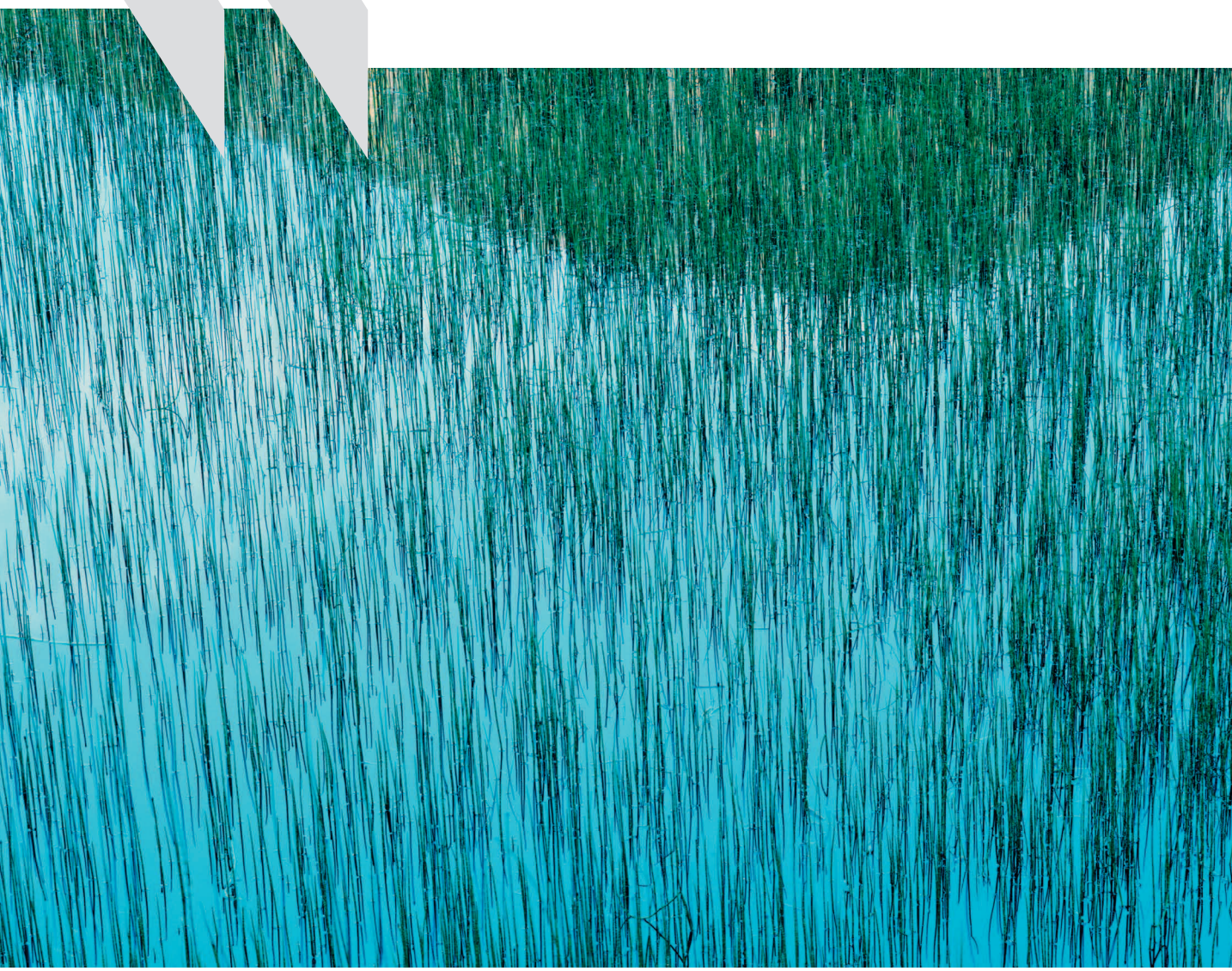
OECD Economic Surveys

ITALY



Volume 2009/8
June 2009

OECD Economic Surveys

Italy

2009

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

The OECD is a unique forum where the governments of 30 democracies work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies.

The OECD member countries are: Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The Commission of the European Communities takes part in the work of the OECD.

OECD Publishing disseminates widely the results of the Organisation's statistics gathering and research on economic, social and environmental issues, as well as the conventions, guidelines and standards agreed by its members.

Also available in French

Cover illustration: © Pat O'Hara/The Image Bank/Getty Images.
Corrigenda to OECD publications may be found on line at: *www.oecd.org/publishing/corrigenda*.

Table of contents

Boxes

Tables

Figures

This Survey is published on the responsibility of the Economic and Development Review Committee of the OECD, which is charged with the examination of the economic situation of member countries.

The economic situation and policies of Italy were reviewed by the Committee on 22 April 2009. The draft report was then revised in the light of the discussions and given final approval as the agreed report of the whole Committee on 5 May 2009.

The Secretariat's draft report was prepared for the Committee by Paul O'Brien, Romina Boarini and Enrico Sette with statistical assistance from Annette Panzera, Margherita Comola, Serena Fumagalli and Jens Arnold under the supervision of Patrick Lenain.

The previous Survey of Italy was issued in June 2007.

BASIC STATISTICS OF ITALY

THE LAND

Area (thousand sq. km)	301.3
Agricultural area (thousand sq. km, 1995)	165.2

Population of major cities (thousands, 20.10.2001):	
Rome	2 547
Milan	1 256
Naples	1 005
Turin	865

THE PEOPLE

Population, 2007 (in thousands)	59 336
Number of inhabitants per sq. km	197
Population growth rate (annual growth rate, %) in 2007	0.69
Fertility rate in 2006	1.35
Life expectancy in 2006	69.8

Labour force, 2008, thousands	24 854
Employment, 2007, thousands	24 492
In agriculture	895
In industry	6 954
In services	15 809

THE PRODUCTION

Gross domestic product in 2008, billions €	1 572.2
GDP per head (2008, USD)	30 315.6
Gross fixed capital formation (% of GDP in 2008)	17.0

Origin of gross domestic product in 2008 at market prices, % of total:	
Agriculture	1.6
Industry	31.8
Construction	6.7
Other	60

THE PUBLIC SECTOR

Current expenditure in 2008 (% of GDP)	48.7
Current revenue in 2008 (% of GDP)	45.8

Gross financial liabilities in 2007 (% of GDP)	112
General government investment in 2003 (% of total investment)	10.7

THE FOREIGN TRADE

Export of goods and services in 2006 (% of GDP)	27.9

Main export categories in 2006, as a % of total exports:	
Manufactured goods	34.6
Fabric and textile goods	12.5
Chemical products	9.7
Transport equipment	4.7
Mineral fuels	0.3

Imports of goods and services in 2006 (% of GDP)	28.7

Main import categories in 2006, as a % of total imports:	
Foodstuffs	6.3
Manufactured goods	22.5
Metal, ores and scraps	15.0
Chemical products	12.7

THE CURENCY

Monetary unit: Euro (€)

Currency units per USD ($), average of daily figures	
2008	0.68
2009 (March)	0.77

Executive summary

Italy is facing a difficult period. The economy is in a sharp recession, mainly because of external developments linked to the global financial crisis, and there is great uncertainty about the strength and timing of the recovery. Despite a relatively healthy banking system Italy seems particularly sensitive to both the credit tightening which has occurred in line with that in other countries and the weakness in external demand. This sensitivity has probably been accentuated both by the poor productivity and aggregate profitability performance of the economy over the past decade or more, and by the weak underlying fiscal situation. An array of budget neutral measures have been taken in the short term, but economic performance can be enhanced over the longer term by both macroeconomic and structural policy reforms.

Fiscal policy *needs to focus on two areas: improving the efficiency with which current spending achieves its aims, and ensuring that long run trends in spending commitments are contained. For the time being, there is no space to increase the public sector deficit beyond what is implied by the operation of automatic stabilisers. But measures such as recent efforts to redirect spending towards the unemployed and poorer families can both help to increase somewhat the effect of automatic stabilisers and do something to relieve the impact of the recession on those likely to be hardest hit. In the longer term, fiscal trends are less problematic than in many other countries thanks to several pension reforms introduced in the past; nonetheless, the fact that full implementation of the pension reform will need considerable determination and Italy's high-debt starting point mean that continuing efforts are needed.*

In the financial sector, *Italy's relatively conservative banks and cautious regulation seem to have helped avoid serious domestic problems for the banking sector in the crisis so far. But credit has tightened nevertheless and risks remain, as in all countries. Efforts to find ways to recapitalise the banks should continue, preferably through private finance, domestic or foreign, but not excluding provision of public capital, although there is understandable reluctance to envisage even partial public ownership.*

Structural policies *should not be forgotten, even in a crisis period. Italy can build on previous progress in areas such as liberalisation in services. This liberalisation should be completed and extended to other areas, for example in transport and other local services, to increase the extent to which competition is used to improve services to customers and to raise overall efficiency. Different parts of the public administration provide key services to the economy, whether in drafting and implementing regulations, collecting taxes or enforcing contracts in the courts. Plans to improve efficiency in public administration should be pursued and the use of various audit mechanisms, such as regulatory impact analysis and public spending reviews, should be an integral part of this.*

The education system *in Italy is facing major change as the government has announced its intention to rationalise expenditure in the sector and to reinforce the evaluation system; it also intends to introduce new recruiting, initial training and incentive schemes for teachers, but definitive measures in this area have yet to be adopted. Lack of clear information for evaluating pupil and school performance is indeed a weakness of the current system, as is the fact that few actors in the*

system, from teachers to the central administration, are held to account for poor performance. Accountability needs to be introduced at several levels, notably for school principals and budget managers, but also for teachers, so that those responsible for key decisions such as teacher recruitment, class formation and teaching methods have both appropriate information on which to judge outcomes and incentives to improve. But if principals are to be held to account, they must have appropriate autonomy and powers of management, contrasting with the current almost complete lack of autonomy at the school level. Given the interrelated nature of these reforms, it would be best to introduce them as a self-contained package, rather than in a piecemeal fashion.

ISBN 978-92-64-05435-6
OECD Economic Surveys: Italy

Assessment and recommendations

Italy is now in the midst of a deep recession, as are many other countries, and there is great uncertainty about the timing and strength of the recovery. The banking system itself was not immediately threatened by the first wave of the financial crisis, but credit supply has nonetheless been sharply restrained, as elsewhere, and households have suffered large financial losses following the steep fall in equity markets. The contraction of output is likely to persist well into the current year and only a slow recovery can be expected next year. Some long-term structural problems remain to be addressed, even as attention is focused on ways to alleviate the effects of the crisis and to shorten its duration.

