never) as the dependent variable. We have chosen this as the dependent variable because it is the question on evasion to which we had the most responses. In fact, everyone answered this question. The large response to this question provides us with many observations on which to run our observation-hungry probit analysis, but leaves us with the uncomfortable feeling that many of the answers we were given were false. A more satisfying

situation would have been one in those individuals who are prone to lie about their underground participation simply refuse to answer. In this circumstance we could have performed a two-stage Hausman correction analysis for self-selection.

Table 14: Probit estimation of the effect of individual parameters on intensity of work in underground sector

Parameter	Estimate	Change Prob(y=0)	Change Prob(y=1)	Change Prob(y=2)
Constant	1,5950 ** (0.3519)			
Country (1=Czech, 0=Slovak)	0,4380 ** (0.1299)	-0,010	-0,116	0,126
Respondent age	0,0122 ** (0.0041)	0,000	-0,003	0,004
Female	0,4463 ** (0.1042)	-0,012	-0,124	0,135
Primary school education	-0,7781 ** (0.2633)	0,036	0,233	-0,269
Apprenticeship (2 years)	-0,5733 (0.3238)	0,028	0,176	-0,203
Apprenticeship (3-4 years) without diploma	-0,7141 ** (0.2520)	0,026	0,207	-0,233
Secondary vocational without diploma	-0,4055 (0.2643)	0,014	0,120	-0,134
Grammar school with general diploma	-0,0876 (0.3069)	0,002	0,025	-0,027
Desired income 2500 crowns less than actual	-0,1758 (0.1805)	0,005	0,051	-0,057
Desired income 5000 crowns less than actual	0,0775 (0.1144)	-0,002	-0,022	0,024
According to you, what percent of adults in your neighborhood have underground income (variable **A8** in appendix)	-0,0100 ** (0.0026)	0,000	0,003	-0,003
What is fine on 100,000 crowns of undeclared taxes? (variable **A11** in appendix)	0,0000 (0.0000)	0,000	0,000	0,000
What is chance of being caught buying or selling undeclared goods or services? (variable **A12** in appendix)	0,0066 ** (0.0019)	0,000	-0,002	0,002
Is your economic situation in 2000 worse than in 1999?	-0,1702 (0.1304)	0,005	0,049	-0,054
Have you ever bought goods on the underground economy? (1=yes, 2=no)	1,0305 ** (0.1310)	-0,026	-0,265	0,291

The second column of the table shows the raw probit coefficient estimates. The third to fifth columns are estimates of the marginal effects of the independent variables on the dependent variable. The third column shows these marginal effects for the group of frequent evaders. The fourth column shows marginal effects for occasional evaders and the last column shows marginal effects for non-evaders. Variables of significance are age (the older one is the more one tends to evade, except for the class of sometime evaders), being female (for the class of frequent and sometime evaders, being female has a negative effect on the chance of moving up a class), education (which has a generally positive effect on intensity of evasion), if one believes many others to be evading (the bandwagon variable A08 had a positive effect on evasion except for the class of non-evaders), whether one bought goods in the underground economy (this factor seems to push non-evaders into a higher level of evasion). Being Czech had a negative marginal effect on evasion except for those who declared themselves to be non-evaders. We did not include income because of its high positive correlation with education and age. The coefficients attached to these latter variables suggest that income, as in the tabular analysis, also bears a positive relationship to tax evasion.

5. Implications

So far the results of our analysis have been that tax evasion tends to bear no clear relation to morality, or tax levels, but rather responds to income. There is nothing in the Allingham-Sandmo model of tax evasion which would make this a surprising result. In fact, Christian (1994) found that in 1988 in the US evasion, as measured by underreported income, tended to rise with income, but less than proportionally. Christian's analysis though cannot be taken as general because he did not look at income from corporations and businesses, nor did he consider those who did not fill

out tax forms. Most attention has focused on whether higher taxes lead to higher evasion. Clottfelter (1983), for example, found that noncompliance is strongly positively related to the marginal tax rate. Our analysis suggests that tax levels, past a certain threshold, may have little bearing on tax evasion. What is perhaps more surprising about our model is the inconclusive role that morals play in the decision to evade taxes.

The result that evasion seems to increase with income may fall out of an Allingham-Sandmo (1972) model of evasion with an appropriately specified utility function. If the taxpayer has decreasing absolute risk aversion, the rising incomes make it more attractive to risk tax evasion. Utility functions are difficult to observe and referring to them to explain behaviour gives the researcher perhaps too much freedom in drawing conclusions. A more observable possibility is that income and tax evasion technology are somehow linked. The "rich" may have better access to tax shelters and dodges. This possibility may explain the broad consensus among economists, as expounded by Sorensen (1994), and governments that income taxes are becoming a thing of the past and that the more enforceable value added tax is the tax of the future. Scotchmer (1989) explains how rich taxpayers can reduce the uncertainty of their tax liability by hiring experts. An extension of his thinking is that the rich can also research methods to evade taxes. As Slemrod and Yitzhaki (2000) explain, the Allingham-Sandmo model of tax evasion has focused attention on risk aversion and hence on the utility function. They write "This focus has to some extent obscured other important aspects of the issue, such as the tax concealment technology."

