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Raising Public Spending Efficiency in Switzerland

Richard Dutu

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RAISING PUBLIC SPENDING EFFICIENCY IN SWITZERLAND

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By Richard Dutu

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ABSTRACT/RÉSUMÉ

Raising Public Spending Efficiency in Switzerland

Despite having low government spending, Switzerland scores highly in various public policy outcomes, including health, education and transportation. But, as the population grows and ages, efficiency of public spending will have to rise to maintain low tax rates. Given its high returns, the provision of early childhood education and care should be boosted, especially for children from disadvantaged socio-economic backgrounds, including those from immigrant families. Cantons should avoid oversupplying baccalaureates, thereby lowering university dropout rates. Policies will also need to adapt to structural changes in the labour market, by boosting the supply and attractiveness of fields of study that are facing high demand on the labour market, and by further clarifying study streams across tertiary education. Health-care efficiency could be raised by further developing managed-care networks. Enforcing systematic data collection for the quality of care would also help patients and providers make better informed choices. Generic drugs' prices are too high due to a poorly designed price-fixing mechanism. Transportation suffers from congestion that could be reduced by implementing peak-load pricing on roads and trains. But efficiency in public spending is also about allocating public funds optimally. Switzerland's rapidly rising social security entitlements and its fiscal equalisation system constrain public spending and risk crowding out important expenditures. Fast-rising social security entitlements could be addressed via indexing the retirement age to life expectancy. Fiscal equalisation weakens tax-raising incentives for some cantons; this could be addressed by allowing them to keep a larger part of their increased revenues. Efficiency in allocating public expenditure could also be raised by increasing the share of public spending allocated by tender and harmonising procurement regulations across all levels of government.

This Working Paper relates to the 2015 OECD Economic Review of Switzerland (<http://www.oecd.org/eco/surveys/economic-survey-switzerland.htm>)

JEL classification codes: H11, H51, H52, H55, H57, H77.

Keywords: Public spending, efficiency, education, health care, administration, fiscal equalization.

Accroître l'Effizienz des Dépenses Publiques en Suisse

Malgré un volume de dépenses publiques faible, la Suisse obtient de très bons résultats dans de nombreux domaines de la politique publique, dont la santé, l'éducation et le transport. Toutefois, compte tenu de la croissance démographique et du vieillissement de la population, l'effizienz des dépenses publiques devra être renforcée pour conserver des taux d'imposition bas. Compte tenu de ses effets très positifs, l'offre de structures d'éducation et d'accueil des jeunes enfants devrait être accrue, notamment pour les enfants issus de milieux socio-économiques défavorisés, comme les enfants d'immigrés. Les cantons devraient éviter une situation d'excès de bacheliers, afin de réduire les taux de décrochage universitaire. Les politiques devront aussi s'adapter aux changements structurels sur le marché du travail en améliorant l'offre et l'attractivité des domaines d'études qui suscitent une forte demande sur le marché de l'emploi, et en simplifiant encore les filières dans l'enseignement supérieur. Dans la santé, le développement des réseaux de soins intégrés pourrait renforcer l'effizienz. Le recueil systématique de données sur la qualité des soins aiderait aussi patients et prestataires à faire des choix mieux informés. Les prix des médicaments génériques sont trop élevés en raison d'un mécanisme de fixation des prix mal conçu. Dans les transports, la congestion pourrait être réduite en adoptant une tarification de période de pointe sur les routes et les rails. Mais l'effizienz des dépenses publiques a aussi trait à la répartition optimale des deniers publics. Les droits à prestations de sécurité sociale qui augmentent rapidement en Suisse et le système de péréquation budgétaire contraignent les dépenses publiques et risquent de supplanter des catégories de dépenses importantes. L'indexation de l'âge de la retraite sur l'espérance de vie pourrait permettre de faire face à l'augmentation rapide des droits à prestations de sécurité sociale. La péréquation budgétaire incite moins certains cantons à collecter les impôts. Pour remédier à cette situation, ils pourraient être autorisés à conserver une part plus importante de leurs recettes supplémentaires. La répartition des dépenses publiques pourrait aussi devenir plus efficiente en augmentant le pourcentage des marchés publics alloués par appels d'offres et en harmonisant les procédures de passation de marché à tous les niveaux de l'administration.

Ce Document de travail se rapporte à l'Étude économique de l'OCDE de la Suisse 2015 (<http://www.oecd.org/fr/eco/etudes/etude-economique-suisse.htm>).

Classification JEL : H11, H51, H52, H55, H57, H77.

Mots clefs : Dépense publique, effizienz, éducation, santé, administration, péréquation fiscale.

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RAISING PUBLIC SPENDING EFFICIENCY IN SWITZERLAND

By Richard Dutu¹

Introduction

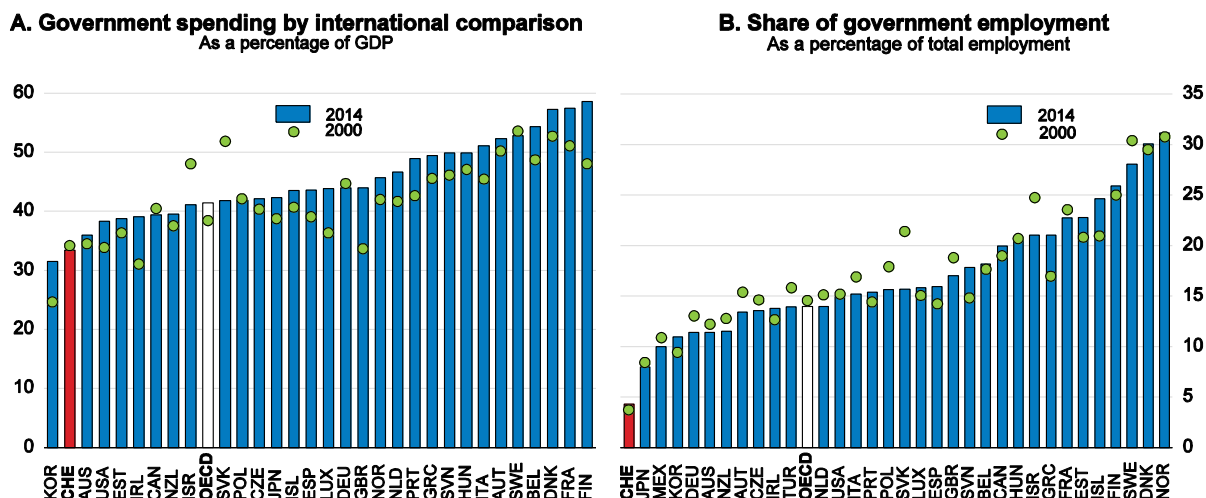
Public expenditure in Switzerland was just 33.5% of GDP in 2014, a share that has remained largely unchanged over the past decade and a half (Figure 1, Panel A). Likewise, the share of public employment is very low (Panel B). The small size of the public sector is a reflection of a long-standing and well entrenched ethos of fiscal conservatism and a limited role for government, where both the cantons (since the 1990s) and the Confederation (since 2001) have been subject to so-called debt-brake and other budget rules that hold down expenditures and the deficit.

The relatively low level of public expenditure has been no obstacle to Switzerland's high international ranking on several public policy outcomes. For instance, at 82.9 years, it enjoys the second highest life expectancy at birth in Europe, after Iceland (EUROSTAT, 2015). It had the highest mathematics score among non-Asian nations in the 2012 PISA evaluation and ranked fifth overall (OECD, 2014f). It also has the most kilometres of railroad track per square kilometre and per person. Its judicial performance is impressive too, with the shortest trial length of 31 OECD countries (Palumbo et al., 2013).

Nevertheless, the country faces a number of pressures that will require more spending or a still more efficient public sector. As in most OECD countries, the falling ratio of workers to retirees is putting pressure on the old-age pension system. And the rise in life expectancy and chronic medical conditions are already pushing up health expenditures, especially for long-term care. If current growth rates for social and health-care spending were to continue, they would absorb 70% of all public expenditure in 2030, versus 38% today (economiesuisse, 2012). At the same time, a growing and increasingly complex economy will require developing and improving the transportation network, and productivity gains will need an increasingly educated workforce to be sustained. Both of these will put greater demands on public spending.

1. Richard Dutu is an economist in the Policy Studies Branch of the Economics Department of the OECD; e-mail: richard.dutu@oecd.org. This paper was prepared for the OECD Economic Survey of Switzerland published in November 2015 under the authority of the Economic and Development Review Committee. The author is thankful to Jens Arnold, Hansjörg Blöchliger, Sarah Bochud, Matthieu Cahen, Marie-Clémence Canaud, Anna D'Addio, Robert Ford, Stéphanie Guichard, Matevz Hribernik, Simon Jäggi, Peter Jarrett, Rafal Kierzenkowski, Vincent Koch, Marko Köthenbürger, Patrick Leduc, Paul Lingenfelter, Paul Magina, Cyril Malherbe, Andrew McQueen, Yuki Murakami, Ulrich Obendorfer, Alvaro Pereira, Christoph Schaltegger, Michael Schuler, Douglas Shappiro, Anne Sonnet, Marc Surchat, Frank Van Tongeren, Stefan Vannoni, Vaclav Vojtech, Peter Vujanovic, Richard Yelland and Swiss government officials for their valuable comments and suggestions. Special thanks are due to Patrizio Sicari for excellent statistical assistance and Dacil Kurzweg and Krystel Rakotoarisoa for technical preparation.

Figure 1. Government spending and employment

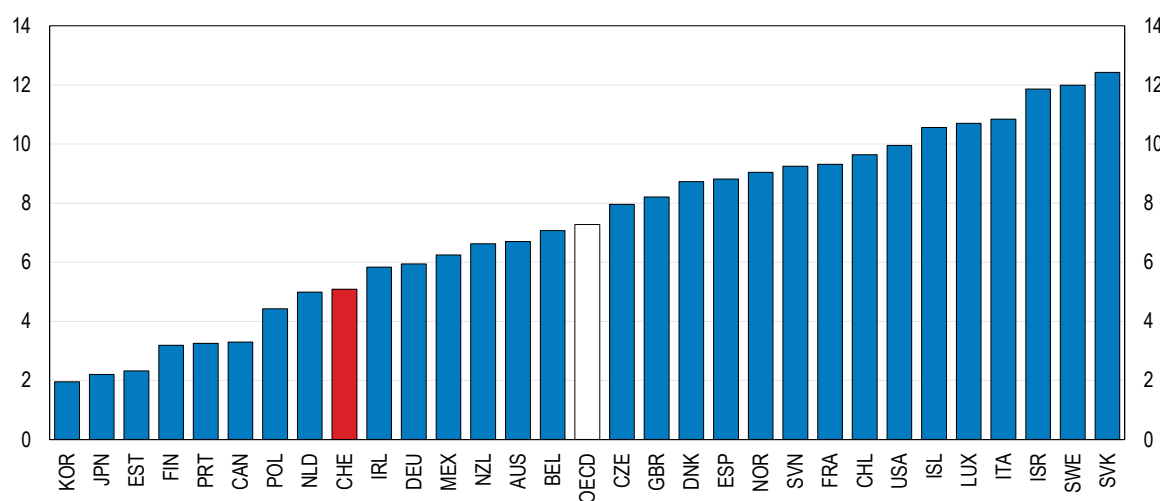


Source: OECD, Economic Outlook No. 97 Database (and updates).

Evaluating the efficiency of public expenditure can be done using a technique known as Data Envelopment Analysis (DEA). The idea is to compare a country’s outcomes in a particular area of public policy with that of the best performing countries. Performance is measured in terms of output efficiency (e.g. PISA scores) and input efficiency (e.g. education spending or class size) (Box 1). Such analysis shows that education policy in Switzerland is not efficient (Figure 2). Indeed, Germany and Switzerland had about the same score in the 2012 PISA reading assessment, but Switzerland spent 21.4% more per student than Germany (see also Agasisti and Zoido, 2015). In health care, even though Switzerland is close to the frontier in terms of output efficiency, there remains much scope to improve input efficiency (Figure 3). For instance, in 2012 Switzerland had the largest health-care spending per capita in Europe at EUR 4 565 (adjusted for countries’ different purchasing power), on par with Norway and well above the EU28 average of EUR 2 193 (OECD, 2014c). Note, however, that those figures include both public health-care expenditure (two thirds of the total) and private spending (the other third). Also worryingly, input efficiency has deteriorated for both education and health care since 2013 when similar DEA analysis by the OECD was last conducted (Hribernik and Kierzenkowski, 2013). Another example of poor efficiency, although this was not part of the DEA analysis, is Swiss agriculture. Despite heavy government support (direct payments are two thirds of farm income), it has the second-lowest productivity in the OECD (OECD, 2013b; Jarrett and Moeser, 2013).

