

Safe havens in Europe

Switzerland and the ten dwarfs

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Abstract:

Switzerland and ten microstates are the safe havens in Europe providing low taxes and offshore banking. Microstates offer a veil of anonymity to funds passing through, and Switzerland offer safe storage of funds. It is shown that safe havens are wealthier than their neighbors. Equilibriums are likely to exist, where it increases the welfare in a small country to be a safe haven, but decreases the welfare in the big neighbor if it follow suit. The policy package necessary for a safe haven is discussed, and it is shown to be dynamic. The unusual paths of the Swiss GDP per capita and the exchange rate of the Swiss Franc are discussed. It is further argued that the future of the safe havens is bright in a world where debt is high and growing in the big economies. The conclusion looks at the many attempts to control grey and black money flows.

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1. Introduction

No internationally accepted definition exists of a safe haven. However, the common usage is: A safe haven is a country that makes money *from abroad* by helping foreigners to do something that is heavily regulated in their own country such as gamble, buy cheap booze, and escape taxes. In this connection the main activity of safe havens is to provide offshore financial services. It is a particular type of export: An export of a service that is generated by a relatively low level of regulations. For ease of presentation a safe haven is often referred to as S. Its neighbor country is F, for foreign.

Section 2 takes off from a survey of all European countries. It identifies 11 safe havens: Switzerland and 10 microstates. When visiting it is often visible to the naked eye that wealth is being generated in an unusual way. San Marino is not only an off-the-map hilltop. It is a place where Ferraris are more plentiful than goats. And even a five minutes stroll down the main street in Vaduz (Liechtenstein) reveals that the main industry is financial services.

Section 2 shows that *it pays* to be a S, and why smaller countries are more likely to be a safe haven. The reason is: (a) To be a safe haven imposes a cost on the natives, but this cost (b) is offset by income produced by the inflow it generates from abroad. The smaller the country is relatively, the more likely it is that (b) exceeds (a). The logic of the argument will be briefly analyzed in section 3 below.

The largest safe haven is Switzerland, with 7'650'000 inhabitants – it is about 4 times larger than the other 10 countries added together. Still Switzerland has only 1 % of the population of the West.² As regards the service of offshore finance the microstates mainly provide *short-run* veils of anonymity for funds passing through, while Switzerland also provides *long-run storage* of funds either in the country itself or as a guarantee for funds invested abroad. Switzerland is the only safe haven with its own currency.

Section 2 looks at the data to establish the main causality: From small to safe haven to rich. Section 3 presents a simple model permitting equilibrium between a small safe haven and a large normal country. Section 4 deals with offshore financial centers. Section 5 considers the case of Switzerland, section 6 deals with the economic instability in the world increasing the demand for safe havens, and section 7 concludes by considering the pressures on the safe havens making them comply with the regulations of other countries.

2. The organization of microstates has Malta as its largest member. The literature on microstates is moderate in size, but see e.g. Armstrong and Reid (1998), and Baldacchino (2004) concentrating on islands. A much larger literature deals with tax-havens, see e.g. Slemrod and Wilson (2006) and Dharmapala and Hines (2006).

2. The 11 safe havens in Europe

This section considers the data. Section 2.1 looks at a set of correlations showing that the safe havens are small, wealthy countries. Section 2.2 presents evidence that the causality is from small to safe havens to wealthy. Section 2.3 consider the trade-offs of dependent microstates.

2.1 The main pattern in the data

The assessment that a country is a safe haven is based on lists made by the IMF and OECD, and the entries about the economy for each country in the CIA World Factbook and Wikipedia. These sources have a high degree of agreement in the matter.³

Europe has 54 fully and partially independent *countries* with enough policy autonomy to develop into safe havens.⁴ No less than 11 are classified as safe havens by all sources I have found. Seven borderline cases are often mentioned as well, but they are not included.

Table 1. Matrix of Spearman's rank correlation coefficient

	Safe-haven	Income	Area	Population	Post-com	Dependent
Safe-haven (p-value)	1 (0.0)	0.57 (0.0)	-0.62 (0.0)	-0.62 (0.0)	-0.51 (0.0)	0.40 (0.3)
Income (p-value)	0.57 (0.0)	1 (0.0)	-0.26 (25.8)	-0.23 (23.0)	-0.82 (0.0)	0.33 (1.5)
Area (p-value)	-0.62 (0.0)	-0.26 (25.8)	1 (0.0)	0.86 (0.0)	0.17 (22.6)	-0.44 (0.1)
Population (p-value)	-0.62 (0.0)	-0.23 (23.0)	0.86 (0.0)	1 (0.0)	0.12 (39.9)	-0.45 (0.1)
Post-com (p-value)	-0.51 (0.0)	-0.82 (0.0)	0.17 (22.6)	0.12 (39.9)	1 (0.0)	-0.29 (3.6)
Dependent (p-value)	0.40 (0.3)	0.33 (1.5)	-0.44 (0.1)	-0.45 (0.1)	-0.29 (3.6)	1 (0.0)

Note: The sign of the correlation to income rank is reversed. Rising income gives a positive estimate.

For most of microstates listed in the first section of the Appendix Table data are scarce, as they are routinely excluded in international statistics, except for the data analyzed in Table 3.

3. The key terms used identifying the safe havens are 'center of offshore finance' and 'low taxes/tax haven'. The economy of Jersey is thus characterized in Wikipedia as: 'financial services contribute approximately 60 percent of the island's economy. The island is recognized as one of the leading offshore financial centers.' In the CIA World Factbook the text is very similar.

4. See Appendix for a complete list of 50 undisputed countries and 14 possible 'countries'.

However, the income rank (for 2005) in the CIA World Factbook exists for all 11 safe havens. In Table 1 the sign of the coefficients on/to income rank are reversed to be in accordance with intuition. The other variables are made as explained in the Appendix.

Table 1 gives the correlation matrix of the 6 variables. The table has 15 different entries of which 11 are significant. Safe havens are wealthy, small and often dependencies. Post communist countries are relatively poor and not dependent, but they are not safe havens so the variables have some collinearity.

The Appendix tables A4 and A4 use regressions to analyze the multicollinearity. The main pattern is as follows: *Safe-haven* is explained by *small size* and *dependency*, and by not being *post com*. *Income* is explained by being a *safe haven*, and not *post com*, but not by small size or dependency status.

2.2 Causality: Small size to safe-haven to income

Table 2 assumes that in the absence of the safe haven policies the income of the countries would be the average of its surrounding neighbors. In some cases – notably the islands (Cyprus and the Isle of Man) the choice of neighbors are difficult. The footnotes explain the comparisons made.

The test results show that the safe havens are richer than their neighbors by 15.7 places in the income ranks. The result is robust to the possible changes in the comparison. This is taken as a confirmation of the causal link from the choice of S-policies to a high income: It pays to be a safe haven.

Table 3 reports the income data in the World Development Indicators. They cover 9 of the safe havens. It confirms that the income level in safe havens is higher than the one of their neighbors. The result is statistically significant. However, in Table 3 Cyprus is richer than Greece and Monaco is the richest country contrary to the ranks used in Table 2

It is a great problem how expatriates are counted in these data. Precisely the same problem applies to bank assets in the financial statistics. It is easy to cite very different numbers. It should be handled by the concepts of *national* versus *domestic*, but more categories appear necessary to fully catch what is going on, and few microstates give both data.

Finally, it should be noted that safe havens tend to have a somewhat faster population growth than other countries. Andorra is actually the fastest growing country in Europe. The fast growth of these countries is due to in-migration. Rich people want to live there for tax reasons, and they provide work for a great deal of service staff.

Table 2. The gain of income rank of 10 of the 11 safe havens compared to its neighbors

Andorra	12	Isle of Man	36	Monaco ^{a)}	44
France	39	U.K.	37	France	39
Spain	48	Ireland	27	Italy ^{c)}	43
Gain	31.5	Gain	-4	Gain	-3
Cyprus ^{a)}	62	Jersey	6	San Marino	31
Greece	47	France	39	Italy	43
<i>Russia</i>	<i>71</i>	U.K.	37	Gain	12
<i>Turkey</i>	<i>94</i>	Gain	32	Switzerland	17
Gain	-15	Liechtenstein	2	Germany	32
Gibraltar	16	Austria	19	France	39
Spain	48	Switzerland	17	Italy	43
<i>Morocco</i>	<i>152</i>	Germany ^{b)}	32	Austria	19
<i>U.K.</i>	<i>37</i>	Gain	20.7	Gain	13.5
Gain	32	Luxembourg	3		
Guernsey	14	Belgium	26	Average Gain	15.7
France	39	France	39		
U.K.	37	Germany	32	T-test for average Gain > 0 ^{d)}	
Gain	24	Gain	29.3	P-value	0.53 %

Notes: The *Gain* is the excess rank of the bolded safe haven country compared to the neighbors. In several instances it is dubious which ‘neighbors’ to include – here some possibilities are given. Italics indicate a possible neighbor that is not included in the calculation of gain. (a) The income rank differs from the one suggested by Table 3. (b) Distance from Liechtenstein to the German border is 40 km. (c) Distance from Monaco to the Italian border is 15 km. (d) Normality not rejected by Shapiro-Wilks W-test.