One important aspect of evasion technology is the opportunity people have to declare themselves self-employed. In both Czech and Slovak countries it is common for a worker to go to a company office, work there, as would any other employee and still declare himself to be self-employed. Such a declaration spares the company the need to pay for the worker's social security, and gives the worker the opportunity to deduct from his taxes "business expenses" such as the cost of going to and from work. The daring worker who declares himself self-employed may go so far as to deduct from taxes the cost of his vacations as business trips, the cost of his car lease as business cost, and maybe even his apartment rental. The danger to the worker is that tax authorities investigate and find these expenses not related to his work. The benefit to the worker is that such expenses allow him to evade taxes. In the US, Slemrod and Yitzhaki (2000) explain that 41.4% of self-employed workers voluntarily report their true incomes. It would be nice to compare the number of self-employed in Czech and Slovak Republics over time and relate this to the level of taxes. Such a comparison is not possible because of the three available methods for reporting self-employment, the Czech and Slovak Republics differ in the method they choose. These three methods of measuring total number of self-employed are

1) By number of individuals being registered for self employment (in

the Czech Republic this is called a "Zivnostensky list").

2) By number of people calling themselves self employed (via labor market surveys).

3) By taking tax reports and looking number of the people actually filling taxes declared as coming from self-employed revenue.

The Czechs currently report the first measure whereas Slovak information is on the second measure. Even if these measures are not directly comparable, the number of Czechs declaring themselves self-employed is so much larger than the number of

Slovaks declaring themselves self-employed, that it is reasonable to suspect that self-employment is greater in the Czech Republic than it is in the Slovak Republic.

Whether fewer Slovaks are self-employed because Slovak tax authorities enforce tax laws more firmly than Czechs or because the lower income of Slovaks makes such a complicated investment in evasion technology unprofitable is a question difficult to answer with reference to our survey. As we mentioned earlier, Slovaks and Czechs have the same beliefs about the probability of apprehension for evading taxes and have the same beliefs about the penalties for tax evasion. This may mean that there is no difference in enforcement technology, or it could mean that evaders adjust their behaviour to attain a suitable risk-level and that this risk level is the same in both countries. Inquiries into the role that available evasion technology offer taxpayers should play a larger role in future enquiries on tax evasion in transition countries.

6. Conclusion

This paper has suggested that the separation of the Czech and Slovak Republics was a natural experiment, which allows us to analyze whether or not differences in taxes lead to differences in tax evasion. Our tentative conclusion is that tax differences are not as important as income differences for determining the degree of tax evasion. Morality has an ambiguous effect on tax evasion and any conclusions about the effects of morality on evasion are plagued by the problem of simultaneity.

References

Allingham, Michael G. and Agnar Sandmo (1972). "Income Tax Evasion: A Theoretical Analysis." *Journal of Public Economics*, 1:323-338.

Andreoni, James, Brian Erard and Jonathan Feinstein (1998). "Tax Compliance." *Journal of Economic Literature*, 36:818-60.

Baldry, Jonathan C. (1987). "Income Tax Evasion and the Tax Schedule: Some Experimental Results." *Public Finance*, 42:357-83.

Christian, Charles W. "Voluntary Compliance with the Individual Income Tax: Results from the TCMP Study." In *The IRS Research Bulletin*, 1993/1994, Publication 1500 (Rev. 9-94). Washington, D.C. Internal Revenue Service, 1994.

Clotfelter, Charles T. "Tax Evasion and Tax Rates: An Analysis of Individual Returns." *Review of Economics and Statistic*, 65:363-373.

Elfers, Henck, Russel H. Weigel, and Dick J. Hessing (1987). "The Consequences of Different Strategies for Measuring Tax Evasion Behavior." *Journal of Economic Psychology*, 8:311-37.

Lizal, Lubomir, and Evzen Kocenda (2001) "State of Corruption in Transition: The Case of the Czech Republic," *Emerging Markets Review*, 2, 2, 138-160.

Scholz, John T. and Neil Pinney. "Do Intelligent Citizens Free Ride? The Duty Heuristic, Low-Information Rationality, and Cheating on Taxes." Unpublished manuscript, Department of Political Science, State University of New York, Stony Brook, 1993.

Slemrod, Joel and Shlomo Yitzhaki (2000). "Tax Avoidance, Evasion, and Administration." NBER Working Paper 7473.

Scotchmer, Suzanne (1989). "Who Profits from Taxpayer Confusion?" *Economics Letters*. 29:49-55.

Sorensen, Peter Birch (1994). "From the Global Income Tax to the Dual Income Tax: Recent Tax Reforms in the Nordic Countries." *International Tax and Public Finance*, 1:57-79.

U.S. General Accounting Office. "Tax Administration: Profiles of Major Components of the Tax Gap." Washington, DC:GAO/GGD-90-53BR, April 1990.

