LABORATOIRE AMÉNAGEMENT ÉCONOMIE TRANSPORTS | TRANSPORT URBAN PLANNING ECONOMICS LABORATORY

UNIVERSITÉ DE LYON

The reform of Passenger rail in Switzerland: more performance without competition

"Long-distance Passenger Transport: Geography, Infrastructure, Competition"

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University of Lyon - LAET

My experiences and research subjects

- Assistant Professor in Economics in Lyon University
- Research in LAET
  - Contracts economics: Europe Rail performances, Reforms and institutional patterns, Regulation design and pratices…
  - Spatial economics : regional governance of passengers transport policy, HSR equity…
- Expert
  - Transforum 7. Thematic group leader. HSR.
  - OECD- ITF. « Public Transport Market Organization and Innovation Working Group »
  - European Committee of Regions. Expert. Com2011(650). EU guidelines for development of RTE-T.
  - Florence School of Regulation. Regular participation.
  - Regional Councils (Regional PT contracts)…

Our 6 questions

- What about **Swiss Rail transport system**?
- What is this Swiss **Rail Reform design**?
- What are **the ouputs**? Their **impacts** on public finances and on travellers' welfare?
- How to **understand the dynamics** in the regional and local traveller railway transport reform in Switzerland?
- What **learning lessons** from Switzerland passenger railway reform for policy makers?
- **Next steps**… An ongoing Rail Reform…

1. The Swiss Railway system (1/3)

11. Switzerland: European champion of rail mobility

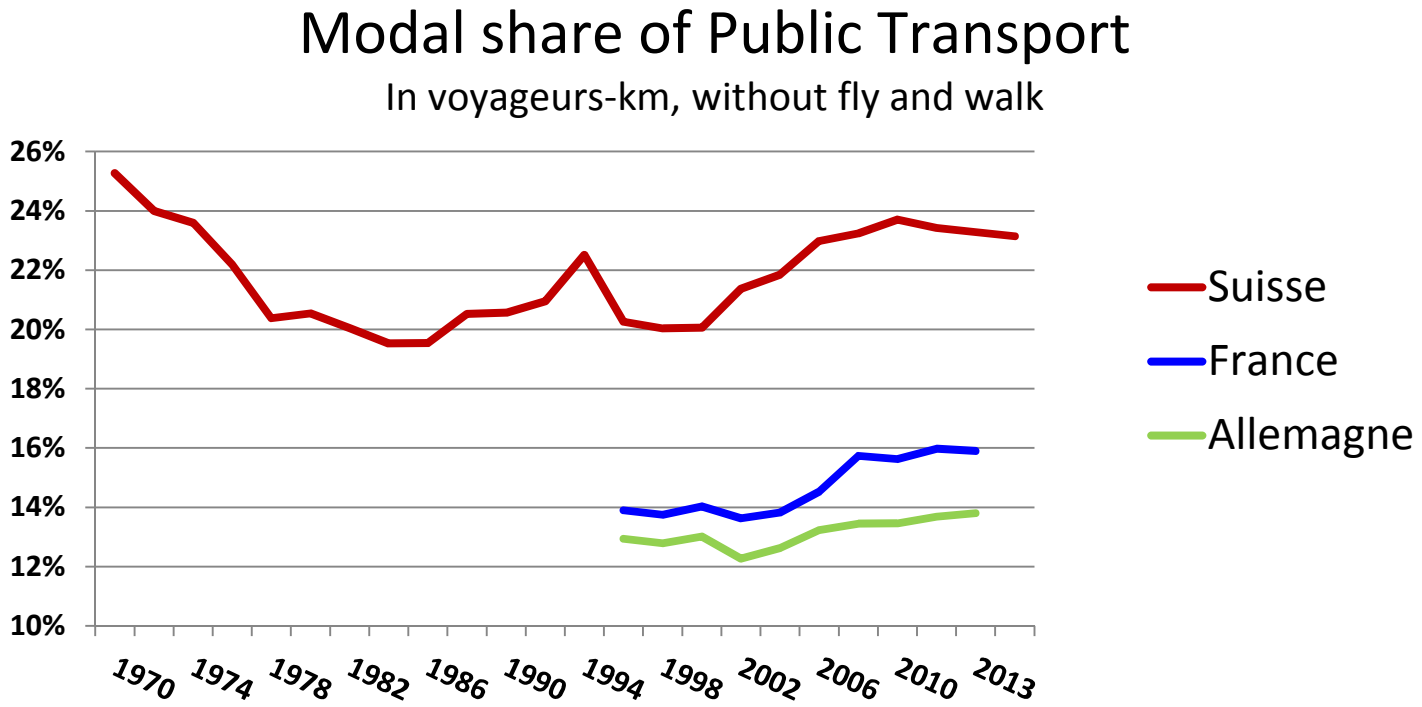
Tableau 1 : Comparaison internationale de fréquentation des réseaux ferroviaires de voyageurs en 2010

Pays	Nombre d'habitants (millions) (1)	Lignes exploitées (km) (2)	Trafic (millions de voyages) (3)	Trafic (millions de vok) (4)	Nombre de voyages en train par habitant (5) = (3)/(1)	Distance moyenne annuelle par habitant (6) = (4)/(1)	Parcours moyen d'un voyageur (Km) (7) = (4)/(3)
Allemagne	81,6	33 707	1 896,6	77, 2	23	946	41
Espagne (a)	47,1	13 835	569,5	22,3	12	473	39
France	63,0	29 444	1 077,4	84,9	17	1 347	79
Italie (b)	60,5	16 704	622,3	44, 5	11	736	66
Japon	127,4	20 140	8 819,0	244,6	69	1 920	28
Pays-Bas	16,6	2 886	324,0	15,3	19	925	47
Suède	9,4	9 957	37,8	6,8	4	721	179
Suisse (c)	7,8	3 475	325,8	17,7	42	2 269	54

Source: DESMARIS (2014). *Cahiers Scientifiques du Transport,* 65.

1. The Swiss Railway system (2/3)

12. Switzerland: European champion of Public Transport mobility



From C. Desmaris, C. Schaaffkamp, A. Wettig (2016). « Transport public suisse : un exemple à suivre ? », *Ville Rail & Transports*, Février .

1. The Swiss Railway system (3/3)

13. A long-term multi-operators rail system
    - About sixty local companies (24% pass, 40% lines, 60% stations)
        - BLS SA (canton Bern, 7 cantons)
        - SBB: an integrating role for all TPs.
    - Integrated operators and mutual use of networks
14. A very high level of quality of service
    - Interconnection of modes and tariff integration (“Service direct”)
    - High density offer, synchronization and simultaneous correspondence, high frequency, punctuality
15. An acceptable price for the regular traveler
    - Attractive pricing (½ and general subscription)
16. A high public cost!
    - 508€/hab *versus* 197€ / hab in France (*2,6 / France)

2. The Swiss Railway Reform
A « Swiss model » vs « UE model » (1/3)

First step: a regional rail reform (1995/96)

- Regionalization of the public transport supply
  - Cantons as full responsible (decision and funding) of regional transport services.
  - FOT have to co-sign the agreements.
- « Net-cost » contract: very incentive
  - Ordering principle
  - Unplanned deficits will no longer be covered by the State
  - Short term contract (Two years)
- End of monopoly incumbent operator for regional traffic
  - Possibility of tendering for rail regional transport services
  - But cantonal authorities do not solicit it (different for road services).