Limited exposure of banks did not protect from recession

The depth of the Italian recession has come as a surprise. The authorities were counting on the relatively solid balance sheet of the banking system and its moderate leverage to deflect the adverse problems experienced elsewhere. But while hopes for the financial system itself have so far been borne out, although exposure to some vulnerable countries in Eastern Europe is a risk, Italy has so far nonetheless suffered significantly from collapsing demand, both foreign and domestic. Moreover, several years of low productivity growth and declining aggregate profitability left Italy's export-oriented economy particularly vulnerable to the slump in world trade.

The underlying fiscal situation, the relatively weak capital position of the banks (even though they do not suffer from a risk of insolvency) and a history of weak trend growth mean that economic dynamism is likely to be slow to recover from the blows it has suffered in the crisis. Room for discretionary fiscal stimulus is restricted for the time being because the downturn implies a widening of the public deficit and an increase in the already high level of public debt. On the positive side, relatively healthy household and corporate balance sheets may allow Italy's recovery to be on a more solid footing than elsewhere.

The recession focuses attention on the fiscal situation

Gross public debt was around 106% of GDP in 2008. Substantial progress had been made in cutting the ratio of debt to GDP since the mid-1990s, but partly based on one-off tax and revenue measures that were not sustained. After 2006, progress seemed to have resumed, partly as a result of improved tax collection, but without much success in reducing government expenditure. A fiscal programme for 2009-11, finalised in September 2008, aimed to bring the budget into balance by 2012 and debt below 100% of GDP by 2011. Such

an ambitious programme was what Italy had needed, though it would have been difficult to achieve even in normal times. But by now, OECD projections suggest that the public deficit will reach 6% of GDP in 2010, with debt over 115% of GDP and rising, even with some effort at fiscal consolidation.

This prospect is almost entirely due to the deteriorating outlook for the economy. Real GDP is expected to fall by at least 5% between early 2008 and the trough of the recession. On the revenue side, the buoyancy of tax revenue seen in 2006-7 may have been less directly linked to the financial boom than in other countries; but, as the economy contracts, that part which was due to reduced evasion may become vulnerable. Reduced activity and employment could also hit revenues hard, while on the other hand there should not be a large increase in expenditures because, notwithstanding recent measure to enlarge it, Italy's social safety net is less well-developed than in many other European countries.

Financial markets pay more attention to fiscal risks

The interest rate differential between Italian and German 10-year public debt widened from 35 basis points in 2007 and stood at between 140 and 150 basis points in March 2009, although the average interest cost of new debt actually fell slightly. With Italy's high level of debt, the widening differential is a warning that investors are increasingly concerned about fiscal risks, as in other European countries, though fiscal prudence demonstrated so far and overall financial stability may have limited the widening in the spreads. While well short of the levels seen before monetary union, when it was dominated by a significant exchange rate risk, a differential at this level and in combination with the likelihood of significantly lower inflation could over time produce a higher real cost of long-term borrowing.

Careful debt management is crucial in uncertain times

About one sixth of existing public debt has to be refinanced every year. With new borrowing to finance the ongoing budget deficit added to this, the government has to sell debt equivalent to over 20% of GDP each year. The sharp increase in the differential with rates in most other euro area countries need not bring severe short-term problems as the government would have time to react to signals from rising interest rates and adjust policy. Public debt auctions have remained successful. However, the fact that the usually highly liquid interbank borrowing market ceased to function for a while highlights the risks for the public debt market.

When the economy recovers, fiscal consolidation should resume

Membership of monetary union reduced debt servicing costs greatly, providing a good opportunity to bring debt down very rapidly. Unlike in Belgium, for example, a significant part of this opportunity was wasted, leaving Italy more exposed in the current situation. It is true that several pension reforms since the mid-1990s transformed the very long run outlook for public finances. The magnitude of the further measures needed to offset the

fiscal consequences of population ageing is now at a more manageable level than in most countries. But these costs are still significant and the progressive implementation of the pension reform itself will require strong commitment, as it involves longer working lives, higher private pension saving or much lower levels of replacement rates in the long run for future pensioners than today's pensioners receive. When the economy begins to recover, the government will need to commit itself to a serious medium term programme of debt reduction based on expenditure control and probably further reforms of pension and health care. In the shorter term, the government's room for fiscal manoeuvre will depend, among other things, on financial markets' views of Italy's long-term fiscal sustainability.

Some steps to alleviate the immediate crisis have been taken, and the automatic stabilisers are being allowed to work

The government has rightly allowed automatic stabilisers to work. Although the orientation towards underlying consolidation foreseen in the budget planning for 2009-11 has been maintained, a number of mostly budget-neutral anti-crisis measures have been introduced. For the most part any additional expenditure and tax cuts have been financed by offsetting measures. Many of the measures, though small, are useful in the context of the current recession. Examples include the extension of the mainly company-based unemployment insurance scheme to some previously uncovered workers, increased support for low-income families, and a reduction in the delay by the public administration in paying its bills. These measures make some contribution to protecting those likely to be worst affected by the recession and redirect expenditure towards areas likely to have a high fiscal "multiplier".

Some measures are likely to have unwelcome side-effects

Support to the car industry risks resource misallocation. This policy was triggered by concern over unfair competition from companies in other countries that have received state loans and other support to a substantially greater degree than in Italy. However, the auto industry is not of systemic importance and, although there has been an impact in lifting car sales in the near term, it is unlikely that such support is the best use of public resources. *Measures that essentially shift expenditure from one category to another should be limited to those which make cost-effective improvements in protection for vulnerable parts of society, or satisfy a clear need for structural reform; if this corresponds to expenditure with high fiscal multipliers, so much the better.*

Credit tightened, despite the relatively sound financial system

As the authorities have asserted, Italian banks are less exposed to high-risk products than those of other large countries, certainly as originators but also as investors. This is partly due to their conservative behaviour and also to some regulatory and supervisory caution. No banks have closed or had to be bailed out. Nevertheless, the two largest banks made extensive acquisitions in certain eastern European countries which may be vulnerable to downturns in those economies. Despite their low exposure to the key risky assets, Italian

banks suffered along with banks worldwide from the difficulties on the interbank market, fall in their share prices and diminished or vanishing profits as the economy slowed. While they may have operated a relatively cautious lending policy, they were not carrying excess capital reserves and many of them are well integrated into international capital markets. Hence, generally tighter international credit conditions were already obliging Italian banks to restrain their own lending in Italy – the European bank lending survey shows that credit standards have tightened in Italy to a very similar degree as elsewhere. Banks have used ECB liquidity facilities and are energetically selling bonds to the public.

An innovative response to problems on the interbank market…

In response to the difficulties on the (uncollateralised) interbank market, the Bank of Italy promoted a collateralised interbank lending clearing facility. The Bank acts as a market facilitator, monitoring the quality of collateral to give participating banks sufficient confidence to maintain liquidity in this anonymous market. Participating banks agree to guarantee the collateral vetted by the Bank, but there is a potential residual liability for the Bank of Italy (in the event of the default of a trader and the collateral issuer). Branches of foreign banks can participate only if their own central banks accept a share in this potential liability, a potential disadvantage for such banks. However, as a useful way to overcome the problems on the normal interbank market, the distortion to competition and implicit subsidy involved seem minimal, especially compared with other measures to support banks that have been taken elsewhere.

… and a scheme for bank recapitalisation

Banks have not so far needed crisis measures but are likely to need more capital as the recession deepens. There is no perfect solution to this problem. In a banking system that was until relatively recently dominated by publicly-owned institutions, there is reluctance to return to public sector stakes. The special facility set up in the February anti-crisis measures was aimed at avoiding direct equity injections which might lead to effective public ownership, although some of the loan conditions amount to policy direction by the government anyway. *Special facilities for lending to banks, or guarantees on their lending, should not be conditional on what use banks make of the funds; monitoring this in practice is a hopeless task and at best likely only to divert funds from one form of lending to another.*

Medium term measures to promote an effective financial system

The authorities should be ready to act to maintain the functioning of the financial system if the downturn accentuates problems for banks. It will also be important to continue to strengthen information-sharing and co-ordination domestically and with foreign counterpart regulators, both to avoid regulatory arbitrage and to keep track of potential risk. In the longer term, policy should ensure strong competition for both deposits and lending business, within prudent regulatory standards, to promote strong long term growth. Revising capital requirements to make them less pro-cyclical is a useful direction to consider, in conjunction with other European regulators.

Regulatory reform can improve business framework conditions

Despite adopted reforms, growth in Italy was low, partly as a result of still excessive or cumbersome regulation, low competition in some sectors and a mostly inefficient public sector. These problems need to be addressed in order to restore confidence in the Italian economy. Progress has been made in improving regulation, but higher productivity growth remains elusive. Parts of the service sector remain largely protected from competition or encumbered with excessive regulation, sometimes varying across regions. Inefficiencies in public administration can also add to the obstacles faced by the private sector. Much of the analysis of these questions in this *Economic Survey* is based on work carried out as part of the forthcoming OECD *Regulatory Reform Review of Italy*.

Pursue service sector liberalisation and promote competition…

It is important to maintain momentum in liberalisation policy, required in most service sectors and liberal professions, as highlighted in the OECD Review of Regulatory Reform. In the case of local public services, further progress will need to involve full separation of ownership interests in service providers from local governments and members of local government. The role of the Competition Authority in increasing competition in Italy, and in improving legislation itself through its regular reports on relevant issues, has been significant. The government should maintain and strengthen the basic rule that competition policy's key yardstick must be the interests of customers, not of producers, employees or the state.

… and support this with more efficient public administration

The business environment is affected not only by the structure of regulations and competition enforcement, but also by the efficiency with which the public administration designs, implements and enforces regulations. Successive governments have tried to increase the focus of the administration on outcomes and there have been successes such as the partial separation of the tax collection agency from the civil service, allowing it to pursue a policy based on output-based performance targets. Such an approach is part of the government's "industrial plan" for the public administration. *Reform of public administration to increase the focus on improving output-based measures of performance should be pursued. It is important to take this beyond useful, but in themselves insufficient, transparency measures such as publishing senior officials' salaries and interests, to include operational ways to focus attention on* outcomes *rather than* procedures *at all levels of the administration*. An important example of where efficiency needs to be enhanced is the administration of civil justice, where delays are among the longest in all OECD countries. Reforms have tended to concentrate on procedural rules but have neglected issues – such as fee structures and career management – that in practice generate incentives which discourage simplification of documentation and accelerated handling of cases.

Strengthen the use of auditing mechanisms in the public sector

Many of these issues have been well-documented in the work on Public Expenditure Reviews, the first set of which were published in June 2008. *The work on Public Expenditure Reviews should be strengthened, both to cover work on other policy areas and with a view to implementing some of the key reforms to incentives that they recommend*. At the moment this work has switched focus to specific budgetary management and information issues; these are important but should not prevent further work on assessing substantive issues. Other auditing mechanisms, such as Regulatory Impact Assessment or cost benefit analysis for infrastructure projects, are also under-utilised in Italy. They should be strengthened. In the context of the current crisis, some infrastructure expenditure could usefully be brought forward. But, given the reputation for mismanagement, it should be subject to strict cost-benefit and monitoring criteria.

