

Informal labor market and informal economy during transition - the Polish perspective¹

By dr Maciej Grabowski²

The aim of this contribution is to shed light on informal labor market and informal economy, its main reasons, characteristics and methods of estimation, and changes during economic transformation. Poland is taken as a case study for this purpose.

The nature and mechanism of the informal economy was changing parallel to deregulation, liberalization and growing competition during economic reforms. Prior to 1989 reforms the informal sector in Poland was mainly stimulated by excessive limitation of economic activity (including the prohibition of certain forms of activity, the necessity of obtaining licenses etc.) and by limited access to the means of production (including labor, and capital). Since 1989 the improvement of the competitive position (for instance by reducing costs) has constituted the main incentive to remaining within the underground economy for firm and to increase income by employees.

Informal labor obviously represents only a part of the underground (or informal) economy. Methods used to estimate informal labor includes Labor Force Surveys, special polls, census, and discrepancy analysis of income and expenditures, and analysis discrepancies in value-added in sectors. Review of estimations are provided for 1994-1999, including description of reasons of being in informal labor market, regional and season characteristics, and income estimation. Critical assessment of available data is provided. Research and policy problem to be addressed in future are also discussed.

Contents:

1. **Informal labor - place in underground economy, main characteristics of activities and changes in transition**
 2. **Main sources of data and estimations of informal labor**
 - 2.1 Methods of estimation of informal labor and their application in Poland
 - 2.2 Methods based on Labor Force Survey
 - 2.3 Special large sample surveys
 - 2.4 Small sample surveys
 - 2.5 Official estimation of hidden economy and unregistered labor
 3. **Economic, institutional and social reasons of informal labor market**
- Conclusions and final remarks**

¹ Paper prepared for the Round Table entitled "The Informal Economy in the EU Accession Countries: Size, Scope, Trends and Challenges to the Process of EU Enlargement", Sofia, April 18-20, 2002

² Dr Maciej Grabowski, Vice President, Gdansk Institute for Market Economics, Do Studzienki 63, 80 – 227 Gdansk, Poland, e-mail: maciejg@ibngr.edu.pl

1. Informal labor - place in underground economy, main characteristics of activities and changes in transition

The informal sector, also referred to as the underground economy, which has been drawing particular attention from experts and politicians over recent years, has sprung up as a topic of academic papers relatively recently. In the 1960s text books on public finance did not mention this problem at all. A breakthrough in this respect was in 1970s. In Poland, first, serious wide-ranging research into the informal sector, and especially its sociological and economic aspects, was conducted in the 1980s³.

The nature and mechanics of the informal sector were changing parallel to deregulation, liberalization and growing competition. If prior to 1989 changes the informal sector in Poland were mainly stimulated by excessive limitation in economic activity (including the prohibition of certain forms of activity, the necessity of obtaining licenses etc.) and by limited access to the means of production, since 1989 the improvement of the competitive position (for instance by reducing costs) has constituted the main incentive to remaining within the underground economy for firm and to increase income by employees.

Informal labor obviously represents only a part of the underground (or informal) sector. Clandestine employment (or informal labor) may be defined as additional or basic employment which is undertaken by-passing regulations of the employment or taxation codes. Such a definition can be applied to both illegal employment between households and companies, irrespective of whether they are registered or not, and it also includes selfemployed. This definition may also apply to foreigners, and to work unpaid (not valued in money). Informal labor can be grouped or classified according to various descriptive features. It may represent the basic or the additional place of employment i.e. the source of employees' income. Clandestine employment may be permanent or temporary. The employer may be a household or a company (registered or not). As far as the economic sectors are concerned, illegal employment may be found in industry, construction, agriculture, transport and services. Illegal employment may be provided by residents and non-residents of a country.