« Regionalisation paradox »: more public transport coordination is necessary (FOT)

2. The Swiss Railway Reform
A « Swiss model » vs « UE model » (2/3)

Second step: a new Regulatory framework very near European pattern (1998/99)

- Compliance with European Directive 91-440
  - Vertical separation (holding)
  - Open access (in law for passenger)
  - Rail business model type "corporatization"
- A significantly renewed SBB organization and its business model (01/01/1999)
  - Independence from the political and administrative powers.
    - But special status of a public limited company
    - But Quadri-annual contract
  - Confederation has accepted to erase SBB debts
  - Activities have been divided into four distinct branches: Passenger Traffic, Cargo, Infrastructure and Real Estate
  - Sovereignty tasks have been transferred from SBB to the FOT

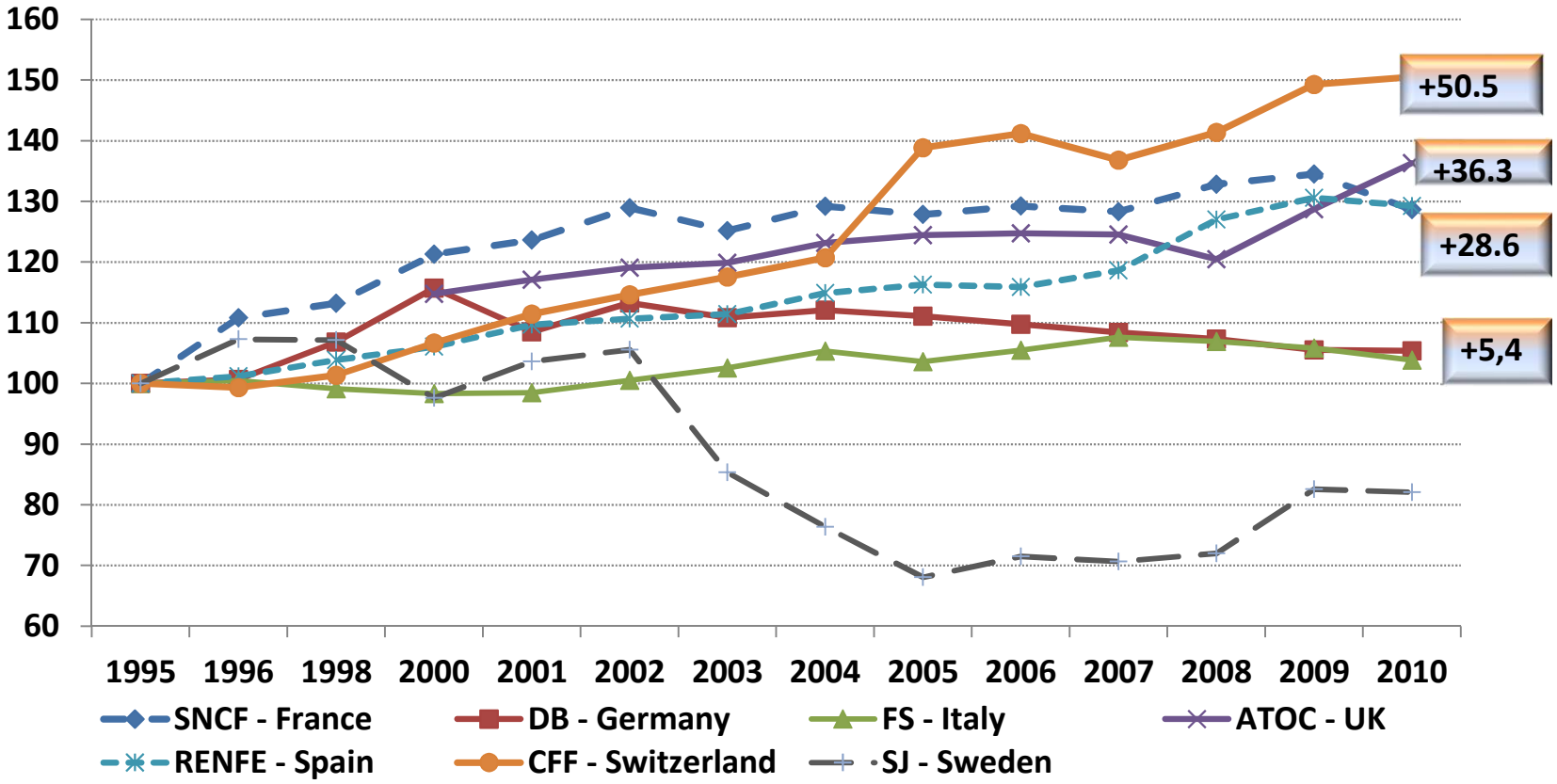
2. The Swiss Railway Reform
A « Swiss model » vs « UE model » (3/3)

Third step: a highly controversial and unfulfilled reform (since 2009)

- Three particularly controversial points:
  - Share of tendering procedures in rail passenger transport
  - Respective share of the Confederation and the Cantons for the financing of infrastructure
  - Optimal architecture for the infrastructure management - Swiss rail system is vertically integrated (as Japan)
- Swiss railway pattern reform: so specific!
  - Pragmatic reform. “Step by step”. No real market competition…
  - Ambitious (conflictual) objectives: quality *vs* productivity and rentability ; more rail share *vs* more efficiency in using publics funds
  - Competition in law. But specific public governance in reality (incentives, cooperation, contractualisation)

3. Real output: significant performance gains

1. Travellers. Large development of passenger supply – SBB Train-km



3. Real output: significant performance gains

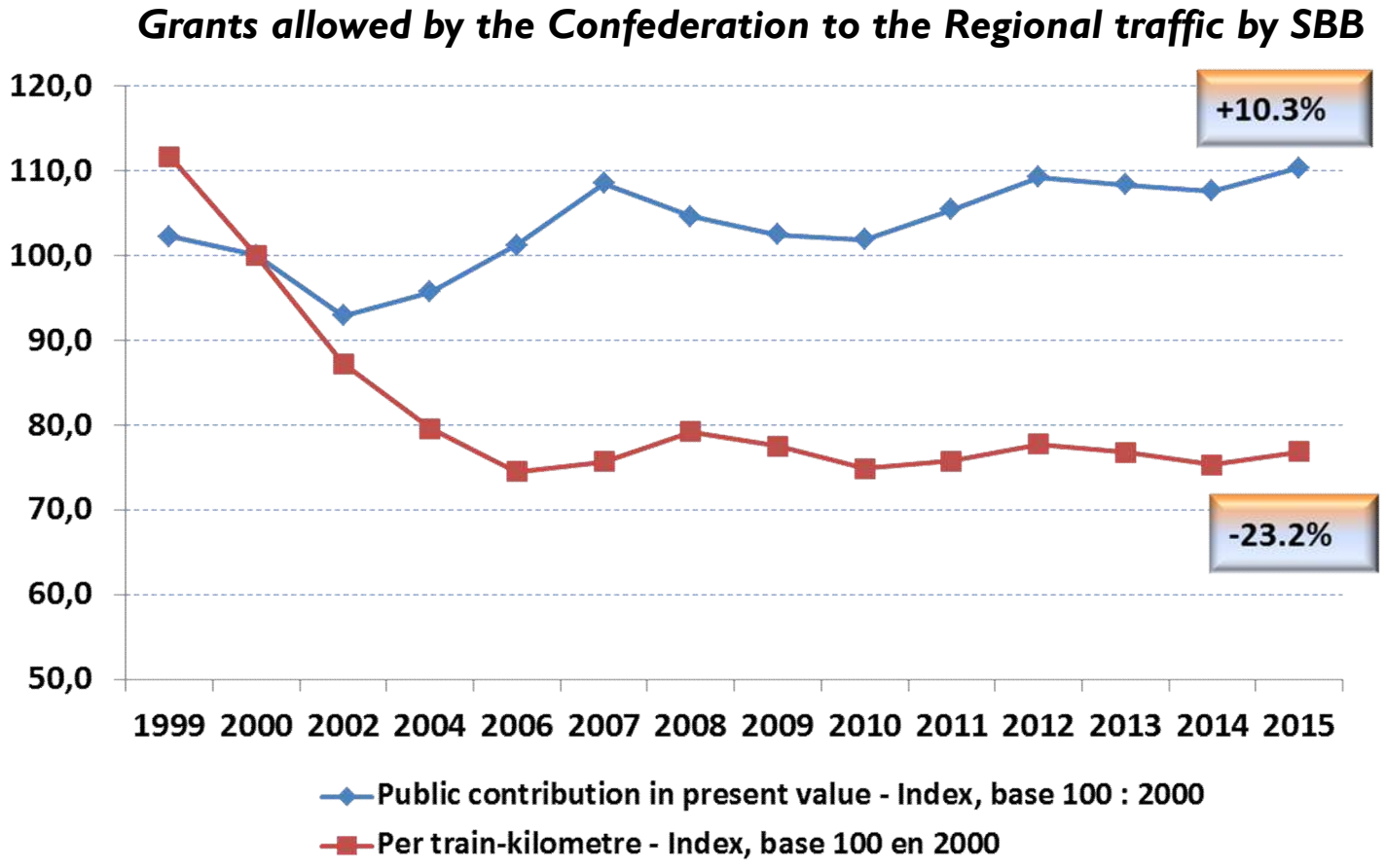
1. Travellers. Rail 2000: more faster train, more frequency and more distance in train

