

Challenges in Austrian educational governance revisited: re-thinking the basic structures

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Veröffentlichungsversion / Published Version

Arbeitspapier / working paper

Empfohlene Zitierung / Suggested Citation:

Lassnigg, L., & Vogtenhuber, S. (2015). *Challenges in Austrian educational governance revisited: re-thinking the basic structures*. (Reihe Soziologie / Institut für Höhere Studien, Abt. Soziologie, 107). Institut für Höhere Studien (IHS), Wien. <https://nbn-resolving.org/urn:nbn:de:0168-ssoar-437109>

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Reihe Soziologie
Sociological Series

**Challenges in Austrian
educational governance
revisited**
Re-thinking the basic structures

Lorenz Lassnigg, Stefan Vogtenhuber



INSTITUT FÜR HÖHERE STUDIEN
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Vienna

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May 2015

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Founded in 1963 by two prominent Austrians living in exile – the sociologist Paul F. Lazarsfeld and the economist Oskar Morgenstern – with the financial support from the Ford Foundation, the Austrian Federal Ministry of Education, and the City of Vienna, the Institute for Advanced Studies (IHS) is the first institution for postgraduate education and research in economics and the social sciences in Austria. The **Sociological Series** presents research done at the Department of Sociology and aims to share “work in progress” in a timely way before formal publication. As usual, authors bear full responsibility for the content of their contributions.

Das Institut für Höhere Studien (IHS) wurde im Jahr 1963 von zwei prominenten Exilösterreichern – dem Soziologen Paul F. Lazarsfeld und dem Ökonomen Oskar Morgenstern – mit Hilfe der Ford-Stiftung, des Österreichischen Bundesministeriums für Unterricht und der Stadt Wien gegründet und ist somit die erste nachuniversitäre Lehr- und Forschungsstätte für die Sozial- und Wirtschaftswissenschaften in Österreich. Die **Reihe Soziologie** bietet Einblick in die Forschungsarbeit der Abteilung für Soziologie und verfolgt das Ziel, abteilungsinterne Diskussionsbeiträge einer breiteren fachinternen Öffentlichkeit zugänglich zu machen. Die inhaltliche Verantwortung für die veröffentlichten Beiträge liegt bei den Autoren und Autorinnen.

Abstract

This paper provides an update and a reflection on an earlier study commissioned by the Ministry of education about the challenges posed to educational governance in Austria. It starts with three contradictory observations, first a considerable gap between high expenditure and weak results in international Assessments, second the prevailing perception in Austrian education policy discourses that despite the high expenditure resources would lack in relation to demands, and third a widespread consensus about serious deficiencies of the governance structure, being too complex and giving schools not enough responsibilities and room for manoeuvre. The paper tries to explain these contradictory issues by taking up the argument of the earlier study, and to deepen the argument by additional illustrations and analyses. A path for improvement is sketched that would need quite far reaching changes in the existing governance structures.

Zusammenfassung

Dieses Papier reflektiert und ergänzt eine frühere Studie im Auftrag des Bildungsministeriums über die Verwaltung des österreichischen Schulwesens. Ausgangspunkt sind drei widersprüchliche Beobachtungen, erstens die Kluft zwischen hohen Ausgaben und schwachen Leistungen in den internationalen Testungen, zweitens die verbreitete Wahrnehmung in den politischen Diskursen, dass trotz der hohen Ausgaben zu wenig Ressourcen verfügbar wären, und drittens ein breiter Konsens über Defizite des Governance-Systems mit zu hoher Komplexität und zu wenig Verantwortung und Spielraum bei den Schulen. Es wird versucht auf Basis der Ergebnisse und Argumentationen der früheren Studie diese Widersprüche aufzuklären und Entwicklungsmöglichkeiten auszuloten.

Keywords

educational governance, bureaucracy, federalism, professionalism, industrial relations, school autonomy

Schlagwörter

Governance, Bürokratie, Föderalismus, Professionalismus, Arbeitsbeziehungen, Schulautonomie

Acknowledgment

This study provides an update and a reflection of Lorenz Lassnigg, Bernhard Felderer, Iain Paterson, Hermann Kuschej, Nikolaus Graf (2007) *Ökonomische Bewertung der Struktur und Effizienz des österreichischen Bildungswesens und seiner Verwaltung*. IHS research report commissioned by the Federal Ministry for Education, Arts and Culture [https://www.bmbf.gv.at/schulen/sb/ihs_oekbew_15515.pdf?4dzi3h]. It refines the basic framework of the earlier study, communicates the results to a wider audience, and looks at the Austrian system using lenses from the OECD project about Governing Complex Education Systems (GCES <http://www.oecd.org/edu/cei/governingcomplexeducationssystemsgces.htm>) which provides very valuable insights for the understanding of the complex Austrian structures.

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Contextual elements of Austrian educational governance

The basic structures of Austrian education have survived quite fundamental regime changes since the Habsburg Monarchy through the 1st Republic in the interwar period, followed by two fascist regimes, into the 2nd Republic. These changes have brought a legacy of conflicting positions (between the state and the Catholic Church about the role of religion, between the Social Democrats and the Christian parties about equity, between the City of Vienna and the rural provinces about the structure of schools and the methodology of education, between the employers and the employees about the structure and methodology of apprenticeship and vocational education), which have resulted in a complex school structure and a complex governance system tightly embedded in the basic structures of the polity and its administrative apparatus. On this background the Austrian education system comprises several quite exceptional elements or positioning compared to other countries:

- high degree of public financing, but much non-financial private contributions through clear half-day schooling and need of home support for learning, deficiencies of child care infrastructures, etc.
- very early tracking between an academic track (AHS Allgemeinbildende Höhere Schule) and a common track (Hauptschule, now Neue Mittelschule) at age 10
- early starting (at age 15 within compulsory school) and very widespread vocational education (VET) at upper secondary level (one of the highest participation rates in VET)
- comprising a strong VET fulltime school system and a strong traditional apprenticeship system based on enterprise training and part time schooling
- a quite strong path for extended education careers through the common school (requiring good achievement results) and vocational education up to higher education, thus creating an elitist upward path through the academic track and a separate competitive vocational upward track
- a relative small, but expanding higher education sector still dominated by the university, and lately complemented by a small and slowly growing Polytechnic sector (FH Fachhochschule)
- a system of teacher education divided by separate institutions for compulsory (and vocational) teachers (PH Pädagogische Hochschule under the Ministry of Education, being not really part of higher education) and programmes at universities for teachers at academic schools

- a very fragmented and scattered patchwork of a governance system with the school part being governed (i) by a mix of a state bureaucracy divided to the federal level (Bund) and the provincial level (Länder) with a kind of political federalism that gives quite high responsibilities to the Länder (and those concerning infrastructure to the communes-Gemeinden) in the sector of compulsory schools, (ii) the apprenticeship system is governed by the social partners and the Ministry of Economic Affairs (enterprise part) and the Ministry of Education and the Länder (school part), (iii) pre-primary education is governed by the Communes and the Länder. This system creates within the fulltime school sector two basic categories of schools, federal schools (Bundesschulen) comprising the whole of academic schools (at lower and upper secondary level) and upper secondary vocational schools (part of which are also classified tertiary more recently), and Länder schools comprising the primary school and the general lower secondary school (Hauptschule und Neue Mittelschule). As a result, the lower secondary compulsory school is divided to the two different categories, without a clear coordination or even oversight between them.

Key traditions and persisting conflicts

Key traditions, cultures and values in Austrian education can be identified by the following aspects: first, despite the formal separation of state and religion a Roman-Catholic tradition based on the historic victory of the counter-reformation against the enlightenment is still prevalent, which includes the concordat with the Vatican about the support of Catholic private schools, meaning that their teachers are paid publicly; second, the tradition of apprenticeship in vocational education, related to the sector of small enterprises and their strong interest representation through the chambers and reflected in the Trade Regulation ('Gewerbeordnung'), has been successfully carried on through the various ages and regimes and is still lively today; third the perception and treatment of education as a strongly politicised and conflictual issue prevails in particular since the interwar period (often referred to a dictum by the baroque emperor Maria Theresia 'die Schule ist ein Politicum'), and mainly reflected in a conflict between Elite-reproduction and Democratisation that leads to a trapped dilemma between holding to the traditional 10-18years Gymnasium and the attempts to alleviate the problems of very early tracking at age 10; fourth that tradition of public servants as a significant social category related to the tradition of the corporatist welfare state mainly established in the difficult period immediately after the first world war and the dissolution of the Habsburg Empire. These old historic traditions still lead to quite severe und seemingly unresolvable concrete issues today.

First the old trade-off between achievement and equality/equity is still guiding the political developments and discourses, in particular concerning the early tracking at the lower secondary level; the – partly hostile – disputes related to this topic are reaching deep into the everyday practices, and are binding much energy which could be otherwise used for improvement; the strong cultural traditions also preclude to some extent the use of research

and evidence for improvement, as ideological beliefs remain stronger than their questioning by evidence.

Second the strong emphasis on vocational education, which includes not only apprenticeship, but also a strong full-time vocational school sector, seems to compensate quite substantially for the structural threats to equity in compulsory schooling; this sector is also somehow separate from the mainstream political conflicts and protected by social partnership.

The public servant tradition seems to guide much of the basic logic of the discourses around financing education. The virtual combination of this tradition with corporatism and the tight embeddedness of the interest representation into the governance of the public sector constitutes to some extent taboos concerning the professionalization of the teachers. The strong logic of Trade Unionism, and the negotiations about every small point of interest representation prevails over professional organisation and issues of professional development (this can be seen by looking at the publication organs for teachers, which include to a high degree the complicated points of negotiations, which are difficult to understand from outside).

Because of the politicised notion of education in Austria there is also a strong tendency with the reporting of the media, however, to blow air into each small oven of conflict, thus creating a field of discontent, and strengthening the conflictual climate, and increasing unrealistic expectations, instead of backing the discourses by increasing information and knowledge.

Distributional federalism as political context

Austrian Federalism has a specific shape which might be called 'distributional federalism', as most of the taxes (about 90%) are collected at the federal level, and then redistributed to the provinces and the communes partly according to specified responsibilities, or through a basic negotiated redistribution mechanism ('Finanzausgleich') which currently concerns a remarkable sum of about EURO 80 billion (the agreements according to this redistribution constitute a kind of 'automatic' entitlement of the Länder and Gemeinden to receive a certain amount of the federal taxes, currently 21% for Länder and 12% for Gemeinden).¹ Because of the complex allocation of responsibilities among the different levels to education these structures of Austrian federalism are a very important element of educational financing.

¹ The Austrian federalism must not be confused with the Swiss one, as the Swiss cantons collect most of the taxes for their expenditure; and Austrian federalism is also not comparable with the German one in its organisational consequences, because German Länder are as big or bigger than the whole of Austria, which means that in terms of scale the Länder responsibilities in Germany would be the equivalent to the central responsibilities in Austria (in terms of distance to the schools or the local entities). These differences are often confused in the Austrian debates. If the distribution of responsibilities for school among governmental level is compared, the share of the Länder level is similar only to very much bigger countries as Germany, Spain, Italy (see Lassnigg, forthcoming 2015). Lassnigg, Lorenz (forthc.2015) Education as a hostage of politics: Sources and dynamics of complexity in a bureaucratic-federalist system. Paper to OECD GCES-Governing Complex Education Systems-project.

Currently attempts are made to change the basic mechanisms of redistribution, and in addition the regulations about the financial governance of the Länder and Gemeinden are changing from a cameralistic system to the standards of double accounting. According to these current structures it is difficult in several aspects to get an accurate overview about the use of resources, which are federal by their origin. As will be shown this structure implies a fundamental split between the financing bodies and the spending bodies, in particular with the teachers in compulsory schools. An important point of current discussion is to shift a more substantial part of the collection of taxes from the federal level to the Länder level, which would bring more congruence between financing and spending responsibilities; however, there are also proposals to make this split even deeper, by shifting more of spending responsibilities to the Länder within the current federal taxing regime.

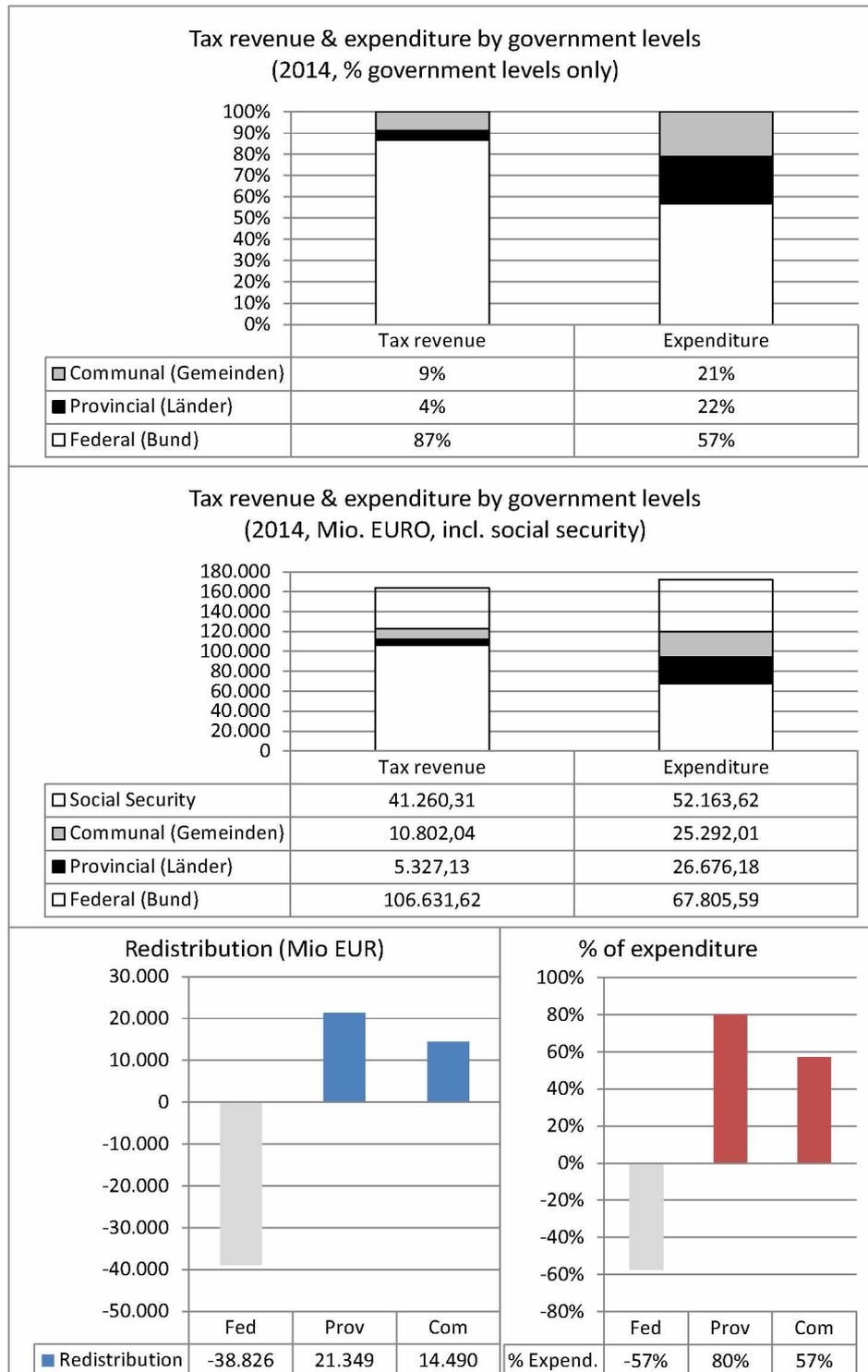
From an institutionalist point of view an important element of political power at a certain level of governance is how much can be spent for personnel as a key group of clientele. This can be emphasized in particular in the corporatist welfare model, where the state employees constitute an important asset in the definition and functioning of the model. In this respect the Länder have a specific position in the Austrian structure, as the proportion of wages in the overall expenditure after transfers is much higher at the Länder level than at each other level (39%), and moreover, the wage expenditure of the Länder is about double of the tax revenues collected at this level before transfers. This means that the federal level pays for half of a main power source of the Länder. As a comparison the communes spend a lower proportion for wages (34%), and they also 'earn' about 80% of wages paid by collecting their taxes (but even at this level 20% of the employees are paid from the central level).

Table 1: Expenditure for wages at different government levels, related to transfers

Mio.EUR	Gov total	Federal	Länder	Communes	Social Security
Gross wages	28.383,8	11.478,3	8.595,2	6.739,7	1.570,6
Social contribution employer	4.521,1	1.565,2	1.286,4	1.410,7	258,8
Imputed social contributions employer	1.892,6	778,2	635,7	428,2	50,5
Sum wages gross employer costs	34.797,5	13.821,7	10.517,3	8.578,6	1.879,9
Distribution %	100%	40%	30%	25%	5%
Expenditure after intergov. transfers	171.937,4	67.805,6	26.676,2	25.292,0	52.163,6
% wages of expenditure after transfers	20%	20%	39%	34%	4%
Tax revenue before intergov transfers	164.019,6	106.631,6	5.327,1	10.802,0	41.260,3
% wages of revenue before transfers	21%	13%	197%	79%	5%

Source: own calculation based on STATISTIK AUSTRIA, STATcube

Figure 1: Amount of intergovernmental Redistribution 2014



Source: Own figure and calculation based on STATISTICS AUSTRIA Stat-CUBE

Figure 1 illustrates the orders of magnitude of fiscal redistribution. The federal level raises 87 per cent of taxes, and after redistribution the proportion of the Länder and Gemeinden rises from 13% of overall state tax revenues to 43% of state expenditure. The Länder are the biggest winner of this redistribution, as the share of federal money among their expenditure is about 80%.

Some descriptive aspects

Social partnership – small state corporatism

Austria is among the countries with a high degree of participation of the representative organisations of employers and employees in policy making and governance (see Graf, Lassnigg, and Powell 2011 for a basic description).² This corporatist structure works mainly through informal channels, and has its basis in the system of industrial relations. The organisations of Austrian social partnership³ have a strong – even constitutional – foundation, in particular the chambers of employers (Wirtschaftskammer Österreich-WKO,⁴ and regional branches) and employees (Österreichischer Arbeiterkammertag-AK, and regional branches)⁵ are a specific construction comprising mandatory membership. As a part of the federalist system the chambers are organised at the Länder level, and the federal branches work as a kind of peak organisation of the Länder chambers; the WKO is also basically organised on a sector or branch level, with a very complex overall construction. The trade unions are organised by industrial sectors, and partly by occupational groups (white collar workers – Privatangestellte-GPA,⁶ public employees – öffentlich Bedienstete-GOED),⁷ and the Länder are also an important organisational level. Within the Union of Public Services seven (out of 26) representative groups (Bundesvertretungen)⁸ at the federal level are concerned with sectors/occupations in the education system, corresponding to an extremely complex system of service regulations (Dienstrecht) and related collective agreements.⁹

The Austrian practice of mandatory membership is conflicting to the European practices of the social dialogue, as mandatory organisations cannot take part in the European system, meaning that the chambers are excluded from the European level, and the non-mandatory

² Graf, Lukas ; Lassnigg, Lorenz ; Powell, Justin J.W (2011), Austrian Corporatism and Institutional Change in the Relationship between Apprenticeship Training and School-based VET, in: Busemeyer, Marius R.; Trampusch, Christine (eds.), *The Political Economy of Collective Skill Formation*, Oxford University Press, Oxford, pp. 150-178.

³ See <http://www.sozialpartner.at/>

⁴ See https://www.wko.at/Content.Node/wir/Austrian_Economic_Chambers_Home.html

⁵ See http://www.arbeiterkammer.at/The_Chamber_of_Labour.html

⁶ See http://www.gpa-djp.at/cs/Satellite?c=Page&cid=1342541888234&n=A03_3.1.2.1&pagename=A03%2Findex

⁷ See <http://goed.at/english/>

⁸ See <http://goed.at/ueber-uns/organigramm/bundesvertretungen/>

⁹ For an overview see the information at the Ministry's website about teachers' service regulations (LehrerInnendienstrecht) <https://www.bmbf.gv.at/schulen/lehrdr/index.html> and at the Chancellery's website about wages/collective agreements at the central/federal level that is also applicable to the teachers at Länder level https://www.oeffentlicherdienst.gv.at/moderner_arbeitgeber/start_im_bundesdienst/gehaltstabellen.html

Federation of Austrian Industries (Industriellenvereinigung-IV)¹⁰ and the Trade Unions (Österreichischer Gewerkschaftsbund-ÖGB)¹¹ have gained weight at this level.

The social partners are basically entitled to comment on new laws, and they have made a comprehensive proposal for a reform of education in 2007 (Beirat 2007).¹² One of the main charges has been a comprehensive reform of school governance, including federal service regulation, school autonomy, and educational standards.

„Bis 2010 soll eine umfassende Reform der Schulverwaltung auf Schiene gebracht werden (z.B. bundeseinheitliches LehrerInnendienstrecht, umfassende Schulautonomie und Qualitätssicherung durch externe Überprüfung von Bildungsstandards)“. (Beirat 2007, 3)

To some extent these charges have been satisfied up to now.

Complex regional governance structures

The procedural features of educational governance in the bureaucratic-federalist system were outlined above. It must be taken into account also that the administrative structures at the different levels are also providing specific challenges (see ANNEX 1 for illustrations about the basic structure of the Austrian governance system in a comparative view).

First, the number of nine provinces with the high degree of political discretion and representation is quite high and untypical for such a small country in comparative terms. Beside the metropolitan region of Vienna, three Länder are relatively big with more than one Mio. Inhabitants, three are medium size (below 500 T. inhabitants), and two are very small. The bigger ones include also some stronger urbanised regions around their capital, so they are quite mixed concerning their local conditions.

Second, the number of almost 2.400 municipalities (see Table 3) is excessively high in comparative terms, leading to many very small units which are quite weak in terms of resources and competences (e.g. there are even exemptions negotiated from the new rules of double accounting for small communes, and they are also exempted from the controlling procedures by the Austrian Court of Accounting). The municipalities comprise elected bodies (Gemeinderäte).

Third, the medium level administrative units (counties-Bezirke, 80 more rural counties and 15 towns) are organised differently as they are rather administrative units (without elected

¹⁰ See <http://www.iv-net.at/bm50>

¹¹ See http://www.oegb.at/cms/S06/S06_11/english

¹² BEIRAT FÜR WIRTSCHAFTS- UND SOZIALFRAGEN (2007) CHANCE BILDUNG. Konzepte der österreichischen Sozialpartner zum lebensbegleitenden Lernen als Beitrag zur Lissabon-Strategie. (Oktober). Bad Ischl. http://www.sozialpartner.at/sozialpartner/ChanceBildung_20071003.pdf

bodies; in the towns the Gemeinderat is elected). This Bezirk-level is less involved in the political competition.

Table 2: Stylised estimations on communes, schools* and average class sizes (grossly rounded for overview)

Level of education	Number of schools
Primary	3100
Lower secondary (common track)	1500
Lower secondary academic track	300
Upper secondary post-compulsory academic and vocational schools	1100
Total	6000

Level of education	Share of communes
Primary only	50%
Primary + lower secondary (common track)	25%
Mixed school structure (types from primary to upper secondary)	15%
No school	10%

Level of education	School size (students)
Primary	110
Lower secondary (common track)	150
Lower secondary (academic track)	400
Upper secondary	270

Class size in primary education	Average number of students per class (Index overall=100)
Overall	18.4 (100)
Länder (except Vienna)	17.7 (96)
Länder capitals/biggest cities	19.3 (105)
Vienna	21.8 (118)
Small schools (< 4 classes)	16.4 (89)

* The concept of 'school' used here denotes school sites (Schulstandorte), which can include more than one school as an organisational unit, or classes from different school types; such combinations are widespread at the lower secondary level because of the reorganisation from Hauptschule to Neue Mittelschule; at the upper secondary level more than one vocational schools is often situated at the same site; the size of vocational schools varies between 600 and less than 100; the separation of the lower and upper levels of the academic track schools is artificial, as they are mostly combined in one school site, their average size is almost 600.