2. Main sources of data and estimations of informal labor

2.1 Methods of estimation of informal labor and their application in Poland

³ See: *Gospodarka nieformalna (Informal sector)* (1990). Collective paper edited by K. Sowa, TNOiK, Rzeszów; and Bednarski M., Kokoszczyński R. (1988): "Nieoficjalna gospodarka i jej społeczne następstwa" (The unofficial sector and its social repercussion), *Ekonomista* 3-4, page 710-719; or Wyżnikiewicz B. (1987): "Druga gospodarka - znaczenie i zasięg" (The other sector - significance and extent), INE PAN, Warszawa

Sources of information on informal labor aren't numerous. Estimations of informal labor are calculated using direct or indirect methods. Indirect methods of estimation of informal labor are based on estimation of whole underground economy. The latter is calculated using for instance monetary methods, data from households surveys, analysis of value-added by sectors etc.⁴.

Direct methods may be based on questionnaires directed to specially selected sample, or sample from LFS may be used. Some of these direct methods are used to obtain data from specific group of society. Results of Labor Force Survey (LFS) are carried out by GUS. These surveys are based on large representative and rotating samples of adult population and have been conducting quarterly in Poland since 1992.

All these methods, by definition, doesn't provide genuine data of number of people employed in informal sector or amount of provided labor (for instance: number of worked hours), because they merely provide estimations of informal labor. Error of measurement isn't practically possible to estimate. Different methods are used for different purposes (like: estimation of number of permanently/temporary employed people in informal sector, estimation of number of worked hours, types of work, or industry sectors) and they have their own advantages.

2.2 Methods based on Labor Force Survey

Thank to LFS two kinds of estimations may be done. First method is based on assumption that results of LFS are accurate, and employment provided by employers is purposely incorrect. Number of working people according to LFS is higher that number of working people according to statistical declarations of employers by people working in informal sector. However, one may notice that this method may not include people, who work legally and illegally, for instance after working hours. From the other side LFS (by definition) doesn't include people working abroad, foreigners staying in Poland and people staying in Workers Hostels. This makes estimations of informal labor even more complicated. The second method used LFS data is based on comparisons of unemployed according to Labor Administration and to LFS estimations.

⁴ Compare an excellent review of methods in: Schneider, F. And D.Enste: Shadow Economies: Size, Causes, and Consequences, Journal of Economic Literature, Vol. XXXVIII, 1/2000

The results of LFS are provided quarterly, so we may have estimation of permanently illegal workers every three months. Assuming that fixed error of these surveys doesn't change over time, dynamics on informal labor may be observed.

Estimations of informal labor based on results from LFS indicated that peak of informal labor was reached in 1994 and it was steadily diminishing. These methods compares results of active labor from LFS and labor statistics, and unemployed according to LFS and to Labor Administration (see table 2.1).

Table 2.1

Estimation of informal labor based on LFS (in '000 persons)

Method based on:	1993	1994	1995
data of LFS and number of employed	365	840	755
data of LFS and number of unemployed	1.084	1.126	1.011

Source: Kańska, M., S. Kostrubiec, J.Witkowski (1996): Praca nierejestrowana w Polsce w 1995 roku, GUS, pp. 6-11

Remark:

1. Estimations only of permanently employed in informal sector

Data from table 2.1 suggest also that there are major problems with these methods of estimations of informal labor, because results varied so much.

2.3 Special large sample surveys

Special, additional to LFS, surveys on informal labor was conducted by GUS in 1995⁵ and 1998⁶. The same sample was used as for LFS, and around 11.000 households in each survey were questioned (it means that over 25.000 people were involved in each survey) during first six months of each year.

