

Schneider, Friedrich

**Working Paper**

## The Financial Flows of the Transnational Crime: Some Preliminary Empirical Results

Economics of Security Working Paper, No. 53

**Provided in Cooperation with:**

German Institute for Economic Research (DIW Berlin)

*Suggested Citation:* Schneider, Friedrich (2011) : The Financial Flows of the Transnational Crime: Some Preliminary Empirical Results, Economics of Security Working Paper, No. 53, Deutsches Institut für Wirtschaftsforschung (DIW), Berlin

This Version is available at:

<https://hdl.handle.net/10419/119379>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*

Friedrich Schneider

# **The Financial Flows of the Transnational Crime: Some Preliminary Empirical Results**

August 2011

Economics of Security Working Paper 53

*This publication is an output of EUSECON, a research project supported by the European Commission's Seventh Framework Programme.*

**European Security Economics**



[www.economics-of-security.eu](http://www.economics-of-security.eu)

## Economics of Security Working Paper Series

Correct citation: Schneider, F. (2011). "The Financial Flows of the Transnational Crime: Some Preliminary Empirical Results". Economics of Security Working Paper 53, Berlin: Economics of Security.

First published in 2011

© Friedrich Schneider 2011

ISSN: 1868-0488

For further information, please contact:

Economics of Security, c/o Department of International Economics, German Institute for Economic Research (DIW Berlin), Mohrenstr. 58, 10117 Berlin, Germany.

Tel: +49 (0)30 89 789-277

Email: [eusecon@diw.de](mailto:eusecon@diw.de)

Website: [www.economics-of-security.eu](http://www.economics-of-security.eu)

# **The Financial Flows of the Transnational Crime: *Some Preliminary Empirical Results*<sup>1</sup>**

*Friedrich Schneider*<sup>2</sup>

## **1. Introduction**

Until 2008, the growth of the world economy was quite strong and improved the economic well-being all over the globe, but this development was also accompanied by some risks. One of them is transnational crime, which has shown a remarkable increase in the last 20 years<sup>3</sup>. This raises the following two questions: (1) How is transnational crime financed, and what do we know about this financing? (2) What economic implications does transnational crime have? In this contribution question (2) will be very briefly answered, however the main focus lies on providing a more detailed answer on the financing of transnational crime (question 1). Additionally a detailed analysis of the finances of transnational crime is crucial to reduce their financial options, so that the basis of their operations is at least limited. Such an analysis is another goal of this chapter.

My paper is structured as follows: section 2 provides a literature review on the kinds of transnational crime financing. Section 3 shows the infiltration of transnational crime into the economic system. In section 4 some conclusions and policy recommendations are drawn.

## **2. The Kinds of Transnational Crime Financing: A Preliminary Literature Review**

My literature review will meet two objectives: to widen the knowledge of this subject and the understanding of the main issues under debate and to focus on the literature closely related to the research topic. The body of literature on transnational crime financing is diverse and quite often merely descriptive; hence within this chapter, only the important contributions are summarized. This literature review can not be separated from the analysis of the finances of terrorist organizations, because transnational crime organizations and terrorist groups often work closely together<sup>4</sup>. Hence we start with common aspects and then with differences of both types of organizations.

### **2.1 Some Common Aspects of Transnational Crime and Terrorist Groups Financing**

Similarities between transnational crime and terrorist groups are fully described by Schneider (2008a, 2008b, 2009), Schneider, Brueck and Meierrieks (2010), Sanderson (2004); Gilmore (2004), Shelley (2005); Wilkinson (2005); Makarenko (2002, 2003a, 2003b, 2003c) and Koh (2006); these groups have the following similarities:

- (1) both are highly rational actors, e.g. they know quite well what they are doing;

---

<sup>1</sup> The research leading to these results has received funding from the European Union Seventh Framework Programme under grant agreement n°218105 (EUSECON).

<sup>2</sup> Prof. Dr. Dr.h.c.mult. Friedrich Schneider, Department of Economics, Johannes Kepler University, Altenbergerstr. 69, A-4040 Linz, Austria, Phone: +43 (0)732 2468-8210, Fax: +43 (0)732 2468-8902, E-mail: [friedrich.schneider@jku.at](mailto:friedrich.schneider@jku.at), <http://www.econ.jku.at/schneider>.

<sup>3</sup> See for an example Walker and Unger (2009).

<sup>4</sup> Compare Schneider (2008a, 2008b, 2009), Makarenko (2002, 2003a, 2003b, 2003c), Koh (2006) and Masciandaro (2004).

- (2) both use extreme violence and the threat of reprisals, in order to reach their goals;
- (3) both operate secretly, though at times publicly in friendly territory, and
- (4) both defy the state and the rule of law.

According to Masciandaro (2004, 2005, 2006), Picarelli (2006), Shelley (2005) and Yepes (2008) the issues of transnational crime, money laundering, and the financing of terrorism have the following common aspects:

- (1) Transnational crime and terror organizations use wire transfers or electronic payment systems to move money through multiple jurisdictions.
- (2) Both engage in a variety of criminal activities in a similar way to traffickers and other criminal syndicates. However, the line is now becoming less defined, since terrorists often resort to crime and cooperate with criminals in generating money, obtaining arms and explosives. According to Makarenko (2003a, 2003b) criminals are likely to use terrorism tactics and violence in pursuit of revenues:
  - (i) Drug, arms and human trafficking<sup>5</sup>, trading in precious stones (diamonds) and other commodities,
  - (ii) smuggled cash, cigarettes, and other addicted goods, and
  - (iii) criminal activities like kidnapping.<sup>6</sup>

Both groups benefit from shell companies and offshore bank facilities. For instance, money laundering experts<sup>7</sup>, argue that both groups use a technique known as a “starburst”: A deposit of dirty money is made in a bank with standing instructions to wire it in small, random fragments to hundreds of other bank accounts around the world, in all types of financial centre. Tracking down the money becomes very difficult, since obtaining legal permission to pursue bank accounts in multiple jurisdictions can take years. Napoleoni (2005, p.33) argues, “*You build a long chain of representative offices at the end of which there is a shell company registered offshore, and you are lucky, if you get to the end of the chain. Financial investigations often run into a blind alley always through, somewhere, in a tiny offshore office*”. From this Napoleoni (2005) concludes that it is extremely difficult to track down crime money.

