

Money Laundering: Some Preliminary Empirical Findings^{*)}

by
Friedrich Schneider^{**)}

Summary:

After defining and explaining the three stages of money laundering, the paper tries a quantification of the volume and development of money laundering activities, with the help of a DYMIMIC estimation procedure for the years 1995 to 2006 for 20 highly developed OECD countries. The volume of laundered money was 503 billions USD in the year 1995 for these 20 OECD countries and increased to 1,106 billions USD in 2006. On a worldwide bases in 2006 910 billion USD are estimated to be laundered coming only from the total drug (crime) business. The overall turnover in organized crime had a value of 800 billion USD in 2001 and increased to 1,700 billion USD in 2006. These figures are very preliminary with a quite large error, but give a clear indication how important money laundering and the turnover of organized crime is nowadays.

Keywords: Money laundering, volume of money laundering, definition of money laundering, DYMIMIC estimation

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^{**)} Professor of Economics, Johannes Kepler University of Linz, Altenbergerstrasse 69, A-4040 Linz-Auhof / AUSTRIA, Phone: 0043-732-2468-8210, Fax: 0043-732-2468-8209, E-mail: friedrich.schneider@jku.at, <http://www.econ.jku.at/schneider/>

1.) Introduction

The term „Money Laundering”¹ originates from the US describing the Mafia’s attempt to “launder” illegal money via cash-intensive washing salons in the 30s, which were controlled by criminal organizations. The IMF estimates that 2-5% of the world gross domestic product (GDP) stems from illicit (criminal) sources.² A great deal of the money derives from drug-dealing, with a total revenue of 910 Billion USD in 2006.³ In 2005 the Austrian Police secured drugs worth 49.266 Million Euro (value of the drugs measured “street” prices), in total 25,892 persons were charged for violation of the Austrian Narcotics Act.⁴ (see figure 1.1 and figure 1.2). Most of all illegal transactions are processed by cash since there is the smallest risk to leave no trace;⁵ but nowadays there exists a growing tendency to “misuse” the internet in order to undertake illicit transactions in form of online-banking, cyber money and electronic purse.

The goal of this paper is to undertake a first attempt, to shed some light about the size and development of money laundering and its techniques. This is an empirically orientated and descriptive paper with the purpose to collect the facts and the knowledge we have about this difficult topic. In chapter 2 illegal financial transactions are described, which demand money laundering activities, and chapter 3 deals with the necessity of money laundering. The definition of money laundering and the various stages of money laundering are shown in chapter 4 as well as the money laundering techniques. Chapter 5 provides first estimations about the size and development of money laundering and the monetary volume of crime activities. Chapter 6 deals with measures against money laundering, and finally the last chapter 7 gives a summary and ends with four conclusions.

¹ Compare Ertl (2002, p. 8), Courvat/Pless (1993, p. 171f), Schneider (2004) and Masciandaro (2004), and Schneider, Dreer and Riegler (2006).

² Compare IMF (1998). However the results are scientifically doubtful, since they are scientifically not “reproducible” and not scientifically proven. See Riegler (2004, p. 90ff).

³ Own calculations, compare chapter 5 and table 2.1.

⁴ These figures only cover cannabis products, heroin, cocaine, XTC-pills and LSD-trips. Compare BMI (2006), Suchtgiftmittelbericht (2005, p. 4).

⁵ Compare Vanempen (1994, p. 24f) and the FIU Germany: „...Cash transactions continue to play a significant role in a large number of cases. Evidently, offenders are aware and continue to deliberately exploit the advantage of “interruption of the paper trail” afforded by cash transactions. Particularly significant in this context are the very large amounts involved in some of these cash transactions.” FIU (2004 p. 42).

2.) Illegal (criminal) financial transactions

Apart from the “official” economy there exists an “Underground Economy”, which characterizes an illegal economy including all sorts of criminal activities, which are in conflict with the legal system, e.g. organised crime or drug dealing (see figures 2.1 and 2.2 for a list of criminal activities). Worldwide these profits (or turnover) generated by criminal operations reached a size of 1.2 to 2.1 trillion USD in 2003 and, of course, are the object for money laundering processes (see table 2.1). As table 2.2 shows, in 2006 in Austria and in Germany turnover from criminal activities which were laundered reached a size of 903 million Euro and 7,903 million Euro, respectively; in 2004 nearly 28 Million EURO of “black” money was frozen by Austrian authorities.⁶

A major characteristicum of organised crime is the tight and disciplined structure of the criminal organization in combination with criminal activities done on a large scale. In 2004 in Germany, for example, 620 investigations linked to organised crime were made; the total amount of the damages identified reached 759 Million Euro with estimated profits amounting to 1,337 million Euro, however, provisionally seized assets only added up to a total value of 68 Million Euro in the course of these investigations.⁷

The areas and amount of organised crime in Middle-Europe is quantified following Sisha (1999) and by own calculations: The largest part of it is made of drug trafficking (40%), followed by the illegal trade of arms with 20 per cent and the “white collar” economic crimes (15 per cent), as shown in figures 2.1 and 2.2. In order to return the earnings generated by criminal activities into legal businesses, some kind of “transformations” has to be done. This process is called money laundering, which is not to be mixed up with tax fraud or flight of capital (see table 2.3).

Opposite to these classical criminal activities, shadow economy activities mean the production of (in principle) legal goods and services with an value added for the official economy and where the illegality comes from avoiding taxes and social security payments and violating labour market regulations. Hence shadow economy (i.e. in principal legal activities, but with holding tax and social security payments, and violating other labour market regulations) and underground (crime) economy are quite different activities, which can not be summed up to one underground economy (typical crime activities, like burglary, drug dealing, etc.) because the latter usually produces no positive value added for an

⁶ Compare BMI (2005).

⁷ Compare BKA (2005, p. 14 and 16).

economy. Hence, they can not be treated as a complement to the official GDP, whereas to the traditional shadow economy can be seen as a complement to the official GDP, of course for both economies we have overlapping areas.⁸

The tables 2.4 and 2.5 contain the size and development of the shadow economy as well as of the underground economy. The size and development of these two economies is shown for Germany in table 2.4 and for France, Great Britain and Italy in table 2.5; in both the values are shown over the period from 1996 to 2006. If we consider first the shadow economy of Germany, we clearly realise that over the time span 1996 to 2000 the shadow economy was larger than the underground economy; the shadow economy had a value of 263 billion Euros in 1996, and increased to 329 billion Euros in 2000; and the underground economy had a value of 189 billion Euros in 1996 and increase to 334 billion in 2000. From the year 2000 on, the underground economy was larger than the shadow economy, and reached a size of 438 (or 20.1% of official GDP) in the year 2006, whereas the shadow economy amounted for 345 billion Euros (15.0% of official GDP).

The largest underground economy has, as shown in table 2.5, Italy, which had a size of 18.2% in 1996, which has increased to 25.4% within ten years. Exactly the opposite movement we have for the shadow economy of Italy. Shadow economy had a value of 27.0% of official GDP in 1996 and fell to 23.2% in 2006. In France, the underground economy had a value of 8.9% in 1996 and this value rose to 14.8% in 2006. The shadow economy had a value of 14.9% in 1996 and declined to 12.4% in the year 2006. Finally, if we consider Great Britain, the underground economy had a value of 9.4% in the year 1996 and rose to 13.7% in the year 2006. In contrast, the shadow economy fell from 13.1% in 1996 to 11.1% in 2006. For all three countries we can derive the conclusion that the shadow economy has been declining over the last years, whereas the underground economy (classical crime activities) has been strongly increasing.⁹

⁸ Schneider (2000, 2004, 2005), and Schneider, Dreer and Riegler (2006).

⁹ The sizes and development of the shadow economy and underground economy have the following sources: "Values of the shadow economy: Schneider (2005); values of the underground economy: calibrated from the DYMIMIC estimation, which is presented in chapter 5.