Plans for fiscal federalism may be difficult to pursue

A draft law on extending further spending and revenue responsibility to the regions, as foreseen in 2001, was introduced last year. However, the introduction of such a comprehensive reform of fiscal federalism mechanisms in the present period may be challenging and it is important to ensure strong political and regional consensus. Having said this, the basic lines of the law on fiscal federalism, notably financing essential expenditure from central revenues on a standard cost basis and a transparent revenue sharing mechanism based on VAT and income tax capacity, are sound. *The definition of "essential" expenditure should be carefully defined to match national policy targets and it needs to remain stable through time*. As the example of education shows, it is not straightforward to assess what "standard cost" implies in a country with such wide regional variations. The intention to phase in its implementation should help to minimise the difficulty of adjusting to the new system. *Stability over time, along with transparency, is also important for the revenue sharing mechanism. A new local tax, partly based on the value of the housing properties, would be highly desirable from the point of view of fiscal federalism.*

Compulsory education is less effective than in most countries, but reliable performance information is scarce

Compulsory school education in Italy produces poor results at secondary school level, despite a relatively high level of expenditure, although international comparisons of children in primary education often show a better performance in Italy. It also shows, according to the OECD PISA results, large differences in pupils' performance between regions, which may reflect socioeconomic conditions rather than regional differences in school efficiency. These regional differences in performance do not appear in most national assessments of school or pupil performance, notably the examinations at the end of lower and upper secondary school. Either the national examinations assess very different aspects of achievement from PISA, or the national assessment system is not applied uniformly. The national school assessment agency, INVALSI, was set up to overcome this information deficiency, but in its early years failed to establish a reliable

OECD ECONOMIC SURVEYS: ITALY – ISBN 978-92-64-05435-6 – © OECD 2009

system of testing that had the support and understanding of teachers. INVALSI needs to be strengthened, both in terms of financial and human resources, so as to provide nationally comparable, independent information on pupil and school performance and specific support to school leaders for them to understand how to improve. *In parallel, uniform national testing of educational attainment of pupils at key points in their school career is needed*. In both cases, *it will be necessary to ensure that results in individual schools are fully comparable with those in other parts of the country, which will require strong external controls on the administration and marking of exam results*.

INVALSI assessments are currently planned to be undertaken only for a sample of pupils in every school. However, there is no legal obligation for the school to take part in the assessment and therefore participation is voluntary. It is important to avoid assessment fatigue, but *standardised INVALSI assessments would probably be more useful if carried out at all schools, perhaps at fewer grade levels than currently envisaged. This would require legislation to make participation in assessment compulsory for every single school. Full information on the results of the INVALSI assessments, as well as on the national examinations, should be available to schools and individual teachers, building on INVALSI's recent experience in disseminating information from national examinations at the end of lower secondary education.*

To improve standards, accountability is needed…

In parallel with the lack of objective information on standards, there is a lack of accountability at many levels and there is little attention paid to performance. While the national curriculum defines what should be taught in schools, there are no consequences for either teachers or schools attached to the degree of success in meeting the objectives. The current system is rather centralised, giving schools very little autonomy, but the centre does not intervene either to improve performance in poor schools. Notably, teacher recruitment and allocation to schools is also managed on a centralised basis, and is often unrelated to schools' needs or teachers' abilities. School principals themselves have no formal part in recruitment decisions to their schools. Under the plans for developing fiscal federalism, yet to be finalised, it is planned to increase responsibility for managing education at regional levels.

… focusing incentives on results…

The availability of performance information at school level should in itself generate better performance, since conscientious teachers and principals are likely to be motivated to make improvements themselves. However, in a system where currently it is possible for teachers to do rather little with no consequences for their career, *information on performance should be supplemented by increased accountability for results*. Accountability means ensuring that decision makers are responsible for the consequences of decisions, for example by making school principals responsible for recruitment but also making their career dependent on school performance. Publication of aggregate school results, provided they are presented in "value-added" form (adjusted to take account of factors external to the school that can influence pupils' achievement) that can be understood by the wider public can also add a legitimate form of accountability to families. *Whether or not results are published, the information they provide should be used to identify the worst-performing schools so that specific programmes can be put into place for them; provision for such action on failing schools*

should be made whatever the degree of local or school autonomy that is finally chosen. This is not only to improve equity but also because better performance in the worst schools can be one of the best ways to raise the overall performance of the system.

… and effective training and recruitment

The system of teacher training, recruitment and allocation of teachers to schools should be reformed to take better account of pedagogical skills and individual schools' needs. The draft law in Parliament for reforming teacher initial training and career is a good start in principle, especially its emphasis on pedagogical skills and teaching practice, though progress on finalising it is slow. It remains to be seen whether the system improves on the now-abandoned system of specialised teacher training institutes that was set up a few years ago. *The new training system should feed a recruitment system which is based on school needs and which takes into account the skills and performance of teachers rather than their seniority. Plans to introduce a more developed career structure for teachers should be pursued, but they must serve to improve accountability, with promotion being based on abilities and performance. It would be desirable to use the new training system to introduce voluntary re-certification, linked with career advancement, for existing teachers*.

Social segregation, and its consequences, could be reduced

The influence of social background on pupil performance within individual schools is smaller than average in OECD countries. However, because of social segregation due to family choices among the different types of upper secondary school, there is a wide variation of results between schools. Children of parents with lower socioeconomic status disproportionately end up in the vocationally-oriented schools, which are those which tend to deliver poor results when measured by PISA standards. Analysis of PISA results shows that systems which separate children too early into vocational and non-vocational streams tend to have worse overall performance. *This could be improved in Italy by requiring greater uniformity in at least the first two (out of five) years of upper-secondary school, notably to increase the importance of general education in the vocationally-oriented schools. In all schools reinforced attention to weaker pupils is required, and the provision of early education and care for socially disadvantaged groups should also be reinforced*.

Expenditure cuts can increase efficiency, but must be planned with care

OECD analysis concurs with the conclusions of the previous government's white paper and this government's conclusion that it should be possible to achieve equally good results with lower teacher numbers. But this does not mean that, in practice, rapid cuts in expenditure and teacher numbers can be achieved with no negative impact on outcomes. The government's first target in cutting excessive teacher numbers was correctly focused on primary school, where the pupil-teacher ratio is exceptionally low. But even at this level, and certainly in secondary school, measures to cut expenditure should go strictly along with mechanisms to encourage better performance.

ISBN 978-92-64-05435-6
OECD Economic Surveys: Italy

Chapter 1

The impact of the crisis and the potential for fiscal stimulus

Along with the rest of the OECD, Italy is facing a deep and possibly prolonged recession. A decade of slow productivity growth and gradually deteriorating competitiveness meant that the financial crisis hit a weakened economy. Fortunately, the banking sector itself has – up to now – escaped the risk of insolvency that has crippled banks in some countries, but this has not protected the economy from the credit crunch. The inability of successive government to take effective action to reduce public debt in the past has left the government with little room to manoeuvre in fiscal policy, other than to allow automatic stabilisers to work as best they can.

Italy is suffering a serious economic recession, which started earlier than elsewhere but has now accelerated following the downturn elsewhere and collapse in world trade. There were early hopes that the lack of participation in key factors supporting the boom that some countries experienced in recent years might mean that Italy's economy would be equally insulated from the downturn. These hopes have now been definitively dashed. The European Central Bank has taken steps, including unconventional ones, to support demand, but many countries have taken significant fiscal action in addition to any measures to reinforce the banking system. Italy is one of the few large countries which have not so far taken any fiscal action that increases the budget deficit; instead, measures have reallocated resources in budget-neutral packages. Its distant history of running up public debt partly financed by exchange rate depreciation and its more recent history of failing to take sufficient advantage of more favourable circumstances to reduce the debt level have left Italy with little room for manoeuvre.

This chapter outlines the shape of the recession as it has hit Italy and as it may develop further in the short term. It also assesses the fiscal situation and the scope for any discretionary fiscal response. Chapter 2 considers the situation of the financial system, while the remaining chapters look at longer term issues of regulatory reform and public sector efficiency (Chapter 3) and education (Chapter 4).

The impact of the crisis on Italy

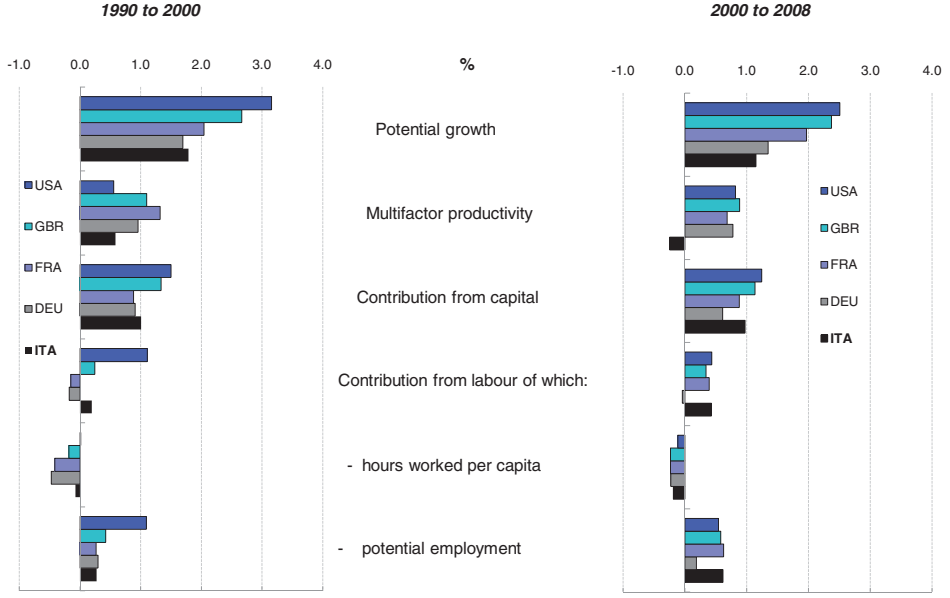
Both potential and actual GDP growth in Italy have been low for a long time. Already beginning to fall behind in the 1990s, the gap in underlying productivity growth has opened up further since then and has been only partially offset by some improvement in labour supply (Figure 1.1). Previous *Economic Surveys* have made many recommendations for supply-side reforms. There have been a number of improvements, for example in indicators of product market reform, and many of the issues are discussed in Chapter 3. Annex 1.A1 summarises recent policy responses in some of the areas concerned; in fact there has been a significant amount of relevant legislation, though in some cases it is subject to the issuing of implementing decrees and regulations before it can take effect. It is important that the authorities follow through in implementing all such reforms.

