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Competing for Criminal Money

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Abstract

To compete for criminal money by means of low bank secrecy seems a tempting strategy for countries in order to attract additional funds. We show in a model that this "Seychelles-strategy" can increase national output, in particular if a country takes a (Stackelberg) leadership in the competition game. If all countries try to do the same, there will be a race to the bottom and a supranational authority like the FATF (Financial Action Task Force) must intervene. However, there are also some intrinsic barriers to the "Seychelles-strategy". Among others, criminal capital might crowd out legal capital and money laundering might increase crime. Our findings suggest that countries have created niches for laundering. Small countries can free ride for a while, but eventually will face external sanctions and internal crime problems.

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Introduction

In 1994 the International Monetary Fund (IMF) valued offshore assets at US\$2.1 trillion, representing 20 per cent of total global private wealth. By 1998 a British Parliamentary report estimated that this had increased to over US\$6 trillion. This is reportedly still growing. In 2000 the IMF estimated that there was a US\$1.7 trillion discrepancy between reported portfolio assets and liabilities caused by channeling funds through Offshore Finance Centres (OFCs). Just as funds have grown so has the number of OFCs. There are some 67 jurisdictions around the world with OFC facilities. This includes countries and territories with strict bank secrecy provisions and minimal taxes such as Bermuda, the Cayman Islands and Vanuatu through to industrialized democracies such as Australia Luxembourg, Austria, the Netherlands, the United States and the United Kingdom. These countries have introduced preferential legal regimes to attract and compete for globally mobile capital, to in effect benefit from the 'hyper-mobility' of global finance.

The rush to deregulate financial markets has made countries vulnerable to money laundering whereby criminal funds are converted into legitimate transactions. Until recently countries with strict bank secrecy laws and minimal reporting requirements have in a sense competed for criminal money. This has not necessarily been a deliberate or intentional strategy, but rather is a consequence of competition for commingled funds that have their origins in both lawful enterprise and unlawful gain. Criminals have been able to take advantage of preferential regimes accorded to them by bank secrecy through investing in bonds, securities and financial products such as life insurance plans and managed funds. Until the late 1990s many countries were oblivious to the risks posed by the infiltration of criminal money into their financial systems and in doing so effectively competed for criminal money. However, as a result of corporate collapses, banking scandals, heightened concern over terrorist financing and the risk posed to financial markets by money laundering, governments and multilateral organisations have moved against criminal money through tightening reporting requirements and regulations. In doing so authorities have had to determine where the line for policy competition stops; where it begins and ends, how it is demarcated through increased regulatory intervention or prohibition in law. While governments may continue to compete for globally mobile capital, they seek to more actively distinguish this from criminal money, in domestic laws, bilateral treaties and multilateral agreements. This paper considers the changing nature of criminal money and its competition, the development of new techniques of criminal investment, government counter-measures and the relationship between legislation, enforcement and criminal activities. It argues that the commingling of funds that results when legitimate financial products are converted into criminal use remains a serious problem in regulating competition for globally mobile capital. Unless regulations are carefully developed and effectively enforced countries may continue to inadvertently compete for criminal money despite their best intentions.

I. 1.Criminal Money, an Attractive New Source of Income

In times of increased internationalization and globalization, countries try hard to attract foreign capital. They compete for the location of foreign firms and capital with low taxes, with good infrastructure and high subsidies for firms, with low labour standards and declining welfare benefits in order to guarantee low wage side payments, with low ecological standards. They have to compete hard, since other countries will do the same. The danger of the erosion of the welfare state, of social dumping or ecological dumping was pointed out by anti-globalists. Countries are trapped in the dilemma to lower standards in order to attract international firms and capital, and at the same time to have to win elections by the national population who often wants higher standards.

One smart way out of this dilemma seems to be to compete for criminal money, at least at a first glance. A country does not have to lower standards, neither work or product related nor or ecological, it does not have to lower taxes, it can even charge higher interest rates to criminals who will be happy to place their money undiscovered in a safe and non corrupt country. Money seems to flow into the country like manna from heaven.

In 1995 the government of the Seychelles, an island state of some 80,000 people in the Indian Ocean of the east of Africa, passed the Economic Development Act (EDA). The aim of the act, according to its preamble was to "...provide for the granting of incentives and concessions to qualified individuals desirous of investing in the Seychelles for the purpose of ensuring a high level of sustainable economic growth in the Seychelles" (Seychelles, 1995). The act created a board that could give specified concessions and incentives to such investors. One of these incentives was complete immunity from prosecution in criminal proceedings and the protection of assets from forfeiture even if investment were earned as a result of crimes committed outside the Seychelles. An investor could deal in drugs or commit violent offences anywhere else in the world and then safely invest the proceeds in the Seychelles free from forfeiture or prosecution. All the individual had to do was invest a minimum of US\$10 million and the Seychelles government would grant immunity from prosecution. In doing so the Seychelles explicitly announced that it would openly compete for the proceeds of crime.

Other countries reacted with horror. The United States Department of the Treasury issued an advisory to banks and financial institutions urging them to exercise strict caution in their financial dealings with the Seychelles. The Republic Bank of New York severed all financial dealings with the country and stopped all payments to/from the Seychelles. The US treasury noted that "...the law would apparently created a safe haven in the Seychelles, for the proceeds of drug trafficking in other nations" (US Department of the Treasury, 1996). The Financial Action Taskforce (FATF), established by the Group of Seven industrialized nations (G7) in 1989 issued its first ever public condemnation of an individual country. Its President, at the time US Treasury Under Secretary for Enforcement, Ronald Noble, announced that:

The clear design of the Seychelles law is to attract capital by permitting international criminal enterprises to shelter both themselves and their illicitly

gained wealth from pursuit by legal authorities... Drug traffickers and other criminals can enjoy the spoils of their illegal activities secure in the knowledge that the Seychelles authorities will protect them. This poses a grave threat to combat money laundering and maintain the integrity of the world's financial system (Noble, cited by the US Department of the Treasury, 1996).

No country in the world has been as bold as the Seychelles, to openly announce to global money markets that it recognised capital as absolutely “neutral” regardless of its possible criminal origins. Indeed it openly solicited such funds. The opposition to the EDA was so strong that the investment board was never convened and never considered an application from an investor with US\$ 10 million or more. In 1996 it also introduced an Anti Money Laundering Act and in 1997 the Mutual Assistance in Criminal Matters Act. In August 2000 the Seychelles government finally repealed the EDA and escaped listing by the FATF as a Non Cooperative Country and [or] Territory (NCCT).

There may not have been any other country to so openly compete for criminal money to the extent of providing an entire suite of legal incentives to launder funds, but such investments do not need such formal provisions and the approval of a statutory body. While the United States may have been so aghast at the openness of the Seychelles proposal, at the same time, it had become a magnet for the inward investment of funds based on crimes committed outside its borders. It did not display an “open for business” welcome sign on a par of with Seychelles EDA, but nor did it reject such investment. Raymond Baker, a US money-laundering expert reported that:

When it comes to large deposits from overseas, far too often American banks assume a ‘don’t ask, don’t tell philosophy’...In fact, the treasury Department estimates that 99.9 percent of the criminal money presented for deposit in the United States is accepted into secure amounts. It’s a sad fact, but American banks under, the umbrella of conflicting American laws and policies, will accept money from overseas even if they suspect that it has been illegally obtained (Baker, cited in Napoleoni, 2004: 203-204).

