

**Work in the Shadow: Some Facts**

by

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Working Paper No. 1318  
August 2013

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**Abstract:** *In this paper the main focus lies on the shadow economy labor force in OECD, developing and transition countries. Besides informal employment in the rural and non-rural sector also other measures of informal employment like the share of women and men are shown. The most influential factors on the shadow economy labor force are tax policies and state regulation, which, if they rise, increase both. Furthermore the discussion of the recent micro studies underline that economic opportunities, the overall burden of the state (taxes and regulations), the general situation on the labor market, and unemployment are especially crucial for an understanding of the dynamics the shadow labour force.*

**JEL-Classification:** K42, H26, D78.

**Keywords:** Shadow economy work, undeclared work, shadow labor force, tax pressure, state regulation, labor market

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## **1. INTRODUCTION**

Fighting informal (illegal) or shadow employment has been an important policy goal in most countries during recent decades. In order to do this one should have knowledge about the size and development of shadow economy labor force as well as the reasons why people are engaged in shadow economy activities. In this mostly empirically orientated paper I am mainly concerned with the size and development of black activities or undeclared work, and the shadow economy labor force.

My paper is organized as follows: Section 2 presents theoretical considerations about the shadow economy labor force and labor market. In section 3 first a micro study of the shadow economy labor force is presented and then a discussion of the size and development of the shadow economy labor force and its various aspects is undertaken. In section 4 the interaction between the shadow economy and unemployment is analyzed. Finally section 5 concludes.

## **2. SOME THEORETICAL CONSIDERATIONS ABOUT THE SHADOW ECONOMY LABOR FORCE AND LABOR MARKET**

Having examined the size, rise and fall of the shadow economy in terms of value added over time, the analysis now focuses on the “shadow labor market”, as within the official labor market there is a particularly tight relationship and “social network” between people who are active in the shadow economy.<sup>1</sup> Moreover, by definition every activity in the shadow economy involves a “shadow labor market” to some extent:<sup>2</sup> Hence, the “shadow labor market” includes all cases, where the employees or the employers, or both, occupy a “shadow economy position“.

Why do people work in the shadow economy? In the official labor market, the costs firms (and individuals) have to pay when “officially” hiring someone are tremendously increased by the burden of tax and social contributions on wages, as well as by the legal administrative regulation to control economic activity. In various OECD countries, these costs are greater than the wage effectively earned by the worker – providing a strong incentive to work in the shadow economy.

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1. Pioneering work in this area has been done by L. Frey (1972, 1975, 1978, 1980), Cappiello (1986), Lubell (1991), Pozo (1996) and Tanzi (1999). One of the latest surveys or background paper is Hazans (2011) dealing with informal workers across Europe.
  2. Compare also one of the latest OECD report with the title “Is Informal Normal: Toward More and Better Jobs” by the OECD (2009).

More detailed theoretical information on the labor supply decision in the underground economy is given by Lemieux, Fortin and Fréchet (1994) who use micro data from a survey conducted in Quebec City (Canada). In particular, their study provides some economic insights regarding the size of the distortion caused by income taxation and the welfare system. The results of this study suggest that hours worked in the shadow economy are quite responsive to changes in the net wage in the regular (official) sector. Their empirical results attribute this to a (mis-) allocation of work from the official to the informal sector, where it is not taxed. In this case, the substitution between labor market activities in the two sectors is quite high. These empirical findings indicate, that “participation rates and hours worked in the underground sector also tend to be inversely related to the number of hours worked in the regular sector“ (Lemieux, Fortin and Fréchet 1994, p. 235). These findings demonstrate a large negative elasticity of hours worked in the shadow economy with respect both to the wage rate in the regular sector as well as to a high mobility between the sectors.

Illicit work can take many forms. The underground use of labor may consist of a second job after (or even during) regular working hours. A second form is shadow economy work by individuals who do not participate in the official labor market. A third component is the employment of people (e.g. clandestine or illegal immigrants), who are not allowed to work in the official economy. Empirical research on the shadow economy labor market is even more difficult than of the shadow economy on the value added, since one has very little knowledge about how many hours an average “shadow economy worker” is actually working (from full time to a few hours, only); hence, it is not easy to provide empirical facts.<sup>3</sup>

Kucera and Roncolato (2008, p. 321) also deal with informal employment. They address two issues of crucial importance to labor market policy:

- (i) The intensive labor market regulations as one (major) cause of informal employment, and
- (ii) the so-called “voluntary” informal employment. Kucera and Roncolato give a theoretical overview on both issues and also a survey of a number of empirical studies, in which mainly the effect of official labor market regulations on informal employment is analyzed, where they find a significant and quantitatively important influence.