## 2.2 The Main Differences in Financing between Transnational Crime and Terrorist Groups

There are also differences between transnational crime and terrorist groups with respect to financing. To some extent it is possible to make a distinction in the roots and operational characteristics:

### (1) Terrorist Financing<sup>8</sup>

A number of scholars (Napoleoni (2005), Krueger (2008), Yepes (2008)) explain terrorism through religion, development of socio-political causes, and sometimes the state of the economy. They argue that typical operational characteristics of terrorist groups are:

---

<sup>5</sup> Makarenko (2003a), p. 66 writes: “The most common criminal activity terrorist groups have been involved in is the illicit drug trade. Since the 1970s groups such as FARC, Basque Fatherland and Liberty (Euzkadi Ta Askatasuna – ETA), the Kurdistan Workers Party (Partiya Karkaren Kurdistan – PKK) and Sendero Luminoso have all been linked to the drug trade by well-documented evidence. Since the early 1990s additional groups such as Hizbullah and the IMU have also realised the financial utility of participating in the illicit drugs trade. It is alleged that Hizbullah continues to protect heroin and cocaine laboratories in the Bekaa Valley; and evidence strongly indicated that the IMZ – prior to the Afghan campaign – controlled drug trafficking routes into Central Asia from northern Afghanistan”.

<sup>6</sup> Similar arguments are brought forward by Gilmore (2004), Giraldo and Trinkunas (2007), Hutchinson and Malley (2007), and Koh (2006).

<sup>7</sup> See: Koh (2006), Schneider (2004, 2008a, 2008b, 2009) and Masciandaro (2004).

<sup>8</sup> In this section the only goal is to show that there are major differences between terrorist financing and transnational crime.

- (i) Low costs / low technology structures of the type that made possible some recent attacks with a great impact on human lives, on nations, and on economies (e.g. 9/11 New York, Madrid, London and Mumbai).
- (ii) Flexible and decentralized organizations with independent decisions and actions.
- (iii) Common ideology with indiscriminate targets (i.e. no purpose that can be related to profit).
- (iv) Financial means are needed to plan and execute (future) terrorist attacks; there is only a limited need to hide assets.
- (v) Self-financing with possible criminal activities but also obtaining money from legal sources (e.g., donations and charity organizations). Terrorists use different sources of money, depending on their motivations, their mode of operations, and the resistance they face from law enforcement. Quite often the money starts off clean, becoming “dirty” only when the terrorist crime is committed at some point in the future. Hence, terrorist “enterprises” use clean money to commit crimes

## **(2) Transnational Crime Turnover and Money Laundering<sup>9</sup>**

Criminal or dirty money is earned through various underground activities, like drug, weapons and human trafficking. How much illicit crime money in all of its various forms is it possible to observe? Baker (2005) estimates the quantity of money to range between US\$ 1.0 and 1.6 trillion in 2000/2001. This estimate has been adopted by the World Bank. Moreover, Baker estimates that half – US\$ 500 to 800 billion a year – comes out of developing and transitional economies. 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 of the country by any means possible.

In Table 1, the global flows from illicit activities worldwide are shown. According to Baker, in cross-border illicit financial flows, the proceeds of bribery and theft are the smallest quantities, at only perhaps three percent of the global total. Generated funds from classical crime activities (No 1-7) account for some 30 to 35 percent of the global total crime activities. Commercially tax evading money, driven in particular by abusive transfer pricing and faked transactions as well as mispricing, is by far the largest component at some 60 to 65 percent of the global total crime activities.

---

<sup>9</sup> For a detailed analysis see Schneider (2008a, 2008b and 2009), Schneider and Windischbauer (2008), Schneider, Dreer and Riegler (2006), and Takats (2007).

**Table 1: Global Flows from Illicit Activities worldwide, years 2000/2001**

Number	Global Flows	Low (US\$ bn)	%	High (US\$ bn)	%
1.	Drugs	120	11%	200	12.5%
2.	Counterfeit goods	80	7.5%	120	7.5%
3.	Counterfeit currency	3	0.2%	3	0.2%
4.	Human trafficking	12	1.1%	15	0.9%
5.	Illegal arms trade	6	2.0%	10	0.6%
6.	Smuggling	60	5.6%	100	6.3%
7.	Racketeering	50	4.7%	100	6.3%
	<i>Crime subtotal</i>	<b>331</b>	<b>31.2%</b>	<b>549</b>	<b>34.3%</b>
8.	Mispricing	200	18.9%	250	15.6%
9.	Abusive transfer pricing	300	28.3%	500	31.2%
10.	Fake transactions	200	18.9%	250	15.6%
	<i>Commercial subtotal</i>	<b>700</b>	<b>66.0%</b>	<b>1,000</b>	<b>62.5%</b>
11.	<i>Corruption</i>	30	2.8%	50	5.1%
	<b>Grand Total</b>	<b>1,061</b>	<b>100.0%</b>	<b>1,599</b>	<b>100.0%</b>

Source: Baker (2005)

The next step in the characteristic of money laundering is to make dirty money appear legal (compare Walker (1999, 2000, 2004, 2007))<sup>10</sup>. There are many methods of money laundering; in Table 2 the 12 most common methods according to Unger (2007) and Walker (2007) are shown. Choice of method depends on the type of crime activity and on the specific institutional arrangements in a country where the criminal money is “earned”? For example, in the drug business, method 8 business ownership is used quite often.<sup>11</sup> In the drug business and in big cities smaller amounts of cash are earned by drug dealers in a lot of different spaces, which they introduce into cash intensive operations such as restaurants which are especially well suited for money laundering purposes. In addition another common method is the use of cash deposits, the so called smurfing method, or illegal gambling.

<sup>10</sup> Step one is the earning and collection of the crime money.

<sup>11</sup> Compare Schneider (2004) and Masciandaro (2004).

