Fiscal equalization: the Swiss way, federal, cantonal, local

Bernard Dafflon

1. Fiscal Equalization: a long participative and democratic process
2. The content of the 2008 Equalization policy
3. Funding Fiscal Equalization, Switzerland, 2014
4. Financial dependence of the cantons on federal transfers, 2012

5. Revenue equalization 1: indices of tax potential RTS
   Revenue equalization 2: distribution formulas

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   Expenditure needs equalization 2: cantonal – local

7. Selected issues

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1. Fiscal Equalization: a long participative and democratic process

- *1959 -2007   The old system: = revenue sharing and conditional grants-in-aid with an equalizing supplement according to the financial capacity of the cantons*
- *Modified, up-dated more that 25x and many marginal changes*
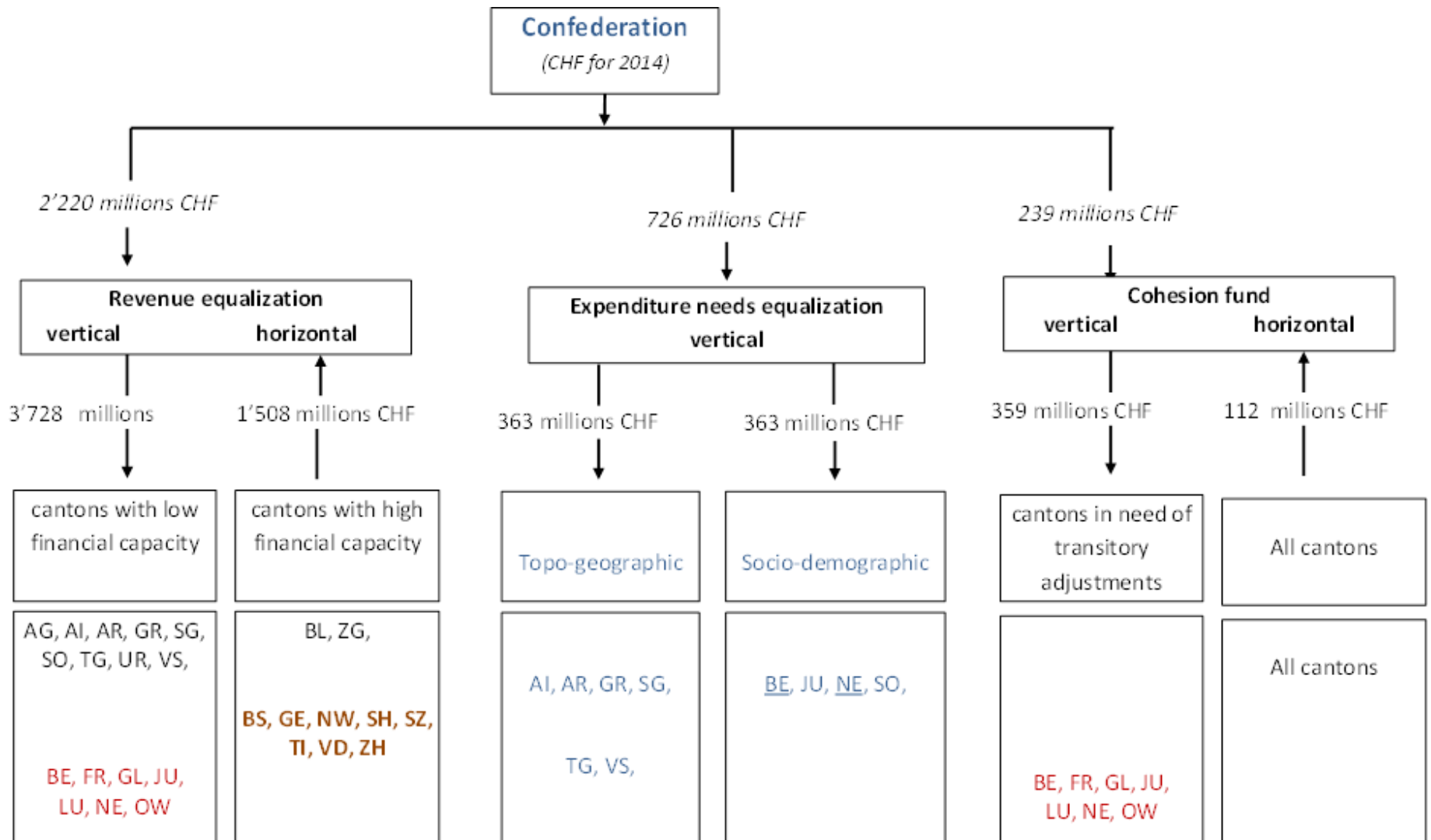
1996 - 1997	*External expert commission for measuring the performance of the system. Conclusion: a new system is needed.*
1997 - 2001	*Cantonal - federal joint committee on equalization (equal number of representatives) → Preliminary Report → Consultations of the political parties*
2001 November 14	*Message of the Federal Council (the federal executive) to the federal Parliament on the reform of equalization and the re-assignment of certain functions between the Confederation and the cantons.*
2003 October 3	*The (actual) federal law on equalization is adopted by the National Council and the Council of States.* *Subject to compulsory referendum (double majority of the people and the cantons).*
2004 November 28	*The constitutional article and the law are adopted in federal referendum, by 64.4% of the voters (participation above 50%) and 22 cantons (out of 26).*