Box 1. Data Envelopment Analysis

Data Envelopment Analysis (DEA) is a statistical technique used to assess the efficiency of public expenditure. Given that different combinations of inputs and outputs are observed in practice, DEA enables benchmarking of a country’s performance against a set of best-practice countries by identifying how far it stands from the efficiency frontier. There can be a shortfall in terms of output, called output inefficiency, or an excess input, called input inefficiency. As a non-parametric technique, DEA does not require specifying a functional form for the implicit production function. The approach, however, is sensitive to sample selection and outliers. Sampling techniques such as bootstrapping can be used to correct for small-sample bias (Dutu and Sicari, 2016). Other OECD Surveys have used the technique, e.g. Slovenia (OECD, 2013e).

Figure 2. **Output inefficiency in secondary education¹, 2012**Potential gains in synthetic PISA scores, per cent²

1. Data envelopment analysis (DEA) was performed with one output (PISA scores for 2012) and two inputs (a composite indicator of the socio-economic environment and lifestyle factors for the same year and PPP education spending). Averages over the periods 2009-11 were used for expenditure to capture its effects on performance and smooth its developments, as 2011 is the latest year available for education expenditure data.
2. Potential gains are measured if efficiency in a country were to be raised to the level implied by the estimated efficiency frontier while holding inputs constant and under the assumption of non-increasing returns to scale.

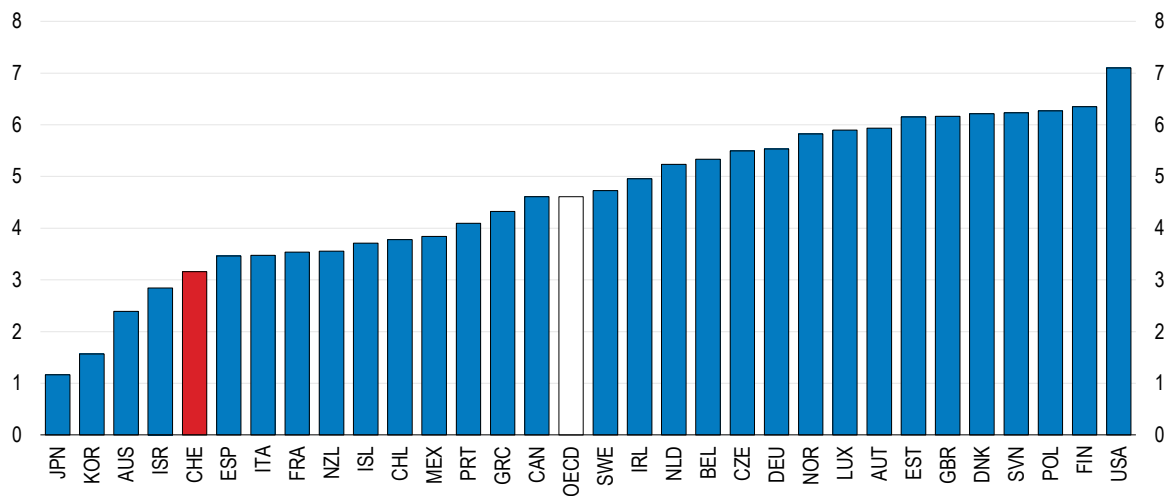
Source: OECD calculations.

By contrast, Swiss general public administration ranks first for output efficiency and third for input efficiency, with Switzerland improving on both dimensions since the previous DEA study (Hribernik and Kierzenkowski, 2013). For instance, Switzerland had the OECD's lowest ratio of administrative costs to net revenue collection in 2013 (OECD, 2015c). As noted earlier, it also has the lowest share of public employment, although many health-care workers are excluded. Perhaps as a result of the high performance by its public administration, Switzerland enjoys the highest public confidence in national government in the OECD (OECD, 2015c).

Efficiency in public spending is also about the optimal allocation of public funds. Indeed, the Swiss public sector operates under a set of institutional arrangements (fiscal equalisation across and within cantons, social security entitlements, debt-brake rules) that affect the allocation of public funds across levels of government and between areas of expenditure. For instance, because of spending constraints, the growing GDP share of pension entitlements may in the future crowd out other important expenditure categories, such as research or infrastructure.

This article is organised in two parts. First, production efficiency is examined in four of the main areas of public expenditure: education, health, transportation and agriculture. Several policy recommendations are made to maintain or increase output while reducing the costs and inputs needed. The second part of the article focuses on allocative efficiency of public spending. In particular, it examines to what extent social security funding, fiscal equalisation and public procurement can be improved in order to foster an efficient allocation of public funds across levels of governments and areas of public expenditure.

Figure 3. **Output inefficiency in health care¹, 2012**
Potential gains in health-adjusted life expectancy, per cent²



1. Data envelopment analysis (DEA) was performed with one output (health-adjusted life expectancy at birth for 2012) and two inputs (a composite indicator of the socio-economic environment and lifestyle factors for the same year and PPP health-care spending). Averages over the periods 2008-12 were used for expenditure to capture its effects on performance and smooth its developments.
2. Potential gains are measured if efficiency in a country were to be raised to the level implied by the estimated efficiency frontier while holding inputs constant and under the assumption of non-increasing returns to scale.

Source: OECD calculations.

Increasing production efficiency

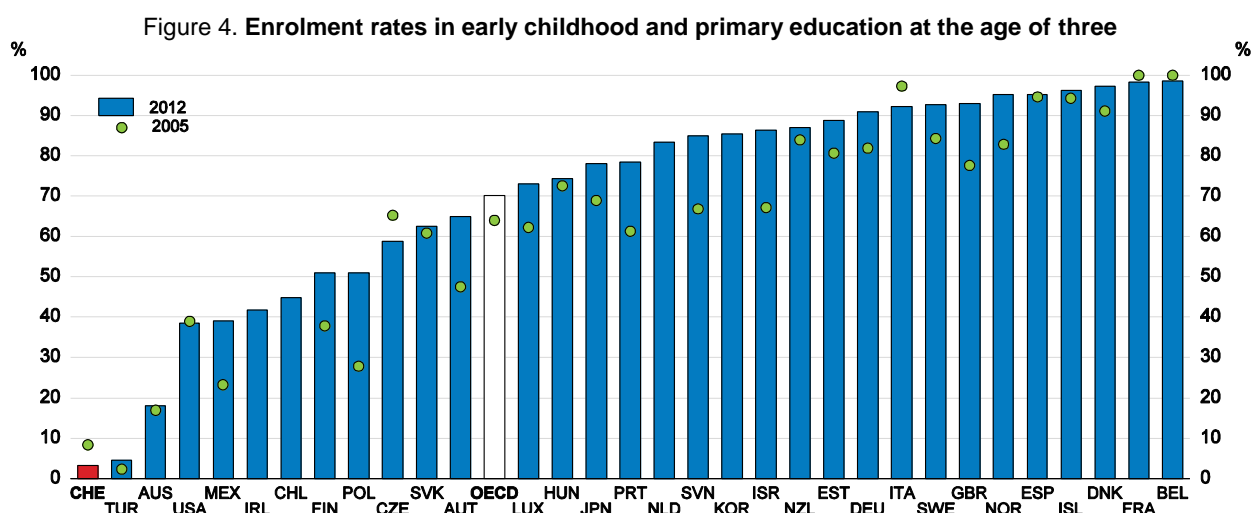
Making the education system more inclusive and responsive

Raising enrolment in early childhood education and care, especially for migrant children

Raising enrolment in early childhood education and care is one avenue to increase efficiency in the education system. In the OECD's PISA assessments, pupils are asked about the length of time they attended pre-primary education. Young people who stated that they had attended for more than a year achieved significantly higher values in the 2009 PISA reading tests in almost all countries compared to those who did not attend kindergarten at all (OECD, 2014a). Across OECD countries, enrolment of children at age three in pre-primary education has increased from 64% on average in 2005 to 70% in 2012 (OECD, 2015a). But in Switzerland, despite recent progress, childcare places are still in short supply, and only 3% of children aged three are enrolled in pre-primary education, the lowest rate in the OECD (Figure 4). And, indeed, participation in Swiss early-childhood education has declined since 2005, unlike almost all other OECD countries.

In order to alleviate the shortfall of childcare places, the Confederation launched a financial aid programme for childcare outside the family in 2003. This was initially to run for a period of eight years but has now been extended until 2019. In the programme's first 11 years, a total of 43 000 new places were created (Le Temps, 2014). Innovative initiatives such as the childcare voucher systems in the Canton of Lucerne have also been running successfully now, with a doubling of places since its 2009 inception. It is the lack of low-cost places that is especially problematic (OECD, 2013b). Region-based modelling of childcare costs shows, for instance, that Zurich has one of the most expensive childcare systems in the OECD for working couples once all costs are taken into account. Given the high marginal income tax on

second earners, almost the entire second wage of an average dual-earner couple with two children aged two and three is needed to cover the cost of childcare (OECD, 2011). Similar conclusions were reached for canton Basel-Stadt (Schwegler et al., 2012). The government (cantons and municipalities) should increase direct public spending on additional pre-primary facilities, and the Confederation should institutionalise financial aid for childcare. Given the positive impact of pre-primary education on PISA scores and the positive relationship from such scores to economic performance (OECD, 2010c), the returns to such reforms are likely to be high.



Source: OECD, *Education at a Glance 2014* database.

Increased education spending on migrant children also promises above-average returns. In 2006 the Swiss Confederation and the cantons set an objective that 95% of all 25 year-olds hold an upper-secondary qualification. In the past 20 years that rate has fluctuated between 90 and 92% (CSRE, 2014). Looking closer, it turns out that the goal has now been reached for the Swiss born, but outcomes are still far from the target for those born abroad (Wolter, 2014). Some progress has been made, however. The PISA reading performance differential between young people with and without an immigrant background fell from 86 to 48 points between 2000 and 2009 (OECD, 2010a). In mathematics it fell from 76 to 63 points between 2003 and 2012 (OECD, 2014g). But roughly three-quarters of the narrowing, which primarily concerned first-generation migrants (i.e. young people who were not born in Switzerland), can be ascribed to an increase in immigration from countries such as France and Germany, whose languages overlap with Switzerland's (Cattaneo and Wolter, 2012).

The problem of underperforming native-born children of immigrants, already noted in the 2009 *Survey* (OECD, 2009), starts early. A survey of parents conducted in Basel and its environs showed that children with a migration background have the least opportunity to access facilities provided outside the family, thereby hampering their ability to master an official language early (CSRE, 2014). OECD research suggests that, despite improvements, immigration remains a risk factor for low academic performance which may have long-lasting consequences for individuals as they leave school and enter post-secondary education, training or the labour market (OECD 2012; OECD, 2015d). At the same time, empirical evidence shows that almost three quarters of the immigrant children's performance at school is accounted for by socio-economic determinants (Cattaneo and Wolter, 2015). This is supported by recent research which suggests that Switzerland performs relatively well regarding educational achievements of second-generation immigrants (Kunz, 2014). Switzerland should therefore boost assistance aimed directly at socio-economically disadvantaged families. It should also facilitate enrolment of children from families with an immigrant background in early childhood education and care.

Moreover, completing university has been shown to increase the earnings of Swiss men with disadvantaged family backgrounds even more than that of those from more favoured backgrounds (Perini, 2013). The outcome in terms of raising employment rates is lower, however (OECD and EC, 2015). If increased pre-primary spending helps to increase the probability that these children get to university level, the net return would be even higher. Overall, labour market outcomes for Swiss children of immigrants are highly favourable in international comparison. This is partly attributable to good overall labour market conditions and other factors such as the strong role of apprenticeship, which seems to be a particularly beneficial school-to-work transition mechanism for such children (Liebig et al., 2012).

Another contributing factor to weaker performance by children with an immigrant background is the lack of diversity among teachers. A quarter of the Swiss population was born outside of the country, but foreign-born students represent only about 8% of those planning to teach in compulsory education. A lack of linguistic and cultural diversity among the teaching profession can be problematic, in Switzerland as in other OECD countries, and a higher share of teachers from migrant families would help the integration of students from similar backgrounds. Specific measures such as those being implemented in Germany by the MigraMENTOR project could fruitfully be developed in Switzerland, making a teaching career more attractive to foreign students in particular (Box 2).