		1994	2000	2005	2010	*Var %*
Distances per day in km	Car	21.3	23.6	23.7	23.8	*11.7*
	Train	**4.2**	**4.7**	**5.6**	**7.1**	***+69.0***
	All	31.3	35	35.2	36.7	*17.3*
Travel times per day in minutes	Car	32	35.3	34.6	33.2	*3.8*
	Train	**4.6**	**4.9**	**5.2**	**6.4**	***39.1***
	All	77.5	84.5	88.4	83.4	*7.6*
Speeds in km/hour	Car	37	35.5	36.2	38.6	*4.3*
	Train	**49.8**	**53.5**	**60.9**	**61.4**	***+23.3***

Adapted from OFS (2012). Mobility in Switzerland - Results of the micro-census Mobility and Transports 2010.

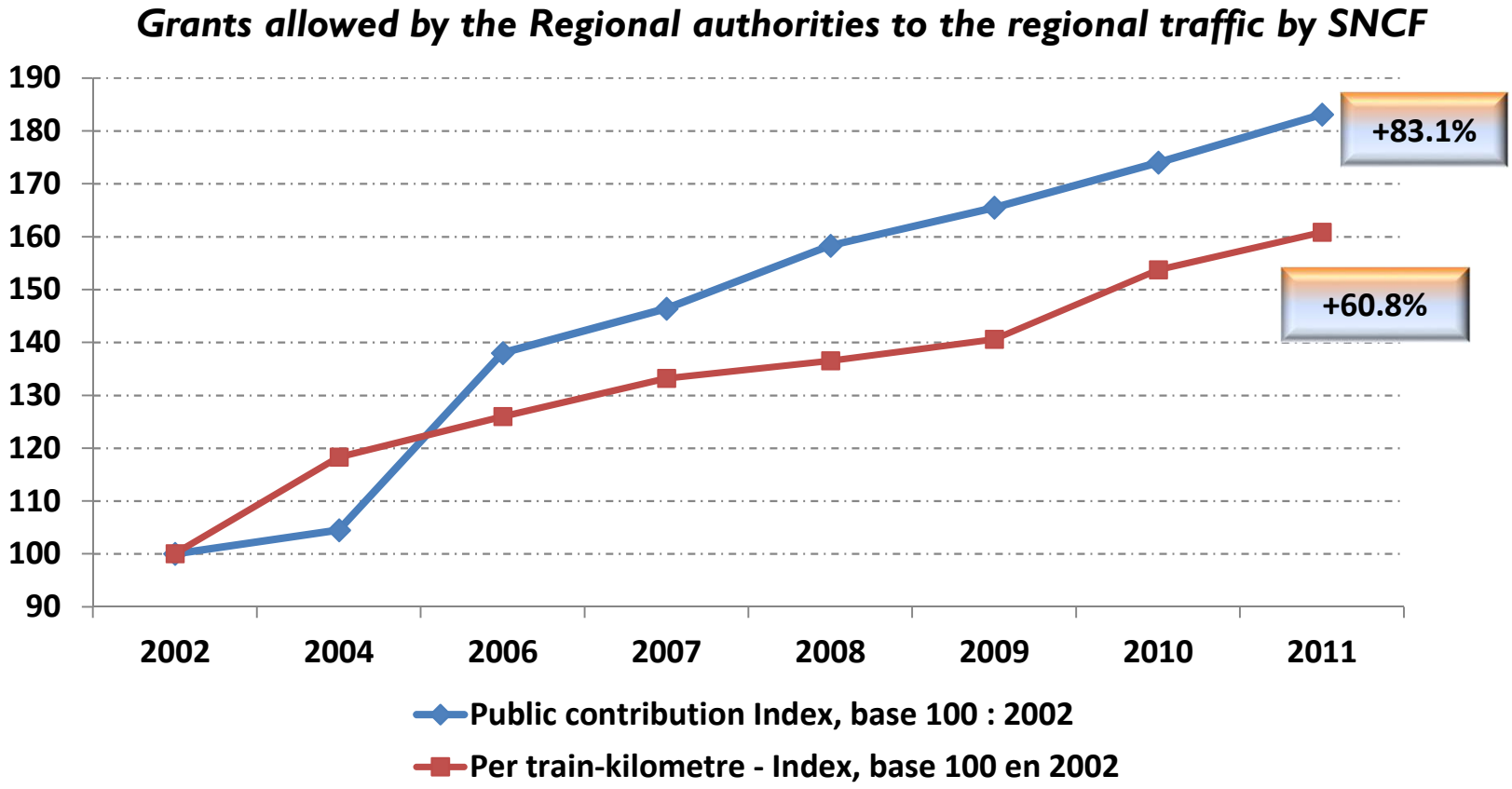
3. Real output: significant performance gains

2. Taxpayers. An inverse of the public compensation trend (1/3)



3. Real output: significant performance gains

2. Taxpayers. An inverse of the public compensation trend (2/3)



3. Real output: significant performance gains

2. Taxpayers. More efficiency in the use of public funds (3/3)

Public compensation paid to the SBB for Regional passenger transport

	1993	2000	2002	2004	2006	2008	2010	2013	2014	2015
In millions of current value CHF	725	546	507	522	552	571	556	591	587	602
Index, basis 100 in 2000	-	**100,0**	92,9	95,7	101,2	104,6	101,9	108,3	107,5	**110,4**
Per train-km. In current value CHF	**N.D.**	**10,2**	**8,9**	**8,1**	**7,6**	**8,1**	**7,6**	**7,8**	**7,7**	**7,8**

(a) Adapted from SBB Financial statements.