Source: own calculation, see also Lassnigg 2015 forthc.

Table 3: Proportion of small communes (up to 1.000 inhabitants) in Austria (No. communes, inhabitants, and population per commune)

	communes			population			pop/commune		
	total	in city surroundings	in countryside	total	in city surroundings	in countryside	total	in city surroundings	in countryside
1000-2000	829	249	580	1.199.613	362.648	836.965	1.447	1.456	1.443
500-1000	436	101	335	331.011	78.581	252.430	759	778	754
below 500	190	27	163	64.178	9.091	55.087	338	337	338
<i>small communes</i>	<i>1.455</i>	<i>377</i>	<i>1.078</i>	<i>1.594.802</i>	<i>450.320</i>	<i>1.144.482</i>	<i>1.096</i>	<i>1.194</i>	<i>1.062</i>
Total	2.354	811	1.543	8.507.786	5.584.169	2.923.617	3.614	6.886	1.895
% row	100%	34%	66%	100%	66%	34%			
	% column			% column			index (total =1.00)		
1000-2000	35%	31%	38%	14%	6%	29%	1,00	1,01	1,00
500-1000	19%	12%	22%	4%	1%	9%	1,00	1,02	0,99
below 500	8%	3%	11%	1%	0%	2%	1,00	1,00	1,00
<i>small communes</i>	<i>62%</i>	<i>46%</i>	<i>70%</i>	<i>19%</i>	<i>8%</i>	<i>39%</i>	<i>1,00</i>	<i>1,09</i>	<i>0,97</i>
Total	100%	100%	100%	100%	100%	100%	1,00	1,91	0,52

Source: own calculations based on STATISTICS AUSTRIA

When it comes to education, the communes are responsible for the infrastructure of compulsory schools, and for pre-primary education also (Kindergärten; here the Länder provide additional infrastructure). Table 2 gives some stylised information about the distribution of schools among communes. We can see that bigger mixed school systems, including upper secondary education are situated in about 15% of communes, and that compulsory schools are widely distributed, with about 25% of communes running a primary and lower secondary school, and further 50% running only a primary school – those ones will be mostly small communes.

A substantial increase of local or school autonomy would concern the bigger communes in post-compulsory upper secondary education, however, very much the smaller communes in compulsory, particularly primary education. As the schools are not very much prepared for organising their purposes autonomously because of the high degree of regulation and their subordinate position, many of the communes will also be poorly prepared for these purposes. Therefore careful design of autonomy will be necessary in Austria.

Strong tradition of civil service under change and reform

One of the key elements of the corporatist welfare model, to which Austria clearly is attached, has historically been a strong and privileged position of the civil servants.

“Of special importance in this corporatist tradition was the establishment of particularly privileged welfare provisions for the civil servants (Beamten). In part, this was a means of rewarding loyalty to the state, and in part it was a way of demarcating this group’s uniquely exalted social status.” (Esping-Andersen 1990, 24)

Despite substantial changes in last decades, the civil servants enjoy generous pensions and regulations of employment security, still including protection against mobility. In the last decade the share of teachers employed on basis of private employment regulations (‘Vertragsbedienstete’) has been substantially increased, in particular with the young newly employed teachers. A reform of the service regulation (*Dienstrecht*) has been amended by the end of 2013, which is about to change some of the basic structures of the Austrian teaching force, and to simplify much of the existing body of regulation.¹³ The basic status-

¹³ See the new law http://www.parlament.gv.at/PAKT/VHG/XXV/BNR/BNR_00001/fname_334508.pdf; the complexity of the regulatory framework can be seen first by the length of 52 pages text, and second by the fact, that in order to provide the new regulation, in sum 8 laws had to be changed:

- 1 Änderung des Gehaltsgesetzes 1956
- 2 Änderung des Vertragsbedienstetengesetzes 1948
- 3 Änderung des Bundeslehrer-Lehrverpflichtungsgesetzes
- 4 Änderung des Landeslehrer-Dienstrechtsgesetzes
- 5 Änderung des Landesvertragslehrpersonengesetzes 1966
- 6 Änderung des Land- und forstwirtschaftlichen Landeslehrer-Dienstrechtsgesetzes
- 7 Änderung des Land- und forstwirtschaftlichen Landesvertragslehrpersonengesetzes
- 8 Aufhebung des Unterrichtspraktikumsgesetzes.

difference between Federal and Länder teachers is reduced, by constituting only one type of teacher; however, in fact different types are reconstituted by extra allowances for certain subjects, levels, and services in addition to a common number of teaching hours. Thus, based on different subjects and levels still different groups of teachers will be constituted (e.g., a kind of 'basic teachers' in primary school and those who give the supplementary subjects (Nebenfächer) in upper level schools; upper secondary teachers in supplementary subjects get allowances of some 6% more in the beginning of their career than basic teachers; teachers in primary subjects (Schularbeitsfächern) receive some 12-14% more, with still a difference of 25% in the allowance per teacher-hour for upper secondary as compared to lower secondary teaching (30 EUR vs. 24 EUR), so the worth of teaching increases upstream. The basic structure of remuneration is still based on the number of teaching hours, and has even been changed back to this structure for the Länder teachers which had been structured on the basis of a model of annual working hours before – this return to the previous structure of teaching hours plus various allowances has also been criticised by academic experts. As the teacher unions have objected this model, it can be easily imagined that the reformed simplified model might work as a starting point for several new rounds of additional allowances.

An important fact is that the reform will be gradually implemented. The implementation of the reform will start for all newly beginning teachers not before 2019, as the unions have negotiated a period of five years (2014-19) during which the new teachers may decide between the old and the new scheme. This gradual process will lead to a period of up to forty years, until the reform will be fully implemented, and the stock of teachers will be renewed (Figure 2).

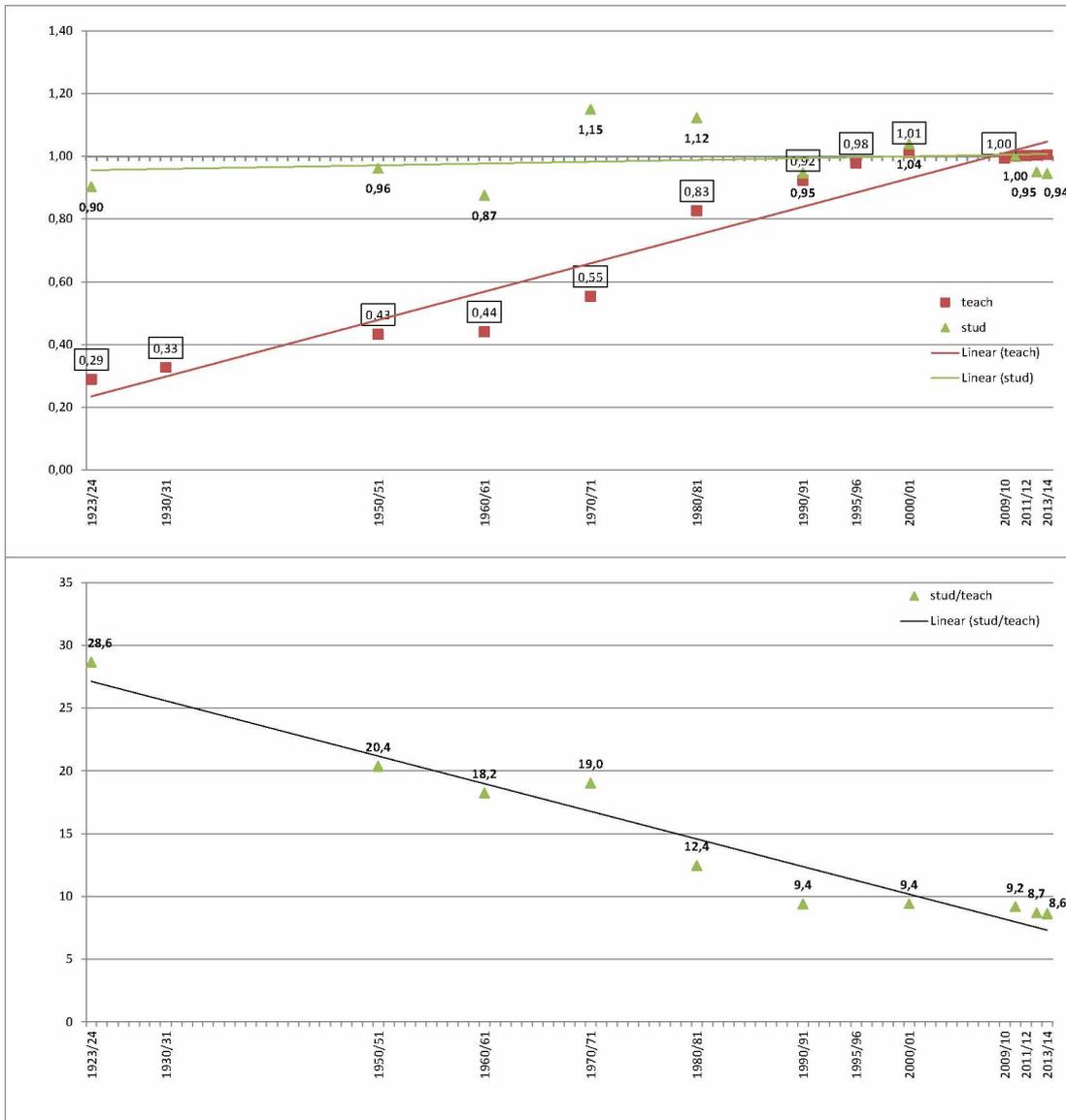
The figures show the long term development of the teaching force, and their quantitative relation to the students, with a substantial increase of teachers' numbers during the 1970s, which are grossly going into retirement during the current decade. The Figure 2a shows that student numbers oscillate by +/-10-15% along a quite horizontal path, however, the teachers' numbers have substantially increased, in particular during the 1970s, and have levelled off in the 1990s. In the long term since the 1920s the student/teacher-ratio has been reduced by 60%, with a major part of this reduction during the 1970s and 1980s.

Substantial parts of the teaching force are of higher age (50% of male teachers above 50 years, 75% of female teachers above 40years). The combination of the steep wage profile of the existing stock and the increase of wages of young teachers will substantially increase the expenditure for teachers during the upcoming decades.

A quick look easily shows that this regulation is only understandable for specialists, who are familiar with the whole body of these regulations.

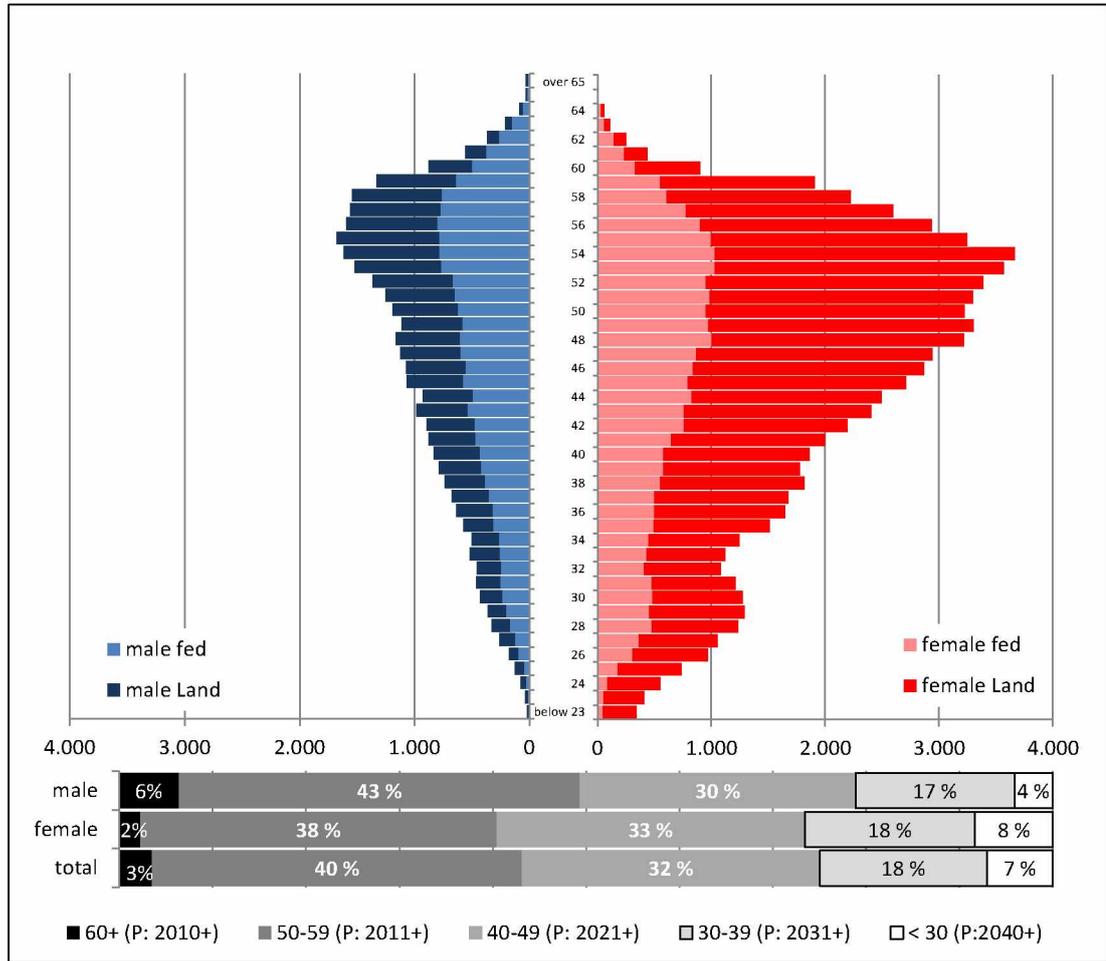
Figure 2: Students, teachers, retiring teachers

a) Long term development of teachers and student numbers, and S/T-ratio (2010=100)



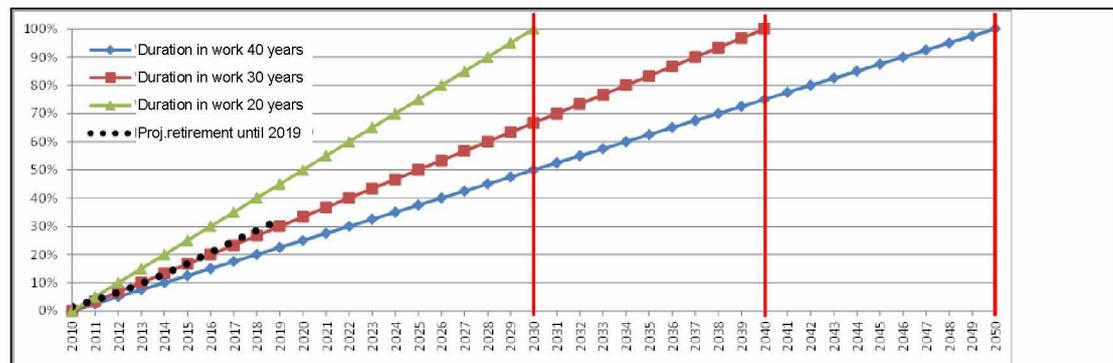
Source: own calculation based on STATISTICS AUSTRIA

b) Age profile of teachers 2010/11



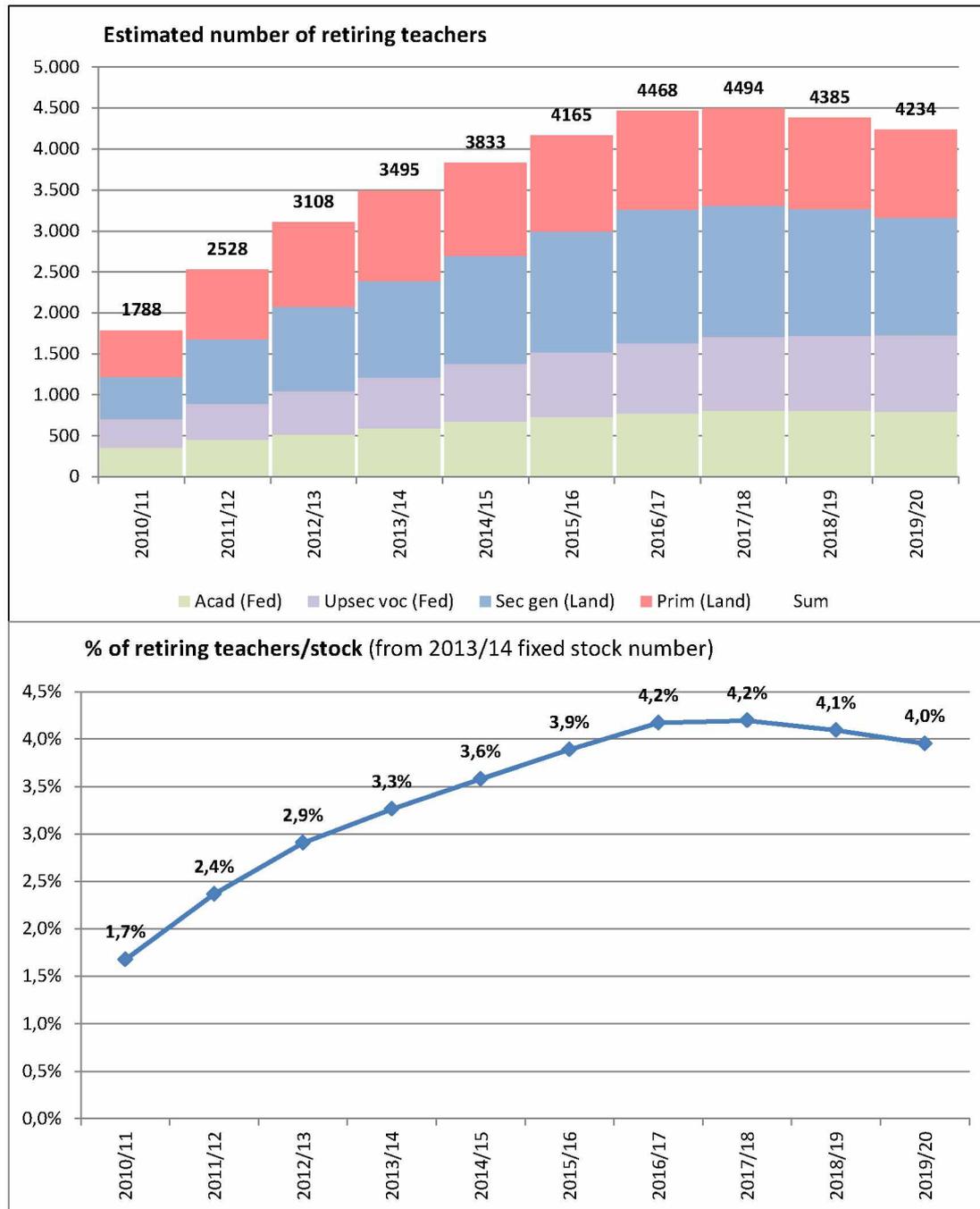
Source: modified from NBB 2012 Vol.1, B4a

c) Stylized course of renewal of the teachers' stock depending on the duration of careers 2010-50, and projected retirement 2010-19.



Source: own construction and picture, Austria 2050-project

c) Retiring teachers



Source: own calculations based on NBB 2012 Vol.1, B4b

Industrial relations and school partnership

A key element of the financing of education in Austria is the system of industrial relations, including the service regulation on the one hand and the structures and practices of collective agreements in this field. Both systems are negotiated between the state representatives and the trade unions. Over decades a very complex and differentiated 'quasi-taylorist' system of collective agreements has evolved which has been based on several elements which constitute the salary of teaching personnel. Basically every major change in working conditions virtually increased the elements to be paid, and thus would have needed increases in salaries. This basic logic constitutes a linkage between education practices and salaries that transform every major reform into an issue of the material interest based negotiations, and have already hampered attempts of curriculum reform or reforms of the governance structures. The reform of the industrial relations regulations ('Dienstrecht') has simplified the structures; however, the basic logic was not changed.

A common contention in the education policy discourses is a rhetorical extension of the social partnership system that governs the private market based industrial relations, to the public service, which is basically based on other principles. The differentiated structure of Austrian education combined with federalism also leads to a very differentiated structure of the trade union as employees' representative, thus in effect the politically accountable public employer sits vis-à-vis a quite high number of specialist employees' representatives.

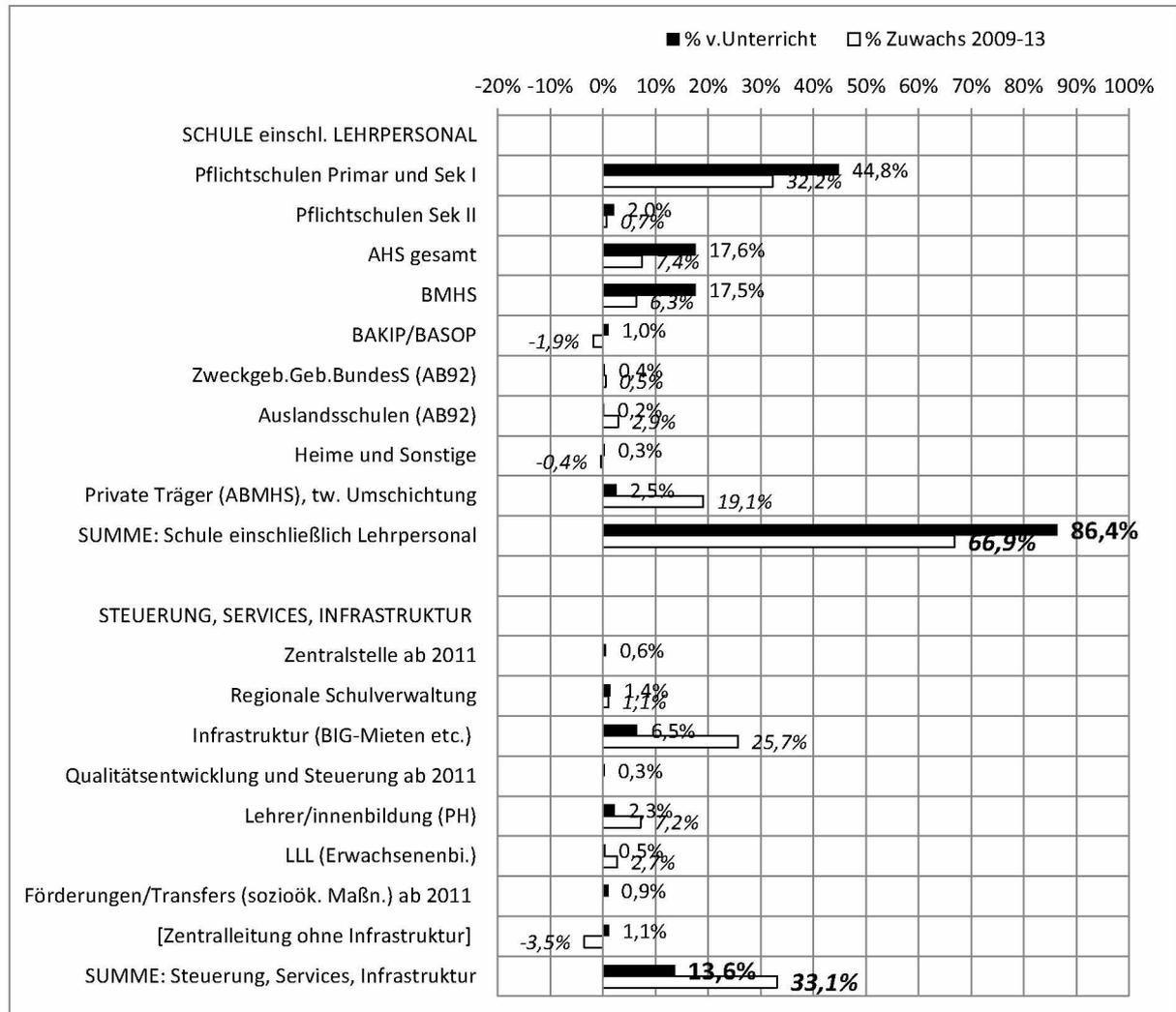
Since the attempts to increase democratisation and co-determination in the 1970s a comprehensive system of school partnership has been established that includes parents' and students' representatives. According to the strong legalistic tradition the achievement regulations give opportunities to question the teachers' decisions for parents and students, which might contribute to the significant difference between grades and tested achievement in Austrian schools.