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3. For developing countries some literature about the shadow labor market exists; compare Dallago (1990), Pozo (1996), Loayza (1996), Chickering and Salahdine (1991) and OECD (2009).

### 3. A MICRO-STUDY ABOUT THE SHADOW ECONOMY LABOR MARKET

Haigner, Jenewein, Schneider and Wakolbinger (2013) investigate the informal labor supply and demand in Germany for the year 2010. In this study they use data from a representative survey among 2104 German residents, conducted in May 2010. As a matter of fact, questions on illegal behavior like informal labor supply and demand are highly confidential and delicate; hence it is possible that survey respondents who have engaged in such activities do not want to declare that they have done so. In order to encourage more honest answers, the interviewees have been read the following text (translated from German).

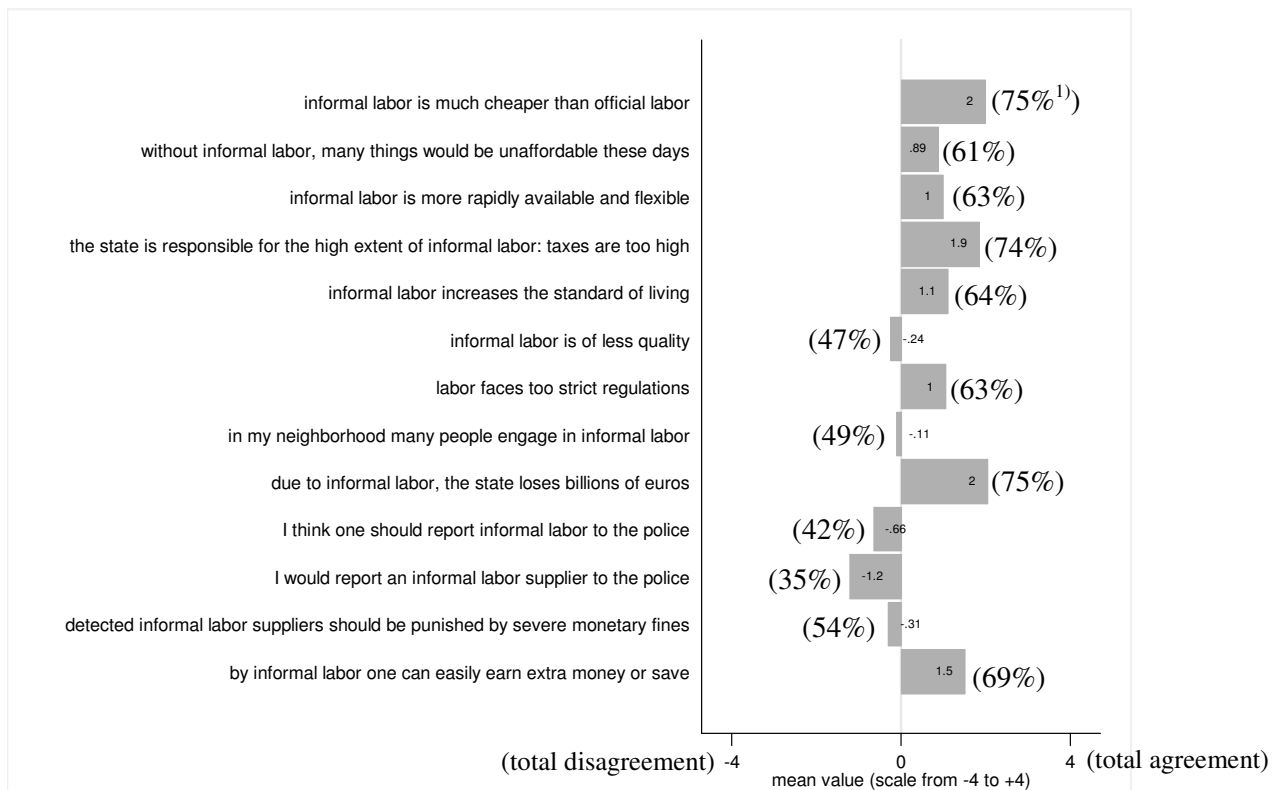
*“The next set of questions deals with what is called black work. We survey these questions on behalf of a group of independent scientists, who will process the results within a study. By black work they mean the following: One works for somebody and agrees not to pay taxes for the payment. Both partners are better off because no value added tax, income tax or social security contributions are paid. Such procedures are frequently occurring, for example, in cleaning, gardening, baby-sitting, waiting at table, writing or programming. Also, work which is not taxed is prevalent in construction, renovation, car repair and taking care of elderly people.”*

Moreover, if interviewers recognized that the interviewees hesitated to answer the questions on informal labor supply and demand, they would again note that the interview is confidential and that answers are confidential, anonymous and only for scientific use. The question on informal labor supply was (translated from German) *“Have you, during the last year, worked for somebody in the way described above (black work)?”* The question on informal labor demand was (again translated from German) *“Have you, during the last year, demanded black work?”* Moreover, they have asked informal labor suppliers on the reasons for doing so, on the time when they have done such works (working time, weekends, vacations,...), on the sector in which they have worked, on the number of hours they have worked per month and on the estimated hourly wage they have received.