4. The 3 keys of the Swiss Rail Reform success

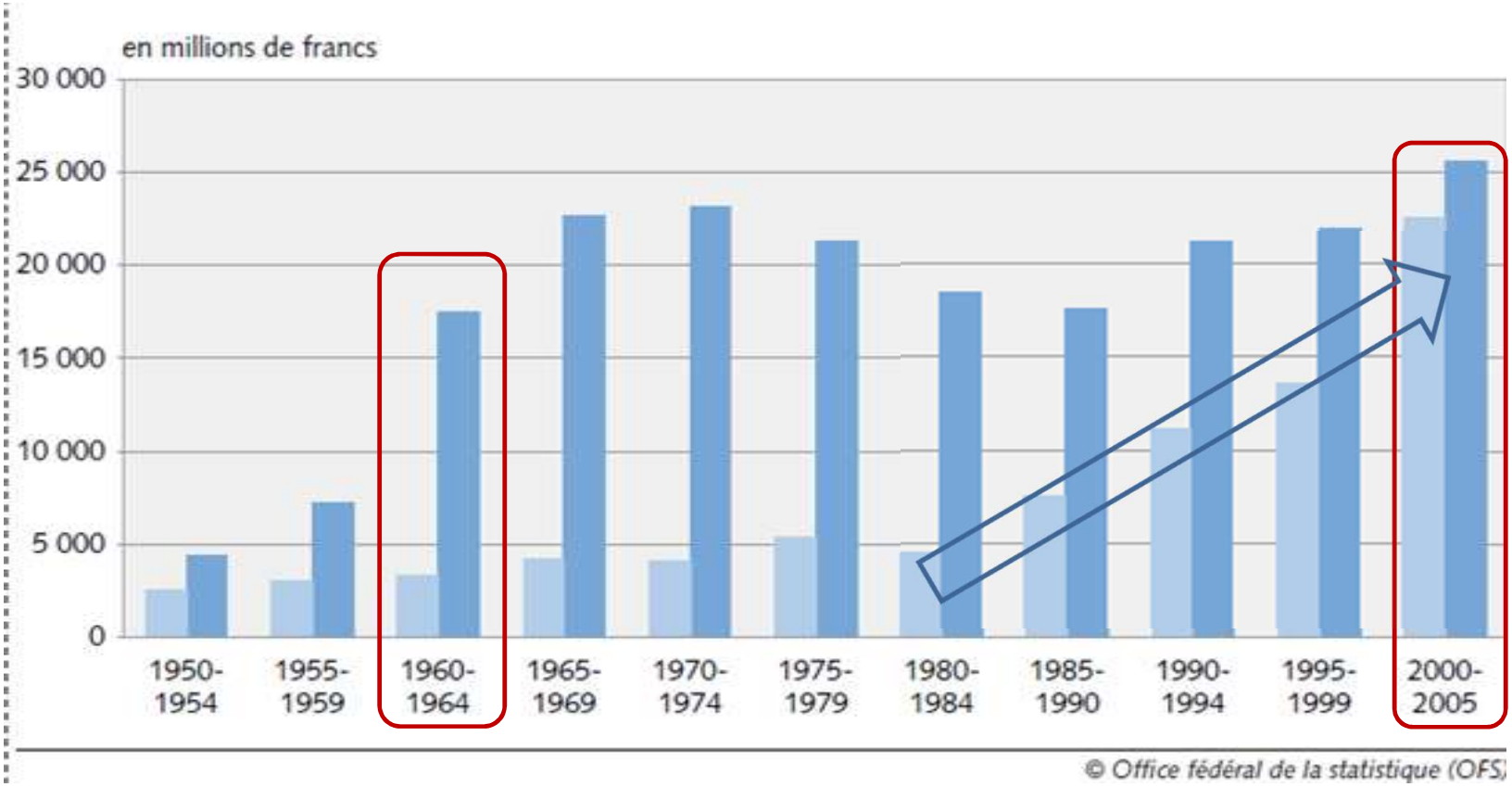
Key 1. A very responsible Public governance! (1/5)

- A collective choice in favor of a long-term rail infrastructure investment planning
  - Major rail invest programs: Rail 2000 (1994-2004); ZEB(2004-22); NRLA
- Put a cap on public operating contributions in favor of rail infrastructure funding
- A larger involvement of the Regional Authorities in decision-making and funding
- A really incentive and empowering SBB corporate governance
  - Clear, precise, demanding and strictly controlled strategic objectives
  - An absolute financial constraint imposed to the Swiss Railways by the Confederation -stable level of the public operating funds allocated to SBB

4. The 3 keys of the Swiss Rail Reform success

Key 1. A very responsible public governance (2/5)

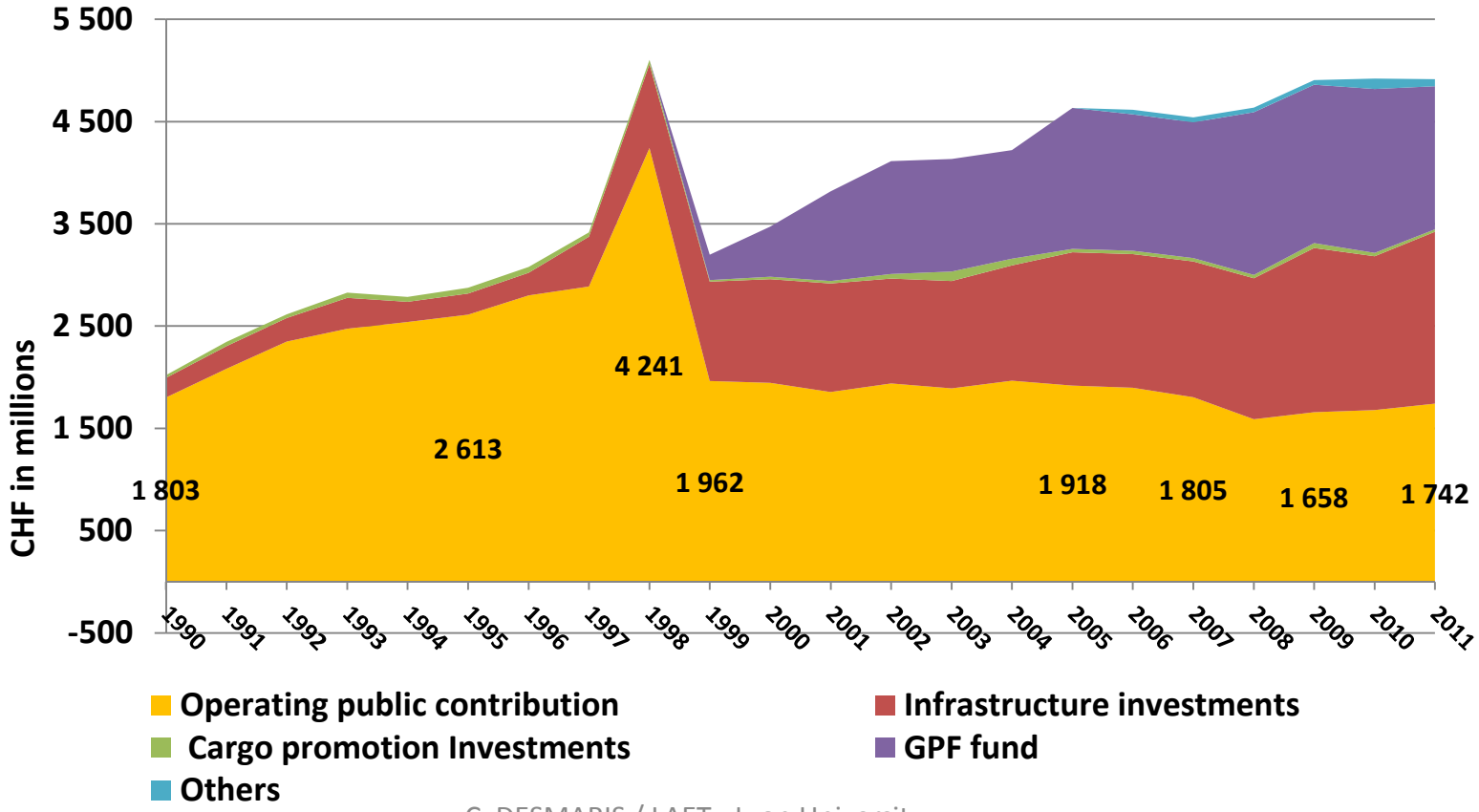
- ***A) A collective choice in favor of a long-term rail infrastructure investment planning***



4. The keys of the Swiss Rail Reform success

Key 1. A very responsable public governance (3/5)

- ***B) Put a cap on public operating contributions in favor of rail infrastructure funding***



4. The keys of the Swiss Rail Reform success

Key 1. A very responsable public governance (4/5)

- ***C) A larger involvement of the Regional Authorities in decision-making and funding***

	2003	2010	Structure 2003 (%)	Structure 2010 (%)	Variation	Variation en %
Confederation	*570.2*	545.4	**65.1**	**51.4**	- 24.8	**-4.3**
Cantons	*298.0*	513.7	**34.0**	**48.4**	**+ 215.7**	**+72.4**
Municipalities	7.3	1.9	**0.8**	**0.2**	- 5.4	**-74.0**
Total of public contributions (millions CHF)	***875.5***	***1 061.0***	***100.0***	***100.0***	***+ 185.5***	***+21.2***

4. The keys of the Swiss Rail Reform success

Key 1. A very responsable public governance (5/5)

D) A really incentive and empowering SBB corporate governance

An absolute financial constraint imposed to the Swiss Railways by the Confederation

Agreements	Total amount (CHF million)	Annual average (CHF million)	Index base 100 : annual average 1999-2002
1999-2002	5 840	1 460	100.0
2003-2007	6 020 (5 602) (a)	1 505 (1 400) (a)	103.1
2007-2010	5 880	1 470	100.7
2011-2012	3 322	1 661	113.8
2013-2016	6 624	1 656	113.4

(a) After reduction due to savings programs.