(In)-Transparency and attempts for governance reforms

The quite detailed financial reporting system does not provide a clear account of the uses of educational expenditure, and the more recent changes in expenditure cannot be clearly estimated because of quite substantial changes of the used categories in 2011 (see the illustration in ANNEX 2). In the short term the changes of reporting and statistical categories make empirical comparisons over time difficult, and in the longer term the changed reporting structure still leaves essential aspects under cover so that transparency has been improved to some extent, however, not enough. Figure 3b illustrates the haziness of categories, e.g., between the personnel and other expenditure, between the operative and the steering expenditure (some subsidies have been shifted from the steering category to the operative category, and the administration expenditure is also not clearly transparent), as well as between compulsory education at primary and lower secondary level and academic school that spans lower and upper secondary education.

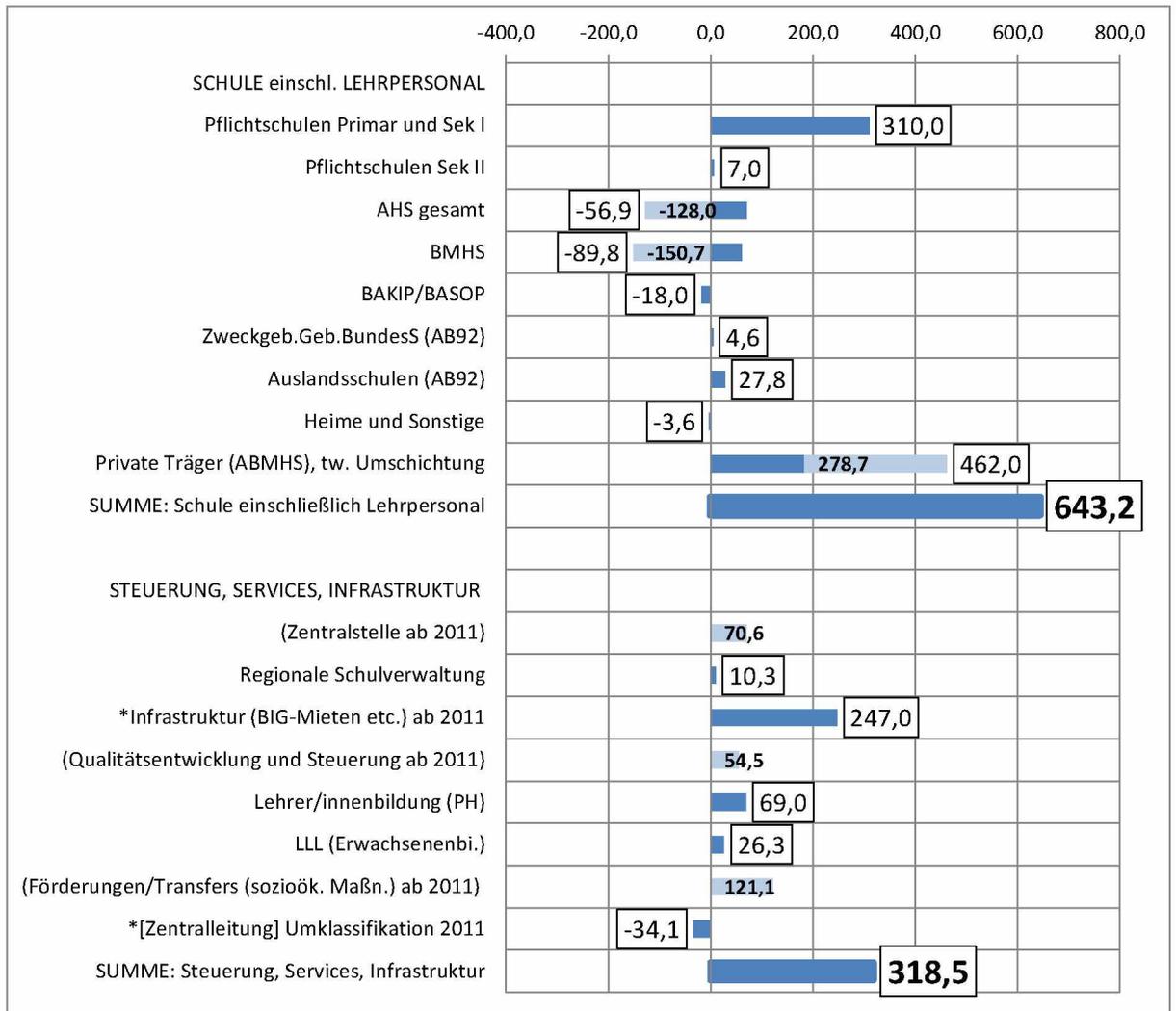
Figure 3: Expenditure for education and change 2009-13 in detailed categories

a) relative (% of education, % change)



Source: own calculation based on financial statistics

b) absolute change 2009-13



Source: own calculation based on financial statistics

Governance reforms are a longstanding practice in Austria. Currently a big endeavour is under way under the title of “Aufgabenreform” (task reform) which should be finished until the end of 2015 (the tax reform should be financed by savings from governance reform). The reports include a wide variety of hundreds of specific improvements from various sources, among them only few are related to education. They address the following topics, most of which are also recurring frequently in public debates:

- coordination of support of migrant students;

- reducing administrative tasks of teaching personnel and substituting by administrative personnel;
- improvement of management and controlling educational goals at school level;
- cooperation between different school sectors.

Some proposals concern fundamental aspects of planning and steering:

- to develop adequate information for steering in compulsory schools; evaluation of the shape of catchment areas (Schulsprengel);
- evaluation of the controlling of the financing of teachers of Länder by the federal level (conditions of recharging money);
- abolishing political influence with selection of principals at the Länder level.

Attempts have been made to improve the knowledge and evidence about education by the creation of a state institute for educational R&D (BIFIE).¹⁴

Stratification vs. equity

As outlined before, the emphasis on the achievement-equity trade-off must be seen as a generic element of education politics and policies in Austria. This is reflected in the early differentiation at lower secondary level between an academic track (AHS) and a general track (Hauptschule, now transformed into Neue Mittelschule). As the differentiation takes place already at age 10, it has repercussions into primary school, where parents and teachers already are inclined to prepare students for the choice situation. The emphasis on the trade-off is reflected in periodically recurring political conflicts and a basic dilemma, as on the one hand there is wide consensus that the choice is too early, but as the academic track is sacrosanct for broad and influential groups on the other hand, there is no solution for the early choice.

A way out is sought for since decades, to relatively improve the general track, and the opportunities it provides, which has been to some extent successful. However, focus on the overall 'less achieving' general track causes questions and resistance among the protagonists of the academic track which feel treated 'inequitable' from their perspective. The complex and contradictory setting is to some extent also reflected in the practices within schools that compromise achievement for not destroying formal opportunities of students, which can be seen in strong differences between grades and test results. A substantial group of low achievers according to the international LSAs is also one result of the structures. More

¹⁴ See <https://www.bifie.at/>

recent PIAAC analyses indicate also interestingly, that the Austrian 'high achievers' (upper 95% percentile) show a comparative low achievement compared to the average of participating countries, whereas the 'low achievers' (lower 5% percentile) show a comparative high achievement (Lassnigg & Vogtenhuber 2014).¹⁵ According to these results the inequitable structure of the Austrian system seems to provide also quite substantial compensatory mechanisms.

The strong system of vocational education itself reproduces the tracked structure, as it comprises the different levels of medium and upper schools, and apprenticeship which has been historically treated as the lowest level. At the same time vocational education at the upper secondary level is also compensating for the inequities in lower secondary education, by providing comparatively wide access to qualifications, and also real opportunities of progression into higher education through the upper level vocational colleges which are widely accessed from the lower secondary general schools. So vocational education clearly cannot be seen as depriving opportunities in Austria, but rather has a mixed standing concerning equity, as it provides opportunities for progression, however, in a very selective way compared to AHS, and by providing a wide range of achievement levels in vocational education. Transfer into vocational education occurs at ages 14 or 15 which also means early choice, and does in the mainstream not provide improvement of general education for the young people with low basic competences. Compensatory opportunities are rather provided by a separate system financed and organised by labour market policy.

More recently the issues of equity have been more substantially discussed in a chapter of the Austrian Education Report 2012. However, these more elaborate proposals have to date not much influenced the wider political disputes.

Whereas the above described *Neue Mittelschule* is a kind of systemic approach to improve equity, relevant policies targeting specific student groups also exist for students with special education needs (SEN), students with difficulties in German language, mainly migrants, and in particular also for disadvantaged young people with problems of transition into the labour market or to post-compulsory education, in particular apprenticeship. The latter policies have been mostly developed as curative measures in labour market policy, and have more currently been started to be linked to more preventive strategies in the education system also. Concerning SEN quite progressive steps towards integrative policies have been taken some decades ago; however, the separate system of special schools has also been retained. Concerning children of migrants it took a long time until the necessity of their adequate education and support has been recognized as an urgent policy issue. Only when the proportions of migrants had already grown substantially, it proved more difficult to develop adequate strategies.

¹⁵ Lassnigg, Lorenz; Vogtenhuber, Stefan (2014), Das österreichische Modell der Formation von Kompetenzen im Vergleich, in: Statistik Austria (Hrsg.), Schlüsselkompetenzen von Erwachsenen – Vertiefende Analysen der PIAAC-Erhebung 2011/12, Statistik Austria, Wien, S. 49-79.

Challenges for education policy and governance

Main challenges in Austrian schools

Since the participation in the LSAs in the late 1990s and early 2000s (first TIMSS, then PISA) a wide consensus exists that the discrepancy between the relatively high expenditure for education on the one hand, and the only average achievement on the other, including a quite large group of students with too low competencies, particularly in reading, poses a main overarching challenge for the Austrian school system. Measures tried for curing this discrepancy so far have not brought improvement measured by PISA (OECD-PISA-database, Lassnigg/Vogtenhuber p.244-245, see ANNEX 3).¹⁶ Another main challenge, based on the demographic development, is clearly to find adequate educational strategies for the needs of migrant children, whose proportion has grown to around half of all children in compulsory education in the densely populated regions, being also concentrated in schools of certain areas. A third challenge is the high rate of social reproduction, in particular due to the parents' educational status, which multiplies the likelihood of successful educational careers for children of highly educated parents (this somehow contrasting to the comparatively low inequality in the society, in particular if measured after transfers (EU DG-Empl 2011)).¹⁷ A fourth challenge has come up recently by the imperative of reducing the deficit of the public households taken from the EU level, which includes an increased emphasis on the assessment of the total public financing and the full inclusion of federal, Länder, and Gemeinde budgets and stronger restrictions for 'outsourcing' public financing to separate bodies. This challenge is increased by serious problems caused by a regional bank, and the liabilities taken by the respective provincial government which go into levels of billions of EUROS.

Challenge (i): discrepancy between high expenditure and moderate results

Conventionally the first challenge can be treated by either improving achievement or by reducing expenditure, with evidence pointing rather to the second way as being more successful than the first. The Austrian way of solution has grossly been a third way that is to increase expenditure and hope for improvement. The Neue Mittelschule reform was the main vehicle for this, with the key element of the reform being an increase of the teaching intensity/personnel for students in this new track, and to mix the different kinds of teachers. This reform was devised and implemented in a more or less voluntaristic way, taking quick political decisions, and giving only very rough cornerstones for change. However, it was accepted at the political level, and substantial additional resources were provided by the government, and – more or less independently from the ideological positions to the step towards 'comprehensiveness' – welcomed by the Länder who were mainly responsible for

¹⁶ OECD, PISA 2012 Database, Table I.2.3b.

¹⁷ EC DG for Employment, Social Affairs and Inclusion (2011). *Employment and Social Developments in Europe 2011*. Luxembourg: Publications Office of the European Union
<http://ec.europa.eu/social/BlobServlet?docId=7294&langId=en>

implementation. At the basis of this move were, and still are, disputes among the main stakeholders about the facts related to achievement as well as about the factors constituting them.

- One the one side of the challenge, the weak performance expressed by the LSAs has been taken up by the stakeholders outside school, by policy makers and the social partners, but not by the actors inside school. In particular the teachers unions, supported by some groups in the academic community express doubts of several kinds about the accuracy and feasibility of PISA, trying to isolate the proponents of 'evidence based' improvement attempts.¹⁸
- On the other side of the challenge the high expenditure is also put under scrutiny, by several arguments claiming the need for more resources, due to the several changes in society and families, including migration, which would make teaching more difficult. In the early 2000s in particular the Social Democrats have taken education, and in particular the reduction of the class size, as one of the main points of their election campaign.

As a result, both sides of the challenge, weak achievement and high expenditure were under ideological disputes, which hampered a shared definition of the situation (facts), and consequently also a serious search for the reasons for the disputed facts. So until now neither the reasons for the weak achievement, nor the factors contributing to the high expenditure are sufficiently clear.

The challenge for the current report is to bring together the available knowledge and to add to them as far as possible, based on available information. This includes providing a clear account of the available resources, their distribution, and the mechanisms that might hamper effectiveness and efficiency. On the side of achievement, we have to take the available knowledge, taking into account that there are some puzzles in the available results, first differences between assessments (e.g., PISA and PIAAC) and domains; second shifts of results between assessments in time (e.g., proportion of consistently low achieving students) – however, the performance near the average, and a weak improvement over time can be taken as evidence.

Challenge (ii): Needs resulting from migration

The second challenge, opportunities for migrants, is clear from the quantitative scale, as immigration will be a main factor reducing demographic decline of young people in the future (IHS-WIFO 2013; ANNEX 4),¹⁹ and must be urgently seen as a resource, and not as a

¹⁸ One of the early publications expressing hostility against PISA were edited by Austrian academics, and a quite influential philosopher is – embedded in a wider German network – campaigning against the overall strategy of measuring competences and related policy strategies for improvement.

¹⁹ IHS-WIFO (2013) Analyse der Datengrundlage zum künftigen Qualifikationsangebot und –bedarf in Österreich. IHS-research report (April). Vienna: IHS. <http://www.equi.at/dateien/data-ihsrep-ak.pdf>

'problem'. To some part this challenge is related to resource allocation, however, according to recent research the main aspect of this challenge is related to the development of adequate pedagogy (main topic of NBB 2012). The political expectations are also strongly related to resources, and the development of strategies is hampered by disputes over separation of migrant children into specially treated groups vs. consequent integrative strategies. Issues concerning resources are compulsory and free provision of pre-primary education, resources for needed additional support to students, and resources needed for school development and teacher education to improve pedagogy, including in particular continuing teacher education.

Challenge (iii): Social reproduction

The third challenge, social reproduction, seems to some part 'inversely' related to resources, as the public resources do not go un-proportionally high to the academic school, rather the opposite. Here the complex selection mechanisms seem to play the strongest role, as the results of the school types at different levels are influenced by the resources which the students from advanced social background bring to the schools (Lassnigg Vogtenhuber 2009).²⁰ A comparison of the level and development of resources grossly shows that the lower level of the academic school is driven by 'massification', compared to the general school, and that the compensatory vocational schools did not receive such expansionary resources as the general schools. If the results by Daniele Checchi (2006)²¹ about the different governance and structural factors are considered, the dimensions of public/private and centralised/decentralised financing are interacting with the differentiation and decentralisation of school systems. Centralised public funding can to some degree compensate for tracking structures and lack of 'comprehensiveness', as privately funded decentralised comprehensive structures do not provide better results in terms of equity than centralised public tracked structures. This argument and modelling might provide a fruitful approach for the understanding of the Austrian disputes about governance and 'school autonomy'. 'School autonomy' has been forcefully brought onto the agenda in the 1990s from the research level, originally supported by the Industriellenvereinigung however, has not been well received by the actors, and is quite heavily disputed until today.

Challenge (iv) current and future budget constraints

Concerning the fourth challenge a financial path of the overall budget has been given, and is yearly updated by the Ministry of Finance, approved by the government, that sets targets for the individual ministries. In education the path has been flattened substantially against the previous periods, when every year substantial additional funds have been negotiated and provided, and in the short run implies quite substantial cuts. As by far most of the money

²⁰ Lassnigg, Lorenz; Vogtenhuber, Stefan (2009), Governance-Faktoren, Schülerleistungen und Selektivität der Schulen, in: Schreiner, Claudia; Schwantner, Ursula (Hrsg.), PISA 2006. Österreichischer Expertenbericht zum Naturwissenschafts-Schwerpunkt, Leykam, Graz, S. 376-386. <https://www.bifie.at/buch/815/9/5>

²¹ Checchi, D. (2006): *The Economics of Education. Human Capital, Family Background and Inequality*. Cambridge: Cambridge University Press.

goes into the personnel costs, there is very little room left for manoeuvre to reduce expenditure, and a main proposal is to increase the number of teaching hours by teachers. This proposal has been already made and taken back in the past, so at the time of writing it cannot be said whether it will be successful this time, and which kinds of conflicts it might provoke.

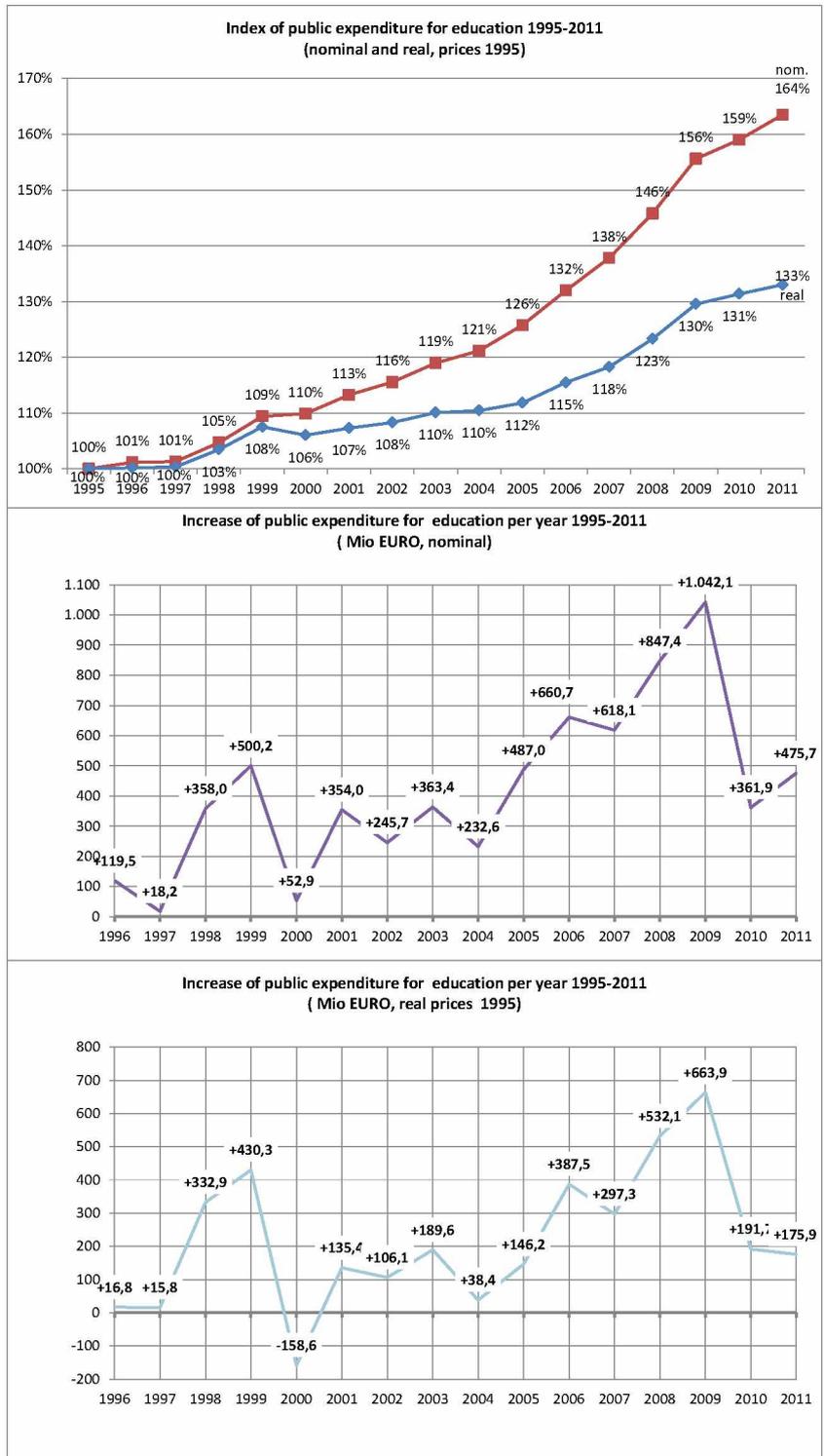
Even if the provision of resources would have been not very efficient in the recent past, and efficiency could probably be increased by a saving of resources it is questionable whether this kind of unplanned stop-go politics will provide real improvement, in particular in the sketched Austrian environment.

Relations of the main challenges for education to governance and financing policies and structures

The increase or reduction of the expenditure and increase or reduction of class size have been and still are perceived as the main benchmarks for the quality of education policy in the public, with increase/reduction being valued positively and reduction/increase being valued negatively. Consequently these aspects are carefully considered by policy makers. They have two important implications: first they are closely related to each other, as the reduction of the class size is known as being the most significant driver of costs, and secondly, as 80-90% of expenditure is built by personnel expenditure, the two benchmarks are closely related to the employment of teachers, who have strong interest organisations, and are also a quite remarkable number of relatively articulate voters, and can also to some extent play a role as opinion leaders or multipliers. From this observation an upward trend of expenditure can be expected, which can be empirically verified. Looking at the recent decades, the expenditure increased substantially despite already quite high levels, and moreover, each period of reducing the increase or cutting of expenditure was accompanied by political protest (sometimes even leading to resigning Ministers of Finance) and has often been followed by an even higher increase compared to the previous reductions during the following years. At this background an expected increase of effectiveness is automatically related to an increase of expenditure, and the increase of efficiency is conceptually ruled out by the basic framing of the issues. We can observe the strong focus on an increase of expenditure not only at the overall level of mainstream political discourses, but also in the more specific analyses and proposals for problem solutions, e.g. to improve disadvantaged schools the provision of additional money is proposed by socially backed formulae (Bacher 2015),²² or to improve support of migrant students the focus is also often on additional financing. The Austrian Institute of Economic Research in its expertise also basically calls for an increase of resources in education, and a shift of resources from other sectors to education.