- 2008   The law and the new system are enforced on January 1. Its performance must be evaluated each four years.

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1. The content of the 2008 Equalization policy

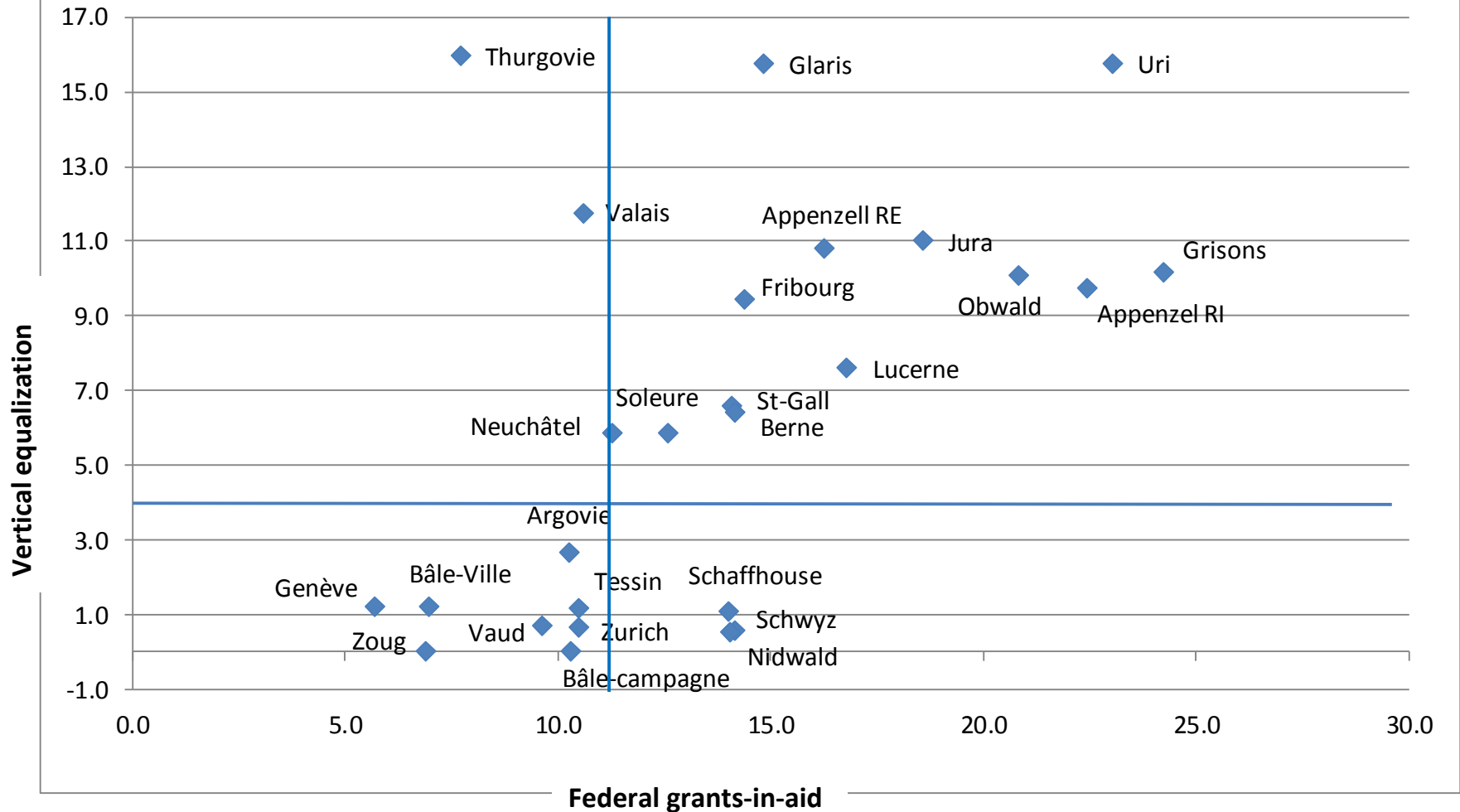| equalization	objective	disparity	variables	weight
Revenue	• reduce the differences in financial capacity among the Cantons; • guarantee the Cantons a minimum level of financial resources (85% of the national average)	Representative tax system: differences to the national per capita average	• Personal Income Tax PIT • Personal Wealth Tax PWT (adjusted) • Corporate Profit Tax CPT (general regime) • CPT corrected for holding, domicile and mix companies	in proportion of their potential tax yield in the total
Expenditure needs				
• Geo-topographic	compensate for excessive financial burdens on individual Cantons due to geo-topographical or socio-demographic factors	• Altitude • Remoteness • Smallness	• % pop living above 800 m. alt. • % of productive land > 1080 m. alt. • Population density • Pop in commune < 200 residents	0.33 0.33 0.16 0.16
• Socio-demographic		• Poverty • Old age • Foreigners	For 2/3 • % social aid to population • % of aged > 80 to pop • % of (qualified) foreigners to population	0.42 0.25 0.33
		Agglomeration and urban areas	For 1/3 • N of residents • Workplaces in proportion to surface • Workplace in proportion to population	0.35 0.38 0.27
Cohesion fund	Facilitate the transition from the old to the new system so that beneficiary cantons in the old system receive at least the same amount in the new system	Difference between the old and new system	Difference paid in proportion to available fund. If difference reduces: no over compensation. Reduced by 5% from the 8th year	