Box 2. MigraMENTOR

In some parts of Hamburg the share of children with an immigrant background is more than 30%, but teachers with the same background are less than 5%. The German Ministry of Education, together with several foundations, is trying to change this by attracting more migrant youths into teaching. Using their experience, teachers with a migrant background know what it means to grow up as a migrant, what the difficulties are, but also the opportunities. They are in a better position to motivate students, help them find their way through the German education system and show them that it is possible to be successful. Similar initiatives are now taking place in North Rhine-Westphalia and Berlin, where Humboldt University is touring secondary schools to promote teaching careers among migrant students.

Source : D. Bader and R. Fibbi (2012), *Les enfants de migrants: un véritable potentiel*, Étude réalisée sur mandat de la Commission Éducation et Migration de la Conférence suisse des directeurs de l'instruction publique (CDIP), Université de Neuchâtel.

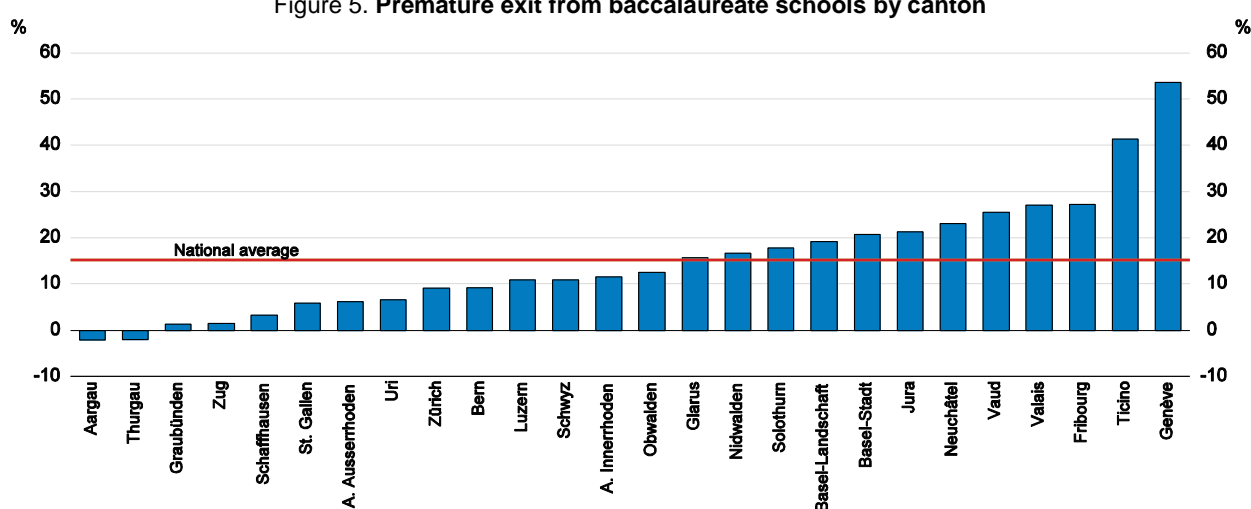
The problem of inter-cantonal differences in standards

The number of student graduating high school with baccalaureate credentials in Switzerland has been increasing steadily, from 25% of the 1999 age cohort to around 36% nowadays. About 75% of that increase is due to an increase of holders of professional baccalaureates (CSRE 2014). Whereas in cantons with a low baccalaureate graduation rate fewer than 10% of pupils fail to achieve competence level 4 in both reading and maths prior to entering a baccalaureate school, the figure in cantons with high baccalaureate attainment rates is about 30% (CSRE, 2014). In addition, the two cantons with the highest attainment rates also have the most pupils dropping out baccalaureate schools without the qualification. That percentage is 50% in Geneva and a little over 40% in Ticino, both about triple the national average, whereas in Aargau virtually all pupils who begin complete the baccalaureate (Figure 5). In the end, students coming from cantons with high success rates score lower on competency tests and drop out more frequently from both baccalaureate schools.

In Switzerland, with a few exceptions such as degrees in medicine, everyone who graduates from high school with a baccalaureate credential must be admitted to tertiary (type-A) education. However, baccalaureate graduates from certain cantons are overrepresented in university dropouts across Switzerland, suggesting that the quality of their baccalaureates is lower. The impact of the baccalaureate rate (expressed as the number of baccalaureates obtained as a percentage of the number of 19 year-olds) in the canton of origin has indeed been shown to increase the risk of dropping out significantly (Wolter et al., 2014). In addition to being unfair and inefficient, this imposes additional costs on the other cantons, which

finance conventional universities, and the Confederation, which funds federal institutes of technology (e.g. ETH Zürich). One way to address this problem is to set up a bonus system to encourage such cantons to reduce the number of university dropouts, and vice versa. Indeed, education transfers already represent 60% of all inter-cantonal transfers (FFA, 2014b). The alternative of restricting entrance to universities via exams or other methods, would openly conflict with the affirmed objective to “maintain examination-free access to Swiss universities for baccalaureate holders”, as agreed between the Confederation and the cantons (DFE, 2011). Another option would be to increase resources for guidance counselling for high school students, in particular with regard to field-of-study choices. In all instances, improving tracking and selection in cantons with high dropout rates should help contain the rise in university dropouts. Combined with a bonus-penalty, system it would help to raise Switzerland’s DEA input efficiency in education. In addition, the dropout rates are particularly high among some foreign students. Therefore, solutions to reduce the dropout rate in the university system will have to be evaluated in a comprehensive way.

Figure 5. **Premature exit from baccalaureate schools by canton**



Source: CSRE, Swiss Education Report 2014, based on FSO data.

Problems in matching education with labour-market needs

While thousands of students drop out from academic baccalaureates and universities, the share of unfilled apprenticeships rose from 4% in 2007 to 9% in 2014. This represents 8 000 positions (8% of all apprenticeships) (LINK Institute, 2014). The main reason for unfilled places was the lack of suitable applicants; indeed, there was also a jump in firms saying they failed to receive any applicants for apprenticeships vacancies at all.

The increasing number of unfilled apprenticeships points to structural changes in the Swiss labour market, both on the supply and demand side. On the supply side, as discussed above, more students are enrolling in the academic track, and therefore fewer are enrolling in the vocational track where apprenticeship is a key component. On the demand side, despite the increasing number of unfilled apprenticeships, the percentage of firms offering such training has fallen, from 23% in 1985 to around 18% in 2008. In their analysis of Swiss companies’ readiness to offer apprenticeships, Müller and Schweri (2012) find that the decline can be partly explained by the increasing proportion of very small businesses and start-ups. These firms typically offer fewer apprenticeships: newly established firms have a training rate of only 6.5% during the first four years, while the corresponding share of companies in existence for more than four years reaches 23.8%. Those trends can be problematic because the efficiency of the Swiss labour market relies heavily on the key role played by vocational education and training (VET) and professional education and training (PET) where apprenticeships are key (Box 3). Incidentally,

VET graduates report the most satisfaction following their compulsory schooling, regardless of follow-on options (CSRE, 2014).

Box 3. Vocational education and training

In Switzerland more than 65% of students in upper secondary education are enrolled in pre-vocational or vocational programmes at the upper secondary level, compared with an average of only 44% across OECD countries. Among those who choose vocational programmes, about 93% of them are enrolled in joint vocational programmes combining school- and work-based elements. The VET system is well developed, and PET is well articulated with upper secondary VET, offering a wide range of progression opportunities.

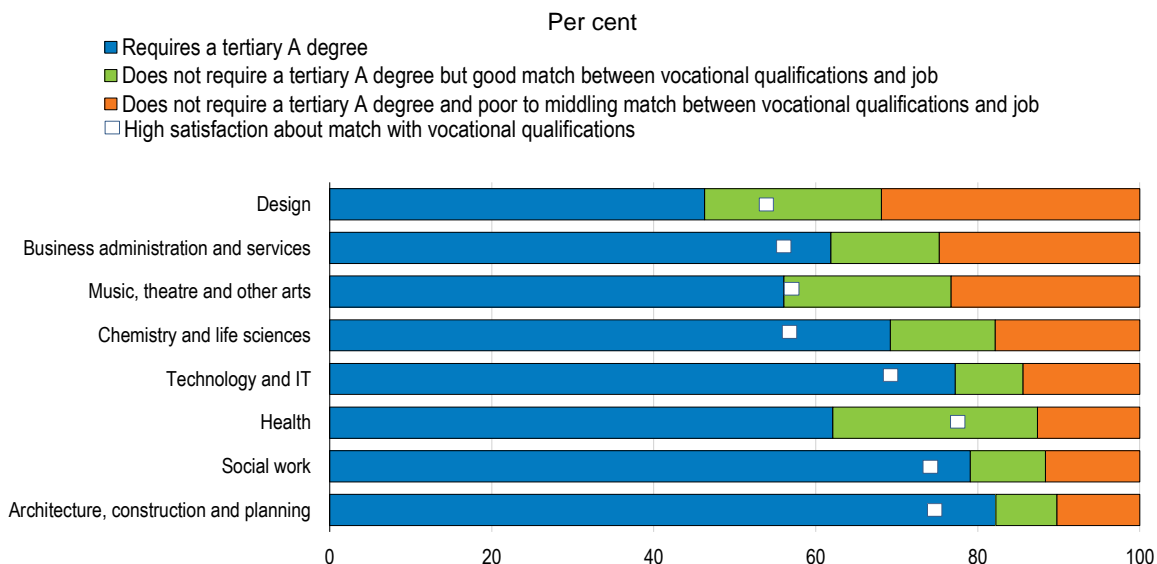
Governments spent almost CHF 3 billion on VET in 2011. The cantons cover the majority of this funding, although from 2004 onwards, the Confederation increased its share from an initial 16% to the current 25% for VET/PET. About 10% of these Confederation funds is accounted for by expenditure on third-party projects, while the remaining 90% is paid as subsidies to the cantons. In 2009 more than CHF 5.3 billion was spent by companies on VET, with CHF 2.5 billion on apprentices' wages and the rest on investment. At the same time companies profit economically from offering apprenticeships (Strupler and Wolter, 2012).

Source: OECD (2014), Education at a Glance 2014 – Country note for Switzerland, OECD Publishing; CSRE (Centre Suisse de coordination pour la Recherche en Éducation) (2014), Swiss Education Report 2014, Aarau.

The demand for graduates in science and engineering, health care, teaching and in certain crafts is rising (B.S.S., 2014). This has contributed to a skilled labour shortage in those areas, which has been partly addressed by immigration, particularly from EU and EFTA countries. However, the passage of the “mass immigration” initiative in 2014 puts this strategy into question. The labour shortage in some areas such as STEM should be addressed by better selecting and matching students with labour market needs, and increasing the supply and attractiveness of fields of study that face high demand on the labour market.

Another inefficiency in the Swiss education system is overskilling among certain types of graduates. In 2011, about 30% of employed university of applied sciences (UAS) graduates were in a job that did not require a university degree (Figure 7), even five years after graduation. One explanation may be that some

Figure 6. Match between job requirements and training one year after graduation from a UAS, 2011¹



1. First-cycle graduates (Bachelor's degree) who had not enrolled for a Master's course at the time of the survey and second-cycle graduates (Master's).

Source: Swiss Education Report 2014, based on FSO data from the Graduate Survey.

positions can equally be filled by people who have completed tertiary level B PET or those with continuing education and training certificates, a more professionalised form of tertiary education. A good example is

the field of health: one year after graduation in the French-speaking part of Switzerland, where tertiary-level health training is only available at (type A) UAS, more than three-quarters of UAS graduates have found an appropriate job. By contrast, in German-speaking Switzerland, where nurses are also trained at tertiary level B, the rate is only one third (CSRE, 2014). Perhaps due to greater competition from VET and PET graduates, the share of UAS graduates with a master's degree who reported a good match between their training and their job one year after graduation in 2013 was lower than for conventional universities (72.4% versus 84.4%). The government should look closely at the supply mix between general education type-A graduates and high-level technical type-B apprenticeships in the same field. The government should further clarify and differentiate study streams across the tertiary education system. Tertiary-type A and B education should be complementary, not substitutes.