²² Bacher, Johann (2015) Indexbasierte Ressourcenverteilung eine gute Lösung für inklusive Regionen? JKU Institut für Soziologie, Linz. Presentation http://www.jku.at/soz/content/e94921/e271261/indexbasierteRessourcenverteilungBacherVersion3_ger.pdf

Figure 4: Illustration of the 'expansionary logic' of education politics in Austria



Source: own calculations

The bulk of research focusing on efficiency, saying that the increase of resources does not automatically lead to improvement, in particular when resources are already high, is more or less neglected in Austria. To some extent it is brought into the debate by researchers, however, the drive towards the increase of expenditure is so powerful, that these voices are not heard. This can be most clearly demonstrated at the case of the Neue Mittelschule reform. Here the increase of teaching resources towards double or team teaching in the core subjects is the main element of the reform. From research it can be clearly expected that this might be a frame for improvement, but cannot work if it is not accompanied by the improvement of teaching-learning practices, which cannot be expected to occur automatically. Institutional economics expects that because of opportunism an automatic improvement will not take place. The evaluation shows, that the core idea for pedagogical improvement through the room for individualisation of teaching-learning was only fully implemented in a minority of schools during the inception period, as a result the reform did not lead to an hoped-for improvement of achievement in Neue Mittelschule, consequently the substantial additional resources have even led to a decrease of efficiency. Many indications from the quantitative picture given in the statistical volume of the Austrian Education report which point to problems with efficiency are more or less neglected in the political discourses

- In comparison to other countries the proportion of educational expenditure to the GDP is not at the highest level, however, a much higher ranking of the per/capita proportion is indicating that in Austria relatively fewer students are educated *ceteris paribus* by a fairly high expenditure
- A clear discrepancy has been always shown between comparatively high class sizes and comparatively low student-teacher ratios, which indicate that high teaching resources ‘disappear’ somewhere before reaching the structures and practices of provision.

An important fact rare the substantially below average teaching hours (contact time of teachers) particularly at lower secondary level (but also to some extent at upper secondary level), whereas the pupils’ time of instruction is average. Another element in this puzzle might be that effective class sizes in terms of student groups taught might in fact be lower than the nominal class size because of divisions by subjects, or other kinds of groupings.²³ This difference cannot be completely displayed because of a lack of sufficient information, and would not pose a big problem if the nominal class size would not be a key political

²³ In the general secondary schools before Neue Mittelschule the main subjects (mathematics, German, first foreign language, mostly English) were taught in ability groups with smaller group sizes compared to the main classes, especially in the track with the weakest students. The national assessment for grade 8 in mathematics (2012) provides data on the assignment to ability groups and classes. Average “nominal” class size was 19.5. The average size of ability groups was 13.3 for the third ability group (low ability), 16.4 for the second ability group. The size of the first ability group is 18.3, almost identical to the class size. Taking into account these forms of grouping might reduce the overall nominal class size by some 10% to the effective group size in this school type.

benchmark. If real effective sizes are in fact smaller, the use of the nominal figures would automatically drive expenditure up.

Following from the above argument, a main question arises, of how this political logic might be related to the structures of provision in the educational system, and in particular to the governance of the system. A previous study (Lassnigg et al. 2007; see also Lassnigg, Bock-Schappelwein, Pitlik, Hans 2009)²⁴ has given a comprehensive literature and data based analysis of the Austrian system and pointed to several contradictions, incoherencies and unresolved problems in basic structures of provision and governance.

- As a main problem in the structure of provision was identified that in the tracked system the differences in the resources which result from the composition of the student bodies was neglected in policy and governance. A subsequent study has tried to identify the proportion of differences between the school types in different tracks that can be traced to the social origin of the students. Attempts to identify how the governance at the school level deals with this factor showed rather signs of compensatory than aggravating strategies (thus the actors seemed basically to work not in line with the selective structure but against it; Lassnigg/Vogtenhuber 2009). Considering two contrasting approaches of coping with equity and justice in education, one that tries to alleviate the differences in background resources within education vs. the one that runs differentiating and elitist strategies in education and compensates for inequalities afterwards by redistribution, the Austrian system comprises a contradictory mixture, as there seem compensating practices to prevail within the elitist structure and institutions. According to the available information at the time of writing the previous report (2007) the redistributive mechanisms were considered being rather weak, whereas more current information shows a favourable position in comparative terms (see EC DG-Empf 2011).
- The main focus of the study was on the governance and administrative structures, and posed as the core argument for the understanding of the structure that the basically existing overall classical bureaucratic structure is fundamentally broken at the Länder level by the politicised federalism, with the result that the potential strength of the rationality of a bureaucracy is broken, and only its weaknesses of overregulation and reducing the discretion and responsibility at the bottom level come into play, whereas the intervening factor of federalism brings an opportunistic politicisation into the system, which also discourages professional practices at the bottom level. As a result the actors at the bottom level, the schools, principals and teachers are doubly discouraged by the existing governance regimes, which at the same time give no room for institutional autonomy of schools and drive teachers into

²⁴ Lassnigg, Lorenz; Bock-Schappelwein, Julia; Pitlik, Hans (2009), Bildungsökonomie: Eine vernachlässigte Quelle erweiterter Steuerungswissens im österreichischen Bildungswesen, in: Specht, Werner (Hrsg.), Nationaler Bildungsbericht Österreich 2009, Band 2: Fokussierte Analysen bildungspolitischer Schwerpunktthemen, Leykam, Graz, S. 361-379.

their lessons where they have full discretion. The schools as actors and cooperation among teachers is systematically precluded and discouraged by this structure. The combination of state official tradition and social partnership fits into the overall structure by establishing an institutional complementarity of the trade unions' strategy towards regulation on the one hand (bureaucracy) and political influence on the other (federalism). The shape of industrial relations based on the *Dienstrecht* and collective agreements is the main mechanism of how the teachers' unions have succeeded to gain a main veto point in any major education reform, as very detailed systems of regulations governing the employment conditions and payment of salaries have been developed incrementally. Based on this system each new major responsibility of teachers is defined an additional task to an already full use of capacity, and thus should be additionally remunerated. Political activities of teachers are guided into these structures – as a consequence the trade unions are also the only actor that represents the professional interests, which conflict with the classical goals of material interest representation of employees; it must be said also that professional organisations are very rudimentary in this context, and the development of kinds of more research based activities is tended to be devalued.²⁵ As a consequence the Educational Referendum (*Bildungsvolksbegehren 2011*)²⁶ evolved as a kind of professional platform, which however, turned also into a politicised path; more recently the *Industriellenvereinigung* has tried to set up a new platform to improve education.

- As a result, the conditions for an effective governance system in education proposed by economic institutionalism are structurally and politically precluded. If the model by Bishop/Wößmann (2001)²⁷ is taken as reference then from eleven criteria three are fully present in Austria (attention of teachers to assessment of students; influence of teachers on pedagogy; and no influence of schools on their overall budget), and two are implemented and heavy counter-fire (partly central final exams in upper level academic and vocational schools; central educational standards and control), whereas three very important criteria are definitely missed (autonomy of schools in process and personnel issues; influence of teachers about amount of their work; and not too much influence of trade unions), and the remaining three are not so clear to assess (parents' influence on schools; proportion of private schools for competition; medium level administration).

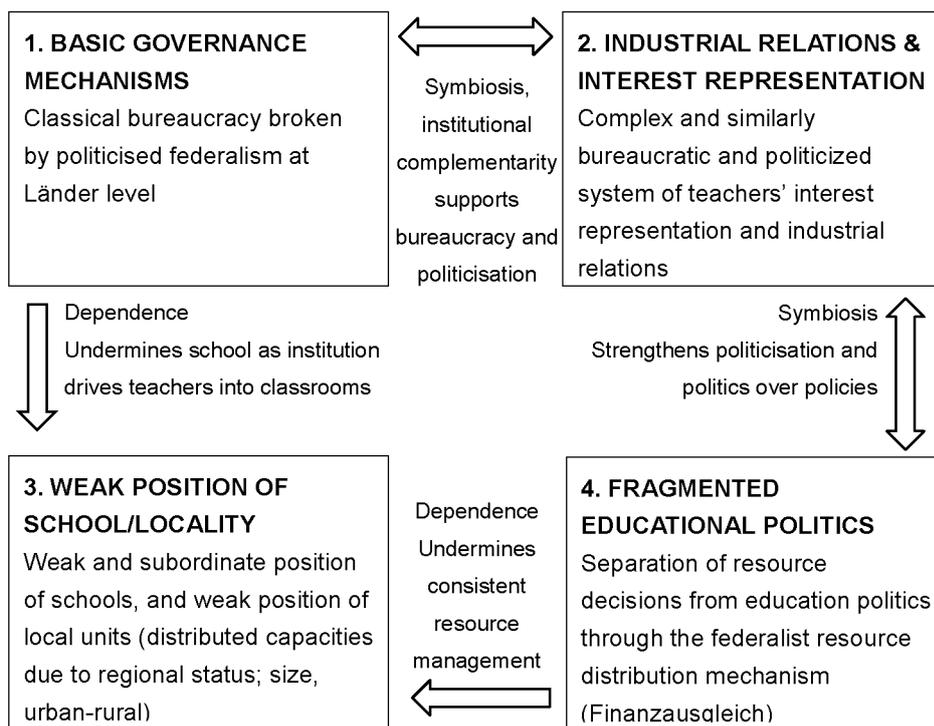
²⁵ In Austrian politics a complete confusion prevails about what research means, and the kind of politicised debates can be illustrated by recent statements concerning the *Neue Mittelschule* (end April 2015). A very serious evaluation of their effects on practices and competences is countered by completely superficial data about transitions into the academic track which can be interpreted mainly as a selection effect. However these data are used by high level politicians to criticise in a very devaluing manner the Federal research institute BIFIE (which, by the way was not responsible for the evaluation).

²⁶ See <http://www.nichtsitzenbleiben.at/>

²⁷ Bishop, John H. and Wößmann, Ludger (2001): *Institutional Effects in a Simple Model of Educational Production*. Kiel Working Paper No. 1085. <http://opus.zbw-kiel.de/volltexte/2003/53/pdf/kap1085.pdf>

Basically all stakeholders support at least rhetorically more autonomy at school level, however, to varying degrees. In particular the labour side of the social partners is much more reserved than the employers' side, and a recent political draft proposal by representatives of the Länder, the Ministry and the social partners does give the schools rather a rhetorical autonomy than one mandated by regulatory changes; a NGO-like movement, based on a referendum some years ago (Bildungsvolksbegehren) charges more wide ranging responsibilities at the school level. Main issues of debate are the responsibilities about personnel management, and how the planning and financing responsibilities should be allocated among the authorities, however, a more fully-fledged comprehensive proposal is still missing.

Figure 5: Stylized framework for understanding the Austrian governance system



Source: own figure

Key issues for developing a better governance system

The study about the governance structures has finally proposed four key issues which are related to the framework for understanding the system, and which should be addressed in developing a new more effective and efficient governance system (Lassnigg et al 2007, p.188):

- i. *Congruent distribution of responsibilities.* Resolving the problems of intersecting responsibilities among the authority levels, in particular in the direction that a definitive congruence between the tasks/duties of governing actors and the responsibilities for financing and spending is reached (the actual incongruence that the federal level is responsible for financing, whereas the Länder level is responsible for spending in the main sector of teachers in compulsory schools, and the duties are mixed is seen as a major problem reducing efficiency)
- ii. *School autonomy.* Designing, regulating and implementing sufficient conditions for pedagogic work at the school level based on concepts of school autonomy, by providing room for discretion and abandoning the bureaucratic and organisational obstacles for work at school (paralleled by the establishment of sufficient monitoring achievement)
- iii. *Reform of the system of industrial relations.* Development of effective structures of industrial relations and working conditions in education, in particular reform or abandonment of Dienstrecht and shaping of attractive and flexible working conditions by changing the inflexible and tayloristic regulations and structures of payment of the salaries (devising teachers' work on the basis of professional principles instead as a collection of tayloristic points of effort constituting the salary)
- iv. *Comprehensive funding structures according to efficiency and equity.* Allocation of funding through simplified structures of responsibilities according to specified criteria of efficiency and equity, and considering the main challenges for education; a comprehensive system must include the Finanzausgleich.

These issues will be tackled one after the other in the following

Development issue (i) congruent regulation

A basic thrust of the regulation at the federal political level was to create self-binding mechanisms against a voluntaristic or one-sided change of the basic structures of the education system, with a constitutional quorum and interlinked responsibilities between the federal and the Länder level. This system has been set up by a big regulatory endeavour in 1962 which was negotiated by the then two big coalition parties (Socialist and Christian Democrat). In order to 'resolve' the big fights from the past about school structures they agreed to transform these issues into constitutional law requiring a parliamentary two third quorum to change it, in order to secure that one side of the conflict parties cannot change the structure towards its own aims and ideas. This solution, however, has not solved the

issues but trapped the actors in un-ended conflict without a perspective of a solution. This trap might also be interpreted as a de facto mechanism that supports to some part more rhetorical than serious discourses, which might build up to overstated discursive conflicts, because each party knows in advance that it will not be able to realise its charges.

In addition to the quorum the interlinkages of the political and administrative levels have been fixed, on the background that the provinces and the communes have also been embedded into the party political conflict. Historically there has been the significant conflict between social democratic 'red' Vienna and the conservative rural provinces, which is still echoed by quite fundamentally different structures between the two regional types.

Development issue (ii): school autonomy

The structural blocking has periodically led to shifts in attention towards "inner school reform", and as a part of such movements school autonomy has become a political issue in Austria in the early 1990s. This movement has started with a collaborative research report edited by two eminent educational researchers driven from action research. The volume discussed conceptual issues and analysed the hindrances at the practice level caused by the tight bureaucratic structures (Posch/Altrichter 1993).²⁸ The debate got more or less stuck in structural issues, and a kind of duality has emerged between school development at the micro level, to some extent promoted by quality models and initiatives, on the one hand, and the political debates about 'providing more autonomy' to schools on the other (Friedrich 1993).²⁹ This to some extent heated debate has resulted in only minor amendments that could not change the basic structures (Lassnigg, Bock-Schappelwein, Pitlik 2009; Schratz, Hartmann 2009).³⁰ An attempt to change the practices at the school level by a new curriculum for lower secondary education, which should relate the teachers' decisions about content to strategies of school development (Lehrplan'99) did not succeed at the practice level because of the resistance of the trade unions. In the 2000s school autonomy has also been strongly related to the political turbulences around right wing populism and been discredited as a strategy to 'outsource' austerity measures from the political level to the school level.

School autonomy, meaning not only more room for discretion but a change of the distribution of responsibilities and of the basic working practices, has become stuck in the complex, fragmented and conflict-loaded structures, so a viable and comprehensive strategy has never been seriously proposed or discussed up to now. The following dimensions can be summarized as the main hindrances for the development of school autonomy in Austria:

²⁸ Posch, Peter, Altrichter, Herbert. Eds. (1993). *Schulautonomie in Österreich* (2., aktualisierte und erw. Aufl.). *Bildungsforschung des BMUK*, Band 1. Studienverlag, Innsbruck-Wien.

²⁹ Friedrich, Gerhard (1993) *Autonomie der Schule. Ein Organisationsentwicklungskonzept*. Band 3 der Reihe „Bildungsforschung des BMUK“, Studienverlag, Innsbruck-Wien.

³⁰ Schratz, Michael, Hartmann, Martin (2009) *Schulautonomie in Österreich: Bilanz und Perspektiven für eine eigenverantwortliche Schule*. *Nationaler Bildungsbericht Österreich 2009*, Band 2. <https://www.bifie.at/buch/1024/c/2>

- The complex distribution of responsibilities with the focus on the distribution between the federal and the Länder level
- The political-administrative structure with quite big and powerful regions (Länder) and the predominantly small and weak communes, without a structure in between (the weak institutions at district level have been abolished and transferred upwards to the Länder)
- The bureaucratic structure that locks teachers into their classrooms, and does not provide space and incentives for cooperative and collective strategies at school level
- The half-day provision linked to the wide room of discretion by teachers about their non-teaching working time which supports an individualized shift of supplementary work outside schools
- The lack of professionalism with the strong link of interest organisations to the material interests and to the preservation of the existing power structures which would be substantially changed by a shift of responsibilities to the school level
- The wide room for discretion for teachers in the classroom shifts attention to that level, and might support a notion that organizational issues are perceived rather as a disturbance than a potential resource; the high share of small schools might shift much of de facto responsibility to the school level, possibly related to a lack of resources for really taking them

In sum the development of a structure that gives schools as organisations a right degree of discretion about their work and performance would need a proper design of the overall structure including many problematic and contested issues. The overall acceptance of such a shift among the various actors seems quite weak, and a major question is, to which degree the new attempts of quality initiatives at the school level will be effective and survive in the existing wider structure. Here we have to take into account, that there has already been a wave towards micro level school reform in the 1980s, out of which the debate about autonomy has originated. It should also be taken into account, that despite much attempts an improvement of achievement results could not be achieved so far.

Development issue (iii): Industrial relations

The bureaucratic logic of the school system is also given strong expression by the fact that teachers were traditionally employed as civil servants (with life-tenure and often permanent posts, i.e. the right to stay in a specific school). Only in recent years this has been replaced by a contract agent scheme for new teachers entering the system. Teachers are given full autonomy with regard to the choice of pedagogical methods they deem appropriate to achieve educational targets in curricula, and they also have a very high degree of discretion about one third to half of their working time (mostly performed in an individualised way outside of the school).

A large share of the teachers are organised in trade unions that are powerful stakeholders and grouped in political fractions that broadly mirror the political parties in Austria. Traditionally, the Austrian teacher unions are led by conservative representatives (Christian democrats), with differences in the political preferences between the upper level 'academic' teachers and the teachers in compulsory schools (thus the 'politicisation' reaches into the teachers organisations also).

Regulatory changes by the current reform have been outlined above, with the long term gradual implementation period making an assessment of effects very difficult. It was shown, that the new regulation contains many invasive points, where the traditional practices might prevail, and develop new categorisations of teachers, and negotiate plenty of new kinds of allowances on top of the somehow simplified structure.

The main developmental path would be to establish a new professional layer of practice and organisation that would shift the attention towards pedagogical practice in addition to the issues of interest negotiations, and would take the political responsibility away from the trade unions alone. The basis of this development could be the many existing initiatives for school and pedagogic development, which are not commonly organised and are also not visible in the common educational discourses. A main threat in this development is the prevailing high level of politicisation which tends to absorb professional issues into the existing unproductive and polarised patterns of discourse instead of creating and pushing new more productive paths of discourses.

An important asset in this development could be research and evidence, which is quite heavily discredited from different sides at the moment, and which also needs substantial development in order to show its positive potentials.

Development issue (iv): putting the fragments of education policy together

As the communes are responsible for the infrastructure including non-teaching personnel, the available resources and the competencies of the communes are an important element of the provision of education in Austria. The fragmentation of responsibilities also leads to important interfaces between sectors of education which are situated with different authorities (the academic and general schools at lower secondary level: if participation in the academic track is increased additional resources come in from the central level, without changing the communal level, but also power about schooling is redistributed to some extent; and the relation between pre-primary and compulsory schools is also affected). The availability of resources at the communal level is a very important issue for education which is governed through the negotiations about the redistribution of the federal taxes to the Länder and Communes.

These negotiations are performed as a separate political activity spanning all the different policy fields, setting parameters also for compulsory education as a part of these negotiations. As a consequence of this split the different sectors of education at certain localities are kept separate, and the planning of infrastructure is not comprehensively monitored. The federal level makes its own planning, and the Communes and the Länder make their planning for the fragmented localities. An important deficiency is that the school types at the lower secondary level are so completely separate that not even simple monitoring figures can be found that would give a comprehensive picture of resources at this level (in the academic school the students can be assessed separately for the lower and the upper cycle, however the teachers and other resources cannot by the given statistics, and are consequently not reported. This aspect is important for planning, as the ongoing shift in participation from the general school to the academic school means in parallel that additional resources come in, without automatically affecting those from the Länder and communes.

As a result of these governance structures, we cannot find a systematic logic in the structure and development of the school facilities. This is reflected in various aspects of the school structure (e.g. the distribution of school sizes seem erratic and does not reflect any reasonable structure). The current system seems also unable to cope with differences in demographic development, as can be demonstrated by the comparison of the population and the resources in primary schools. In the Länder except Vienna the 6-9-year population declined by 15-30 percent 2000-12, whereas the deflated real resources per population for primary schools increased by 20-40 per cent in the same period, whereas in the Vienna region, where the population increased slightly, the resources remained stable (Figure 6) The comparison of the development of these figures gives an erratic picture pointing to the above mentioned basic expansionary logic, and being unable to plan and to redistribute between Länder, so the development seems to be a combination of (expansionary) incrementalism and the inclination to get as much as possible out of the common pool.

Recent proposals concerning the *Finanzausgleich*, which must be renegotiated in 2016 include a closer look at the sector specific demands, however, it seems not easily to imagine how this linkage can be provided, given the divergent interests and the basic structures of the negotiations.