3.) Necessity of Money Laundering Activities

According to some estimations, the total turnover of organised crime actually reaches figures between 1,200 billion and 2.1 trillion USD in 2003 and the worldwide volume of money laundering “from drug business” obtains 810 billion in 2003 (see table 2.1). However it should be noted that there is a huge variance in the size of these figures and how reliable they are, is an open question but at least they provide some preliminary magnitudes.

Money laundering is necessary, because nearly all illegal transactions are done by cash, and because cash leaves no traces on information carriers like documents or bank sheets.¹⁰ An important role for money laundering is played by drug-trafficking, with total revenue of 500 to 1,000 billion USD equally to nine per cent of the worldwide trade.¹¹ The UNDOC World Drug Report 2005 reports that during the observation period (2001-2003) about 200 million people, who correspond approximately to 5 per cent of the world’s 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 USD 13 billion at the production level, at USD 94 billion at the wholesale level (taking seizures into account), and at USD 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”.¹² By comparison, in 2004 drugs with an estimated black-market value of 33,333 million Euro were secured in Austria.¹³

These immense sale volumes and profits of drug-trafficking need to be laundered: One million USD in 20 dollar-notes weighs approximately 55 kg; the same sum in five dollar-notes scales 220 kg.¹⁴

¹⁰ Compare Vanempten (1994, p. 24f), Masciandaro (2004).

¹¹ Compare Bongard (2001, p. 55 and p. 181).

¹² UNDOC (2005, p. 5 and p. 127).

¹³ Compare BMI (2005), Suchtmittelbericht Österreich (2004), and Schneider, Dreer and Riegler (2006).

¹⁴ Compare Siska (1999, p. 28).

4.) Definition and Stages of Money Laundering

In order to better understand the process of money laundering we first provide an definition of it and then turn to the various stages of money laundering.

4.1) Legal Definition of Money Laundering

The term „Money Laundering“ was firstly used in 1973 during the Watergate Scandal and is therefore no original legal definition but a colloquial paraphrase describing the process of transforming illegal into legal assets.¹⁵ Based on US approaches a supranational definition of money laundering was created by the United Nations Convention on Drugs and an EU-council directive, which had to be converted into the national law of all Member States. The council directive 91/308/EEC of June 1991 of money laundering is the following:

“...Money laundering` means the following conduct when committed intentionally:

- 1) the conversion or transfer of property, knowing that such property is derived from criminal activity or from an act of participation in such activity, for the purpose of concealing or disguising the illicit origin of the property or of assisting any person who is involved in the commission of such activity to evade the legal consequences of his action,
- 2) the concealment or disguise of the true nature, source, location, disposition, movement, rights with respect to, or ownership of property, knowing that such property is derived from criminal activity or from an act of participation in such activity,
- 3) the acquisition, possession or use of property, knowing, at the time of receipt, that such property was derived from criminal activity or from an act of participation in such activity,
- 4) participation in, association to commit, attempts to commit and aiding, abetting, facilitating and counselling the commission of any of the actions mentioned in the foregoing paragraphs.

Knowledge, intent or purpose required as an element of the abovementioned activities may be inferred from objective factual circumstances.

Money laundering shall be regarded as such even where the activities which generated the property to be laundered were perpetrated in the territory of another Member State or in that of a third country....”

Source: Council Directive 91/308/EEC of 10 June 1991 on prevention of the use of the financial system for the purpose of money laundering, Brussels.

¹⁵ Compare Ertl (2002, p. 8).

4.1.1.) Germany

According to the newspaper “Tagesspiegel” approximately 100 billion Euros are laundered in Germany in 2004.¹⁶ Germany’s Criminal Code determines in § 261 punishments in case of money laundering:

*Anyone who hides, obscures the origin of, or prevents or jeopardizes the determination of the origin, the finding, the forfeiture, the confiscation or the seizure of an object which originated from a felony committed by another person or a misdemeanour committed by another person or by a member or criminal association shall be punished by a term of imprisonment of up to five years or by a fine.*¹⁷

The object must be due from an illegal act of another person and both concealment and thwarting are punishable. However no punishment is possible if assets are disguised which have arisen from ones own crimes or offences. The statutory framework of a maximum penalty is an imprisonment of five years; in case of gang membership (or organized crime) or operation on a commercial basis an imprisonment up to ten years can be imposed.

4.1.2.) Austria

In Austria the definition of money laundering or criminal code reads:

*Anyone who conceals or disguises the origin of property that originate in the crime of another, particularly by giving false information, in legal proceedings, regarding the origin or true nature of those property items, the ownership or other rights to them, the power of disposition over them, their transfer or their whereabouts, shall be punished with imprisonment for a term of up to two years or with a monetary fine of up to 360 daily rates.*¹⁸

In Austria according to the existing law money laundry means the process of converting profits from criminal activities with the goal to hide their illegal origin. The intention of money laundering comes from all assets resulting from criminal activities, which explicitly

¹⁶ See <http://archiv.tagesspiegel.de/archiv/18.11.2005/2180342.asp>. This figure is, however, much higher than all other figures for Germany, e.g. Schneider (2004) estimates “only” 7.24 billion Euro cash flow of money laundering.

¹⁷ English translation of Germany’s penal code. See <https://www.imolin.org/amlid/showLaw.do?law=6301&language=ENG&country=GER>

¹⁸ English translation of Austrian’s penal code of 1993. See <https://www.imolin.org/amlid/showLaw.do?law=5951&language=ENG&country=AUS>

contradict the legal code, among them for example terrorist organisations. However, a person can only be prosecuted who owns assets of another person which are due either from a crime or from offences that are enumerated in § 165 StGB, as for instance bribery, smuggling or falsification of documents. As a result there is no penalty for any kind of „white washing“ one's own criminal assets. In contrast to other legal systems there exists no separate money laundering law in Austria, criminal offence is regulated in the Austrian's penal code (StGB), in addition numerous obligations exist in the banking law (BWG), in the GeWO, the gambling law, etc.

4.2.) Criminological characteristics of Money Laundering

All monetary assets (cash and book money (electronic bank transfers)) or their surrogates as well as non-monetary assets such as moveable goods and real estates, which are generated directly or indirectly from a criminal action (or are intended for the realization of such an activity), are considered as an object of money laundry. The intended purpose of the transformation is to wash illicit/criminal assets in a form of legal transferability. The proceeding is thereby characterised by a criminal intention to systematically transform, mix, transfer, convert and deceive the true origin or nature of incriminated objects.

4.3.) The Steps of “Cash” Money Laundering

Money laundering takes basically place in the following three steps/stages:

In step one, illegal profits are placed (the placement), which means the physical infiltration of cash (coming from crime) into the financial system. In step two, this money is then converted into book money (primary and secondary deposit), which is finally followed by a layering process (stacking of illegal funds). These sophisticated steps (or “acts”) are used to hide the origin of the money by creating complex financing transactions between different states and piling up several layers of dealings. Reintegration and parking of this illegal money, which shows no connection to organised crime and is converted into visible asset, make up the third step through investments in a business, industrial enterprises, tourism projects, etc.

4.3.1.) Step 1: “The Placement“

At the first initial step, termed “placement”, profits from criminal activities are infiltrated into a legal bank/economic system; at this stage there is an increased risk of being revealed or detected. The following two different methods are commonly used:

(1) Primary deposit

Using primary deposits one understands immediate placement of criminal revenues into a legal financial system without attracting attention of regulatory agencies. With the help of „structuring“ and „smurfing“ limiting amounts are undermined in order to avoid identification, obligations to report and documentation required. Besides, money is split up systematically in small partial amounts as to permit inpayment in several bank accounts below respective identification and declaration limits, e.g. in Austria these regulations don't apply to savings deposits up to a figure of 15,000 Euro.