Special surveys carried out by GUS in 1995 and 1998 allowed to revealed many aspects of informal labor, including working hours, seasonal

⁵ Compare: Kalaska, M., S.Kostrubiec and J.Witkowski (1996): Praca nierejestrowana w Polsce w 1995 roku, GUS, Warszawa

⁶ Compare: Kostrubiec, S.(1999): Praca nierejestrowana w Polsce w 1998 roku, GUS, Warszawa

character, temporary illegal jobs, regional characteristics ect According to this survey 2.199 thousands persons worked on black in 1995 and 1.431 thousands in 1998. It is equal respectively of 7,3% and 4,8% of total population of age above 15 years old. This reduction of illegal workers may be explained by increase of employed from 15,48 mln in 1995 to 16,27 mln in 1998 and by reducing number of unemployed from 2,23 mln in 1995 to 1,83 mln in 1998 (GUS 2000).

These surveys showed that informal labor is usually temporary and seasonal. In 1995, 957.000 (or 43%) worked permanently in informal sector and it was exclusive job for them; in 1998 this share was 46% (or 662.000). From the other side, it means, that 54-57% of illegally worked had additional legal job. Interestingly, well educated often had two jobs (legal and illegal); 84% of illegally worked among university-level persons had at the same time a main legal job.

From the other side, group (among education groups), which was the most attracted by illegal jobs was a group of people with vocational education. About 11% (in 1995 survey) of all people with such education were involved in informal labor. This group was followed by elementary educated (6,7%) and university educated (5,5%). This suggests structure of labor demand.

There was observed significant seasonality in informal labor market in Poland. Summer months are much more popular for this kind of activity than winter months. The least of number of people working on black was observed in January, and it was 3,5 times lower than in July. It was confirmed by two surveys 1995 and 1998.

Informal labor is rather male, than female phenomena. About as much as twice more men worked on black than women. Young and middle-age people are the most attractive groups for illegal employment. A share of illegally worked to total population in age group of 25 years old till 44 years old was 10,4% in 1995 and 9,0% in 1998. Old people (over 60 years old) worked on black the least.

These surveys revealed that there were strong regional disparities in informal labor sector. The North and East parts of Poland were the strongest regions in informal sector and Central, South and Mid-West the weakest ones. Kostrubiec (1998) provided correlation analysis, which showed that there is significant correlation between regional unemployment rates and informal labor participation.

2.4 Small sample surveys

Other methods, which were used in Poland to estimate informal labor, were based on small representative sample surveys (over 1000 responders). The Gdańsk Institute for Market Economics (GIME) carried out twice such surveys in June 1994 and May 1997⁷. Surveys on small samples confirmed to large extent characteristics and trends of informal labor of surveys done by GUS in 1995 and 1998, less so the size of it. According to these surveys there were 29,6% and 14,1% of people involved in unregistered work in 1994 and 1997 respectively. These differences may be explained by period of surveys, which were carried out in May and June, so during months of high informal activities. Samples were derived from slightly different population: for GUS survey it was population of 15 years old and above, for GIME survey it was 18 years old and above. Main characteristics of small sample surveys are provided in table 2.2.

⁷ Compare: Grabowski, M. (ed.)(1995): Szara strefa w transformacji gospodarki, Transformacja Gospodarki, IBNGR, Gdansk; Grabowski, M. (1997): Szara strefa, a rynek pracy i sektor MSP w Polsce (mimeo) (Informal sector, and labour market and SMEs in Poland)

Table 2.2

Structure of incomes from informal labor in 1994 and 1997

sample structure for both surveys		persons with unregistered incomes			
		1994 (307 persons out of 1050)			1997 (142 persons out of 1008)
1	2	3	4	5	6
	%	%	average amount of unregistered income (PLN)	%	average amount of unregistered income (PLN)
Total	100	29,6	160	14,1	267
Male	50	64	180	65	246
Female	50	36	110	35	278
Place of living (in '000):					
city +200	24	28	170	22	172
50-200	16	14	130	20	290
till 50	22	26	180	27	228
village	37	31	160	31	354
age:					
18-24	15	20	160	22	185
25-39	30	36	170	40	250
40-59	36	37	150	32	352
+60	19	7	180	5	229
labor relations:					
employees	48	56	160	58	289
farmers	6	4	240	2	225
pensioners	25	11	160	8	223
students	7	9	140	11	126
unemployed	10	16	190	14	305
non-worked	3	3	130	6	301
Education:					
Elementary	26	13	100	29	221
Vocational	25	35	180	31	265
High	36	37	170	29	353
University	12	15	150	11	167