4. The keys of the Swiss Rail Reform success

Key 2. An historical operator capable of great increasing productivity

- ***A) Significant gains in labour productivity***

	1980	1995	2000	2005	2010	2015	Variation en %	
							1980-1995	**1995-2015**
Passenger-kilometres In million (1)	9 167	11 712	12 835	13 830	17 513	18 560	**+27.8**	**+58,5**
Tonne-kilometres In million (2)	7 220	8 156	10 658	8 571	13 111	15 065	**+13.0**	**+84,7**
Staff (3)	38 367	33 529	28 272	25 943	25 356	27 574	**-12.6**	**-17,8**
Labor productivity In traffic unit million (1 + 2) / (3)	**0.43**	**0.59**	**0.83**	**0.86**	**1.21**	**1,22**	**+38.7**	**+105,8**

Our calculations from Historical statistics of railways *(UIC)*.

4. The keys of the Swiss Rail Reform success

Key 2. An historical operator abble of managerial innovations

- ***B) Increasing the railway company earnings***

(CHF million)	2002	2003	2004	2005	2006	2008	2011
Passengers	113.7	93.4	152.2	78.6	193.7	276.8	213.9
Freight	-96.1	-33.1	-2.8	-165.7	-37.3	-29.9	-45.9
Infrastructure	106.5	0.3	43.7	17.4	91.8	30.4	72.4
Real Estate	-	*-4.6*	*15.2*	*21.0*	*27.8*	*3.3*	*2.4 (a)*
Real Estate before internal balances	**-**	***152.1***	***184.6***	***219.6***	***229.8***	***291.6***	***182.5***
Group-level units	-136.4	-34.3	-164.2	-123.2	-20.5	68.8	96
Eliminations	-	3.2	-1.4	5.6	4	-4.6	0
Total SBB	**-12.0**	**24.9**	**42.6**	**-166.3**	**259.4**	**345.0**	**338.7**

4. The keys of the Swiss Rail Reform success

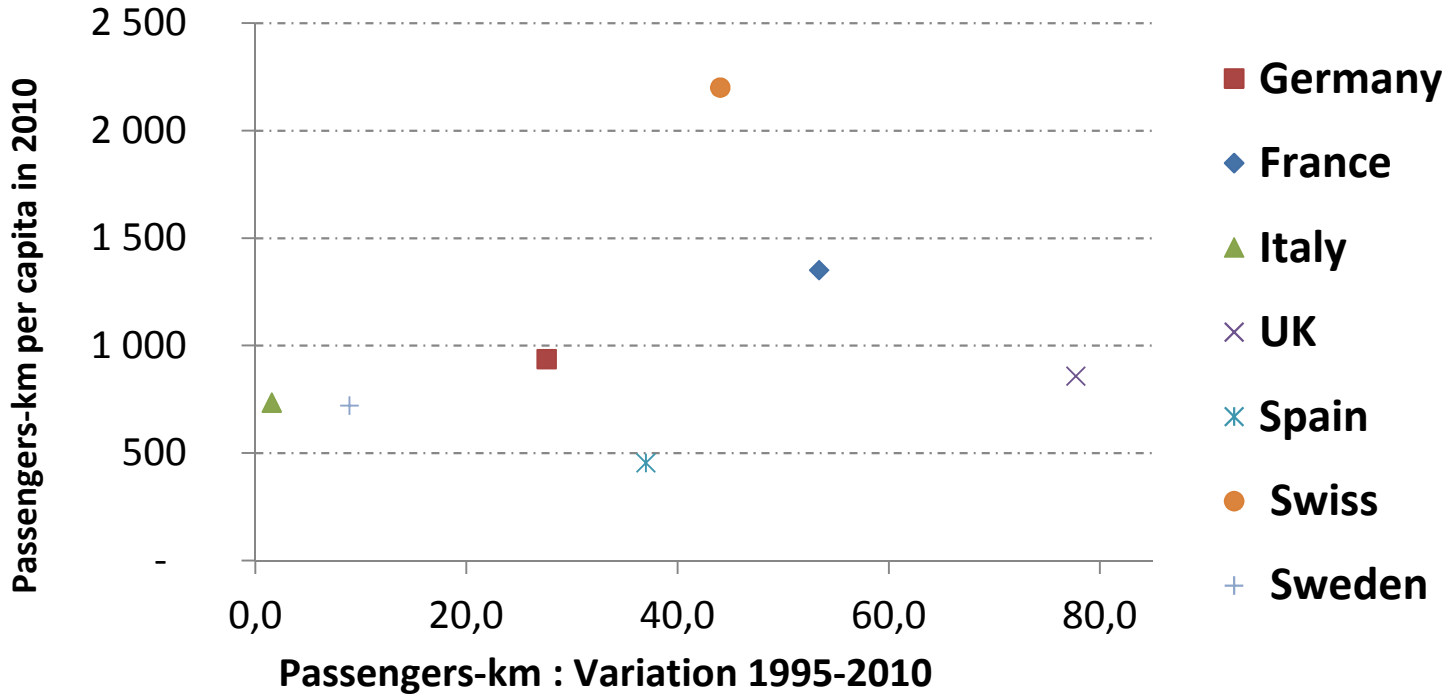
Key 3. More numerous clients and more satisfied passengers and citizens (1/6)

- The country where the use of the train stay the most common worldwide (with Japan).
  - High quality services for high traveler satisfaction for the public transport clients
  - Increasing rail customer loyalty: higher subscribers and subscriber rates (50% of adults)
  - A constant strong growth in the Swiss rail and TP passenger traffic
- Strong political support from consumers and citizens
  - Each of the major stages in Swiss transport policy is submitted to a "popular vote"

4. The keys of the Swiss Rail Reform success

Key 3. More numerous and more satisfied passengers (2/6)

- ***A) The country where the use of the train is the most common worldwide***



4. The keys of the Swiss Rail Reform success

Key 3. More numerous and more satisfied passengers (3/6)