Table 3. GDP per capita for 2007 in US\$

Prices	2000-\$	Current	2000-\$	Current	2000-\$	Current	
Neighbours (F-countries)			Safe havens (S-countries)		Gain in %^{b)}		
Spain	16369	32130	Switzerland	37,935	57,490	60.6 %	43.4 %
Italy	20001	35641	Of which microstates				
France	23585	40460	Cyprus	15,149	27,853	1.0 %	0.3 %
Belgium	24991	43161	Andorra	21,496	39,875	11.2 %	11.3 %
Germany	25249	40468	Isle of Man	29,462	50,191	-3.4 %	-3.4 %
Austria	26786	44850	San Marino	31,590	54,428	57.9 %	52.7 %
U.K.	28929	46092	Channel Isl. ^{a)}	45,226	76,413	74.0 %	77.3 %
Countries in crisis/failed safe			Luxembourg	56,389	106,902	129.4 %	158.7 %
Greece	14,995	27,767	Liechtenstein	82,308	130,504	183.4 %	180.2 %
Ireland	32,214	59,489	Monaco	98,397	169,270	354.6 %	346.6 %
Iceland	38,166	65,566	Average gain in %		96.5 %	96.4 %	
			Binominal test for 8 of 9 positive ^{c)}		2.0 %	2.0 %	

Notes: (a) The Channel Islands are Jersey and Guernsey. (b) Compared to same neighbors as in Table 2. (c) Normality of the two gain-distributions just rejected at the 5 % level by the Shapiro-Wilks W-test, so the classical t-test is dubious, but it has p-values of 1.8 % for both variables anyhow.

2.3 *A note on dependent microstates*

Most microstates are partly independent only – they are the last ‘loyal’ parts of past empires. This applies to the 37 overseas microstates that have special treaties with the EU as they still somehow ‘belong’ to EU members though with a large range of legal arrangements.⁵ For simplicity we shall speak of a ‘dependency’ and a ‘mother country’. This also applies to the dependent microstates in Europe.

These states typically feel that they deserve something for their loyalty to the mother country, and it typically feel that it ‘owes’ them something in return. Also, they are small and the mother country is rich, so it can afford to pay them. Consequently, many of these dependencies are subsidized – in some cases the subsidy is a substantial part of their GDP. Paldam (2004) presents a model of the dependency/subsidy trade off for small parts of a large union originally developed to explain the cases of Greenland and the Faroe Islands in the Danish Kingdom.

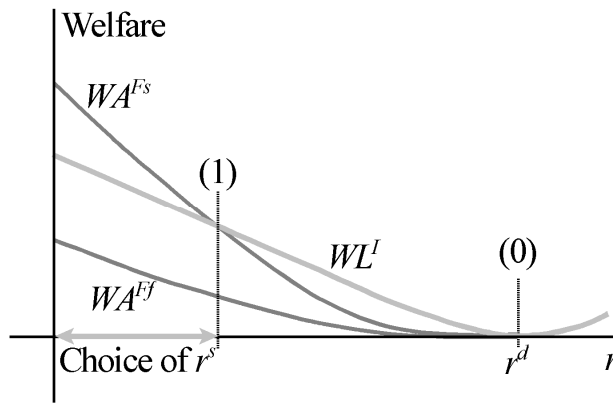
An alternative to subsidization is to ‘allow’ the dependency to be a safe haven. It is arguable that since there are enough safe havens anyhow, it does not cost the motherland anything to let their dependency catch a bit of the cake instead of letting somebody else eat it. Also, it saves in subsidies. Consequently, it seems a good deal for both the dependency and the mother country.

5. These microstates are Anguilla, Aruba, Azores, Bermuda, Bonaire, British Antarctic Territory, British Indian Ocean Territory, British Virgin Islands, Canary Islands, Cayman Islands, Ceuta, Clipperton Island, Curaçao, Falkland Islands, French Guiana, French Polynesia, French Southern and Antarctic Lands, Greenland, Guadeloupe, Madeira, Martinique, Mayotte, Melilla, Montserrat, New Caledonia, Pitcairn Islands, Réunion, Saba, Saint Barthélemy, Saint Helena, Ascension and Tristan da Cunha, Saint Martin, Saint Pierre and Miquelon, Sint Eustatius, Sint Maarten, South Georgia and the South Sandwich Islands, Turks and Caicos Islands, and Wallis and Futuna. Only the Canary Islands and Réunion are too large to be microstates.

3. The basic safe haven model

Section 3.1 sets up the model of a beneficial regulation in an isolated country. Section 3.2 considers two countries of which one opt for being a safe haven, S, to reap an income from the other, F. It also shows that equilibrium may exist, where the F does not react. Section 3.3 discusses an alternative variant of the model, while section 3.4 discusses path dependency, i.e., how countries develop into one or the other model.

Figure 1. The two curves WL^I a WL^I -curve in the main case – drawn per capita



3.1 The set-up discussed: Deriving the WL^I -curve for an isolated country

The model consider a world where an activity A is regulated by a rate r , so that $A = A(r)$. It further assumes that in an isolated country r has a perceived optimum r^d . A safe haven, S, is a country that chooses a lower r to obtain an A -flow from abroad. The S-model uses two curves: The WL^I -curve shows the welfare loss of keeping r too low in an isolated country, while the WA^F -curve shows the welfare gain generated by the A -flow. It pays to be a safe haven if the WA^F -curve is above the WL^I -curve. The paper argues that the curves look as drawn in Figure 1.

The model considers an activity, A that has benefits $B(A)$ and costs $C(A)$ – both measured in welfare units. The benefits have two terms $B(A) = D(A) + Y(A)$, where $D(A)$ is the welfare from ‘consuming’ A , while $Y(A)$ is the welfare from producing A . For high and low A -levels it is believed that the costs exceed the benefits. Thus, we assume that it is regulated, and the regulation is taken to be a rate, $r \geq 0$. Once the administration is set up it has much the same administrative costs of the regulation if r is set one value or another. The

democratic decision process choose a certain level of $r = r^d$ that is believed to be optimal by people.

The WL^I in the perceived welfare loss of deviating from r^d :

$$(1) \quad WL^I(r) = W(A(r^d)) - [B(A(r)) - C(A(r))]$$

Thus, the population believes that the WL^I -curve has a minimum in r^d at zero and rises to both sides as drawn on Figures 1 and 2. We are mainly interested in the path of the WL^I -curve in the interval from $r = 0$ to r^d . In this interval the WL^I -curve is monotonously falling, and we assume that it is fairly linear till it approaches r^d .

A may be a transfer to the poor, paid by a tax with the rate r on the non-poor. The activity A is the transfer received by the poor and the income taxed to generate the revenue. A production $Y(A)$ is needed to generate the revenue. Obviously it is a cost $C(A)$ to pay the tax.

3.2 Two countries: Deriving the WA^F -curve for a safe haven where $r < r^d$

Now two countries are considered: S and F. First they have the same $r = r^d$. They are thus isolated as regards A . They both produce the A they consume. Now S decides to become a safe haven by reducing r to $r^s < r^d$. This generates an A -flight from F to S: $A^F = A^F(r^d - r^s)$. The welfare gain from consuming A^F goes to the foreigners and so does the costs. However, the welfare gain from producing A^F accrues to S. This means that S produce and consume $A(r^s) > A(r^d)$. This gives the welfare loss $WL^I(r^s)$ as showed by the WL^I -curve.

However, in addition S obtains the welfare gain from producing A^F , and we assume that $W(A^F)$ is proportional to A^F as all benefits of consuming and cost A^F are in F. The production welfare in S follows the WA^F -curve. It must look roughly as the WL^I -curve, so that it is flat at zero around r^d , and rises monotonically for r falling to zero. Even when the two curves have the same general form they are likely to differ by the width of the flat section around r^d and by the slope later on.

From introspection I think that the flat section is wider for the WA^F -curve, as drawn on Figure 1, but maybe I am wrong and Figure 2 is a better approximation.

As regards the slope of the two curves the key observation is that the WL^I -curve has to do exclusively with the natives in S, so per capita it is constant, but the WA^F -curve is generated in F, so the size of the effect is positively related to the size of the population in F. If S is small relatively to F the WA^F -curve is steep, as drawn with WA^{Fs} , which does intersect with

the WL^I -curve at (1). However, if this is the case then F is large relative to S and the WA^{Fs} -curve results, which is below the WL^I -curve throughout.

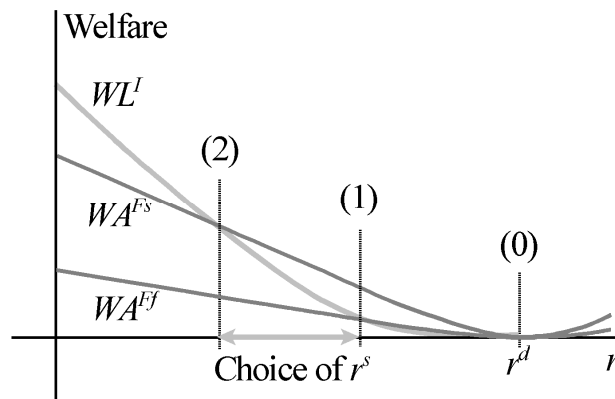
This means that it pays for S to be a safe haven if r^s is chosen in the interval between the Welfare-axis and (1): The choices marked by the gray arrow. That is, if r is reduced enough. However, F has no way to gain from being a safe haven. The same conclusion also applies for F when it comes to react to S's safe haven policy to induce A^F to come back from S. It is an equilibrium that S is a safe haven and F is not.

3.3 If the WL^I and the WA^F curves are different

If the WL^I and the WA^F curves have exactly the same form, the WL^I -curve is either fully below the WA^F -curve or fully above. So if S is sufficiently small it pays to pursue a safe haven policy for all $r < r^d$.

A more interesting possibility is shown as Figure 2 where the WL^I -curve is the flattest around r^d . Here it is possible that the safe haven occurs from (0) r^d and up to a certain value (2) where the WL^I -curve exceeds the WA^{Fs} -curve. Here it is an advantage for F to retaliate up to (1), but if r^s is between (1) and (2) it does not pay for F to react, and there is still an equilibrium with a safe haven and a country that can do nothing about it.