Source: Grabowski, M. (ed.)(1995): Szara strefa w transformacji gospodarki, Transformacja Gospodarki, IBNGR, Gdansk 1995; p. 8; and Grabowski, M. (1997): Szara strefa, a rynek pracy i sektor MSP w Polsce (mimeo) (Informal sector, and labour market and SMEs in Poland)

Remarks:

- (i) Surveys were carried out in June 1994 and May 1997 by Pracownia Badań Społecznych in Sopot
- (ii) Columns 2, 3 and 5 may not sum-up to 100 due to rounding;
- (iii) Non-respond was not taken into account for calculations.

Data of table 2.2 suggest that, informal labor diminished over between 1994 and 1997, but main characteristics remained the same. There is however one exemption: the least educated and skilled persons didn't work illegally in 1993 as much as in 1997. Informal labor diminished between 1994 and 1997, but average nominal income from informal work increased at the similar pace as inflation. It was 67% and 75% increase for informal work and inflation respectively.

There is one more important characteristics of informal labor: who is employer? The results of empirical surveys indicated that informal employment in firms is much smaller that in households. It means, that 14%

(or between 14 and 17%) of all working on black are employed by firms (mostly small, private firms). The rest, i.e. 86% of illegally employed worked for households. However, firms' black workers are much often permanently employed, and their jobs are main ones, not additional ones. Grabowski (1995) provided detailed analysis of data, which revealed that official labor market and informal labor market are related. For instance, there is strong correlation between rates for work and time of work in both markets. This suggests that labor supply (hours worked) is strongly related to rates in both markets. So if difference between rates for work in both markets is smaller, supply of informal work is smaller as well (other conditions unchanged)⁸. There is also relatively strong correlation (but not as strong as the relation between rates and working hours) between rates for work in both markets. It means that those who earn good or bad money in formal market they usually earn respectively good or bad money in informal market.

2.5 Official estimation of hidden economy and unregistered labor

GUS provides estimation of hidden economy according to rules of European System of Accounts 1995 (ESA 1995). However GUS doesn't provide estimation of illegal activities, and hidden economy is defined as economic activity, which is not prohibited by law, and its range and extent is hidden partly and wholly vis a vis public administration (fiscal, statistical, custom). Hidden economy is divided into:

- non-registered economic activities;
- under-declared economic activities.

Estimations of hidden economy are calculated by GUS for registered private firms of size:

- (i) 0-5 employees for all sections
- (ii) 6-50 employees for sections: manufacturing and mining
- (iii) 6-20 for all other sections.

Non-registered economic activities are estimated for individuals provided their work mostly in service sector. Three methods are used:

- (i) direct method;
- (ii) labour force survey (LFS) and module-survey of non-registered labour;

⁸ Lemieux, T.; B. Fortin, and P. Frechette (1994) brought similar conclusions for Canadian labor markets.

- (iii) survey of consumers.

Direct method is used for estimation of under-declared economic activities of firms, and is based on assumption on similarity of average productivity of labour and level of wage. This estimation is calculated according to section of economy, localization (rural and urban), and size of firm (according to number of employees).

Labor surveys are used to estimate non-registered labour. Three sets of data are used:

- (i) official statistical data on wages, number of employees, and registered unemployed;
- (ii) LFS;
- (iii) Module-survey of non-registered labour.

Based on these methods number of individuals working in informal sector and their income is estimated.

Consumer survey is used to estimate expenditures of households on services (such as child care, rent of flats, car repair, cleaning, repairing of flats and houses) and on construction. It is compared with statistical data on such activities.

