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Turnover of organized crime and money laundering: some preliminary empirical findings

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Abstract After a short literature review, the paper quantifies the turnover of organized crime with the help of a MIMIC estimation procedure for the years 1995 to 2006 for 20 highly developed OECD countries. The volume of turnover from organized crime was US-$ 270 billion in the year 1995 for these 20 OECD countries, rising to $ 614 billion in 2006. The worldwide turnover in organized crime had a value of $ 595 billion in 2001 and rose to $ 790 billion in 2006. These figures are very preliminary but clearly indicate the importance of the turnover of organized crime or the extent of money laundering.

Keywords Financial means of organized crime · Forensic economics · Hawala banking · MIMIC estimation · Money laundering

JEL Classification K42 · H26 · O17 · H26

1 Introduction

According to the IMF (2003, 2001) as well as the World Bank 2–4% of world gross domestic product (GDP) in 2000 stems from illicit (criminal) sources or from money laundering activities.[1] Using forecasts from regression analyses (taken from economic intelligence units) Agarwal and Agarwal (2004, 2006) estimate that global money laundering amounts to more than US-$ 2.0 to 2.5 trillion annually or about 5–6% of world GDP in 2006. In the finance and banking sector the authors find a figure of $ 500 billion to one trillion in 2004 (Agarwal and Agarwal 2004). Recent IMF estimates on the money laundering conducted by

[1] See also former estimates of the IMF (1996, 2002) and Riegler (2004, 90), Ertl (2004, 8), Courvat and Pless (1993, 171), Schneider (2004), Masciandaro (2004), and Schneider et al. (2006). The term "Money Laundering" originates from the US describing the Mafia's attempt to "launder" illegal money via cash-intensive washing salons in the 1930s which were controlled by criminal organizations.

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the drug traffickers who "introduce" the proceeds gained into the legitimate financial market amount to between 2–5% of world GDP, about $ 600 billion annually. The IDB (2004) concludes that a rough estimate for Latin America seems to be anywhere from 2.5 to 6.3% of the annual GDP of those countries. A great deal of the money derives from drug-dealing, with total revenue of $ 338 Billion in 2006.[2]

The aim of this paper is to make a first attempt to shed some light on the size and development of the financial resources of the organized crime. This is a purely empirically orientated paper with the purpose of gathering the facts and the knowledge we have about this difficult topic. Section 2 provides a brief literature review, concentrating on the latest (empirical) studies. In Sect. 3, some further empirical evidence about illegal financial transactions is provided, which are related to money laundering. Section 4 provides first estimates of the size and development of the monetary volume of criminal activities using a latent estimation approach. Finally Sect. 5 summarizes and finishes with three conclusions.

2 Literature review

Measuring the size and development of organized crime and/or money laundering is done by a few researchers only. One of the most famous economists presenting macro estimates of the extent of money laundering is John Walker (2007, 2004, 1999). His approach to quantifying money laundering is based on standard economic theory, in which he develops an international input-output-model. The Walker model relies on estimates of the extent of various types of crimes in various countries around the world, estimates of the proceeds resulting from these crimes, and the probability of those proceeds being laundered. Walker determines the laundering pathways by an "attractiveness index" based on a range of factors that express the opportunities and risks presented by the financial sectors/institutions in each country. He claims that his approach to quantify money laundering is arguably superior to those based on analysis of financial transactions, since there is no potential for the double counting inherent in the layering and placement stages of money laundering processes. The model defines the types of data and analyses that need to be generated in order to effectively model global transnational crime and money laundering. Walker (2007) concludes that since 2000 global money laundering may account for as much as $ 3 trillion per annum and that business fraud exceeds illicit drugs as a source of laundered money. He argues that attacking the economic basis of crime can be an effective transnational crime prevention strategy and that economists can play a valuable role in monitoring and combating transnational crime and money laundering.[3]

Peter Reuter (2007, 1983),[4] who is quite critical to the findings of Walker, arrives at the opposite conclusion that neither on the national nor on the global level are credible estimates available. He admits that the aggregate annual figure globally is presumably in the hundreds of billions of dollars, but whether that figure is a relatively small number of only a few hundred billions, or even a trillion, is unknown. He argues that the vagueness of such estimates

[2] Own calculations, see Sect. 4 and Table 2.