Figure 2. The two curves WL^I and WA^F in an alternative case – drawn per capita



3.4 The path to a low level of regulation in an important field

To be a safe haven means that a certain regulation is kept lower than everywhere else resulting in A-flight into the country. Also, it is an advantage taken, which has a certain moral ambiguity: A safe haven may be seen as a country helping people in F free riding on the regulations of their own country.

It is not likely that S just decide to go there all of a sudden. Also, it is a rather difficult choice to make in a public debate due to the moral ambiguity. So the typical way to develop into a safe haven is for some event to happen that start a dynamic path into the policy. One possibility is a war in F that causes the regulation to increase dramatically. Also, it may simply be that for some reason a blocking coalition develops to prevent a certain regulation in being increased as everywhere else. So it is really everybody else that change the regulation leaving S as a safe haven.

Once the A-inflow occurs it expands the A-production and automatically creates an A-lobby that wants to expand the flow. Also there is a period of adjustment where the country develops institutions to handle the low level of the regulation in the A-field. Perhaps the ill effects of an excessive A-consumption may be counteracted by alternative methods to raising r .

4. Offshore banking as the key to being a safe haven

The list of safe havens makes it clear that by far the biggest money-maker for the safe havens is offshore banking.⁶ First section 4.1 give some numbers, then section 4.2 looks at the relation between capital inflows and Dutch Disease. Section 4.3 consider the conditions for running a safe haven, it brings Table 4 presenting a set of ‘safe haven conditions’.

4.1 Offshore banking

Offshore banking is big business. However, most of the safe Havens have blank entries in the IFS (from the IMF), so to get some idea of the magnitudes one has to patch together data from many sources. In the typical developed Western economy the *asset-ratio* – between bank assets and the GDP – is in the range of 0.6-1.

The bank assets/GDP-ratio is 10 in Switzerland (like in Gibraltar). The Swiss bank assets are thus a bit larger than the GDP of Germany. This huge asset balance has been built over half a century. The record of Swiss banks is so strong that the crisis of 2009 caused massive capital inflows to the safe haven, and a large appreciation of the Swiss Franc (CHF) resulted – see 5.5 for a particularly wild quarter in the life of the Swiss Franc.

In Iceland a similar asset/GDP-ratio was build during the first decade of the 21st century, but it was built by increasing the credit multiplier, so it collapsed when the crisis of 2009 hit the economy. It is a major job to build enough credibility so that a safe haven is robust to crises.

Jersey, Gibraltar, Guernsey and Liechtenstein⁷ appear to be countries where financial services are the biggest industry. With the associated part of tourism, accounting and legal advice it probably comes to well above 50 % of GDP.⁸ The UK dependencies of Jersey, Gibraltar and Guernsey have Financial Service Commissions that give some information. It is not very detailed and of dubious comparability. However, the statistics given allow us to assess that the assets-ratios are about 67, 10 and 45 respectively in the three countries.

The main purpose of using offshore banking is to hide money from the authorities of your own country. This has two elements: (a) You may want to pass funds through the veils

6. The definition of an *offshore bank* is that it is located outside the country of residence of the depositor, in a jurisdiction that provides: (i) Greater privacy. (ii) Lower taxation. (iii) Greater freedom over deposits. (iv) Greater protection against political or financial instability.

7. The most common financial institution in Liechtenstein is the *treuhandgesellschaft*, which administrate funds. 168 such firms are listed at the URL: <http://www.welcome.li/liechtenstein-treuhandgesellschaften-37.html>.

8. The ‘associated’ part mentioned is the part servicing the foreigners using the financial services. When the indirect effects in the input-output sense are added financial services must completely dominate these economies.

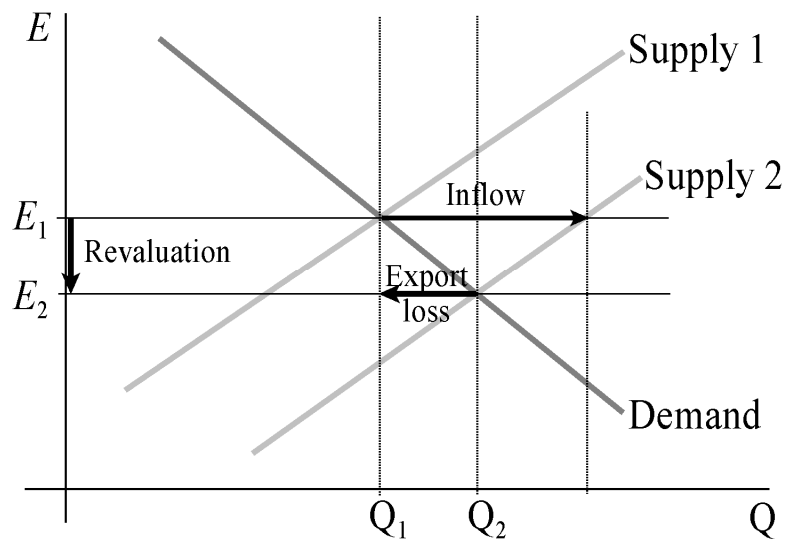
of anonymity, and (b) you may want a safe place to keep your money. The two roles are different: (a) Is a short-run facility that is served by all safe havens, and it does put great demands on the credibility of the safe haven. (b) Is a long-run facility that needs a substantial economy. It demands an economy with high credibility in the long run. Only Switzerland is well suited for that role. This is precisely because it is the only one of the safe havens that has a full normal economy in addition to the large financial sector.

4.2 Offshore banking, capital inflow and Dutch Disease

If an offshore financial center is successful, it generates large capital inflows. The inflow increases the supply of foreign currency in S and hence the price falls. The simple quasistatic analysis of Figure 3 shows the equilibriums (E_1, Q_1) before the inflow and (E_2, Q_2) after the inflow. This is termed an appreciation and it is a revaluation. The real exchange rate E shown is calculated from the nominal rate E^n by $E = E^n(P^F/P^S)$, where the P's are the price levels in F and S. Theoretically, they the two equilibriums are the same in the floating and fixed exchange rate case. Theory predicts that the adjustments are faster and smoother in the case of a floating rate, where the rational traders on the market perform the job.

The inflow means that the banks in S are awash with liquidity, interest rates fall and the activity level increases this causes inflation and a real revaluation. However, if the exchange rates are floating the nominal rate revaluates, and his offsets the inflation.

Figure 3. Capital inflow and the real exchange rate



My reading of the experience is that in the floating exchange rate case the market reacts so fast that the inflationary pressures of capital inflows is normally offset. Also, the floating is normally rather gentle. However, in times of financial instability it does give large movements of the exchange rate, and this surely makes life exciting for firms involved in foreign trade. The example in section 5.5 shows the daily exchange rate of the CHF (to the Euro) for the 3rd quarter of 2011 where the Greek economy was teetering at the brink of default. The CHF covered a distance down and up of 19 pp.

In order to dampen the fluctuations it is necessary that the economy has some size. When the Swiss economy has movements as discussed, then surely they would be truly immense for an economy as Guernsey or Liechtenstein had their own floating exchange rate. Hence, the microstates all have fixed their exchange rate.

This makes the effects of the story on Figure 3 a story of domestic price adjustments. but thanks to the complex dynamics in the fixed exchange rate case the path to equilibrium is likely to be influenced by the economic policies pursued, and it may take some time to get from (E_1, Q_1) to (E_2, Q_2) . The path may even be cyclical involving overshooting.

The way to insulate the economy from these movements is to make sure that the inflows are quickly sent out again. Also, it is clear that an economy such as the one of Jersey cannot absorb inflows in the order of 40 times the GDP. They must by necessity be invested somewhere else. These countries provide veils of anonymity, not storage. Even in the case of Switzerland most of the foreign funds floating out have to be invested abroad.

Table 4. The long-run safe haven package

(1)	A system of well-secured and highly trusted property rights
(2)	A developed banking system, with high solidity and a well-protected secrecy
(3)	A stable, conservative political system generating predictable policies and low taxes
(4)	A high level of honesty within the country
(5)	A solid economy with no looming debt and balance-of-payment crises
(6)	An arm's length principle as regards fully black funds

4.3 *The policy package necessary to generate long-run credibility for a safe haven*

A large literature discusses the conditions for a good 'investment climate.' The modern discussion started by Borner et al (1995) and the World Bank (1997). Also, a handful of firms

– such as Standard & Poor’s, Moody’s and ICRG – try to measure aspects of the credibility of countries. To be a credibly long-run safe haven a country obviously has to be extremely credible and have been so for some time. That is, it is not enough to score triple A at Standard & Poor’s in a few years.

Based on the literature, and common sense, it appears that the 6 conditions listed in Table 4 are the key ones for a country that wants to become a long-run financial safe haven. All six items are very good for generating normal business. Even if it did not generate large scale offshore banking it would still be the package recommended by business organizations. The package hangs together so that if some of the conditions are fulfilled the others are easier to meet. If the policy starts to work, the country gets large capital inflows, and the balance-payments improve, and wealth is produced. When the population sees that the policy works, so it becomes popular, and easier to defend. Thus, the policy has an inner dynamic which becomes a good cycle.

The bank secrecy in (2) is essential to attract gray and black funds and the low tax part of (3) is necessary to attract white funds. It is essential that the state does not seem to be in desperate need of taxes (5) so that dangers to funds entering loom large in the future.

A safe haven is a promising place to turn black money white, but it is an obvious point that to be inviting a safe haven have to hold criminals at an arm’s length.⁹ We shall return to this point.