Laundered money does not only require the services of countries like the Seychelles. It is attracted to major industrialised economies such as the US, UK, Netherlands and Australia. The Seychelles was one extreme example of a pattern of countries seeking to attractively attract globally mobile capital. Small island states and enclaves with open capital markets, strict bank secrecy, a lack of transparency and anonymous bank accounts are the most candidates to arouse suspicion in cases of money laundering. In 1998 the OECD, while concentrating on the opportunities small states and territories offered for tax avoidance, also noted that their financial systems, particularly bank secrecy, also presented risks as conduits for laundered funds. In 2000 it identified 35 of these tax havens (see map one). These small, and in many cases, poor countries were obvious targets. The entities incorporated in these jurisdictions or the volume of funds under management was completely disproportionate. For example, the South Pacific island of Niue, which had established an Offshore Finance Centre (OFC) in 1994 and given management rights to the Panamanian law firm Mossack Fonseca, had by 2004, 9,220 International Business Corporations (IBCs), almost four times the number the total population of

the island (United States Department of State, 2004; van Fossen, 2002). In 1998 a British investigation into financial regulation in the Channel Islands found that there were 15,000 company directors on the island of Sark, the world smallest self-governing jurisdiction. These directors sat on the boards of companies incorporated in the United Kingdom, Ireland, Panama and the Isle of Man, but seemed to have very little idea of what “their” companies actually did. One islander alone was the director of 3000 such companies. Yet while Sark has 15,000 company directors, the island only has a population of 575 (Edwards, 1998: 88). US corporations have deposited some US\$800 billion in the Cayman Islands, equivalent to 20 percent of the total value of all bank deposits in the USA or US\$20 million per Caymanian resident (Sikka, 2003: 367). It is also equivalent to the entire US dollar foreign reserves held by the Peoples Republic of China (PRC). Unlike the PRC however, the Cayman Islands measures only 262 square kilometres (a tenth the size of Luxembourg) with a population of 44, 270 persons (CIA, 2005).

In its 2004 assessment of official financial services, the US Department of State listed 58 OFC countries and territories. Of these almost half, 24 jurisdictions, were still issuing bearer shares. These have been identified as a prime instrument of money laundering concern, as it allows owners of shares to conduct business anonymously. Beneficial owners do not have to be identified. While many of the countries that continue to issue bearer shares also appeared on the OECDs initial list, there were others that were identified that have not been listed by the OECD including Uruguay, Hungary, Luxembourg and Switzerland.

In 2001 a French parliamentary report identified The City of London as a key centre for money laundering and terrorist financing. Its author, Member of the French Parliament, Arnaud Montebourg, reported that:

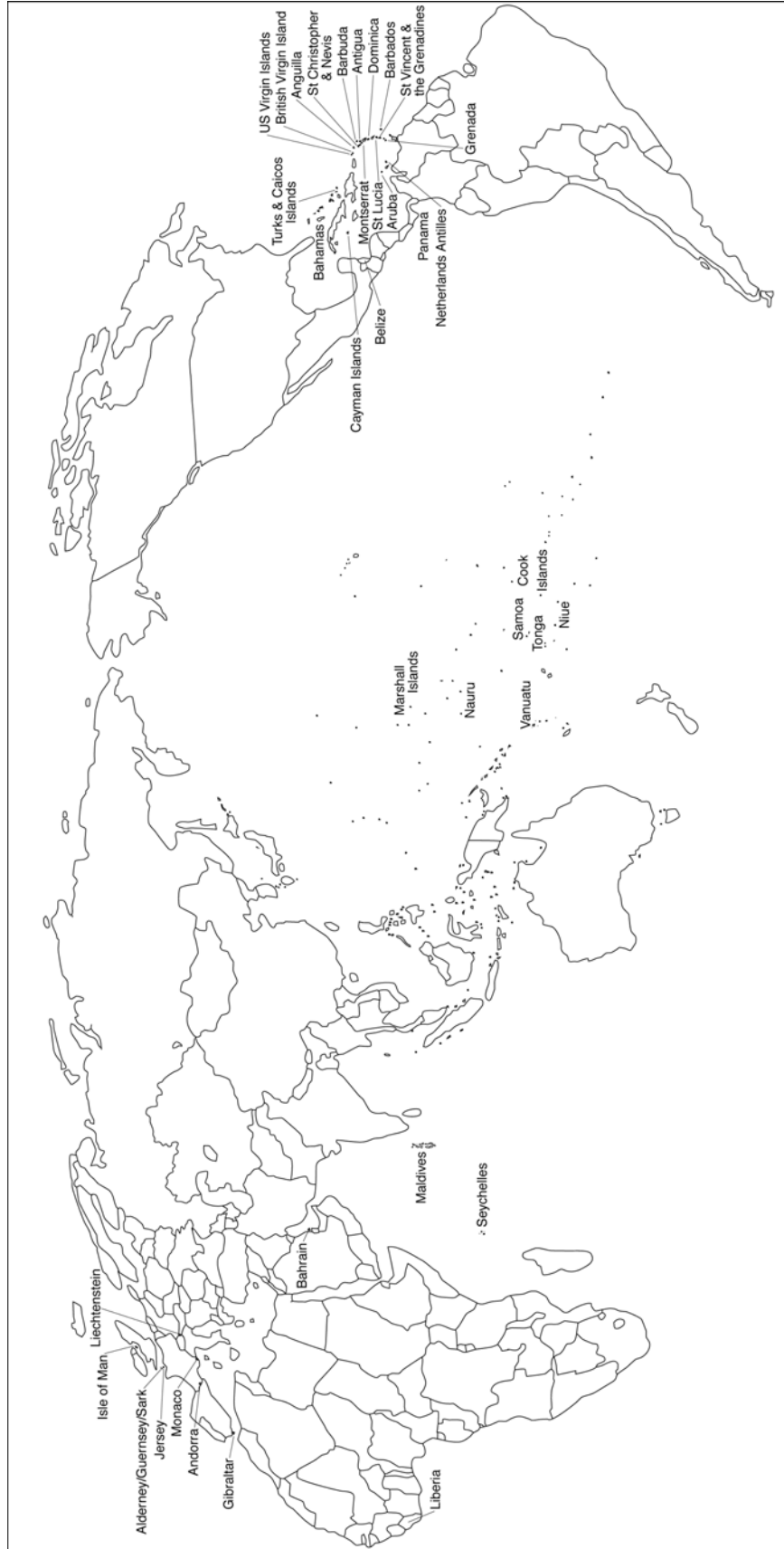
...to understand the length of time that the City of London has been used, the way it has been infiltrated, and above all the lack of reaction on the part of the British regulatory authorities...[London is] not only a tax, banking and financial haven, but also, unfortunately, a judicial have in many respects (Montebourg, cited in Inciyan, Roche and Stern, 2001:29).

The point here, is that it is not just small OFC states (such as those identified by the OECD) that implicitly compete for criminal funds and make themselves vulnerable to money laundering, but also major industrialised OECD economies. Such competition is not necessarily deliberate or even intentional. It is a rather a consequence of financial deregulation that has tended, in the words of Masciandaro (2004:4) to view capital as “neutral”. In privileging the “neutrality” of capital over the political economy of its origins and circulations, the criminal dimensions have been obscured. In welcoming fluid and porous capital in investment form, a number of countries have, even if inadvertently, competed for crime and criminal money. Those that offer bank secrecy, anonymous accounts and poor transparency are in effect engaged in a “race to the bottom” for criminal funds whereby money laundered through their financial systems. In examining these competitive tendencies it is necessarily to not only examine countries that have policies of confidentiality and secrecy but all countries that have policies aimed at actively attracting globally mobile capital into their markets. These countries are listed on table one. The

basis of this listing is the International Monetary Fund's (IMF's) 1999 report on countries and territories that seek to attract globally mobile capital by hosting an offshore financial centre that may or may not be partitioned from the domestic economy. Countries that have been listed by the FATF as NCCTs in four of its reports issued since 2000, along with the OECDs listing of tax havens are also included at table one.

Since the FATF's¹ formation in 1989 there has been a steady move against money laundering globally. This increased in the late 1990s and accelerated since the terrorist attacks of September 11 2001.

¹ The FATF consists of 33 member countries and/or supranational polities: Argentina; Australia; Austria; Belgium; Brazil; Canada; Denmark; European Commission; Finland; France; Germany; Greece; Gulf Cooperation Council; Hong Kong SAR; Iceland; Ireland; Italy; Japan; Luxembourg; Mexico; The Netherlands; New Zealand; Norway; Portugal; Russia; Singapore; South Africa; Spain; Sweden; Switzerland; Turkey; United Kingdom and the United States.