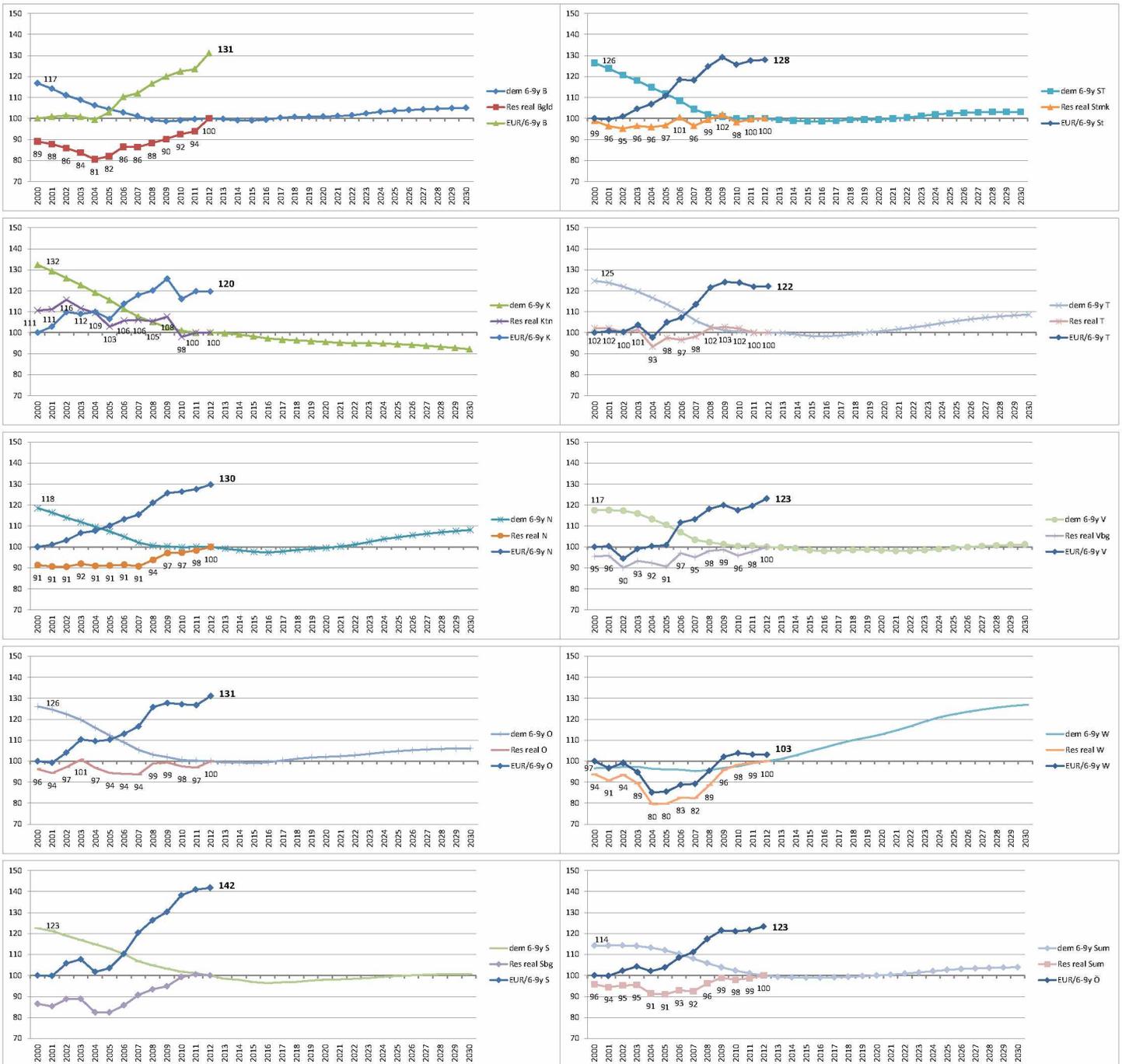
Contested evidence and structural deficiencies vis-a-vis systematic evidence informed planning and steering

Since the Austrian participation in the international Large Scale Assessments that started in the late 1990s an increasing emphasis on 'evidence based policy' has been promoted at the federal level. The first participation in TIMSS has led to a substantial project for professional development (IMST) which is still in place, whereas in particular with the PISA assessments the topic became increasingly politicised and contested. The teacher unions have been

basically critical against this movement, and the increasing attempts towards evidence are quite separate from the practice level.

Figure 6: Comparison of demography and resources in primary schools by Länder

6-9y olds and resources for primary school index 2012 = 100; relation resources/age group index 2000=100



Source: own calculations based on STATISTICS AUSTRIA

The existing governance system includes fundamental hindrances for political planning according to priorities. The fragmented and interlocking responsibilities among the state and non-state actors (trade unions) as well as the basic regulatory structure make the effective formulation of political priorities difficult, and diffuse in particular the relationship of priorities to the use of resources. As has already been argued a main resulting dynamic in this system is the basic trend towards the expansion of the educational budget (i.e. reduction of class sizes) which severely counteracts considerations of effectiveness and efficiency. Another severe hindrance is still the lack of sufficient information, despite substantial improvements in the documentation of the distribution of federal resources as well as the educational statistics. The use of resources across the different administrative and political levels is not transparent, and the financial information cannot be clearly related to the material statistical information about students and teachers, so in several ways it is not obvious to calculate unit costs. The statistical volume of the NBB has taken this as an objective, however, the conventional classifications, which differ between the financial and the material information continuously create difficulties in achieving this task which should be carried on (Lassnigg et al. 2007, Lassnigg et al chapter NBB 2009). The breaking of bureaucracy by federalism and the lack of autonomy and concentration of resources at the school level also weaken the relationship of resource allocation to practice.

The analysis of regional differences in the development of the various parameters does not provide systematic meaningful patterns but rather gives an erratic picture. This is plausible, as mechanisms that would clearly channel the resource use towards certain priorities do not exist. A basic mechanism that guides the allocation of resources is incrementalism, meaning the yearly updating of what has been there already before (substantial redistribution seems not possible, even if the parameters would point to such needs, as the different demographic developments between Vienna and the other Länder indicate). On the background of this incrementalism the existing structure supports the federalist political power play known from the bureaucratic logic indicating that every actor tries to maximise his or her resources (this might explain that against the basic expansionary trend some Länder have succeeded to receive relatively more resources than others).

Since the late 2000s an overarching priority has been the – knowingly expensive – reduction of class sizes that is widely consensual among all groups of actors (except some researchers), and fits into the also consensual basic priority of the expansion of educational resources as a political value. According to this consensus substantial additional means have been provided for these purposes in the federal budget through the last decade, in particular for the NMS reform. However, the tight European rules towards the reduction of public deficits has currently reversed the trend, and the financial path towards 2018 demands substantial cuts in parts of educational finance. This means that the priorities set

some years ago cannot be carried through, and that the austerity politics will create heavy conflicts about resources among the various actors.

The indicators of *wirkungsorientierte Steuerung* point to longer term issues which seem difficult to arrive in the political logic of incrementalism without the actors devising strategies at the practice level to reach the priorities.

The statistical information for the monitoring of resource use reflects the basic administrative and political structures and therefore still includes substantial gaps, in particular concerning firstly the relationship between the financial information and the material information, and secondly the relationship between financial and substantial information about teachers and students. A basic issue is how to include the high proportion of transfers between the levels into a consistent monitoring system. Consequently the lower secondary level with the two categories of Landes- and Bundesschulen cannot be monitored as a comprehensive entity, and also the categories of Landes- and Bundeslehrer cannot be compared easily.³¹

Full information about the resources for infrastructure provided by the communes is still not completely available, leading to the demand for better information for the steering of resources in the compulsory school sector in the current proposals for the Aufgabenreform of the state administration.

Schulversuche have some tradition in Austria since the 1970s, when a kind of experimental design has been set up for the development of comprehensive reform. However, these approaches have always been flawed, because the academic school could not be included into the trials. Moreover, the envisaged reform has been implemented only in the sector of the general lower secondary school, mainly introducing setting differentiation by the achievement groups in principal subjects. From this time a practice of trials (Schulversuche) has been established that is used rather for the purpose of reform, and is not systematically controlled. Since the 1980s an approach of school development based on concepts of action research has flourished, leading to some duality between this kind of qualitative micro level school development (represented in an exemplary sense by the IMST project), and more formal quantitative approaches which somehow transferred into the LSAs, and then the creation of the BIFIE.

³¹ Until recent changes it was not possible for the federal level to get information about the parameters of the employment of the Landeslehrer despite the responsibility to refund the total expenses (Lassnigg, Nemeth 2002). Concerning the information about the Landeslehrer see the references of the Rechnungshof given in http://www.rechnungshof.gv.at/fileadmin/downloads/2013/beratung/gesetzesbegutachtungen/Stellungnahme_Novelle_zur_Landeslehrer-Controllingverordnung.pdf

Considerations concerning utilisation, distribution and management of resources

In this section the above considerations are a bit more focused and concretised towards the governance of different aspects of the allocation and utilisation of resources. The use of resources concerns the practice level at schools, the distribution concerns the channels of how the resources travel to the school level, and the management concerns the mechanisms and practices that might improve both, the use and the distribution of resources.

Main challenges for the use of resources

The main challenges of governance in education policy and politics in Austria have been outlined in the previous section. Here we can summarize more concretely the challenges for the use of resources at the school level. From institutional economics two aspects are important to consider: First the constellations-combinations of public-private and centralised-decentralised funding structures which have complex influences on equity (Checchi 2006), second the recommendation that the amount of resources should be determined at a certain distance from the school level, however, the use of this (given) amount should be determined as much as possible at the school level (Bishop/Wößmann 2001). In Austria most funding is provided publicly, in the characterised split of federal and Länder responsibilities. The main channel of funding, which in turn is determined at the federal and Länder levels, runs through the allocation of the resources for teachers to schools. Even the selection of teachers is not under the responsibility of the school. The comparatively smaller proportion of resources for infrastructure is determined by the communal and the federal level; for the communal level this channel is much influenced by the negotiations about the *Finanzausgleich*, outside of education politics.

A main challenge is that in this split structure an overview about the use of resources is difficult to obtain because of certain significant gaps. First, the information about financing has been improved substantially in recent years, but is not transparent enough to interpret the given categories in a substantial sense, and the financial information is not clearly linked to material categories of provision (for the essential sector of lower secondary education comprehensive figures cannot be obtained because the resources of the academic school cannot be clearly identified for the lower and upper secondary level). Second, the information about teachers cannot be related to the information about students and infrastructure on a more disaggregate level, so the resource use at the school level cannot be sufficiently identified. Third, the resources used for administration and management cannot be clearly identified, because they are to some part embedded into the work of teachers, and the responsibilities of the school leaders also include linked responsibilities of administration, pedagogy and teaching; so in fact it is not known how much of the resource use is really linked to the principal tasks of teaching and learning. Fourth, the tasks of assessment are very much regulated in Austria, thus this function can also be expected to make use of a substantial amount of resources (relative to the direct support of learning), and besides

despite the existing thorough regulations of assessment a clear and substantial discrepancy between test results and the teachers' assessment occurs.

On this background the available information does not really allow to identify how the discrepancy between the relative high expenditure and the rather mediocre test results is related to the resource use at the school level. Thus this discrepancy remains to be a source of discontent and conflict, which hamper improvement. The basic framing in education politics that every problem were due to a lack of resources is systematically flawed because the resources are clearly quite superfluous, and in addition have also been substantially increased in recent times. It must also be considered that most additional resources have directly increased the teaching force, so the argument that teachers are key for success has been implicitly taken into account in Austrian politics.

The relationships between class sizes (CS) and the student-teacher-ratio (STR) have shown that a very favourable STR translates into a not so much favourable class size. Here the difference between the overall class size and the effective size of instructional groups must be taken into account, as the effective class sizes are below the nominal class sizes because of the achievement groupings and several regulations about divisions in certain subjects. Because of the complex regulatory system, information about the effective class sizes is not reported regularly and difficult to obtain.

The exemplary analysis of the relationship between the demographic development and the allocation of resources in the sector of primary schools has shown that the schools in Länder with a demographic decline have earned a substantial 'demographic dividend' by increasing their resources per population in a similar amount to the decline, whereas Vienna had to suffer a 'demographic penalty', as the favourable demographic development was not related to an increase of resources (despite a high amount of demographic change has been caused by immigration). This analysis clearly indicates that the mechanisms of resource allocation in this sector do not reflect needs, and that the current system does particularly not support redistribution of resources according to the needs.

Proposals to shift more teaching resources away from administration to effective tasks of teaching because of specific personnel would cost less salary than teachers can only increase efficiency if the teaching workforce is reduced by the respective working hours. However, based on the current framework and practice this seems even unthinkable, so it can be expected that this shift in reality will increase expenditure, as the administrative personnel will be cheaper but employed in addition to the existing teaching force, thus improving implicitly the favourable STR even further.

Summarizing a first main challenge concerning the use of resources at the school level would be to provide substantial better information about how the resources are used, and where the discrepancy between high expenditure and mediocre results comes from. Before

this question is answered more clearly, an increase of resources should not be envisaged in any area. Proposals of formula funding to gear more resources to disadvantaged schools should consider first how the resources are actually distributed, and should secondly at least be based on redistribution rather than on an increase by putting them on top of available resources – otherwise there is a serious danger that the additional resources might blow out as a seemingly plausible symbolic solution (similar to much of the resources of the NMS).

Given the overall constellation, a second challenge would be a substantial shift of responsibilities to the school level, which would need a very careful design given the many hindrances in the given structure. Proposals in this direction are available; however, they remain on a much too general level to be effective. In formulating such a solution Austria can build on much of the experience of other countries, which have taken measures much time before (e.g. the material from the OECD GCES project can be used for this purpose). A main question is whether a satisfactory solution would need a shift in the regime, and cannot be achieved by incremental changes. The current approaches of improving the professional practice (SQA, QIBB, also IMST)³² can be taken as starting points, from which the structural needs and hindrances can be analysed, and solutions be developed from the practice level rather than from the political level. The use of evidence could be infused more directly into practice at this level.

A basic question concerning this challenge is related to the distribution of responsibilities between the federal and the Länder level. An existing proposal by a current high level reform commission proposes to shift the responsibilities for provision substantially to the Länder level, and to reduce the responsibilities of the federal level to strategic functions. This would aggravate the division between financing (still by the federal level) and provision (shifted to the Länder level), and would give leeway to the political charge of increased resources as solution for each problem, which is very likely given the existing logic. A shift of these responsibilities to the Länder can only be successful, if the responsibility of generating the resources is also shifted to the Länder level by the right/responsibility of collecting the respective taxes. The increased responsibility at the Länder level for implementation would also shift the issue of school autonomy to this level, and thus very likely prevent a common approach to this main challenge.

A third challenge is that a reform of the Austrian governance system must be based on a clear account of how the existing system works, and what its pitfalls are and how the practice can be improved, instead of looking on the complex and complicated distribution of responsibilities on paper, and to try to solve these problems on paper rather than on the level of practical governance. As proposed in the previous section, the four interrelated dimensions (distribution of responsibilities; school autonomy; industrial relations;

³² SQA: Schulqualität Allgemeinbildung =initiative school quality in general education; QIBB: Qualitätsinitiative Berufsbildung=quality initiative for vocational education and training; IMST-Innovations make schools top.

Finanzausgleich) should be taken into account and be brought into a reasonable comprehensive structure.

Main challenges concerning resource distribution

The main challenge with resource distribution concerns the conditions of allocating the resources in a more systematic and comprehensible way according to the needs and priorities. The empirical distributions across Länder look erratic and do not give meaningful patterns, at more disaggregate levels sufficient information and monitoring is lacking, reflected by the charges of the Rechnungshof and the Aufgabenkommission for the development of an information base for steering.

The resource distribution is organised in a fragmented way between administrative political levels, with the distinction of the Landes- and the federal schools, employing different categories of teachers partly for the same groups of students, and a distinct system of allocating the infrastructure. This system makes comprehensive planning impossible, and relies on a mixture of incrementalism and political influence. The structure and development of school resources appears erratic and does not follow reasonable patterns.

As different aspects of resources are allocated by distinct mechanisms, and different but interrelated sectors and regions follow different rules, the information system about resources is also fragmented, and does not allow a comprehensive reporting and assessment of resource allocation.

The divergence of financing and spending between the Länder and the federal level constitutes divergent interests and political logics and competition which further reduces the rationality of resource allocation. In addition some of the Länder span quite big and mixed regions that include similar heterogeneity as Austria as a whole (e.g., between rural and urban regions), and thus also include conflicting interests.

In particular two issues of resource allocation are problematic and contested, first how teachers are allocated to schools, and second the allocation of resources for infrastructure from outside education politics

- The allocation of teachers to schools by the authorities beyond them makes on the one hand schools dependent and reduces their responsibility, and within the structure of politicised federalism makes teachers dependent on the political forces – on the other hand the argument is brought forward that the existing structure would protect teachers from the arbitrariness of local school heads. Overall the idea of school development research that schools are able to manage their own affairs successfully is weakly developed in the Austrian environment.

- The separation of the allocation of the means for infrastructure from education policies impedes planning and oversight, in particular in the wide area of the small and weak communes which receive much less resources than the Länder. This highly decentralised field does not provide the necessary data for gaining oversight. The Rechnungshof thus demands the development of a sufficient information base for steering. Moreover the lack of resources by communes hinders the professional development of personnel in pre-primary education, as more highly educated personnel is considered being too expensive by the communes.

A specific issue concerning the failure of planning is the reform of teacher education, which has been amended and is implemented in a period when the renewal of the teaching work force will already be to a large part processed through the system.

Proposals of formula funding based on factors of disadvantage have been brought forward more recently to channel the resources more directly to the needs.

The figures in ANNEX 5 show a quite distributed picture without patterns that could be reasonably interpreted.³³ There are some differences by population structures, however, these cannot sufficiently explain the patterns. A comparison of the communes with very small primary schools only (up to three classes) to the Länder averages shows quite similar class sizes in the small schools to the average. We can see very different relationships between class size and student teacher ratios in different Länder in different school types (at given class sizes the STR varies by more than 1 up to 4 students/teacher between Länder in given school types, that amounts from 10% of the average ratio in primary school through 20% in NMS up to 100% in SEN). There are different patterns of Länder across school types with some rather consistently showing favourable figures (N), and others rather reverse figures in different school types (B, K). A tendency seems to be that the small and medium Länder show more specific resource intense patterns than the larger ones; maybe the overall amount of resources influences generosity of distribution.

Main challenges concerning resource management

The main challenge to resource management is its distributed and fragmented nature based on the structure of the overall governance system that splits the different aspects of resource management up to various processes at different levels of the system (personnel, infrastructure, running costs are due to different processes, where the different levels central, regional, local are differently responsible), and takes the responsibility for resource management away from the schools as the location where the resources are put into use. Primary processes of resource management are the implementation of the respective

³³ For a detailed overview about the distribution of several aspects of education across the Austrian Länder see Lassnigg, Lorenz (2010) Oberösterreichs Bildungssystem im Benchmarking. Institute for Advanced Studies (IHS), Vienna (report commissioned by AK-Upper Austria) <http://www.equi.at/dateien/ooebm-ak-jku-iv.pdf>

regulations by the various authorities, and the related processes of the gathering and transmission of information of how the resources flow. A definite list of challenges to resource management was given in the 2007 report (Lassnigg et al. 2007, 60-61):

- political expansionary dynamic of education expenditure
- political focus on the class size as most important 'quality indicator' which is the most cost intense policy parameter
- use of nominal overall class size indicator that reflected an artificially 'worsened' situation as the effective group sizes have been substantially lowered by regulations due to mandatory class separations (Teilungsziffern) in certain subjects, achievement groups, etc., but this effective group size is not reported and difficult to obtain because of the complex regulatory system; as a result politics is mainly guided by a fictional parameter
- class repetition increase duration of students in the system and thus automatically increases costs for questionable results (estimation of additional costs was roughly around 150 Mio EUR)
- institutional incongruence between financing and spending bodies
- lack of coherent monitoring of efficiency (monitoring only of sub-processes, if ever)
- comparatively high difference between personnel expenditure due to wage scheme and actual expenditure about 12% at time of report)
- complex system of regulations in service laws and collective agreements making personnel policy endemically intransparent and rendering steering impossible, but increasing the power of the teachers' interest organisations and supporting charges for increased pay for each reform affecting working conditions
- task profile of teachers involving tasks that could be performed by staff with lower salaries.

Because of the distributed and fragmented nature of the governance system the information and monitoring is also split up and distributed, thus there is no location where the information from die different processes is put together, which produces a basic and endemic state of in-transparency about the resources spent in education. Even if each of the processes were transparent in itself, the systemic structure would produce in-transparency. This challenge is definitely well known, and periodically put to scrutiny since five decades (Lassnigg et al. 2007, 57-61). As a consequence, a basic intention in the statistical Volume of the National Education Report (NBB) has been, and still is, to provide a common categorical frame that allows to relate the statistical information about the different units and masses (students stocks and flows, graduation and retention, kinds of resources, teachers, process indicators, etc.) at different levels and in different sectors directly to each other. Until now this endeavour has only partly been successful, because the various information bases include different categorisations that are reflected in the statistical information. The practices of the different stakeholders in setting their categories are stronger than the observers trying to put the information together in a consistent way. Thus a review among the primary producers of

information and an overarching political will would be necessary to provide such a transparent system. Concrete main challenges at this level of the production of information and knowledge management are different categorisations of information about students and teachers, and still different categorisations of finances, and different categorisations of finances from different financing bodies.

Capacity building for resource management is bound to the governance system, and influenced by the political culture. On the one hand formal training will only be provided for 'official' tasks, on the other hand informal learning occurs of how to handle tasks in the given structures according to the given interests. In sum the challenges of resource management are closely related to the construction of the governance system, and in particular to the issue of increased school autonomy. If a reform in this direction would be devised, a new comprehensive system of the distribution of resources must include a feasible junction of the now distributed functions and sub-processes, including a solution of the responsibilities at the different levels, and as a critical part a sufficient capacity building at the level of the schools, where the discretion about the use of resources should be linked much more directly to the performance of tasks at this level.

A first step for the improvement of resource management should be a definitive analysis of the factors that constitute the gap between high expenditure and weak results. At the moment this gap is not sufficiently understood, to provide evidence based recommendations for solutions. This report contributes to the understanding of main elements of the challenges; however, how the different aspects play together should be systematically evaluated.

Summary, concluding remarks

The framework

This paper has taken up the basic framework of the Lassnigg et al. 2007 study of educational governance in Austria to explain the difficulties of improving the outcomes of the system despite substantial (additional) resources have been put into the system in recent decades and many reform approaches have been tried at various levels. This framework points to serious structural deficiencies which are hindering the development, whereas the existing proposals for change and reform remain at quite scattered and superficial levels. According to the explanatory framework the following main points must be considered:

- First the relationship between the bureaucracy and the politicised distributional federalism is deeply contradictory, as the (potential) strengths of the centralised bureaucratic model of providing a comprehensive and consistent policy is broken by the federal structures, thus only the negative regulatory aspects of bureaucracy prevail
- Second the bureaucracy and the politicisation of the administrative and political structures have been paralleled by a symbiotic institutional complementarity with the system of interest representation and industrial relations; thus a very tight and complex web of regulations has developed that provides strong veto points and charges for additional allowances to any attempt for change, as always must be defended what has been won in the past (this structure is echoed in the reform of the Dienstrecht, by the extension of its implementation to a period of four decades, during which all the time the competing or conflicting values and practices of the 'old' and the 'new' will continuously blow air into the glow)
- Third the layered and fragmented political structures, with the main political mechanism of the Finanzausgleich separating important aspects of the distribution of resources from education policy, are endemically hindering oversight and transparency; therefore even the statistical categories in the different sectors and on the different levels differ so much that a consistent data base is almost impossible to build up (despite the basic demands are clear already for five decades; somehow we might derive from the experience in this field of the provision of an information base a kind of a 'law of endemically insufficient improvement').
- Fourth the overall constellation leads to a weak position of the schools as well as the local units which are dependent on the upper administrative levels, and on the politicians, and have too little room to move at the institutional level, so the teachers are driven into their classrooms where they have much discretion, and to their flexible use of working time outside of the school; the interest driven representation structure also captures the professional interests which are driven behind the material and power interests.

To find a way through this complex constellation one possibility of reducing complexity is to ask for more resources. So the political discourse is overwhelmed by the issue of answering to increasing problems – which can be found everywhere – by increasing resources, with the reduction of class sizes being the main quality indicator (which, however, reduces productivity and efficiency in economic terms; thus an endemic hostility against economics, and against data supporting it, can be predicted).

Empirical findings and illustrations

In addition to the previous study some new empirical findings or illustrations are presented, which underscore the propositions.