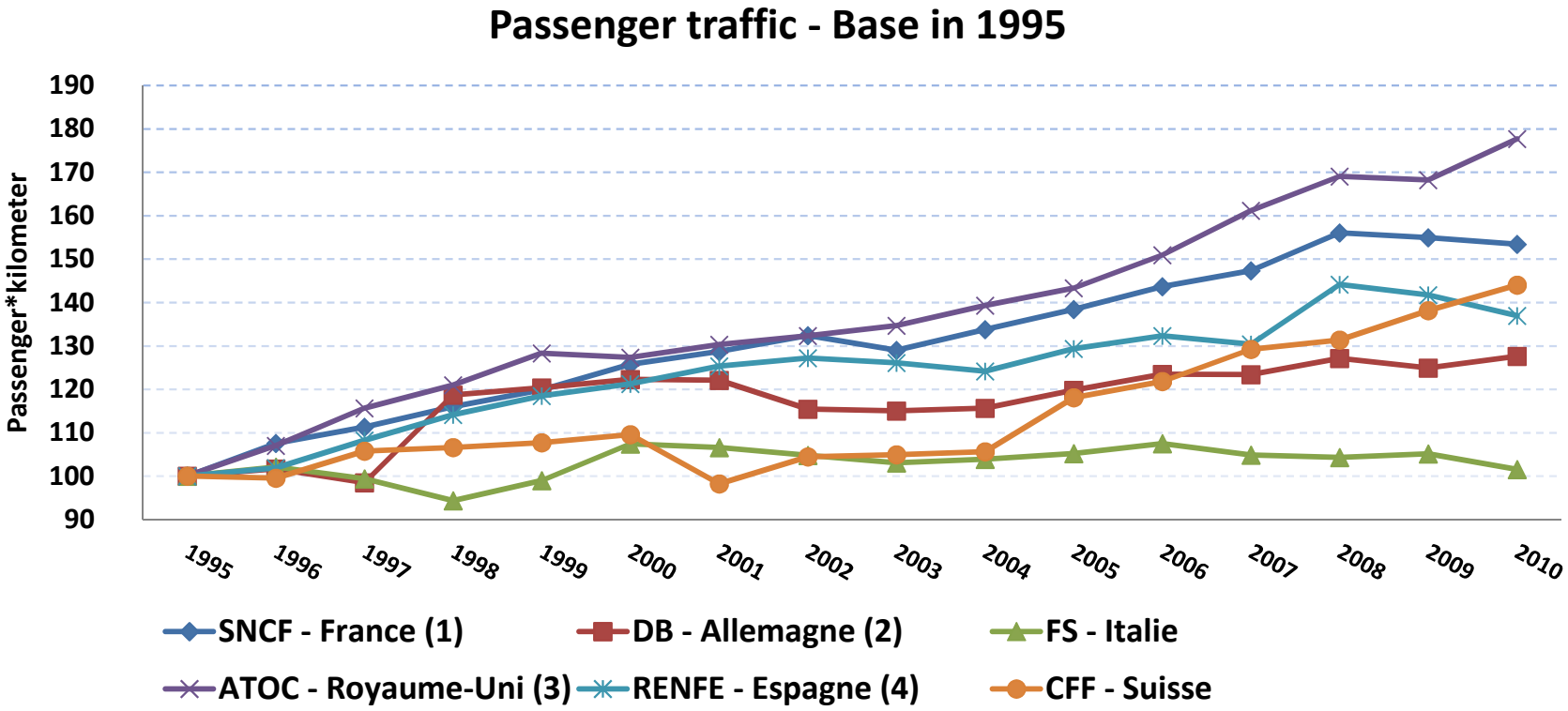
- ***A) The country where the use of the train is the most common worldwide***

	Passagers-Km (in billion)			Passagers-Km per capita		
	1995	**2010**	**Variation (%)**	**1995**	**2010**	**Variation (%)**
France	55.3	84.9	+53.4	956	1 352	+41.3
Germany	60.5	77.2	+27.6	739	938	+27.0
Italy	43.9	44.5	+1.5	770	735	-4.5
UK	30.0	53.3	+77.7	517	859	+66.1
Spain	15.3	21.0	+37.0	388	455	+17.2
Switzerland	11.7	16.9	**+44.0**	1 669	**2 201**	**+31.9**

4. The keys of the Swiss Rail Reform success

Key 3. More numerous and more satisfied passengers (5/6)

- ***B) A constant strong growth in the Swiss rail passenger traffic***



C. DESMARIS (2015) from UE (2014), Transport in figures.

4. The keys of the Swiss Rail Reform success

Key 3. More numerous and more satisfied passengers (4/6)

- ***B) A constant strong growth in the Swiss passenger traffic***

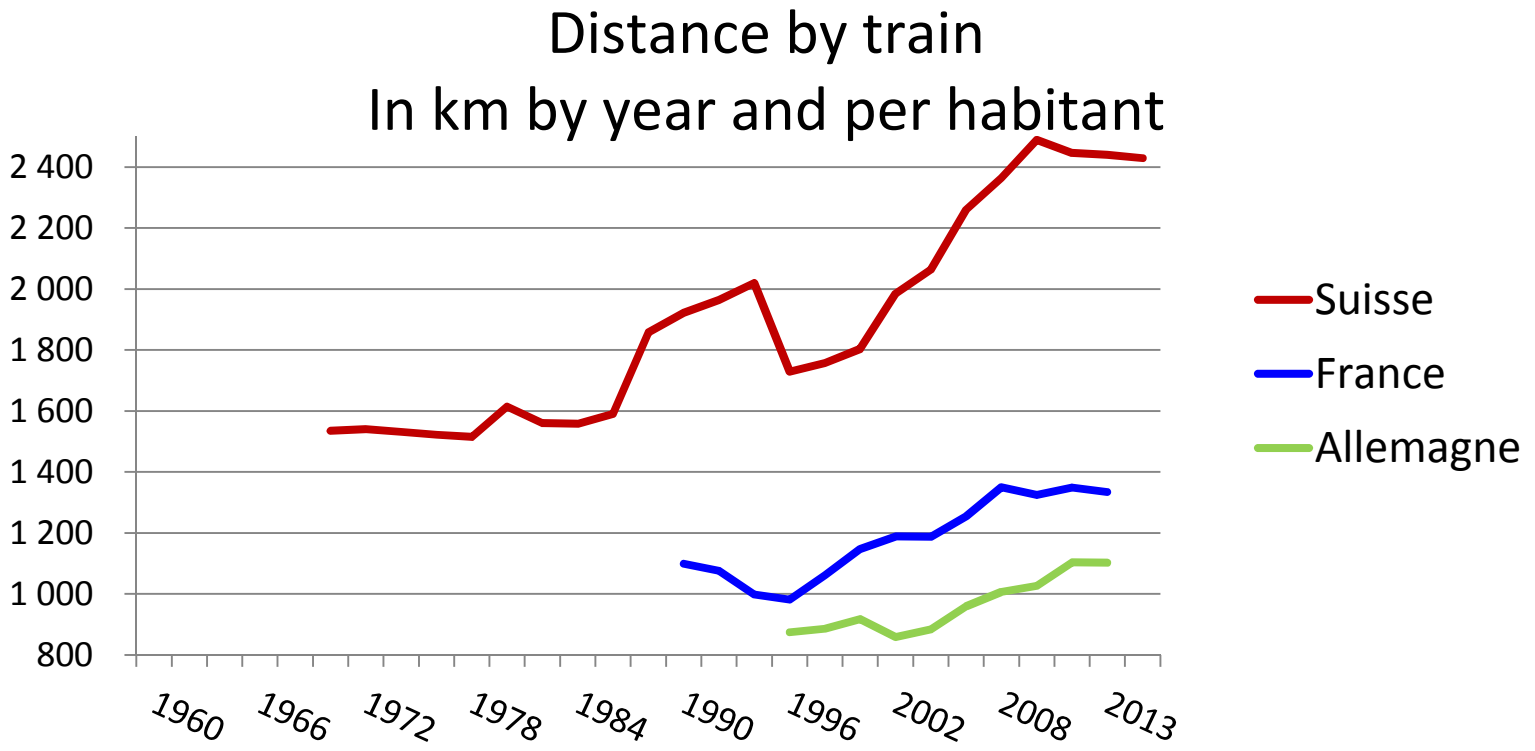
	1980	1995	2011	Variation (%) 1980-1995 (a)	Variation (%) 1995-2011 (a)
Passenger-kilometres (in billion)	9.2	11.7	17.7	+27.2 (+1.5)	+51.3 **(+2.6)**
Passengers (in million)	216.3	253.2	356.6	+17.1 (+1.0)	+40.8 **(+2.2)**
Trains-km (in billion)	66.9	90.4	136.0	+35.1 (+1.9)	+50.4 **(+2.6)**