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3. *Funding Fiscal Equalization, Switzerland, 2014*

Confederation
(CHF for 2014)

2'220 millions CHF | **726 millions CHF** | **239 millions CHF**

Revenue equalization		Expenditure needs equalization		Cohesion fund	
vertical	horizontal	vertical		vertical	horizontal
3'728 millions	1'508 millions CHF	363 millions CHF	363 millions CHF	359 millions CHF	112 millions CHF
cantons with low financial capacity	cantons with high financial capacity	Topo-geographic	Socio-demographic	cantons in need of transitory adjustments	All cantons
AG, AI, AR, GR, SG, SO, TG, UR, VS, **BE, FR, GL, JU, LU, NE, OW**	BL, ZG, **BS, GE, NW, SH, SZ, TI, VD, ZH**	AI, AR, GR, SG, TG, VS,	BE, JU, NE, SO,	**BE, FR, GL, JU, LU, NE, OW**	All cantons

4. *Financial dependence of the cantons on federal transfers, 2012*

Canton	grants in aid	vertical equalization	tax sharing	total revenue	dependence of the cantons en %			
					grants	equalization	tax sharing	total
1	2	3	4	5	6 = 2/5	7= 3/5	8=4/5	9 = (2+3+4)/5
Zurich	1'256'552	78'843	815'060	11'955'556	10.5	0.7	6.8	18.0
Berne	1'422'731	666'733	373'147	10'106'978	14.1	6.6	3.7	24.4
Lucerne	493'027	223'612	148'471	2'935'305	16.8	7.6	5.1	29.5
Uri	81'710	55'942	20'756	354'679	23.0	15.8	5.9	44.7
Schwyz	153'449	6'330	149'762	1'083'442	14.2	0.6	13.8	28.6
Obwald	51'504	24'882	16'976	246'991	20.9	10.1	6.9	37.8
Nidwald	42'239	1'569	30'276	300'249	14.1	0.5	10.1	24.7
Glaris	44'452	47'131	16'802	299'290	14.9	15.7	5.6	36.2
Zoug	85'723	0	293'518	1'244'115	6.9	0.0	23.6	30.5
Fribourg	451'813	295'754	130'271	3'135'845	14.4	9.4	4.2	28.0
Soleure	229'920	107'015	94'573	1'824'065	12.6	5.9	5.2	23.7
Bâle-Ville	294'824	51'355	189'258	4'229'054	7.0	1.2	4.5	12.7
Bâle-Campagne	246'751	0	134'967	2'396'393	10.3	0.0	5.6	15.9
Schaffhouse	85'173	6'631	46'242	608'488	14.0	1.1	7.6	22.7
Appenzell Rh.-E.	65'057	43'295	31'735	400'293	16.3	10.8	7.9	35.0
Appenzell Rh.-I.	31'709	13'779	9'570	141'252	22.4	9.8	6.8	39.0
Saint-Gall	550'996	248'932	179'525	3'891'618	14.2	6.4	4.6	25.2
Grisons	531'755	222'621	156'156	2'191'731	24.3	10.2	7.1	41.5
Argovie	460'588	118'466	246'255	4'484'545	10.3	2.6	5.5	18.4
Thurgovie	130'857	270'229	94'295	1'692'478	7.7	16.0	5.6	29.3
Tessin	330'367	36'548	172'739	3'153'753	10.5	1.2	5.5	17.1
Vaud	865'830	63'941	441'920	8'974'205	9.6	0.7	4.9	15.3
Valais	310'559	343'302	154'128	2'925'367	10.6	11.7	5.3	27.6
Neuchâtel	228'495	118'898	102'637	2'024'922	11.3	5.9	5.1	22.2
Genève	495'769	105'337	436'200	8'719'819	5.7	1.2	5.0	11.9
Jura	151'485	89'787	31'086	815'600	18.6	11.0	3.8	33.4
Switzerland	**9'093'335**	**3'240'931**	**4'516'326**	**80'136'033**	**11.3**	**4.0**	**5.6**	**21.0**