Appendix A: Tax structures of Czech and Slovak Republics

Table A1:

Ratio Total Taxes/GDP

Country	1993	1994	1995	1996	1997	1998	1999	2000
Czech Republic	41.20	40.50	40.00	36.20	36.40	36.00	37.10	36.80
Slovakia	36.40	38.80	42.00	41.00	38.40	37.10	35.30	34.20

Ratio Direct Taxes/GDP

Country	1993	1994	1995	1996	1997	1998	1999	2000
Czech Republic	10.10	10.40	10.20	9.40	8.60	9.00	9.00	8.80
Slovakia	9.90	11.40	11.30	11.30	9.30	9.60	8.90	8.70

Ratio Indirect Taxes/GDP

Country	1993	1994	1995	1996	1997	1998	1999	2000
Czech Republic	12.00	13.10	12.60	12.50	11.80	11.20	12.20	12.30
Slovakia	12.70	13.20	14.00	12.20	11.70	10.90	10.80	10.90

Source: Czech and Slovak Statistical yearbooks, 1993-2000

Table A2

Corporate tax rates

Country	1993	1994	1995	1996	1997	1998	1999	2000	2001
Czech Republic	45	42	41	41	39	35	35	32	31
Slovakia	45	40	40	40	40	40	40	29	29

Tax bylaws, Czech and Slovak Ministry of Finance.

Table A3: Personal income tax rates – Czech and Slovak Republic

Personal income tax rates – Czech Republic

Marginal rate (in %)	1992	1993	1994	1995	1996
up 60 000 Kc	15	15	15	15	15
up 120 000 Kc	20	20	20	20	20
up 180 000 Kc	25	25	25	25	25
up 540 000 Kc	32	32	32	32	32
up 1 080 000 Kc	40	40	40	40	40
more than 1 080 000	47	47	47	47	43

	1997
up 84 000 Kc	15
up 144 000 Kc	20
up 204 000 Kc	25
up 564 000 Kc	32
more than 564 000 Kc	40

	1998	1999
up 91 440 Kc	15	15
up 183 000 Kc	20	20
up 274 000 Kc	25	25
up 822 600 Kc	32	32
more than 822 600 Kc	40	40

	2000	2001
up 102 000 Kc	15	15
up 204 000 Kc	20	20
up 312 000 Kc	25	25
up 1 104 000 Kc	32	32
more than 1 104 000 Kc	40	40

Tax bylaws, Czech Ministry of Finance.
Note that this table splits in certain years due to a change in the income levels at which one passes to higher marginal rates.

Personal income tax rates – Slovak Republic

Marginal rate (in %)	1992	1993	1994	1995	1996	1997	1998	1999
up 60 000 Sk	15	15	15	15	15	15	15	15
up 120 000 Sk	20	20	20	20	20	20	20	20
up 180 000 Sk	25	25	25	25	25	25	25	25
up 540 000 Sk	32	32	32	32	32	32	32	32
up 1 080 000 Sk	40	40	40	40	40	40	40	40
more than 1 080 000	47	47	47	47	47	47	47	47

	2000	2001
up to 90 000 Sk	12	12
up to 150 000 Sk	20	20
up to 240 000 Sk	25	25
up to 396 000 Sk	30	30
up to 564 000 Sk	35	35
up to 1 128 000 Sk	40	40
more than 1 128 000 Sk	42	42

Tax bylaws, Slovak Ministry of Finance.
Note that this table splits in certain years due to a change in the income levels at which one passes to higher marginal rates.

Table A4: Value Added Tax

Lower rate	1993	2001
Czech Republic	5	5
Slovakia	6	10

Higher rate	1993	1994	1995	1996	1997	1998	1999	2000	2001
Czech Republic	23	23	23	22	22	22	22	22	22
Slovakia	23	23	23	23	23	23	23	23	23

Source:EBRD, Transition Report (1996-2000)

	In billions of Czech Crowns (In % of GDP)						
	1994	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*
Tax Revenues	462.5 (40.50)	536.1 (40.00)	568.9 (36.20)	607.7 (36.20)	648.0 (36.00)	682.1 (37.10)	715.3 (36.80)
Direct Taxes	119.0 (10.40)	135.9 (10.20)	142.4 (9.40)	143.4 (8.60)	162.5 (9.00)	165.4 (9.00)	170.3 (8.80)
Corporate Income Tax	64.5 (5.60)	67.3 (5.00)	61.8 (3.90)	55.6 (3.30)	67.6 (3.80)	70.1 (3.80)	70.6 (3.60)
Personal Income Tax	54.5 (4.80)	68.6 (5.10)	80.5 (5.30)	87.6 (5.30)	94.9 (5.30)	95.3 (5.20)	99.7 (5.10)
Indirect Taxes	149.6 (13.10)	168.9 (12.60)	190.2 (12.50)	196.8 (11.80)	200.8 (11.20)	223.5 (12.20)	238.7 (12.30)
VAT	85.5 (7.50)	94.8 (7.10)	109.1 (7.20)	117.7 (7.10)	119.4 (6.60)	138.3 (7.50)	149.9 (7.70)
Social security contributions	179.2 (15.70)	213.3 (15.90)	222.2 (15.90)	246.8 (14.80)	262.9 (14.60)	270.6 (14.70)	284.1 (14.60)
Other taxes	14.7 (1.30)	18.0 (1.30)	18.6 (1.20)	20.8 (1.20)	21.8 (1.50)	22.5 (1.50)	22.2 (1.70)