Recommendations for promoting efficiency in education spending

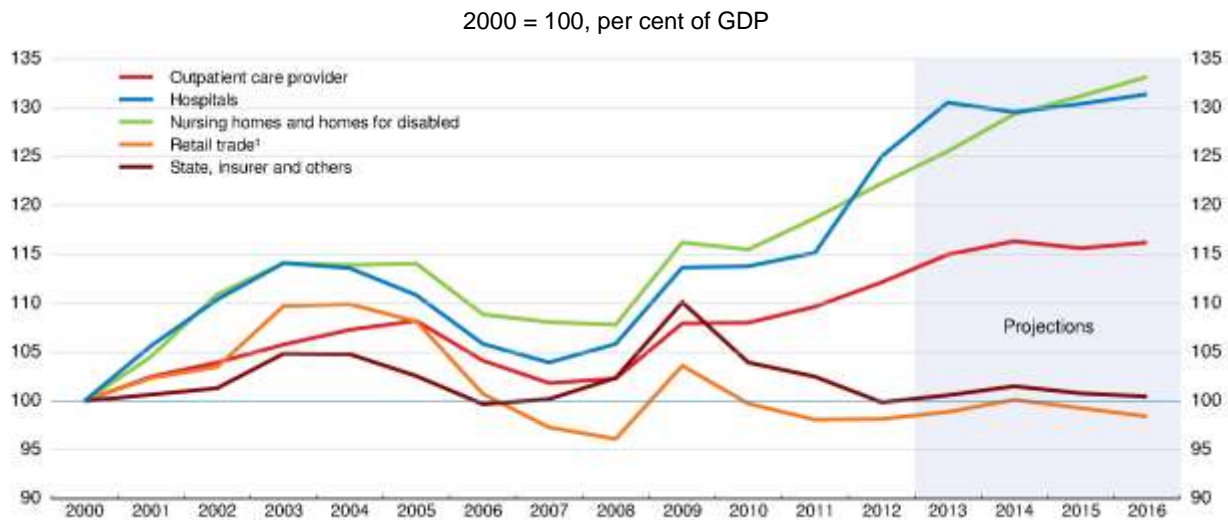
- Increase public spending on early childhood education and care, especially for children with disadvantaged socio-economic backgrounds (including those from immigrant families), which could be combined with a generalisation of the childcare voucher systems in the Canton of Lucerne.
- Boost the number of teachers from immigrant backgrounds.
- Evaluate solutions to reduce the dropout rate in the university system.
- Boost the supply and attractiveness of fields of study that are in high demand in the labour market. Further clarify study streams across the tertiary education system.

Fostering value-based competition and better governance in health care

The Swiss health-care system is among the OECD's best. Patients benefit from high-quality services and from a wide choice of providers and insurers. This good performance is reflected in high levels of patient satisfaction: 19 years after the *Loi fédérale sur l'assurance-maladie* (LAMal), which introduced compulsory medical insurance, 94% of the Swiss are satisfied with the health care system, the highest level in the OECD (OECD, 2015c). But this excellence comes at a price. In 2012 Switzerland was on a par with Norway in terms of health-care spending per capita at EUR 4 565 (adjusted for countries' different purchasing power), more than double the EU28 average of EUR 2 193 (OECD, 2014c). With 68.4 persons employed in the health and social sector per 1 000 population, the overall supply of health personnel exceeds the OECD average. Most notably, Switzerland is above the OECD average for nursing, with 10.2 professional nurses per 1 000 population (OECD: 6.9) and 4.8 associate professional nurses per 1 000 population (OECD: 2.3).

Between 1996 and 2012 real health-care expenditure increased by 62%, and the average premium on a standard health plan for adults over 26 (adjusted for inflation) increased by 97% (Interpharma, 2015). In contrast, real GDP rose by 38% over the same period. Structural and demographic changes generate direct health-related costs that explain part of this rise. Population aging leads to higher medical expenses such as for long-term care, which, in addition, is less and less provided within the family. Long-term care has been the fastest growing component of health-care expenditure since 2000 (Figure 7). Some of the rising costs might be indirect through the increased political weight of the elderly population who support more public health-care spending (Zweifel et al., 2005). Some of the increase is also due to a "Baumol effect" (Baumol, 1961), whereby services in the health-care sector, especially in long-term care, are relatively more labour intensive and do not benefit from the same rate of productivity growth as the overall economy. But wages, which are an important cost-push factor in health care, grow at roughly the same rate as in other sectors, increasing the relative productivity-adjusted cost of the health-care sector. The idea has found some confirmation in empirical analyses (Hartwig, 2008).

Figure 7. Decomposition of health expenditure developments and projections



1. Pharmacies and all other possible selling points (supermarkets, stores, etc.).

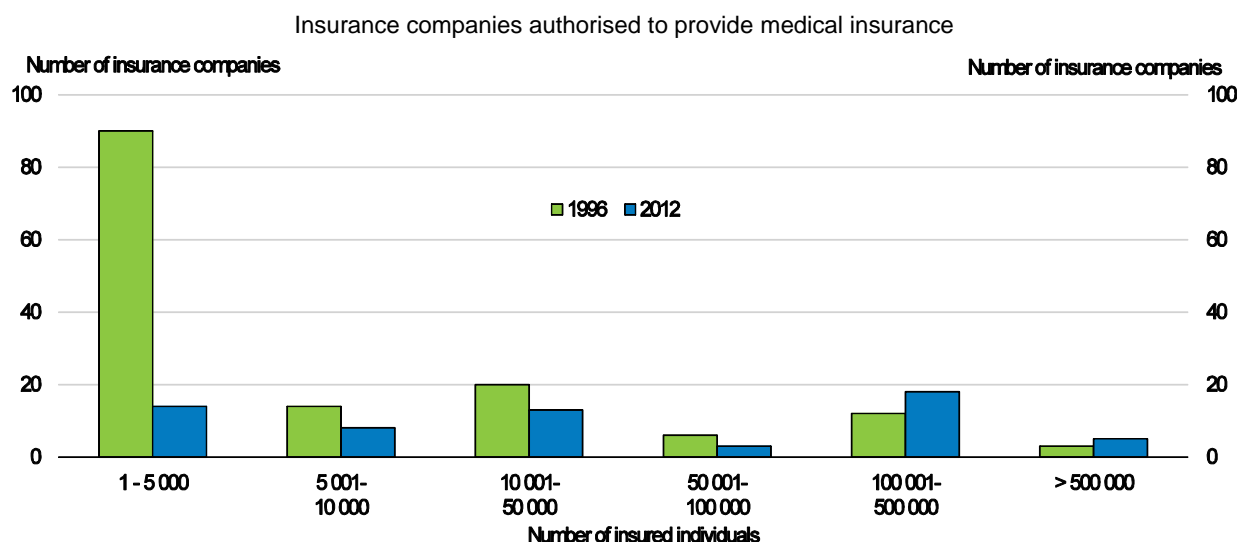
Source: Federal Statistical Office (BFS); Federal Health Office (BAG); and KOF.

Some of those inefficiencies are due to excessive fragmentation of the health system, leading to higher costs. It is the cantons that formally have the task of guaranteeing access to medical services and monitoring the system. They also take care of disease prevention and health education. The Confederation is responsible mostly for the regulation of health insurance. As for municipalities they handle the tasks that are delegated by cantons, for example the provision of nursing and home care. Fragmentation is also apparent on the funding side. In 2012, 61.3% of funds were provided by households, 32.3% by the government (Confederation 5.7%, cantons 22.3% and municipalities 4.3%) and 6.4% by private companies. By funding regimes, 42% came from the compulsory public insurance scheme (LAMal), 26.2% from households through a myriad of private health-insurance companies and out-of-pocket payments, 20.2% from the government (of which 17.1% from the cantons), 7.1% from private insurance and 4.5% from various other sources. Hospitals, clinics, birth centres and specialised institutions received 54.8% of the funds, the ambulatory sector 30.3%, retailers such as pharmacies 8.2%, and the rest (including non-profit institutions) 6.7% (BFS, 2014). One way to deal with the costs of fragmentation would be a single-payer public health insurance system, which would lead to greater transparency, accountability and economies of scale, but this was massively rejected by popular initiative (“Pour une caisse publique d’assurance-maladie”) in September 2014. As a result, improvements will have to be made to the system as it currently operates.

One way to improve input efficiency is by encouraging competition to reduce costs for any given level of output. Consolidation in the sector has led to a fall in the number of health-insurance companies in the last 20 years, boosting economies of scale. The most sizeable consolidation has taken place in the smallest category (with less than 5 000 insured), with their number falling from 90 to 14 between 1996 and 2012 (Figure 8). However, incentives to compete on efficiency and the quality of healthcare services are blunted. First, the prices of services are often collectively negotiated at cantonal level between associations of insurers and providers. Moreover, Article 35 of LAMal obliges insurers to have contracts with all providers in a canton (the goal being to guarantee a diversity of approaches) regardless of costs and quality of service. Only formal proof of qualification and requirements with regards to infrastructure are needed to be admitted in the list of qualified providers, with no reference made to quality or cost efficiency. This prevents insurers from choosing providers on the basis of quality of care and makes it difficult to limit the number of providers and costs. At the same time, patients have little information on the quality of

providers' services, and even if such information were available insurers could not benefit from it since they have to contract with all providers. Abolishing this obligation, while maintaining diversity, would increase efficiency by allowing insurers to pick the best, most cost-effective providers. It would also foster the development of a market for health-quality data in parallel to those collected by the cantons and the Confederation (see below).

Figure 8. Number of insurers by size of their portfolio of insured people



Source: Interpharma (2015), Santé Publique en Suisse, Basel.

Even greater efficiencies could be achieved by inducing a greater number of the insured to seek care within a restricted network of providers in exchange for lower health premiums, a system known as managed care. In addition to avoiding the costs of over-consultation, the system allows information sharing among practitioners within the network and facilitates quality certification. A comprehensive managed care system operates in a number of OECD countries, including the United States. Indeed, managed care is gaining in popularity in Switzerland, with 24% of insured people part of a managed care network in 2014, twice the 2010 share (Groupe Mutuel, 2015). Over-consultation can also be mitigated outside of managed care by “gatekeeping”, i.e. requiring patients to be referred by generalists in order to access specialists or non-emergency hospital care.

One downside of managed care is that by offering premium discounts in exchange for restricting provider choice, managed care contracts are known to attract people with good health-risk profiles. As a result, higher-risk individuals are reluctant to switch to managed-care contracts, making it difficult to disentangle the impact of managed care from risk-selection. In order to foster real and equitable competition between insurers, further improvement in the current risk-equalisation mechanism would help. The mechanism organises risk-premium transfer payments through a risk-equalisation pool, but the formula currently corrects only for sex and age. Hospitalisation beyond three days in the previous year is now taken into account. More factors would be needed, some of which are currently being examined. While studies of the impact of managed care on cost savings controlling for risk-selection are scarce, they point to significant savings (OECD and WHO, 2011).

A by-product of the fragmentation of the Swiss health-care system is an over-supply of health services through “supplier-induced demand”. Looking across cantons, there is a significant correlation between specialist density and the number of consultations (SAAS, 2012). No such correlation is evident for non-specialists, however, but Filippini et al. (2006 and 2009) have shown that a higher density of physicians is associated with higher antibiotic consumption, the annual cost of which is estimated at EUR 6.8 million,

representing 12% of total spending on antibiotics in ambulatory care. Similar studies have shown that more beds lead to a greater use of hospital services. A side effect of this over-supply is that small hospitals tend to conduct too few operations to be cost effective, making it harder for them to keep up to date with quality standards. For instance, there are 120 hospitals conducting vascular surgery in Switzerland, versus 8 in the whole of London (La Tribune de Genève, 2015). Although the number of hospital beds per person in Switzerland is around the OECD average, there are many small regional hospitals with few beds. A reduction in their number should be encouraged. As with the other recommendations already discussed, it would raise Switzerland's input efficiency in health.

While consumers may choose between multiple providers, they often have surprisingly little quality information to inform their choices. As for health professionals, they lack registries publishing the results of specialised, complex treatments, which could be used as tools for comparative evaluation of the effectiveness and costs of treatments and health services. With an incomplete picture of how costly and effective treatments are and how health risks vary across the population, it is difficult for the insured to choose among providers and for governments to tailor policy. The resulting asymmetry of information generates over-consumption of medical services through supplier-induced demand, whose annual costs have been estimated at CHF 1-2 billion (SAAS, 2012).