- The basic structures of the distributional federalism have been illustrated by the comparison of the collection of taxes at the different political levels, and the spending of the resources after transfer. A specific position of the Länder is visible that collect very few taxes and spend much money for the salaries of their employees. If the institutionalist interpretation is followed that the employees provide much of a power base, then the transfer from the federal level pays for the power base at the Länder level.
- Some international comparisons show an exceptional structure of the Austrian distributional federalism, which makes it unique also compared to the neighbours Switzerland and Germany. The distribution of responsibilities in Austria is only similar to very big countries, or those with national divisions, small countries don't have a substantial regional level. The Swiss cantons have to collect their money by taxes; that constitutes a completely different constellation, and the comparison with the German federalism is completely biased, because in terms of scale Austria must be compared to German Länder, which are at this level, however, fairly centralised.
- A look at the longer term development of educational expenditure shows an expansionary tendency, despite already high levels of spending (if in certain periods the expansion of the budget was contained, the following periods show often a bigger increase compared to the saving). The coming period of financial constraint will be interesting to be seen, the planning figures point to quite severe cuts in the near future (the additional resources for improvement from previous periods seem now to be taken back again).
- Endemic intransparency of the distribution and use of resources can be seen as an important empirical finding, maybe the best illustration for this is the fact that the class size as the main indicator used for quality is only a nominal figure that is upwardly biased, because of many regulations that split classes to smaller groups, however, without regular information about this; the regulations are so complex that an easy estimation of this effect that reduces the nominal class size to an average effective size of teaching-learning groups is not possible (examples for the lower effective group size have been the achievement groups in general lower secondary

schools, now substituted by the team-teaching model of NMS. The substantially smaller Student-Teacher-Ratio rather points to the real situation.

- Several comparisons of indicators between the Länder do not give any systematic structures, so the distribution of resources to the educational institutions seems erratic and driven by unclear interests. In particular the comparison of the demographic development and the development of resources spent in primary schools shows that most Länder with a demographic decline have substantially increased their resources whereas regions without decline (in particular Vienna) have paid a demographic penalty. If the demands from immigration are considered it must be concluded that the actual system of resource distribution is not able to channel the resources according to the demand (comparisons to the federal level indicate, that the erratic structure of the Länder rather influences that level than the other way round).

Identified challenges

Many specific challenges have been identified at different levels and in different sectors, which must be brought together somehow in order to provide some guidance for what should be done. The main identified challenges in Austrian schools are fourfold: (i) the discrepancy between high expenditure and moderate results, (ii) the needs resulting from migration, (iii) social reproduction, (iv) current and future budget constraints.

As outlined two strategies can be used for the improvement of efficiency, reduction of expenditure with given results, or improvement of results with given expenditure. So far a third way has been chosen, to increase expenditure (in particular teaching resources) with the hope of bringing about better results. As part of the current and mid-term financial consolidation path the resources for education seem now severely under scrutiny. Thus the recent strategies must come to a halt, and new strategies must be found. However, as this turn has been chosen without preparation, the costs of adaptation might be high. Finding a strategy for the improvement of efficiency without destroying the positive motivations and triggering conflict seems to be the biggest challenge at the moment and in the short and mid-term perspective. Based on the sketched basic framework and the fragmented structures not much optimism for finding such a strategy seems appropriate. It seems for sure that without a serious preparation of policies for improving efficiency an improvement of the results will be unlikely. Several policies and instruments for improvement have been brought into start during recent years (standards, SQA, QIBB, new teacher education), however, these need motivation and resources to be used for improvement, otherwise the real danger exists that these measures (which are not fully positively endorsed in the system, and to some extent under conflict by powerful players) will only be used for increased control which probably will not lead to improvement. In this sense the current period of financial austerity comes at a quite difficult point of development of Austrian education.

In terms of governance the previous study has already identified four areas. As indicated in the title to this paper, steps towards improvement along these paths will presuppose the will to rethink the basic structures of governance:

- i. *Congruent distribution of responsibilities.* Resolving the problems of intersecting responsibilities among the authority levels, in particular in the direction that a definitive congruence between the tasks/duties of governing actors and the responsibilities for financing and spending is reached (the actual incongruence that the federal level is responsible for financing, whereas the Länder level is responsible for spending in the main sector of teachers in compulsory schools, and the duties are mixed is seen as a major problem reducing efficiency). The problems resulting from the given constellation have been further underlined by this study. Current political signals are pointing in a direction that due to a less complex distribution of responsibilities the incongruent distribution of responsibilities might be aggravated by giving more responsibilities of provision to the Länder, who then can charge the resources from the federal taxes. A clear recommendation is that the Länder should have only those responsibilities which they can finance from their own tax collection. If such a move that would substantially change the Austrian federalism is not done, no more responsibilities should be given to the Länder.
- ii. *School autonomy.* Designing, regulating and implementing sufficient conditions for pedagogic work at the school level based on concepts of school autonomy, by providing room for discretion and abandoning the bureaucratic and organisational obstacles for work at school (paralleled by the establishment of sufficient monitoring of achievement). A viable and credible structure of school autonomy should be worked out which does not exist at the moment. There are different proposals and much rhetoric in the air, and political conflicts running around them.
- iii. *Reform of the system of industrial relations.* Development of effective structures of industrial relations and working conditions in education, in particular reform or abandonment of Dienstrecht and shaping of attractive and flexible working conditions by changing the inflexible and tayloristic regulations and structures of payment of the salaries (devising teachers' work on the basis of professional principles instead as a collection of tayloristic points of effort constituting the salary). Steps towards reform have been done, however, also here the above mentioned 'law of endemically insufficient improvement' probably applies. As a new reform can only be expected after forty years when the current one will be implemented, a possible development path would be to strengthen professionalism as far as possible and at all costs. Maybe a rule could be that every step or measure taken must be evaluated due to its effects on professionalism, which in this course must also be defined and set alive.
- iv. *Comprehensive funding structures according to efficiency and equity.* Allocation of funding through simplified structures of responsibilities according to specified criteria of efficiency and equity, and considering the main challenges for education; a

comprehensive system must include the Finanzausgleich. This area will be a 'hot topic' in the near future, as new negotiations have already started. Here pushes towards transparency are necessary, and the distribution of the funds should be linked to clear educational strategies.

In any case will a precondition for understanding and improvement be the production of sufficient information and transparency about the use of resources. To this topic the previous study has given a recommendation that will finally be cited here. The concept is based on the idea that the statistical information and the management information should be linked, in order to produce good results and good statistics, the challenge is how to produce information that steps across the existing fragmentations and segmentations. The expected progress in the citation has clearly been overstated, two rounds of the National Education Report have brought some steps, but more is left to be done even at this level...

„Die Entwicklung der statistischen Informationssysteme hängt von der Nutzung im System für Qualitätsentwicklung und Qualitätssicherung ab. Daher sollten die Schulen in die Rückkoppelungsprozesse über das statistische Informationssystem einbezogen werden, indem erstens Referenzwerte für bestimmte Typen von Schulen produziert werden und zweitens die Schulen für ihren eigenen Bereich die Vergleichswerte besitzen sollten. Für diesen Zweck sind Qualitätsindikatoren zu entwickeln, die die verschiedenen Dimensionen von Information bündeln und verwerten, insbesondere SchülerInnen, LehrerInnen, Infrastruktur, Arbeitsorganisation und Unterricht, Finanzen und Kontextinformationen insbesondere über den sozialen und regionalen Hintergrund. Entwicklungen in dieser Richtung sind im Gange, jedoch gibt es nach wie vor große Lücken in den erforderlichen Datenbeständen.“ (Lassnigg et al. 2007, 182)

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ANNEX 1: Austrian governance structure in a comparative perspective

Annex 1-a: Governance Typology, number of decision levels per country

	Levels (main)	Levels +	Sum Levels	School	Central	Local	Province	State	Sub-region	School	Central	Local	Province	State	Sub-region
Netherlands	2		2	x	x					86	14				
England	2		2	x		x				75		25			
Belgium (Fl.)	2		2	x				x		71				29	
Australia	2		2	x				x		42				58	
Portugal	2		2	x	x					26	74				
Luxembourg	2		2	x	x					15	85				
Finland	2		2	x		x				15		85			
AVERAGE Gr.1	2									47	25	16		12	
Estonia	2	1	2+1	x	(x)	x				69	4	27			
Hungary	2	1	2+1	x	(x)	x				63	10	27			
Slovak Republic	2	1	2+1	x	x	(x)				59	40	1			
Iceland	2	1	2+1	x	(x)	x				55	3	42			
AVERAGE Gr.2	2	1								62	14	24			
Scotland	3		3	x	x	x				48	15	37			
Sweden	3		3	x	x	x				47	18	35			
Slovenia	3		3	x	x	x				43	41	15			
Denmark	3		3	x	x	x				41	22	37			
Turkey	3		3	x	x		x			19	63		18		
Norway	3		3	x	x	x				18	21	62			
Mexico	3		3	x	x			x		17	46			37	
AVERAGE Gr.3	3									33	32	27	3	5	
Czech Republic	2	2	2+2	x	(x)	x	(x)			73	1	24	3		
Korea	3	1	3+1	x	x	(x)	x			42	27	6	26		
Italy	3	1	3+1	x	x	(x)	x			39	36	8	16		
France	3	1	3+1	x	x		(x)		x	34	29		6		31
AVERAGE Gr.4	2,75	1,25								47	23	9	13		8
Austria	4		4	x	x	x		x		30	27	22		22	
Spain	4		4	x	x		x	x		29	16		16	39	
Japan	4		4	x	x	x	x			21	13	45	21		
Germany	3	2	3+2	x		x	(x)	x	(x)	23		31	5	31	10
AVERAGE Gr.5	3,75	0,5								26	14	24	11	23	2
OECD average	3	3	3+3	x	x	x	(x)	(x)	(x)	41	23	19	5	10	2
Sum				26	17+4	14+3	5+4	6+1	1+2						

Source: Own calculations based on OECD 2012 EAG

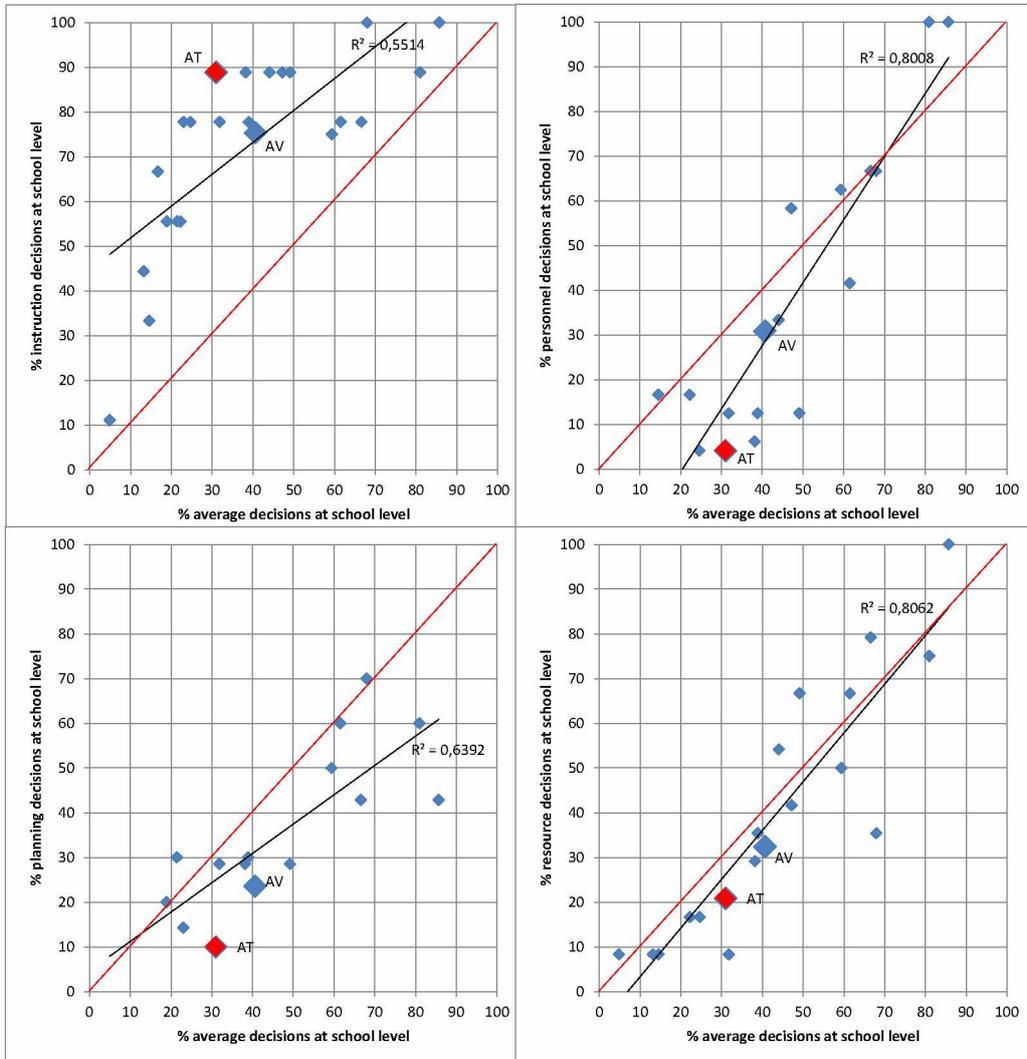
Annex 1-b: Governance Typology, number of decision levels per country

(based on Annex 1—a)

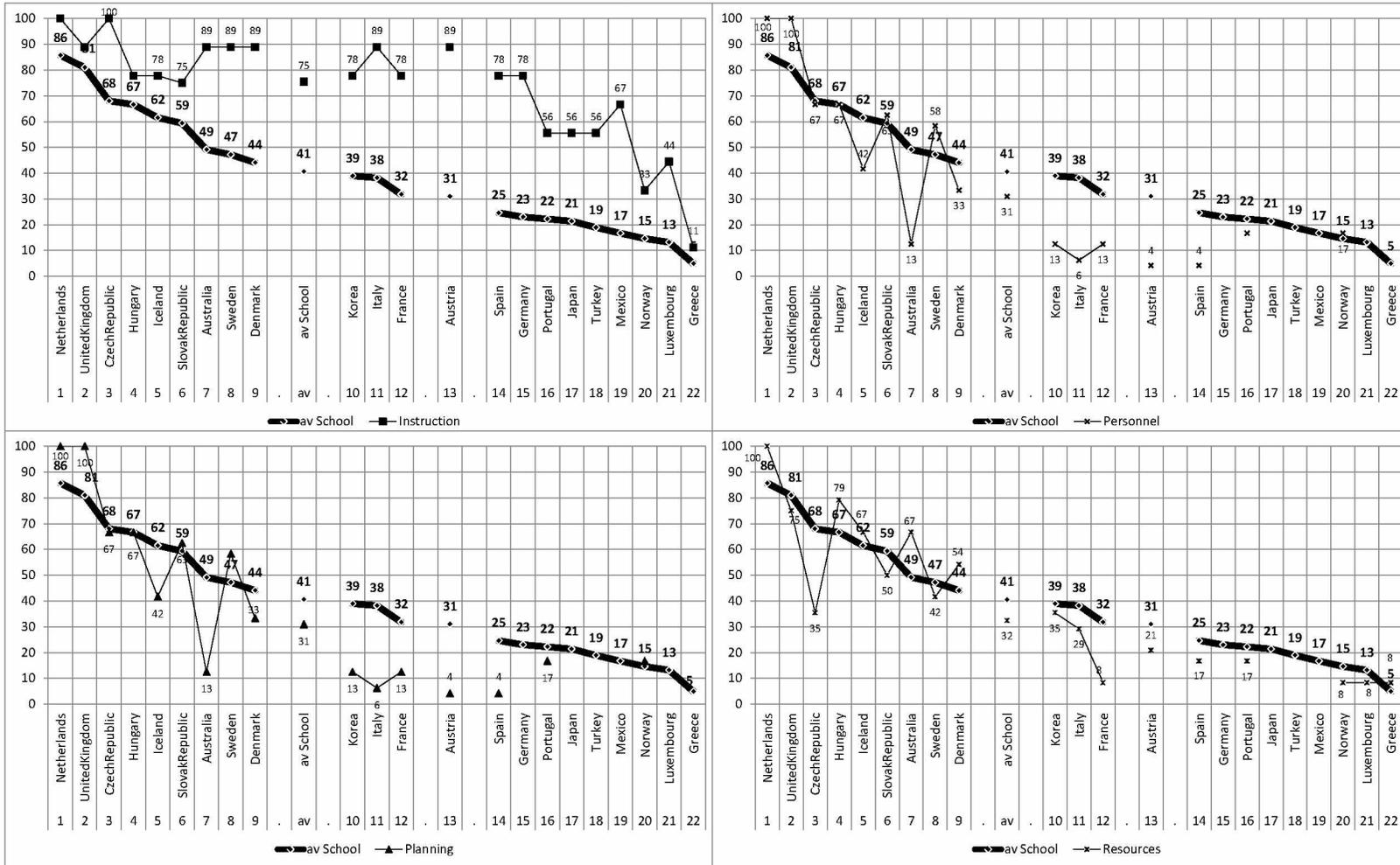


Annex 1-c: Decisions at school level

% domains compared to average % decisions at this level, 2011 (scatter)

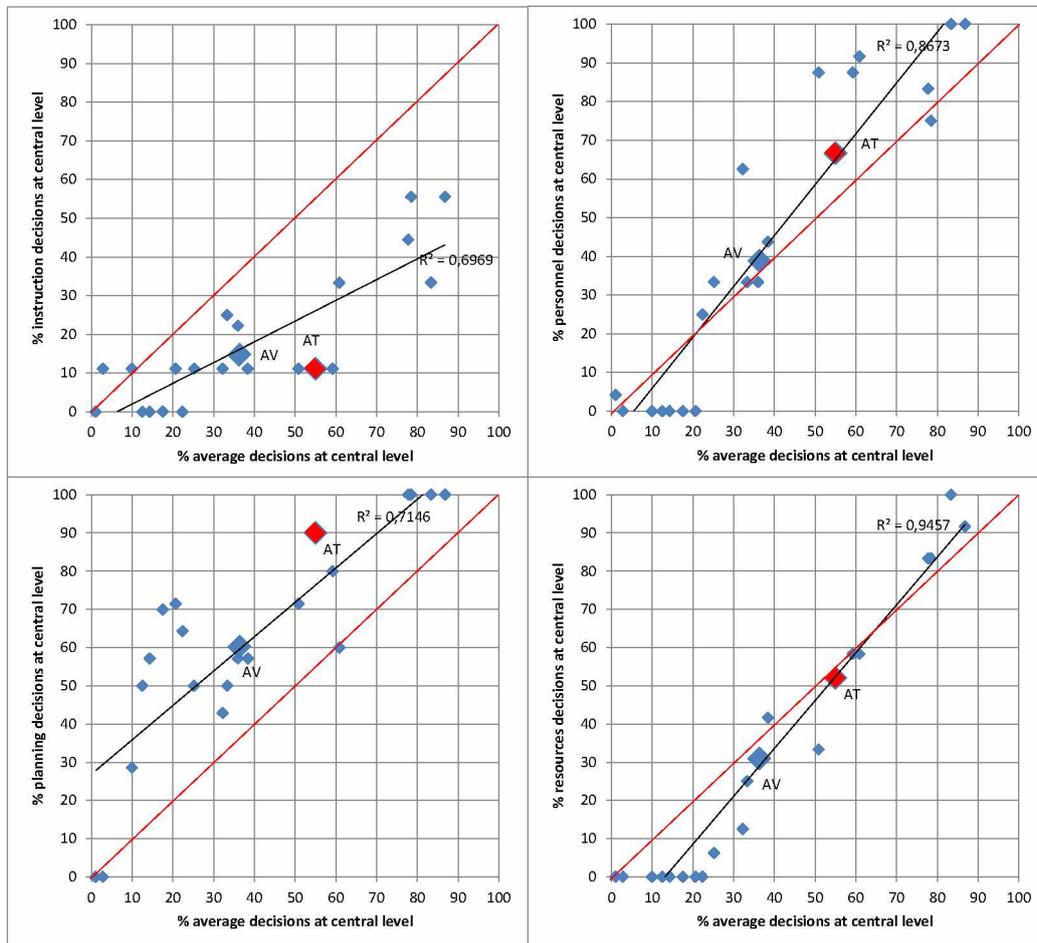


% decisions per domain taken at school level compared to overall decisions taken at school level, 2011

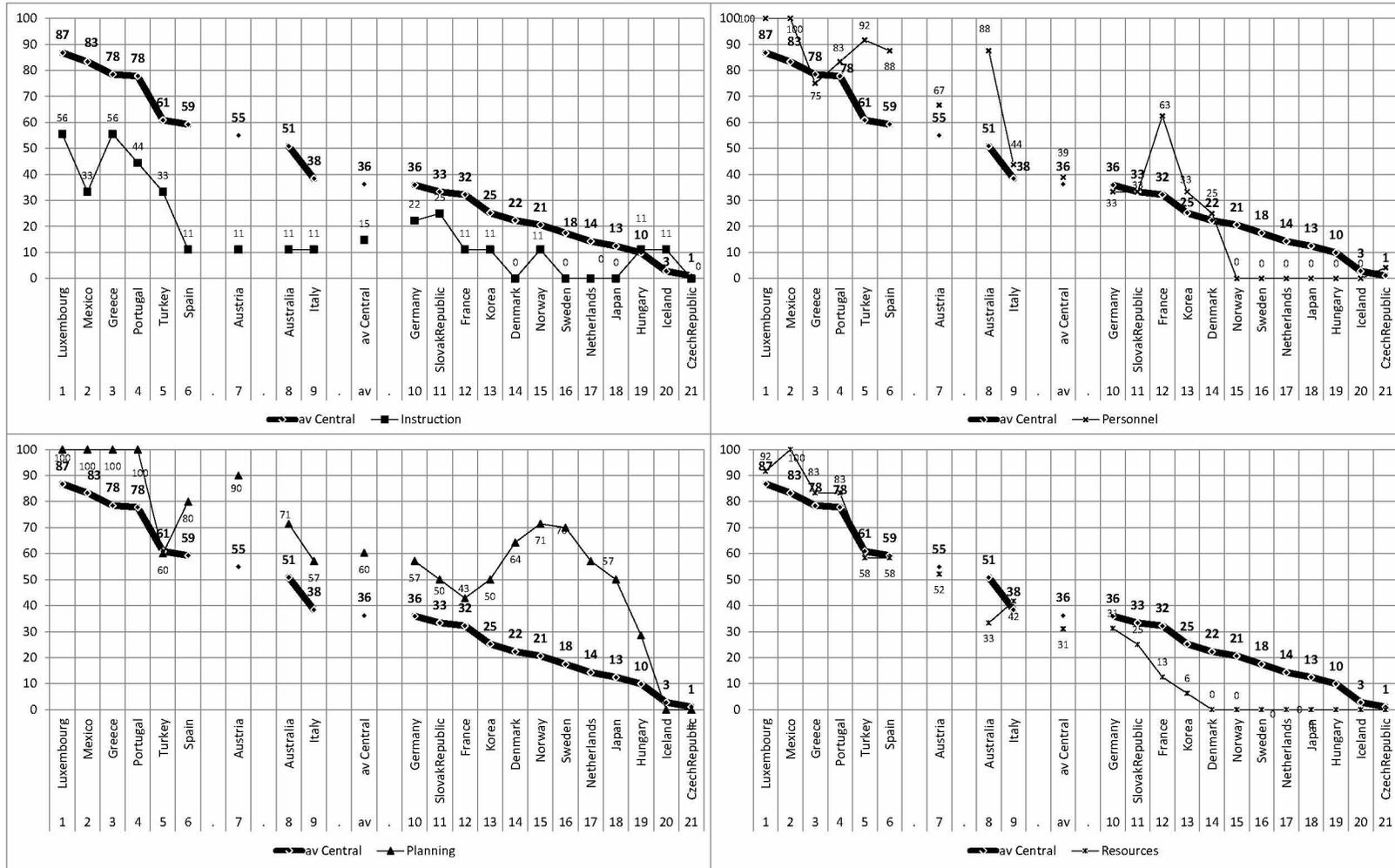


Annex 1-d: Decisions at central level

% domains compared to average % decisions at this level, 2011 (scatter)