vertical dependence of the cantons in % of their total revenues

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5 Revenue Equalization 1: indices of tax potential ITP (RTS)

Tax Potential per tax category, three years, in CH francs

1	2	3	4	5	6	7	8	9
Tax category	t 1	%	t 2	%	t 3	%	Σ for 3 years	Weight in %
Personal Wealth	62'521'270	0.07	67'539'271	0.08	71'158'327	0.08	201'218'868	0.08
Income	570'721'852	0.67	578'476'325	0.65	608'115'258	0.64	1'757'313'435	0.66
Corporate capital	16'269'988	0.02	16'851'972	0.02	19'833'669	0.02	52'955'630	0.02
Corporate profits	63'996'230	0.07	75'844'304	0.09	92'038'528	0.10	231'879'063	0.09
At source	15'405'077	0.02	15'740'519	0.02	17'159'515	0.02	48'305'111	0.02
Immovable property	91'125'839	0.11	93'525'158	0.11	97'229'679	0.10	281'880'675	0.11
Capital gain	12'580'159	0.01	13'814'803	0.02	15'368'429	0.02	41'763'391	0.02
Motor vehicle	21'095'918	0.02	22'361'449	0.03	22'841'261	0.02	66'298'628	0.02
Total	853'716'334	1.00	884'153'801	1.00	943'744'666	1.00	2'681'614'801	1.00

taxes considered for federal – cantonal revenue equalization

$$ITP_i = 100 \times \sum_{T=1}^{8} W_{T1} \times \frac{\sum_{y=t-2}^{t} \dfrac{R_{iTy}}{H_{iy}}}{\sum_{y=t-2}^{t} \dfrac{\sum_{j=1}^{N} R_{jT1y}}{\sum_{j=1}^{N} H_{jy}}}$$

$$W_T = \frac{\sum_{j=1}^{N} \sum_{y=t-2}^{t} R_{jTy}}{\sum_{T=1}^{8} \sum_{j=1}^{N} \sum_{y=t-2}^{t} R_{jTy}}$$
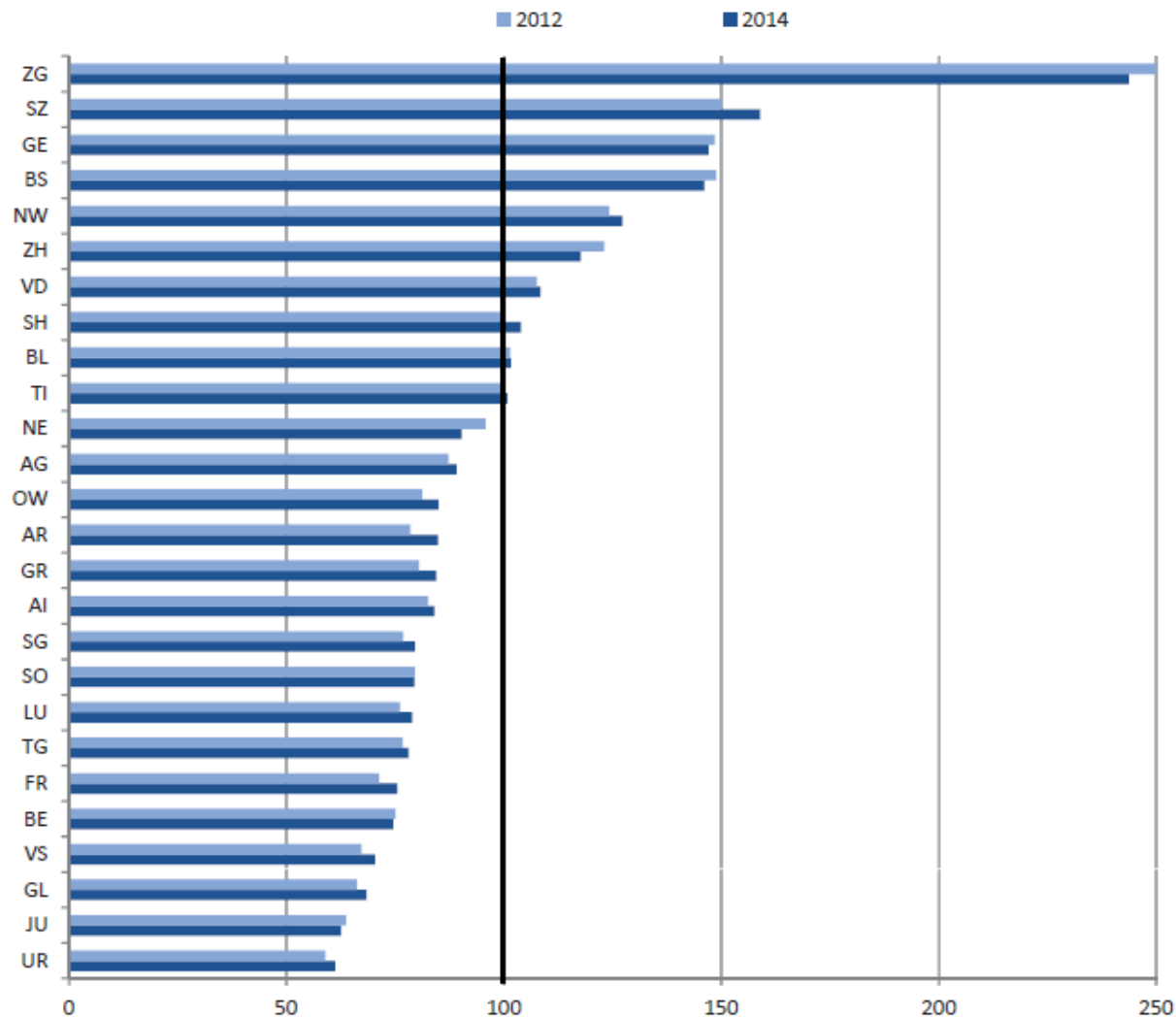
Indices of Tax Potential of the Cantons, 2012 and 2014