[3] In another paper, Walker (2004) empirically investigates the relationship between the shadow economy and illicit drugs. He finds out that the richer a country, ceteris paribus, the lower the shadow economy is; and he can show in his analysis that the figures for Bolivia, Columbia and Peru suggest that quite a large percentage of the estimated shadow economy may be attributed to the coca export rate. He concludes that for these coca producing countries the size of the shadow economy helps to infer the value of illicit drug production.

[4] See also Reuter (1985), Levi and Reuter (2006), Reuter and Truman (2004) and Reuter and Greenfield (2001).

is a result of both disagreements as to how money laundering is conceptualized, as well as weaknesses in the techniques used to quantify it. As a consequence, estimated changes in the volume of money laundering cannot be used as a measure for judging the effectiveness of global anti-money laundering law enforcement regime such that aggregate figures provide little value added for policy makers. He justifies his conclusion as follows: First, these aggregate findings conceal as much as they reveal. Second, the anti-money laundering control regime has been constructed not so much in order to conceal their origins, but to reduce income generated by criminal activities, increase the integrity of the financial system, and control corruption and terrorist financing. Thus, the volume of money laundering is rather of scientific interest instead of providing a useful basis for policy measures. Moreover, estimates of the underground economy are inherently weak in their own terms and even weaker as estimates of the volume of money laundering because so little is known about what share of proceeds, either legitimate or illegitimate, are processed in order to conceal the origins. The attempt to estimate total earnings from each major class of illegal crime fails, because of a lack of systematic data for capturing the scale of each crime. To summarize, Peter Reuter is very skeptical of the aggregate estimates and of any attempt to estimate the sizes and scopes of organized crime and money laundering, either for a single country or for the whole world.

Brigitte Unger (2007, 2006) quite strongly defends Walker's research arguing that since the seminal study by Walker (1994) it is possible to create a framework to measure money laundering per country and worldwide. Furthermore, she argues that Walker's model is a positive example of the interdisciplinary research in criminology and economics. In her own work, Unger provides a theoretical underpinning for the Walker model by using Tinbergen's "old" gravity model. The gravity model principally says that the export flows from country i to country j depend on the GDP of both exporting and importing countries and the distance between them. Following the modern gravity approach, the attractiveness of money laundering depends among other factors on national bank secrecy laws and governmental attitudes toward corruption and crime, etc. She admits that this model needs a better micro foundation, but she also argues that Tinbergen's original *ad-hoc formulation* was later on progressively micro-founded. Hence, Brigitte Unger provides a first theoretical basis for the Walker model and presents plausible estimates of money laundering and organized crime.[5] Unger (2006) estimates the amount of money laundering in the Netherlands to be between 18 and 25 billion Euros (year 2004/05), which is approximately 5% of Dutch GDP. The report by Unger (2006) presents a list of 25 effects of money laundering on society, which can be both positive and negative and occur in both the short and long term. This list includes effects on crime rates, economic growth, imports, exports, statistics, terrorism, as well as the solvency and liquidity of the financial sector. After identifying all effects and reviewing the literature, Unger et al. conclude that most literature on money laundering is pure speculation and without solid empirical background.

How much illicit money in all its forms can be observed? Baker (2007) estimates illicit money to range between $ 1.0 and 1.6 trillion a year. Moreover, Baker estimates that half of it—$ 500 to 800 billion a year—originates from developing and transitional economies.

[5] See especially the latest book of Brigitte Unger (2007), in which she gives an interdisciplinary overview of the state-of-the-art of money laundering, but also describes the legal problems of defining and fighting money laundering. In her book, she presents a number of economic models and applies them to measure the size of money laundering in the Netherlands and Australia. See also the book of Masciandaro et al. (2007), in which the authors first present the general principles of money laundering, then illustrate an institutional empirical framework that is useful in evaluating the causes and effects of money laundering in the banking and financial markets. The authors also analyze the design of national and international policies aimed at combating money laundering. See also Walker (1999).