Another method of placement tries to influence the control mechanisms of the institutes of the financial sector in terms of purchasing existing banks or starting-up new banks in offshore countries. („company havens“ or „bank havens“). Moreover, to bribe the employees, is a commonly used (illegal) instrument to place criminal money: Thereby many attempts are made to bribe bank employees in order to allow a direct infiltration of criminal money without attracting attention of supervisory authority. Depositing criminal currency to bank accounts abroad provides another opportunity to enter the legal financial or economic system as well.

(2) Secondary deposit

Unlike the primary deposit of criminal money, secondary deposit is an indirect infiltration of money supply into the Bank system and thus a conversion into book money through interconnection of a natural or legal person. This happens by changing the financial institutions, e.g. incriminated money is converted into other assets via front men, who trade with an account of a third party, or by using other person's names in order to open an account or to open a company or to buy an insurance policy.

Indirect placement can also be accomplished by forwarding the displacement of the money laundering into life insurance companies, financial service providers and exchange offices. Currently such activities or “offers” are sent via email or quoted at homepages to occupy as a

“financial agent”, to provide (German or Austrian) banking accounts, which are used to remit illegal proceeds so as to veil transfer ways.¹⁹

A further technique to launder money is the setting-up of front companies, which in opposition to front men are corporate bodies, that infiltrate black money on their banking accounts and therewith into the fiscal system by means of feigned turnovers. This works only if such firms have a cash-intensive business (e.g. gastronomy, import-export companies, car trade, hotel sector, auctioneers and galleries). For example 25,000 customers of life insurances are under strong suspicion of laundering black money by single payments worth of one billion euro.²⁰

4.3.2.) Step 2: „Layering“

In step 2, the so-called layering stage, criminals attempt to conceal the source of illegal income through a great deal of transactions by moving around black money. Transaction intensity and transaction speed are increased using multiple transfers and transactions, electronic payment systems plus diverging jurisdictions, and inefficient cooperation of criminal prosecution between countries often simplify/facilitate the layering processes as well. A legitimization of capital transfer is thereby accomplished by over- and under invoicing at international commercial transactions, by charging fictive goods or services in form of winding up transactions or by back to back loan business. In this case money launderers lodge a certain amount of money to a banking account (or plausibly prove securities adequate at value on another bank) in order to subsequently retrieving the same sum as bank loan afresh/again. If so a money launderer raises his own capital and is though in possession of a proof of origin concerning the bank loan.

Quite common is also the misuse of financial derivatives and swaps by the same token occurring commonly among money launderers to cloud/hide the original derivation of criminal funds. Here two offshore companies, which are merely separate de jure but de facto controlled by just one person, arrange an option contract, by taking each either “long” or “short” position. The loss of one is compensated by the profit of the other. Financial volume of offshore-centres adds up to approximately 10-12 billion USD, furthermore it is assumed that annual growth amounts 15 per cent.²¹

¹⁹ See http://www.daserste.de/plusminus/beitrag_dyn~uid,7x6o6i1cla2hntlx~cm.asp

²⁰ See <http://archiv.tagesspiegel.de/archiv/18.11.2005/2180342.asp>

²¹ Compare IMF (2002) and Schneider, Dreer and Riegler (2006).

4.3.3.) Step 3: “Integration”

In this third step infiltration of transformed and transferred capital into the official economy by means of financial investments (specific deposits, stocks) or property (direct investment in real estates and companies) is primarily completed in countries²² promising high growth rates and little control.

4.4.) Latest Developments in Money Laundering

New (mostly electronic) technologies in the area of payment transfers allow economic transactions without any restriction by legal and territorial barriers or by state controls. The following three are meanwhile known:

(1) Electronic Purse („Prepaid Cards“, „Smart Cards“)

These smart cards, storing money electronically, seem appropriate to money laundering activities, especially the “white cards” since no account is necessary and loading as well as discharging are proceeded completely anonymously. Hence money laundering counter-measures include limitations of the storable money, the transaction volume and the number of cards per person, additionally a card assignment to an authorised account is required.

(2) „Online-Banking“

Online Banking designates world-wide financial transactions in the internet; money laundering at the same time can be prevented if orders carried out by the internet are depending on legitimised accounts.

(3) „Cybermoney“

In the internet (“ecash”), unfortunately, the only possibility to identify virtual money is given when the change of real cash into virtual money by a cybermoney-emitter takes place. However this “handicap” is avoided by criminals through acquiring cyber-money emitters.²³ By paying with cybermoney there is no linking to an account, consequently no paper trail is

²² Riegler (2004, p. 41).

²³ Compare Altenkirch (2002, p. 63ff).

left. The danger of malpractice is minimized if the usage of e-cash services obligatory depends on an existing account relationship. Whereas FATF especially names the identification of customers as a major problem when using the internet for money laundering activities. All forms of payment transactions regarding new technology should therefore be carried out through legitimised accounts.²⁴

5.) Quantification/Estimation of the Volume of Money Laundering

The estimation (as shown in tables 2.1 and 5.1) of the volume of money laundering (size and development)²⁵ is an extremely difficult task, mainly due to the lack of adequate data, a problem which holds true not only for single countries but also on a worldwide basis. Hence, all existing estimations are afflicted with large errors (+/-20.0%) and can only be seen as preliminary scientific estimates or in some cases even “guesses”.

Apart from a first major difficulty of diverging definitions of the term „money laundering“ on the national and the international level a second one arises, as particularly the transaction-intensive layering stage can lead exceedingly to potential double and multiple counting problems. Furthermore many estimates (or guesstimates) quite often are made for specific areas (e.g. drug profits) or are based on figures that are wrongly quoted or misinterpreted or just invented without a scientific base!

Generally one can make a distinction between direct and indirect methods of quantification:

Direct methods focus on recorded (“seized”/confiscated) statements of illegal payments from the public authorities and hence should provide – at first glance – a first rough estimate. However, to get an overall/total figure one has to estimate the much bigger (undetected/“Dunkelziffer”) volume, where quite often this turns out to be extremely difficult or even impossible! Methods, which here are quite often used are the discrepancy analysis of international balance of payment accounts, or changes in cash stocks of national banks.²⁶

Indirect methods try to identify the volume and development over time of money laundering activities with the help of causes and indicators. First, the various causes (e.g. the various criminal activities, income distribution) and indicators (confiscated money, prosecuted

²⁴ See <http://www.ex.ac.uk/~wakeupman/undergrad/ron/explosion%20of%20money%20laundering.htm>

²⁵ Some results are shown in table 3.

²⁶ Compare Riegler (2004, p. 65ff).

persons, income per capita) are identified and second, an econometric estimation is undertaken.

5.1.) Econometric and DYMIMIC Procedures

When choosing an econometric regression estimation technique, for example, the dependent variables is the drug supply (output evaluated at market prices) and the independent variables are drug selling prices, confiscation (drug volume), number of addicted people, intensity of punishment, etc. As already argued these are only partial results and the difficulty arises to get an overall figure and an estimate how much of these criminal turnover is used for laundering purposes.

In the DYMIMIC estimation procedure the volume and development of money laundering is treated as a latent (i.e. unobservable) variable. This estimation procedure uses various causes for more laundering (i.e. various criminal activities) and indicators (confiscated money, prosecuted, persons, etc.) to get an estimation of the latent variable, the volume and development of money laundering. One big difficulty using this method is that one gets only a relative estimated value of the size and development of the money laundering and one has to use the absolute values of other estimations in order to transform/calibrate the relative values from the DYMIMIC estimation into absolute ones.