Reflecting the organisation of the health-care system, health data are collected in a fragmented way. Quality data collection and diffusion lie in the hands of the Confederation, but the actual production and collection of underlying data rest with the cantons. As both owners and quality assurers of hospitals, cantons may have mixed incentives to address quality shortfalls. This is perhaps particularly a risk if the viability of local services is under threat. To make health policy evidence-based and tailor it to local circumstances, Switzerland would benefit from systematic collection of a set of data across the full spectrum of health services. Besides the quality indicators published by the Federal Office of Public Health, an organisation called the *Association nationale pour le développement de la qualité dans les hôpitaux et les cliniques* (ANQ) is now responsible for coordinating and producing quality indicators at hospitals and clinics around the country. Jointly funded by the cantons, the hospital association, Santésuisse (the umbrella organisation of health insurers) and several social insurance schemes, the ANQ programme has sought to measure a series of quality indicators. This includes rehospitalisation rates, surgical site infection rates, falls, ulcers and patient satisfaction (OECD and WHO, 2011). While participation is voluntary, the ANQ reports good will from most hospitals (ANQ, 2013). Nowadays uniform quality measures are computed for acute somatic illness, psychiatry and rehabilitation medicine. A set of quality indicators for primary care and outpatient activity is still lacking, however, and should be developed. In parallel, publishing a list of complying health-care providers could encourage voluntary participation.

The remuneration system for inpatient services provides another example of weak incentives to control costs. Hospitals used to receive funding based on the number of hospital beds occupied, inducing them to keep patients longer than necessary. A new system of case-based payments by diagnostic-related groups (DRGs) was introduced in January 2012. As in the US system, the payment per case is calculated by multiplying the base rate, which is hospital-specific, by a coefficient, which is disease-specific yet uniform at the national level. The coefficient reflects the relative costliness of hospital treatment for that particular condition. Base rates are negotiated between hospitals and insurers within each canton and approved by cantonal governments. The cost of in-patient drugs is included in the tariff, as are those of diagnostic and therapeutic services. Early evaluations show that costs are still rising fast (Table 1). While it is arguably too early to make a definitive assessment of the effects of the reform, it seems to be encouraging other inefficient behaviour such as providers selecting a costly DRG when the diagnosis is uncertain (Gerritsen and Kirchgässner, 2013). Moreover, the variation in hospital-specific prices (the base rates) remains high too. For instance, administrative tribunals validated base rates of CHF 10 325 per case in Lucerne and CHF 9 480 per case in Zurich's Triemli and Waid hospitals. Those rates are significantly

higher than the recommended base rate of CHF 8 974 derived from benchmarking of nationally efficient hospitals in the cantons of Zurich and Thurgovie (Confédération Suisse, 2014). The DRG reform is therefore a step in the right direction, but it has not removed all perverse incentives and has introduced others, and it leaves too much room for cantons to fix base rates. As noted earlier, more and better information via registries would help benchmark costs per procedure. If these measures and rulings by administrative tribunals prove insufficient, then new regulation may be needed to limit the ability of hospitals and insurers to set base rates.

Table 1. **Acute-care sector statistics in Switzerland**

	2011	2012	2013 ¹
Number of hospitals	300	298	293
Number of hospital beds	38 533	38 297	37 744
Available hospital bed days (millions)	14.1	14.0	13.8
Number of days of hospitalisation (millions)	12.8	12.6	12.7
Occupancy rate	91%	90%	92%
Average length of stay (days)	9.5	9.4	9.4
Number of hospitalisations (millions)	1.35	1.35	1.37
Operating costs (CHF)			
Per case	11 631	12 251	12 564
Per day	1 229	1 320	1 357

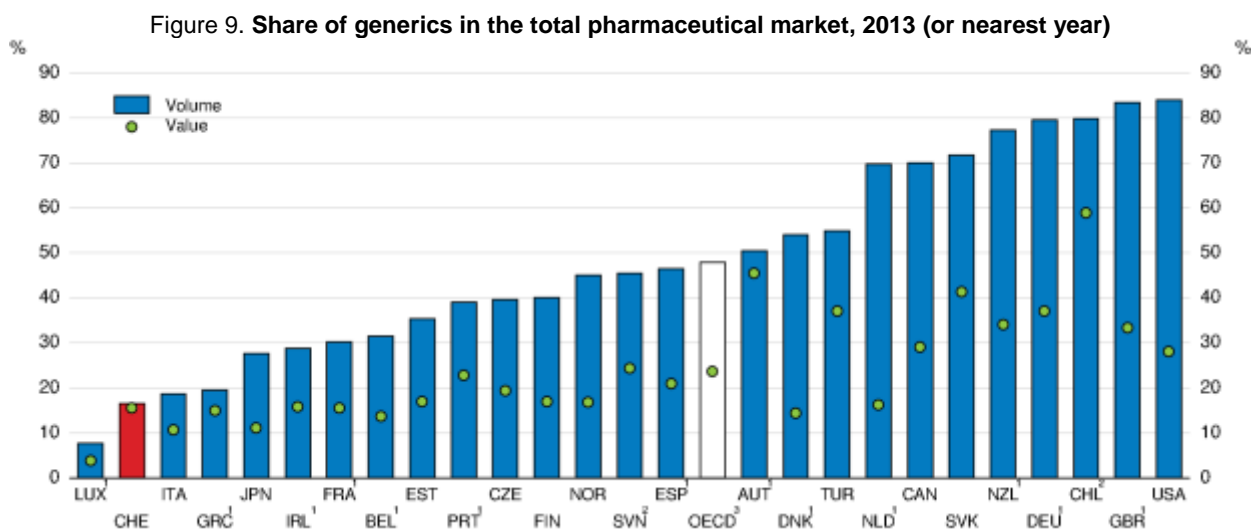
1. Provisional.

Source: Interpharma (2015), based on FSO data.

With the long-term shift from treating communicable disease and accidents (curative care) to treating chronic conditions, the balance of effort in developed nations' health-care systems will need to shift from a far-reaching network of well-equipped hospitals to promoting good health throughout life via a focus on public health, prevention and primary care. The decentralised system has encouraged the development of locally relevant prevention programmes, but it has also made it difficult to develop broad-based policies to address major chronic diseases and conditions, such as diabetes, obesity and cancer, and associated risk factors (e.g. alcohol abuse). In addition, many of the 26 cantons are simply too small to achieve the minimum size for efficient prevention policy (the five least populated all have fewer than 40 000 inhabitants). Similarly, progress in implementing measures with a proven value has been too slow. An evaluation of Switzerland's H1N1 immunisation strategy found that cantons' response plans were not standardised nor harmonised to minimum standards, that there was a lack of co-ordination on the distribution of vaccines to cantons and that there was a lack of leadership in communication (OECD and WHO, 2011). The revision of the Epidemics Act, which will come into force in January 2016, creates a framework for up-to-date detection, monitoring, prevention and management of disease outbreaks. It requires, for instance, a coordinated approach to the development of emergency plans.

Drugs accounted for 9.2% of health costs and 20% of compulsory health-insurance expenses in 2012. Prices for medicines in Switzerland are much higher than in the comparison countries used for benchmarking by the Swiss Federal Office of Public Health (FOPH), namely Germany, Austria, Denmark, France, the United Kingdom and the Netherlands. Patented drugs for cardiovascular disease, for instance, are 11% cheaper in the FOPH panel countries, and 15% cheaper if Belgium, Finland and Sweden are included in an extended panel as the FOPH is currently considering. Generic drugs are on average 65% cheaper in the current comparison panel than they are in Switzerland. Their higher cost is due to the Swiss rule for setting their prices. The rule requires that generics be priced, depending on sales volume, at least 10% to 60% below the price of the original patented medicine at the time of its patent expiry. In addition, health insurance reimburses both the generic and the patented drug, thereby decreasing the incentive to

choose the generic. As a result, the share of generics by value is low in international comparison (Figure 9).



1. Reimbursed pharmaceutical market.
2. Community pharmacy market.
3. Simple average of the 26 countries with available data.

Source: OECD, Health at a Glance 2015.

Some progress has been made in reining in drug costs and boosting the use of generics, such as increasing the share paid by consumers for brand-name drugs for which less expensive generics are available (OECD and WHO, 2011). Perhaps as a result, drug spending fell below 10% of total health-care outlays in 2012 for the first time since LAMal in 1996 (Interpharma, 2015). Drug prices should be reviewed at least every year rather than every three years in order to better reflect varying exchange rates. In the autumn of 2014 prices of one-third of drugs were still using a 1.58 CHF/EUR exchange rate as a reference. Applying today's exchange rate of 1.04 CHF/EUR would therefore force prices down significantly. In any case, the current system for setting generics' prices should be abandoned in favour of reimbursing a pre-determined fixed amount, as is done in more than 20 other European countries (Confédération Suisse, 2014). Competition among pharmaceutical companies would push the price down to that level, and patients would have more incentives to choose the generic over the original. Such measures could save CHF 1 billion per year out of the CHF 5.7 billion spent on medicines, according to SantéSuisse. This represents CHF 125 per patient per year.

The impact on health-care costs of allowing doctors to sell medicines is much debated. Using physician-level data for the period 2008-10, and exploiting regional variation in dispensing regimes across cantons, Kaiser and Schmid (2013) show that dispensing physicians (40% of the total) increase drug costs per patient by 30%. However, several other studies have shown that self-dispensing doctors have a mitigating cost-saving effect by prescribing generics more frequently where their profit margins are higher (Rischatsch et al., 2009). A study by Schleiniger et al. (2007) even found a robust negative effect of allowing doctors to dispense drugs on the volume of drugs sold.

Setting priorities in the Swiss health-care system is the shared responsibility of the federal government, the cantons and – in the field of care for older people – the municipalities. While the strongly local and participative nature of civic governance in Switzerland fosters locally relevant public health solutions, mirroring the situation discussed early regarding education, this dispersion in policy hinders the building of an overall vision for the health system and creates incentives that are not always geared towards efficiency. At some CHF 3 billion per year, inadequate coordination due to poor governance has

been estimated by the Swiss Academies of Arts and Sciences to be the largest of all the system's inefficiency costs (SAS, 2012). Since many services are simultaneously financed from multiple sources, and nobody is responsible for the global health-care budget, it is easier for a financing body to cut its own outlays than to engage in more rational spending. As an example, if after an operation a patient is admitted to a nursing home, the overall costs will be higher than with at-home rehabilitation. But the proportion paid out by the health insurer for a nursing home assignment is much lower, so they prefer to send patients to nursing homes, increasing the overall cost (SAMS, 2012). This possibility to cost shift at the expense of another payer lowers incentives to look for solutions that would foster effective expenditure rationalisation. Such problems do not arise in countries with single payers (e.g. Scandinavia). Establishing a legal framework to facilitate national public health policies should then be a priority, as already highlighted in earlier OECD and WHO Reviews (OECD and WHO, 2006 and 2011). Such a law should clearly spell out objectives and priorities to ensure that cantons and insurers meet agreed outcomes. A national health conference gathering all stakeholders could be instituted to set priorities. A body in charge of implementing public health priorities and monitoring progress should also be put in place.

Recommendations for promoting efficiency in health-care expenditure

- Switch the system for setting generic drug prices to reimbursing a pre-determined fixed amount.
- Encourage systematic benchmarking of hospital costs. If hospital reimbursement rates keep rising despite the 2012 reform, consider new legislation to control them using cost benchmarks.
- Create incentives for agents to join managed-care networks, and further improve the risk-equalisation mechanism among insurers by including more dimensions in the formula.
- Encourage the closing of small and inefficient hospitals.
- Publish the list of institutions participating in the collection of quality data by the *Association nationale pour le développement et la qualité dans les hôpitaux et les cliniques* (ANQ), and develop quality indicators for primary care and outpatient activity.
- Establish a country-wide legal framework to set priorities and facilitate national public health policies.