These are countries that often have the weakest legal and administrative structures, the largest criminal gangs of drug dealers, and, far too often, economic and political elites who want to take their money out by all means.

Another author who is quite critical of the existing estimates and procedures for capturing the size and development of organized crime and money laundering is Petrus C. Van Duyne.[6] Van Duyne and his coworkers contend that there is no hard or proven knowledge on either policy issue. Neither the FATF (Financial Action Task Force) or the US Administration, nor the FIU (Financial Intelligence Unit) have invested in converting speculation into scientific knowledge on money laundering and organized crime (Van Duyne 2003). Van Duyne argues that every member state portrays money laundering and organized crime phenomenon as global phenomena, but none has thought of a multi-country integrated strategic information management system (Van Duyne and De Miranda 2001; Van Duyne et al. 2001). The inherent lack of knowledge about money laundering is matched by a lack of unity and transparency. Hence, this awareness has not been translated into any further action so far. Van Duyne argues that although there is little empirical knowledge, one should at any rate agree on what money laundering is supposed to mean. However, as it is the case with the term organized crime, the substance of a collectively perceived phenomenon is often taken for granted. Is money laundering really as clear a phenomenon as legislators, jurists or economists think it is? This is an important question, following the argument of Van Duyne, because if the phenomenon is ambiguously defined, one cannot determine the volume or extent of its financial threat. Despite this uncertainty, the money generated by criminal activity is seen as a (political) threat.

Additionally, Van Duyne criticizes another issue, namely the big gap between the enormous sums of 'dirty' money that are thought to exist (based on scientific estimates) on the one hand and the relatively smaller sums that are actually traced on the other hand. There are two explanations: One is insufficient law enforcement meaning that not much money and assets are detected because criminals are too smart, such that we need more tools, which also ends in more money, more personnel, more research funds and so on. Another, not implausible, explanation is that much of the money that passes through the hands of criminal organizations remains homeless. The financial stopping places are the banks, which gain, while the *herds* of crime money are passed through them. Van Duyne argues that the fight against criminal money management, including money laundering or other organized crime, should be driven by the simple wish for the restoration of justice. The offender should not retain the money or any other criminal advantage in the first place. To summarize, Van Duyne is very critical of the ways of estimating the size and development of organized crime and money laundering, but also of the methods of organizations like the FATF or FIU to fight organized crime.[7]

Another way to transfer criminal financial flows is the Hawala banking system. According to Bunt (2007), Hawala bankers[8] are financial service providers who carry out financial transactions without a license and therefore without government control. They accept cash, checks or other valuable goods (diamonds, gold) at one location and pay a corresponding sum in cash or other remuneration in a different place. Unlike official banks, Hawala bankers

[6] See Van Duyne (2006, 2007), Van Duyne and Levi (2005) and Van Duyne et al. (2005, 2007).

[7] See also Van Duyne and Soudijn (2009).

[8] Several traditional terms, like Hundi (India) and Fei-ch'ein (China), underline the fact that Hawala banking came up independently in different parts of the world. At present, a range of other terms is used to refer to the same phenomenon, such as 'informal banking', 'underground banking', 'ethnic banking' or 'informal value transfer system'.