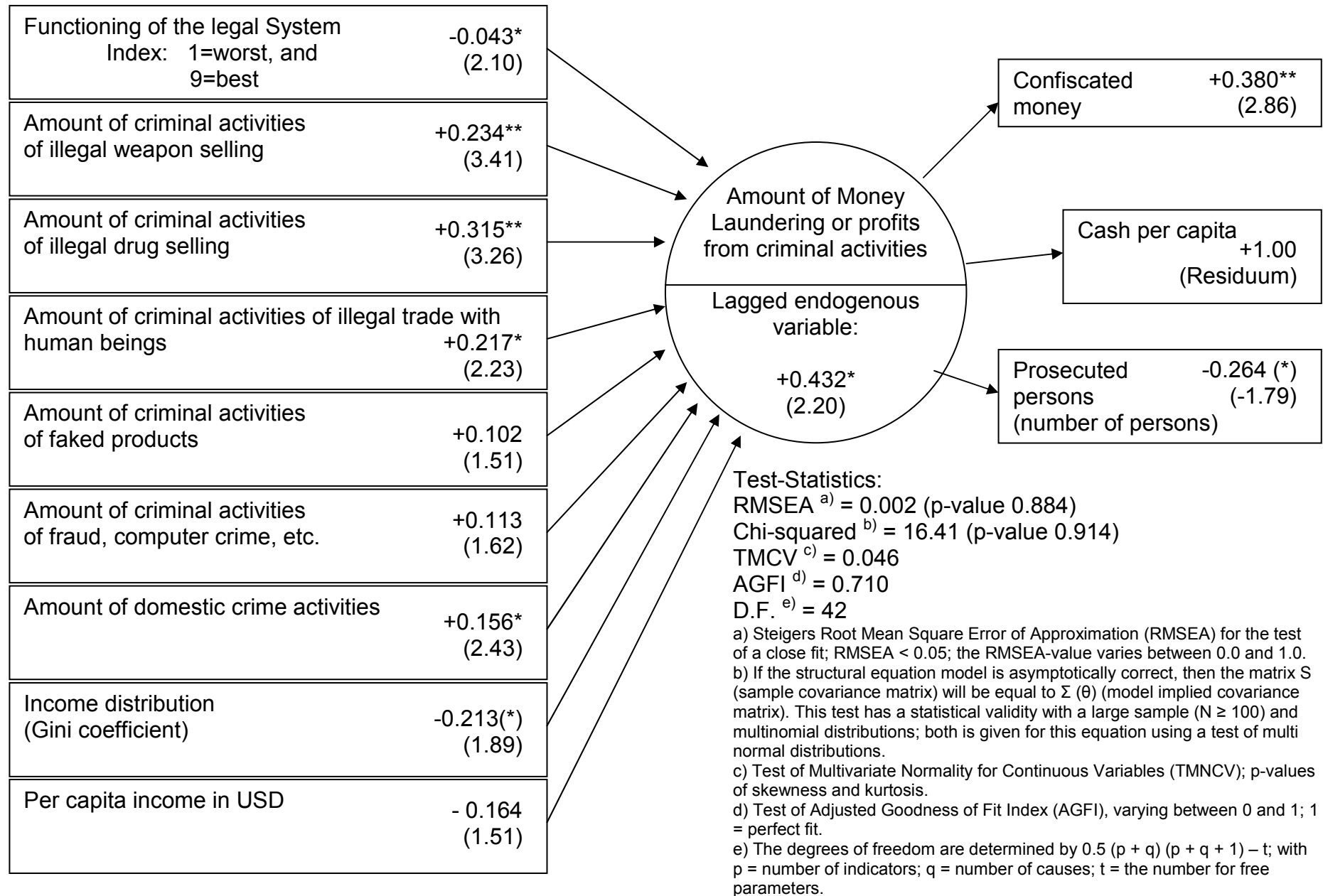
In this paper a first attempt is made, to undertake a DYMIMIC estimation of the amount of money laundering or profits from criminal activities for 20 OECD countries over the years 1994/95, 1997/98, 2000/2001, 2002/2003 and 2003/04. We derive the following three major hypotheses:

- (1) Theoretically we expect the more illegal (criminal) activities (e.g. dealing with drugs, illegal weapon selling, increase in domestic crimes, etc.), hopness, the more money laundering activities will take place, *ceteris paribus*.
- (2) The more inequal the income distribution and the lower official GDP per capita is, the higher money laundering activities will be, *ceteris paribus*.
- (3) The better the legal system is functioning the less money will be laundered, *ceteris paribus*.

The results of the dymimic estimation are shown in figure 5.1. From the nine causal variables six are statistically significant and the quantitatively most important coefficient is the one of criminal activities of illegal drug selling, which also has the highest statistical significance. It is followed by the estimated coefficient of criminal activities of illegal weapon sellings and then the one of criminal activities of illegal trade with human beings. A state which has a better functioning of a legal system, has a lower amount of money laundered or profits from criminal activities. The coefficient has the expected negative sign and is statistical significant. If domestic crime activities increase, the amount of money laundering increases. Again, the coefficient has the expected positive sign and is statistically significant. If a country has a very unequal income distribution, *ceteris paribus*, the amount of money laundering increases, but this coefficient is just at a 10% confidence level, statistically significant. If we turn to the indicator variables, the variable “confiscated” money has the expected positive sign and is highly statistically significant. Also the more people are prosecuted due to criminal records, the less money is laundered, hence the number of prosecuted person has the expected negative influence on the amount of money laundering. The test statistics of this DYMIMIC estimation are satisfactory. But it should be clearly said, that the data is quite erroneous, rather incomplete and the estimation is not robust.

In order to calculate the absolute values of the size of the shadow economies from these DYMIMIC estimation results, we use already available estimates of aggregated figures (shown in table 2.1) and with the help of these values, only aggregate results of the 20 OECD countries could be calculated for the years 1995 to 2006, the results are shown in table 5.1. Again, it should be explicitly mentioned, that these are very rough, preliminary calculations, and they show an increasing volume of laundered money over time. In the year 1995 the volume of money laundering or money laundering turnover had a size of 503 billions USD and this values increases to 1,106 billions USD in the year 2006. In principle, these are rough figures and as already mentioned with a large error, but the clearly show a strongly increasing trend over time.

Figure 5.1: DYMIMIC estimation of the amount of money laundering for 20 highly developed OECD countries over the periods 1994/95, 1997/98, 2000/2001, 2002/2003 and 2003/04



5.2.) The 10%-Rule of FATF

The FATF (Financial Action Task Force) uses the following rule of thumb: On basis of the estimated annual turnovers on retail trade level, the assumption is made that the confiscated amount is 10 per cent of all drugs floating around. Knowing that the operating cost quota (relating to sales turnover) is roughly 60 per cent, profits/turnovers of drug trafficking can be estimated: In the year 1997 the FATF “estimated” a total world drug-turnover of approx. 300 billion USD, 120 billion USD profits thereof and 85 billion USD were classified to be relevant for money laundering.²⁷

6.) Measures against Money Laundering

6.1.) The Financial Action Task Force (FATF)

The Financial Action Task Force (FATF), an international organization, has the main task to fight against money laundering and terrorism financing, consisting of 33 member countries. The FATF tries to “hunt” these non-cooperative countries with the help of a “name and shame” policy by publishing a “black list”. Moreover, the FATF is trying to combat money laundering internationally by means of typologies and 40 recommendations (international standards). Currently (2006) only Myanmar and Nigeria are still quoted on FATF’s black list.

6.2.) Austria

The main element of the existing money laundering precautions is formed by the so called “Know your Customer” principle; the FIU (Austrian Financial Intelligence Unit) has to be informed by all affected parties (banks, insurance companies, etc.) as soon as a suspect exceeds standardised limits in all financial business. By banning anonymous savings bank books, identifying customers and obliging to store numerous documents etc. obligated parties comply with the “Know Your Customer” principle. Besides these reporting obligations the duty to stop transactions immediately, exists in case of a suspicion. International pressure “forced” the Austrian authorities to take over these standards and to install a money laundering registration office (A-FIU).

²⁷ Compare FATF (1999).