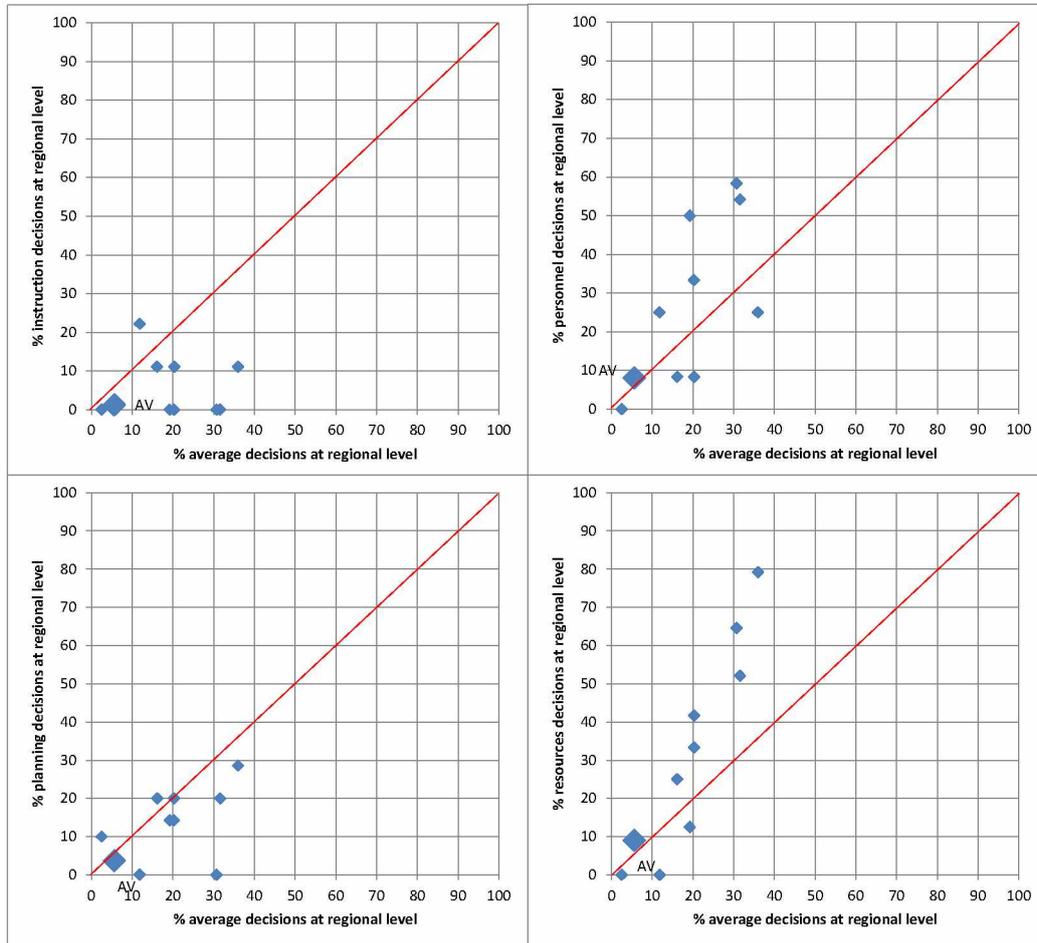


% decisions per domain taken at central level compared to overall decisions taken at central level, 2011

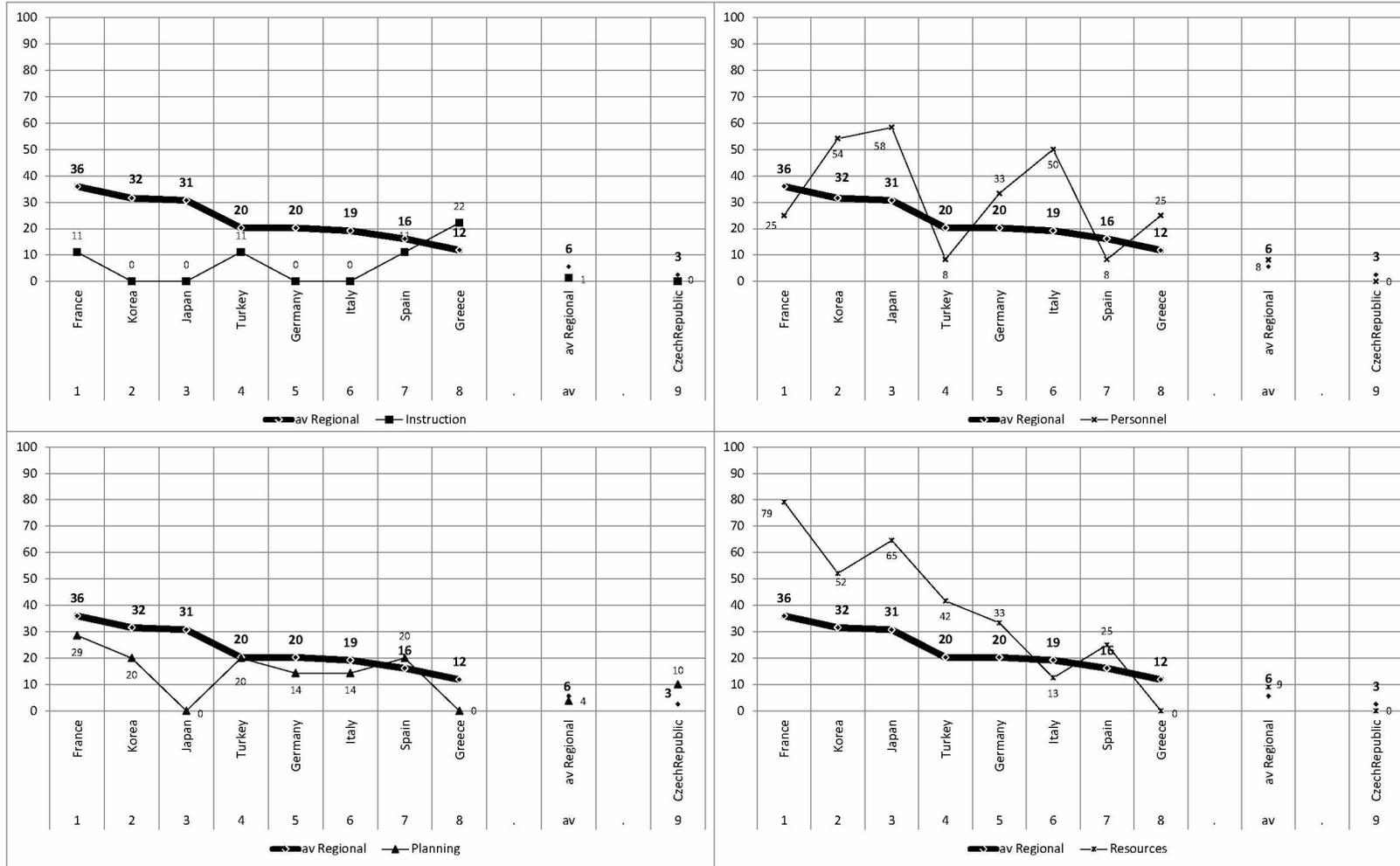


Annex 1-e: Decisions at regional level

% domains compared to average % decisions at this level, 2011 (scatter)

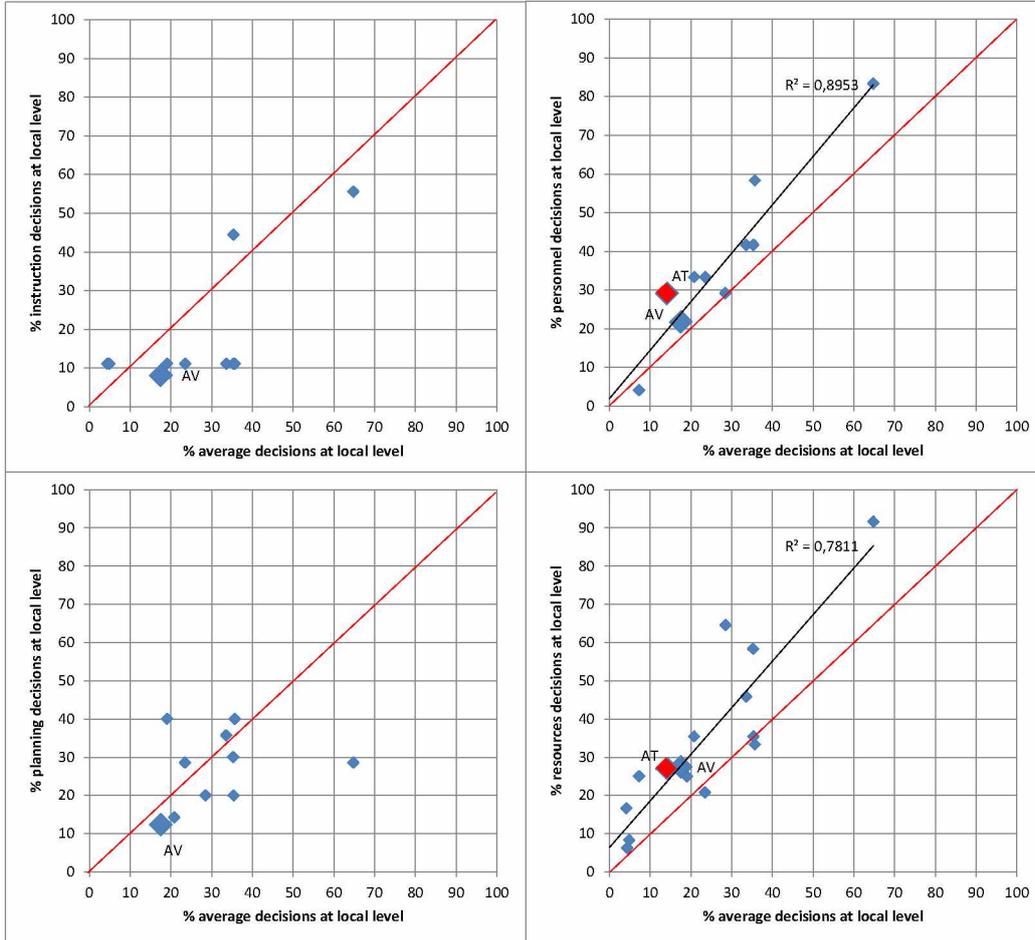


% decisions per domain taken at regional level compared to overall decisions taken at regional level, 2011

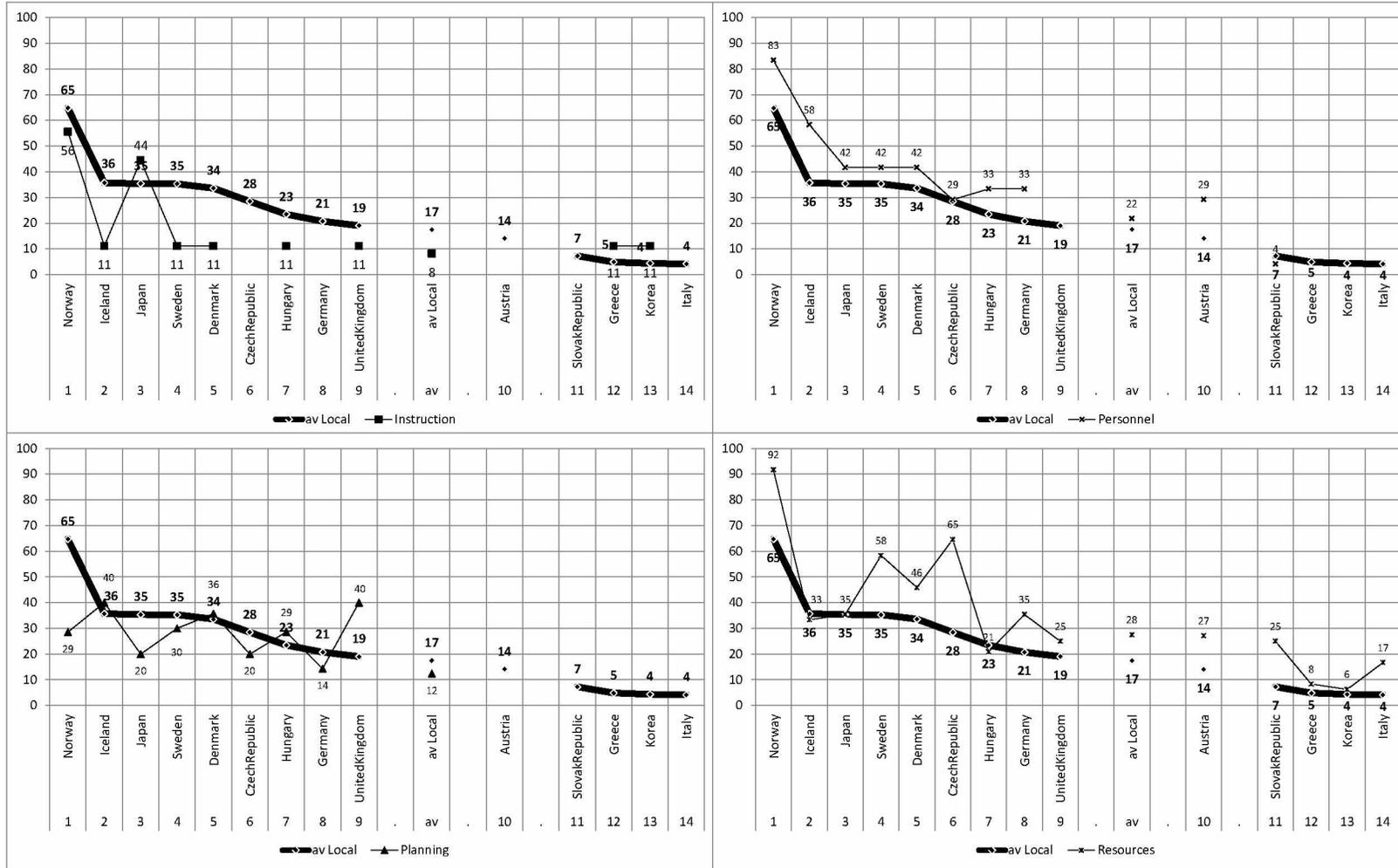


Annex 1-f: Decisions at local level

% domains compared to average % decisions at this level, 2011 (scatter)



% decisions per domain taken at local level compared to overall decisions taken at local level, 2011



ANNEX 2: Educational expenditure, detailed 2009-13

	Ausg. 2009-13 p.a.	% v.Unterricht	Zuwachs 2009-13	% Zuwachs 2009-13
SCHULE einschl. LEHRPERSONAL				
Pflichtschulen Primar und Sek I	3.370,98	44,8%	310,0	32,2%
Pflichtschulen Sek II	152,16	2,0%	7,0	0,7%
AHS gesamt	1.321,32	17,6%	71,1	7,4%
BMHS	1.319,52	17,5%	60,9	6,3%
BAKIP/BASOP	75,61	1,0%	-18,0	-1,9%
Zweckgeb. Geb. BundesS (AB92)	27,93	0,4%	4,6	0,5%
Auslandsschulen (AB92)	17,86	0,2%	27,8	2,9%
Heime und Sonstige	22,43	0,3%	-3,6	-0,4%
Private Träger (ABMHS), tw. Umschichtung	191,93	2,5%	183,3	19,1%
SUMME: Schule einschließlich Lehrpersonal	6.499,72	86,4%	643,2	66,9%
<i>STEUERUNG, SERVICES, INFRASTRUKTUR</i>				
Zentralstelle ab 2011	46,86	0,6%		
Regionale Schulverwaltung	102,85	1,4%	10,3	1,1%
Infrastruktur (BIG-Mieten etc.)	491,41	6,5%	247,0	25,7%
Qualitätsentwicklung und Steuerung ab 2011	23,96	0,3%		
Lehrer/innenbildung (PH)	170,07	2,3%	69,0	7,2%
LLL (Erwachsenenbi.)	35,93	0,5%	26,3	2,7%
Förderungen/Transfers (sozioök. Maßn.) ab 2011	71,40	0,9%		
[Zentralleitung ohne Infrastruktur]	84,56	1,1%	-34,1	-3,5%
SUMME: Steuerung, Services, Infrastruktur	1.027,04	13,6%	318,5	33,1%
TOTAL Unterricht	7.526,76	100,0%	961,8	100,0%
GESAMTBUDGET	70.600,85	10,7%	6.110,1	15,7%

Source: own calculation based on financial statistics

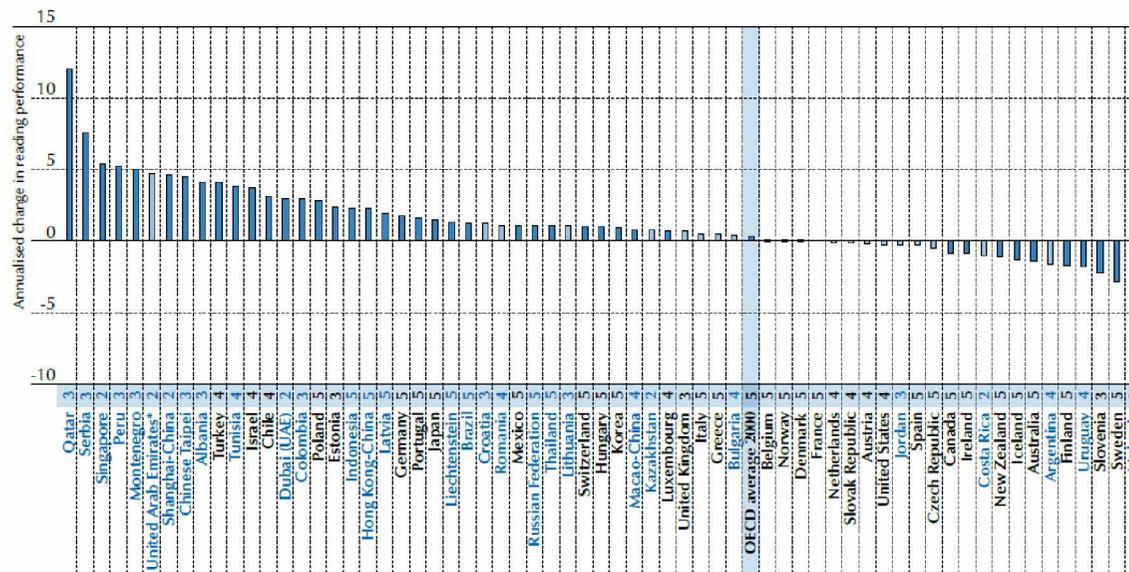
ANNEX 3: PISA annualised change reading, mathematics compared to PIAAC

a) Reading

■ Figure I.4.3 ■

Annualised change in reading performance throughout participation in PISA

Reading score-point difference associated with one calendar year



* United Arab Emirates excluding Dubai.

Notes: Statistically significant score point changes are marked in a darker tone (see Annex A3).

The number of comparable reading scores used to calculate the annualised change is shown next to the country/economy name.

The annualised change is the average annual change in PISA score points from a country's/economy's earliest participation in PISA to PISA 2012. It is calculated taking into account all of a country's/economy's participation in PISA. For more details on the calculation of the annualised change, see Annex A5.

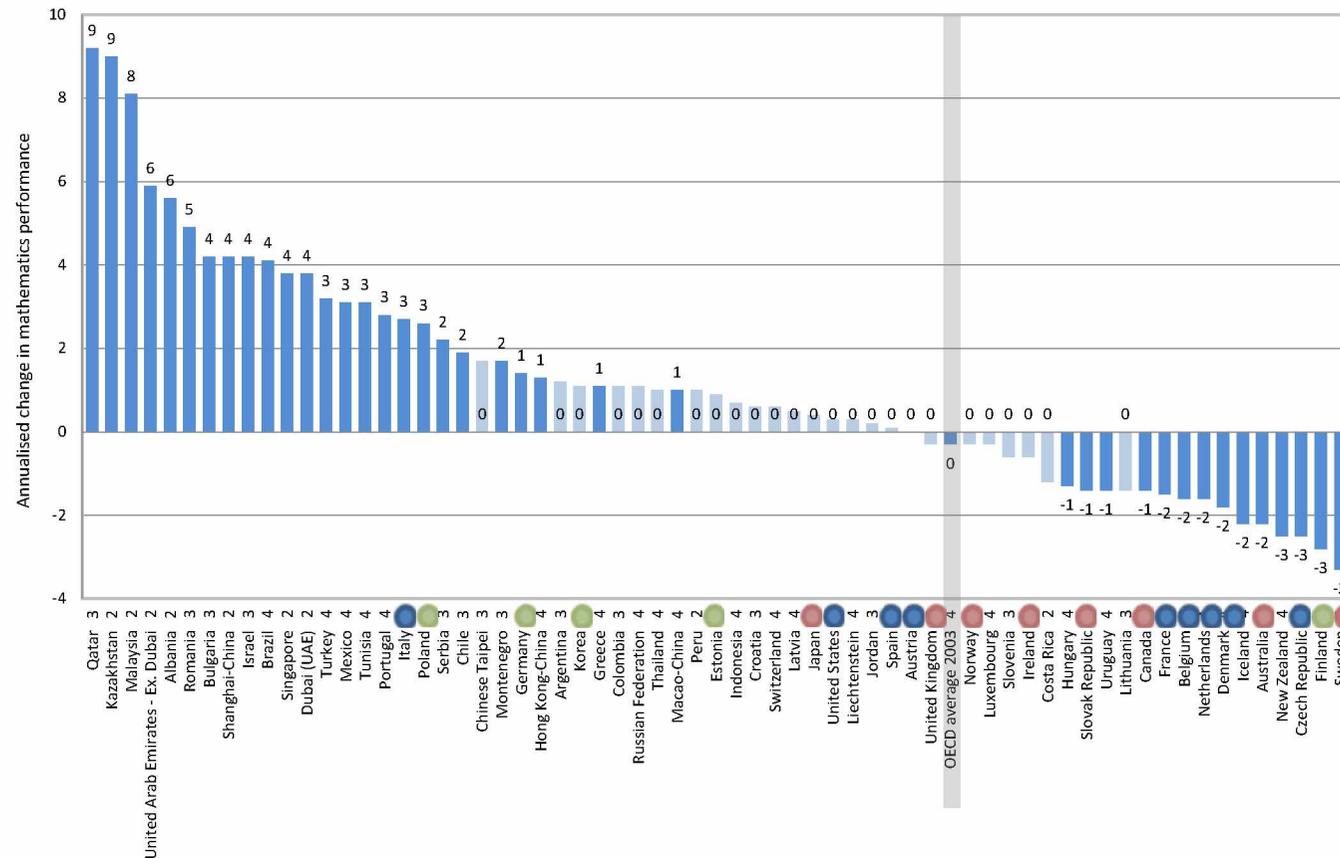
OECD average 2000 compares only OECD countries with comparable reading scores since 2000.

Countries and economies are ranked in descending order of the annualised change in reading performance.

Source: OECD, PISA 2012 Database, Table I.4.3b.