Estimation of hidden economy is provided in table 2.3. Table 2.4 provides main data on employment, hidden economy and unregistered labor in 1995-1999.

Table 2.3 Estimation of hidden economy in creation of GDP in 1995-1999 (in current prices)

	1995	1996	1997	1998	1999
	In %				
GDP (without hidden economy)	100	1000	100	100	100
GDP (with hidden economy)	116,6	115,9	115,2	115,3	114,5
Des-aggregation of hidden economy	16,6	15,9	15,2	15,3	14,5
(i) in registered firms	11,9	11,3	11,0	11,0	10,4
(ii) non-registered labour	4,7	4,6	4,2	4,3	4,1
A. Manufacturing	1,9	1,6	1,5	1,6	1,4
B. Construction	3,1	2,9	2,5	2,5	2,5
C. Trade and Repair	8,6	7,8	7,2	6,9	6,5
D. Transport	1,0	1,0	0,9	0,9	0,8
E. Firms services	0,6	1,0	1,6	1,9	1,9
F. Other sections	1,4	1,6	1,5	1,5	1,4

Source: Rachunki narodowe według sektorów i podsektorów instytucjonalnych 1995-1999 (National Accounts), GUS, Warszawa 2001, p. 472

Table 2.4

Employment, unemployment, hidden economy and unregistered labor in 1995-1999

	1995	1996	1997	1998	1999
Employed (as in Dec., in '000), in this selfemployed	15486 5261	15842 5398	16294 5599	16267 5648	16009 5578
Unemployed (as in Dec., in '000) And unemployment rate (%)	2629 14,9	2359 13,2	1826 10,5	1831 10,4	2349 13,1
Unemployed (acc. to LFS; as in Nov.) And unemployment rate (%)	2233 13,1	1961 11,5	1737 10,2	1827 10,4	2641 15,3
Employed in hidden economy (in '000)	805	850	870	830	820
Hidden economy (% GDP)	16,6	15,9	15,2	15,3	14,5
Unregistered labour in GDP (% GDP)	4,7	4,6	4,2	4,3	4,1
GDP (%)	7,0	6,6	6,8	4,8	4,1

Source:

1. Rocznik Statystyczny Pracy 1999, GUS, Warszawa 2000, p. 27, 82, 95;
2. Rocznik Statystyczny, GUS, Warszawa 2001, p. 131
3. Rachunki narodowe według sektorów i podsektorów instytucjonalnych 1995-1999 (National Accounts), GUS, Warszawa 2001, p. 472

Data from table 2.3 and 2.4 suggests that there is relatively weak relation between unregistered labor and labor market. In 1995-1999 estimations of unregistered labor are almost flat, and unemployment varied strongly, as well as employment. This is rather contradicted with intuition and conclusions from other research work. However trend of declining of informal sector during 1995-1999 may be explained by strong economic growth during that period.

3. Economic, institutional and social reasons of informal labor market

Main reasons of informal labor may be divided to three main groups: economic, institutional and social reasons. This grouping may be instrumental for discussion of policy measures how to limit informal labor.

The main economic reasons of informal labor are the following:

- lack of legal jobs;
- lack of, or insufficient level of legal incomes;
- higher enumeration, if job is taken without registration;
- strong and unfair competitions, which may prompt firm to search for cost reduction, including informal labor.

Economic transition has brought about new phenomena such as unemployment, poverty and large income stratification. This was instrumental for many people to accept jobs in informal sector. From the other side, labor

elasticity remains relatively low, because of lack of housing and transportation infrastructure, and therefore employment was lagging behind economic growth. Fast changes in income distribution may create incentives for "losers" to accept additional informal jobs. Strong competition from firms, which benefit from informal economy, including black labor, may create strong pressure for other firms to do the same (mimic effect).