When international companies choose to place their headquarters in S, it means that some of the profits generated by these companies accrue in S, and when the very rich individuals decide to live in S this also generate income in S. These moves are an extra gain as a consequence of the safe haven policy. It is not so easy to calculate how large income these moves generate: Also it gives some tax income from earnings made abroad. The public consumption made from these taxes generates income via the usual multiplier mechanisms.

The number of rich companies and persons living in S seems moderate in numbers, but they own great wealth and have generated a competition among the cantons and the concentration is high in some cantons that have specialized in attracting tax refugees.

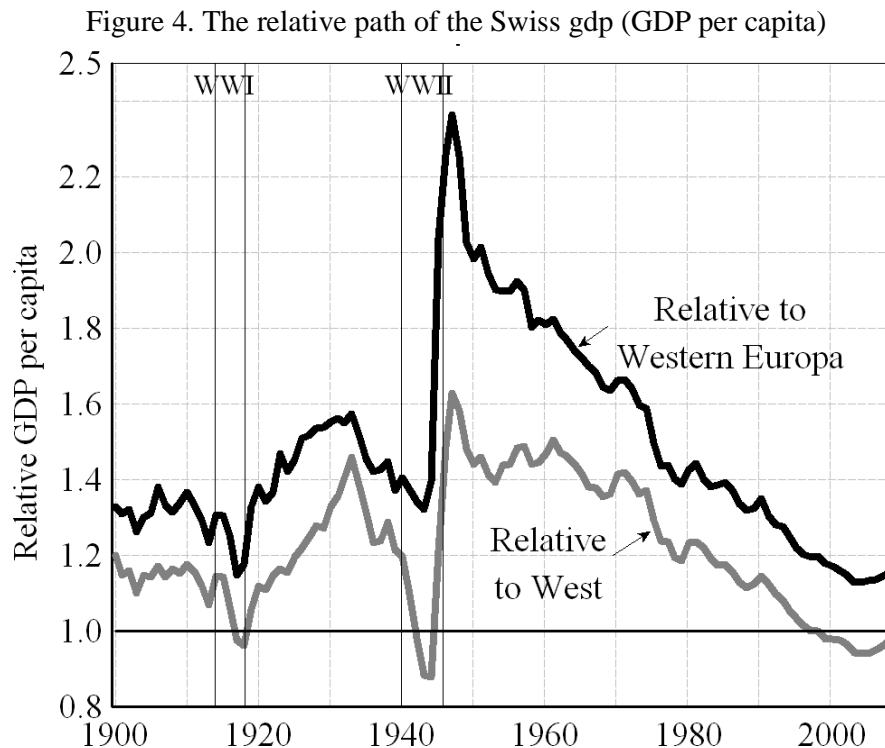
9. The arms length principle (6) is a bit like the mafia rule in Las Vegas: No owner of a Las Vegas casino is allowed to have any economic connection to known criminals. However, a casino appears to be a great device for turning black money white, so from time to time mafia connections to casinos are discovered.

5. The Swiss case

The key to understanding the case of Switzerland is that apart from being a safe haven Switzerland is also a perfectly ‘normal’ economy, with a hardworking population and a high level of economic efficiency. Section 5.1 shows the path of the Swiss economy, while section 5.2 looks at the nominal and real exchange rate for the Swiss Franc (CHF). Section 5.3 considers the tricky accounting for capital inflows in a safe haven. Section 5.4 looks at the domestic consequences of absorbing capital inflows, and 5.5 is a case study of a wild quarter in the life of the CHF. Finally section 5.6 discusses the really black funds in the world, which also look for a safe haven.

5.1 The path of the Swiss economy

Figure 4 shows the relative path of gdp (GDP per capita) compared with the West and Western Europe. The aggregates are weighted with country sizes.¹⁰



10. The statistics used (Maddison 2003) are PPP-data for the West. It covers 20 countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, UK in Western Europe and Australia, Canada, New Zealand and the USA overseas. The two groups are of roughly the same size.

The two graphs show that Switzerland was already a relatively wealthy country in year 1990.¹¹ Since then Swiss income has risen in two waves, both associated with a world war. After World War I Switzerland grew by about 20 % more than the other countries, but the crisis of the 30s and World War II were hard on the Swiss economy even when Switzerland remained neutral. Switzerland is a very trade dependent country, with no resources to speak of, so the periods of trade disruptions are difficult periods for Switzerland.

However, the two world wars were the events that convinced a lot of people – especially in Germany – that a financial safe haven was necessary. After World War I Germany had a prolonged period of political chaos – with a handful of failed local revolutions and then hyperinflation. Then the Jews and other victims of prosecution needed to get out and preferably to bring their money as well, and during the last 1½ years of World War II many Germans could see that they would lose, and needed to save some funds from the debacle.

It also taught the Swiss that if they pursued the right policies they could become wealthy in the process, and they certainly succeeded for most of the century to become richer than most developed countries. Especially from 1944 to 1975 Switzerland was much richer than its neighbors. However, from both curves shown on Figure 4 it appears that the high income of Switzerland was due to a large upward jump just after World War II and then it has been followed by a low growth in productivity.

In Paldam (2011) it is shown that the path showed on Figure 4 for Switzerland is unique. Calculated as the sum of numerical deviations from the common growth path Switzerland is the country that has the most different growth path, also if it adjusted for the average deviation. The path of Switzerland looks as a clear case of Dutch Disease. When the foreign exchange inflow starts there is a high upward jump, but then the revaluation generated by the inflow causes a slow growth that gradually undermines the jump.

When the relative position of the PPP-income and the relative GDP in current income is compared it appears that the Swiss nominal income is about 50 % higher. This is a measure of the Dutch Disease afflicting the Swiss economy. It is amazing that a landlocked country with fine transport infrastructure can have such an excess price level.

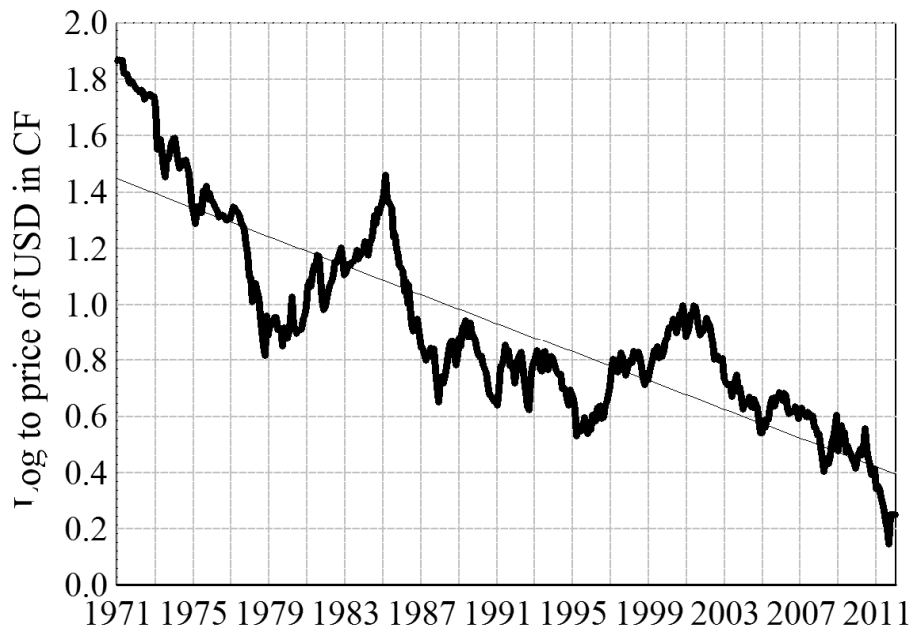
5.2 *The exchange rate: nominal and real*

The oil-country ‘look-alike’ development path of the Swiss economy in Figure 4 suggests Dutch Disease. As the jump is large, the aggregate excess income is substantial. The term

11. In the historical data Switzerland was a relatively poor country in the first half of the 19th century, but exceeded the European average already in the period from 1850-75, and has been relatively wealthy since then.

Dutch Disease suggests something bad. However, it starts with something very good, a large income raise – the ‘disease’ element is that raise is gradually undermined by revaluation. The good is not as good, at it seems at first. The Dutch Disease observation suggests that the CHF (Swiss Franc) has revalued, in the period. And, in fact Switzerland is the world champion for the 20th century in revaluations.¹² During the Liberal Century Switzerland was a member of the Latin Monetary Union where the Swiss, the French and the Italian currencies were fixed 1 to 1. The Union collapsed during the First World War. Since the abolition of the union the French have cut 2½ zeros and the Italians almost 4 zeros of their currencies.

Figure 5. Logarithm Index of CHF price of US \$



Source: Bloomberg data base.

In August 1971 the US dollar started to float – this caused a major realignment of all currencies. Figure 5 shows the monthly development of the Swiss exchange rate since January 1971 before the realignment. For a constant rate of change to show up as a straight line it is a logarithmic transformation. In the period covered, the euro (and the weighted sum of the euro currencies before that) is virtually trendless relative to the US dollar, though it has varied a great deal.