5   Revenue Equalization 2:   formulas

$$TC_i = \frac{\left(H_i \times \left[ITP_i - 100 \right]^{1+p}\right)}{\sum\limits_{i=1}^{N-m}\left(H_i \times \left[ITP_i - 100 \right]^{1+p}\right)} \times M$$

Contributing SNG

$$TB_i = \frac{\left(H_i \times \left[100 - ITP_i \right]^{1+p}\right)}{\sum\limits_{i=1}^{m}\left(H_i \times \left[100 - ITP_i \right]^{1+p}\right)} \times M$$

Beneficiary SNG

Before 2014
After

Moyenne suisse

85%, valeur-cible

85% equalization objective

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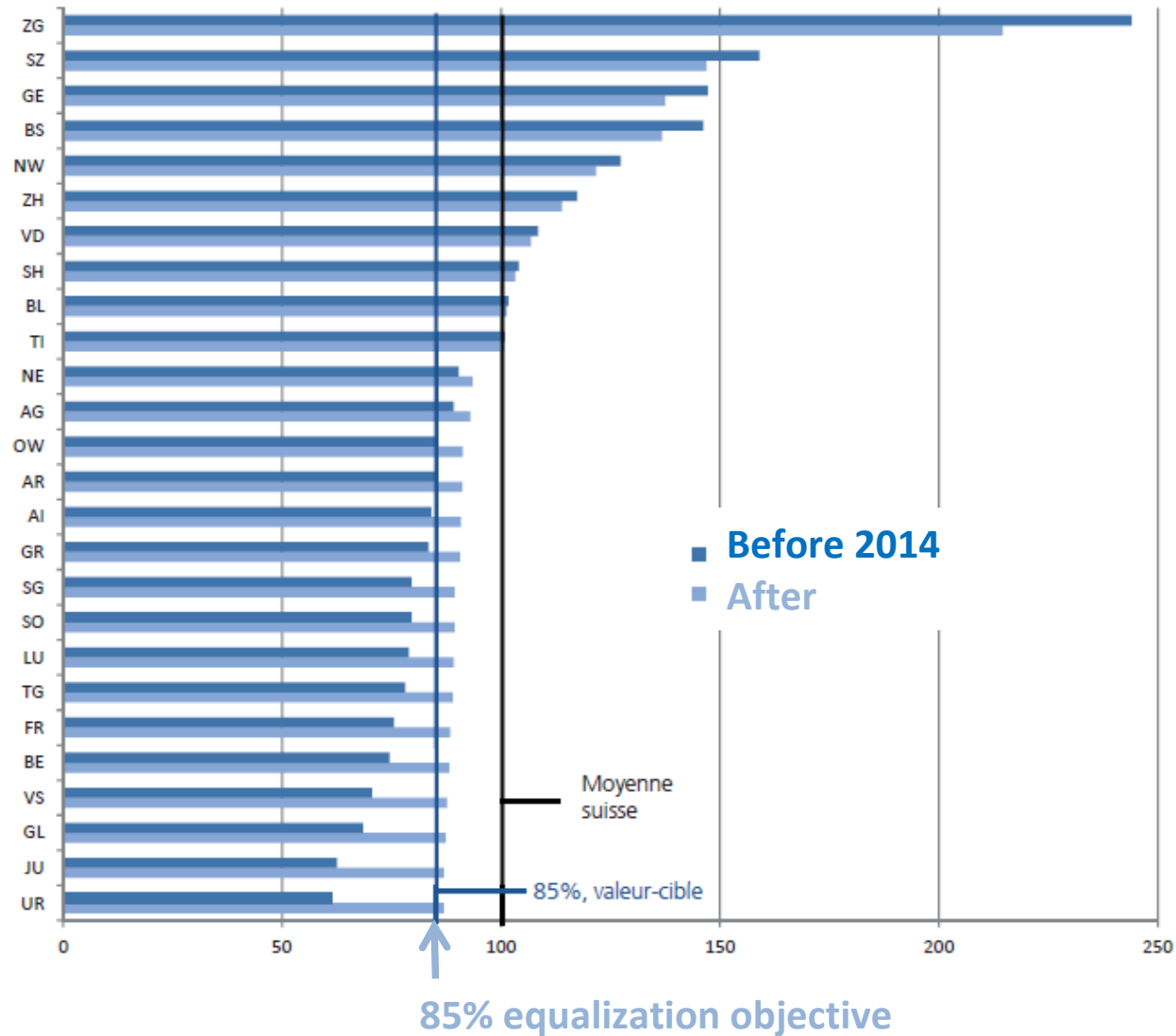
Cantonal – communal revenue equalization, canton Fribourg, 163 communes 2011-2012