**Table 2: The Methods of Money Laundering**

1)	<b>Wire transfers or electronic banking</b>	The primary tool of money launderers to move funds around in the banking system. These moves can conceal the illicit origins of the funds or just place the money where the launderers need them. Often the funds go through several banks and even different jurisdictions.
2)	<b>Cash deposits</b>	Money launderers need to deposit cash advances to bank accounts prior to wire transfers. Due to anti-money-laundering regulations they often 'structure' the payments, i.e. break down large to smaller amounts. This is also called 'smurfing'.
3)	<b>Informal value transfer systems (IVTS)</b>	Money launderers need not rely on the banking sector, other transfer providers, such as the Hawala or Hindi are readily available to undertake fund transfers. These systems consist of shops (mainly selling groceries, phone cards or other similar items), which are also involved in transfer services. IVTSs enable international fund transfers, as these shops are present in several jurisdictions.
4)	<b>Cash smuggling</b>	Money launderers might mail, Fedex or simply carry cash with them from one region to another, or even to different jurisdictions.
5)	<b>Gambling</b>	Casinos, horse-races and lotteries are ways of legalizing funds. The money launderer can buy (for 'dirty' cash) winning tickets – or in the case of casinos chips – and redeem the tickets or the chips in a 'clean' bank check. Afterwards, the check can be easily deposited in the banking sector.
6)	<b>Insurance policies</b>	Money launderers purchase single premium insurance (with dirty cash), redeem early (and pay some penalty) in order to receive clean checks to deposit. Longer term premium payments might make laundering even harder to detect.
7)	<b>Securities</b>	Usually used to facilitate fund transfers, where underlying security deals provide cover (and legitimate looking reason) for transfers.
8)	<b>Business ownership</b>	Money might be laundered through legitimate businesses, where laundering funds can be added to legitimate revenues. Cash-intensive operations, such as restaurants, are especially well suited for laundering.
9)	<b>Shell corporations</b>	Money launderers might create companies exclusively to provide cover for fund moves without legitimate business activities.
10)	<b>Purchases</b>	Real estate or any durable good purchases can be used to launder monies. Typically, the item is bought for cash and resold for clean monies, like bank checks.
11)	<b>Credit card advance payment</b>	Money launderers pay money in advance with dirty money, and receive clean checks on the balance from the bank
12)	<b>ATM operations</b>	Banks might allow other firms to operate their ATMs, i.e. to maintain and fill them with cash. Money launderers fill ATMs with dirty cash, and receive clean checks (for the cash withdrawn) from the bank.

Source: Unger (2007: 195-196).

With the help of the MIMIC estimation procedure<sup>12</sup> Schneider (2008a, 2008b) estimates that money laundering and/or financial turnover from transnational crime has increased from USD

<sup>12</sup> The MIMIC (Multiple Indicators Multiple Causes) procedure is a latent estimation method where the dependent variable is unknown. Hence an attempt is made to model the unknown variable (amount of money laundering) with the help of causes (various types of crime and their proceeds) and indicators like the development of cash). For further explanations see Schneider (2008a, 2008b) including the appendix).



273 billion (1,33% of the total official GDP) in 1995 to USD 603 billion (or 1,74% of the official GDP) 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 world wide basis in 2006 the IMF estimates USD 600 billion to be laundered coming only from the drug (crime) business<sup>13</sup>.

Unger (2007) reproduces the amount of laundered money and its top 20 destination countries; Her figures are shown in Table 3 and cover the time span 1997-2005. Here two estimates are presented, one by Walker (1999, 2007) and one by the IMF. The Walker figure of 2.850 billion USD is much larger than the IMF figure with 1.500 billion USD (both figures are for the year 2005). Walker's figures have been criticized as being too high with that of the IMF considered to be more reasonable. Table 3 clearly demonstrates that two thirds of worldwide money laundering was sent to the top 20 countries listed. One should realize that most of the countries included within the Table are highly developed and have quite sizeable legal/official economies. What is also amazing is that there are only a few microstate offshore countries (OFCS) and tax heavens among them (Cayman Islands, Vatican City, Bermuda and Liechtenstein)<sup>14</sup>. The majority of countries that attract money laundering flows are economic prepotencies and not some tiny unimportant countries. The United States has the largest worldwide share of money laundering of almost 19%, followed by the Cayman Islands (4,9%), Russia (4,2%), Italy (3,7%), but also smaller countries like Switzerland (2,1% of worldwide money laundering), Liechtenstein (1,7%) and Austria (1,7%) are quite attractive<sup>15</sup>. If one takes the lower IMF value for Austria, Switzerland and the United Kingdom, roughly 5.5 % of the total amount is laundered, which comes close to roughly 10% of official GDP of the three countries. However, it needs to be emphasized that it is not clear whether this money is only laundered in these countries or subsequently stays in these countries; it may well leave these countries after the laundering process. In general, Table 3 demonstrates how substantial the amount of laundered money is and that two thirds of these funds are concentrated in only 20 countries.

Bagella, Busato and Argentiero (2009: 881) use a theoretical two-sector dynamic general equilibrium model to measure money laundering for the United States and the EU-15 macro areas over the sample 2000:01-2007:01 at a quarterly data basis. Their series are generated through a fully micro-founded dynamic model, which is appropriately calibrated to replicate selected stochastic properties of the two economies. Their model (and the analysis) has a short run perspective, and for this reason the paper discusses the stochastic properties of the Hodrick-Prescott filtered series. Bagella *et al.* (2009: 881) produced the following results: First the simulations show that money laundering accounts for approximately 19 percent of the GDP for the EU-15, while it accounts for 13 percent in the US economy, over the sample 2000:01-2007:04. Second, the simulated money laundering appears less volatile than the corresponding GDP. As regards the EU-15 macro area, the simulated statistics suggest that money laundering volatility is one-third of the GDP volatility; for the US economy, the same statistics produce a figure of two-fifths. Considering these estimates one must admit that they are pretty high. Comparing these figures with the other ones (from Walker and the IMF) one realizes that the range of magnitude is huge and much more research is needed to clarify this.

---

<sup>13</sup> For sources see e.g. Zdanowicz (2009), UN (2007), and IMF (2007).

<sup>14</sup> Compare also Masciandaro (2005, 2006), Zdanowicz (2009), Truman and Reuter (2004), and Walker and Unger (2009):

<sup>15</sup> Here are primarily discussed the percentage shares of money laundering or the highly developed countries and not the absolute size.