In order to grasp the general attitudes towards informal labor supply and demand, they have asked the survey respondents to declare their accordancy with a set of 13 statements on the topic. Possible answers were indicated on a scale ranging from -4 (total disagreement) to +4 (total agreement). Figure 4.1 shows the results. While there seems to be considerable awareness of the fact that informal labor reduces the tax revenues of the state, many people

claim, on the other hand, that high tax rates make attractive the informal labor market. Interestingly, many people like informal labor because it is more rapidly available and more flexible than official labor, which is widely perceived to be subject to too strict regulations. Moreover, people, on average, do not agree with the statement that informal labor suppliers should be reported to the police, nor would many people report them to the police themselves. This shows that informal labor is, in Germany, perceived as a rather trivial offense.

**Figure 4.1: Attitudes towards informal labor supply and demand**



<sup>1)</sup> in ( ) percentage points of agreement

Source: Haigner et al. (2013)

### (1) Informal Labor Supply

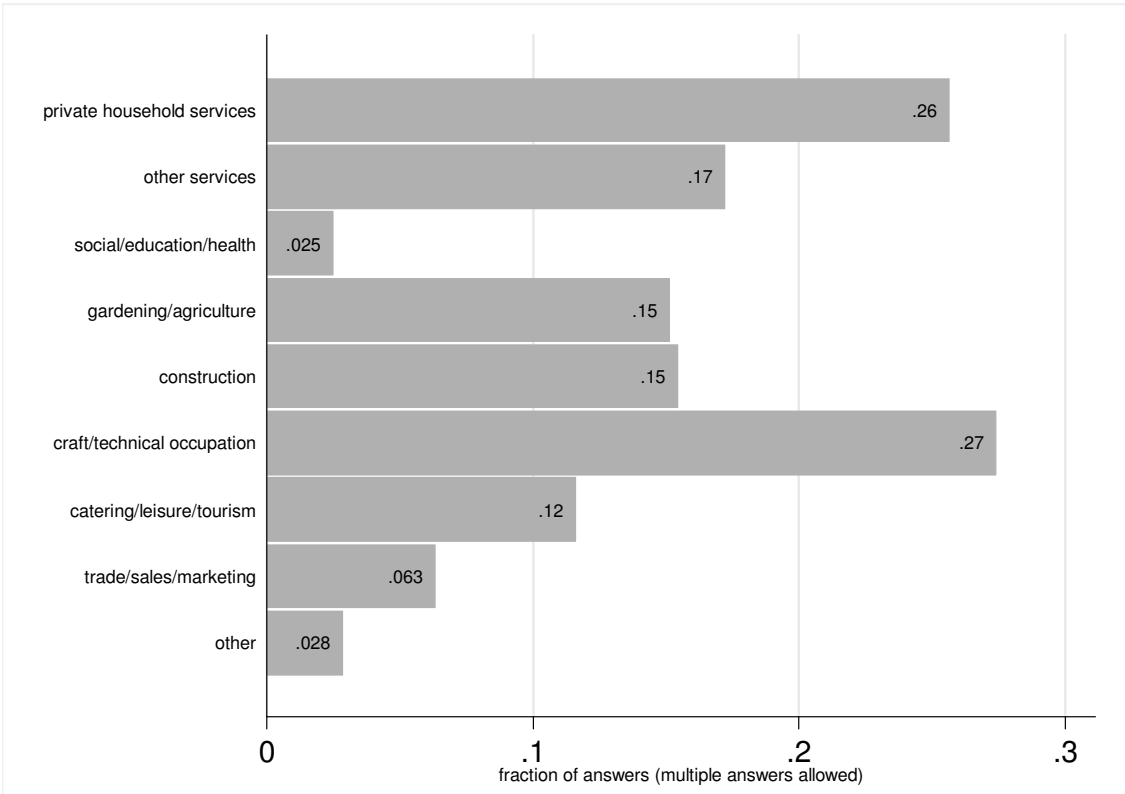
Out of 2104 respondents, 285 (13.55%) declared that they have been supplying informal labor during the year before the survey. Among men, the fraction of informal labor suppliers was significantly higher (18.82%) than among women (8.58%) (Mann-Whitney U-Test, N=2104, p=0.00). Moreover, the authors find above average fractions of informal labor suppliers among the unemployed (29.29%) and people out of labor force “due to other reasons” (23.53%). Among pensioners (5.10%) and housewives and housemen (9.52%) the fraction is below the average, while it is close to the average among students (14.44%), apprentices (11.75%), self-employed persons (15.17%) and dependent employees (15.60%). Among

persons not having completed compulsory education and those who have completed an apprenticeship, informal labor suppliers are overrepresented (24.24% and 20.41%), while they are underrepresented among persons with a university degree (7.19%).