Map 2: Tax Havens Identified by the OECD – June 2000

	IMF List 1999	OECD Tax Havens 2000	FATF NCCTs 2000	FATF NCCTs 2001	FATF NCCTs 2002	FATF NCCTs 2005
Africa						
Djibouti	X					
Liberia	X	X				
Egypt				X	X	
Maldives		X				
Mauritius	X					
Nigeria	X			X	X	X
Seychelles	X	X				
Tangier	X					
Asia and Pacific						
Australia	X					
Cook Islands	X	X	X	X	X	
Federal States of Micronesia	X	X				
Guam	X					
Hong Kong	X					
Indonesia				X	X	
Japan	X					
Macau	X					
Malaysia	X					
Mayamar (Burma)				X	X	X
Marianas	X					
Marshall Islands	X	X	X	X		
Nauru	X	X	X	X	X	X
Niue	X	X	X	X		
Philippines	X		X	X	X	
Samoa	X	X				
Singapore	X					
Thailand	X					
Vanuatu	X	X				
Europe						
Austria	X					
Andorra	X	X				
Campione	X					
Cyprus	X	X				
Gibraltar	X	X				
Guernsey/Sark/Alderney	X	X				
Hungary	X			X		
Ireland	X					
Isle of Man	X	X				
Jersey	X	X				
Liechtenstein	X	X	X			
Luxembourg	X	X				
Malta	X					

	IMF List 1999	OECD Tax Havens 2000	FATF NCCTs 2000	FATF NCCTs 2001	FATF NCCTs 2002	FATF NCCTs 2005
Madeira	X					
Monaco	X	X				
Netherlands	X					
Russia	X		X	X		
Switzerland	X					
Ukraine				X	X	
United Kingdom	X					
Middle East						
Bahrain	X	X				
Dubai	X					
Israel	X		X	X		
Kuwait	X					
Lebanon	X		X	X		
Oman	X					
Americas						
Antigua & Barbuda	X	X				
Anguilla	X	X				
Aruba	X	X				
Bahamas	X	X	X			
Barbados	X	X				
Belize	X	X				
Bermuda	X					
British Virgin Islands	X	X				
Cayman Islands	X		X			
Costa Rica	X					
Dominica	X	X	X	X		
Grenada	X	X		X	X	
Guatemala				X		
Montserrat	X	X				
Netherlands Antilles	X	X				
St Kitts and Nevis	X	X	X	X		
St Lucia	X	X				
Panama	X	X	X			
Puerto Rico	X					

	IMF List 1999	OECD Tax Havens 2000	FATF NCCTs 2000	FATF NCCTs 2001	FATF NCCTs 2002	FATF NCCTs 2005
St Vincent & the Grenadines	X	X	X	X	X	
Turks & Caicos Islands	X	X				
United States	X					
Uruguay	X					

I.2. The Seychelles Strategy

At a first glance, competing for criminal money the way the Seychelles did, seems a quite attractive and harmless source of income. We will call the strategy of a country to deliberately attract criminal money the Seychelles strategy in the following. Banks profit from it, lawyers, notary public, real estate agents. They all profit from the act of money laundering. Money laundering can take place by putting illegal money on official bank accounts, by buying financial assets, by creating trust companies through which dubious import and export businesses can run in real terms or only on fake papers, by buying overpriced real estate etc.

Positive effects can also be expected from the pure fact that more money circulates in the country, making it easier and cheaper available, easier loans for business and consumers,

more transaction money, all these meaning a positive stimulus for investment and consumption. Higher investment and consumption will lead to more employment and higher growth rates. May be that there are some distortion with regard to real estate prices, or some bond prices, but overall one would expect a positive macroeconomic effect. And good macroeconomic data such as low unemployment and high growth without having to do unpopular things such as raising taxes or cutting benefits will make it likely to win the next elections for national politicians.

Competing for criminal money, by taking the money stemming from criminal activities in other countries and using the money in legal business in the own country looks like a national election winner. The drug problem stays in Morocco, the money from it goes to the Netherlands where it is nicely laundered and may be reinvested in real estate or real business.

There are three obstacles that make the manna from heaven taste less sweet.

1. If other countries do the same. The “competitive advantage” of low anti money laundering regulations will disappear if other countries do the same.
2. If whole sectors get absorbed by laundering activities and real legal business gets crowded out by illegal business.
3. If criminal money attracts crime. If crime follows the money the costs of competing for criminal money can be higher than the benefits from it.

In the following, we first want to show that there is a short term efficiency gain for the economy if criminal money flows into a country. Then we want to point out the dangers of such a strategy. Finally, in the empirical part, we want to highlight which strategies countries have developed to compete for criminal money, lately.

II. Efficiency Gains from Criminal Money

We will show that a country following the Seychelles strategy can have efficiency gains. For this we use a model developed by Sinn (2002) for tax competition and apply it to money laundering.

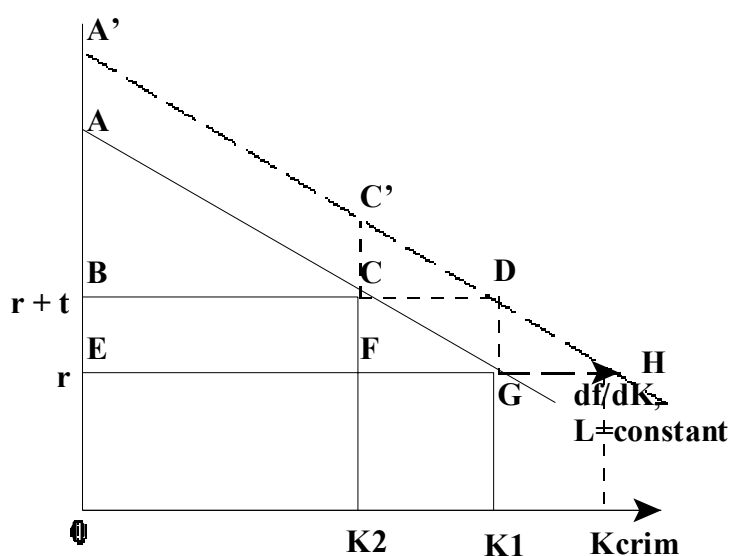
Let us assume a small open economy that produces a homogenous output using labour L and capital K . Let $f(L, K)$ be a linear homogenous production function. The amount of labour employed is provided by domestic residents and is fixed. The amount of capital K used can vary. Capital is perfectly mobile and is available at the exogenously given world interest rate r .

The marginal product of capital, i.e. the additional output of one extra unit of capital, is positive but diminishes the more capital is being used: $df/dK > 0$, $(df/dK) / dK < 0$

Firms will invest up to the point where the marginal product of capital equals the world interest rate: $df/dK = r$

If in this small open economy, the government would try to tax the mobile factor, it would fail, according to the standard argument of taxation. The standard argument of taxation says that you cannot tax a mobile factor, because you would burden the immobile factor by even more than the tax. If, e.g. the government imposes a tax on capital, capital will withdraw from this country and go to a more attractive country with lower taxes. The small country is left with less capital, less output, and a higher tax burden on the immobile factor, in our case, labour. The tax is shifted completely to the immobile factor. This argument is graphically shown in figure 1 (see Sinn 2003, p.29).

Figure 1: Criminal money instead of raising taxes



If the government levies a tax $t = BE$ on capital, capital will move to another country, the amount of capital used in the country will fall from $K1$ to $K2$, where the marginal product of capital minus the tax equals r :

$$df/dK - t = r$$

The tax is shifted completely to the immobile factor labour. Before the tax, the income of capital was $E0K1G$ and the income of labour was AEG . When the tax t is introduced, capital leaves the country, labour income falls from AEG to ABC . The tax revenue of the government is $BEFC$. Even if the government would give all the tax revenue to labour, labour would have a loss of CFG .

The standard argument of taxation states that governments cannot increase taxes. The equilibrium in tax competition between countries is $K1$ (see Sinn, 2003 Chapter 2) and (Razin and Sadka 1991).

Now, consider the effect of criminal money entering the country. Criminals who invest in the country do not try to maximize their profits by investing up to the point where the marginal product of capital equals the interest rate plus the tax rate ($K2$). They are willing to pay a higher price if the chance of being detected is sufficiently small. For the sake of simplicity let us assume that the amount x , criminals are willing to pay above the profit maximizing honest calculus just amounts to the tax rate, GD . Or, to interpret the graph horizontally, assume that at the given world interest rate r criminals are willing to invest additional capital from G to H . If a tax $x=t$ is introduced, the small open economy will end up with capital $K1$ in the country, output will not shrink, labour will not be overburdened. The government's tax revenue is $EBGD$. If the government gives this revenue to labour, labour will earn $A'EGD$, which is a higher income by two times CGD than before the tax.