**Table 3: The Amount of Laundered Money and Top 20 Destinations of Laundered Money, Year 2005<sup>1)</sup>**

Rank	Destination	% of worldwide money laundering <sup>2)</sup>	Walker estimate 2.85 trillion US\$ Amount in billion US\$	IMF estimate of 1.5 trillion worldwide Amount in billion US\$
1	United States	18.9%	538,145	283,500
2	Cayman Islands	4.9%	138,329	73,500
3	Russia	4.2%	120,493	63,000
4	Italy	3.7%	105,688	55,500
5	China	3.3%	94,726	49,500
6	Romania	3.1%	89,595	46,500
7	Canada	3.0%	85,444	45,000
8	Vatican City	2.8%	80,596	42,000
9	Luxembourg	2.8%	78,468	42,000
10	France	2.4%	68,471	36,000
11	Bahamas	2.3%	66,398	34,500
12	Germany	2.2%	61,315	33,000
13	Switzerland	2.1%	58,993	31,500
14	Bermuda	1.9%	52,887	28,500
15	Netherlands	1.7%	49,591	25,500
16	Liechtenstein	1.7%	48,949	25,500
17	Austria	1.7%	48,376	25,500
18	Hong Kong	1.6%	44,519	24,000
19	United Kingdom	1.6%	44,478	24,000
20	Spain	1.2%	35,461	18,000
	SUM	67.1%	1,910,922	1,006,500

1) Source Unger (2007: 80)

2) Based on the average of the Walker and IMF estimates

From a global perspective for 2000, the IMF (2003, 2001) as well as the World Bank (2001) estimate that 2-4% of the world gross domestic product (GDP) stem from illicit (criminal) sources. Agarwal and Agarwal (2006) estimate from economic intelligence units that global money laundering amounts to more than 2.0 to 2.5 trillion US\$ annually or about 5-6% of World GDP in 2006 (4.444 trillion US\$ in 2006)<sup>16</sup> to be contrasted against an observed figure of US\$ 500 billion to one trillion in 2004 from the same authors (Agarwal and Agarwal (2004)). Recent IMF estimates on money laundering by drug traffickers who “infiltrate” the proceeds gained through the selling of drugs into the legitimate financial market, amount to 600 billion US\$ annually. The IDB (2004) reaches the conclusion that for Latin America a rough estimate appears to be somewhere between 2.5 and 6.3 % of annual GDP of Latin American countries.

In their latest study Walker and Unger (2009, page 821) again undertake an attempt to measure global money laundering and/or the proceeds from transnational crime that are pumped through the financial system worldwide. They criticize methods such as case studies, proxy variables, or models for measuring the crime economy, arguing that they all tend to under- or overestimate money laundering. They present a model which makes it possible to estimate the flows of illicit funds from and to each jurisdiction in the world and worldwide. This “Walker Model” was first developed in 1994, and was recently updated. The authors

<sup>16</sup> Again the figures by Agarwal and Agarwal seem implausible high; one can also question the scientific basis.

show that it belongs to the group of gravity models which have recently become popular in international trade theory<sup>17</sup>. The authors demonstrate that the original Walker Model estimates are compatible with recent findings on money laundering. Once the scale of money laundering is known, its macroeconomic effects and the impact of crime prevention, regulation and law enforcement effects on money laundering and transnational crime can also be measured. Walker and Unger (2009: 849-850) conclude that their model still seems to be the most reliable and robust method to estimate global money laundering, and thereby the important effects of transnational crime on economic, social and political institutions. Rightly they argue that the attractiveness of the distance indicator in the Walker model is a first approximation, but is still quite *ad hoc*. A better micro-foundation for the Walker Model will be needed in the future. A micro foundation means that, the behavior of money launderers is analyzed, and in particular what makes them send their money to a specific country. Hence, Walker and Unger (2009, p. 850) argue that an economics of crime micro-foundation for the Walker Model would mean that, similarly to international trade theory, behavioral assumptions about money launderers have to be made. Their gravity model must be the (reduced form) outcome of their rational calculus of sending their money to a certain country and potentially making large profits.

This part clearly shows how difficult it is to get reliable estimates of the size and development of the turnover of transnational crime and of the part which is laundered then. To give an overall scientific evaluation of the reliability of the discussed figures is at the current stage of research (Dec. 2010) not possible, as we do not have enough knowledge about this difficult area. One can make plausibility checks, as I did it, but this is all what can be done so far.

### **2.3 The Sources of Transnational Crime Financing**

Obviously the financial sources of transnational crime come from all crime activities in which the transnational crime organizations are engaged. The most important of which are analyzed below.

#### **(1) Drug Trafficking**

According to Yepes (2008) in May 2002 a report called “Global Overview of Narcotics-Funded Terrorist and Other Extremist and Transnational Crime Groups”<sup>18</sup> was launched, prepared by the Federal Research Division of the Library of Congress and the US Department of Defense. The report examined connections between terrorist groups and narcotics trafficking in the following regions of Latin America: Triborder Region (Argentina, Brazil, and Paraguay), Colombia, and Peru; in the Middle East: Lebanon, in Southern Europe (Albania and Macedonia); in Central Asia: Kyrgyzstan, Tajikistan, and Uzbekistan and in East Asia: The Philippines. In this respect the report shows clear evidence in relation to drugs and financing and the connection between terrorist and transnational crime organizations<sup>19</sup>.

#### **(2) Oil Smuggling**

According to Johnson (2001) and Napoleoni (2005) another crime business is oil smuggling, where terror, criminal, and legitimate economies interact. Countries, where oil smuggling is a significant problem are Thailand, China, Russia, Cambodia, Iran and Tanzania. In all these countries oil smuggling “creates” significant profits, a substantial portion of which enters the

---

<sup>17</sup> Gravity models try to explain that trade flows in and out of big centres; hence the bigger / larger the gravity centre the more trade it has.

<sup>18</sup> See [http://www.loc.gov/rr/frd/pdf-files/NarcsFundedTerrs\\_Extrems.pdf](http://www.loc.gov/rr/frd/pdf-files/NarcsFundedTerrs_Extrems.pdf)

<sup>19</sup> Compare also FATF (2005), Masciandaro (2004) and Zdanowicz (2009), who provide empirical evidence for this.

laundering cycle. Oil smuggling is also related to arms trade according to Johnson (2001) and Napoleoni (2005).

### **(3) Arms / Diamonds Trafficking**

According to Levi and Gilmore (2002), Schneider (2004, 2008a, 2008b, 2009) and Yepes (2008) in addition to drugs, arms trafficking, as well as illegal diamonds trade are some of the most important sources of funding of transnational crime groups. The illicit arms trade demonstrates how comparatively easy it is to obtain false documentation accompanying arms shipments, especially end-user certificates. Inconsistent documentation requirements between states, and inefficient control in customs and port authorities in many states, have created an environment in which the illicit arms trade does not need to rely entirely on criminal activities for example:

- (1) When a state is involved in supplying arms to an embargoed state, payments or even a barter exchange often come in the form of commercial payments, such as “oil for arms” deals to avoid bank involvement.
- (2) When an arms broker supplies weapons to an embargoed state, banks are often used because shipments are usually paid for in the form of letters of credit by the direct transfer of hard-currency funds. In this case, money laundering becomes an important factor to ensure that the final arms destination is disguised. It is at this point that offshore banks play an important role because their facilities can ensure that any deposit or transfer is routed via several intermediary institutions; and deposits or transfers can be conducted in the name of a series of shell companies. Both of these techniques are used to hide the financial trail behind multiple administrative layers.
- (3) In situations where access to normal banking channels is very difficult (for example, as with most non-state actors), the financing of arms deals often takes a different form, most often through commodity exchanges. According to Smillie et al. (2000), illicit arms transfers to Liberia and Sierra Leone were often financed with diamonds and timber concessions.