disregard the legal obligations concerning the identification of clients, record keeping, and the disclosure of unusual transactions, to which official financial institutions are subject. Despite growing competition from formal remittance services, the use of Hawala banking has probably not declined. According to a recent estimate of the IMF (mainly Asian), migrants transfer 100 billion dollars per annum to family members and relatives in their country of origin through the official financial system. In addition, a similar amount of money is transferred in the form of goods and cash, and through underground bankers (IMF 2005). According to Bunt (2007), there are at least two different perspectives on Hawala banking. From the first point of view, Hawala banking is regarded as a centuries-old institution which has not yet proven to be useless. Low-income and migrant workers supposedly put more trust in Hawala bankers than in formal banks. This view underlines the problem associated with subjecting Hawala banking to the same rules as formal banks. Regulation by either registration or licensing is seen as ineffective because it will simply push the system further into the underground, further complicating the already problematic task of controlling Hawala transactions (Razavy 2005: 292; Perkel 2004: 210–211). Hence, Hawala banking might be the closest thing to free market banking, without government regulation and it might have worked well for centuries.[9] One should clearly emphasize these advantages of Hawala banking when criticizing it. From the opposite point of view, Bunt (2007) argues that Hawala banking is described as 'underground banking', a system that flies under the radar of modern financial regulation. Underground banking is considered a threat to the effectiveness of anti-money laundering measures and the fight against terrorist financing.[10] In order to prevent underground bankers from becoming a safe haven for criminals and terrorists, they should be subject to the standard regulations regarding record keeping, disclosure of unusual transactions and identification of clients.

What conclusions can be drawn from this short and selective literature review? First, one observes a wide range of estimations about the size of laundered money and of financial resources of organized crime institutions. Second, it is quite often not clear what definition is used and how the estimations are produced. Third, only a few researchers (e.g., Unger, Walker, Masciandaro et. al.) develop some theoretical reasoning and derive hypotheses about the size and development of financial means of organized crime.

3 Some further evidence on illegal (criminal) financial transactions

3.1 Definition and size of criminal activities

Apart from the "official" economy there exists an "Underground Economy" which includes all sorts of criminal activities that are in conflict with the law, e.g., like human trafficking or drug dealing. Opposite to these classical criminal activities, shadow economy activities contain the production of (in principle) legal goods and services with added value for the official economy and where the illegality comes from the avoidance of taxes and social security payments and the violation of labor market regulations. Hence the shadow economy (i.e. in essential legal activities, but with holding tax and social security payments, and violating other labor market regulations) and criminal economy engage in quite different activities.

[9] The trade-off between free-market thinking and more regulation is also tackled by Benson (2007), Benson and Baden (1985), Benson and Rasmussen (1994) and Benson et al. (1998).

[10] See also Tupman (2009), Roth et al. (2004) and Schmid (2009).

Table 1 Estimates of money laundering and/or organized crime financial volume

Origin/study	Year	Volume (worldwide)
National Criminal Intelligence Service (NCIS;	1998	1.3 trillion USD
Washington D.C.; USA, year 2004)	2001	1.9 trillion USD
	2003	2.1 trillion USD
UN-Estimates (New York; USA)	1994/1998	700 billion to 1 trillion USD
International Monetary Fund and Interpol	1996	500 billion USD
(Washington D.C.; USA)		
Ilöd Takats (2007)	2005	600–1,500 billion USD
Raymond W. Baker (2005, 2007)	2002	1,000–1,600 billion USD
M. D. Agarwal and Aman Agarwal (2006)	2005	2,000–2,500 billion USD
M. D. Agarwal and Aman Agarwal (2004)	2002	500–1,000 billion USD
The Economist (London, year 2003)	1997	400 billion USD
	2001	600 billion USD
Sam Kerry	1997	420 billion–1 trillion USD
Michael Schuster	1994	500–800 billion USD
John Walker (2007)	1998	2.85 trillion USD
	2000	3.00 trillion USD

Source: Own calculations and reference list

The two therefore cannot be combined into one grand underground economy (typical crime activities, like burglary, drug dealing, etc.) since crime usually does not generate positive externalities.[11] As such, whereas the shadow economy is often treated as a complement to official GDP, the criminal economy cannot be seen as such. There are, of course, areas where the two economies overlap.[12]

The worldwide turnover generated by criminal operations reached $ 1.3 trillion in 1998 and even $ 2.1 trillion in 2003 (see Table 1). Some authors like Agarwal and Agarwal estimate even higher figures from $ 2.0 to 2.5 billion in 2005, or John Walker up to $ 3.0 trillion (Harvey 2009).