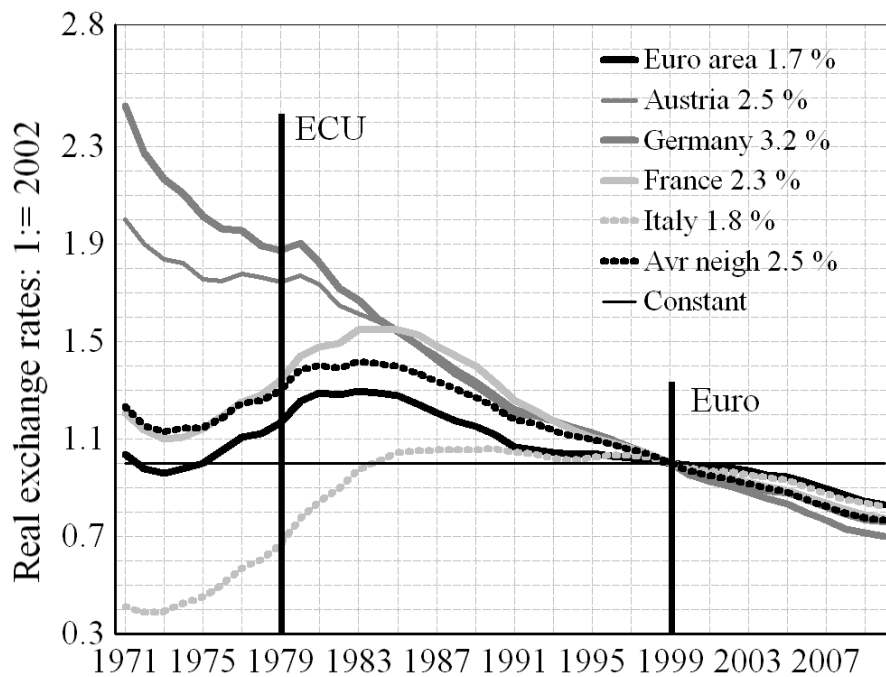
12. An alternative formulation is that Switzerland has kept its currency very close to the (pre World War I) gold parity while everybody else has devalued.

In the period of Figure 5 the CHF appreciated 5 times relative to the US dollar or by 4.1 % per year. The fitted straight line says that the annual rate of revaluation is 3.2 % per year, which corresponds to the revaluation to the Euro. Even 3.2 % per year is a world record.

Figure 6 is one specimen of a table that has no doubt been calculated and recalculated by all Swiss macroeconomists – the nominal rate of 3.2 % revaluation is compared with the inflation rate. If Switzerland has 3.2 % less inflation than its trading partners/neighbors the CHF stays stable in real terms. The constant horizontal line at 1 shows that possibility.

Switzerland has in fact had less inflation than the Euroland, but not 3.2 % less, so the CHF has steadily revalued in real terms as well. This is shown by the six downward sloping curves that give the real rate relative to the most relevant countries. Before the establishment of the European monetary union (1/1 1979) the countries had very different rates of inflation, but from the late 1980s the inflation rates converged (probably not enough, but still some).

Figure 6. The real rate of revaluation of the CHF



Note: The real exchange rates are calculated from the GDP deflators.

The Euro was launched (1/1 1999) and the numbers in brackets shows the average rate of revaluation in each of the 6 cases since then. It is interesting that Germany has had the same

rate of inflation in the period, but in all the other cases inflation was higher than in Switzerland, but not 3.2 % higher. So Switzerland has had a steady rate of revaluations. When large capital import leads to a real revaluation it is precisely what is termed Dutch Disease.

It is a common observation that countries with large capital import and resulting Dutch Disease, come to suffer from deindustrialization, and turn into rentier societies – as in the richest oil countries – where natives work very little and foreigners are imported to do the work. In Switzerland the capital inflows are borrowed funds, and though the country has had large scale labor import no de-industrialization has occurred. It is a simple fact that Switzerland has a rather hard working population with high participation ratios in the labor force and moderate unemployment. However, many Swiss industrialists (and independent economists) have warned that deindustrialization is becoming a real possibility – especially in connection with the revaluations in 2011.

5.3 National accounting and the autonomous posts of the balance of payments

The balance of payments always balances, so we consider only the autonomous posts such as they are registered, and disregard balancing items.

Switzerland is a country that exports capital. That is, Switzerland has a permanent balance of payments surplus, which corresponds to an annual capital export. For a financial safe haven we expect to see a capital inflow.

To see how ends meet we need to go into the details of balance of payments accounting. Consider the case where a foreigner deposits CHF purchased abroad on a Swiss bank account. The first thing happening is that a Swiss bank lends or sells CHF's to an exchange agency abroad. The result is a registered (a) capital outflow. The next thing registered is (b) an increase in (another) Swiss banks deposits. In principle, this should be registered as (c) an increase in foreign holdings in Switzerland – this is a typical balancing item.

The whole idea of a safe haven is that (c) is discrete. Maybe it is done via a Swiss Lawyer, who administrates the funds, so that legally it is a Swiss account that rises, not a foreign one. Many methods appear to be possible, and some of them are likely to be hard to distinguish from a Swiss bank deposit. We may thus assume that while (a) is fully registered this does not apply to (c). So the funds deposited in Swiss banks are likely to appear as net capital export. This in particular applies to sums where care is taken to insure anonymity.

Item (b) is that Swiss banks see a balance increase – most of the money has to be invested. As we are dealing with bank balances that are 10 times the Swiss GDP it is obvious that a great deal of the funds will be invested abroad and hence be registered as capital export

– one more time. All said, it appears that capital import is likely to appear as capital export on the autonomous posts in the balance of payments.

5.4 Awash with liquidity

With the inflow discussed it is not easy to hinder Dutch Disease, and as shown it has been substantial. This necessitates a correspondingly low interest rate. Foreign investors will not make money from interests, but from the appreciating exchange rate.

A depreciating CHF causes domestic wages to rise relative to foreign, but as the natives can buy foreign goods cheaply; wages need not raise so much. Living standards will rise anyhow. Since the Swiss banks in are awash with money earning very low interest, Swiss producers in will be able to borrow cheaply. This also helps offsetting the high wage costs. So for some time competitiveness will not become too bad.

Another consequence of the low interest rates is that real estate prices will go up. Imagine that interests are half the ones abroad and real estate prices are twice as high. Clearly, natives will become relatively big actors on the capital market compared to people in other countries. Everybody becomes capitalists, making solid conservative policies a more likely outcome. From Table 4 (in section 4.3) we note that key elements in these policies are (3) low taxes and (5) balanced budgets that generate no public debt. Hence public expenditures will be low. Social expenditures will have to be private insurance schemes.

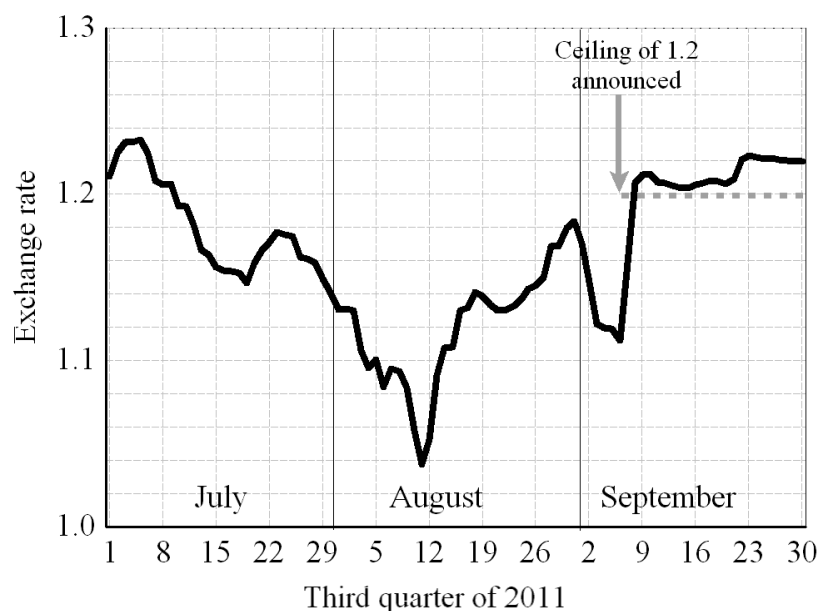
It is dangerous for Swiss citizens in if the safe haven policies get in trouble, as it may cause a lot of money to float out. This will force the Swiss Central Bank to raise interest rates so that housed prices fall, and a lot of natives will become technically insolvent. Thus, the Swiss will develop a strong interest in a continuation of the safe haven policies.

5.5 The example of the third quarter of 2011

The third quarter of 2011 was a period of unusual turmoil on the international exchange market. Greece was constantly at the brink of default, Standard & Poor's downrated the US, and the discussion about the solvency of Portugal, Italy and Spain moved from the business and finance sections in the media to the front pages.

The result of the currency uncertainty in the world was the movements of the Swiss Franc shown on Figure 7 – over a period of just 5 weeks the rate revaluated 19 %, and then it devalued most of the way back again, but then September started with a new revaluation, and then September 6th the Swiss National Bank (SNB) announced that:

Figure 7. The price of 1 Euro in CHF



‘The current massive overvaluation of the Swiss franc poses an acute threat to the Swiss economy. ... The SNB is therefore aiming for a substantial and sustained weakening of the Swiss Franc. With immediate effect, it will no longer tolerate a EUR/CHF exchange rate below the minimum rate of CHF 1.20.’

It is surely an important step and perhaps the SNB can sustain the policy. However, when large amounts of funds floats in next time it will be interesting to see if the SNB will resort to negative interest rates or make large scale repatriation schemes for the funds?

5.6 *Black funds and the veils of anonymity*

The inflow of gray funds needs bank secrecy. But bank secrecy also attracts black money made by criminal activity as drug trade, corruption, theft, plunder ...