With criminal money and capital it is possible for a small open economy to tax the mobile factor.

The gain in output is $CK2K1G$, plus an addition income from the overpaying two times CGD .

III. Some Obstacles

There are three obstacles that make the manna from heaven taste less sweet. First, other countries might get the same idea and try to compete for criminal money as well. Second, criminals might invest into a specific sector, such as the transport sector for drug dealing, or they might invest in specific assets such as Italian bonds and crowd-out the real economy. Third, criminal money might eventually attract crime and stop countries from free-riding on other countries' crime.

III.1. If other countries also compete for criminal money

Given the welfare gains a country faces that attracts additional criminal capital inflows from investors who are willing to pay more than the market rate and who are

willing to pay additional taxes if they do not get caught, other countries might get the same idea as the under II. described small open economy.

If country A has low bank secrecy clauses, accepts bribery of financial employees, airport controllers, notary public, lawyers and real estate agents, country B might get the same idea and also lower bank secrecy clauses, be more tolerant towards unclear transactions, be less strict in controlling suspicious transactions etc.

Would it, under these circumstances, still pay for country A and B to compete for criminal money? Will there be a race to the bottom of financial regulations in order to attract criminal money?

3.1.1. A monopoly on criminal money

To begin with, assume that country A has the monopoly over criminal money. All the world's criminal money is laundered and invested in country A. The market share for criminal money of country A is hence 100%.

If we assume that criminals have a linear demand function for money laundering depending on the "price" for laundering, which is the net sum of the cost of laundering, i.e. the probability of being caught and getting the money confiscated or having to pay a fine or going into jail minus the interest rate received. Assume further that country A has the monopoly for supplying laundering possibilities. It is the "price setter" by determining the net price of money laundering, i.e. the costs of money laundering for criminals minus the interest rate paid to them..

Let P be the net price for laundering and X be the amount of laundering. Furthermore, assume that the country has some costs c when producing money laundering opportunities. For example, these can include financial expertise necessary to instruct criminals, costs of making complicated laundering constructions and contracts etc.

The following model is an adaptation of Sinn's (2003, Chapter 8) model on competition of competition rules to money laundering.

The demand for laundering by criminals is a linear function of the form

$$P(X) = b(K - X) + c \quad \text{Where } b, K, c > 0 \quad (1)$$

The slope of this demand function is $-b$, K is the quantity of laundering opportunities offered under perfect competition, X is the amount of laundering opportunities actually supplied and c are the marginal costs of supplying laundering facilities. In this form of writing, one can see the price as the marginal costs c the monopolist faces plus a mark up $K - X$ depending on the degree of market concentration. (Under perfect competition $K = X$ and there would be no mark up. We will see that under monopolistic competition $K/2 = X$, i.e. only half of the quantity sold under perfect competition is being supplied)

The country will behave like a monopolist and try to maximize its profit from laundering. It does so by setting the marginal return of laundering opportunities equal to the marginal costs of providing this service .

max Profit = $P(X) \cdot X - C(X)$ under the demand constraint $P(X) = b(K-X) + c$ and $P'(X) = -b$

$$d\text{Profit}/dX = P'(X) \cdot X + P(X) - c = 0 \quad P'(X) < 0 \quad (2)$$

For simplicity we assume the marginal costs c to be constant. $dC/dX=c$, hence a horizontal line in the Figure below.

The marginal return of laundering depends on the (falling) linear demand function and decreases the more quantity is supplied. This is due to the fact that the monopolist can set the price, but can only increase his return by selling additional output at a lower price than before. Since he has to lower the price also for the previous units of output his additional (marginal) return of the last output unit is lowered by the loss of returns for the previous units of output.

The monopolistic country charges a higher price than under perfect competition, offers less laundering opportunities and has a higher profit from money laundering. The fact of higher prices, less quantity and unjustified profits is why economists are usually against monopolies because with regular legal production this means a welfare loss (at least according to the predominant ordo-liberal neoclassical point of view). But in the case of money laundering it might be wishful that less money laundering opportunities are created and that it is expensive for launderers to continue their criminal activities.

3.1.2. Competition for criminal money following a Cournot-Nash strategy

Would competition among countries for criminal money increase the laundering opportunities for criminals? And would it still pay for country A to supply laundering facilities?

Assume that there are n countries trying to do exactly the same as country A. If all countries assume the quantity that the other country supplies as being given they are said to behave like Cournot-Nash followers. If all countries have the same costs of providing laundering facilities and get symmetric shares of the world money laundering one can write this the following way:

$$X = \sum_{i=1}^n x_i = nx_i \quad i=1 \dots n \text{ countries}$$

Profit maximizing for each individual country (equation 2) then becomes:

$$P(X) + P'(X) \cdot 1/n = c \quad (3)$$

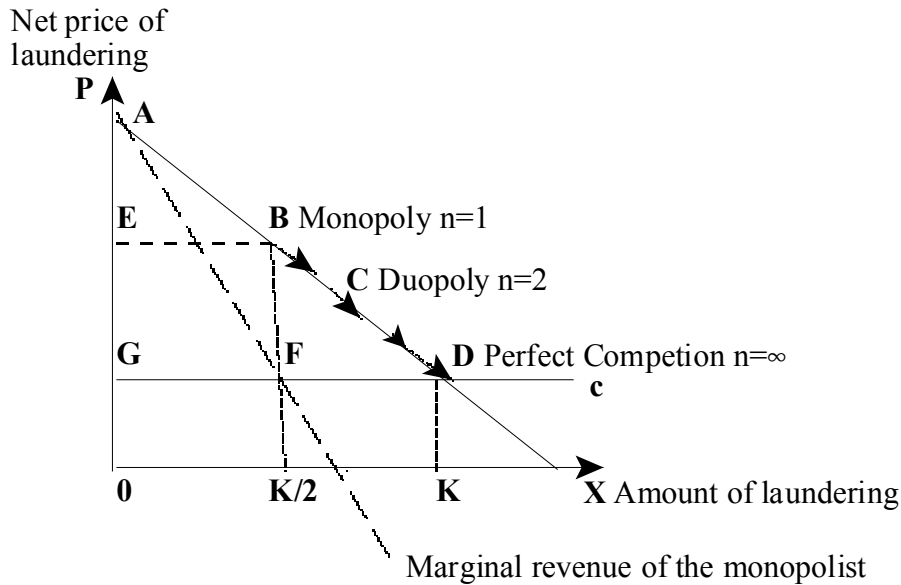
Filling in the linear demand function of (1) into (3) and rearranging one gets at the Amoroso-Robinson expression for Cournot oligopolies:

$$X = [1/ (1/n) + 1] \cdot K \quad (4) \quad (\text{Cournot solution})$$

The Amoroso Robinson formula allows to see the quantity sold as a function of the market share $1/n$ a country has. If there is only one country ($n=1$, a monopolist) it will

supply only half of the competitive quantity K . If there are two countries ($n=2$) they will supply two thirds of K . If there are indefinitely many countries (perfect competition among countries, $n= \infty$, $1/n$ approaches zero, they will supply K , the perfect competition output.

Figure 2: Countries competing for criminal money in a Cournot-follower setting



As can be seen from Figure 2, where the net price of money laundering for criminals is on the y-axes and the amount of money laundering on the x-axes, the more countries compete, the lower the price for criminals to launder their money and the more money will be laundered. The extra profit from free riding on other countries' crime that country A originally made ($n=1$, monopolistic situation) declines when a second country joins, and gets zero under perfect competition. But it still pays for country A to compete. It gets a smaller market share of criminal money but the overall quantity of criminal money has increased from $K/2$ to K when a very large number of countries participate.

III.1.3.. Country A neglects anti- money laundering agreements (is a Stackelberg leader)

What about country A not taking the money laundering facilities other countries offer as being given as the Seychelles did, for example? What if a country takes an active step of neglecting anti-money laundering directives while all the other countries do follow anti-money laundering policies and behave like Cournot -Nash followers. Country A is then a Stackelberg leader as the Seychelles were, and confronts the other Cournot-Nash follower countries with the fait accompli of low bank secrecy and other attractive facilities for launderers.