Profitability has been low, some activity has moved abroad

Slow growth in Italy has been accompanied by a steady increase in labour costs relative to prices (since 2000 unit labour costs have risen by 6% more than the GDP deflator), implying a considerable weakening in overall profitability. An accompanying trend has been the tendency for an increasing number of Italian companies, as for those of many western European countries, to transfer part or all of their production to eastern European countries such as Romania. This is an interesting complement to the phenomenon of Romanians moving to Italy for work, many of them ending up in northern Italy working mostly in small or medium-sized companies. This flow of business investment abroad has undoubtedly also encouraged the investment that Italian banks have made in subsidiaries in those countries.

OECD ECONOMIC SURVEYS: ITALY – ISBN 978-92-64-05435-6 – © OECD 2009

Figure 1.1. **Decomposition of potential growth: an international comparison**



Source: OECD, *Economic Outlook No. 85.*

StatLink http://dx.doi.org/10.1787/638506518714

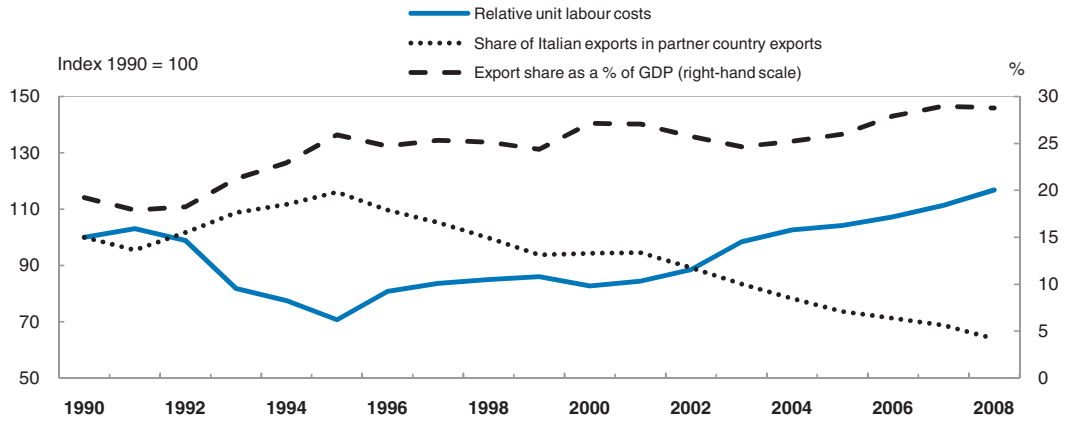
Competitiveness has been poor though the economy remains export oriented

The economy's international exposure through trade is also a key factor. Low productivity growth and the tendency, noted earlier, for wage growth to outstrip it are reflected in weak performance, at least according to simple measures of comparative labour cost competitiveness (Figure 1.2). Export performance, measured by the volume of Italian exports compared with the volume of demand in world export markets has declined (as it has for many other OECD countries, due to the rapid growth of emerging non-OECD exporters). Price competitiveness measures tend to look worse than cost measures, but this is probably a reflection of a tendency by Italian producers to move "up market" and also means that the share of exports in GDP has continued to rise, and the share of Italian exports in OECD exports measured in current prices has been more stable, so the diagnosis need not necessarily be pessimistic (Codogno, 2009). The overall trade balance has remained relatively buoyant, with no serious deterioration in recent years, once the effect of higher prices for energy imports, on which Italy is very dependent, is excluded.

Industrial production has been weakening since 2007

Industrial production had already been weakening in 2007. Industry represents 21% of GDP and together with construction (a further 6% of GDP), seems to have led the economy into the slowdown and recession (Figure 1.3). Both internal and external demand slowed very much at the same time so tightening credit at home and falling demand abroad seem to have acted more or less together. Data from surveys by ISAE also show that industrial entrepreneurs' judgements about their order books began to decline suddenly in May-June 2008. This was almost simultaneous for both domestic and foreign orders, although if anything expectations about internal demand may have slowed a month or two before external demand.

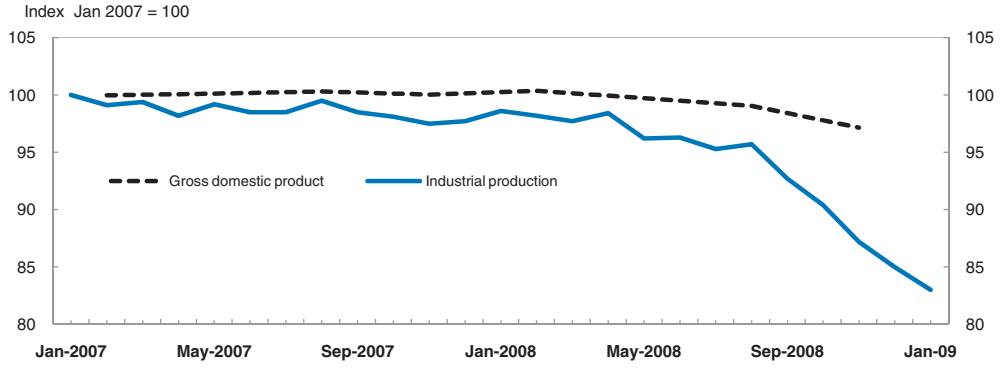
Figure 1.2. **Italian competitiveness**



Source: OECD Economic Outlook No. 85.

StatLink http://dx.doi.org/10.1787/638552641021

Figure 1.3. **Industrial Production has fallen steeply**



Source: OECD Economic Outlook No. 85.

StatLink http://dx.doi.org/10.1787/638572527056

Unemployment has risen and consumers are cautious

The labour market took a long time to react but is now weakening. Total full-time equivalent employment continued to grow up to the third quarter of 2008, with only a small fall in the fourth quarter even as GDP plunged. The pace of decline can be expected to pick up in the first half of this year; the use of the *cassa integrazione,* in which companies may put workers in short time, already began to rise very sharply in January and February, having reached a historical low a year earlier. Unemployment had fallen fairly steadily for nearly 10 years until mid-2007, at least partly due to earlier labour market reforms introducing a considerable degree of flexibility in short term contracts. Throughout this period the labour market had successfully coped with a growing labour force due to both immigration and rising female participation. But this trend seems now to have reversed and by the end of 2008 unemployment was half a per cent above a year earlier, whereas GDP had fallen 3%.

Rising unemployment (and expectations of further rises) is likely to be one reason for slowing consumption despite an already relatively high saving rate and rises in real incomes as energy prices fall. One interpretation of the high saving rate in Italy[1] is the natural caution of Italian households. This may partly be in reaction to the less thrifty

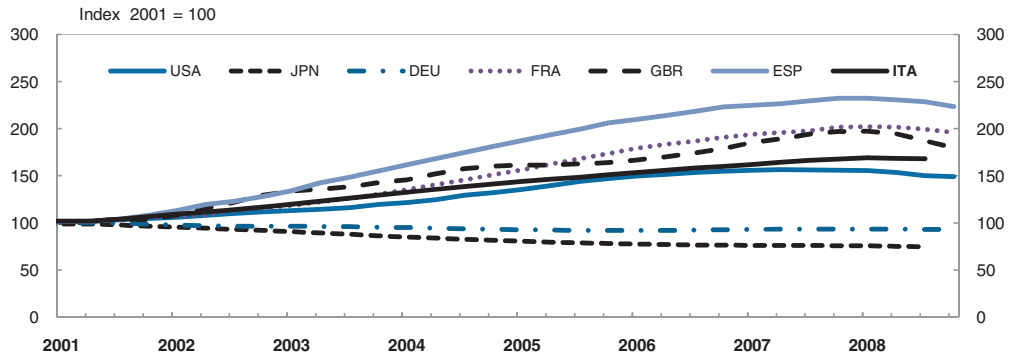
habits of the public sector, but is also probably related to the fact that social spending is quite high but disproportionately accounted for by old-age pensions. Unemployment benefits are reasonably generous for those who are eligible. However, unemployment insurance does not give permanent cover for many workers in the private service sector and nearly all workers on short-term contracts. It is in these sectors and types of job contract that employment growth has been most buoyant in recent years.

The rise in unemployment and prospects of a continuing increase in the future are likely to have depressed consumption expenditure in many potentially vulnerable households. One part of the February 2009 anti-crisis package took steps to deal with this by introducing a 90-day unemployment benefit to workers laid off with no unemployment insurance, an experimental one-off payment to some categories of independent workers made unemployed, and a widening of the coverage of unemployment schemes to small and medium-sized firms in additional sectors, with the participation of the social partners, as in existing schemes. These may be helpful measures, though they are rather *ad hoc* and serve to underline the only partial nature of current coverage, unusual in a European country.

The housing boom had less effect than elsewhere, and households have relatively low debt

The housing boom had been an important factor in the upswing in many countries and the bursting of that bubble a key source of the financial crisis. In Italy it played much less of a role, econometric research finds little impact of housing wealth on consumption expenditure. Property prices did rise substantially during the decade but the rate of increase had already peaked in 2003; prices were still rising in nominal terms in much of 2008, but probably beginning to fall back slightly in real terms (Figure 1.4). Restrictions on the maximum loan-to-value ratio for mortgage loans may have helped to restrain demand. While delinquency among housing loans remained low and stable through 2008,[2] the share of underperforming loans in lending to companies was increasing through the year. Italian households not only take relatively lower mortgages than in many other countries, they also carry less debt. This is another factor that had led to hopes that Italy would suffer a milder slowdown – on the one hand the credit crunch would have less effect on consumption because not much of it is credit-financed and, on the other hand, banks would not suffer from delinquent consumer debt because households are not highly

Figure 1.4. **House prices, selected countries**



Source: Various national sources, see Table A.1 in Girouard, N., M. Kennedy, P. van den Noord and C. André (2006), "Recent house price developments: the role of fundamentals", OECD Economics Department Working Papers, No. 475.

StatLink http://dx.doi.org/10.1787/638621237466

geared. So far, the latter assumption seems to hold (see Chapter 2) but consumption has declined sharply anyway, despite an acceleration in earnings in 2008 as a number of national wage settlements were renewed.

Banks were thought to be in a relatively good position

As the financial crisis developed in late 2007 and early 2008, Italian bankers and the authorities were quick to claim that Italian banks had relatively low direct exposure to the kind of lending that was rapidly going bad as a result of gross underestimation of the risks involved. Italian banks were more concentrated on "traditional" "relationship" banking that made such mistakes much less likely. Hindsight shows that Italian banks have indeed been less directly affected, and have not suffered catastrophic write-offs from sub-prime lending or derivative assets, though they have not been entirely unscathed. But this has been no protection for the real economy so far.