**(2) Sectors of Informal Labour Supply**

Figure 4.2 shows in which sectors informal labor supply takes place. Not surprisingly, crafts and technical occupations and private household services have the highest relative importance. In both branches, more than a quarter of informal labor suppliers are engaged. About 15% of informal labor suppliers declare to be working in other services, gardening/agriculture and construction. Fractions do not add up to 100% since multiple answers have been allowed.

**Figure 4.2: Sectors of informal labor supply**



Source: Haigner et al.(2013)

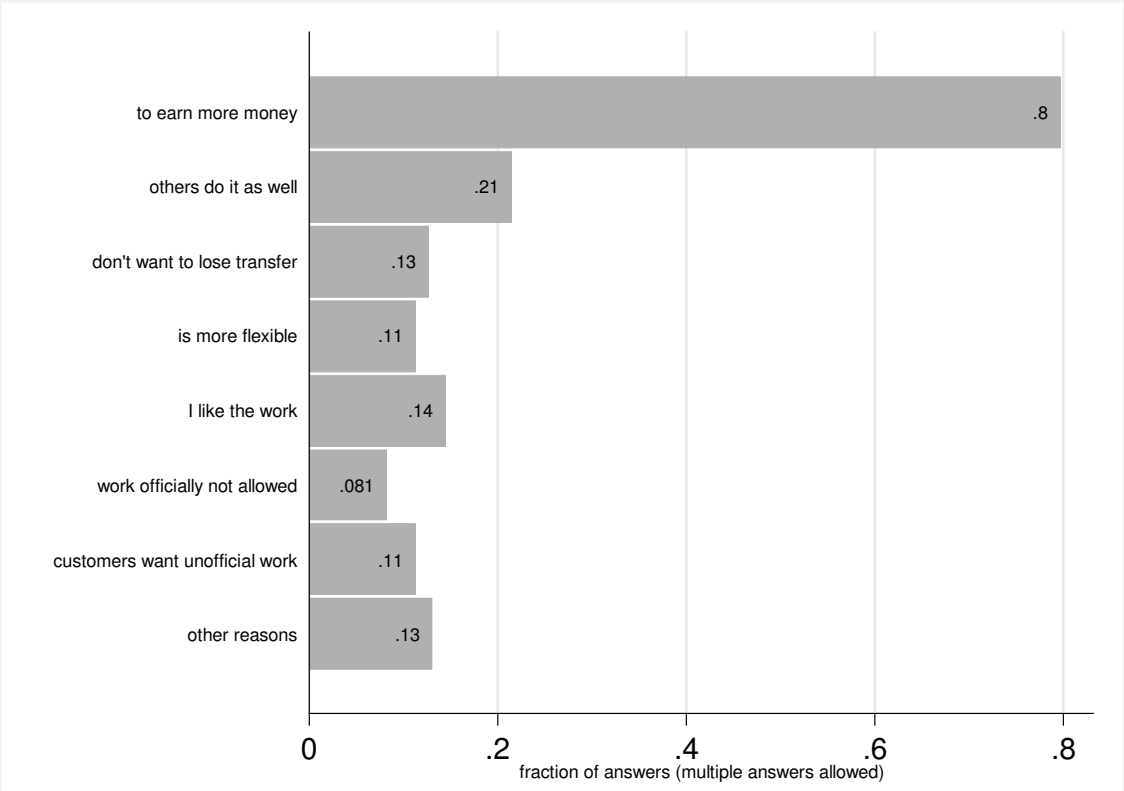
**(3) Directly reported reasons**

The authors have directly asked the survey respondents (declaring to engage in informal labor supply) for the reasons for doing so. Again, the results are as expected. Figure 4.3 shows that four in five declare to supply informal labor in order to earn more money. All other noted reasons are far less important. However, it is interesting to see, for example, that one in about

eight informal labor suppliers do so because they do not want to lose transfer payments. In the German social system, pensioners as well as unemployment benefit and social assistance recipients face a full transfer cut and thus implicit marginal tax rates of 100% and more if they would officially supply labor.