In this case the total amount of money laundering facilities supplied by all countries is

$$X = X_R + X_A \quad \text{where R stands for the rest of the world, and A for country A. (5)}$$

$$X_R = \sum x_i \quad i=1 \dots n-1 \text{ countries (6)}$$

$$X_A = x_n \quad n^{\text{th}} \text{ country}$$

There are $n-1$ countries in the rest of the world and country A. Using the linear market demand function of equation (1) and remembering the Cournot oligopoly profit condition (2), all countries in the rest of the world will behave like a Cournot-Nash follower and determine their supply of money laundering facilities according to:

$$x_i = K - X \quad i = 1, \dots, n-1 \quad (7)$$

This means that each country produces a supply of money laundering facilities which is just equal to the difference between the competitive quantity K and the quantity produced by all other countries, including country A and itself. There is still some room for manoeuvre for each rest of the world country, it can still vary its supply within a certain range up to the competitive quantity K . In principle it faces the same decision problem as did the monopolist before. It will, therefore, maximize its profit by choosing half of this range for its supply. So will all the other countries from the rest of the world.

Remembering equation (6) and summing up (7) for all countries of the rest of the world, $i=1 \dots n-1$ gives the total supply of the rest of the world

$$X_R = \left[\frac{1}{(1/(n-1))+1} \right] \cdot (K - X_A) \quad (8)$$

Country A determines the quantity X_A , the rest of the world consisting of Cournot-Nash followers, covers a fixed share of the left over range. This fixed share depends on the number of countries $n-1$.

The Stackelberg leader country A knows this calculation and takes them into account when determining its own supply. It maximizes its profit:

$$P(X) X_A - c X_A \quad (9)$$

subject to (5) and (7).

Filling in the linear demand function (1) into the profit condition (9) gives:

$$\max X_A \left[b(K - X_A) \right] \cdot 1/n.$$

The optimal solution from this is that

$$X_A = K/2 \quad (10)$$

As in the Cournot-Nash case, country A will choose half of the competitive amount of money laundering for its supply. The rest of the world will take this quantity as granted and will supply (see equation 8):

$$X_R = \frac{1}{((1/(n-1))+1)} \cdot K/2$$

The total quantity of money laundering supplied is

$$X = X_R + X_A = \left[\frac{1+2(n-1)}{n} \right] \cdot K/2 \quad (11) \text{ Stackelberg solution}$$

If one compares output of the Cournot solution (4) with the Stackelberg solution (11) one can see that country A's quantity of money laundering facilities sold is always larger under the Stackelberg solution than under the Cournot solution (for $n=2$ it is $9/12$ as opposed to $8/12$ under Cournot, for $n=3$ it is $10/12$ instead of $9/12$ etc).

It will therefore pay for country A to engage in competing for criminal money and to take the leadership in doing so.

III.1.4. Other countries also try to become a Stackelberg leader

But what, if the other countries try also to become a Stackelberg leader and want to get the largest market share? As Sinn (2003, p.) shows in a recursive game- though not for money laundering but for deregulation - there will be an incentive for the second country also to loosen its money laundering policy. The third country will also follow etc. Only for the very last country there is no more gain from engaging in the money laundering race. It, therefore, pays for a country to be the first to abandon bank secrecy and to engage in competing for criminal money.

There can, thus, be a race to the bottom with regard to competing for criminal money. But there are two objections to be made. First, the above models are economic models and assume that countries make a deliberate choice whether to engage in letting money laundering activities happen or not. Empirically one sometimes get the impression that some countries are surprised about attracting criminal money and have not made a deliberate choice. As Masciandaro (200.) pointed out, some countries tried to establish big functioning financial markets, who attracted all kinds of capital, among others also criminal one. They then started fighting money laundering in order to keep up their reputation as solid financial centres. This would speak against the profit maximizing behavior of countries with regard to money laundering.

On the other hand, there are also some countries, who deliberately try to free ride on others and who seem to take such a Stackelberg position quite consciously. Tax heavens, offshore centres seem to fit the model quite well.

The model only showed potential gains from money laundering, without including the potential dangers and costs of it. For example, criminal money can lead to speculation in some sectors and lead to high volatility in e.g. real estate prices. It can undermine politics, lead to corruption and bribery etc. For an overview over 25 potential effects that money laundering can have, see Unger (2005). Money laundering can have its price. Two important cost factors are that criminal money can be put into activities, which crowd out legal business and that criminal money can eventually attract crime.

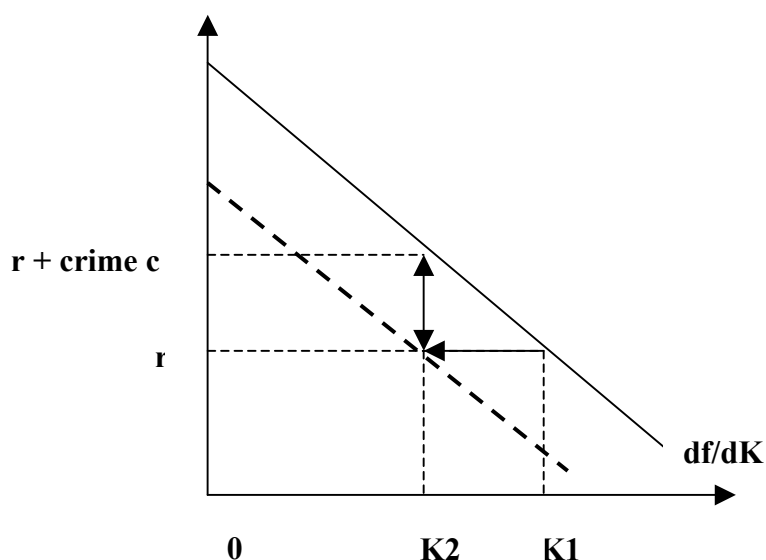
III.2. Crowding out of legal business

Money launderers might pick out specific sectors, such as real estate, and buy for example plants, or other company objects at too high prices. This would crowd out private business who cannot afford these high prices. Some sectors are specifically vulnerable to criminal money. The less transparent the market, the more it attracts those who want to hide something. Sectors that are potentially vulnerable are real

estate, restaurants, the red light district, but also sectors with a lot of cash payment such as the car sector (see Kleemans, 2005).

If illegal business crowds out legal business, the potential efficiency gains from extra capital and money from illegal activities from abroad might vanish quickly.

Figure 3: Crowding out legal business



As can be seen in figure 3, if criminals are willing to invest at a higher interest rate ($r + \text{crime } c$) than legal private business, then the price (interest rate) for legal business will move along the productivity line df/dK from $K1$ to $K2$. There will be less legal business.

If, as will be shown in the next session, criminal money leads eventually to more crime, then the costs of legal investors will increase due to extra expenditures for security, alarm etc. In this case the productivity line would shift inwards (the dotted line). Legal business would only be willing to invest up to $K2$.

III.3. If criminal money attracts crime

The biggest danger of tolerating money laundering activities is that eventually criminal money might attract crime. If criminals come to know the country where they can comfortably launder, they might eventually also set up their criminal business.

III.3.1. The crime multiplier

The model of Masciandaro (1999) allows to measure this effect. He assumes that crime triggers financial flows, which lead to more investment in illegal activities in the country. There is, hence, a spill over mechanism from criminal money to crime.

Because of the possibility of money laundering in the financial sector, reinvestment of the money in illegal activities in the real sector will be the consequence.

As is shown in graph 1 below, there is an original amount of liquidity from crime ACI. One can interpret ACI as stock and as flow. Masciandaro himself seems to have a flow in mind when he talks about the liquidity from crime. One can interpret this as the proceeds from crime. But one can interpret ACI also as the stock of criminal money. A fixed proportion y of this illegal money has to be laundered, since even criminal activities need some legal money. A part c of the criminal money gets lost in the verge of the money laundering process. These costs c include both legal regulations (which increase c for the launderer) and costs for the individual criminal who tries to bribe somebody, has to buy a false passport, has to find somebody to bring the money over the border, loses some money while whitewashing it in the casino etc. The laundered money can be reinvested in either legal or illegal activities. A fixed share q of it goes back into the illegal sector and bears an interest of r_i , $(1-q)$ gets reinvested in the legal sector and has an interest rate r_l . If the decision of how much money is put into the illegal sector (q) depends on the difference of the interest rate between the illegal and the legal sector $r_i - r_l$, than this interest difference must stay constant over time (otherwise the multiplier would not work the way Masciandaro designs it).