So far credit- and financial institutions are mainly affected by the second money laundering EU-directive, however, other affected professions are “qualified” to act as well as middlemen (for instance, notaries, attorneys, accountants, auctioneers, casinos (for example by manipulating gambles or faked profits) and anyone who trades with high-quality goods such as gems/jewellery/fine art work). Moreover, the EU Directive enforces various measures, namely to identify, register, document, store and provide information along with a stop of information and activity in case of a suspicious case. However, in June 2005 a new EU-Directive concerning money laundering was passed, which will have to be transposed into national law by 2007. Eventually, in 2007 every salesman will have to fulfil certain obligations, which are to identify and store reports, if the payment exceeds 15000 Euros in cash.

In Austria in 2004 bank accounts with a total amount of 28 Million Euro were frozen due to suspicion of money laundering activities. Besides these activities 373 suspicion reports (90 per cent of these come from credit- and financial institutions, solely 24 reports were made by others) occurred, 100 cases brought a charge according to § 165 penal code (StGB); altogether 147 pressed charges were delivered for prosecution service,²⁸ as shown in table 2.2.

In order to systematize criminal proceedings, the Austrian authorities developed typologies on a basis of suspicion reports and convictions:²⁹

(1) For example, staff members of US-offshore-companies settled various building projects in the Russian Federation, and arranged that the bills were over-invoiced. Thereupon payment of the fraudulent derived surplus took place by means of oil deliveries and Russian contractors received “kick-back-payments” via different (partly Austrian) accounts in return.

(2) Also the internet is used more and more for fraudulent transactions: In one case a profit (of one per cent a day!) was “offered” on an internet-page in case of paying in a certain amount of equity capital. The promised disbursement has never been made; the money had all disappeared and was presumably transferred abroad. It is to be assumed that at least 4000 people got victims to this fateful act.

(3) Another attempts were made to launder assets with the help of gambling. Several men changed ten thousands of Euros into gambling chips, entered the play hall, drank some beer, thereafter changed the unused coins into real cash again and thus attracted the attention of the gambling company. Investigations showed that these men were following the order of the

²⁸ Compare BMI (2005).

²⁹ There is no standard of typology so far.

authorities from offshore- companies and hence had laundered fraudulent funds reaching 1 Mio Euro through faked gamble winnings.³⁰

(4) Moreover, starting from the US, criminals tried to alienate worthless investments via telemarketing; profits were collected on an account of an offshore-company and were transferred via Austria to Spain afterwards. Thus the damage rose up to 100 million USD; more than 2000 affected parties could be elicited.³¹

(5) In 2004 the majority of all money laundering cases in Austria were carried out by means of offshore-companies, of money remittance systems or of ARS-Systems(=Alternative Remittance System) which is any system used for transferring money from one location to another and generally operating outside the banking channels. The services encompassed by this broad definition of ARS range from those managed by large multinational companies to small local networks. They can be of a legal or illegal nature and make use of a variety of methods and tools to transfer the money (Source: FATF/GAFI, 2005, p. 3.).

6.3.) Germany

In 2002 Germany established a Competence Centre named „Zentralstelle für verfahrensunabhängige Finanzermittlung“ to fight money laundering. In addition, the control mechanism over financial transactions were extended combined with the establishment of a central database at the “Bundesaufsichtsamt für Kreditwesen” in order to visualize cash flow of terrorism and money laundering organisations. Moreover, the authorisation of the current supervisory body (eg „Bundesaufsichtsamt für Wertpapierhandel“ oder „Bundesaufsichtsamt für Versicherungswesen“) was extended. In 2004 8062 suspicious transaction reports referring to money laundering activities were brought up in Germany³² (see table 2.2).

The following three typologies could be developed in this context:

(1) Contemporary atypical bank transfers to third parties were deposited in numerous investment accounts, which were kept by members of a certain ethnicity and which were intended to be used for long-time investments. In addition, the fact that drew attention, was that account opening was done only by one (unique) middleman combined with the foundation of companies without any identifiable business activity (moreover, respective management was taken over by members of this ethnicity).

³⁰ Compare BMI (2005) and BMI (9-10/05).

³¹ Compare BMI (2005).

³² Compare FIU (2004, p. 47).

(2) Another method was to open an account, which was kept for a foreign banking customer for the settlement of an offshore-company, and was used to purchase gold after the customer had received a foreign credit notice of a large sum of money in Euro. Shortly afterwards resale –involving loss - and bankwire of these sale revenues to an offshore-company (by means of a third country) took place. Therefore paper trail could remain undetected by acquisition of goods and reselling.

(3) In another case, large transfer of money were repeatedly set down to an account, this money was then transmitted to separate accounts (of the account holder) in offshore-countries, for example, in form of three remittances amounting over one million Euros. This customer, whose domicile lay in an offshore-country and who was a tax lawyer and auditor specializes in tax affairs, was - by his own admission – mainly acting for German investors. Thus it was just a “flowing collective account”, with which a client’s money could be transferred into accounts in offshore-countries in order to be laundered.³³

7.) Summary and Conclusions

In this paper an attempt is made, to tackle the quite difficult topic of estimating the volume of money laundering.

First, a differentiation is made between classical shadow economy activities and classical underground crime activities, arguing that on the one side shadow economy activities provide an extra value added of (in principal legal) goods and services, and on the other side typical crime activities (like burglary, drug dealing, etc.) produce no positive value added for the official economy.

Second, the necessity of money laundering is explained as since nearly all illegal (criminal) transactions are done by cash. Hence, this 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 world.

Third, after defining money laundering, and after explaining the three stages (steps), placement, layering and integration, the paper tries a quantification and estimation of the volume and development of money laundering activities. With the help of a DYMIMIC estimation procedure, the amount of money laundering and/or the profits from criminal

³³ Compare FIU, 2004, p. 22 ff.

activities are estimated using as causal variables various types of criminal activities, the functioning of the legal system, per capita income and income distribution and as indicators confiscated money, cash per capita and prosecuted persons. The estimation was done for the years 1994/95, 1997/98, 2000/2001, 2002/2003 and 2003/04 for 20 highly developed OECD countries.

Fourth, the volume of laundered money or profits from criminal activities was for these 20 OECD countries in the years 1995 503 billions USD and increased in 2006 to 1,106 billions USD. The worldwide money laundering turnover was in 2001 700 billion USD and increased in 2006 to 910 billion USD. The sum of cash flow of all laundered money in Austria (Germany) was in 1994 189 million (3,590 million) and in 2006 903 million (7,903 million) Euro.

Fifth, the various measures against money laundering are discussed for Austria, Germany and the measures from the financial action task force (FATF).

From these preliminary results I draw the following four preliminary conclusions:

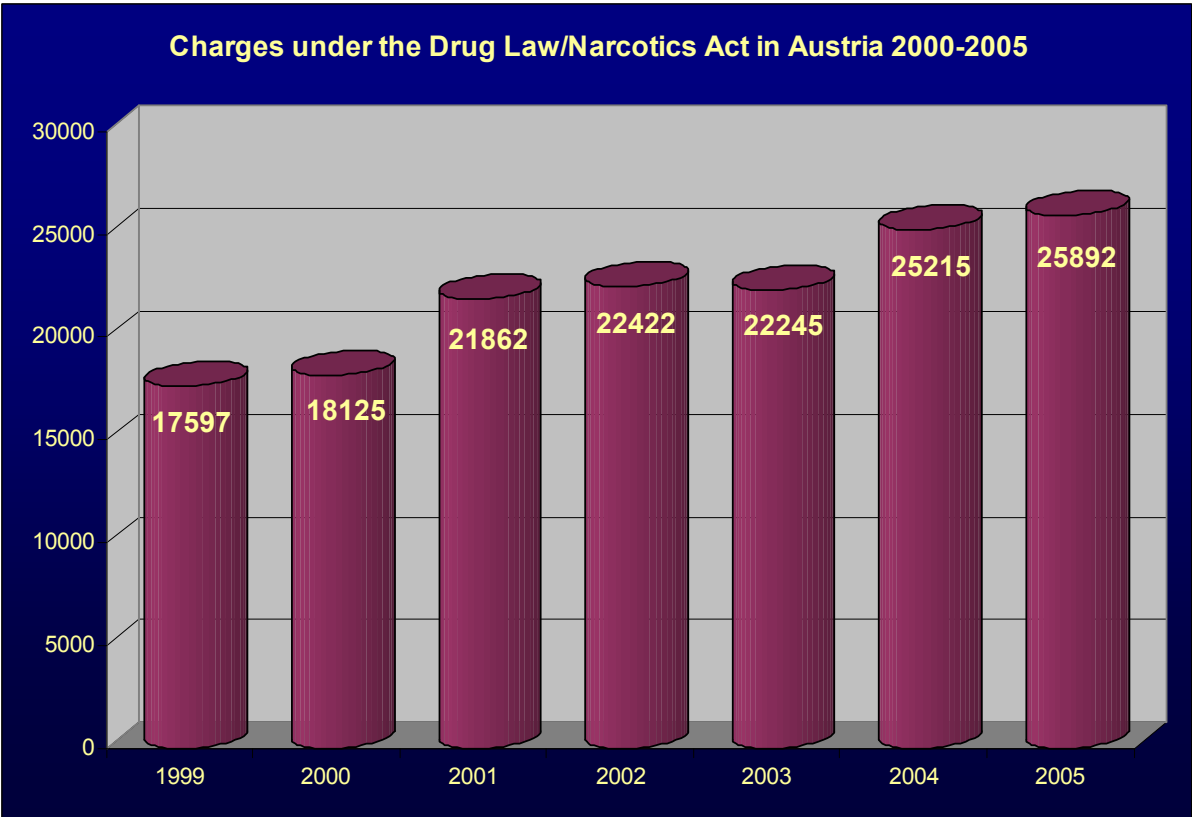
(1) The term money laundering is extremely difficult to tackle. It's defined almost differently in every country, the measures taken against it are different and vary from country to country and it is not so all clear what really money laundering is.

(2) To get a figure of the extent and development of money laundering over time is even more difficult. This paper collects all available findings and tries to undertake some own estimations with the help of a latent estimation procedure (DYMIMIC) and shows that money laundering has increased from 1995 503 billion USD to 1,106 billion USD 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 bases in 2006 910 billion USD are estimated to be laundered coming only from the total drug (crime) business. The overall turnover in organized crime had a value of 800 billion USD in 2001 and increased to 1,700 billion USD in 2006. These figures are very preliminary with a quite large error, but give a clear indication how important money laundering and the turnover of organized crime nowadays is.

(3) To fight against money laundering is also extremely difficult, as we have no efficient and powerful international organizations, which can effectively fight against organized crime and money laundering.

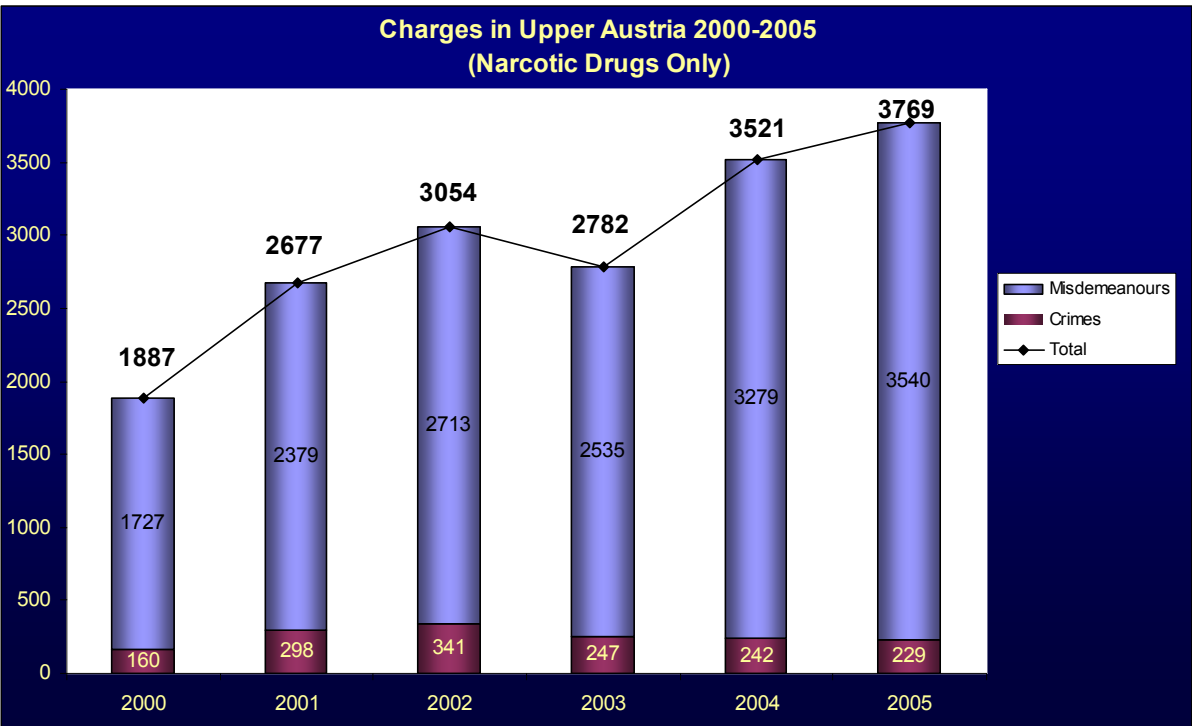
(4) Hence, this paper should be seen as a first start/attempt in order to shed some light on the grey area of money laundering and to provide some better empirical bases or taking more efficient measures against money laundering.

Figure 1.1: Charges under Drug Law/Narcotics Act in Austria (1999-2005)



Source: BMI, Vienna, 2006, p. 23.

Figure 1.2: Charges in Upper Austria 2000-2005 (Narcotic Drugs Only)



Source: BMI, Vienna, 2006.

Figure 2.1: Organised Crime and their main areas in Central Europe

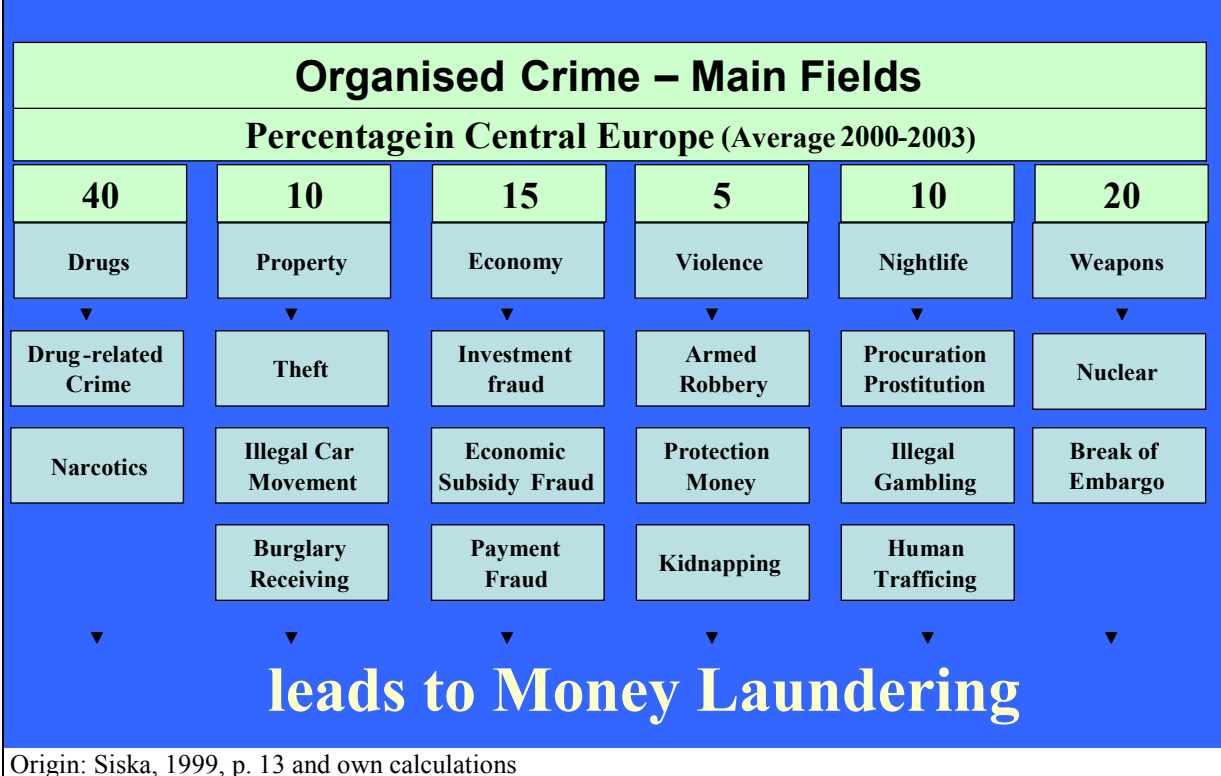


Figure 2.2: Organized Crime – Main Fields (Central Europe, av. 2000-2003)