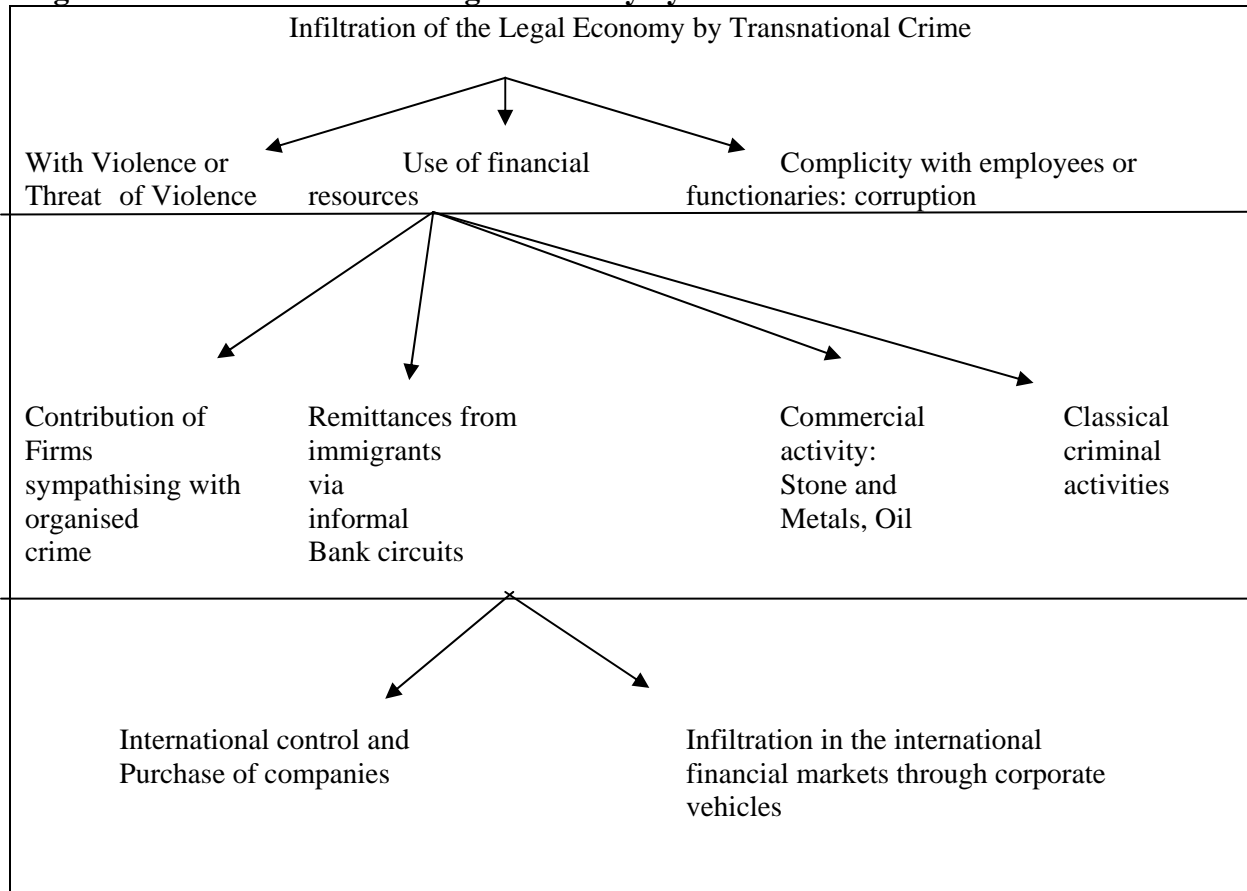
## **3. The Infiltration of the legal Economic System and of the Informal Money Banking (Hawala) System by Transnational Crime Organizations**

Obviously transnational crime organizations prefer to use an informal banking system, in order to make it more difficult for the state authorities to detect transactions. The most famous and oldest informal banking system is the Hawala banking system, which will be analyzed in part 3.2 after a short introduction regarding the different kinds of infiltration by crime organizations.

### **3.1 The Infiltration of Legal the Economic System**

In Figure 1 the various channels of infiltration used by the transnational crime groups are summarized. Figure 1 concentrates on the use of financial resources and clearly demonstrates that the financial means / flows stand on five pillars ranking from legal investments to classical criminal activities.

**Figure 3.1: Infiltration of the Legal Economy by Transnational Crime**



Source: Yepes (2008: 56) and author's own remarks.

### 3.2 The Informal Money Banking (Hawala) System

During the 1990s, international concern grew over the “underground banking” and its abuse by serious offenders. Some academic works by Williams (2007), Savona (1997) and El-Quorchi (2003) have explained how informal systems operate, including their risks. The Informal Value Transfers Systems (IVTS) changes from region to region (also referred to as Hawala or door-to-door). Some scholars (Williams, 2007; El-Quorchi, 2003) argue that Hawala is vulnerable to criminal abuse, and like the other financial institutions, there is evidence that money derived from drug trafficking, illegal arms sales, body part trade, corruption, tax evasion, and all kinds of fraud having been moved through Hawala networks.

Hawala banking still takes place and some authors provide literature (Passas (2005) and van de Bunt (2007)) about the Hawala banking system, where these authors point to the need for a regulation of the Hawala banking system. As argued, another way to transfer criminal financial flows is the Hawala banking. According to van de Bunt (2007), Hawala bankers<sup>20</sup> are financial service providers who carry out financial transactions without a license and therefore without government control<sup>21</sup>. They accept cash, cheques or other valuable goods (diamonds, gold) at one location and pay a corresponding sum in cash or other remuneration at another location. Unlike official banks, Hawala bankers disregard the legal

<sup>20</sup> Several traditional terms, like Hundi (India) and Fei-ch'ei (China) remind one of 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’.