More than one in five informal labor suppliers claim that a reason for doing so is that others do it as well. This result is in line with our (earlier reported) finding that German residents perceive, in general, informal labor supply and demand as a rather trivial offence. By the same token, slightly more than ten percent of informal labor suppliers claim that they do so because their customers want the demanded work to be done unofficially. Another ten percent say that they like the flexibility of informal labor supply.<sup>4</sup>

**Figure 4.3: Directly reported reasons for supplying informal labor**



Source: Haigner et al. (2013)

<sup>4</sup> In this study also a microeconometric investigation is undertaken confirming the facts discussed here under ceteris paribus conditions.



## 4. SHADOW ECONOMY LABOR FORCE – EMPIRICAL RESULTS

### 4.1 World Wide Aspects – Latest Results

The following results of the shadow economy labor force are based on the OECD and World Bank database on informal employment in major cities and in rural areas, as well as on other sources mentioned in the footnotes of this chapter and the tables. The values of the shadow economy labor force are calculated in absolute terms, and as a percentage of the official labor force, under the assumption that the shadow economy in rural areas is at least as high as in the cities. This is a conservative assumption, since in reality it is likely to be even larger.<sup>5</sup> Survey techniques and, for some countries, the MIMIC-method and the method of the discrepancy between the official and actual labor force are used for estimation.

One of the latest studies is the OECD (2009)<sup>6</sup> one with the title “Is informal normal?”, which provides world wide figures. This OECD study<sup>7</sup> concludes that in many parts of the world and over the period 1990 to 2007 informal employment is the norm, not the exception,. More than half of all jobs in the non-agricultural sectors of developing countries – over 900 million workers – can be considered informal. If agricultural workers in developing countries are included, the estimates size to roughly 2,000 million people. The share of informal employment is also shown in figures 4.4 for Latin America and South East Asia. In some regions, including Sub-Saharan Africa and South Asia, over 80% of non-agricultural jobs are informal. Most informal workers in the developing world are self-employed and work independently, or own and manage very small enterprises. According to the OECD study (2009), informal employment is a result of both, people being excluded from official jobs and people voluntarily opting out of formal structures, e.g. in many middle income countries incentives drive individuals and businesses out of the formal sector.

To summarize, this OECD study clearly comes to the conclusion that informal is really the norm or the normal case. 1.8 billion people work in informal jobs, compared to 1.2 billion who benefit from formal contracts and social security protection. Informal economic activity, excluding the agricultural sector, accounts for three quarters of the jobs in Sub-Saharan Afri-

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<sup>5</sup> The assumption that the shadow economy labour force is at least as high in rural areas as in major cities, is a very modest one and is supported by Lubell (1991). Some authors (e.g., Lubell (1991), Pozo (1996), and Chickering and Salahdine (1991)) argue that the illicit labour force is nearly twice as high in the countryside as in urban areas. But since no (precise) data exists on this ratio, the assumption of an equal size may be justified arguing that such a calculation provides at least minimal figures.

<sup>6</sup> See also OECD (2008).

<sup>7</sup> The following results and figures are taken from the OECD (2009), executive summary.

ca, more than two thirds in South and South East Asia, half in Latin America, the Middle East and North Africa, and nearly one quarter in transition countries. If agriculture is included, the informal share of the economy in the above mentioned regions is even higher (e.g. more than 90 % in South Asia). Also, this OECD study comes to the result that more than 700 million informal workers “survive” on less than \$ 1.25 a day and some 1.2 billion on less than \$ 2 a day. The study also concludes that the share of informal employment tends to increase during economic turmoil. For example, during the Argentine economic crisis (1999-2002), the countries’ “official” economy shrank as by almost one fifth while the share of informal employment expanded from 48 to 52 percent. One can clearly conclude that even under strong economic growth, the share of non-agricultural employment and, the share of informal employment is strongly rising.

#### **4.2 OECD-Countries**

In *Table 4.1* the estimates for the shadow economy labor force in highly developed OECD countries (Austria, Denmark, France, Germany, Italy, Spain and Sweden) are shown.<sup>8</sup> In Austria the shadow economy labor force has arrived at 500.000 to 750.000 or 16% of the official labor force (mean value) in the years 1997-1998. In Denmark the development of the 80s and 90s shows that the part of the Danish population engaged in the shadow economy ranged from 8.3% of the total labor force (in 1980) to 15.4% in 1994 – quite a remarkable increase of the shadow economy labor force; it almost doubled over 15 years. In France (in the years 1997/98) the shadow economy labor force reached a size of between 6 and 12% of the official labor force or between 1.6 and 3.2 million in absolute figures. In Germany this figure rose from 8 to 12% in 1974 to 19% and to 22% (8 millions) in the year 1997/98. For France and Germany this is again a very strong increase in the shadow economy labor force. In other countries the amount of the shadow economy labor force is quite large, too: in Italy 30-48% (1997-1998), Spain 11.5-32% (1997-1998) and Sweden 19.8 % (1997-1998). In the European Union about 30 million people are engaged in shadow economy activities in the years 1997-1998 and in all European OECD countries 48 million work illicitly.