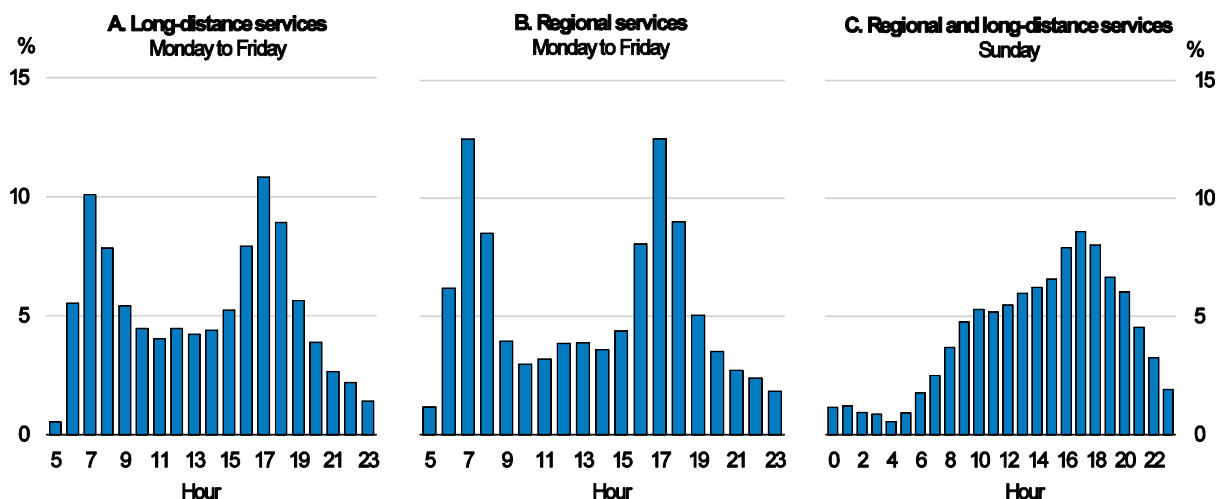
Optimising the use of transport infrastructure

Between 2008 and 2013 the Swiss population grew by 5.8%, the seventh fastest in the OECD and the third fastest in Europe. Combined with a thriving economy and widespread commuting, this demographic growth is putting increasing pressure on the country's transport infrastructure. Using data from the Federal Roads Office (FEDRO, 2013), OECD calculations point to the cost of traffic congestion reaching CHF 1 billion in 2013, three times as much as in 2000. In 2011, public spending on transport amounted to CHF 17.5 billion, 9% of total public expenditure (FSO, 2014). The financing of road and rail infrastructure, as well as of transportation services, relies on a combination of usage-based payments and public financing. Due to environmental concerns and Switzerland's peculiar topography (more than 70% of its area is covered by the Alps), extending existing infrastructure is difficult. Additionally, the estimated growth effect (beyond the capital expenditure) from additional rail tracks and motorway investment in Switzerland between 1960 and 2005 was weak, sometimes negative, pointing to poor-quality investment at the time (Égert et al., 2009).

More efficient use of transport infrastructure would over the long term reduce the need to invest in more of it. A particular feature of road and rail infrastructure usage is that congestion typically occurs in the morning and evening rush hours, as seen in passenger traffic data at Zurich's main train station for instance (Figure 10). Because road and rail infrastructure are "club" goods (i.e. excludable), their efficient

use calls for congestion externalities to be internalised by charging a higher price at peak traffic times and vice versa (“peak-load pricing”). But road usage is largely free of charge in Switzerland. Motorway passenger vehicle users have to buy an annual CHF 40 vignette, while freight traffic is priced according to the distance travelled. Neither pricing scheme is time-dependent, however.

Figure 10. Hourly distribution of train passengers, Zurich Hauptbahnhof, 2014¹



1. Passenger traffic as a percentage of trains arriving at or departing from Zurich HB per hour. On weekdays the percentage per hour before 5 A.M. is negligible.

Source: SBB, Die SBB in Zahlen und Fakten 2014, Bern.

Peak-load pricing for train travel would be easy to implement. Recent technological advances such as electronic tolling stations or satellite-based registration systems also make it possible to charge for road usage according to time. A mileage rate could be charged for all vehicles, with tariffs differentiated by time, place and possibly type. However, this may cause transparency problems (with drivers not knowing what they were being charged) and privacy issues. Moreover, because usage-dependent pricing for only one mode of transportation might lead to a substitution effect, it is important to adopt a comprehensive pricing framework (Avenir Suisse, 2013a). If congestion pricing encourages travel on other congested routes, the result can be sizeable indirect welfare losses, which counteract the intended efficiency gain (Parry and Bento, 2002). Peak-load pricing might also raise efficiency beyond the gains due to more uniform traffic by reducing the need for additional infrastructure and therefore taxes to fund it. This so-called double dividend is well-known in environmental economics where green levies yield a first dividend by internalising environmental externalities and a second by allowing lower distortionary taxes (Bovenberg and De Mooij, 1994). Switzerland should implement peak-load pricing, as already long ago advocated by the OECD (Blöchliger, 2002). It should first test the system on a few heavily used highways, such as between Bern and Zurich or between Geneva and Lausanne. As illustrated by the Dutch experience, rapid implementation is critical. Party politics and the fall of the government on another issue put an end to the idea, despite strong initial support from all sides of the Dutch society (ITS-CH, 2013; OECD, 2010b). Addressing the privacy issue is also important.

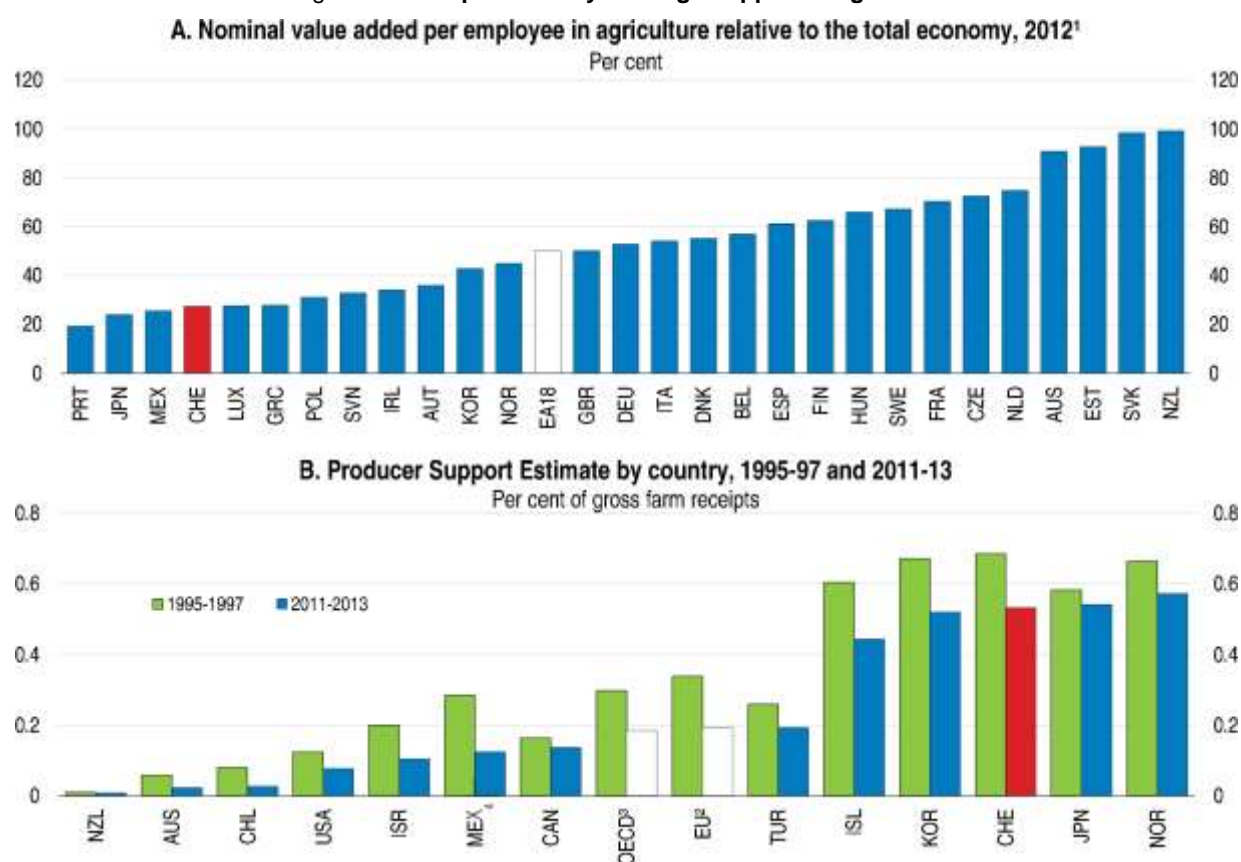
Recommendation for promoting efficiency in transport

- Test peak-load pricing on some highly trafficked roads. Further build peak-load pricing into rail fares.

Enhancing competitiveness and efficiency in agriculture

At 0.7% of GDP versus 2% in the median OECD country, agriculture plays a relatively minor role in the Swiss economy. Its share in employment is larger, at 4.1%, reflecting low productivity (Figure 11, Panel A). Indeed, the Swiss farming sector is made up of relatively small family farms, and many agricultural policies support extensive farming practices. Consolidation of the sector is ongoing, however, with the number of farms declining from 70 537 to 56 575 between 2000 and 2012 and the average farm area increasing from 15.2 to 18.3 hectares. Agricultural land, including alpine pastures (which accounts for 36% of total land), shrank by 5.4% between 1985 and 2009 as a result of increases in urban and wooded areas. Livestock and crops represent 69% and 31% of total agricultural production by value, and milk is the primary output (OECD, 2014d).

Figure 11. Low productivity and high support in agriculture



1. Or latest year available.
2. EU15 for 1995-1997 and EU27 for 2011-2013.
3. The OECD total does not include the non-OECD EU member states.
4. For Mexico, 1991-1993 instead of 1995-1997.

Source: OECD National Accounts and Agriculture Statistics databases.

Swiss agriculture has long been heavily shielded from market forces. For instance, in the 1980s, domestic food prices were on average 4.5 times higher than world prices. A set of policy reforms implemented in the early 1990s substantially reduced market distortions. In particular, a larger share of support is now delivered through less distortive direct payments, rather than market price support (Box 4). As a result, domestic prices moved closer to world market levels, and OECD Producer Support Estimates (PSEs) for Switzerland fell from 78% in 1986-88 to 53% in 2011-13. Nevertheless, prices paid to producers were still around 40% above the world market level in 2013 (before the latest franc

appreciation), and PSEs remain among the highest in the OECD (Figure 11, Panel B). Such high levels of support result in considerable costs for taxpayers. In 2013, total budgetary outlays amounted to CHF 3.7 billion, which represented 5.8% of total federal budgetary expenditures (0.6% of GDP) (FOAG, 2014). Total support, as measured by the Total Support Estimate (TSE), amounts to just over 1% of GDP, 58% of which is paid for by taxpayers and 42% by consumers (Jarrett and Möser, 2013).

Box 4. Direct payments in Swiss agriculture

A new system of direct payments was gradually introduced starting from 1993. There are two main categories of direct payments. General direct payments are non-commodity-specific payments granted in the form of payments per hectare of farmland, per head of cattle, for roughage-consuming cattle and for farming in difficult locations. They represented CHF 2 147 million in 2013, more than half of which absorbed by area payments. The other type are ecological direct payments, which are granted in the form of area and headage payments to farmers who voluntarily apply stricter farming practices than those required by public regulations and fulfil the criteria of proof of ecological performance. They aim at achieving environmental and animal welfare targets. In 2013 they represented CHF 645 million, the main category being “regularly keeping animals outdoors” (CHF 166 million).

Switzerland adopted a new policy framework for the period 2014-17 (Politique Agricole 2014-17). The main change is the suppression of general area payments and the reallocation of payments more closely related to specific objectives (agricultural practices) complemented by a system of transition payments to make the reform socially acceptable. Another important shift is the replacement of general headage payments to ruminants by an area payment to pastures with a requirement for a minimal stocking density. Most of the animal welfare and agri-environmental payments from the previous period continue to be applied under this new framework. The environmental cross-compliance conditions are also maintained in the new system of payments. The overall annual budgeted amount for these payments remains stable for the whole period at around CHF 2.8 billion (USD 3.0 billion), which is around the same level as in 2012 and 2013.

Source: OECD, Review of Agricultural Policies: Switzerland 2015.