The turnover in the illegal drug trade exist has often been assessed. It might be in the order of 1-2% of the GDP of the West, so it is a major business. The goods traded are small in bulk, but they have to travel in clandestine and roundabout ways between producers and markets, and the business is highly volatile, as major losses suddenly occur due to the police or gang war. Thus, flexible financial arrangements are highly necessary. The more legal these arrangements can be made, the better it is. The business is very profitable, so it can employ lawyers and financial managers to create insulating layers between the generating crime and the resulting transactions. And in the end the profits made needs to become legalized, and be invested in normal business.

Poor countries often have bandit rulers of both the roving and stationary type. Such rulers have lots of loot for which they want safe havens. They live a dangerous life, and they may have to fly suddenly. Once they escape they know that all funds within reach of their successors will be grabbed. To be able to live in peace and prosperity they need ample and secure funds abroad. While they rule they can legally employ lawyers and financial managers to generate safe 'pension' funds. The more decent and safe these havens look, the better will the bandits feel, when their loot crosses the border.

All of this means that plenty of black funds are aloof. They would like to hide in a decent safe haven, but to remain decent it had to keep black money at arm's length. An all safe havens have developed a set of rules and regulations keeping such funds out – the authorities can show that they make an effort, and they certainly do, but they can only do so much, without seriously harming the world capital market that provide an important services to the world.

The market has developed a complex set of institutions to handle capital flows in safe and discrete ways. It is a recurrent theme in the media how sophisticated these institutions are and how many innovations they generate. Apart from the 10 dwarfs in Europe there are plenty more. The pirates of the Caribbean, who used to trade their loot for rum, are now replaced by far more polished loot handlers. These states are the homes of post-box or even virtual banks that provide veils, through which money can travel, if they leave a fee. One of the services these veils supply is that they produce no financial statistics. There is a lot they cannot tell, even if they wanted.

Everywhere there is a risk of disclosure. If the risk is 10 %, the funds may pass three veils, and then the risk has fallen to 0.1 %. If this is deemed an excessive risk the funds may take another round adding three more veils. Also, the funds can be broken in 10 parts sent different ways. If funds are dirt black, when the journey starts, they are shining white when they reach the safe haven. Also, it is obvious that once such money reaches Switzerland, the banks cannot possibly know how they were originally made. Even if they were stolen at a bank robbery in the very same bank that they have now reached after a journey through three veils they are now of an unknown origin.

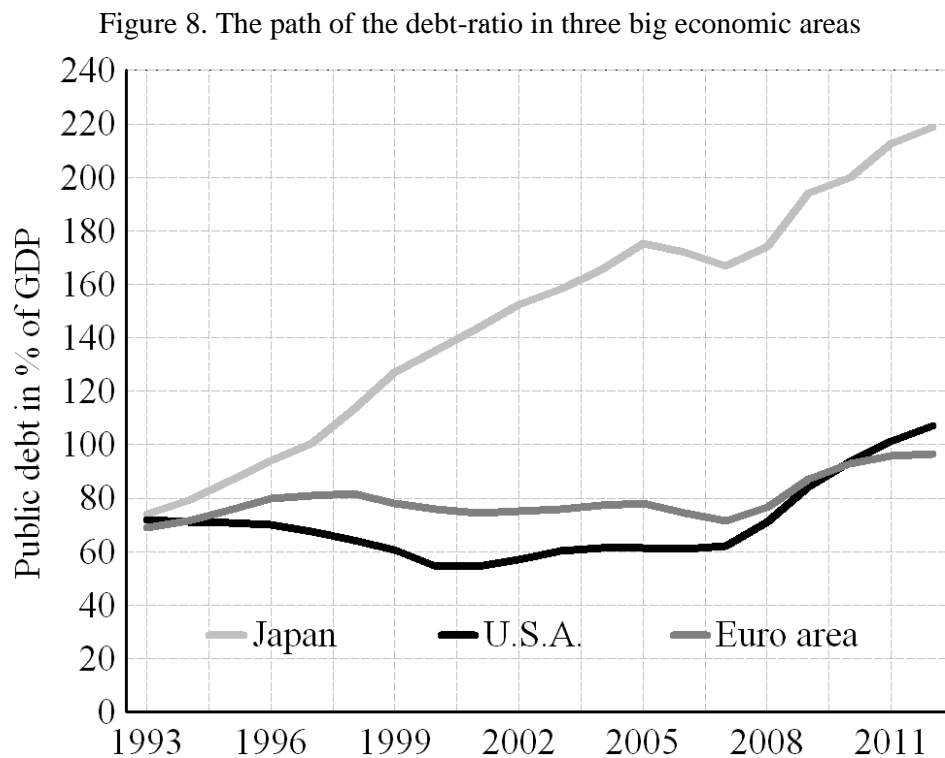
Obviously, somebody in Switzerland help some citizens in other countries commit a crime even in the gray case. However, the Swiss authorities do what they can to prevent crime from being committed in Switzerland.

6. Safe havens in a world of debt

Section 6.1 looks at the grand pattern of debt, and section 6.2 consider the place of safe havens in the pattern. The process of government enforces myopia. Public debt is typically long-run loans. So there is a large time consistency problem, and perhaps it is no wonder that the debt of public sectors of the West are growing with no end in sight. This is slowly undermining peoples trust in the stability of the main currencies and in the bonds issued by the states. Increasingly people ask: Are the state bonds of Greece, Portugal, Italy, Spain, ... really safe? Also, Standard & Poor's have taken the first step downgrading the USA.

6.1 The grand pattern of debt.

The three main currencies in the world are the US \$, the Euro and the Yen. Figure 8 shows the debt burdens of general government debt in per cent of the GDP from the OECD statistics, so an attempt has been made to make the data comparable, even when debt data are famously open to definition games.



Note: *Public* is *general government*. The curve for the full EU is rather similar to the one of the EURO area shown. Source: OECD. For 2011 and 2012 the data are based on budgets and projections.

What the data show is that in ‘normal’ times, the public debt of the US and the EU stays fairly constant, and when a crisis occur they jump upward. The reader will recall that Keynesianism used to be the idea that the budgets should be balanced in the long run. Thus, debt should be zero in the long run. However, countries were recommended to use counter-cyclical surpluses and deficits to dampen economic fluctuations. What is shown in Figure 8 is *irresponsible Keynesianism*.

The story of Japan is even worse. It shows a debt burden that increases steadily with 8 pp per year. This is obviously unsustainable. It appears that a major factor building the Japanese debt has been the repeated failure to kick-start the economy by big budget deficits.

As the countries had an average debt of 70 % of GDP in 1993, where the data starts we are speaking of a prior period of irresponsible Keynesianism. It appears that the debt was largely created after 1970, where it was around 20 %. Since then it has kept rising.

Part of the rise is the inertia of the big spending programs throughout the West that has generated ratchet-like ‘welfare states’ that repeatedly break free from the control of elected politicians. Far too often governments have associated actual spending increases with vague plans for savings well into the future. The cheap promise that some little extra spending now will lead to big savings in the future. Thus, increasingly states are *tax starved*.

Also, there is the tax-demanding dynamics of the population pyramid throughout the West that promise that the tax starvation of the states will *increase substantially* in the future.¹³ The seemingly unstoppable slide into debt is increasingly worrying to everybody.

When the story of Figure 8 is compared with the historical record as presented by Reinhart and Rogoff (2009) it is clear that we have good reasons to be worried. Defaults, bank crises, etc., have occurred quite frequently in the past.¹⁴ Also, there is the story of LDC debt from 1970 to 2010 which tells of a similar debt cycle. The LDC capital markets are shallow, so most LDC debt was foreign. From 1970 to the mid 1990s debt increased from about 20 % to about 100 %. However, since then some debt has been paid and the West has written off about half of the debt. So it is now as it was in 1970.

The key observation is that even if the approximately 30 countries covered by Figure 8 contain some basket cases where debt has to be written off, it is dominated by a handful of

13. The deteriorating population pyramid can be converted into an *implicit debt burden* that has to be added to the explicit one. The promises made to an aging population add about 40 % to the explicit tax burden in the average country. However, it is larger in the EU than in the USA. For Germany it brings the debt burden from 90 % to 150 %, which is the same as the explicit Greek debt at the moment.

14. The data they have painstakingly collected show that Greece – since independence in 1827 has actually been in default 60 % of the time. They also write that Greece may have matured to be a non-defaulter, but since the book was sent to the printer this hope has been squashed.

countries that are so big that nobody can finance a debt forgiveness package. Somehow the debt will have to be paid. Combined with substantially increased tax starvation it ensures plenty of future problems.

The most likely scenario for the future is policies combining substantial tax increases and public sector cuts¹⁵ – this will be contractionary, and probably also politically destabilizing. That is, governments may come to change more often, strikes and demonstrations may become more frequent, etc. It is also possible that some of the debt will be reduced by inflation. Also, it is likely to lead to a great deal of exchange rate instability.

The outcome of this analysis is that the world may come to need safe havens more in the next few decades. And the need may be especially high for safe havens that provide safe storage of funds. Obviously the 10 microstates cannot provide safe storage, so the role of these states is to provide veils of anonymity as usual.

6.2 *The debt of Switzerland and its neighbors*

For most of the 11 safe havens public debt data appears to be unavailable. In the OECD comparative data only Luxembourg and Switzerland are included. We expect that the public debt of a safe haven is small, as is predicted by the safe haven package of Table 4 (in section 4.3). This is indeed the case.

For Luxembourg the debt ratio has increased from 10% in the mid 1990s to 20 % in 2010. Figure 9 shows the development of the Swiss debt-ratio compared with its four neighbors. Italy stands out with a permanent debt around 120 % . The *other three* – Germany, France and Austria – has a common trend: Till 2005 the Swiss debt was only 10 percentage points lower than the other three and rising with much the same rate. Since 2005 Swiss debt has fallen while the one of the other three has increased. As a result the Swiss debt burden is now half the one of the three neighbors, and one third of the one of Italy.