Chapter 2 looks at the banks' situation in some detail. Their role in the recession appears to hinge on the fact that, although they had operated a cautious lending policy, the relatively low-risk portfolio was fully reflected in their low overall capitalisation. And although they had some advantage on the funding side in their relatively high ratio of stable retail deposits to overall lending, they were nevertheless quite well integrated into international capital markets. Despite some historical resistance to foreign involvement in the banking sector and the absence of a major presence of any single foreign-owned bank, the share of foreign-owned capital in the banking sector is now slightly above average for large euro area countries (see Table 2.1). So once credit began to tighten in other countries, the heightened sense of overall risk and difficulties on the inter-bank market seem to have forced Italian banks to tighten their lending conditions more or less in parallel with other countries. Hence the decline in industrial production began as credit tightening began in late 2007 and accelerated just as the crisis and slowdown in world trade intensified in September 2008.

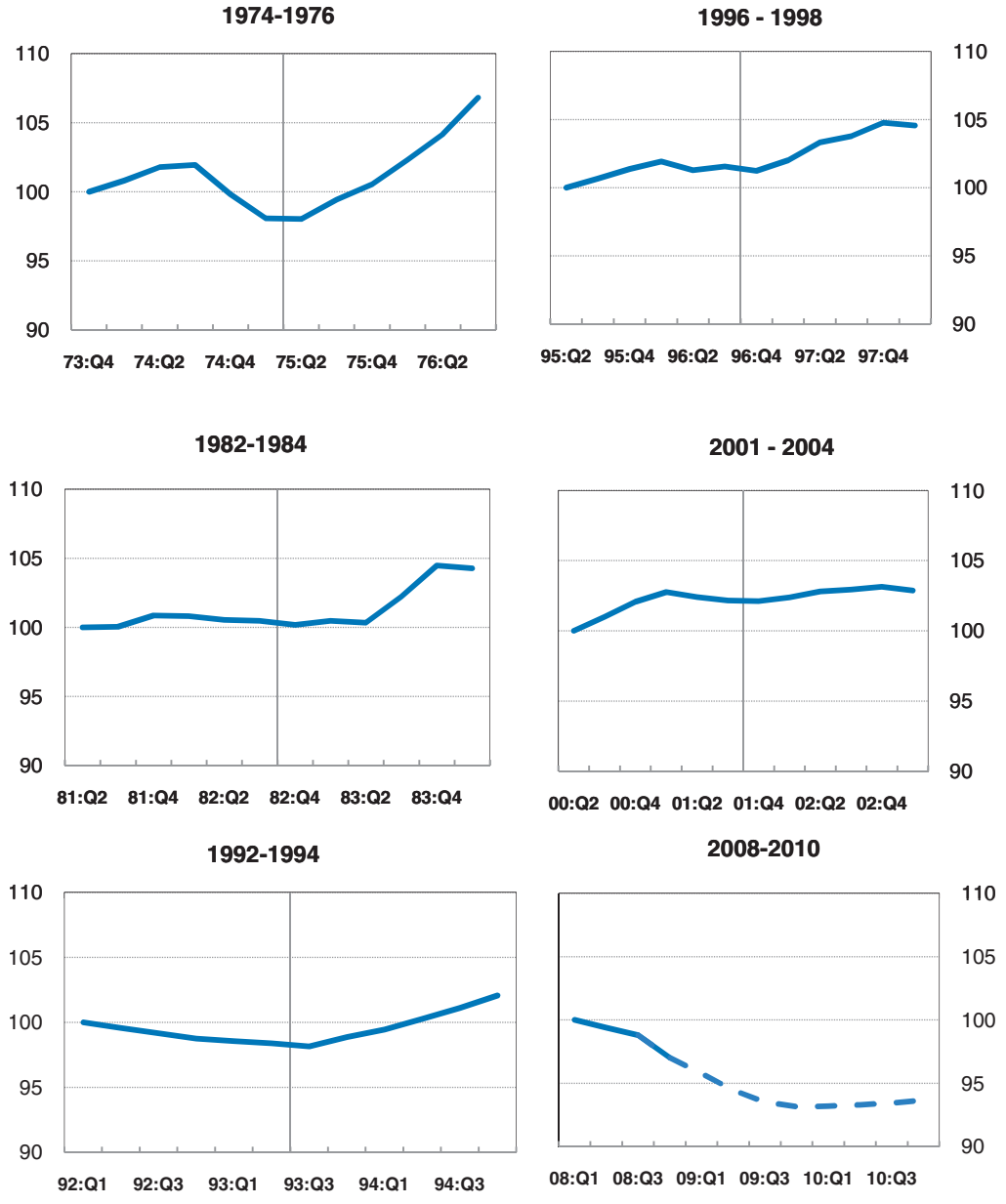
Overall, the combination of a relatively trade dependent economy, parts of which have become increasingly uncompetitive, the size of certain cyclically sensitive industries such as vehicles and other investment goods, and the importance of credit finance for the vehicle industry[3] in particular, seem to have worked together to transmit and even amplify the international demand shock in Italy at the same time as banks were tightening credit domestically. Although nearly all sectors of industry have experienced large falls in output, with overall output falling about 12% in the 12 months to December 2008, they have been particularly severe in the vehicle industry where output fell by a quarter over the same period. Overall output of consumer goods has fallen less than that of other goods, but within that category durables output has fallen much more than that of non-durables as uncertainty among consumers, even without strong credit constraints, causes spending to be delayed.

The outlook

The parallel downturn in all OECD countries is very steep. In Italy, as in most other OECD countries, it is without precedent except for 1974-75 (Figure 1.5). The contraction in output is expected to continue through to the end of 2009, with a very slow return to positive growth during 2010 (Table 1.1). The contractionary effects of the financial market turbulence are projected to continue, although there should be some lessening of their intensity through the year. While household debt is relatively low, households as well as

Figure 1.5. **Italian recessions since 1974**

1st quarter in each period = 100, GDP at constant prices



Source: OECD Economic Outlook No. 85.

StatLink http://dx.doi.org/10.1787/638656203013

businesses are expected to remain cautious in their spending this year and no support will be forthcoming from foreign markets. Unemployment will rise strongly during 2009 and may reach 10% by the end of the year though considerable uncertainty surrounds the reaction of the labour to the crisis; and falling activity will cause the budget deficit to increase considerably in Italy as elsewhere.

After such a sharp downturn, and with a very wide output gap, the relatively good position of the domestic banking sector, once financial market functioning returns to normal, might permit a strong rebound of activity in 2010. However, the expected rapid rise

Table 1.1. **Demand, output and prices**

	2005	2006	2007	2008	2009	2010
	Current prices € billion	Percentage changes, volume (2000 prices)				
Private consumption[1]	844.0	1.3	1.2	–0.9	–2.4	0.0
Government consumption	290.8	0.5	1.0	0.6	0.3	0.2
Gross fixed investment	296.7	3.2	1.6	–2.9	–16.0	1.3
Machinery and equipment	142.2	5.4	2.4	–4.1	–20.2	1.1
Construction	154.4	1.1	0.8	–1.8	–12.2	1.4
Residential	69.9	4.1	1.1	–0.9	–10.3	1.7
Non-residential	84.5	–1.3	0.6	–2.7	–13.9	1.2
Final domestic demand	1 431.5	1.5	1.2	–1.0	–4.7	0.3
Stockbuilding[2]	–0.7	0.5	0.1	–0.3	–0.3	0.3
Total domestic demand	1 430.7	2.0	1.3	–1.3	–4.9	0.5
Exports of goods and services	371.4	6.5	4.0	–3.9	–21.5	–0.7
Imports of goods and services	372.2	6.2	3.3	–4.5	–20.2	–0.2
Net exports[2]	–0.9	0.1	0.2	0.2	–0.2	–0.1
GDP at market prices	1 429.9	2.1	1.5	–1.0	–5.3	0.4

Note: National accounts are based on official chain-linked data. This introduces a discrepancy in the identity between real demand components and GDP. For further details see *OECD Economic Outlook* Sources and Methods (*www.oecd.org/eco/sources-and-methods*).

1. Final consumption in the domestic market by households.
2. Contributions to changes in real GDP (percentage of real GDP in previous year), actual amount in the first column.

Source: OECD Economic Outlook No. 85 database. These projections are based on information available up to 19th May.

in unemployment, which is likely to continue to climb in 2010, and concern over the level of the budget deficit (even though the increase is less than in many countries and in cyclically adjusted terms there may be some improvement) are likely to promote continued caution on the part of both consumers and producers, keeping domestic demand growth low in 2010. There will be some recovery in export demand but, given the sluggish performance of the economy even in better times, a sharp recovery in overall activity seems unlikely. All economic forecasts are subject to uncertainty, but there is of course an exceptional degree of uncertainty around these projections. This is a combination of uncertainty over the outcome of the crisis in the financial sector, its impact on the world economy as a whole, and finally the response of the Italian economy. The relatively low impact on the Italian financial system and the healthy financial position of the personal sector might mean that the Italian economy could recover quite sharply, but this cannot be relied upon. These projections balance the possibility of a more dynamic recovery against that of further disappointments as the year progresses.

Part of the explanation for weak growth in the past has been slow progress in structural reforms to improve the degree of competition in the service sector and efficiency in the public administration. As Annex 1.A1 outlines, there have been a number of measures taken in the past two years to address these issues, though some of them are only initial plans rather than fully implemented policies. Chapter 3 takes up these long term issues in more detail. In the shorter term, the only policy levers directly available to a country in a monetary union concern fiscal policy.

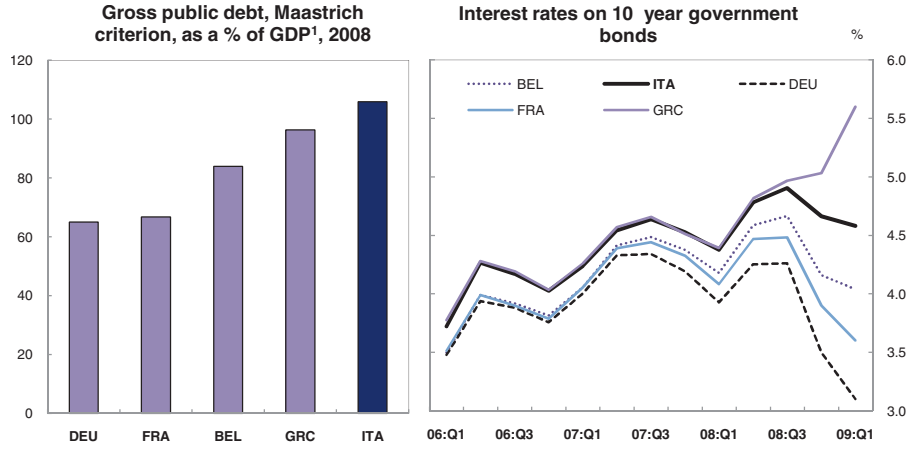
Fiscal policy and the macroeconomy

Italy has missed earlier chances to continue debt reduction

Italy's fiscal position at the start of this recession is poor. The authorities realised in the 1990s that public debt levels had reached excessively high levels and debt was reduced significantly after it peaked in 1994 at about 120% of GDP (Maastricht definition). After 2000, the rate of decline in the debt/GDP ratio slowed. The ratio actually rose in 2005-06 before the decline resumed. As has been regularly documented in OECD, IMF and other reports, the high primary surplus that had been necessary to finance the interest rate premium previously demanded on Italian debt was not converted into the overall surplus that was needed to continue to cut into the debt mountain.[4] The longer run risk of further deterioration in public finance may be less serious than in most other European countries. Provided the pension reform is fully followed through, and other parts of the welfare system are not expanded to offset this, the planned reductions in replacement rates for public pensions will make a major contribution to consolidation. European Commission estimates put Italy in a better situation in this respect than countries such as France and Germany (European Commission, 2008).