The pace of reform in the agricultural sector has slowed in recent years, and barriers to structural changes remain significant (OECD, 2013b). While the shift toward direct payments (which are less distortive than price support) has improved efficiency, they still represent nearly two-thirds of Swiss agricultural GDP, leaving little room for what farmers earn by selling their products on the market. As a result, price signals are playing only a secondary role in guiding farming decisions. This is likely to hamper the development of a competitive food-producing sector that responds efficiently to evolving consumer preferences (OECD, 2015b). Future policy changes should aim at reducing the overall level of agricultural support, inducing farmers to produce more efficiently. Similar in spirit to ecological direct payments, some of the general direct payments could be transformed into efficiency direct payments, that is, payments conditional on implementing productivity-enhancing farming methods. Similarly, some of the general direct payments could be made conditional on increasing the share of revenues coming from market activities.

Barriers to trade also weigh on efficiency in agriculture and should be reduced further. Tariff protection varies substantially across and within sectors, averaging 32% for agricultural products versus 1.4% in Australia and 9% in the United States, with adverse effects on productivity (WTO, 2013, 2014 and 2015). Agro-food imports are also regulated by a complex system of tariff-rate quotas. The system takes nearly 300 pages to describe; it has 28 tariff quotas, 58 sub-quotas and 80 bilateral preferential tariff quotas other than those under the Generalised System of Preferences where all imports are admitted freely (OECD, 2015b). The elimination of the remaining export subsidies to processed products (exporters of processed foods are compensated for the high costs of locally produced inputs) should also be considered to further reduce interference with domestic and world markets.

Agricultural spending also suffers from distortions arising from inconsistencies between policy instruments and objectives. For example, payments to maintain cattle production in geographically less favoured areas create incentives to increase stocking densities on grassland (pastures). This, in turn, increases environmental pressures from livestock farming, which conflicts with the environmental objectives supported by ecological direct payments (OECD, 2015b). Similarly, high tariffs on agricultural products raise the price of imported raw materials used in the food processing industry, which hampers the ability of domestic food producers to sell competitively priced items. As for general direct payments, they slow down the necessary structural changes in the farming sector by maintaining production where it is not economically viable and by restricting expansion in the more productive lowland regions. The latest *OECD Review of Swiss Agricultural Policies* (OECD, 2015b) calls for more explicit disentangling of policy objectives and instruments via a differentiated policy approach. In particular, it recommends distinguishing between policies that address market failures and those that address farmers' income problems.

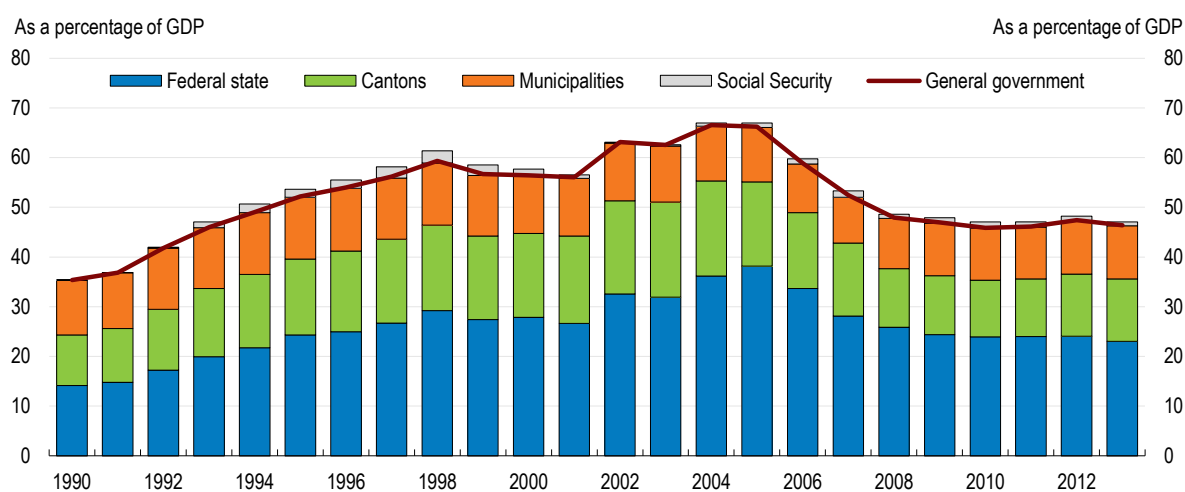
Recommendations for promoting efficiency in agriculture

- Using environmental direct payments as a model, allocate some of the general direct payments to create: 1) 'efficiency' direct payments conditional on implementing productivity-enhancing farming methods; and 2) 'market' direct payments to farmers who increase the share of their revenue coming from market-related activities rather than direct payments.
- Reduce import tariffs on agricultural products and export subsidies to processed food producers.
- Disentangle agricultural policy objectives and instruments by distinguishing between policies that address market failures and those that address farmers' income problems.

Allocating public expenditure efficiently

With public debt at around 45% of GDP (or 35% of GDP according to Maastricht definition), down 10 percentage points since 1998, Switzerland's public finances are in very good shape. The cantons have declining debt-to-GDP ratios, thanks to good economic conditions and debt-limitation mechanisms. Indeed, "debt brake" rules, which were put in place in the 1990s for most cantons and in 2001 for the Confederation, have undoubtedly contributed to a decline in debt-to-GDP ratios (Figure 12). However, the picture is more mixed for municipalities and the social security system. In particular, the outlook for

Figure 12. Trends in the gross debt-to-GDP ratio by level of government, 1990-2014



1. Data for 2014 are projections in the case of Cantons and Municipalities and, consequently, for the general government.

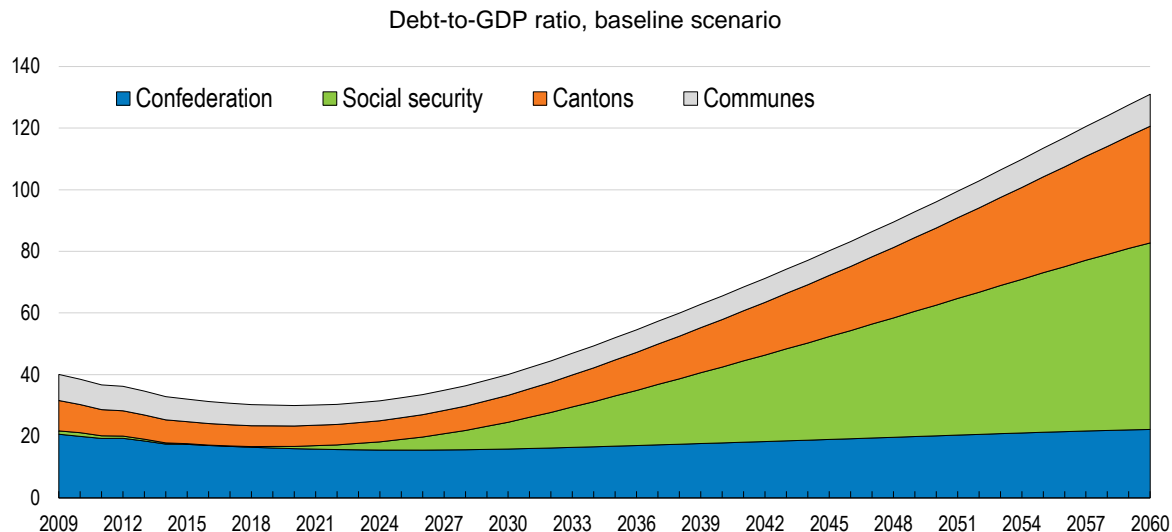
Source: Federal Finance Administration (FFA).

social security spending is increasingly beholden to demographic forces and risks crowding out other categories of public spending. National and cantonal fiscal equalisation systems are also impacting on the allocation of public funds across levels of government and expenditure areas. This section looks at how those constitutional arrangements and obligations could be improved to foster an efficient allocation of public expenditure and to avoid the risk of important categories being underfunded. It also makes policy recommendations to increase the role and efficiency of tendering for public procurement as a cost-effective way to deliver high-quality public services.

Tackling the rise in pension expenditure

While keeping the debt of the Confederation and the cantons under control via debt-brake rules is effective, almost 40% of all public spending consists of social security expenditures (FFA, 2014a). Yet, with the exception of some relatively small federal transfer payments, social security expenses, such as the public old-age pension insurance, are excluded from federal accounts and therefore unconstrained by its debt brake. Also, importantly, many social insurance expenses are related to demographic factors, such as aging, which will put increasing pressure on public expenditures regardless of the strength of the economy. Projections show that if growth rates in social and health spending were to continue on their current trajectory, their share in total public spending would jump to 70% by 2030 (economiesuisse, 2012). The biggest increases will relate to the old-age pension system, whose cost is predicted to increase from 9.6% to 11% of GDP in 2030, and long-term care, from 0.6% to 1.9%. Further simulations that encompass all areas of public spending confirm that the biggest increase in public debt will relate to social security (Figure 13). If no corrective actions are taken, public debt could rise to over 130% of GDP by 2060 (FDF, 2012).

Figure 13. Public finance projections



Source: Swiss Federal Department of Finance, 2012 Report on the Long-Term Sustainability of Public Finances in Switzerland, Bern.

In the Swiss social insurance system, both entitlements and contributions are set by law with no guarantee that the latter will fully cover the former (Bruchez and Matter Schaffner, 2011). By leaving this key aspect of public finances to the side, the debt brake may be misleading by giving the impression that public finances will always be under control. While there is always the option to amend the debt brake, as was done in 2008 to incorporate extraordinary spending, debt brake rules are not the right tool to control social expenditure. Moreover, incorporating such spending would risk crowding out other important

productivity-enhancing outlays on education and transport, for instance. There is already some crowding out going on via the old-age pension system, since about 20% of its expenses are covered by the Confederation, as are 38% of invalidity insurance (AI) outlays (Bruchez and Matter Schaffner, 2011).

The Swiss pension system has three pillars. The first is the public old-age pension system (AVS). It is a defined-benefit system and is largely financed out of labour income contributions. Since 1975 the contribution rate has been 8.4%, which is paid in equal proportions by employees and employers. The second largest source of financing is the federal budget, which covers about 20% of AVS expenses. The remainder, about 6%, comes from earmarked tax revenues, such as the tobacco tax. The formula behind entitlement payments uses the number of years in which contributions have been made and past annual incomes. The second pillar is a funded system. It is financed out of labour income contributions by employers and employees and the return earned on the accumulated stock of capital. The contribution rate increases with the employee's age, from 7% between 25 and 34 years old, to 18% between 55 and 64/65 years old. Employers are required to contribute by at least as much as the employee. The third pillar is a system of tax-deductible private saving, capped at CHF 6 768 per year for employees who are part of the second pillar. With rising life expectancy and declining fertility, the ensuing decline in the ratio of workers to retirees is going to be a challenge for the first pillar as pension spending is financed by contributions from current workers. From 6.2 workers per pensioner in 1950, the ratio fell to 3.8 in 2010 and is projected to drop to 2.0 by 2050 (Avenir Suisse, 2013b). At the same time the fertility rate has dropped from 2.7 to 1.5 since the mid-1960s.

All else being equal, the effects of aging on the financing of social security can be offset in three ways: by increasing revenues (higher contributions), decreasing expenses (reduced benefits) and raising the retirement age. Any reform needs to account for the impact that it would have on labour supply (which is the contribution base for social security), the total tax take and finally economic growth. A comprehensive, general equilibrium assessment taking into account all interactions was conducted by Keuschnigg et al. (2011). In their overlapping-generations model, they aimed at keeping benefits unchanged while varying contributions, the retirement age (currently 65 for men and 64 for women) and several key features of the Swiss system. In line with demographic projections, the authors assumed that the dependency ratio roughly doubles due to increased longevity, total population rises by 10% in the long run, and the working-age population declines by about 6%. Several reforms were considered in the modelling exercise, such as raising the retirement age, eliminating the upper income ceiling for pension assessment (currently contributions on income above CHF 79 560 do not translate into higher first-pillar pensions), eliminating unemployment benefits from the contribution base (which weakens job-search intensity), boosting competition among pension funds and reducing their administrative costs, and encouraging life-long training.