<sup>21</sup> This clearly means that Hawala banking system is a highly unregulated and informal system. Compare Schneider (2010) and Van de Bunt (2007).

obligations concerning the identification of clients, record keeping, and the disclosure of unusual transactions, to which these official financial institutions are subject.

To re-emphasize the point: through this system that forms an integral part of the legal (formal) and informal market economy in a number of countries, Hawala bankers ensure the transfer of money without having to move it physically or electronically. When a payment needs to be made overseas, the underground banker will get in touch with a courier (or more recently using email, fax or phone) in that country informing him of the details of the payment. If the recipient of the payment wishes to personally obtain the money, a code referring to the underground banker in the country of payment is given to the recipient. Such a system is almost untraceable since it leaves little, if any, paper trail. Transaction records are kept only until the money is delivered, at which time they are destroyed. Even when there is a paper or electronic record of the transaction it is often in dialects and languages that serve as a *de facto* encryption system.

According to Fischer (2002: 17), the annual turnover<sup>22</sup> of the Hawala banking system in the early seventies was already 60 billion USD in the Arabic countries: For example, seven million foreign laborers in Saudi Arabia, who are sending home 43 billion USD a year, make substantial use of the “ethnic” Hawala system. Fletcher and Baldrin (2002, p. 119) estimate with regard to Pakistan that 2.5 billion USD flow in the country in remittances via the Hawala system in 2001; the amount of money in India’s Hindi system was 50 billion USD in 1971. Despite the growing competition by formal remittance services, the use of Hawala banking has probably not declined. According to a recent estimate by the IMF (2005), (especially Asian) migrants transfer 100 billion dollars per annum to family members and relations 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 through the Hawala bankers.

According to van de 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 outlived its usefulness. Low-income workers and migrant workers in particular, supposedly put more trust in Hawala bankers than in formal banks. This viewpoint emphasizes the problem associated with subjecting Hawala banking to the same rules as formal banks. Regulation either through 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 of free market banking, without government regulation that has functioned well for centuries. One should clearly emphasize these advantages of Hawala banking when criticizing it. From the opposite point of view, van de Bunt (2007) argues that Hawala banking is described as ‘underground banking’, a system that flies under the radar of modern supervision of financial transactions. Underground banking can be considered a threat to the effectiveness of anti-money laundering measures and the fight against terrorist financing. 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<sup>23</sup>.

---

<sup>22</sup> Mostly these are legal payments and of course can include some illegal payments and it is unclear whether the Hawala banker knows this.

<sup>23</sup> Compare also Richard (2005) and Rider (2004). This is a general claim in order to be on the safe side. However, to the author’s knowledge there is no clear empirical evidence that the Hawala banking system has been infiltrated by the transnational and/or organized crime organizations.

### 3.3 The Principal Sources of Organized Crime Financing

The sources of organized crime financing which are channeled through formal and informal systems come from a variety of origins, some criminal, some not. As discussed in Schneider (2008b) and (2010) the most important are:

- (1) International and domestic activities: e.g. : black mail, corruption and all the crime related activities;
- (2) diaspora-migrant communities: contributions for protection;
- (3) high level transnational crime: fraud, illegal production and smuggling of drugs, kidnapping, armed robbery, trafficking in human beings; and
- (4) investments and legitimate business: money is used to acquire legal enterprises.

## 4. Summary and Conclusions

In this chapter an attempt is made to review the literature of the finances of transnational crime with a focus on estimations of the volume of the finances of transnational crime. The chapter reaches the following two findings:

*First*, the necessity of money laundering is obvious as a great number of illegal (criminal) transactions are cash based. Hence, this amount of cash from criminal activities must be laundered in order to have some “legal” profit, to undertake investment or consumption in the legal world. *Second*, to arrive at an estimate of the extent and development of the amount of the financial means of transnational crime over time is even more difficult<sup>24</sup>. This paper collects some findings and Schneider (2008b; 2010) show that money laundering from transnational crime has increased from 273 billion USD (or 1,33% of official GDP) in 1995 to 603 billion USD (or 1,74% of official GDP) 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, 600 billion USD are estimated to be laundered coming only from the total drug (crime) business. These figures are very preliminary with a quite large margin of error, but give a clear indication how important money laundering and the turnover of transnational crime nowadays is.

From these preliminary results I draw three conclusions:

- (1) The revenues of transnational crime are scientifically extremely difficult to tackle. It's defined differently in almost every country, the measures taken against it are different and vary from country to country and it is not so all clear what money laundering from the revenues of transnational crime really is.<sup>25</sup>
- (2) To fight against transnational crime is also extremely difficult, as there are no efficient and powerful international organizations which can effectively fight against transnational crime<sup>26</sup>.
- (3) Hence, this paper should be seen as a first start/attempt in order to shed some light on the grey area of the revenues of transnational crime and to provide some better empirical bases.

---

<sup>24</sup> All estimated figures have a large error, the estimation procedures are very difficult to use. Hence the published figures should be interpreted with great care. Compare also conclusion 1.

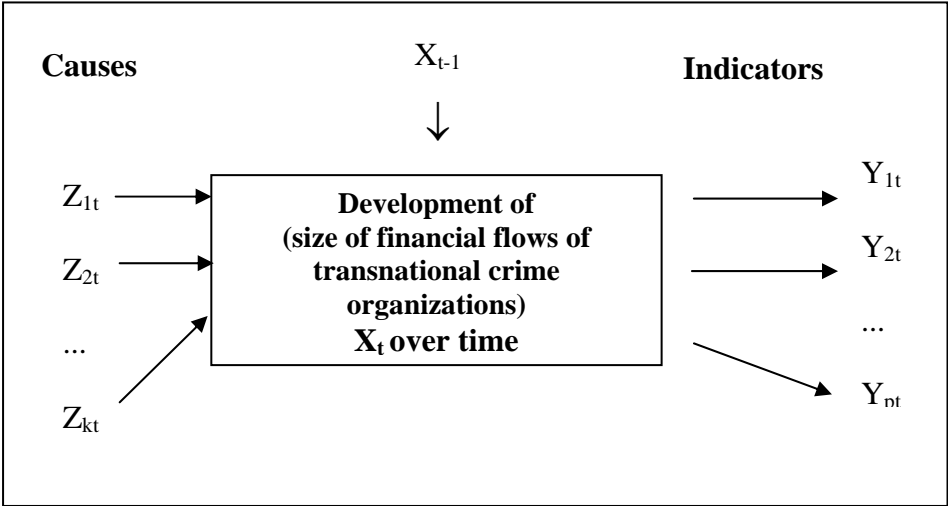
<sup>25</sup> The definition of money laundering considerably varies from country to country, also there are no international organized and harmonized effects to fight money laundering with the result that little has been done so far.