3.2 Necessity of money laundering

The areas and amount of organized crime in Middle-Europe is quantified following Siska (1999) and by own calculations (see Fig. 1). The largest part of it is made up of drug trafficking (30%), followed by illegal arms trade with 20% as well as "white collar" economic crimes. Less important are property crimes (15%), night-life (10%) and violent crimes (5%). In order to use the earnings generated by criminal activities into legal businesses, some kind of "transformations" or money laundering has to be done. Hence, money laundering is necessary, because nearly all illegal (crime) transactions are done with cash as it leaves no traces on information carriers, such as documents or bank statements (Vanempten 1994: 24; Masciandaro 2004).

[11] Applying Public Choice considerations an exception may be drug trafficking, as there is a market for such illegal substances, and thus a real value is created by such activities like drug production and trafficking. I owe this argument to an anonymous referee. See also Benson and Rasmussen (1994).

[12] See Schneider (2000, 2004, 2005), Schneider et al. (2006), and Kirchgaessner (1983).

Origin: Siska, 1999, p. 13 and own calculations

Fig. 1 Organized Crime and their main areas in Central Europe

An important role for money laundering is played by drug-trafficking, with total revenue of $ 500 to 1,000 billion equal to 9% of worldwide trade (Bongard 2001: 55, 181). The enormous volumes of cash passing through the hands of drug traffickers need to be laundered: One million dollars in 20 dollar-notes weighs about 55 kg; the same sum in five dollar-notes scales 220 kg (Siska 1999: 28). The UNDOC World Drug Report 2005 reports that during the observation period (2001–2003) about 200 million people, which is around 5% of world population, consumed drugs at least once. Therefore, the extent of the illegal drug-market is enormous: "The value of the global illicit drug market for the year 2003 was estimated at $ 13 billion at the production level, at $ 94 billion at the wholesale level (taking seizures into account), and at $ 322 billion based on retail prices and taking seizures and other losses into account. Obviously, the size of the global illicit drug market is substantial. The value, measured at retail prices, is higher than the GDP of 88% of the countries in the world" UNDOC 2005, 2005: 5, 127).

4 Quantification/estimation of the turnover of organized crime

The estimation (as shown in Table 1) of the size of the financial means (or turnover) of organized crime is an extremely difficult task, mainly due to the lack of adequate data, a problem which holds true not only for individual countries but also on a global basis. Hence, all existing estimations are subject to large errors and can be seen only as preliminary scientific estimates or in some cases even "scientific guesses".

Apart from a first major difficulty regarding the various definitions of the term "turnover or financial means of organized crime" on the national and the international level a second problem arises: the transaction-intense layering stage of the financial means of criminal money can lead to potential double and multiple counting problems. Furthermore estimates

(or guesstimates) are quite often made for specific areas (e.g., drug profits) or are based on figures that are wrongly quoted or misinterpreted.

4.1 Overview of the estimation methods

Generally direct and indirect methods of quantification or estimation can be distinguished:[13]

Direct methods focus on recorded ("seized"/confiscated) statements of illegal payments from public authorities and hence should provide—at first glance—a first rough estimate. However, to get an overall/total figure the much bigger undetected volume must be traced, which quite often proves to be extremely difficult. Methods which are frequently used are the discrepancy analysis of international balance of payment accounts, or changes in cash stocks of national banks.

Indirect methods try to identify the turnover of organized crime across time with the help of causes and indicators. First, the various causes (e.g., the different criminal activities, police expenditures, etc.) and indicators (confiscated money, prosecuted persons and so on) are identified and second, an econometric estimation is undertaken. When formulating econometric models, for example, the dependent variable is the drug supply (production at market prices) and the independent variables are drug selling prices, confiscation (of drugs), number of addicted people, intensity of punishment, etc. As already argued these are only partial results and the difficulty arises when the total size of this criminal turnover is to be estimated.