Switzerland is a small country, and it is worth to compare with the other six similarly sized West European countries at the ‘German rim’: Belgium, Denmark, Finland, Netherlands, Norway and Sweden. They present a somewhat mixed picture, where a great many stories can be told, so we just look at the average path in Figure 10.

15. Some well-known economists – notably Joseph E. Stiglitz and Paul Krugman – still advocate expansionary policies so that the denominator in the debt burden (i.e., GDP) increases sufficiently to reduce the burden. However, it does mean that in the short run debt will rise. Thus, it increasingly looks like the prescription of more of the same failed old policy.

Figure 9. The path of the debt-ratio of Switzerland and its neighbors

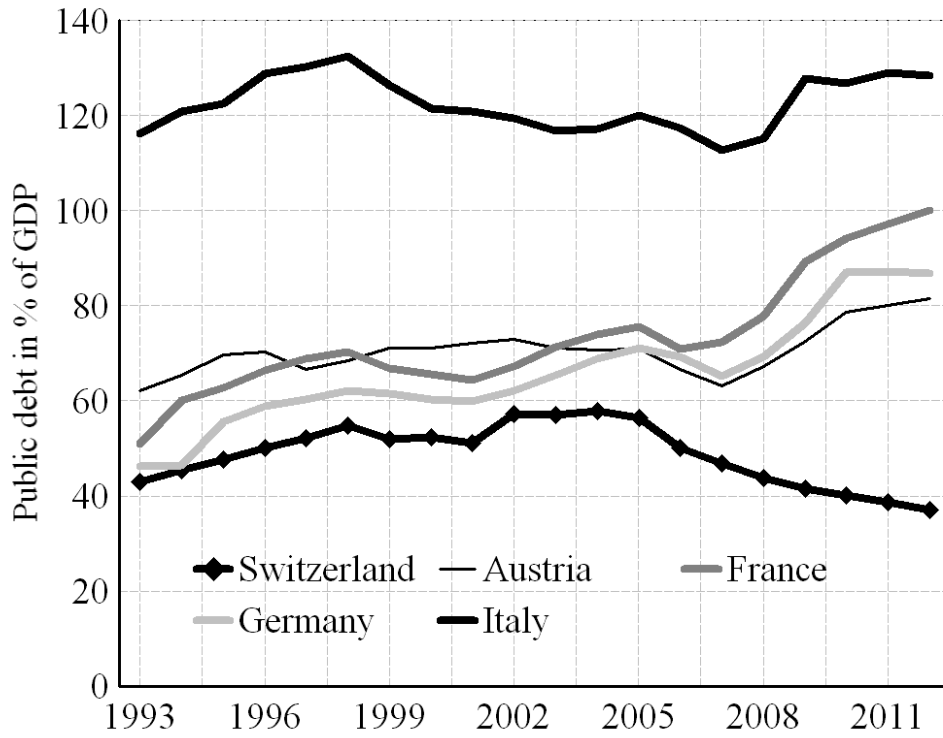
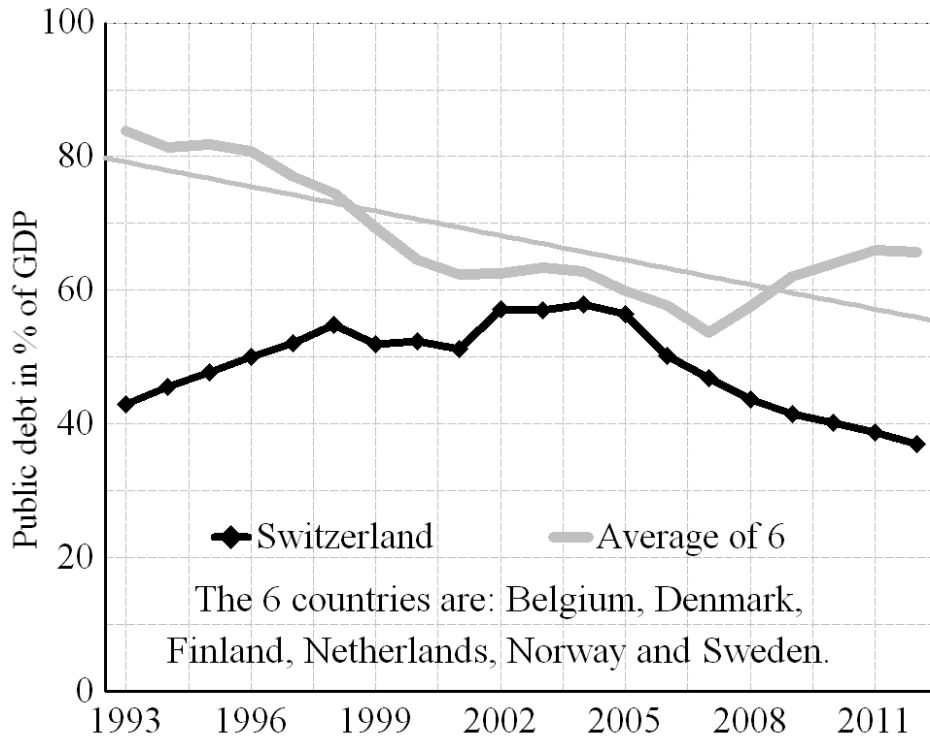


Figure 10. The Swiss debt-ratio compared to six small West European countries



Note to both figures: See note to Figure 8.

The main picture emerging from Figure 10 is that the six countries have managed to reduce debt. In average the reduction is from about 80 % to about 55 %. It is by 25 pp over 19 years, or by $1\frac{1}{3}$ pp per year. This corresponds rather well to the debt burden reduction generated by the growth of the GDP, so the stock of debt has been almost constant. Recently debt has gone up to 65 %, but at the rate of reduction accomplished in the period, debt may still be reduced to zero over the next 50 years.

Thus, if we see the debt reduction of these countries as the best that can be done under normal circumstances and look at the big three in Figure 8 it is clear that we are dealing with a problem that will be with us for most of the 21st century. This also means that the world will need the Swiss safe haven for a long time into the future.

7. Conclusion: Is the scope for safe haven seriously hampered?

Recently a great deal of pressure has been applied on safe havens to reduce bank secrecy and money laundering. The IMF, OECD and EU as well as a number of countries – notably Germany – have demanded that owners of accounts are authenticated and account information is available to the authorities in the countries of origin of the funds. Also, the USA has made a large effort to catch black money flows associated with the illegal drug trade and international terrorism.

On paper a lot has been done. A handful of international agreements of tax cooperation and money laundering have been made and most safe havens in Europe have gradually signed these agreements. However, as the reader may imagine, it is a complex ongoing process to make sure that such agreements are implemented. The governments of safe havens surely have very mixed interests in the matter, so they cannot be expected to be overly fast. Also, in order to make them sign, the treaties they are not too rigorous. Also, an army of lawyers is working to find loopholes. It is a well-known that it is easy for countries to pay lip service only to international agreements.

Consider the job at hand. In Guernsey the latest statistic puts the total bank balance at 139 billion U.K. £, and most of the bank customers has chosen Guernsey instead of their neighborhood bank for some reason, which may not be the reason given, if they are asked. The Financial Service Commission of Guernsey has a nice home page. It does not state how large the staff is, but from the organizational diagram and the text, it appears that less than 50 employees are actually checking accounts for dubious entries.¹⁶ If nobody points to one particular account, it is extremely unlikely that a fishy flow through a normal looking account will be noticed.

Thus, it appears that the efforts made do make offshore banking a bit more difficult, but by no means impossible: Where there's a will, there's a way.

16. Thus, each regulator may have a balance of 3 billion £ to keep free of money laundering and tax evasion. If the average balance on an account is £ 5,000 the regulator deals with 600,000 accounts. With a normal working year each account can be scrutinized for about 10 seconds once a year. Of course, the scrutiny will be made by computers looking for patterns, but then a pattern has to be singled out as suspicious.

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17. We use the update of February 2010, posted one month before Maddison passed away.

Appendix: Classification of countries and definition of variables

Table A1. A survey of the countries and independent areas of Europe

Name	Status	Population	Area	Income	Finance	Low tax	Post com
<i>Vatican City</i>	<i>Country</i>	832	0.44		<i>Transfers^{a)}</i>		
Gibraltar	HR, UK	28'956	6,5	16	Yes	Yes	
Monaco	Country	30'539	2	44	Gambling	Yes	
San Marino	Country	31'817	61	31	Yes	(Yes)	
Liechtenstein	Country	35'236	160	2	Yes	Yes	
Faroe Islands	HR, Denmark	49'267	1'393	41			
Guernsey	HR, UK	65'068	78	14	Yes	Yes	
Isle of Man	HR, UK	84'655	572	36	Yes	Yes	
Andorra	Country	84'825	468	12	(Yes)	Yes	
Jersey	HR, UK	94'161	116	6	Yes	(Yes)	
<i>Aland</i>	<i>HR, Finland</i>	<i>275'000</i>	<i>13'517</i>				
Iceland	Country	311'058	103'000	25	(Yes)		
Malta	Country	408'333	316	53	(Yes)		
Luxembourg	Country	503'302	2'586	3	Yes	Yes	
Montenegro	Country	661'807	13'812	108			X
Cyprus	Country	1'120'489	9'251	62	Yes		
Estonia	Country	1'282'963	45'228	63		(Yes)	X
Slovenia	Country	2'000'092	20'273	50			X
Macedonia	Country	2'077'328	25'713	112			X
Latvia	Country	2'204'708	64'589	77			X
Armenia	Country	2'967'975	29'743	140			X
Albania	Country	2'994'667	28'748	132			X
Lithuania	Country	3'535'547	65'300	70			X
Moldova	Country	4'314'377	33'851	176			X
Croatia	Country	4'483'804	56'594	67			X
Georgia	Country	4'585'874	69'700	149			X
Bosnia & Herz.	Country	4'622'163	51'197	134			X
Ireland	Country	4'670'976	70'273	27	(Yes)	(Yes)	
Norway	Country	4'691'849	323'802	7			
Finland	Country	5'259'250	338'145	34			
Slovakia	Country	5'477'038	49'035	58			X
Denmark	Country	5'529'888	43'094	28			
Bulgaria	Country	7'093'635	110'879	89			X
Serbia	Country	7'310'555	88'361	101			X
Switzerland	Country	7'639'961	41'277	17	Yes	Yes	
Austria	Country	8'217'280	83'871	19			
Azerbaijan	Country	8'372'373	86'600	100			X
Sweden	Country	9'088'728	450'295	23			
Belarus	Country	9'577'552	207'600	88			X
Hungary	Country	9'976'062	93'028	64			X
Czech Rep.	Country	10'190'213	78'867	54			X
Belgium	Country	10'431'477	30'528	26	(Yes)		