The last part of the Masciandaro graph is not convincing. Why should the return from money reinvested into illegal activities not also be split between criminal and legal activities but entirely be laundered? It seems more consistent to assume that only a share y of the return from reinvestment into illegal activities $q(1-c)(1-r_i)y$ ACI is whitewashed at cost c whereas the rest $(1-y)q(1-c)(1-r_i)y$ ACI is put on the illegal market.

The original multiplier of Masciandaro was:

$$\text{Total amount of money laundered AFI} = \frac{y}{1 - (q(1-c)(1+r_i))} \text{ ACI}$$

Multiplier times original crime money

When the reinvested money is again split into y share for the illegal market and $(1-y)$ for the legal, the new modified multiplier becomes:

$$\text{AFI} = \frac{1}{1 - (yq(1-c)(1+r_i))} \text{ ACI}$$

- Assumptions:
- y ...fixed proportion of crime money that needs to be laundered
 - c ...fixed proportion of transaction costs of laundering
 - q ...fixed share of laundered money is reinvested in illegal activities (depends on difference between r_l , return in legal economy and
 - r_ireturn in illegal economy

Note that $1 > y, q, c > 0$ since they are shares by definition. But the interest rate r_i has basically no "natural" restriction. However, it is limited by the model constraints. An indefinite series $x + x^2 + x^3 + \dots + x^n$ with $n \rightarrow \infty$ can be approximated with $\lim_{n \rightarrow \infty} \frac{1}{1-x}$ as long as $0 < x < 1$.

If this condition is applied to our problem, this guarantees that the multiplier is positive and that the model does not explode. For the original multiplier of Masciandaro (1999) this means that

$q(1-c)(1+r_i) < 1$. (For example, if q and c have high values (say 0.9 both) then the maximal value the interest rate on criminal activities r_i can have so that the model does not explode is 23%. With higher r_i the nominator would become negative).

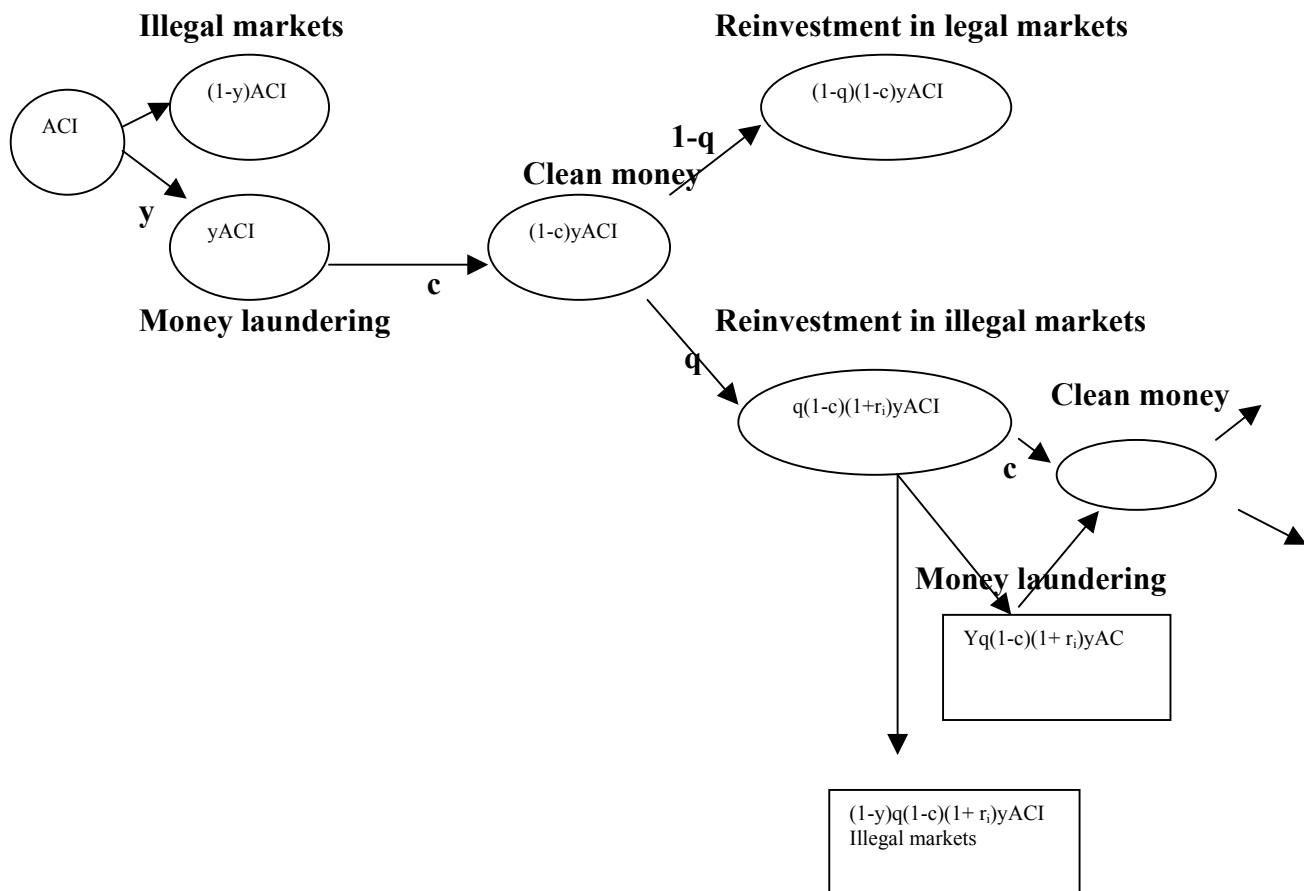
If this condition is applied to the modified multiplier, this means that

$yq(1-c)(1+r_i) < 1$. (For example, if y , q and c have high values (say 0.9) then the maximal value for r_i is 37%. If $y=0.7$, and q and c are 0.9, the maximal return on criminal activities r_i is 76%).

The model is hence relatively robust within a range of “normal” numbers, but once criminal returns get exorbitantly high it would not hold anymore.

Note also that the modified multiplier is larger than Masciandaro’s and it might be for reasons of realistic results that he opted for the smaller one. (See below under operationalization that for the assumptions of $y=0.7$, $c=0.5$, $q=0.2$ and $r_i=0.5$ Masciandaro’s multiplier is 1.11 while ours is 1.35).

Figure 4: The model of Masciandaro (1999) modified



III.2. Possible Operationalization of the Variables

The fixed proportion y of crime money y that needs to be laundered is 70% (from CBS 2004) and 80% (from Walker 1995). It depends on the type of crime. A large percentage of crime money from drugs and fraud is being laundered. Whereas other types of crime like theft, break in, robbery etc lead to proceeds of which only about 10% are being laundered. But since drugs and fraud are the largest components of crime, which are relevant for money laundering we will assume y in the range of 0.70-0.80. The way in which we will presents the multiplier allows us, nevertheless, to look also at other possible proportions to be laundered.

ctransaction costs of laundering. Which percentage of money is lost through the laundering process? It depends among others also on Anti Money Laundering Policy. If money is laundered through the casino, the expected return is 46% (except if you play red and black only, then it is definitely higher, almost 100%, except for the zero.. If you only have to declare the gains this would be the best strategy. But this strategy is not good for very large amounts, you get videotaped, the casino does not hand out larger amounts in cash, reports suspicious transactions to the authorities etc. Laundering in the casino means that the expected return, c , is 46%. Another argument we found is, that money laundering means that the criminal does want to pay taxes. There should, hence, be at least the loss of the corporate tax of 34% (in the Netherlands) plus some fees for the bank or the (Dutch) income tax rate of maximum

52%. Altogether, this means that it seems quite reasonable to assume $c=0.5$. Half of the criminal money is lost when it is laundered. Either through casino losses or through taxes. When you take the criminal money over the boarder and then place it on a bank account, the transaction costs c might be substantially lower and the share of money successfully laundered ($1-c$) might be much higher ($1-c=0.9$)

q ... laundered money reinvested in illegal economy. This variable is difficult to evaluate. Experts of the DNB think that there is a high incentive to make money dirty again because of the high profits in the criminal sector. There will be less of an incentive though to reinvest clean money into dirty business than the other way round, except for terrorism financing or if return differences are very high. But even with high returns on criminal activities, it still, seems more likely to hoard some of the illegal money for further illegal business purpose rather than running through the risky laundering process for reinvesting the clean money illegally again. Following Masciandaro, however, one needs always some clean money to do illegal business. In the following we assumed that 20-50 percent of the laundered money is made dirty again, $q=0.2$, $q=0.5$.

r_i The average return of illegal business is also difficult to estimate. For drugs the sales value of 1 kg of heroine can exceed the costs of production by 600%. Especially, if some heroin gets confiscated this brings prices up and increases the illegal returns even more. But for other sorts of crime much lower rates of return might apply. I assumed r to be between 50% and 100%.