4.2 Applying the MIMIC estimation procedure

4.2.1 The MIMIC-procedure

The MIMIC (multiple-indicators multiple-causes) method is based on the statistical theory of unobserved variables, which considers multiple causes and multiple indicators of the phenomenon to be measured. For the estimation, a factor-analytic approach is used to measure the turnover of organized crime as an unobserved variable. The unknown coefficients are estimated in a set of structural equations within which the "unobserved" variable cannot be measured directly. The MIMIC model consists in general of two parts, with the measurement model linking the unobserved variables to observed indicators. The structural equations model specifies causal relations among the unobserved variables. In this case, there is one unobserved variable, the size of the turnover of the organized crime; this is assumed to be influenced by a set of indicators for the turnover of organized crime, thus capturing the structural dependence of the turnover of organized crime on variables that may be useful in predicting its development and size. The interaction between the causes Z_{it} $(i = 1, 2, \ldots, k)$ the size of the turnover of organized crime X_t, and the indicators Y_{jt} $(j = 1, 2, \ldots, p)$ is shown in Fig. 2.

As already said, the volume and development of the financial amount of organized crime is treated as a latent (i.e., unobservable) variable in the MIMIC estimation procedure. This procedure uses various causes for higher money laundering and/or higher turnover of organized crime and indicators (confiscated money, prosecuted, persons, etc.) to get an estimation of the latent variable, which is the volume of turnover of organized crime. One difficulty in using this method is that one gets only a relative estimate of the size and development of turnover from organized crime and one has to use the absolute values of other estimations in order to transform/calibrate the relative values from the MIMIC estimation into absolute ones.

[13] See Unger (2007), Schneider et al. (2006), Walker (1999) and Riegler (2004).

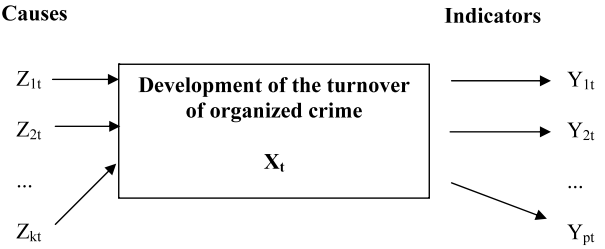

Fig. 2 Development of the turnover of organized crime

4.2.2 Empirical results

Now a first attempt is made to undertake a MIMIC estimation of the amount of the turnover or financial means from criminal activities for 20 OECD countries over the years 1994/95, 1997/98, 2000/2001, 2002/2003, 2003/04 and 2004/05. Based on theoretical considerations, I derive the following three major hypotheses for the cause variables:

(1) Theoretically, I expect that the more criminal activities (such as dealing in drugs, illegal weapon selling, increases in domestic crimes, etc.), take place in a country, the higher the turnover of organized crime activities—ceteris paribus.
(2) The higher is official GDP per capita, the higher the turnover of organized crime activities—ceteris paribus.
(3) The better the legal system works, the lower the turnover or organized crime activities—ceteris paribus.

For the indicator variables I derive the following three hypotheses:

(1) The higher the amount of turnover of organized crime, the higher is the amount of confiscated money– ceteris paribus.
(2) The higher the amount of turnover of organized crime, the higher is the cash (per capita) used in criminal activities—ceteris paribus.
(3) The higher the amount of turnover of organized crime, the higher the number of prosecuted person—ceteris paribus.

The result of the MIMIC estimation is shown in Fig. 3. From eight causal variables, five are statistically significant, the quantitatively most important coefficient being the one of illegal drug selling, which also has the highest statistical significance. It is followed by the estimated coefficient of illegal weapon sellings and the one of illegal trade with human beings. A state having a better functioning legal system has a lower amount of turnover from criminal activities. The coefficient has the expected negative sign and is statistically significant. If domestic crime activities increase, the amount of organized crime activities increases; the coefficient has the expected positive sign, but is statistically not significant. If we turn to the indicator variables, the variable "confiscated" money has the expected positive sign and is highly statistically significant. Moreover, the more people prosecuted by criminal activities, the more activities of organized crime have occurred, hence the number of prosecuted person has the expected positive influence on the amount of turnover of organized crime. The test statistics of this MIMIC estimation are satisfactory.