StatLink <http://dx.doi.org/10.1787/888932935610>

b) Mathematics

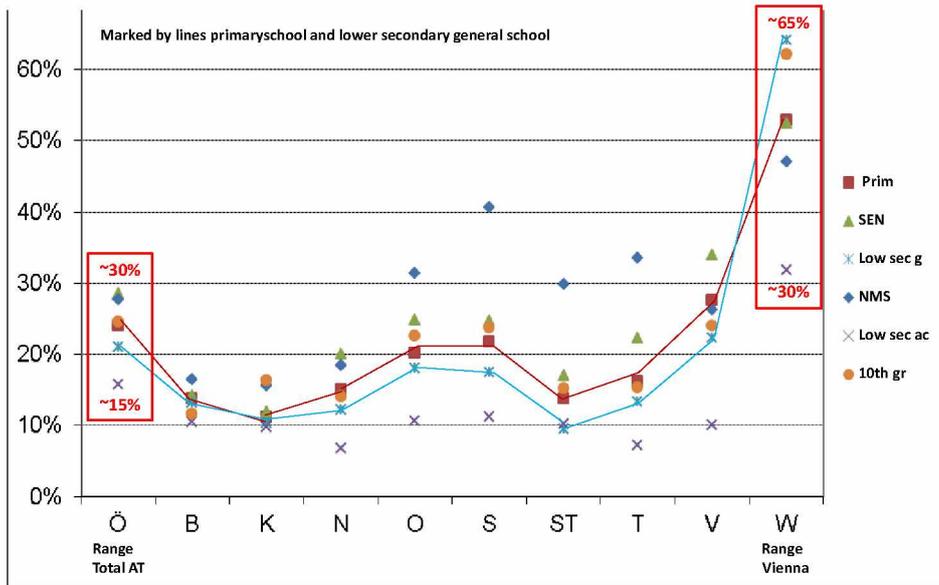


● PIAAC Participation neutral; ● Veränderung positive; ● negativ

The annualised change is the average annual change in PISA score points from a country/economy's earliest participation in PISA to PISA 2012. It is calculated taking into account all country/economy's participation in PISA. For more details on the calculation of the annualised change, see Annex A5. OECD average 2003 compares only OECD countries with comparable mathematics scores since 2003. Countries and economies are ranked in descending order of the annualised change in mathematics performance. Source: OECD, PISA 2012 Database, Table I.2.3b.

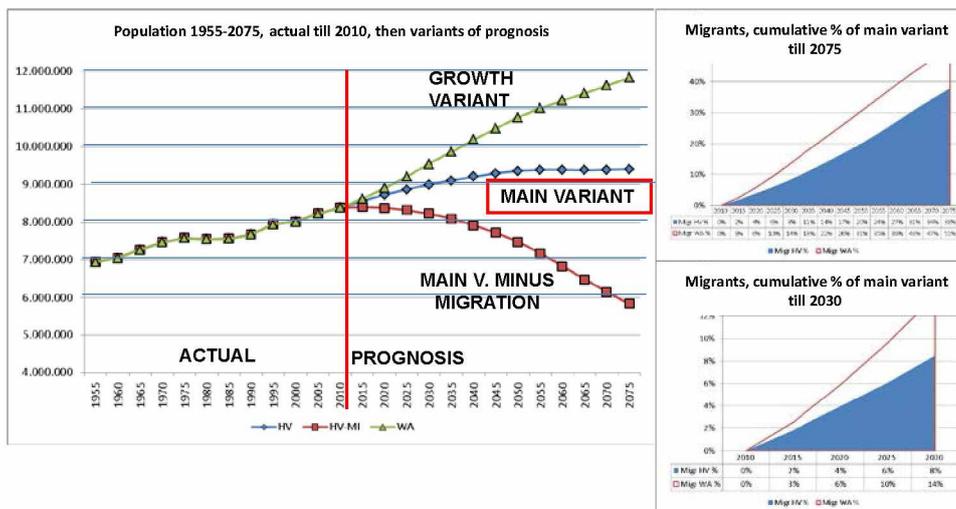
ANNEX 4: Population and immigration, demographic prognoses 2010-2075

Already reached stock of migrants in Länder: % students with foreign ,mother tongue' (NBB 2009)



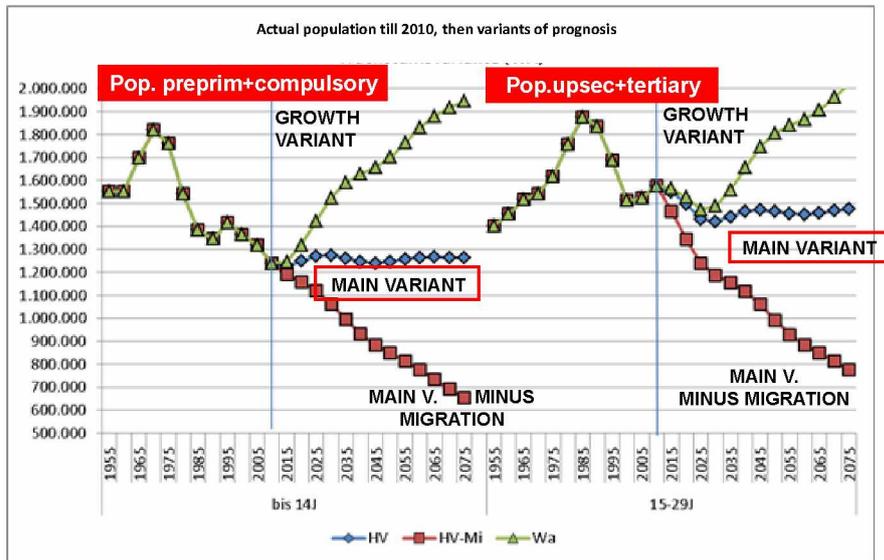
Source: IHS-WIFO 2013

All population prognosis, variants with respect to migration 1955-2075



Source: IHS-WIFO 2013

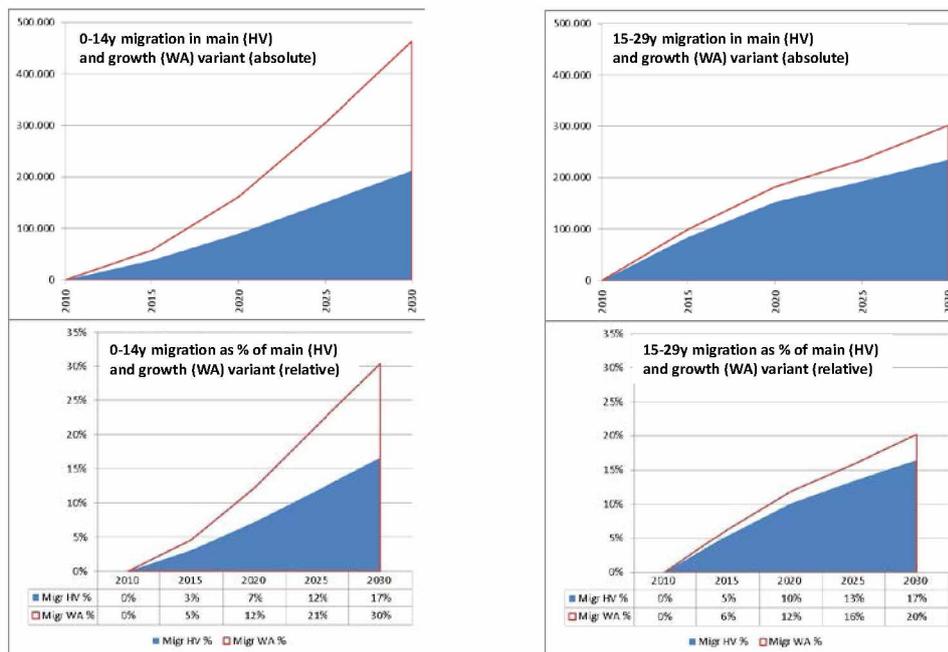
Demographic prognosis 1955-2075 for the young age 0-14 y. age 15-29 y.



2

Source: IHS-WIFO 2013

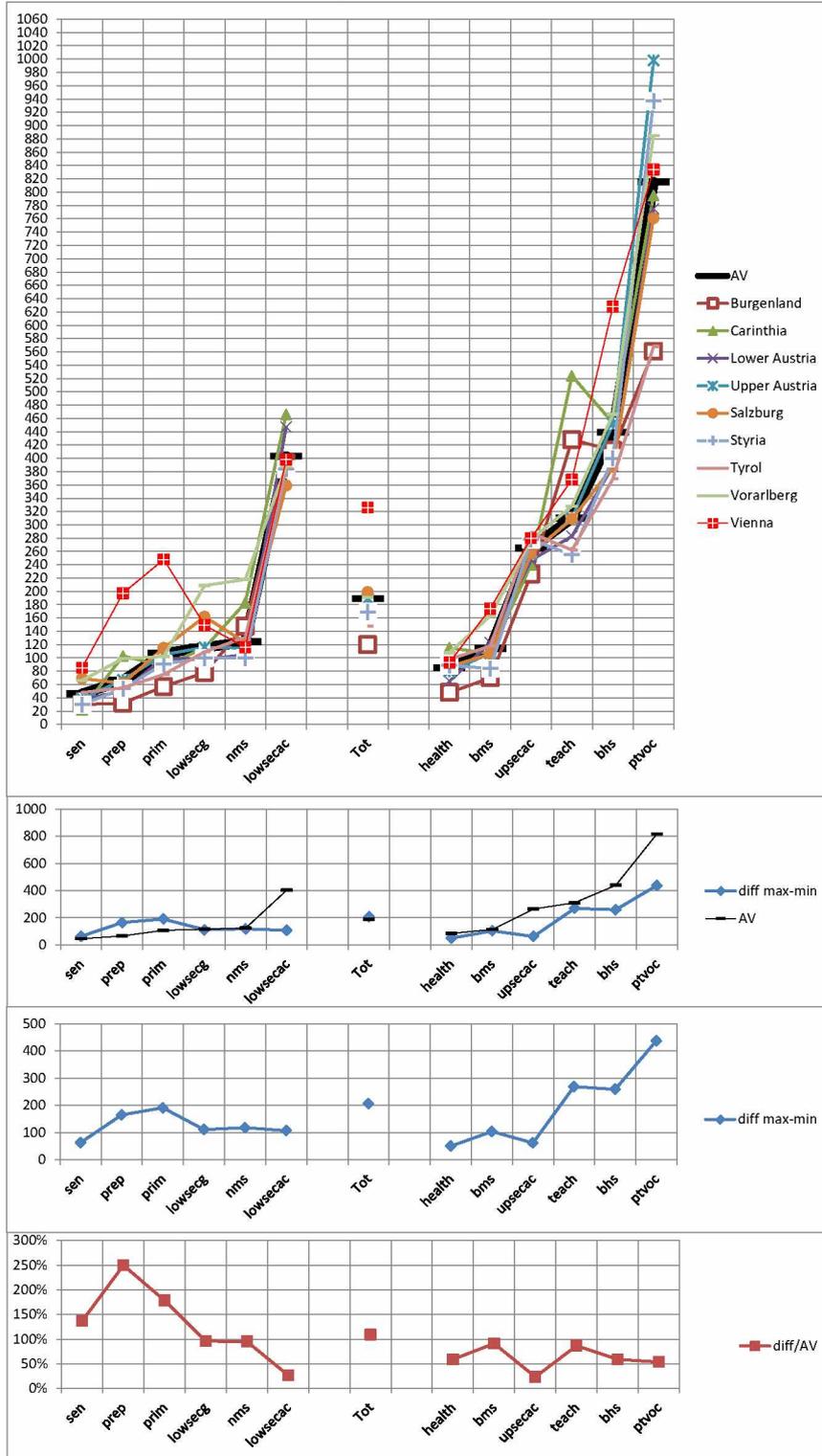
Migration among young population, cumulative % of main and growth variants



Source: IHS-WIFO 2013

ANNEX 5: Indicators about resource distribution across Länder

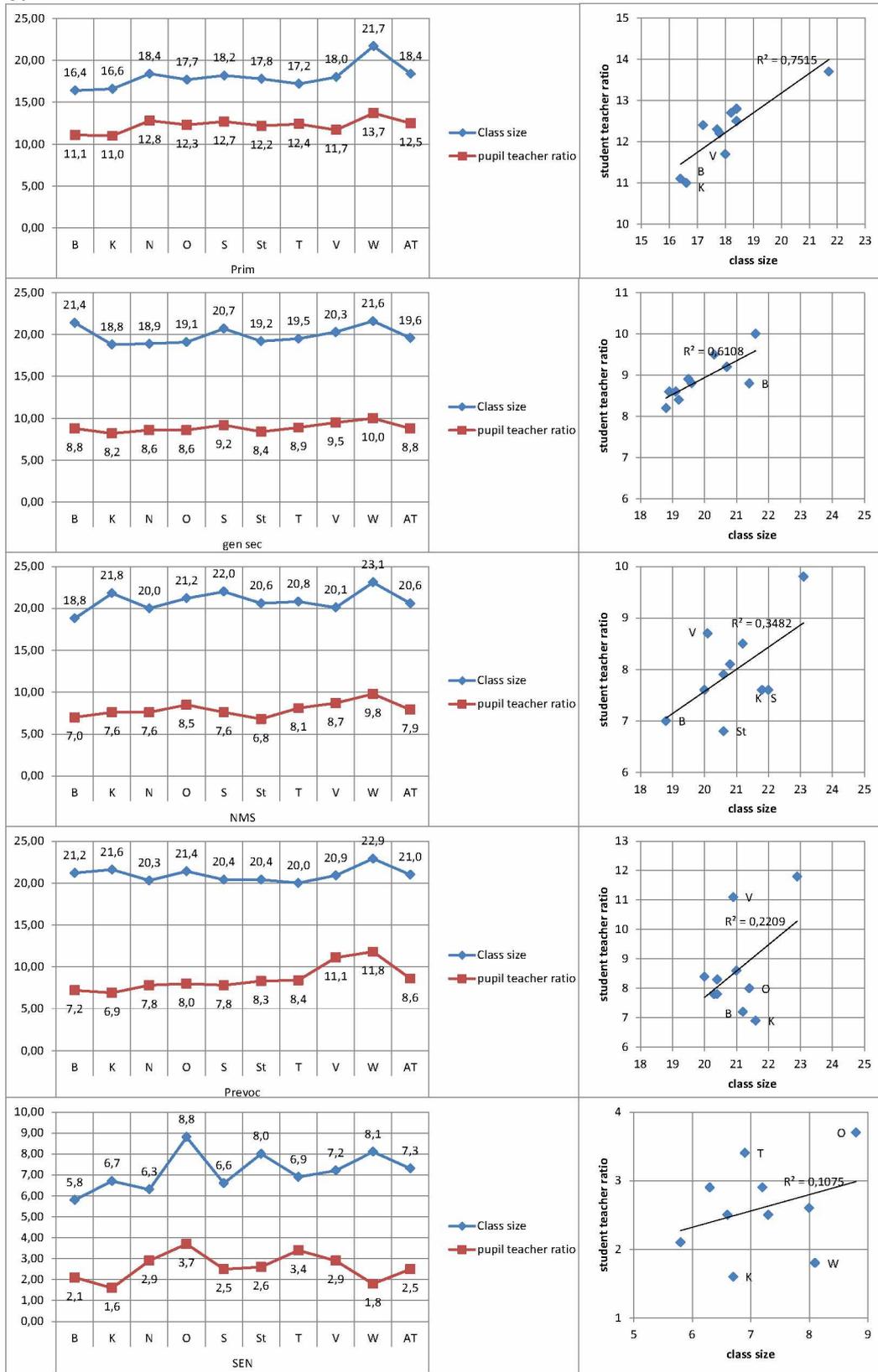
Annex 5-a: School size by Länder - no consistent pattern



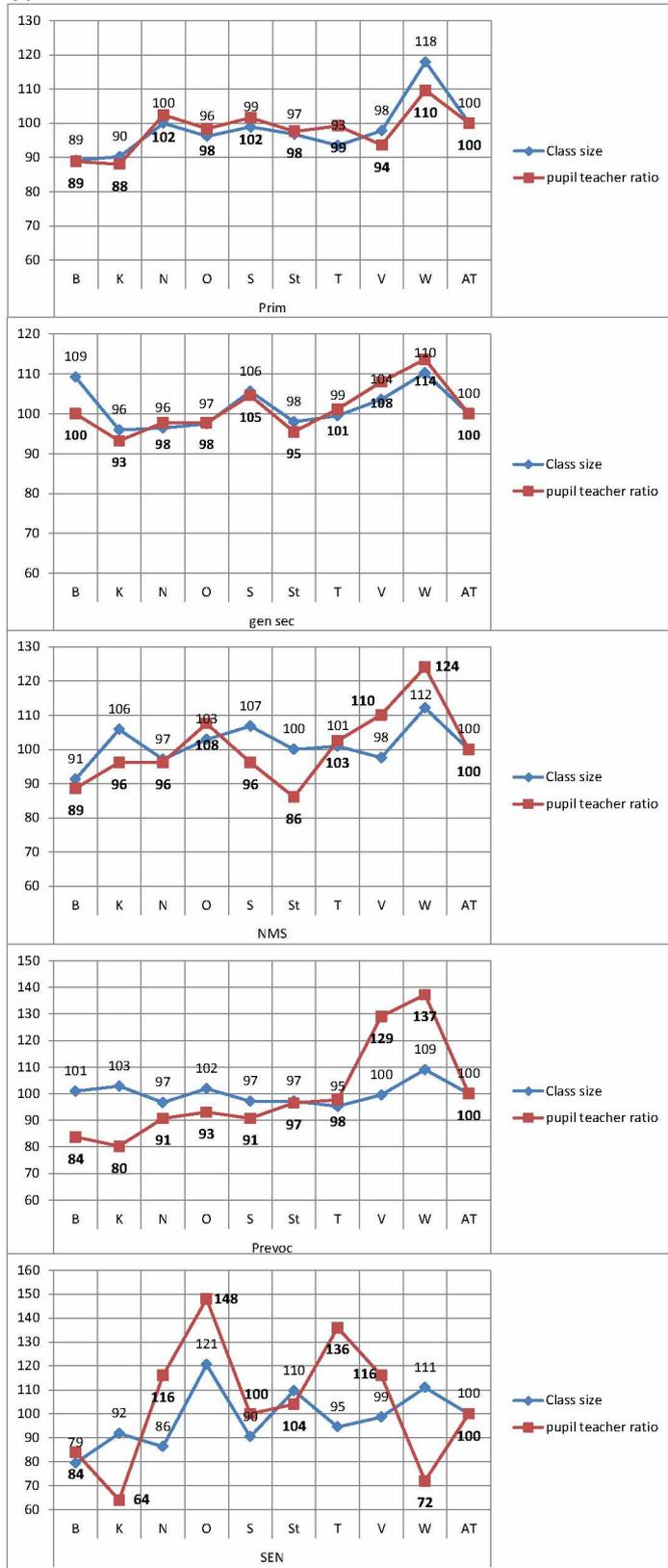
Annex 5-b: Comparison of highest and lowest school sizes by regions, 14 school types

	sen	prep	prim	lowsecg	nms	lowsecac		Tot		othg	health	othv	bms	upsecac	teach	bls	ptvoc	times max	times min
AV	46	66	107	116	124	403		189		68	85	112	114	265	310	439	815		
Burgenland	30	32	57	78	148	393		120		26	48	188	70	226	428	412	561	0	5
Carinthia	22	103	88	115	183	466		183		88	115	292	107	240	524	453	795	4	1
Lower Austria	38	50	100	98	105	447		163		36	65	61	123	247	283	388	775	0	3
Upper Austria	39	67	105	116	115	392		189		38	80	127	107	256	310	452	998	1	0
Salzburg	69	62	115	162	123	359		199		101	87	85	106	257	309	387	761	0	1
Styria	30	54	91	100	100	384		169		49	89	117	84	278	255	400	937	0	2
Tyrol	48	55	75	109	131	386		148		34	98	165	118	288	262	369	568	1	1
Vorarlberg	66	99	102	209	218	388		191		23	108	70	163	278	328	466	885	2	1
Vienna	85	197	248	149	116	398		326		149	93	103	174	280	368	628	834	6	0

Annex 5-c: Compulsory schools, class size and student/teacher ratio by Länder, school types



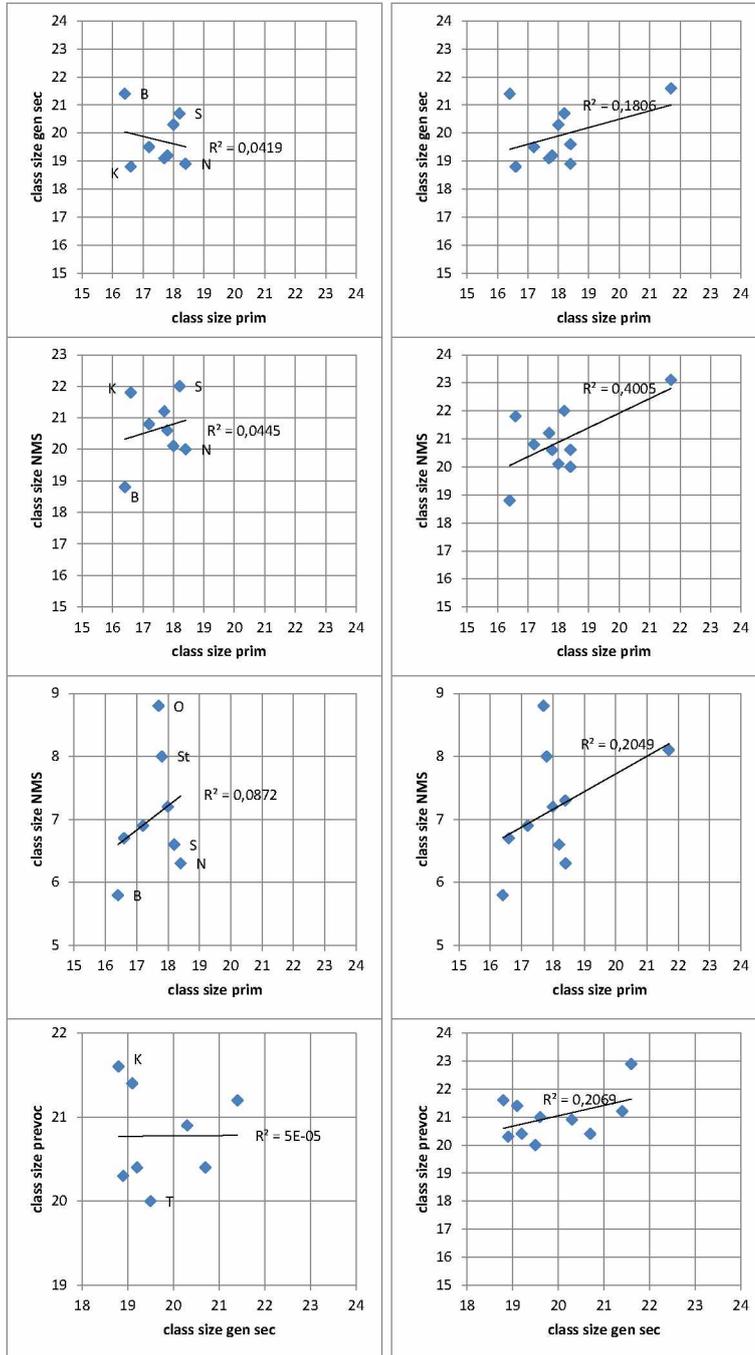
Annex 5-d: Compulsory schools, class size and student/teacher ratio by Länder, school types, Index Austria = 100



Annex 5-e: Compulsory schools, class size in Länder, scatters by different school types

Länder without Vienna

including Vienna



Authors: Lorenz Lassnigg, Stefan Vogtenhuber

Title: Challenges in Austrian educational governance revisited. Re-thinking the basic structures.

Reihe Soziologie / Sociological Series 107

Editor: Beate Littig

ISSN: 1605-8011

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