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8. Shadow economy labor force consists of estimated full-time “black” jobs, including unregistered workers, illegal immigrants and second “black” jobs.

**Table 4.1.: Estimates of the Size of the “Shadow Economy Labor Force” in Some OECD Countries 1974-1998**

Countries	Year	Official GDP per capita in US-\$ <sup>1)</sup>	Total Economy (Shadow Economy plus official GDP per capita in US-\$)	Size of the Shadow Economy (in % of official GDP) Currency Demand Approach <sup>2)</sup>	Shadow Economy Labor Force in 1000 people <sup>3)</sup>	Shadow Economy Participants in % of official Labor Force <sup>4)</sup>	Sources of Shadow Economy and Shadow Economy Labor Force
Austria	90-91	20,636	25,382	5.47	300-380	9.6	Schneider (1998a, b) and own calculations
	97-98	25,874	29,630	8.93	500-750	16.0	
Denmark	1980	13,233	18,658	8.6	250	8.3	Mogensen, et. al. (1995) and own calculations
	1986	18,496	26,356	9.8	390	13.0	
	1991	25,946	36,558	11.2	410	14.3	
	1994	34,441	48,562	17.6	420	15.4	
France	1975-82	12,539	17,542	6.9	800-1,500	3.0-6.0	De Grazia (1983) and own calculations
	1997-98	24,363	34,379	14.9	1,400-3,200	6.0-12.0	
Germany	1974-82	11,940	17,911	10.6	3,000-4,000	8.0-12.0	De Grazia (1983), F. Schneider (1998a, b) and own calculations
	1997-98	26,080	39,634	14.7	7,000-9,000	19.0-23.0	
Italy	1979	8,040	11,736	16.7	4,000-7,000	20.0-35.0	Gaetani-d' Aragona (1979) and own calculations
	1997-98	20,361	29,425	27.3	6,600-11,400	30.0-48.0	
Spain	1979-80	5,640	7,868	19.0	1,250-3,500	9.6-26.5	Ruesga (1984) and own calculations
	1997-98	13,791	19,927	23.1	1,500-4,200	11.5-32.3	
Sweden	1978	15,107	21,981	13.0	750	13.0-14.0	De Grazia (1983) and own calculations
	1997-98	25,685	37,331	19.8	1,150	19.8	
<i>European Union</i>	1978	9,930	14,458	14.5	15,000	-	<i>De Grazia (1983) and own calculations</i>
	1997-98	22,179	32,226	19.6	30,000	-	
<i>OECD (Europe)</i>	1978	9,576	14,162	15.0	26,000	-	<i>De Grazia (1983) and own calculations</i>
	1997-98	22,880	33,176	20.2	48,000	-	

1) Source: OECD, Paris, various years

2) Source: Own calculations from Schneider (2000, 2001).

3) Estimated full-time jobs, including unregistered workers, illegal immigrants, and second jobs.

4) In percent of the population aged 20-69, survey method.

These figures demonstrate that the shadow economy labor market is lively and may provide an explanation, why for example in Germany, one could observe such a high and persistent unemployment up to the year 2007.

Additionally, *Table 4.1* contains a preliminary calculation of the total GDP per capita (including the official and the shadow economy GDP per capita) in US-\$. In all countries investigated, total GDP per capita is much higher – on average in all countries around 40%. This clearly shows that the productivity in the shadow economy is roughly as high as in the official economy – a clear indication, that the work effort (i.e. the incentive to work effectively) is as strong in the shadow economy as in the official one. In general these results demonstrate that the shadow economy labor force has reached a remarkable size in the developing countries as well as in highly developed OECD countries, even though the calculation still might have many errors.

#### **4.3 Developing and Transition Countries**

There have been some newer studies with respect to estimate the size and development of the shadow economy labour force<sup>9</sup>. Kucera and Roncolato (2008, p.321) deal with informal employment. They address issues of crucial importance to labour market policy; first, the intensive labour market regulation is one major cause of informal employment, and second, the so called voluntary informal employment. Kucera and Roncolato give a theoretical overview on both issues and also a survey of a number of empirical studies, in which the effect of the official labour market regulations on informal employment is analyzed, where they find a significant and quantitatively important influence.