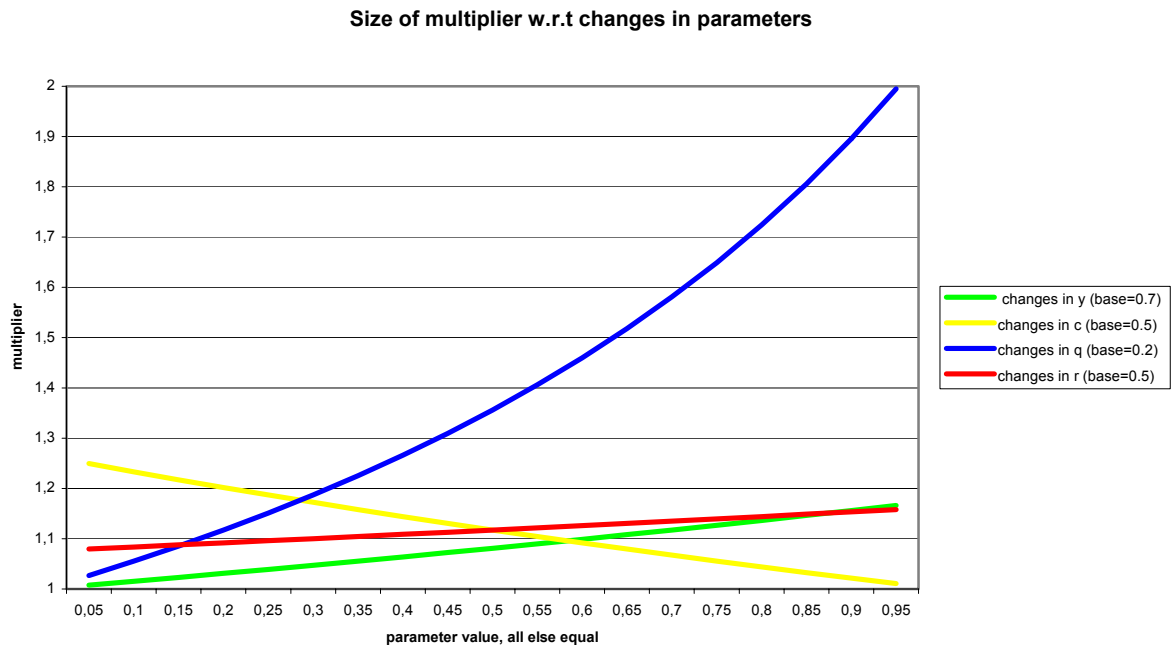
The model of Masciandaro (1999) was extended by Raffaella Barone (mimeo, 2000), *Riciclaggio ed Usura: Un Modello Di Analisi Economica*. She takes into account that criminal money cannot only be invested in legal or illegal business, but can also be consumed. This certainly adds to the debate, since criminals also like to spend the money on luxury goods and use it for regular life, but the multiplier gets then more cumbersome.

The following graphs display the multiplier for different assumptions of the above mentioned variables. Read the graphs as follows: along one line (for example changes in q , top line in the graph) one can read how big the multiplier is if q changes, as long as the other three variables stay at their level (in the first graph $y=0.7$, $c=0.5$ and $r_i=0.5$). If $q=0.2$, the multiplier is about 1.3. If – given the three other variables do not change – q increases to 0.95, the multiplier is 3. If $q=0.4$, the multiplier is 1.4. Along the blue line the change of the multiplier can be seen for all values of q . In the same way one can look at the downwards sloping yellow line for c , the share of money lost with laundering. If the other three variables stay at $y=0.7$, $r_i=0.5$ and $q=0.2$ the multiplier is 1.4 if only 5% of money is lost for laundering, it is 1.3 if 50% is lost and it is 1 if 95% of money is lost through laundering. In the same way variations of y and of r_i can be analysed.

The second graph, figure 6, is plotted for illegal returns $r_i=100\%$, i.e. double as high as in the former graph. One can see that the multiplier gets a little bit higher than before. In the third graph the interest rate $r=100\%$ and the share of reinvestment in illegal activities has been raised to 50%.

The multiplier lies between 1 and 3, in most of the cases and under more likely assumptions it is about 1.5. This means that proceeds from crime will increase through money laundering by about half of the original amount.. The third multiplier is not valid from certain parameters on. The model explodes if the the parameters exceed certain amounts. In particular the interest rate, which is not necessarily smaller than 1.

Figure 5: The crime multiplier with an interest rate of 50%



This means that criminal money will attract more crime because financial returns of it will partly be reinvested in additional criminal activities.

The Masciandaro (1999) model is a closed economy model. Money that is being laundered will be reinvested in the closed economy. In an open economy, as long as the reinvestment in illegal activities happens abroad, the country which accepts money laundering will not suffer. But, it seems more likely, that opportunities to launder will eventually also attract the criminals.

Countries that have little regulations against money laundering are in principle free riding on those countries, which suffer from high crime. They accept the returns from crime as investments, but this goes either at the cost of other countries, or - and this seems more likely - will backfire eventually.

Once crime is settled, the economic, social and political consequences can reach from the control of entire economic sectors, to corruption and bribery till the undermining of politics through criminal organizations. As Kleemans (2005) pointed out for the Netherlands, the criminal consequences of money laundering are not necessarily the establishment of a hierarchic criminal organization, such as the Italian mafia, but can also be the emergence of flexible network organizations that emerge through a "snow ball effect" between relatives of ethnic groups. Both forms of organized crime will eventually undermine and erode social and political values and norms.

Figure 6 The crime multiplier with an illegal interest rate of 100%

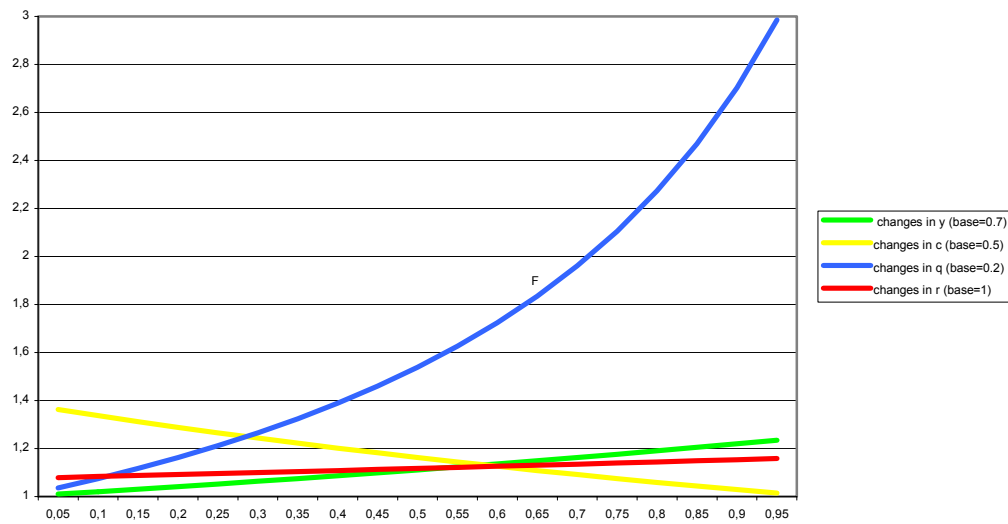
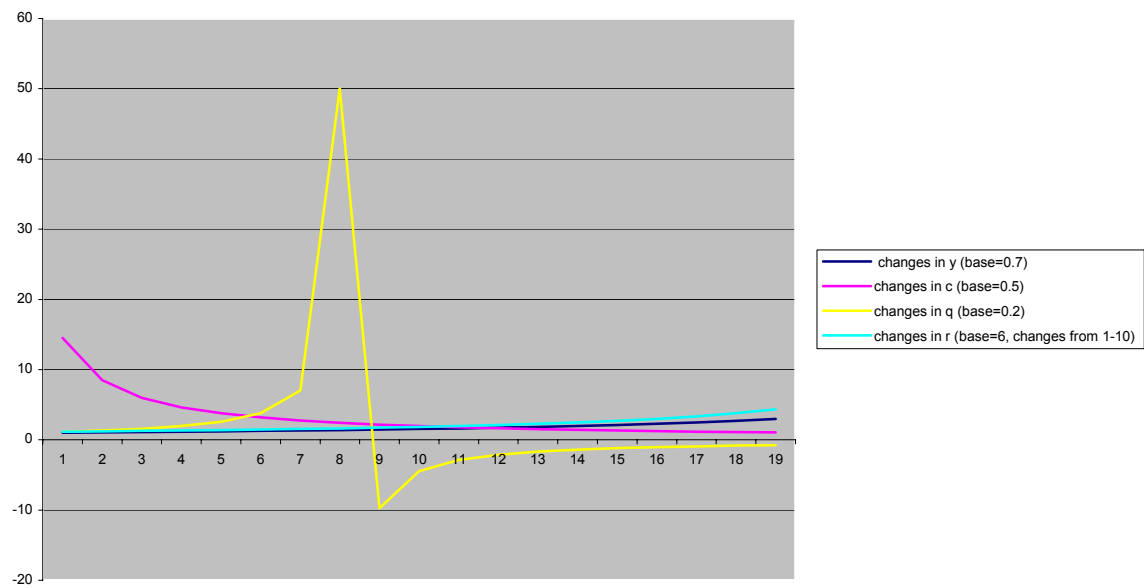