<sup>26</sup> Some fist attempts have been made, like the FATF, or some suborganizations in the U.N.

**5. Appendix: The Amount of Financial Flows of Transnational Crime Organizations – the Estimation Procedure (Latent Estimator MIMIC Approach)**

As the size of financial flows of the transnational crime organizations is an unknown (hidden) figure, a latent estimator approach using a MIMIC (i.e. **m**ultiple **i**ndicators, **m**ultiple **c**auses estimation) procedure is applied. This method has quite successfully been used to estimate the size of the shadow economy and is now briefly described.<sup>27)</sup> This estimation procedure is called the “model approach” which explicitly considers the multiple causes of as well as multiple indicators of the hidden variable. The method is based on the statistical theory of unobserved variables, which consider multiple causes and multiple indicators of the phenomenon (size of the shadow economy, size of the financial flow of (transnational crime organizations)). A factor-analytic approach is used to measure the hidden economy (here size of financial flows of transnational crime organizations) as an unobserved variable over time. The unknown coefficients are estimated in a set of structural equations within which the “unobserved” variable cannot be measured directly. The MIMIC (multiple-indicators multiple-causes) model consists in general of two parts; the measurement model links the unobserved variables to observed indicators. The structural equations model specifies causal relationships among the unobserved variables. In this case, there is one unobserved variable, the size of the financial flows of transnational crime organizations. It is assumed to be influenced by a set of indicators for these financial flows, thus capturing the structural dependence of these financial flows on variables that may be useful in predicting its movement and size. The interaction over time between the causes  $Z_{it}$  ( $i = 1, 2, \dots, k$ ), the size of these financial flows  $X_t$ , and the indicators  $Y_{jt}$  ( $j = 1, 2, \dots, p$ ) is shown in Figure A1.

**Figure A1: Development of the shadow economy (size of financial flows of transnational crime organizations) over time**



Source: Prof. Dr. Friedrich Schneider

<sup>27)</sup> For a detailed discussion compare Schneider and Enste (2000) and Schneider (2005).



## 6. References

- Agarwal, J. D. and Aman Agarwal (2004): Globalization and International Capital Flows, *Finance India*, Vol. 19/1, pp. 65-99.
- Agarwal, J. D. and Aman Agarwal (2006): Money Laundering: New Forms of Crime, and Victimization, *paper presented at the National Workshop on New Forms of Crime, Victimization*, Department of Criminology, University of Madras, India.
- Bagella, Michele, Busato, Francesco and Amedeo Argentiero (2009), Money Laundering in a Microfounded Dynamic Model: Simulations for the U.S. and the EU-15 Economies, *Review of Law and Economics*, 5/2, 2009, pp. 879-902.
- Baker, Raymond W. (2005): *Capitalism's Achilles Heel – Dirty Money and How to Renew the Free-Market System*, Hoboken, N.J.: John Wiley and Sons.
- Bunt, Henk van D. (2007), *The Relation between Organised Crime and Informal Markets: The Role of Hawala Bankers in the Transfer of Proceeds from Organised Crime*, CRIMPREV, Gant University, Gant, Belgium, *Discussion Paper*.
- El Quorchi, M., S.M. Maimbo, et al. (2003): *Informal Funds Transfer Systems: an Analysis of the Informal Hawala System*, Washington, DC, International Monetary Fund, pp. 1-53.
- FATF (2005), Money Laundering & Terrorist Financing Typologies 2004-2005, 10 June 2005.
- Fischer, Howard, S. (2002), *Hawala – What is it and How to Emasculate it*, California, Beverly Hills, Study.
- Fletcher, N. and Baldwin, J. (2002), Money Laundry Counter Measures with Primary Focus upon Terrorism and the U.S. Patriot Act 2001, *Journal of Money Laundering Control*, 6/2, (2002), pp.105-136.
- Gilmore, W. C. (2004): *Dirty money: the Evolution of International Measures to Counter Money Laundering and the Financing of Terrorism*, Strasbourg, Council of Europe Pub.
- Giraldo, J.K. and H.A. Trinkunas (2007), *Terrorism financing and state responses: a comparative perspective*, Stanford, Calif., Stanford University Press, 1-20, pp. 282-296.
- Hutchinson. S. and P.O. Malley (2007), A Crime-Terror Nexus? Thinking on some of the links between Terrorism and Criminality, *Studies in Conflict & Terrorism*, 30/12, pp. 1095-1107.
- International Monetary Fund (IMF) and World Bank (2001), Enhancing Contribution to Combating Money Laundering: *Policy Paper*, Washington D.C.: IMF and World Bank, 2001.
- IMF, International Monetary Fund (2006) quoted from UNDOC (2007), *World Drug Report*, New York, 2007.
- IMF (2007), *Financial System Abuse, Financial Crime and Money Laundering*, Washington, DC., Monetary and Exchange Affairs and Policy Development.
- Johnson, J. (2001): In Pursuit of Dirty Money: Identifying Weaknesses in the Global Financial System, *Journal of Money Laundering Control*, 5/2, pp. 122-133.
- Koh, J.-M. (2006): *Suppressing terrorist financing and money laundering*, Berlin: Springer.
- Krueger, A.B. (2008) What makes a homegrown terrorist. Human Capital and participation in domestic Islamic terrorist groups in the U.S.A., *Economic Letters*, 101/3, pp. 293-296.
- Levi, M. and W. Gilmore (2002b): Terrorist Finance, Money Laundering and the Rise and Rise of Mutual Evaluation: A New Paradigm for Crime Control, in: *Financing Terrorism*, Netherlands, Kluwer Academic Publishers, pp. 87-115.
- Makarenko, T. (2002): A Model of Terrorist-Criminal Relations, *Jane's Intelligence Review*.
- Makarenko, T. (2003a): Tracing the dynamics of the illicit arms trade, *Jane's Intelligence Review*.
- Makarenko, T. (2003b) "A model of terrorist-criminal relations." *Janes's Intelligence Review*.