(a) In parentheses average annual variation

4. The keys of the Swiss Rail Reform success

Key 3. More numerous and more satisfied passengers (4/6)

- ***B) A constant strong growth in the Swiss rail passenger traffic***

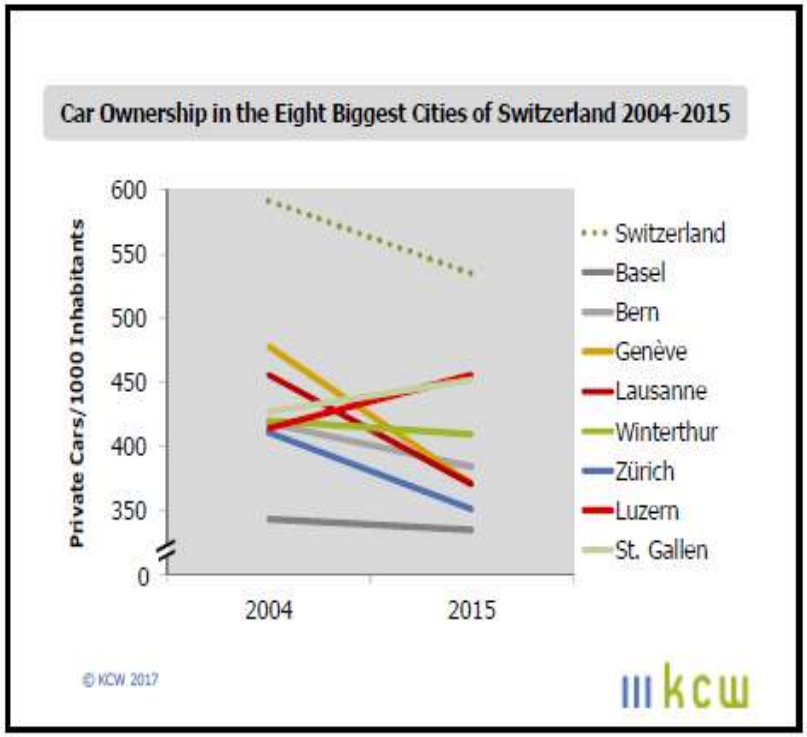


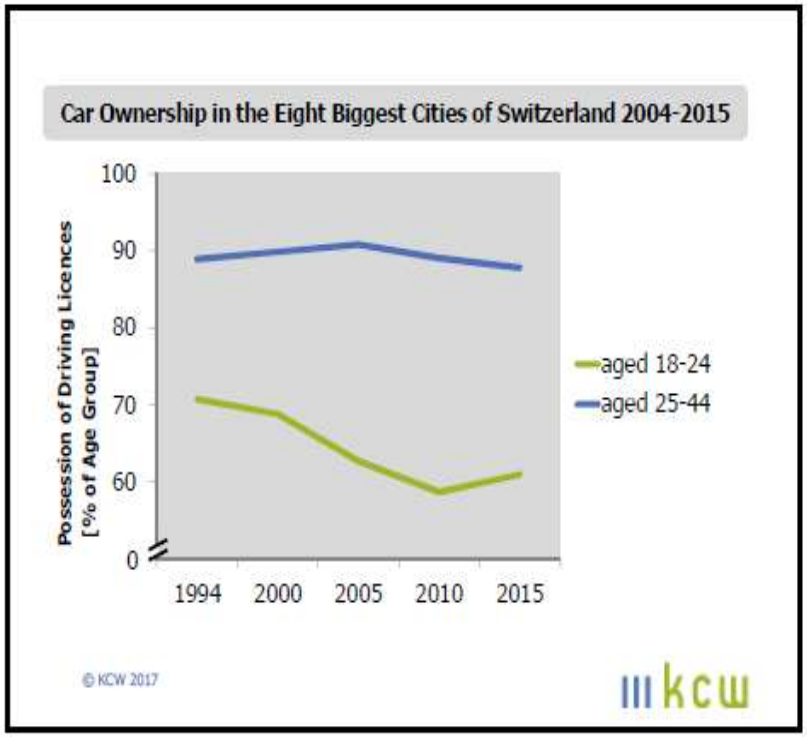
From C. Desmaris, C. Schaaffkamp, A. Wettig (2016). « Transport public suisse : un exemple à suivre ? » Ville Rail & Transports, Février .

4. The keys of the Swiss Rail Reform success

Key 3. Strong support from consumers and citizens (6/6)

– Rail2000: Major factor in the renewal of Swiss public transport





From C. Schaaffkamp (2017). « Do direct awards lead to better public transport? » Thredbo15. Stockholm.

5. Learning lessons from the Swiss rail Reform

- Our main findings: rail (1/2) performance gains without market competition

1. A very specific public governance: an hybrid system…
   - A '**performance constraint**' rather than market competition (No tendering on passenger traffic). Different from EU rail Reform model.
   - **Competition by comparison** (benchmark / by ideas) with **FOT regulation** and large **citizens' involvement.**
   - Mix between **actors cooperation**, LT **investment planning**, **contract** and indirect competition.
2. … coupled with success and great users value in the stated objectives
   - Best efficiency in the use of public funds
   - Best rail modal share
   - More services for the rail clients
   - The pride of a public company staff

5. Learning lessons from the Swiss rail Reform (2/2)

3. Swiss rail "excellence" involves specific costs
   - **Financial**: high effort of Taxpayers, huge and constant rail investment
   - **Political**: large support of Public Authorities in favor of a very integrated public transport system
   - **Managerial**: need of strategic management of Incumbent operator
4. The sustainability of this dynamic of success is still a question:
   - Limits of the strategy of systematic savings: disinvestment and more difficult social access
   - Rail 2000: increase in traffic *vs* more infrastructure maintenance costs
   - Recent slight increase in public regional contribution

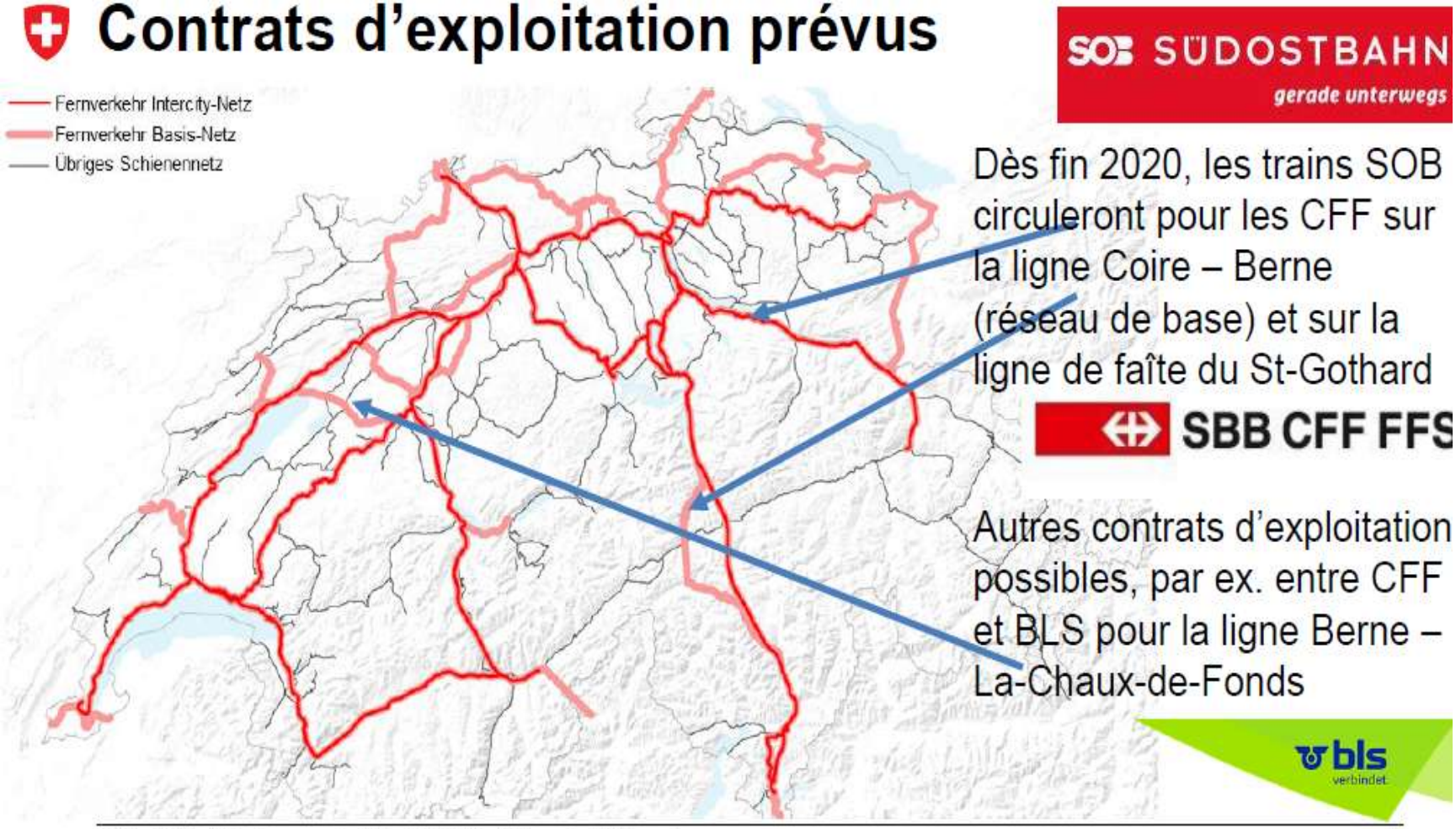
6. Railway reforms underway. Develop concessions for the long distance supply (1/3)