Source: Tax bylaws and State budget. Czech Ministry of Finance

	In billions of Slovak Crowns (In % of GDP)						
	1994	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*
Tax Revenues	170.9 (38.70%)	217.1 (42.00%)	236.4 (41.10%)	251.3 (38.40%)	266.1 (37.10%)	275.0 (35.30%)	283.9 (34.20%)
Direct Taxes	50.1 (11.30%)	58.5 (11.32%)	64.9 (11.28%)	61.0 (9.32%)	68.5 (9.55%)	69.3 (8.90%)	72.4 (8.70%)
Corporate Income Tax	31.9 (7.20%)	35.2 (6.81%)	34.8 (6.05%)	24.4 (3.73%)	26.0 (3.62%)	23.2 (2.98%)	22.4 (2.60%)
Personal Income Tax	18.1 (4.10%)	23.2 (4.49%)	30.1 (5.23%)	36.6 (5.59%)	42.5 (5.93%)	46.1 (5.92%)	47.6 (5.89%)
Indirect Taxes	58.3 (13.20%)	72.3 (13.99%)	70.3 (12.22%)	76.8 (11.74%)	78.3 (10.92%)	84.1 (10.80%)	89.3 (10.90%)
VAT	37.1 (8.40%)	52.3 (10.12%)	48.7 (8.47%)	54.9 (8.39%)	55.3 (7.71%)	58.9 (7.56%)	61.4 (7.50%)
Social security contributions	51.4 (11.60%)	71.9 (13.91%)	85.0 (14.78%)	94.0 (14.36%)	100.5 (14.01%)	101.3 (13.00%)	107.7 (13.12%)
Other taxes	2.6 (0.60%)	4.2 (0.81%)	4.8 (0.83%)	4.2 (0.64%)	4.5 (0.63%)	4.4 (0.56%)	4.5 (0.54%)

Source: Tax bylaws and State budget. Slovak Ministry of Finance

Appendix B: Design of the Survey

TIME A	FILL ACTUAL TIME		HOURS		
			MINUTES		
QUESTIONS ABOUT YOU AND YOUR FAMILY.					
RAGE	**HOW OLD ARE YOU?**				
HNUM	**HOW MANY PERSONS (INCLUDING YOU) LIVE IN YOUR HOUSEHOLDS?**				
KIDNUM	**HOW MANY CHILDREN YOUNGER THAN 5 YEAR OLD LIVE IN YOUR HOUSEHOLD?**				
TEENUM	**HOW MANY CHILDREN FROM 6 TO 18 YEARS OLD LIVE IN YOUR HOUSEHOLD?**				
ADNUM	**HOW MANY ADULTS LIVE IN YOUR HOUSEHOLD?**				
HTYP	**WHAT IS KIND OF YOUR HOUSEHOLD?**	**1 ADULT PERSON, LIVING ALONE**			1
		2 ADULT PERSONS WITHOUT CHILDREN			2
		2 ADULT PERSONS LIVING WITHOUT CHILDREN			3
		FAMILY – PARENTS AND CHILDREN			4
		FAMILY – PARENTS, CHILDREN, GRAND PARENTS (1, OR BOTH)			5
		FAMILY – PARENTS, CHILDREN, RELATIVES (1, OR MORE), BUT WITHOUT GRANDPARENTS			6
		INCOMPLETE FAMILY – EITHER FATHER OR MOTHER WITH CHILDREN WITHOUT GRANDPARENTS			7
		INCOMPLETE FAMILY – FATHER/MOTHER WITH CHILDREN AND WITH GRANDPARENT(S)			8
		INCOMPLETE FAMILY – FATHER/MOTHER WITH CHILDREN AND WITH RELATIVES (WITHOUT GRANDPARENTS)			9
		GRAND PARENTS, CHILDREN WITHOUT PARENTS			10
		A FAMILY WITHOUT A DIRECT RELATIONSHIP: „CHILDREN– PARENTS–GRANDPARENTS"			11
		OTHER			12
RHPOS	**YOUR POSITION IN YOUR HOUSEHOLD.**	**HUSBAND , FATHER**			1
		WIFE, MOTHER			2
		PARTNER			3
		SON, DAUGHTER			4
		GRANDPARENT			5
	ONLY ONE ANSWER	**GRANDSON, GRANDDAUGHTER**			6
		BROTHER, SISTER			7
		OTHER RELATIVE = UNCLE, AUNT, NEPHEW, NIECE			8
		WITHOUT FAMILY RELATIONSHIP			9

RSTAT	CURRENT MARRITAL STATUS:	SINGLE, WITHOUT A PARTNER	1
		SINGLE, LIVING WITH A PARTNER	2
		MARRIED	3
		DIVORCED	4
		WIDOW / WIDOWER	5

RNAT	YOUR NATIONALITY:	CZECH	1
		SLOVAK	2
		MORAVIAN	3
		SILESIAN	4
		GYPSY	5
		POLISH	6
		GERMAN	7
		HUNGARIAN	8
		UKRAINE / RUTHENIAN	9
		OTHER (WHICH):	98