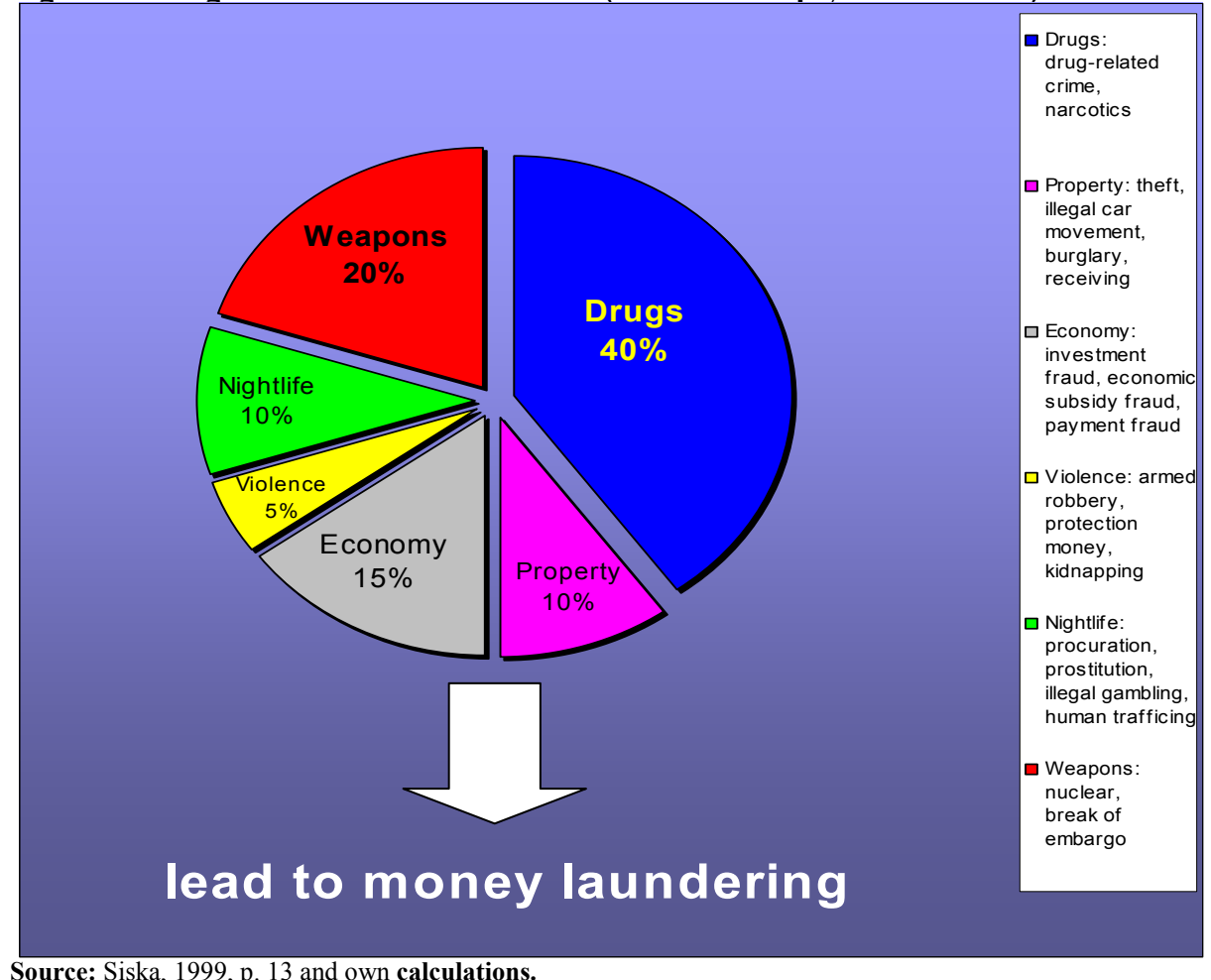


Table 2.1: Quantification of Money Laundering Volume

Origin/Study	Year	Volume (worldwide)
Worldwide turnover of Organised Crime: Range: 500 billion USD – 2.1 trillion USD		
National Criminal Intelligence Service (NCIS; Washington D.C.; USA)	1998	1.3 trillion USD
	2001	1.9 trillion USD
	2003	2.1 trillion USD
UN-Estimates (New York; USA)	1994/98	700 billion to 1 trillion USD
International Monetary Fund and Interpol (Washington D.C; USA)	1996	500 billion USD
Friedrich Schneider (University of Linz)	2001	800 billion USD
	2002	960 billion USD
	2003	1,200 billion USD
	2004	1,400 billion USD
	2005	1,500 billion USD
	2006	1,700 billion USD
Worldwide money laundering turnover, as measured by drug total revenue: 400 billion – 2.85 trillion USD		
The Economist (London)	1997	400 billion USD
	2001	600 billion USD
Friedrich Schneider (University of Linz)	2001	700 billion USD
	2002	750 billion USD
	2003	810 billion USD
	2004	850 billion USD
	2005	870 billion USD
	2006	910 billion USD
Sam Kerry	1997	420 billion -1 trillion USD
Michael Schuster	1994	500-800 billion USD
John Walker	1998	2.85 trillion USD
<p>→ Estimates are afflicted with great uncertainties. → Problems due to an ambiguous classification and a small databases regarding direct methods. → Dubiously potentiated estimates concerning indirect methods.</p>		

Source: Own calculations and reference list.

Table 2.2: Fight against money laundering in Austria and Germany

	1994	1995	1996	2001	2002	2003	2004	2005	2006
Suspicious transaction reports under § 41/1 BWG Austria (cases)	346	310	309	288	215	236	349	417	-
Suspicious transaction reports pursuant to the Money Laundering Act Germany (cases)	2873	2759	3019	7284	8261	6602	8062	9126	-
Sum of criminal cash flow Austria	189 Mio €	80 Mio €	102 Mio €	516 Mio €	619 Mio €	692 Mio €	735 Mio €	843 Mio €	903 Mio €
Sum of criminal cash flow Germany	3,590 Mio €	3,740 Mio €	4,120 Mio €	4,430 Mio €	4,957 Mio €	5,520 Mio €	6,177 Mio €	7,239 Mio €	7,903 Mio €
Sum of "frozen money" Austria	22 Mio €	27 Mio €	6 Mio €	32 Mio €	8 Mio €	2.2 Mio €	28 Mio €	99.3 Mio €	116,3 Mio €¹⁾
Charges Austria (§165 StGB)	20	50	13	74	115	112	100	70	-
Charges Austria (§278a StGB)	34	27	19	89	132	131	159	165	-

Origin: Own calculations (indirect analysis on basis of estimates on shadow economy and class. criminal activities); Siska, Josef, 1999; BMI, 2003 and 2005; FIU 2005 und 2006.