- A legal basis: **the "SBB + model“**
  - Federal Council: 2003 Decision
  - FOT: Responsible for contracts tendering
  - Swiss PT success: Competition “by Ideas” between firms + Cooperation between firms / OFT
- The proposed modifications: obtain **the best possible offers** by **a “competition of ideas”**
  - Sustaining the **oligopolistic model** of SBB
  - **Take advantage of concession renewals** to gain profits for travelers and taxpayers
  - **Agenda 2018**: end of consultation 23/05/2018; OFT decision (15-30/06/2018)

6. Railway reforms underway. Develop concessions for the long distance supply (2/3)

- FOT: A transparent and global methodology
  - Clear criteria for evaluation of operators' offers (FOT Guide)
    - FOT goals: Swiss territory project + Minimum quality prescription (Material, accompaniment, stops, bike ...); Offer Gains for Travelers and Lower Taxpayer Costs
    - A gradual and planned approach: To perpetuate the oligopolistic model of SBB and to enjoy competition through ideas!
  - A rule of profitability assigned to rail operators
    - < 8% Turnover
    - Otherwise, lower passenger fares or higher tolls infrastructure
  - Long-term strategic tolls rules
    - 13,5% Turnover LD ; Revisable every 5 years

6. Railway reforms underway. Develop concessions for the long distance supply (3/3)



As last conclusion: 2018 SBB media announcement...

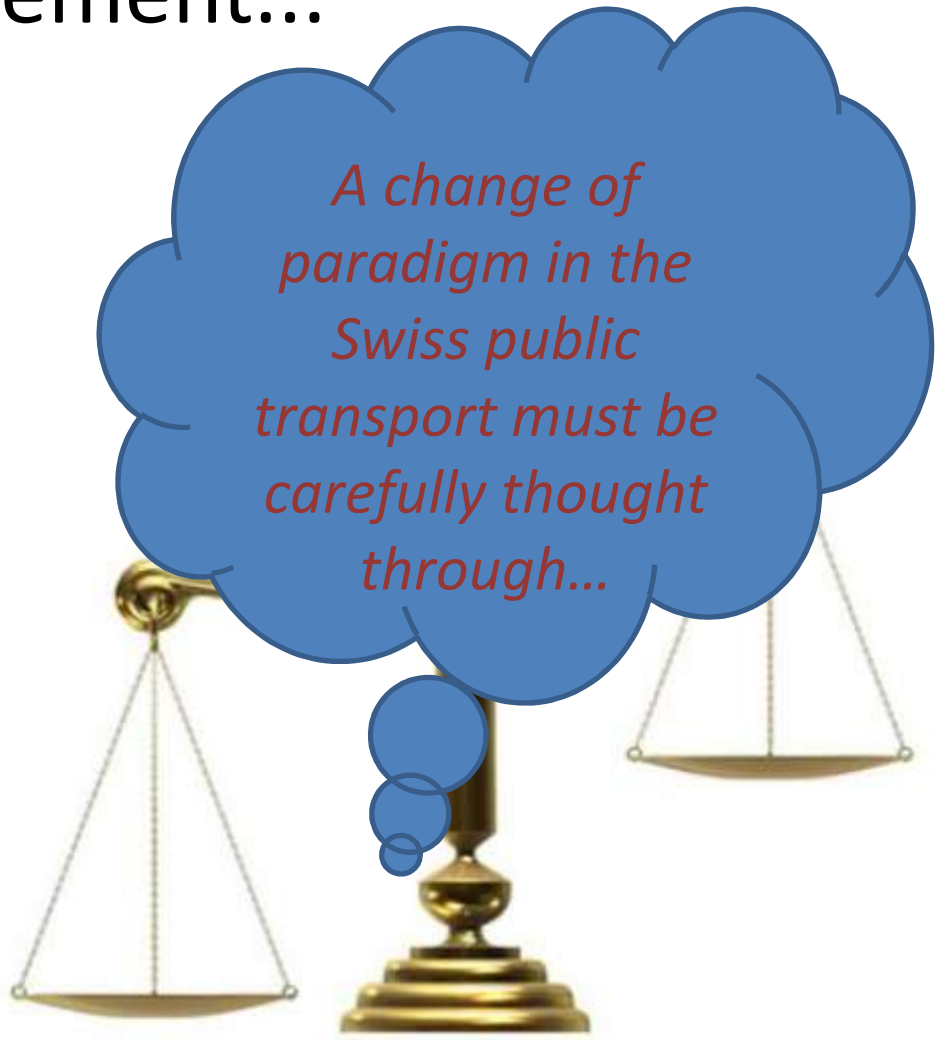


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Table I – Grants allowed by the Confederation to the regional traffic in France

	2002	2004	2006	2007	2008	2009	2010	2011
Million € in present values	1 405	1 468	1 764	2 056	2 224	2 325	2 444	2 572
Index, base 100 : 2002	100.0	104.5	138.0	146.4	158.3	165.5	174.0	183.1
€ per train-kilometre	9.45	11.18	11.91	12.59	12.90	13.29	14.52	15.19
Per train-kilometre - Index, base 100 en 2002	100.0	118.3	126.0	133.2	136.5	140.6	153.7	160.8

Table II – European Railway companies performance

	Supply 2015 in Train-kilometer (Million) (a)	Change since 1995 (%)	Traffic 2015 in Passenger-kilometer (Billion) (b)	Change since 1995 (%)	Passenger-kilometer / Train-kilometer in 2015
SNCF (France)	442 620	43,8	83 425	50,8	18,8
DB (Germany)	787 556	23,0	79 655	31,6	10,1
FS (Italy)	284 483	11,1	39 290	-10,4	13,8
ATOC (UK) (a)	528 580	42,0	62 296	107,7	11,8
RENFE (Spain)	170 579	40,8	24 825	62,1	14,6
SBB (Swiss)	145 400	60,9	18 560	58,5	12,8
Source: Our calculations, from UIC. (a) Passenger trains; Table 41. (b) Domestic and international traffic; Table 51.					
(a) 2014.					