- Makarenko, T. (2003c). Transnational Terror and Organised Crime: Blurring the Lines. *Sais Review*, XXIV (1):49-61.
- Masciandaro, D. (2004): *Global Financial Crime: Terrorism, Money Laundering and Off Shore Centres*, Aldershot, (England), Burlington, Ashgate.
- Masciandaro, D. (2005): Financial Supervisory Unification and Financial Intelligence Units, *Journal of Money Laundering Control*, 8/4, pp. 354-371.
- Masciandaro, D. (2006): *Offshore Financial Centres and International Soft Laws: Explaining the Regulation Gap*, Second Annual Conference: Società Italiana di Diritto ed Economia, Roma, pp. 1-49.
- Napoleoni, L. (2005): *Terror Incorporated: Tracing the Dollars behind the Terror Networks*, New York, Seven Stories Press.
- Perkel, William (2004), Money Laundering and Terrorism: Informal Value Transfer Systems, *American Criminal Law Review*, 41/2, pp. 183-211.
- Picarelli, J. (2006): The Turbulent Nexus of Transnational Organised Crime and Terrorism: A Theory of Malevolent International Relations, *Global Crime*, 7/1, pp. 1-24.
- Razavy, Mark (2005), Hawala: An Underground Haven for Terrorist of Social Phenomenon? *Crime, Law and Social Change*, Vol. 44/2, pp. 277-299.
- Richard, A. C. (2005): *Fighting Terrorist Financing: Transatlantic Cooperation and International Institutions*, Center for Transatlantic Relations, Johns Hopkins University, 2005.
- Rider, B. (2004): The War on Terror and Crime and the Offshore Centres, in: *Global Financial Crime: Terrorism, Money Laundering and Offshore Centres*, Aldershot, Hants, England, Burlington, VT, Ashgate: pp. 61-95.
- Sanderson, T. M. (2004): Transnational Terror and Organised Crime: Blurring the Lines, *Sais Review* XXIV (1): 49-61.
- Savona, E. U. and ISPAC (Organization) (1997): *Responding to money laundering: international perspectives*, Amsterdam, The Netherlands, Harwood Academic Publishers.
- Schneider, Friedrich (2004): The financial flows of Islamic Terrorism, in: Masciandaro, Donato (ed.), *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, pp. 598-642.
- Schneider, Friedrich (2008a): Turnover of Organised Crime and Money Laundering: Some Preliminary Empirical Findings, *Discussion Paper*, Department of Economics, University of Linz.
- Schneider, Friedrich (2008b): Money Laundering from Revenues from Organised Crime: Some Preliminary Empirical Findings, *revised version of a paper* which was presented at the Conference „Illicit Trade and Globalization“, CES-ifo Venice Summer Workshop, Venice National University, San Servolo, July 14-15, 2008.
- Schneider, Friedrich (2009): Die Finanzströme von Organisierter Kriminalität und Terrorismus: Was wissen wir (nicht)?, *Vierteljahreshefte zur Wirtschaftsforschung, DIW Berlin*, 78/4, pp. 73-87.
- Schneider, Friedrich (2010): *The (Hidden) Financial Flows of Terrorist and Organized Crime: A Literature Review and Some Preliminary Empirical Results*, Paper prepared for the EUSECON conference in Athens, April 12-13, 2010.
- Schneider, Friedrich and Enste, Dominik (2000), Shadow Economy: Causes, Size and Consequences, *Journal of Economic Literature*, Vol. 38/1 (March 2000), pp. 77-114.
- Schneider, Friedrich, Dreer, Elisabeth und Wolfgang Riegler (2006): *Geldwäsche: Formen, Akteure, Größenordnung – Warum die Politik machtlos ist*, Wiesbaden: Gabler-Verlag.

- Schneider, Friedrich, Tilman Brück and Daniel Meierrieks (2010), The Economics of Terrorism and Counter-Terrorism: A survey, *CESifo Working Papers*, No. 3011, April 2010, CESifo Munich.
- Schneider, Friedrich und Windischbauer, Ursula (2008): Money Laundering: Some Facts, *European Journal of Law and Economics*, 26/4, pp.387-404.
- Shelley, L. (2005): The Nexus between Terrorism and Organised Crime, in: *Confronting Terrorism Financing*, Lanham, MD (etc.): University Press of America, pp. 29-33.
- Smillie et al (2000). *The Heart of the Matter: Sierra Leone, Diamonds and Human Security*. Canada: Ontario, Partnership Africa.
- Takats, Ilöd (2007): A Theory of "Crying Wolf": The Economics of Money Laundering Enforcement, *Paper* presented at the *Conference "Tackling Money Laundering"*, University of Utrecht, Utrecht (The Netherlands), November 2-3, 2007.
- Truman, E.M. and Peter Reuter (2004), *Chasing Dirty Money: Progress on Anti-Money Laundering*, Institute for International Economics, United States: Washington, November 2004.
- UN (2007): *World Drug Report*, United Nations Office for Drug and Crime Prevention (UDCCP), Oxford-New York.
- Unger, Brigitte (2007). *The Scale and Impacts of Money Laundering*, Cheltenham (UK), Edward Elgar Publishing Company.
- Walker, John (1999). How big is Global Money Laundering?, *Journal of Money Laundering Control*, 3/1, pp. 64-85.
- Walker, John (2000): Money Laundering: Quantifying International Patterns, *Australian Social Monitor*, 2/6, pp.139-147.
- Walker, John (2004): A Very Temptative Exploration of the Relationship between Shadow Economy and the Production and Transit of Illicit Drugs, New York: *UNODC document*.
- Walker, John (2007): Measuring Global Money Laundering, *Paper* presented at the *conference "Tackling Money Laundering"*, University of Utrecht, Netherlands.
- Walker, John and Brigitte Unger (2009), Measuring Global Money Laundering: The Walker Gravity Model, *Review of Law and Economics*, 5/2, p. 821-853, DOI: 10.2202/1555-5879.1418.
- Wilkinson, P. (2005): International Terrorism: The Changing Threat and the EU's Response, *Cahier de Chaillot* 84.
- Williams, P. (2007): Warning Indicators and Terrorist Finances, *Terrorism financing and state responses: a comparative perspective*, Stanford, Calif., Stanford University Press:
- Yepes, Verdugo (2008): International Cooperation in the Fight against Terrorist Financing, *Dissertation*, 2008, Universitat de Barcelona, Barcelona, Spain.
- Zdanowicz, John (2009), Trade-Based Money Laundering and Terrorist Financing, *Review of Law and Economics*, 5/2, p.854-878.