REDU	YOUR HIGHEST ACHIEVED EDUCATION LEVEL	PRIMARY	1
		APPRENTICESHIP (2 YEARS)	2
		APPRENTICESHIP (3-4 YEARS), WITHOUT GCE	3
		SECONDARY VOCATIONAL WITH GCE	4
		GRAMMAR SCHOOL WITH GCE	5
		HIGHER	6
		WITHOUT SCHOOL EDUCATION	7

REMPL	YOUR JOB POSITION	FULL TIME JOB	1	⇒ RISCO
		PART TIME JOB	2	⇒ RISCO
		OWNER OF A FIRM, DO NOT WORK IN THIS FIRM	3	⇒ RISCO
		OWNER OF A FIRM, WITHOUT EMPLOYEES	4	⇒ RISCO
		OWNER OF A FIRM, WITH EMPLOYEES	5	⇒ RISCO
		PENSIONER, WORKING IN A FULL TIME JOB	6	⇒ RISCO
		PENSIONER, WORKING IN A PART TIME JOB	7	⇒ RISCO
		PENSIONER, NOT WORKING	8	⇒ HEAD
		UNEMPLOYED	9	⇒ HEAD
		MILITARY SERVICE	10	⇒ HEAD
		CIVIL SERVICE	11	⇒ HEAD
		STUDENT	12	⇒ HEAD
		WIFE, WORKING IN A HOUSE ONLY	13	⇒ HEAD
		OTHER:	14	⇒ HEAD

| RISCO | WHAT IS YOUR JOB / PROVIDES DETAILS, PLEASE | WRITE: | | | | |

RFEM	HOW MANY EMPLOYEES WORK IN THE FIRM, WHERE YOU WORK	JUST 1, ONE MAN BUSINESS	1
		2 – 5 EMPLOYEES	2
		6 – 25 EMPLOYEES	3
		26 – 100 EMPLOYEES	4
		101 – 1000 EMPLOYEES	5
		MORE THAN 1001 EMPLOYEES	6

| HEAD | ARE YOU HEAD OF YOUR FAMILY, I.E. IS YOUR FINANCIAL CONTRIBUTION TO FAMILY BUDGET THE GREATEST? | YES | 1 | $\Rightarrow$ RINC |
| | | NO | 2 | $\Rightarrow$ HHEDU |

HHEDU	THE HIGHEST ACHIEVED LEVEL OF EDUCATION OF HEAD OF YOUR FAMILY I.E. OF A PERSON, WHO CONTRIBUTES THE MOST TO THE FAMILY BUDGET:	PRIMARY	1
		APPRENTICESHIP 2 YEARS	2
		APPRENTICESHIP (3-4 YEARS), WITHOUT GCE	3
		SECONDARY VOCATIONAL WITH GCE	4
		GRAMMAR SCHOOL WITH GCE	5
		HIGHER EDUCATION	6
		WITHOUT SCHOOL EDUCATION	7

HEMPL	JOB POSITION OF THE FAMILY HEAD	FULL TIME JOB	1	$\Rightarrow$ HISCO
		PART TIME JOB	2	$\Rightarrow$ HISCO
		OWNER OF A FIRM, DO NOT WORK IN THIS FIRM	3	$\Rightarrow$ HISCO
		OWNER OF A FIRM, WITHOUT EMPLOYEES	4	$\Rightarrow$ HISCO
		OWNER OF A FIRM, WITH EMPLOYEES	5	$\Rightarrow$ HISCO
		PENSIONER, WORKING IN A FULL TIME JOB	6	$\Rightarrow$ HISCO
		PENSIONER, WORKING IN A PART TIME JOB	7	$\Rightarrow$ HISCO
		PENSIONER, NOT WORKING	8	$\Rightarrow$ RINC
		UNEMPLOYED	9	$\Rightarrow$ RINC
		MILITARY SERVICE	10	$\Rightarrow$ RINC
		CIVIL SERVICE	11	$\Rightarrow$ RINC
		STUDENT	12	$\Rightarrow$ RINC
		WIFE, WORKING IN A HOUSE ONLY	13	$\Rightarrow$ RINC
		OTHER:	14	$\Rightarrow$ RINC

| HISCO | WHAT IS JOB OF THE HEAD/ PROVIDES DETAILS, PLEASE | WRITE: | | | |

HHFEM	HOW MANY EMPLOYEES WORK IN THE FIRM, WHERE THE HEAD OF YOUR FAMILY WORKS	JUST 1, ONE MAN BUSINESS	1
		2 – 5 EMPLOYEES	2
		6 – 25 EMPLOYEES	3
		26 – 100 EMPLOYEES	4
		101 – 1000 EMPLOYEES	5
		MORE THAN 1001 EMPLOYEES	6