before

after

3610

Per capita tax revenues (8 taxes)

Indices of tax potential of the 163 communes
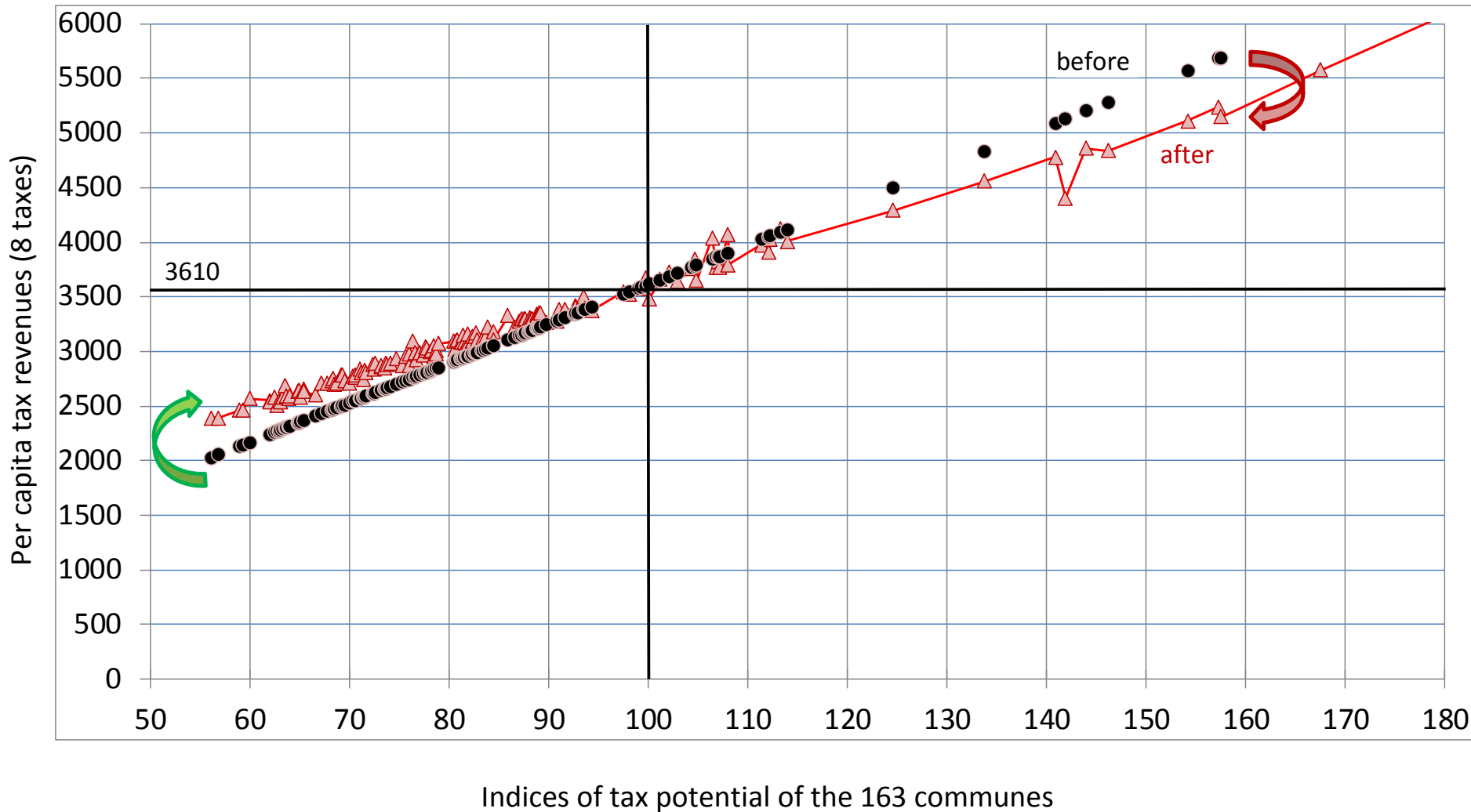
6 Expenditure needs equalization 1: federal-cantonal