Institutional environment, in which firms, workers and households operate are usually indicated as main reasons of informal labor. They are as follows:

- high taxation on labor;
- high unemployment benefits;
- rules of granting unemployment benefits (how easy to get, time-span, checking methods of work abilities, rules of registration of temporary job contract by pensioners and unemployed ect.);
- other specific labor markets regulations (such as, rules of hiring and firing labor, including temporary and/or seasonal workers);
- size and capability of tax administration.

High taxes on income from labor create large disparities between legal and informal wages, which create incentives for informal labor. Empirical surveys suggest that work supply (its real time) is strongly correlated with the rates for work (in both legal and informal labor markets). This means that reduction of divergence between rates for legal and illegal work will lead to the decline of volume of informal labor. Low unemployment benefits create incentives for taking informal jobs. From the other side relatively high unemployment benefits doesn't provide motivation for searching any jobs (poverty trap). Burdens to register temporary work contracts by employers may lead to informal labor relations. Also inflexible labor regulations will provide incentives for such contracts. High firing costs, such as obligatory severance pay doesn't encourage employers to hire legally every worker. This is certainly obvious for small firms. Transformation brought about also new challenges for administration. Both fiscal and labor administration may be instrumental for controlling size of informal sector. Their capabilities are built over long time.

Third group consists of psychological and cultural reasons of informal labor:

- social tax morality (here it refers to social acceptance for black labor and tax evasion);

- risk-adverse, or risk-taking attitude of society;
- willingness or not for permanent work contract.

Lack of identification with state, its functions and tradition of cheating state create strong background for informal labor relations. Probably, strong family links and weak regional and national identification will lead to strong informal labor sector. Also attitude towards taking risk, is instrumental for clandestine employment.

This weak tax morality and identification with state is indirectly confirmed by corruption index. Table 3.1 provides data of corruption perception index for 1996-1999.

Table 3.1

Corruption perception index for Poland in 1996-2001

Indicator	1996	1997	1998	1999	2000	2001
CPI (corruption perception index)	5,57	5,08	4,6	4,2	4,1	4,1

Source of data and remarks:

Transparency International (various issues from www.transparency.org). CPI is between 0 and 10, the higher the better (less corruption).

Empirical surveys were concentrated on the first type of reasons, which suggested that informal labor had mostly economic character. Both mentioned above surveys were similar in this respect. Researchers also indicated that there are mutual, direct profits for both employer and employee in clandestine employment (they don't pay taxes, social security fees). There are also numerous labor market regulations which justify informal labor market. Moreover, tax morality is very low, and there is a significant social acceptance for black jobs.

There are two dimensions of institutional reasons for informal labor market in Poland. Firstly, new labor regulations and policy measures were introduced to limit social costs of reforms and sectoral changes. Their main goal was to provide social net for workers, and therefore they were set too onerously. For instance, it was relatively easy to get unemployed benefits. Additionally, new administration, which was created to deal with labor problems needed time to catch skills and capabilities. Secondly, labor regulations, which were set before 1989, neglected to large extend small firms. It resulted that the same administrative burdens were put on any firm

regardless its size. Surveys suggested that size of firm is an important feature for informal labor relations.

By and large, institutional framework in which employees and firms operate is rather encouraging for informal labor sector. It means, that most features, which are supporting for informal labor are characteristic for Poland: high taxes (marginal rate of income tax) and social security fees, high costs of firing, high costs and administrative burdens for hiring new labor. Tax and labor administration have improved and enlarged their staff and capability since 1990, and it should help to control size of informal labor sector.

Conclusions and final remarks

1. Economic and political transition in 1990s brought about new dimensions for informal labor markets, which changed its features and characteristics.
2. Results of surveys indicated that during 1995-1999 unregistered labor diminished its size and role in economy. This was proved by any survey. However estimations varied significantly. Table below provides resume of main sources of estimation. Numbers indicate share of informal labor force in total adult population.