In *Table 4.2* the share of informal employment in total non-agricultural employment by five-year period and by region is presented. From the table one clearly sees that in all regions the share of informal employment has remarkably increased over time. The share of informal employment in South- and Middle-American countries in the period of 1985-1989 was 32.4% and increased in the period of 2000-2007 to 50.1%. In 34 Asian countries informal employment rose in the period of 1985-1989 from 55.9% to 70.2% from 2000-2007. In the 42 African countries the share of informal employment (in percent of total non agricultural employ-

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<sup>9</sup> See also Schneider (2005, 2011), Schneider and Enste (2000), Feld and Schneider (2010), Schneider, Buehn and Montenegro (2010), Williams and Windebank (2001a, 2001b), Williams (2010 a, 2010 b, 2011 a, 2011 b) and Hazans (2011).

ment) was 40.3% from 1985-1989, and increased to 60.5% in 2000-2007. Table 4.9 clearly demonstrates that there is a very strong positive trend in the share of informal employment (in percent of total non agricultural employment).

Table 4.3 provides the share of informal employment in total non-agricultural employment by country, region and gender. If one splits up the share of informal employment (in percent of total non agricultural employment) by gender, I generally observe, that the share of women is significantly higher than the share of men. In North Africa (countries Algeria, Morocco, Tunisia, Egypt) the share of informal employment of women is 43.3% and the one of men 49.3% over the period 1990-1999. In Sub-Saharan Africa the share of women is 84.1%, the one of men 63.0%. In Latin America the share of women is 56.2% and the share of men 47.1%. Only in the region of West Asia and in the transition countries the share of men of informal employment is higher than the one of women. In West Asia (countries Lebanon, West Bank and Gaza Strip, Syria, Turkey, Yemen) the share of women is 31.1%, the share of men 43.4%. In the Transition countries (Kyrgyzstan, Moldova, Russia) the share of women is 22.3% and the share of men 27.2%. I also realise some remarkable differences. In general the share of informal employment is rather large worldwide and certainly has severe policy implications.

**Table 4.2: Share of Informal Employment in Total Non-Agricultural Employment by five-year period in %**

<i>Region</i>	<b>Average Share of Informal Employment in % of Local Non Agricultural Employment over</b>			
	<b>1985-89</b>	<b>1990-94</b>	<b>1995-99</b>	<b>2000-07</b>
<b>22 South- and Middle American Countries</b>	<b>32.4</b>	<b>35.4</b>	<b>40.3</b>	<b>50.1</b>
<b>34 Asian Countries</b>	<b>55.9</b>	<b>60.4</b>	<b>65.4</b>	<b>70.2</b>
<b>42 African Countries</b>	<b>40.3</b>	<b>47.1</b>	<b>52.4</b>	<b>60.5</b>
<b>21 Transition Countries</b>	<b>30.9</b>	<b>32.3</b>	<b>35.4</b>	<b>40.2</b>

Source: OECD 2009, pages 34-35; and Charmes (2002, 2007, 2008) for the ILO Women and Men in the Informal Economy, 2002. For the most recent period: Heintz and Chang (2007) for the ILO, and for West Asia: Charmes (2007 and 2008).

**Table 4.3: Share of Informal Employment in Total Non-Agricultural Employment, by country, region and gender (in percent), 1990s and 2000s**

Region	1990 - 1999		2000-2007	
	Women	Men	Women	Men
<b>North Africa</b>	<b>43.3</b>	<b>49.3</b>		
Algeria	40.6	43.1		
Morocco	46.8	44.0		
Tunesia	39.2	53.2		
Egypt	46.5	56.9	38.6	47.2
<b>Sub-Saharan Africa</b>	<b>84.1</b>	<b>63.0</b>	<b>77.1</b>	<b>62.6</b>
Benin	97.3	87.0		
Chad	95.2	59.5		
Guinea	86.7	65.6		
Kenya	83.1	59.1		
Mali			89.2	74.2
South Africa	58.4	43.6	64.9	51.0
<b>Latin America</b>	<b>56.2</b>	<b>47.1</b>	<b>59.5</b>	<b>55.4</b>
Bolivia	74.4	55.0		
Brazil	67.3	54.7	52.3	50.2
Chile	43.9	30.9		
Colombia	44.0	34.1		
Costa Rica	48.0	42.1		
Dominican Republic	49.7	46.5		
Ecuador			76.9	73.2
El Salvador	68.6	45.7		
Guatemala	69.4	46.5		
Honduras	65.5	73.6		
Mexico	55.0	54.3	53.5	47.8
Panama	40.8	35.5	50.4	48.7
Peru			72.0	65.1
Venezuela	47.3	46.7	52.1	47.5
<b>South and Southeast Asia</b>	<b>72.7</b>	<b>70.2</b>	<b>73.4</b>	<b>71.2</b>
India	85.7	82.9		
Indonesia	77.2	78.0		
Philippines	73.4	70.8		
Thailand	54.3	49.1		
<b>West Asia</b>	<b>31.1</b>	<b>43.4</b>	<b>35.4</b>	<b>44.4</b>
Lebanon			60.0	44.4
West Bank and Gaza Strip			20.2	46.8
Syria	34.6	42.8		
Turkey	19.1	29.1	32.2	33.4
Yemen	39.7	58.2	29.3	52.8
<b>Transition countries</b>			<b>22.3</b>	<b>27.2</b>
Kyrgyzstan			40.9	47.1
Moldova			18.4	28.0
Russia			7.6	9.6