In order to calculate the absolute values of the size of the turnover of organized crime from these MIMIC estimation results, I use already available estimates of aggregated figures for Australia and other countries from the study of Walker (2007). With these values, aggregate results of the turnover from organized crime for the 20 OECD countries could be

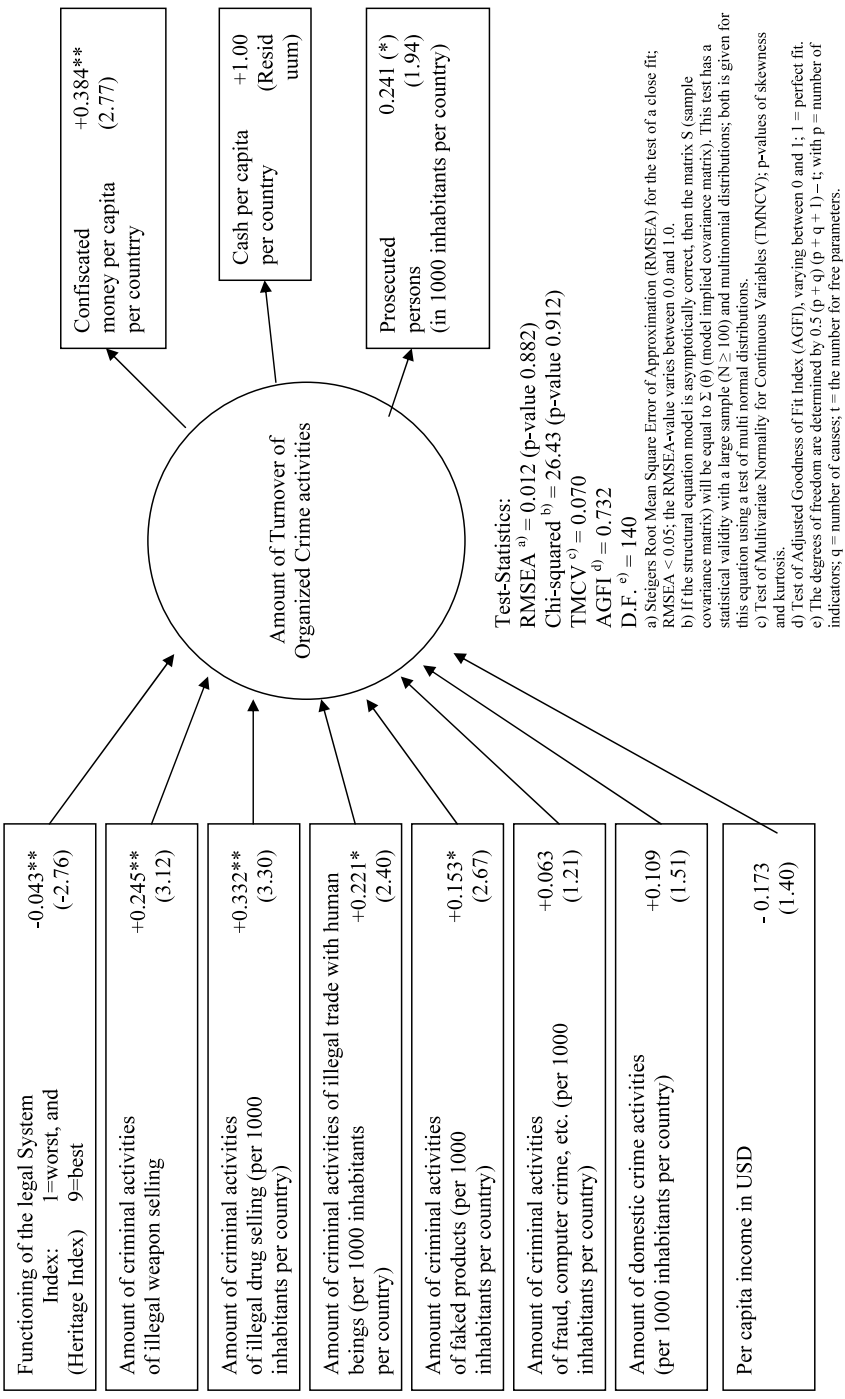

Fig. 3 MIMIC estimation of the turnover of organized crime activities for 20 highly developed OECD countries over the periods 1994/95, 1997/98, 2000/2001, 2002/2003, 2003/04 and 2004/05