Per capita equalization, 2014

Altitude Remoteness Smallness	% pop living above 800 m. alt. Population density
	% of productive land > 1080 m. alt. Pop in commune < 200 residents

Poverty Old age Foreigners for 2/3	% social aid to population % of aged > 80 to population
	% of (qualified) foreigners to population
Urban areas   for 1/3
Zürich, Lausanne, Basel-Town, Geneva	N of residents Workplaces in proportion to surface
Workplace in proportion to population

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6 Expenditure needs equalisation 2: cantonal - communal
Explicative variables in relation to local functions

Explicative variable	Functional expenditure needs to be explained					
	justice, police, security and public order,	compulsory school and special school services	care and residential facilities for elderly people	Individual social aid,	local roads and public transport	Σ
(a) POPD = Population density	4.3%			12.3%	4.3%	20.9%
(b) WP = Ratio of work places to population	4.3%				4.3%	8.6%
(c) POPGW = Population growth over 10 years	4.3%				4.3%	8.6%
(d) POP80 = Ratio of population aged 80 and over to population			14.1%			14.1%
(e) SCC = Ratio school-aged (4 to 14) children to population		47.7%				47.7 %
Total Represent the proportion of each domain in the expenditures total for the 5 functions on 3 years average	12.9%	47.7%	14.1%	12.3%	12.9%	100%

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Synthetic Indices of Needs SIN

$$SIN_i = \left(\frac{1}{3} \times \sum_{t=1}^{3} POPD_i^t \times K_1 \right) + \left(\frac{1}{3} \times \sum_{t=1}^{3} WP_i^t \times K_2 \right) + \left(POPGW_i \times K_3 \right) + \left(\frac{1}{3} \times \sum_{t=1}^{3} POP80_i^t \times K_4 \right) + \left(\frac{1}{3} \times \sum_{t=1}^{3} SCC_i^t \times K_5 \right)$$

Expenditure Needs Equalisation: distribution formula

The distribution formula is:
$$ENE_i = \frac{H_i \times SIN_i^{1+p}}{\sum_{j=1}^{N} H_j \times SIN_j^{1+p}} \times M$$