Nevertheless, in the short run, due to the crisis, debt is now rising towards 110% of GDP, even on relatively cautious projections; current OECD projections suggest it will be near 120% of GDP by the end of 2010. As the crisis unfolded potential purchasers of government debt seem to have taken Italy's fiscal situation and high existing debt into account: the premium on Italian debt rose significantly, along with that of other countries with significant, or rapidly growing, debt levels (Figure 1.6). In contrast with Italy, Belgium has made a sustained effort to reduce the level of debt and has been rewarded with a lower premium over German debt than Italy. Over the last decade or more, Italy has succeeded in lengthening the term structure of its debt so that only about one sixth of it needs to be refinanced each year.

Figure 1.6. **Public debt and interest rates**



1. Belgian data refer to 2007.

Source: Eurostat and *OECD Economic Outlook*.

StatLink http://dx.doi.org/10.1787/638660105825

Can fiscal policy be used to increase aggregate (private) demand?

The fact that Italy has missed past opportunities to further improve its fiscal position does not mean in itself that fiscal action to improve aggregate demand is now impossible. There are legitimate questions as to what measures would be most useful, however. If it can be financed, fiscal policy clearly *can* expand demand, though empirical estimates of the magnitude of its impact are somewhat uncertain. Knowing that higher government deficits now mean higher taxes or lower public spending at some point in the future, both consumers and investors they may cut their own expenditure or save income from tax cuts in the short term to be ready for that. One concern is that such an effect would be more powerful when debt levels are already high, which would be a particular risk for Italy. On the other hand, households and companies could now be more credit-constrained than in normal times so that they would use a fiscal stimulus to maintain the level of consumption or investment. In general, the literature does not support multiplier-pessimism for most countries (Haugh and Turner, 2009). A reasonable estimate might be that Italy could expect a reasonably high multiplier on fiscal action oriented towards direct government spending, especially on infrastructure, and transfers to households.

In practice, the government has been very cautious and avoided any discretionary fiscal action that would lead to a significant increase in the budget deficit. It has taken this line largely because of concern over the market nervousness reflected in the interest rate spread; the government's commitment to stability in public finance may in fact have played a role in declines in the spread in May.

What might happen to the cost of finance?

The nominal cost of Italian debt has risen much less than the increase in the interest rate differential between Italy and Germany might suggest, because German rates have fallen considerably. The picture may be different in real terms, as the near term prospects, at least, are for lower inflation. Furthermore, although the differential has risen substantially compared with the average of the last ten years, it has been much higher in the past (before Italy joined the European monetary union, when the key risk on debt was exchange rate risk). This may lead to concern that a reassessment of risk, taking into account Italy's high level of debt, may mean that the differential will not fall back even when financial markets return to normal.

Most of the econometric literature on the link between long term interest rates suggests that, while spreads may be influenced by relative debt levels, the marginal increase due to any extra debt that would come from fiscal expansion would be quite small, though not insignificant. Chinn and Frankel (2005), for example, in a cross-country study, estimate that an increase in the debt/GDP ratio of 1 percentage point raises long-term interest rates by 5-8 basis points. In addition to uncertainty around econometric estimates for individual countries, the overall impact of developments for Italy is quite uncertain in a context where debt levels for a number of countries will be rising even faster than Italy's, though from lower levels.

The authorities are right to be cautious

Although this may be reassuring about the marginal impact of changes in debt, the starting point is uncertain. A reassessment of relative risk as a function of the stock of debt, following the lower estimate of Chinn and Frankel (2005) would imply, other things being

equal, a spread of up to 250 basis points – more than 100 points higher than the level in early 2009 – to match the difference between Italian and German debt to GDP ratios of around 50 percentage points. This surely does not match any reasonable estimate of the relative likelihood of default. And it probably does not reflect the relatively favourable position of Italy when it comes to longer-term prospects due to ageing, mentioned earlier (European Commission, 2008).

But when markets are nervous one cannot rely on their being "reasonable". They are likely to behave as a function of expectations about the future path of public deficits, both in Italy and elsewhere; this can give behaviour which, when viewed solely in terms of the current level of the deficit, may seem highly non-linear. The case of Ireland may be an example of this. In the presence of non-linear effects,[5] and taking into account that spreads even in March 2009 may not incorporate the likely deterioration in the budget deficit foreseen in current OECD projections, small mistakes in the calculation could lead to major consequences for debt service.

The overall conclusion has to be that Italian debt is simply too high for the government to be able do more. What the authorities may have feared most when anxiety in financial markets was at its peak in late 2008, was not an increase in the interest rate but an inability – even a temporary one – to sell bonds at any price. In normal times this would be an unrealistic fear. However, the normally highly liquid interbank market did seize up, and it would have been unwise not to consider the possibility, although in fact public debt auctions have remained fully successful so far; around half of Italian government debt is held abroad, perhaps more sensitive to any hint of lax policy than national investors. About € 300 billion of Italian public debt matures in 2009 and a similar amount in 2010, of which just over half is medium or long term. The budget deficit will require additional borrowing of over € 80 billion.[6]

Anti-crisis measures in Italy have been small scale but are welcome

Despite their limited room for manoeuvre, the authorities have introduced a number of anti-crisis measures in two packages, one in November and the second in February. The government also intends to increase support to an existing guarantee fund for lending to SMEs. As far as public spending is concerned, overall there have been a number of small changes to existing plans, with additional expenditure offset by reductions elsewhere (Box 1.1). Overall these have shifted spending somewhat towards more vulnerable people and have probably, if anything, increased the expansionary impact of public spending, but to a degree that will have a negligible impact on overall aggregate demand.

Measures to increase support for newly unemployed people are welcome, at least on social grounds, and they highlight some weaknesses of the Italian welfare system. Social transfers account for a significant part of the general government budget but are currently heavily weighted towards pension spending. Support for the unemployed is provided mainly through the employer-based *cassa integrazione* system which provides far from universal coverage. In 2008 and early 2009 the Government adopted various temporary measures to provide some income security to workers likely to be hit by the recession through an increase of resources devoted to finance additional unemployment benefits further to those foreseen on a permanent basis under current legislation (so-called "ammortizzatori in deroga"). This should also add some strength to the macroeconomic automatic stabilisers. The macroeconomic affect will be small, since relatively small numbers of workers are covered.[7]

Box 1.1. **Spending measures in the anti-crisis packages**

Two packages have been presented, one announced in November 2008 and finalised in January 2009, the second announced in February 2009.

These packages have two main characteristics: individual elements are small in macroeconomic terms, and they are designed to be fiscally neutral overall with spending increases or tax cuts in individual areas being offset by spending cuts or revenue increases elsewhere.

The main spending increases are:

- Increased income support for low-income families, through a family bonus.
- The extension of unemployment benefits and temporary inactivity payments to some short-term contract workers in some sectors.
- Acceleration of some infrastructure projects, notably school and prison building, environmental infrastructure, museums and archaeological infrastructure.
- Incentives to buy low-emission cars.
- More spending on railway operation and infrastructure, provided new operating contracts are better oriented towards rationalisation and efficiency.

Revenue cuts involve:

- Freezing the prices of services provided by publicly-owned operators.
- A cap on the rate of interest on variable-rate mortgages (the government to make up the different to lenders).
- Tax incentives to buy household appliances and furniture.
- Prolonging the partial tax exemption on productivity-based pay increases.
- Partial deductibility of the IRAP (regional tax on productive activities) against corporate and personal income tax.
- Reductions in advance tax payments by incorporated companies.

Spending reductions include:

- Lower spending on training and employment measures.
- Lower spending on regional policy.

Revenue increases include:

- Bringing tax accounting better into line with company accounting, on a voluntary basis.
- Better checking of tax declarations.
- Better tax collection.

Fiscal federalism

A draft law on further developing fiscal federalism was published in 2008 and, after much discussion and some revision, was passed in April 2009. Wide-ranging constitutional steps to delegate responsibility for spending in a number of policy areas to the regional level were taken in 2001, but the delegation of corresponding revenue raising powers has never been fully carried through, although foreseen in the reformed constitution.

The law sets out a fairly clear blueprint for how to allocate tax revenues to levels of government and includes a sketch for a system of revenue equalisation. Where spending responsibility is delegated for programmes which are subject to national definitions of

OECD ECONOMIC SURVEYS: ITALY – ISBN 978-92-64-05435-6 – © OECD 2009

objectives – notably in order to guarantee civil and social rights cross the country, including in the key areas of health, social assistance and education – the idea is to allocate central funding from national taxes to cover the "standard costs" of providing the centrally-defined "essential levels" of services. Revenue equalisation is to be based on compensating the poorer regions for their lower revenue raising potential, based on variation in the per capita tax bases for income tax. Similarly, "fundamental functions" devolved to local (*i.e.* provincial and municipal) governments, would be guaranteed through central funding from national taxes based on the evaluation of standardized spending needs (corrected to take territorial peculiarities into account) and an equalisation mechanism is foreseen.

This seems a well-conceived design for the basic rules. The recently-passed law is an *enabling* law, however; it does not specify the detail of how standard costs are defined and provides only general guidelines on the revenue sharing mechanism. These are to be defined in subsidiary legislation. Both the definition of standard costs and the revenue sharing mechanism may yet require difficult negotiations. Using a standard cost approach, which focuses on financing output targets rather than resource inputs, is essential to ensure that sub-national governments have incentives to improve spending efficiency. But, as is pointed out in Chapter 4 in the case of education (where the final choice of which kind of expenditure will remain a central responsibility seems yet to have been clearly defined), it can require difficult choices in the definition of output. For example, for education, should output be defined as bringing pupils to a certain level of attainment (in standardised national assessments) with no reference to background conditions, or should it be bringing them to a certain level of attainment *conditional* on the social background of the pupils or of the area in which the school is located? Both of the latter are known to have an impact on pupil performance, but should the system require regions with favourable conditions to compensate those with unfavourable conditions, over and above any compensation they may receive through the revenue equalisation system?

The answer to most of these questions clearly lies in political discussion rather than economic analysis, though the latter can help to clarify the issue. But it is important that the system to be implemented embodies clear answers, accepted by sub-national governments themselves; otherwise, the system will be undermined in the future as some regions find they are not allocated the funds that they believed they were entitled to, but may spend anyway and expect central government to bail them out; this is essentially what has happened in the past with health finance.