Table 2 Calculations of the volume of turnover from organized crime of 20 OECD countries using the MIMIC estimations

Year	Volume of turnover of organized crime (billion USD for 20 OECD countries)	20 OECD countries
1995	270	Australia, Austria, Belgium, Canada, Denmark, Germany, Finland, France, Greece, Great Britain, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Switzerland, Spain and USA.
1996	296	
1997	320	
1998	334	
1999	362	
2000	389	
2001	420	
2002	441	
2003	479	
2004	515	
2005	573	
2006	614	

Source: Own calculations, calibrated figures from the MIMIC estimations. Calibration basis the country figures of the study John Walker (2007)

calculated for the years 1995 to 2006. The results are shown in Table 2. Again, it should be explicitly mentioned that these are very rough, preliminary calculations, but they clearly show an increasing turnover of organized crime over time. In 1995 the volume of turnover from organized crime had a size of $ 270 billion, increasing to $ 614 billion in 2006.

5 Summary and conclusions

In this paper, a short review of the applied literature of the turnover of organized crime and of money laundering is given. Then an attempt is made to estimate the turnover of organized crime for 20 OECD countries. Summarizing this paper, it reaches the following three key results:

First, the necessity of money laundering is explained as nearly all illegal (criminal) transactions are done with cash. Hence, the amount of cash from criminal activities must be laundered in order to have some "legal" profit, to do some investment or consumption in the legal/official world.

Second, the paper quantifies and estimates the financial volume and development of organized crime activities. Using a MIMIC estimation procedure, the amount of turnover from criminal activities is estimated with various types of criminal activities, the functioning of the legal system and per capita income as causal variables and confiscated money, cash per capita and prosecuted persons as indicators.

Third, to get a figure of the extent and development of turnover of organized crime over time is even more difficult. This paper collects almost all available findings and undertakes own estimations with the help of a latent estimation procedure (MIMIC) and shows that the turnover of organized crime activities has increased from $ 270 billion in 1995 to $ 614 billion in 2006 for 20 OECD countries (Australia, Austria, Belgium, Canada, Denmark, Germany, Finland, France, Greece, Great Britain, Ireland, Italy, Japan, Netherlands, New

Zealand, Norway, Portugal, Switzerland, Spain and the United States). On a worldwide basis, $ 338 billion USD is estimated to be the turnover from the criminal drug business in 2006 alone. The overall turnover in organized crime had a value of $ 595 billion in 2001 and increased to $ 790 billion in 2006. These figures are very preliminary with quite a large error, but give a clear indication how important the turnover of organized crime and of course money laundering nowadays is.

From these preliminary results I draw the following three conclusions:

(1) The financial means of organized crime or the amount of it to be laundered are extremely difficult to tackle. It is defined differently in almost every country, the measures taken against it vary from country to country and it is not clear at all what money laundering or the financial means of organized crime really are.
(2) To effectively fight against the financial means of organized crime is extremely difficult, as we have no efficient and powerful international organizations.[14]
(3) Hence, this paper should be seen as a first attempt at shedding some light on the grey area of the financial means of organized crime or money laundering activities and to provide a better empirical basis for gauging their size and scope.

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[14] See also Dolar and Shughart II (2007) who demonstrate for the U.S. how little effect the measures taken after 9/11 had to prevent money laundering in U.S. financial institutions, instead they dramatically increased the cost of monitoring, especially in the parent banking institutions.

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