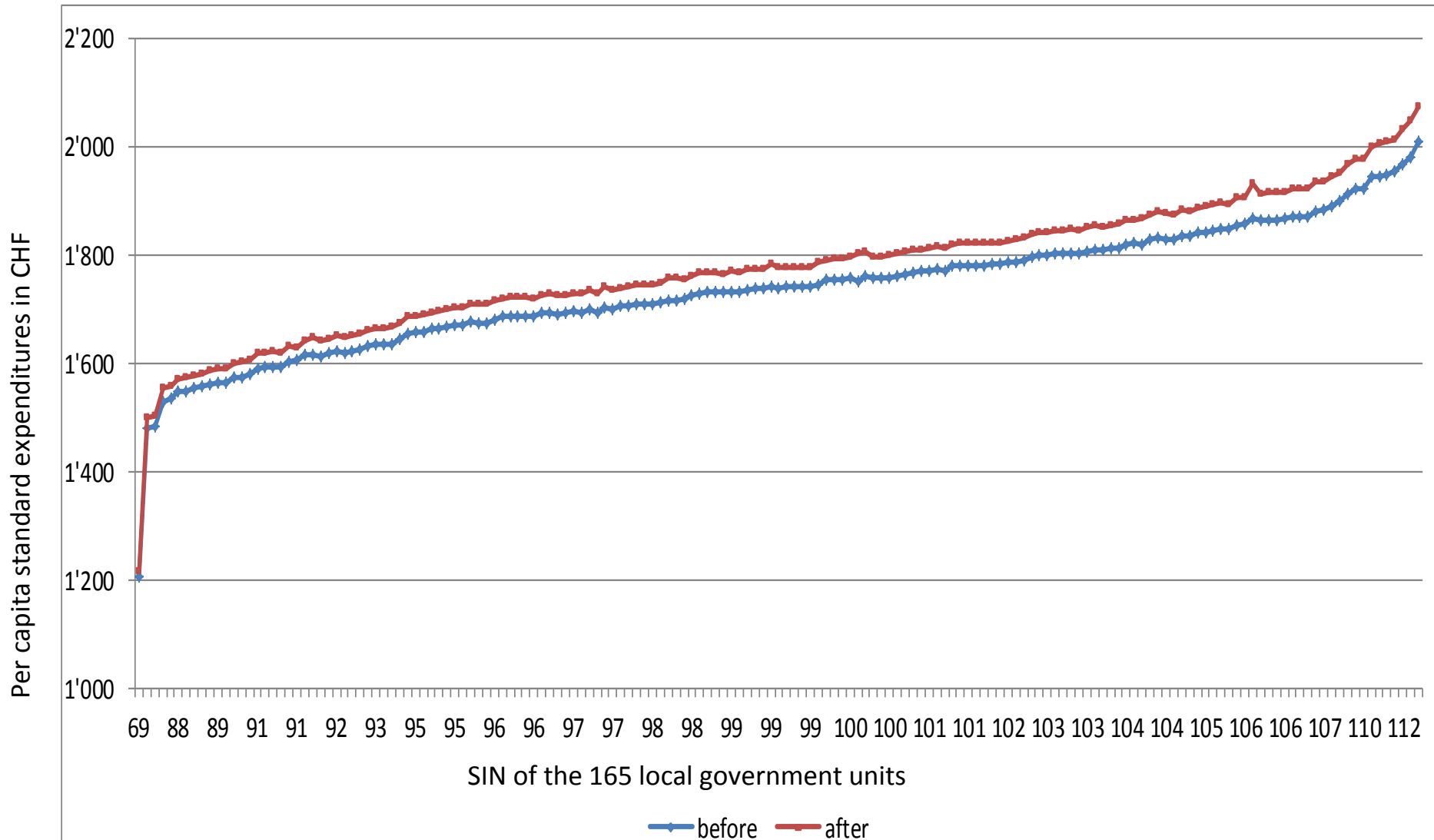ENE   expenditure needs equalization for commune "i";
H   resident population;
SIN   synthetic index of needs
1+p   solidarity exponent: if p=0. Then the exponent = 1, the formula is proportional; if p>1, the formula becomes progressive.
M   the amount at disposal for expenditure needs equalization.

Expenditure needs equalization, 2011-2013,

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7. Selected issues

Federal – cantonal, 2008, 26 cantons   Cantonal – communal, Fribourg 2011, 165 communes

A. Funding: how how much	F	Decided by Parliament, each four years. First time: budget neutrality (reassignment of certain function; suppression of additional equalizing % in grants; suppression of 13% FDT revenue sharing). For revenue equalization: adjusted %Δ 4 taxes and objective 85%
	C	for revenue equalization: 2,5% of the total tax potential of the communes for 8 taxes in the RTS design, fixed in the law for expenditure needs equalization: 50% of the amount for revenue equalization
B. Vertical / Horizontal	F	revenue equalization: V and H (proportion H: min 2/3 max 80% of V) expenditure needs equalization: V only cohesion fund: approx. V 2/3, H 1/3
	C	revenue equalization: H expenditure needs equalization: V
C. Data	F	revenue equalization: 4 tax sources RTS expenditure needs equalization: 10 independent variables (standard deviation, principal component analysis)
	C	revenue equalization: 8 tax sources RTS expenditure needs equalization: 5 explicative (independent) variables (using ln, standardised) to create a synthetic index of needs
D. Time lag	F	revenue equalization: average on 3 years, 4 years time lag (equalization 2015, reference years: 2009, 2010 and 2011 expenditure needs equalization: 2, 3 or 5 years depending on the variable; 3 years average when possible
	C	revenue equalization: average on 3 years, 3 years time lag (2010, 2011, 2012, calculated 2014, for 2015) expenditure needs equalization: 2, 3 or 5 years depending on the variable; 3 years average when possible

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Thanks you for your attention

Any further questions tomorrow: bernard.dafflon@unifr.ch

Full details on the equalization systems, including calculation and Excel matrices on:
www.efd.admin.ch > themes > politique budgétaire > péréquation (F, G, E summary)
www.fr.ch/Scom > péréquation financière (F, G)