RINC	CHOOSE A RANGE OF YOUR NET MONTHLY INCOME; INCLUDING SOCIAL BENEFITS	LESS THAN 10.000 KČ		1
		10.001 – 15.000 KČ		2
		15.001 – 20.000 KČ		3
		20.001 – 25.000 KČ		4
		25.001 – 30.000 KČ		5
		30.001 – 35.000 KČ		6
		35.001 – 40.000 KČ		7
		MORE THAN 40.001 KČ		8
		REJECTING A RESPONSE		9
HINC	CHOOSE A RANGE OF YOUR HOUSEHOLD NET MONTHLY INCOME; INCLUDING SOCIAL BENEFITS	LESS THAN 10.000 KČ		1
		10.001 – 15.000 KČ		2
		15.001 – 20.000 KČ		3
		20.001 – 25.000 KČ		4
		25.001 – 30.000 KČ		5
		30.001 – 35.000 KČ		6
		35.001 – 40.000 KČ		7
		MORE THAN 40.001 KČ		8
		REJECTING A RESPONSE		9
A01	YOU THINK THAT YOUR CURRENT HEALTH IS:		GOOD	1
			BAD	2
A02	ARE YOU SATISFIED WITH YOUR JOB?	VERY SATISFIED		1
		SATISFIED		2
		NOT SATISFIED		3
		STRONGLY NOT SATISFIED		4
A03	IF YOU CAN CHOOSE, WHAT WILL BE YOUR CHOICE?	MORE WORK FOR HIGHER SALARY		1
		I AM COMPLETELY SATISFIED WITH THE CURRENT JOB		2
		LESS WORK FOR LOWER SALARY		3
A04	WHAT IS A MINIMAL MONTHLY INCOME, WHICH SHOULD COVER NEEDS OF YOUR HOUSEHOLD IN YEAR 2000?			
A05	YOUR CURRENT FAMILY INCOME COMPARED WITH INCOME IN 1999:	IS STRONGLY HIGHER		1
		IS A BIT HIGHER		2
		IS APPROXIMATELY THE SAME		3
		IS A BIT LOWER		4
		IS STRONGLY LOWER		5
A06	YOUR CURRENT FAMILY INCOME COMPARED WITH THE INCOME IN 1995:	IS STRONGLY HIGHER		1
		IS A BIT HIGHER		2
		IS APPROXIMATELY THE SAME		3
		IS A BIT LOWER		4
		IS STRONGLY LOWER		5

	YOU SURELY KNOW THAT THERE IS ALSO AN INFORMAL / SHADOW ECONOMY IN THE CZECH REPUBLIC.					

A07	ACCORDING TO YOU, WHAT PERCENT OF ADULTS IN THE CZECH REPUBLIC HAVE ALSO AN INCOME FROM THE SHADOW ECONOMY?				
	I DO NOT KNOW				98

A08	ACCORDING TO YOU, HOW WHAT PERCENT OF ADULTS IN YOUR NEIGHBORHOOD HAVE ALSO AN INCOME FROM THE SHADOW ECONOMY?				
	I DO NOT KNOW				98

A09	DO YOU THINK THAT TO HAVE AN UNDECLARED (UNTAXED) INCOME IS:	STRONGLY MORAL	1
		MORAL	2
		NEITHER MORAL, NOR IMMORAL	3
		IMMORAL	4
		STRONGLY IMMORAL	5
		I DO NOT KNOW	98

A10	WHAT WILL BE THE REACTION OF YOUR FAMILY AND FRIENDS IF THEY FIND OUT THAT YOU HAVE UNDECLARED (UNTAXED) INCOME?	THEY SURELY AGREE	1
		THEY PROBABLY AGREE	2
		I DO NOT KNOW	3
		THEY PROBABLY DO NOT AGREE	4
		THEY SURELY DO NOT AGREE	5
		I DO NOT KNOW	98

A11	SUPPOSE YOU OWE THE STATE TAX PAYMENT IN THE AMOUNT 100.000 KČ. WHAT PENALTY WILL YOU HAVE TO PAY AFTER A YEAR?						

A12	ON A SCALE OF 0 TO A 100, SUPPOSING THAT 0 IS BEING SURE YOU WILL NOT BE CAUGHT AND 100 BEING SURE YOU WILL BE, WHAT WOULD BE THE NUMBER CORRESPONDING TO THE RISK OF YOUR BEING CAUGHT BUYING UNDECLARED GOODS AND SERVICES (OR JOBS)?		

B01	HAVE YOU EVER BOUGHT GOODS AND SERVICES COMING FROM UNDECLARED WORK?	YES	1	⇒ B02
		NO	2	⇒ B03

B02	WHY NOT	A. I NEVER NEED SUCH A GOOD OR SERVICES	1	2
		B. I NEVER HAVE SUCH OCCASION	1	2
		C. I THINK IT IS RISKY	1	2
		D. I THINK IT IS IMMORAL	1	2
	1=YES 2=NO	E. OTHER REASONS:	1	2

B03	WHAT PROPORTION (IN %) OF THESE UNDECLARED GOODS AND SERVICES (OR JOBS) HAVE YOU PAID IN	A. CASH			
		B. CREDIT CARD OR BANK TRANSFER			
		C. EXCHANGE FOR OTHER SERVICES			
		TOTAL	1	0	0