In sum…

In all, although some temporary discretionary action would not objectively threaten fiscal sustainability, the already high level of public debt prevents the government from taking discretionary action that would further expand the deficit. This is particularly true as OECD projections are for a more serious cyclical deterioration than in the government's revised Stability Programme.

A full re-design of the welfare system cannot be envisaged over such a time period, though desirable in the long run. However, further measures such as those in the February package could be envisaged, if they could be financed without excessive disruption by cuts in less urgent spending programmes; despite the short term urgency, care must be taken not to undermine longer term labour market incentives. A review of pending or proposed infrastructure projects, to assess their likely contribution to underlying growth, their

short-term impact on demand and output, and the speed with which they could be brought forward without compromising value for money, could be useful in planning for what use could be made of any additional finance (or, indeed, of which projects could most rationally be delayed if the situation required cuts in expenditure).

Plans for fiscal federalism should be based on the blueprint in the draft law, and the method for calculation of standard costs and the parameters for the revenue equalisation system should be as simple and transparent as possible. The overall cost will be difficult to calculate *ex ante*. It should be possible to phase the new system in over a number of years – the current law allows a five year period for the transition – both to allow the regions to adjust gradually to potential changes in resource levels and to allow across-the-board adjustments if the overall impact on general government (central and local) finance is different from expected.

Box 1.2. **Summary of recommendations on fiscal policy**

Allow automatic stabilisers to work, around a baseline that involves some modest fiscal consolidation in line with that implicit in the Stability and Convergence programme.

Anti-crisis measures to redirect spending towards categories likely to have a high short-term multiplier effect such as support for poor families or the unemployed is useful. Infrastructure spending also comes into this category, provided it passes normal cost-benefit tests.

Expenditure on sector-specific support should be restricted to those with genuine systemic importance, that is the financial sector.

Once economic recovery is well under way, the government will need to commit itself to a strong medium-term programme of debt reduction, based on expenditure control and probably further reforms of pensions and health care.

Plans for fiscal federalism must focus on transparency and stability. "Standard costs" for essential service provision need to be defined carefully. Variation in local circumstances also need to be carefully taken into account.

Local property taxation is an efficient source of revenue for local government and a reformed system should be introduced when feasible.

Notes

1. Precise cross country comparisons of saving rates are not reliable, but the relatively high rate in Italy seems clear. But it is not an extreme case; the rate seems to be higher in France, for example.
2. According to Bonnacorsi di Patti and Felici (2008), non-securitised home mortgages were more risky than securitised lending in Italy.
3. As mentioned earlier, the household sector in Italy is relatively free of debt. But car sales are nevertheless strongly associated with credit, as in other countries.
4. Whereas in 1995 interest paid on government debt amount amounted to over 11% of GDP, by 2002 it had fallen to under 6%.
5. One interpretation of the presence of non-linear effects in econometric modelling is that it indicates that a high degree of ignorance about the underlying behaviour.
6. Over the past two decades, the Italian government has succeeded in significantly reducing the share of short term debt. In the early 1990s, the average residual term of debt was just over 2½ years, now it is over 6. See *www.dt.tesoro.it/opencms/opencms/handle404?exporturi=/export/sites/sitodt/modules/documenti_it/debito_pubblico/risorse_correlate/Bollettino_trimestrale_4x_trimestre_08.pdf&%5d*.

OECD ECONOMIC SURVEYS: ITALY – ISBN 978-92-64-05435-6 – © OECD 2009

7. ISAE (2009) notes that the anti-poverty measures in the emergency decrees may create social stigma for claimants while still covering only some of the people in need, while doing nothing to rationalise the complexities and incoherencies of the existing system.

Bibliography

Bernoth, K, J. v. Hagen and L. Schuknecht (2006), "Sovereign Risk Premiums in the European Government Bond Market", SFB/TR 15 Discussion Paper, No. 150.

Bonaccorsi di Patti, E. and R. Felici (2008), "Il rischio dei mutui alle famiglie in Italia: evidenza da un milione di contratti (The risk of home mortgages in Italy: evidence from one million contracts)", Bank of Italy Occasional Papers, No. 32, October.

Chinn, M. and J. Frankel (2003), "The Euro Area and World Interest Rates", Santa Cruz Center for International Economics, Working Paper Series No. 1016. Chinn, M. and J. Frankel (2005), "Will the Euro Eventually Surpass the Dollar as Leading International Reserve Currency?", NBER Working Paper No. 11510.

Codogno, L., C. Favero and A. Missale (2003), "Yield Spreads on EMU Government Bonds", Economic Policy 18, 503-532.

Codogno, L. (2009), "Two Italian Puzzles: Are Productivity Growth and Competitiveness Really so Depressed?", in M. Buti (ed.), *Italy in EMU*, Palgrave Macmillan.

European Commission (2008), "Public finances in EMU – 2008".

Haugh, D. and D. Turner (2009), "What drives sovereign risk premiums?: An analysis of recent evidence from the Euro Area", *OECD Economics Department Working Papers*, forthcoming.

ISAE (2009), "Gli effetti distributivi degli interventi più recenti su famiglie e imprese", Nota mensile, January.

ANNEX 1.A1

Taking stock of structural reforms

This table summarises recommendations from previous *Surveys* and notes significant measures that have been taken since the previous *Survey* (June 2007).

Recommendations	Action taken since the previous *Survey* (June 2007)
A. LABOUR MARKETS	
Raise labour force participation.	Laws 247/07 and 133/08 included small changes intended to raise participation and expand slightly the circumstances where a temporary labour contract is permitted.
Promote greater wage differentiation.	A tax reduction for productivity-linked pay has been introduced.
Reform Employment Protection Legislation on permanent contracts.	No action.
Reduce tax wedge on labour income.	Tax incentives for workers on permanent contract introduced in 2007.
B. EDUCATION	
Raise quantity and quality of tertiary level degrees.	Part (initially 7%) of university funding to be allocated on (yet to be defined) performance criteria. New recruitment rules intend to achieve better transparency and meritocracy and to favour younger appointments.
Reduce the drop rate from schools.	The drop-out rate declined especially in southern regions, partly as a result of increased investment in infrastructure and some targeted measures under the National Operational Programme.
Improve business-academic research links.	Law 133/2008 (Article 16) allows for the Universities to be transformed into private Foundations but details have yet to be announced.
C. FINANCIAL MARKET	
Ensure competition in the banking sector.	No legislative action since April 2007 (requiring the portability of loans and mortgages between banks). The competition authority and Bank of Italy are monitoring the costs of banking services.
Encourage mergers, including international mergers, in the financial sector.	No action.
Enhance corporate governance and transparency of financial instruments.	On 3 March 2008 the Bank of Italy adopted a new supervisory regulation promoting clearer allocation of supervisory competencies within banking institutions.
Strengthen Financial Market Supervision.	EU Market in Financial Industry Directive and Capital Requirements Directive were implemented in 2007; (See Chapter 2.)
Ensure equal treatment of all shareholders, in both private and partially publicly-owned companies.	No action.
Reform bankruptcy legislation.	No action since the 2006 reform.
D. QUALITY OF PUBLIC FINANCE	
Reduce debt on a sustained basis.	In August 2008 the Government approved the first budget planning document to cover three years, for 2009-11. It embodied plans to cut the deficit significantly, though specific measures to achieve the cuts were not generally included in the budget law itself. However, the financial crisis has led to the revision of the previous estimates, involving the growth of the public debt and the postponement of the achievement of the medium term objective.

OECD ECONOMIC SURVEYS: ITALY – ISBN 978-92-64-05435-6 – © OECD 2009

Recommendations	Action taken since the previous *Survey* (June 2007)
Introduce expenditure caps to prevent any growth in overall public spending in real terms.	The 2009 Budget updates the Internal Stability Pact for 2009-11, by setting new ceilings to the nominal final expenditure of regions (net of health spending and loans). Local entities and regions which do not comply with the Internal Stability Pact will be prevented from committing current expenditure exceeding the minimum spending level over the previous three years. "Virtuous" local entities will be rewarded. These provisions have yet to be tested, and there has been dispute about how well spending targets are formulated, with a mixture of accruals and cash based accounting being used.
Reform the pension system.	Changes required under the 1995 pension reform have been effected. Law 133. 2008 provides that old age and early pensions will be paid in full regardless of pensioners' other income from employment.
Contain public employment and wage growth.	The financial Budget 2009 envisages measures aiming at the re organisation of recruitment with the introduction of a stricter limit to new recruitments, the abolition of the change from temporary into permanent employment for employees with no job security and employment cuts in primary and secondary schools (see Chapter 4).
Make greater use of market mechanisms in devolved government services.	No action.
On fiscal federalism: • Clarify service standards based on output rather than input measures. • Increase flexibility among tenured employees. • Impose hard budget constraints rather than controls on detailed spending items. • Define clear regional and local tax assignments. • Define a clear redistribution mechanism based on objective structural indicators and tax capacity, imposing a hard budget constraint. • Impose transparent and uniform budget accounting methods, externally audited.	In April 2009 a law on fiscal federation, implementing Article 119 of the Constitution, was issued. The law provides for: • The gradual passage to the financing based on the standard costs instead of the historical expenditure. • The provision of additional Government funds for special programmes in favor of specific regional and local authorities financed by special contributions, European funds and national co-financing funds. • The equalization fund will be financed by VAT shares and regional surcharges on income tax. • The introduction of reward mechanisms and sanctions respectively for the more or less virtuous local authorities. But effective implementation of these plans depends on secondary legislation for which drafts have not yet been published.
E. ENVIRONMENTAL POLICIES	
Limit CO_2 emissions and develop renewable energy resources.	The compulsory share of renewable in electricity generation is to rise by 0.75% per year in the period 2007-12. The minimum share of bio fuels in the transport sector has been raised from 3 to 5%.
F. SUPPORT COMPETITION AND REDUCE STATE AID	
Increase regulatory power of competition authorities.	No new powers for the Competition Authority, though it has been given competence in some new areas: some aspect of local public services and in audiovisual rights for sport events.
Reduce state ownership, especially in TV media, transport and energy utilities.	Full privatisation of Alitalia. TV Media remain dominated by state companies and one private company.
Improve state-owned activities governance.	The Budget Law for 2008 contains provision to reduce the number of people appointed to the Boards of state companies.
Continue liberalisation and privatisation in electricity and gas.	Law 125/2007 enacting the Directives 2003/54/CE e 2003/55/CE on internal market of energy and gas. The law provides for the full opening of the electricity demand.
Reduce rents, Increase competition and reduce barriers to entry, notably: • Remove unnecessary licensing in all professions. • Reduce influence of professional associations. • Remove quantitative restrictions on supply in areas from pharmacies to taxis. • Ensure competition in provision of public services.	(See Chapter 3.) Local public services: Article 23bis of Law 133/2008 aims at reordering the entire sector. Accordingly the entrustment of the service must be done through public tendering and any other form should be considered an exception.
Introduce bodies for enforcement of national competition standards in areas of regional regulatory competence (notably retail trade, land-use planning).	No action.
Speed up liberalisation in transport.	No action.
Keep up competition in telecommunications.	No action.