¹⁾ Estimation, preliminary value

Table 2.3: Difference between money laundering/tax fraud/capital flight

	capital flight	money laundering	tax fraud
money acquisition investment (country of origin)	legal	illegal	illegal
transfer	illegal	illegal	legal
investment (country of destination)	legal	illegal	legal

Source: Altvater (2002/2004).

Table 2.4: Shadow economy and underground economy in Germany from 1996 to 2006

year	Germany			
	Shadow economy		Underground economy (typical criminal activity)	
	in % of official GDP	in billion €	in % of official GDP	in billion €
1996	14.50	263	10.4	189
1997	15.00	280	11.6	217
1998	14.80	286	12.8	248
1999	15.51	308	14.1	280
2000	16.03	329	16.3	334
2001	16.00	336	16.9	355
2002	16.59	350	17.4	371
2003	17.40	370	18,0	399
2004	16,40	356	18,8	410
2005	15,40	346	19,5	425
2006	15,00	345	20,1	438

Source: Own calculations.

Table 2.5: Shadow economy and underground economy in Italy, France and Great Britain from 1996 to 2006

Year	Italy		Great Britain		France	
	Shadow economy ¹⁾	Underground economy ¹⁾	Shadow economy ¹⁾	Underground economy ¹⁾	Shadow economy ¹⁾	Underground economy ¹⁾
1996	27.0	18.2	13.1	9.4	14.9	8.9
1997	27.3	18.9	13.0	9.8	14.7	9.3
1998	27.8	19.3	13.0	10.2	14.9	9.8
1999	27.1	19.9	12.7	10.4	15.2	10.3
2000	27.2	20.6	12.7	10.6	15.2	10.9
2001	27.0	21.0	12.6	12.5	15.1	11.2
2002	27.0	22.5	12.5	10.9	15.0	11.21
2003	26.1	23.1	12.2	11.3	14.7	12.21
2004	25.2	23.5	12.3	12.1	14.3	13.1
2005	24.4	24.9	12.0	13.1	13.8	14.0
2006	23.2	25.4	11.1	13.7	12.4	14.8

¹⁾ In % of official GDP

Source: Own calculations.

Table 5.1: DYMIMIC Calculations of the Volume of Money Laundering

Year	Volume of money laundering (billion USD for 20 OECD countries)	20 OECD countries
1995	503	Australia, Austria, Belgium, Canada, Denmark, Germany, Finland, France, Greece, Great Britain, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Switzerland, Spain and USA.
1996	554	
1997	602	
1998	661	
1999	702	
2000	761	
2001	804	
2002	849	
2003	905	
2004	969	
2005	1,027	
2006	1,106	

Source: Own calculations.

8. Literature

Altenkirch, Lars (2002), Techniken der Geldwäsche und ihre Bekämpfung, Frankfurt/Main 2002.

Altvater, Elmar (2002/2004), Schattenseiten der Globalisierung: <http://www.polwiss.fu-berlin.de/people/altvater/B10Schattenglob.pdf>.

BKA (2005), Bundeslagebild organisierte Kriminalität 2004, Juni 2005.

BKA (2005), Annual Report 2004 Financial Intelligence Unit (FIU) Germany, Wiesbaden 2005.

BMI (2005), Bericht der Bundesregierung über die Innere Sicherheit in Österreich (Sicherheitsbericht 2004), Vienna 2005.

BMI (2005), Jahresbericht 2004 d. Bundesministeriums für Inneres zur Suchtmittelkriminalität, Vienna 2005.

BMI (2006), Jahresbericht 2005 d. Bundesministeriums für Inneres zur Suchtmittelkriminalität, Vienna 2006.

BMI (2005), Jahresbericht 2004 der Geldwäschemeldestelle (BMin für Inneres, A-FIU), Vienna 2005.

BMI (2006), Jahresbericht 2005 der Geldwäschemeldestelle (BMin für Inneres, A-FIU), Vienna 2006.

BMI (9-10/05), Geld der Gauner in: Öffentliche Sicherheit, Das Magazin des Innenministeriums, Bundesministerium für Inneres, Nr. 9-10, September-Oktober 2005.

Bongard, Kai (2001), Wirtschaftsfaktor Geldwäsche: Analyse und Bekämpfung, Wiesbaden 2001.

Couvrat, Jean-Francois und Pless, Nicolas (1993): Das verborgene Gesicht der Weltwirtschaft, Münster 1993.

Das Handelsblatt (29.10.2005), Anti-Geldwäsche-Kampf behindert Geldverkehr: www.handelsblatt.com/pshb/fn/rehbi/sfn/buieldhbi/cn/GoArt!204867,204886,981478/index.html

Der Stern (27.10.2004), Das Geschäft mit dem schmutzigen Geld: http://www.stern.de/wirtschaft/geldanlage/531574.html?nv=ct_mt

Der Tagesspiegel (28.11.2005), Geldwäscher im Visier: <http://archiv.tagesspiegel.de/archiv/18.11.2005/2180342.asp>

Ertl, Birgit (2004), Working Papers 4/2002, „Der Kampf gegen Geldwäscherei und Terrorismusfinanzierung“, Vienna 2004.

FATF/GAFI (10.6.2005), Money Laundering & Terrorist Financing Typologies 2004-2005, 10 June 2005.

IMF (1996), Macroeconomic Implications of Money Laundering, prepared by Quirk, Peter J., International Monetary Fund, Monetary and Exchange Affairs Department, Paper prepared for the Plenary Meeting of the FATF, Washington 1996.

IMF (2002), Caribbean Offshore Financial Centres: Past, Present, and Possibilities for the Future, prepared by Suss, Esther C./Williams, Oral H./ Mendis, Chandima, IWF Working Paper, Washington D.C. May 2002.

Masciandaro, Donato (editor) (2004), The global financial crime: Terrorism, money laundering and offshore centres, Aldershot (Great Britain): Ashgate, 2004.

Meins, Anna und Onneken, Peter (11.10.2005), Kontoplünderung - Wie Jobsuchende in die Fänge der Russenmafia gelangen, 2005.

Riegler, Wolfgang (2004), Die Quantifizierung der Geldwäsche, Diploma Thesis, Institute of Economics, University of Linz 2004.

Ronojit Banerjee (2004), Money Laundering in the EU:
www.ex.ac.uk/~wakeupman/undergrad/ron/explosion%20of%20money%20laundering.htm

Schneider, Friedrich (2000), Schattenwirtschaft – Tatbestand, Ursache, Auswirkungen, Beitrag zur Tagung „Die Arbeitswelt im Wandel“ vom 4.-6.5.2000 in Mönchengladbach, Linz 2000.

Schneider, Friedrich (2004), The financial flows of Islamic Terrorism, in: Masciandaro, Donato (editor), Global financial crime: Terrorism, money laundering and offshore centres, Aldershot (Great Britain): Ashgate, 2004, pp.97-126.

Schneider, Friedrich (2005), Shadow economies around the world: What do we really know?, European Journal of Political Economy 21/3, 2005, pp.598-642.

Schneider, Friedrich, Dreer, Elisabeth and Wolfgang Riegler (2006), Geldwäsche: Formen, Akteure, Größenordnung - Warum die Politik machtlos ist, Wiesbaden: Gabler-Verlag.

Siska Josef (1999), Die Geldwäscherei und ihre Bekämpfung in Österreich, Deutschland und der Schweiz, Wien, 1999.

UNDOC (2005), World Drug Report 2005, 2005.

Vanempten, Jean und Verduyn, Ludwig (1994), Le Blanchiment en Belgique. L'Argent criminel dans la haute finance, Bruxelles, 1994.

Walker, John (1998), Modelling Global Money Laundering Flows – some findings:
<http://members.ozemail.com.au/~john.walker/crimetrendsanalysis/mlmethod.htm>

Walker, John (1999), How big is global money laundering?, Journal of Money Laundering Control 3/1, pp.84-101.