B04	GENERALLY, HOW WOULD YOU COMPARE UNDECLARED GOODS AND SERVICES WITH DECLARED GOODS AND SERVICES (OR JOBS) CONCERNING… *1=UNDECLARED IS SUPERIOR, 2=EQUAL, 3=DECLARED IS SUPERIOR*	A. QUALITY	1	2	3
		B. WARRANTIES	1	2	3
		C. AFTER SALE SERVICES	1	2	3
		D. PRICE	1	2	3

B05	WHO DO YOU BUY UNDECLARED GOOD / SERVICES FROM? *1=YES 2=NO*	A. FROM FAMILY MEMBERS	1	2
		B. FROM FRIENDS	1	2
		C. FROM PERSONS IN YOUR NEIGHBORHOOD	1	2
		D. FROM COLLEAGUES FROM YOUR ACTUAL/ FORMER JOB	1	2
		E. FROM YOUR ACTUAL/ FORMER EMPLOYEES	1	2
		F. FROM YOUR ACTUAL/ FORMER BOSSES	1	2
		G. FROM OTHERS	1	2

B06	INDICATE THE REASONS THAT MADE YOU BUY THESE UNDECLARED GOODS AND SERVICES (OR JOBS): (CHECK MANY ANSWERS IF NECESSARY) *1=YES 2=NO*	A. PRICES OF THESE GOODS/ SERVICES ARE LOWER	1	2
		B. LABOR COSTS ARE LOWER	1	2
		C. BECAUSE THE GOOD OR SERVICE ARE BETTER UNOFFICIALLY AVAILABLE	1	2
		D. TO HELP SOMEONE WHO HAS PROBLEMS	1	2
		E. TO HELP SOMEONE WHO IS UNEMPLOYED	1	2
		F. BECAUSE THE GOOD OR SERVICE IS NOT OFFICIALLY AVAILABLE	1	2
		G. OTHER REASONS:	1	2

B07	COULD YOU WRITE DOWN YOUR TOTAL EXPENSES FOR UNDECLARED GOODS AND SERVICES (OR JOB) FOR 2000,						
A. RENOVATIONS AND REPAIRS OF BUILDING (CARPENTRY, PLUMBING, ELECTRICITY, PAINTING…							
B. HOUSEHOLD MAINTENANCE (CLEANING, SNOW REMOVAL, EXCAVATION WORKS, LAWN MOWING…)							
C. RENOVATIONS AND REPAIRS OF GOOD (CAR REPAIR, BODY WORK, BICYCLE AND ELECTRIC APPLIANCE REPAIRS…)							
D. ROOM RENTAL							
E. BABY-SITTING, CARE SERVICES (NURSING, CARE FOR THE ELDERLY)							
F. PERSONAL SERVICES (HAIRDRESSING TYPING, DRESSMAKING….)							
G. PRIVATE CLASSES (DANCING, ENGLISH CONVERSATION…)							
H. SELLING GOODS (DOOR-TO-DOOR, TELEMARKETING…)							
I. TRANSPORTATION SERVICES (CHAUFFEUR, DELIVERYMAN, MOVER…)							
J. SERVICES RELATED TO WEDDINGS AND RECEPTIONISTS (MUSICIAN, D.J., PHOTOGRAPHER, SINGER, CATERER, …)							
K. FOOD AND CATERING SERVICES							
L. PURCHASE OF ALCOHOL, TOBACCOS							
M. SALE OF FARMING, HUNTING, FISHING, AND FOREST PRODUCTS							
N. FACTORY WORK (ENGRAVING, WOOD SAWING, WELDING…)							
O. PROFESSIONAL SERVICES (PSYCHOLOGY, MEDICINE, MATHEMATICAL, ACCOUNTING, ARCHITECTURE …)							
P. OTHER:							

C01	HAVE YOU EVER BEEN ENGAGED IN THE UNDECLARED SECTOR.			
		YEAR 2000	YEAR 1999	YEAR 1995
	OFTEN	1	1	1
	OCCASIONALLY	2	2	2
	NEVER	3	3	3

C02	WHY HAVE YOU NEVER BEEN ENGAGED IN THE UNDECLARED SECTOR? *1=YES* *2=NO*	A. I NEVER NEEDED IT	1	2
		B. I NEVER HAVE HAD AN OCCASION	1	2
		C. I THINK IT IS RISKY	1	2
		D. I THINK IT IS IMMORAL	1	2
		E. OTHER REASONS:	1	2

C03	YOUR MAIN UNDECLARED ACTIVITY	WORK (BEING EMPLOYED)	1
		YOUR OWN BUSINESS	2

C04	HOW MANY PERSONS WERE ENGAGED IN UNDECLARED ACTIVITY WITH YOU IN 2000?	

C05	HOW MANY HOURS A DAY WERE YOU ENGAGED IN UNDECLARED ACTIVITY IN 2000?	