Source: OECD 2009, page 47; and Charmes (2002), for the ILO Women and Men in the Informal Economy, 2002. For the most recent period: Heintz and Chang (2007) for the ILO, and for West Asia:

## 5. SHADOW ECONOMY AND UNEMPLOYMENT<sup>10</sup>

Although there has been some discussion on the size of the shadow economy labor force and on its reasons, comparatively little attention has been given to the relationship between unemployment and working in the shadow economy. As Tanzi (1999) points out, “the current literature does not cast much light on these relationships even though the existence of large underground activities would imply that one should look more deeply at what is happening in the labor market” (p. 347). The objective of the paper by Bajada and Schneider (2009) is to examine the extent of participation in the shadow economy by the unemployed. Their paper has investigated the relationship between the unemployment rate and the shadow economy. Previous literature on this topic has suggested that the relationship between these two variables is ambiguous, predominantly because a heterogeneous group of people working in the shadow economy exists and there are also various cyclical forces at work, such that they produce a net effect that is weakly correlated with unemployment. In their paper they have provided a suggestion for disentangling these cyclical effects, so as to study the component of the shadow economy that is influenced directly by those who are unemployed. They refer to this effect as the ‘substitution effect’ which typically increases during declining periods of legitimate economic activity (and increasing unemployment). Equipped with this approach for measuring the ‘substitution effect’, they discover that a relationship exists between changes in the unemployment rate and shadow economy activity.

By examining the growth cycle characteristics of the ‘substitution effect’ component of the shadow economy Bajada and Schneider (2009) determine that the growth cycles are symmetric (in terms of steepness and deepness) and that changes in the unemployment rate, whether positive or negative, had similar impacts on changes in the substitution effect component. They suggest that the shadow economy is a source of financial support during periods of unemployment for those genuinely wanting to participate in the legitimate economy. Although this does not exclude the possibility that long-term unemployed may also be participating in the shadow economy, it would appear that short-term fluctuations in unemployment directly contribute to short-term fluctuations in the shadow economy.

When Bajada and Schneider consider the various unemployment support programs across 12 OECD countries, there appears to be no real systematic relationship between the generosity of the social security systems and the nature of short-term shadow economic activity by the un-

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10. This part is taken from Feld and Schneider (2010).



employed. Even the various replacement rates across the OECD countries appear to have little consequence on the rate at which the unemployed take on and cut back shadow economy activity. There is however some evidence to suggest that extended duration spell in unemployment lasts anywhere between less than 3 months to approximately 9 months.

On the whole Bajada and Schneider argue that dealing with unemployment participation in the shadow economy as a way of correcting the inequity it generates, is best handled by more stringent monitoring of those receiving unemployment benefits rather than reducing replacement rates as a way of encouraging re-integration into the work force. A strategy of reducing replacement rates would not only fail to maintain adequate support for those experiencing financial hardship during periods of unemployment, it is likely to have little impact on reducing participation by the unemployed who are willing and able to engage in shadow economy activity.

## **6. CONCLUSIONS**

In my paper some of the most recent developments in research on the shadow economy labor force and undeclared work in highly developed OECD, developing and transition countries are shown.

The discussion of the recent literature shows that economic opportunities for employees, the overall situation on the labor market, not least unemployment are crucial for an understanding of the dynamics of the shadow economy. Individuals look for ways to improve their economic situation and thus contribute productively to aggregate income of a country. This holds regardless of their being active in the official or the unofficial economy.

If I come back to the headline of my paper “Work in the shadow: Some Facts” I clearly realize that we have some knowledge about the size and development of the shadow economy labor force. For developing and transition countries, the shadow economy labor force has reached a remarkable size according to OECD (2009) estimates, which is, that in most developing countries the shadow economy labor force is higher than the official labor force. What we do not know are the exact motives, why people work in the shadow economy and what is their relation and feeling if a government undertakes reforms in order to bring them back into the official economy. Hence, much more micro studies are needed to obtain a more detailed knowledge about people’s motivation to work either the shadow economy and/or in the official one.

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