Figure 7 The crime multiplier explodes



Conclusion

Globalization necessitates a compression of time and space, whereby competition is increased and accelerated. Countries now compete actively with each other for highly mobile capital that roams the globe in search of investment opportunities. Resource poor and isolated countries with small economies (mostly islands or isolated enclaves) are at a comparative disadvantage when competing for capital. Tax competition means that countries are unable to earn sufficient incomes through their own tax systems. Consequently they either overburden labour by abolishing taxes on mobile factors altogether and/or turn to capital from all available sources, including criminal funds. In a sense these countries disregard the criminal origins of globally mobile funds, and become key conduits for money laundering through welcoming criminal capital to their shores. In order to compensate for lost legal income, they turn to illegal capital. The OECD has calculated that the amount of the money that flowed from G7 countries into Caribbean and Pacific Island states has increased five fold between 1985 and 1995 to more than US\$200 billion per annum, far exceeding total outward bound Foreign Direct Investment (FDI) in these two regions that account for less than one percent of the world's population (OECD, 1998: 17). This has not been directed in conventional investment purposes, but rather integrated into money laundering and tax evasion.

Between 1984 and 2004 more than 25 countries created novel financial products or instruments and introduced strict bank secrecy regimes that was advantageous to all forms of capital – both legal and criminal. For example in 1984 the British Virgin Islands (BVI) pioneered a specific kind of shelf company, or Special Purpose Entity, called the International Business Company (IBC) or BVI IBC (Maurer, 1995). With minimal reporting or shareholding requirements, the BVI IBC could be used by almost anyone to conduct completely anonymous business transactions almost anywhere in the world. There are now more than 500,000 BVI IBCs in the world today. Other countries followed suit and started to do the same creating their own brand of IBC, and within ten years dozens of countries were competing between themselves as to who could offer the most attractive corporate vehicle. The competition was so intense that other countries started to do the same, and eventually even larger industrialised OECD countries started to create “islands” of relaxed regulation within their own jurisdictions to attract globally mobile capital, regardless of its origins. For example London and New York were separated off from the mainstream British and US economies where investors were offered anonymous investment opportunities in the bond and stock markets. Portugal created an offshore centre on its Atlantic island of Madeira, Ireland established an International Banking Facility in Dublin and Australia an Offshore Banking Unit centred in Sydney. These centres shared one aspect in common: they partitioned regulatory standards between domestic resident capital and non resident international capital where another set of rules applied.

This has led to a “race to the bottom” in competition for capital, where countries with the most relaxed regulations and strictest of bank secrecy laws have in effect competed for criminal money. Between the mid 1980s and 2005 countries which have most actively competed for capital have been shocked by controversies and scandals involving criminal investment. This has included drug trafficking and money laundering through the Turks and Caicos Islands which led to the arrest of that

territory's Chief Minister in 1987, the failure of the Bank of Credit and Commerce International (BCCI) in the early 1990s (an institution implicated in money laundering that also made extensive use of Luxembourg and the Cayman Islands) and the collapse of Enron which had hidden losses in over 500 special purpose entities (SPEs) in the Cayman Islands. Countries which were some of the first to compete for capital regardless of its origins had efficiency gains as shown in session 2, and are now some of the world's richest: Cayman Islands, Switzerland, Bermuda, Liechtenstein and Luxembourg. In fact the Cayman Islands has been transformed from a relatively poor archipelago of turtle fishermen in the 1960s, to one of the wealthiest jurisdictions in the world's, that is the fifth largest centre of international banking (Caulfield, 1978; Roberts, 1995). These countries are now in the best position to strengthen their laws and regulatory systems in a way that discourages criminal money because of their ability to attract all forms of capital investment.

Hence an initial policy of attracting capital regardless of its origins benefits most countries, except for the last who enter the game., as was demonstrated in the Stackelberg version of our model. Few have been as bold as the Seychelles, but even its leadership in setting a new benchmark for openly soliciting criminal funds and offering a legal avenue for money laundering provided countries with an idea as to how far the limits to competition for capital could be pushed. As there is more competition for what is in a sense criminal money, through a combination of relaxed regulatory standards, minimal due diligence procedures, an absent Know Your Customer (KYC) regime and strict bank secrecy laws, the resulting race to the bottom has brought supranational intervention to the fore. By the end of the 1990s and especially with the terrorist attacks of 2001, the myth of capital neutrality was finally exposed. It was shown that not all countries were competing for clean capital; many were actively competing for capital, wherever they could find it, including in the hands of criminals, terrorists, drug lords, fraudsters and professional money launderers. It was at this point that key supranational organisations intervened to stop this problem, to regulate further competition.

This has included the FATF and the IMF. In a sense both these organisations promote policies that allow countries to develop specialised niches where criminal activity can be identified and regulated against. The IMF has recognised that OFCs such as Cayman Islands, Bermuda and Luxembourg can play an important role in world finances by attracting globally mobile capital to a neutral trading environment. However, when used for money laundering and criminal activity they can also pose a risk to financial market stability. New regulatory measures are about managing and containing this risk while enabling these countries to compete for lawful capital. In the late 1990s policy competition for capital and the deregulation of financial markets with minimal regulatory oversight had resulted in a situation whereby almost all countries (at least those with open capital markets) were competing, to various degrees, for criminal money, with isolated and resource poor islands, such as the Seychelles at the far end of this competitive spectrum. By the beginning of the 21st century it was realised that the costs of this competition far outweighed the benefits, at least globally. The small countries that continued to disregard these costs, were in a sense free riding on the crimes of others, hence listings and sanctions against them by the FATF. Larger countries that were also conducive to money laundering and were active in competition for criminal capital – Russia, Nigeria, Guatemala and the Philippines amongst others – also experienced a surge in crime. In these larger

countries money laundering and criminal activity combined in an overall increase in crime. This provided added evidence of links between criminal capital and criminal activity – funds alone were not always outsourced via the “Seychelles route”, containing crimes against person and property in source countries. They can go together. It has demonstrated that there are very real material costs – in terms of escalating criminal activity – if larger countries tolerate and compete for criminal capital.

It may well explain why there are now only three countries left in the world who, due to deficiencies in their laws and desperate search for capital continue to welcome investment from what ever its source: Nigeria, Myanmar (Burma) and Nauru. This is a substantial reduction from the FATFs peak listing of 15 NCCTs in 2000. It is a reflection of a growing recognition that competition for capital carries risks and these risks must be managed and reduced rather than welcomed and embraced. Competing for criminal money carries far more long term costs, despite the initial short term gains made by some.

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