C06	WHO DO YOU SELL UNDECLARED GOOD SERVICES TO? *1=YES* *2=NO*	A. TO FAMILY MEMBERS	1	2
		B. TO FRIENDS	1	2
		C. TO PERSONS IN YOUR NEIGHBORHOOD	1	2
		D. TO COLLEAGUES FROM YOUR ACTUAL/ FORMER JOB	1	2
		E. TO YOUR ACTUAL/ FORMER EMPLOYEES	1	2
		F. TO YOUR ACTUAL/ FORMER BOSSES	1	2
		E. TO OTHERS	1	2

C07	WHAT % OF GOODS / SERVICES, OF UNDECLARED ACTIVITY, WHICH YOU SELL IS PAID BY:	A. CASH			
		B. CREDIT CARD OR BANK TRANSFER			
		C. EXCHANGE FOR OTHER SERVICES			
		TOTAL	1	0	0

C08	INDICATE THE REASONS THAT MADE YOU SELL THESE UNDECLARED GOODS AND SERVICES *1=YES* *2=NO*	A. I CAN NOT FIND AN OFFICIAL JOB	1	2
		B. FAMILY BUDGET SUPPORT	1	2
		C. I WANT TO CONSUME MORE	1	2
		D. I WANT TO DO SOMETHING ALL THE TIME.	1	2
		E. I WANT TO BE MY UNIQUE BOSS.	1	2
		F. TAX EVASION	1	2
		G. I ENJOY RISK	1	2
		H. NOT TO LOOSE SOCIAL BENEFITS.	1	2
		I. OTHER REASONS:	1	2

C09	WHAT % OF YOUR TOTAL INCOME COMES FROM (IN 2000):			
A. RENOVATIONS AND REPAIRS OF BUILDING (CARPENTRY, PLUMBING, ELECTRICITY, PAINTING…				
B. HOUSEHOLD MAINTENANCE (CLEANING, SNOW REMOVAL, EXCAVATION WORKS, LAWN MOWING…)				
C. RENOVATIONS AND REPAIRS OF GOOD (CAR REPAIR, BODY WORK, BICYCLE AND ELECTRIC APPLIANCE REPAIRS…)				
D. ROOM RENTAL				
E. BABY-SITTING, CARE SERVICES (NURSING, CARE FOR THE ELDERLY)				
F. PERSONAL SERVICES (HAIRDRESSING TYPING, DRESSMAKING….)				
G. PRIVATE CLASSES (DANCING, ENGLISH CONVERSATION…)				
H. SELLING GOODS (DOOR-TO-DOOR, TELEMARKETING…)				
I. TRANSPORTATION SERVICES (CHAUFFEUR, DELIVERYMAN, MOVER…)				
J. SERVICES RELATED TO WEDDINGS AND RECEPTIONISTS (MUSICIAN, D.J., PHOTOGRAPHER, SINGER, CATERER…)				
K. FOOD AND CATERING SERVICES				
L. PURCHASE OF ALCOHOL, TOBACCOS				
M. SALE OF FARMING, HUNTING, FISHING, AND FOREST PRODUCTS				
N. FACTORY WORK (ENGRAVING, WOOD SAWING, WELDING…)				
O. PROFESSIONAL SERVICES (PSYCHOLOGY, MEDICINE, MATHEMATICAL, ACCOUNTING, ARCHITECTURE …)				
P. OTHER:				

C10	ARE YOU SATISFIED WITH YOUR UNDECLARED ACTIVITY	VERY SATISFIED	1
		SATISFIED	2
		NEITHER SATISFIED, NOR NOT SATISFIED	3
		NOT SATISFIED	4
		STRONGLY NOT SATISFIED	5

C11	YOUR CURRENT EVALUATION OF UNDECLARED JOB (INCOME, WORKING CONDITIONS…) IS:	SUPERIOR TO MY EXPECTATION	1
		EQUAL AS MY EXPECTATION	2
		INFERIOR TO MY EXPECTATION	3

C12	WHAT IS YOUR INCOME FROM UNDECLARED JOB	LESS THAN 10.000 KČ	1
		10.001 – 15.000 KČ	2
		15.001 – 20.000 KČ	3
		20.001 – 25.000 KČ	4
		25.001 – 30.000 KČ	5
		30.001 – 35.000 KČ	6
		35.001 – 40.000 KČ	7
		MORE THAN 40.001 KČ	8
		NOT RESPONDING	9

TIME B	FILL ACTUAL TIME	HOURS		
		MINUTES		
RSEX	SEX OF RESPONDENT:	MALE		1
		FEMALE		2
SIZE	SIZE OF TOWN	LESS THAN 999 HABITANTS		1
		1000 - 4999 HABITANTS		2
		5000-19999 HABITANTS		3
		20000-99999 HABITANTS		4
		100000 AND MORE HABITANTS		5
REG	REGION:	PRAGUE		1
		MIDDLE BOHEMIA		2
		SOUTHERN BOHEMIA		3
		WESTERN BOHEMIA		4
		NORTHERN BOHEMIA		5
		EASTERN BOHEMIA		6
		SOUTHERN MORAVIA		7
		NORTHERN MORAVIA		8
REG	REGION OF SLOVAKIA	BRATISLAVA		1
		WESTERN SLOVAKIA		2
		MIDDLE SLOVAKIA		3
		EASTERN SLOVAKIA		4