Source of data	1994	1995	1997	1998
GIME	29,6		14,1	
LFS (*)	2,8-3,7	2,5-3,4		
GUS		7,3		4,8

(*) only permanently employed

By and large these number are relatively low. Schneider provides data for some OECD countries and participants in shadow economy as % of labor force are at much higher level. For instance such numbers for Denmark are 15,4% (1994) and 22,5% (1998); for Spain 11,5-32,5% (1997-1998). Moreover all estimations suggest that during 1990s size of informal labor increased.

3. Diminishing trend of size of informal labor market in Poland in 1994-1999 may be partly explained by strong economic growth during this period, and improvement of all employment statistics during that time.
4. Estimations done for Poland are short to cover all participants of informal labor. For instance there is anecdotal evidence that there is growing number of foreigners working on black in Poland. Number of work permissions increased over 1990s, but also number of foreigners, who worked on black caught by Polish labor administration increased as well as number of deported immigrants. Illegal foreigners may be divided at least to two groups. First group consists of low-skilled workers, who are not able to get work permission, and they are active in labor intensive activities, like construction, child care, cleaning. Second group consists of professionals, who work mostly for multinational corporations and they didn't apply for work permissions. Further research of both groups is certainly desirable.

5. Informal and regular labor markets are related, and nature of this relationship should be instrument for any policy conclusions to limit informal labor market.

Bibliography:

1. Bednarski M., Kokoszcyński R. (1988): Nieoficjalna gospodarka i jej społeczne następstwa, *Ekonomista* 3-4;
2. Dallago, B.: *The irregular market: the underground economy and the black labour market*, Worcester 1990
3. De Grazia, R.: *Clandestine Employment: A Problem of Our Times*, *International Labor Review* 119, 5 (Sept.-Oct. 1980)
4. Gikas, G.: *Przyczyny i konsekwencje gospodarki drugiego obiegu*, *Gospodarka Narodowa* nr 9/1992
5. *Gospodarka nieformalna* (1990). Collective paper edited by K. Sowa, TNOiK, Rzeszów;
6. Grabowski, M. (red.): *Szara strefa w transformacji gospodarki*, IBnGR, *Transformacja Gospodarki* 58, Gdańsk 1995
7. Grabowski, M. (1997): *Szara strefa, a rynek pracy i sektor MSP w Polsce* (mimeo)
8. M. Kańska, S. Kostrubiec, J. Witkowski: *Praca nierejestrowana w Polsce w 1995 roku*, GUS, Departament Pracy, Warszawa 1996
9. Kostrubiec, S. (1999): *Praca nierejestrowana w Polsce w 1998 roku*, GUS, Warszawa
10. Lemieux, T., B. Fortin i P. Fréchette: *The effect of Taxes on Labor Supply in the Underground Economy*, *The American Economic Review*, March 1994
11. *Mediating the transition: labour markets in Central and Eastern Europe*, CEPR, London 1998
12. *Rachunki narodowe według sektorów i podsektorów instytucjonalnych 1995-1999* (National Accounts), GUS, Warszawa 2001,
13. *Rocznik Statystyczny Pracy 1999*, GUS, Warszawa 2000,
14. *Rocznik Statystyczny Pracy 1997*, GUS, Warszawa 1997
15. *Rocznik Statystyczny*, GUS, Warszawa 2001,
16. Schneider, F. and D. Enste: *Shadow Economies: Size, Causes, and Consequences*, *Journal of Economic Literature*, Vol. XXXVIII, 1/2000
17. *Szara gospodarka w Polsce*, GUS, *Studia i Prace ZBS-E*, Warszawa 1996,
18. Tanzi, V. (ed.): *The underground Economy in the United States and Abroad*, Lexington Books, Lexington 1982
19. Thomas, J. (1992): *Informal economic activity*, Ann Arbor, University of Michigan
20. Wyżnikiewicz B. (1987): *Druga gospodarka - znaczenie i zasięg*, INE PAN, Warszawa