Note: The 11 safe havens are bolded

Part 2 of Table A1

Name	Status	Population	Area	Income	Finance	Low tax	Post com
Greece	Country	10'760'136	131'957	47			
Portugal	Country	10'760'305	92'090	57	(Yes)		
Kazakhstan	Country	15'522'373	2'724'900	91			X
Netherlands	Country	16'847'007	41'543	20			
Romania	Country	21'904'551	238'391	96			X
Poland	Country	38'441'588	312'685	65			X
Ukraine	Country	45'134'707	603'550	133			X
Spain	Country	46'754'784	505'370	48			
Italy	Country	61'016'804	301'338	43			
U.K.	Country	62'698'362	243'610	37	(Yes)		
France	Country	65'312'249	643'427	39			
Turkey	Country	78'785'548	783'562	94			
Germany	Country	81'471'834	357'022	32			
Russia	Country	138'739'892	17'098'242	71			X

Notes: The table covers all European countries I would have liked to include. However, the two in italics are not included as data are missing.

The countries and near-countries are included as they are deemed sufficiently independent to pursue safe haven policies if they so choose. Svalbard and Akrotiri and Dhekelia have some de jure independence as well, but it is assessed to be insufficiently large by the said criteria. The list includes some countries, which may be termed Asian as well: Armenia, Georgia, Azerbaijan, Kazakhstan and Turkey.

HR means that the country has enough home rule so that it can pursue safe haven policies, if it so desires. The countries in this group have different institutional arrangements with the 'mother' country. Income is the gdp per capita rank in the CIA Factbook. It is not a good measure, but is available for all countries included with the exception of the Vatican and the Alands. The countries are sorted by population and divided into four sections with 14 countries in each.

In addition Europe has 6 contested areas, of which Kosovo is almost a country. However, only fully established national entities can provide enough security to be a viable safe haven. The remaining 5 areas are: Abkhazia, Northern Cyprus, South Ossetia, Nagorno-Karabakh and Transnistria. When Chechnya in 1997-99 had de jure independence its government attempted to create an offshore banking sector.

For the calculations in section 2 the following coding is used:

Safe-haven	if (at least) one 'Yes' it is coded 2, if only '(Yes)' it is coded as 1, else it is coded as zero
Income	'Rank' of the GDP per capita in 2005. Scaled by division by 10. The rank falls when income rises – this is irritating, so the signs in Tables A1 and A2 on income effects have been reversed.
Population	Scaled by division with 100,000.
Ln-pop	Natural log to <i>Population</i>
Area	<i>Area</i> in km ² . Scaled by division with 100,000.
Ln-area	Natural log to <i>Area</i> .
Status	if HR it is coded 1 else 0
Post-com	if 'X' it is coded 1 else 0

A number of alternative sources exist for the classification of safe havens. The International Monetary Fund (IMF), the Financial Secrecy Index (managed by the Tax Justice Network) and the Organisation for Economic Co-operation and Development (OECD) have made various lists covering the offshore financial centers. Appendix Table A2 is the list as summarized by Wikipedia:

The reason for excluding Ireland is the recent collapse of the Irish economy. The list shows that it is not controversial which countries to include. It is Switzerland and the 10 dwarfs: Andorra, Cyprus, Gibraltar, Guernsey, Isle of Man, Jersey, Liechtenstein, Luxembourg, Monaco and San Marino.

Finally, it should be mentioned that Livigno and Campione d'Italia are Italian areas (in the Dolomites) with a special status allowing them lower value added taxes and a big casino respectively. Helgoland is a

German island with a special history allowing it lower sales taxes on booze, giving the island enough tourism for comfortable living.

Table A2. Summary of lists of offshore financial sectors in Europe

Country	IMF	FSI	OECD	Others
Clear cases				
Andorra	x	x	x	x
Cyprus	x	x	x	x
Gibraltar	x	x	x	x
Guernsey	x	x	x	x
Isle of Man	x	x	x	x
Jersey	x	x	x	x
Liechtenstein	x	x	x	x
Luxembourg	x	x	x	x
Monaco	x	x	x	x
San Marino	x	x	x	x
Switzerland	x	x	x	x
Dubious cases				
Ireland	x	x	x	x
Malta	x	x		x
Belgium		x	x	x
Portugal		x	x	x
U.K.		x	x	x

Table A3. Regressions explaining the *Safe-haven* variable

		<i>Income</i>	<i>Population</i>	<i>Area</i>	<i>Post-com</i>	<i>Dependent</i>	<i>Constant</i>	Adj. R ²
Explaining <i>Safe-haven</i> : <i>Pop</i> and <i>Area</i> are not in logarithms								
(1.1) All variables	Coef.	0.031	-0.001	0.008	-0.609	0.622	1.048	0.394
	t-ratio	(0.9)	(-2.6)	(1.5)	(-2.1)	(1.9)	(5.8)	
(1.2) Pop as size	Coef.	0.043	-0.001		-0.449	0.693	1.004	0.379
	t-ratio	(1.3)	(-2.2)		(-1.6)	(2.1)	(5.6)	
(1.3) Area as size	Coef.	0.050		-0.002	-0.351	0.823	0.891	0.323
	t-ratio	(1.4)		(-0.5)	(-1.2)	(2.5)	(5.0)	
(1.4) Tested down	Coef.	0.082				0.875	0.911	0.324
	t-ratio	(3.6)				(2.7)	(5.2)	
Explaining <i>Safe-haven</i> : <i>Pop</i> and <i>Area</i> are in logarithms								
(2.1) All variables	Coef.	0.036	-0.084	-0.118	-0.254	-0.127	3.313	0.635
	t-ratio	(1.4)	(-1.1)	(-2.2)	(-1.2)	(-0.4)	(4.8)	
(2.2) Pop as size	Coef.	0.029	-0.225		-0.371	-0.077	4.215	0.608
	t-ratio	(1.1)	(-6.0)		(-1.7)	(-0.3)	(7.4)	
(2.3) Area as size	Coef.	0.040		-0.172	-0.200	-0.068	2.604	0.633
	t-ratio	(1.6)		(-6.5)	(-0.9)	(-0.2)	(8.8)	
(2.4) Tested down	Coef.	0.057		-0.172			2.613	0.641
	t-ratio	(3.4)		(-7.6)			(11.3)	

Note: As in table 1 the signs on/to income (rank) have been reversed to be in accord with casual usage.

Table A4. Regressions explaining the *Income* variable

		<i>Safe-haven</i>	<i>Population</i>	<i>Area</i>	<i>Post-com</i>	<i>Dependent</i>	<i>Constant</i>	Adj. R ²
Explaining <i>Income</i> (rank): <i>Pop</i> and <i>Area</i> are <i>not</i> in logarithms								
(3.1) All variables	Coef.	0.548	-0.002	0.033	-6.208	0.165	-3.300	0.585
	t-ratio	(0.9)	(-1.2)	(1.4)	(-6.6)	(0.1)	(-3.8)	
(3.2) Pop as size	Coef.	0.759	-0.000		-5.711	0.345	-3.819	0.576
	t-ratio	(1.3)	(-0.2)		(-6.4)	(0.2)	(-4.8)	
(3.3) Area as size	Coef.	0.810		0.014	-5.769	0.373	-3.929	0.583
	t-ratio	(1.4)		(0.9)	(-6.7)	(0.3)	(-5.8)	
(3.4) Tested down	Coef.	0.839			-5.698		-3.870	0.592
	t-ratio	(1.6)			(-6.7)		(-5.8)	
Explaining <i>Income</i> (rank): <i>Pop</i> and <i>Area</i> are in logarithms								
(4.1) All variables	Coef.	1.072	-0.338	0.351	-5.766	0.577	-2.565	0.579
	t-ratio	(1.4)	(-0.8)	(1.1)	(-6.5)	(0.4)	(-0.6)	
(4.2) Pop as size	Coef.	0.828	0.022		-5.664	0.420	-4.242	0.576
	t-ratio	(1.1)	(0.1)		(-6.4)	(0.3)	(-1.0)	
(4.3) Area as size	Coef.	1.194		0.155	-5.610	0.828	-5.761	0.582
	t-ratio	(1.6)		(0.8)	(-6.5)	(0.5)	(-2.3)	
(4.4) Tested down	Coef.	0.839			-5.698		-3.870	0.592
	t-ratio	(1.6)			(-6.7)		(-5.8)	

Note: See the note to Table A3.