The modelling showed that if the government leaves current benefit rules unchanged and adjusts taxes and contribution rates to balance budgets, the statutory labour tax burden has to rise by 21 percentage points, total employment falls by 11.8% in absolute levels and GDP per capita falls by 20%. However, a large part of the negative consequences of ageing can be offset by a comprehensive reform package to boost aggregate labour supply and, thereby, the contribution base. The most effective measure by far was found to be by increasing the retirement age by four years, which keeps the system balanced without adjustments to contribution and pension replacement rates. Intuitively, longer lived future generations need to roughly split their extended total lifetime between work and retirement in the same way as present generations do. If agents currently spend three-quarters of their adult lives in work and one quarter in retirement, then each additional year of life expectancy should be divided in the same way. As for the VAT rise, because it taxes consumption rather than labour, it is found to be less harmful for labour supply than wage taxes, as it is also a tax on retiree wealth imposed when it is spent. Several OECD countries such as Iceland, Israel and Norway already have an official retirement age of 67. Switzerland should raise the retirement age to 65 for both sexes and thereafter link it to life expectancy.

As part of this concern to boost labour supply, especially in old age, any pension reform could be fruitfully augmented with appropriate flanking policies. Indeed, one way to increase the labour supply is to ‘work better with age’ by optimising the possibilities for employment throughout people’s lives (OECD, 2014e). In that regard Switzerland is doing well, with one of the highest employment rates for older workers in the OECD. In 2014, 71.6% of Swiss aged 55-64 were in work, behind Iceland (84.2%), New Zealand (76.2%), Sweden (74.2%) and Norway (72.2%), but easily exceeding the OECD average of 56%. That strong performance is mainly attributable to men with degrees under 60, however (Düll and Sonnet, 2014). At 20.3%, the employment rate for workers aged 65-69 places Switzerland 14th among the 34 OECD countries, far behind the best score of 48% for Iceland (OECD, 2014e). In line with previous *Survey* recommendations, one option to boost labour supply of older workers is to pay higher pensions to people who work beyond the normal retirement age. For instance, pensions are raised by 12% in Portugal for every year of additional work, 10.4% in the United Kingdom and 8.4% in Japan. In Switzerland pensions go up only between 5.2% and 6.3% (OECD, 2013a). Another option is to continue to reduce existing incentives for early retirement, especially in the second pillar, which range from mandatory early retirement to very attractive packages for the most successful employees. Also, on-the-job training for people aged 55-64 without a university degree is seven times lower than that for workers with a degree. Targeted programmes should be developed to raise the skills of older workers without degrees. In Switzerland, only 665 companies (slightly above 1%) employ staff who are beyond the legal retirement age (Le Temps, 2015). Thus in Switzerland, like in France, Norway and the Netherlands, more could be done on the demand side to encourage employers to hire and retain workers approaching and beyond retirement age (Sonnet et al., 2014). The Swiss government is moving in the right direction. It decided to have regular meetings with the social partners and the cantons to discuss best practices regarding the employability of older workers. The first meeting took place in April 2015.

A comprehensive pension reform (Prévoyance Vieillesse 2020) encompassing the first and second pillars is currently being discussed in Parliament. The main changes are a harmonisation of the retirement age between sexes (at 65 years, currently 65 for men and 64 for women), an increase in the VAT rate by 1.5 percentage points to fund the first pillar, more flexibility in the transition to retirement (allowing, in particular, for a gradual transition), and a decrease from 6.8% to 6% of the “conversion rate” in the second pillar (the annual pension as a share of cumulated retirement savings).

Recommendations for tackling the rise in pension expenditure

- Fix the retirement age at 65 for both sexes and thereafter link it to life expectancy.
- Pay a higher retirement premium for working beyond the retirement age, and reduce existing incentives for early retirement.
- Develop programmes to raise the skills of older workers without degrees to help them be productive longer.

Improving the efficiency of fiscal equalisation

The goal of fiscal equalisation is to provide minimum acceptable levels of public services across heterogeneous jurisdictions without requiring heavier tax burdens. Fiscal equalisation in Switzerland is implemented via a transfer of fiscal resources across jurisdictions with the aim of offsetting differences in revenue-raising capacity and public service costs (Blöchlinger and Charbit, 2008). In Switzerland, National Fiscal Equalisation exists between the Confederation and the cantons, but each canton also has its own equalisation system for its municipalities. There are two main components to equalisation between the Confederation and the cantons: resource equalisation and cost compensation. There is also a cohesion fund

worth CHF 366 million, which aims to cushion the effect of recent reforms and is intended to last until 2036.

Resource equalisation is based on the revenue potential of the cantons, which is determined by the taxable income and assets of individuals and the taxable profits of companies. Revenue potential is used to compute a normalised average, say 100, and then cantons are divided into the financially strong and weak (those with outcomes greater or lower than 100). Weak cantons receive transfers from the financially strong cantons (horizontal resource equalisation) and from the Confederation (vertical resource equalisation). An important part of the resource equalisation system is to allow poorer jurisdictions to compete tax-wise with fiscally stronger ones (Oates, 2003). Therefore, fiscal equalisation provides some levelling of the playing field in the competition for economic attractiveness.

Cost compensation addresses variations in costs across cantons associated with geographical, topographic and socio-demographic factors that result in differing requirements or costs of delivering public services. Typically, the alpine cantons have higher costs for infrastructure, winter road maintenance and schools (e.g. school buses), while urban cantons have an above-average proportion of poor and foreign residents who require more assistance. In 2014 resource equalisation amounted to CHF 2.2 billion from the Confederation to the cantons and CHF 1.5 billion among the cantons – that is CHF 3.7 billion in total. Cost compensation amounted to CHF 0.7 billion, half for topo-geographic factors and half for socio-demographic factors, all from the Confederation (Dafflon, 2014). The total of nearly CHF 4.5 billion represented 0.7% of GDP.

At the federal level, an important reform of fiscal equalisation and task allocation between the cantons and the Confederation was adopted by referendum in 2004. A recently published report concluded that implementing the reform has been successful on many fronts (Conseil Fédéral, 2014). For instance, the report noted that the share of non-earmarked transfers increased from 24% to 40%, in line with the goal of reinforcing autonomy. It also noted that the target level of financial resources per capita of 85% of the Swiss average was exceeded in all cantons over the study period. The disentanglement of tasks and financing was also achieved, with 17 of a total of 33 formerly shared tasks disentangled. The Confederation is now solely responsible for seven task areas (including motorways, the old-age pension system and invalidity insurance) and the cantons for ten (including institutions for the disabled and schools for children with special needs). The Confederation and cantons continue to assume joint responsibility for 16 task areas (including regional traffic).

Several problems remain. The very nature of the transfer system creates the risk that the resources transferred to the cantons do not match their needs. For instance, there have been cases of overcompensated cantons with respect to the legal criterion of 85% of the national average of resources per capita (Taboga and Utz, 2014). Indeed, the effect of adjusting transfers cannot be known before the next periodic report on fiscal equalisation by the Federal Council due in 2018, which is also sub-optimal. By then it may well be that cantons will have been undercompensated or overcompensated again. It would be useful to understand the precise reasons for overcompensation and then to amend the transfer formula accordingly.

With regard to decreasing discrepancies in financial capacity and fiscal pressure, not much progress has been made since the 2004 reforms. Although several cantons have been able to lower their tax rates, this was mainly attributable to good economic conditions and the dividends paid by the Swiss National Bank to the cantons, rather than to National Fiscal Equalisation itself. However, the current system creates little incentive for less wealthy cantons to raise their resource potential: the equalisation framework operates so that cantons face a corresponding decrease in fiscal transfers, on average equal to 80% of the revenue raised (Conseil Fédéral, 2014). The implied implicit tax rate of 80% should be reduced to a more incentive-compatible rate, say 60%. In order to attract businesses while limiting the rise in revenue

potential, a smaller weight should be put on companies' profits in the calculation of resource potential, as discussed in the draft corporate tax reform package. Furthermore, it would be worth investigating if moral hazard is a real issue. Other issues relate to the financial capacity of cantons to deal with changing cost structures. For instance, the current 50-50 allocation between socio-demographic factors and topographic/geographic factors in the cost equalisation scheme does not take into account the growing role played by socio-economic factors and is therefore detrimental to more urbanised cantons. The equalisation scheme should be amended to take into account the realities of modern Switzerland.

Recommendations for improving efficiency in fiscal equalisation

- Decrease the high implicit tax rate on cantons that increase their revenue potential to be no more than 60%, and lower the weight on companies' profit in the calculation of resource potential.
- Consider lowering transfers to cantons whose tax effort is below the average of the paying cantons
- Make efforts to better understand the causes of over- and under-compensation, and amend the transfer formula accordingly.

Increasing the share of public procurement put out to tenders

By outsourcing and tendering contracts, governments can deliver high-quality public services at lower cost. In Switzerland public procurement represented 25% of public spending in 2013, up from 23% in 2011, but below the OECD average of 29% and only half the maximum of 45% (in the Netherlands) (OECD, 2013b; OECD, 2015c). At 5.3%, expenditures on general government outsourcing as a percentage of GDP were also the second lowest in the OECD in 2013, less than a third of the share in the Netherlands.

Following signing in April 1994 the WTO-negotiated Agreement on Government Procurement, Switzerland liberalised its public procurement system to make it more transparent and equitable. This was facilitated by the December 1994 Federal Law on Public Procurement (and implementing ordinances) and the Intercantonal Agreement on Public Procurement, which together form the legal basis for public tenders in Switzerland (Oesch, 2010). Access to the market is further governed by the 1995 *Loi sur le marché intérieur* and several other regulations. In addition, Switzerland and the EU signed a bilateral agreement on public procurement in 1999. It is part of a package of seven sectoral bilateral agreements (*Package I*), which is now under threat following the passage of the 2014 mass immigration initiative. The agreement with the EU extends WTO treatment to procurement by municipalities, to private companies exercising public functions in the areas of water, electricity and gas, as well as to procurement by the state-owned telecoms and railway operators (Schneider et al., 2014). In addition to fostering efficiency gains by opening Swiss public tenders to European firms, the agreement with the EU also opened an EU procurement market worth an estimated CHF 1 500 billion per year to Swiss companies (economiesuisse, 2014).

Raising the share of public spending allocated via tendering and improving the existing framework could lower public expenditure. Despite the adoption of WTO principles, significant inefficiencies remain in the current tendering system due to lack of homogeneity in procedures across cantons and the Confederation. More harmonisation is required, especially since 80% of all tenders are advertised by sub-national governments (i.e. the cantons), one of the highest shares in the OECD (OECD, 2013d). In line with recommendations made in the 2007 *Survey*, progress was made with the modification of the implementing ordinance in 2008, which aimed at simplifying and accelerating procurement procedures as well as regulating the use of more transparent e-procurement (OECD, 2007 and 2009). A revision of legal frameworks is currently underway and includes an alignment of cantonal and federal legislation with the revised WTO General Procurement Agreement, which came into force in April 2014. This should lead to

greater standardisation in procedures and foster fair and transparent competition. Switzerland should implement standardised procedures for all its jurisdictions.

As part of its effort to increase transparency, Switzerland should also track procurement spending more systematically in order to increase accountability in the procurement process and also to see who benefits the most. It has indeed been shown that, compared to their share in Swiss GDP, firms from French- and Italian-speaking cantons are under-represented in contracts awarded by the Confederation and its bodies. Language in particular is a problem, with some calls for tenders requiring submissions to be in German only (CGSO, 2014). Measures should be taken to effectively eliminate discriminatory practices, which are forbidden by the 1995 *Loi sur le marché intérieur*. Switzerland should also publicise plans for future procurement tenders, as is done in several other countries, as a way to help interested companies plan ahead (OECD, 2013d).

A web platform (www.simap.ch) was launched in March 2009 to centralise and harmonise the advertisement of tenders and data collection for applicants. In 2014 the amount of public contracts advertised via the website totalled CHF 13.1 billion, 20% of total public expenditure (Tanner, 2015). The OECD Council Recommendation on Public Procurement encourages the use of digital technologies to ensure transparency, foster competition and achieve greater value for money in public procurement. The Swiss *e-Procurement* platform only allows for the publication of tender notices. The *e-Government* programme identified the need to expand the website's functionalities to allow businesses to download information about public tenders and submit their bid electronically. In 2014, bidder profiles and standardised forms were introduced. The upload function should be integrated at a later point in time to enable users to submit bids electronically. Beyond these implemented or planned functionalities, the platform does not provide any capacities that relate to contract implementation and management (orders, e-invoicing, performance assessments).

Recommendations for using procurement to raise public spending efficiency

- Increase the share of public expenditure allocated via public tenders.
- Harmonise procurement procedures across jurisdictions. Raise transparency by systematically tracking and advertising procurement outcomes. Expand the functionalities of www.simap.ch.

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