ISBN 978-92-64-05435-6
OECD Economic Surveys: Italy

Chapter 2

Weathering the storm: the financial system in Italy

The Italian financial system managed to cope with the "first round" of the crisis better than most of its European peers, and banks have suffered mostly on the funding side, due to the strong tensions affecting interbank markets. Banking supervision rules and practice played an important role in ensuring Italian banks took a relatively prudent attitude as did some specific features of the economy, such as the comparatively smaller size of firms and the low debt of households. However, some of these same features that helped to shield Italian banks from the first round of the crisis may expose them to the consequences of the recession. Italian authorities and the European Central Bank provided a prompt response to ensure the banking system had sufficient liquidity, and tensions in interbank markets eased significantly in recent months. A bank recapitalization scheme, though less urgent than in other countries, has been set up relatively late, and carries conditions that may have important limitations.

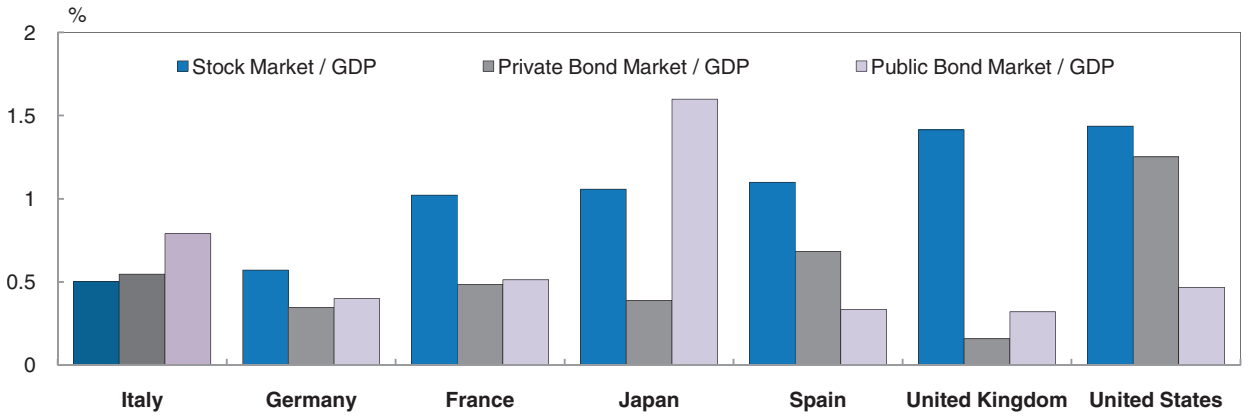
Like other OECD countries, Italy is facing strong headwinds from the international financial crisis. But so far the domestic banking system has been more resilient than in many other countries. This chapter suggests that this reflects a combination of factors including traditional banking relations, bank funding largely reliant on deposits, good supervision and the absence of a full-fledged housing bubble. The chapter analyzes how the structure of the Italian financial system affected the unfolding of the crisis in Italy. Credit decelerated significantly in recent months, although tensions in interbank markets eased somewhat. Some of the same factors that helped to shelter Italian banks from the first wave of the crisis may leave them exposed to the risks arising from the impact of the recession on the financial conditions of borrowers.

Italian banks provide financing to the corporate sector, in particular small and medium sized enterprises

The Italian financial system is centred on the banking sector, which held about 60% of total (unconsolidated) financial assets at the end of 2006, while insurance companies, investment funds, pension funds and individual portfolios held smaller proportion of total assets.[1] Stock market capitalisation is lower than in other advanced countries; in 2007, market capitalisation stood at 50% of GDP in Italy, well below that of France, Spain, the United Kingdom and the United States (Figure 2.1). The private bond market is relatively more developed, although much less so than in the United States. On the other hand, the Italian market for government bonds is very large reflecting high public debt.

The banking sector has been deeply restructured during the past ten years, with over 300 mergers and acquisitions, involving about half of total bank assets and concentrating over 50% of total assets in five banking groups, one of the highest among large European countries (Table 2.1). Two big groups (Unicredit and Intesa – San Paolo) account for more

Figure 2.1. **Stock and bond market capitalisation as a per cent of GDP, 2007**



Source: World Bank Indicators of financial development.

StatLink http://dx.doi.org/10.1787/638668404751

OECD ECONOMIC SURVEYS: ITALY – ISBN 978-92-64-05435-6 – © OECD 2009

Table 2.1. **Asset shares in the Italian financial system**

2007

Banks	Number	Share of total assets managed
Major groups	2	35.4
Large groups	3	16.1
Medium and small	56	36.7
Small (including co-operative banks)	603	11.8
Branches and subsidiaries of foreign banks		16.5
(average[1] in Germany, France and Spain)		10.5

1. Branches and subsidiaries of foreign banks

Source: Bank of Italy (2008a).

than a third of total assets, ranking them among the top European banks by size, with significant international operations. Foreign operations represent about a third of total assets for the top 5 banking groups. Other banking groups operate mostly in the domestic markets, where a large number of small banks, including co-operative banks specialized in local financing, are also active. Foreign banks have made a number of acquisitions in the Italian market, increasing international openness substantially.

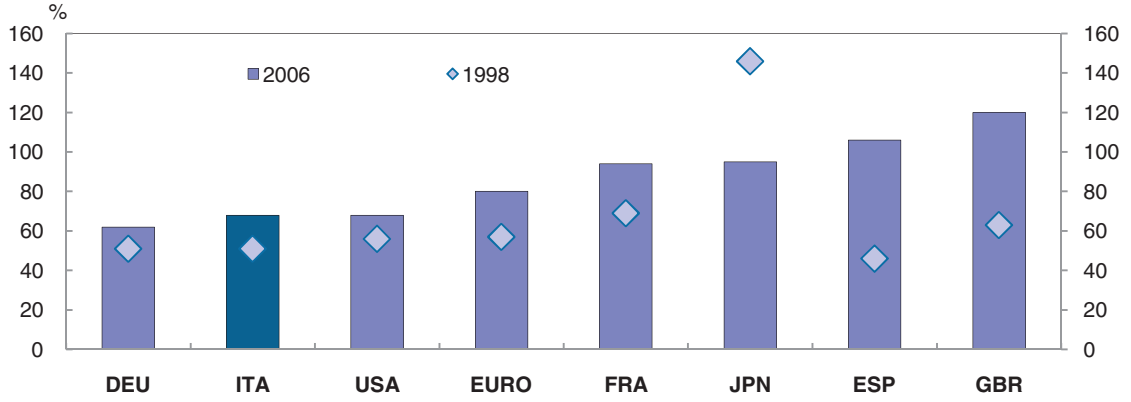
The Bank of Italy has responsibility for the supervision of banks and other financial intermediaries and for the overall stability of the financial system. It also oversees the functioning of segments of the financial markets relevant to the implementation of monetary policy, such as the markets for interbank funds and government securities. ISVAP is the supervisory authority for insurance companies, COVIP for pension funds, and CONSOB for the Italian securities markets. Until 2005, the Bank of Italy was also responsible for competition issues in the credit market, tasks assigned to the Antitrust Authority since January 2006.

Firms rely on bank loans and short term debt

The Italian corporate sector is not heavily indebted by international standards, but its debt consists overwhelmingly of bank loans. Debt of non-financial corporations totalled 68% of GDP at end 2006, below that of most major countries, and the largest share of non-financial corporation debt is held by banks (Figure 2.2). However, according to national accounts data, leverage[2] of non-financial corporations at 38% is slightly above that of the Euro Area average, US and Japan. Part of these differences may be due to different sector and size composition, which importantly affect leverage, and in general the reliance of firms on external finance.[3] Analysis of firm level (balance sheet) data confirms that, even after accounting for cross country differences in the weight of sectors and size, Italian firms had, compared with the Euro area average, higher leverage, a larger fraction of bank loans over total debt, a larger share of short term debt in total debt, a lower share of bonds and a lower share of external equity (ECB, 2007 and Magri, S., 2006).

Trade credit is a larger share of total assets than in other developed countries (Omiccioli 2004, De Blasio 2004). Firms use it as a form of finance, particularly as a substitute for short term bank debt, to reduce transaction costs and synchronize payments, as a marketing tool or to reduce the effect of seasonality in production processes (Finaldi Russo *et al.* 2004, Carmignani, A. 2004). The wide use of trade credit may also result from the stronger inter-firm ties that develop with bilateral trade credit. The financial conditions of suppliers can be seriously affected by financial conditions of

Figure 2.2. **Financial debt of non-financial corporations, % of GDP**



Source: Bank of Italy.

StatLink http://dx.doi.org/10.1787/638676617211

purchasers; it may be that in times of rapidly falling confidence this credit channel, not visible in data on credit intermediated through banks or financial markets, contracts more strongly than bank credit.

Smaller firms rely more heavily than large ones on bank lending. Small and medium sized enterprises (with less than 250 employees), which account for a large proportion of output and employment, have higher leverage ratios than larger ones. Moreover, they resort more to short-term borrowing (Bank of Italy, 2008b). As their accounting information is often less transparent, they have less access to financial markets and therefore rely relatively more on internal funds and bank lending to finance operations. In recent years, Italian firms overall have increased their reliance on market-based financing, as witnessed by the rapid expansion of the bond and the stock markets and the increasing use by larger firms of the syndicated loans market.

The reliance on bank lending may be associated with lower innovation

The Italian financial system is skewed towards bank lending. This mainly reflects the size distribution of firms, but also Italian-specific features, such as insufficient shareholder protection (although there has been significant progress in recent years), weak enforcement of law and the tax system, which raise the costs of access to market finance. The structure of the financial system and the size of firms influence each other, as a bank-oriented system is more efficient to finance smaller firms, and firms tend to be smaller if the financial system is more bank oriented (Champenois, 2008)[4].

There is broad consensus that financial development, especially the access to arm's length finance, enhances the robustness of economic growth, through more dynamic birth and growth of firms, spurred innovative activities and faster trend productivity growth (Rajan *et al.*, 1998, and Aghion *et al.*, 2007). A dynamic stock market is a stimulating factor for venture capital, which proves to be very important for the birth and expansion of innovative firms, but still ranks among the last in Europe.[5] The chosen proportion between debt and equity, the maturity structure of debt, the portion of market *versus* bank debt and the extent to which equity is sold on the market all influence incentives in strategic choices such starting new business lines and deciding to start exporting.

Financial systems oriented towards relationship lending appear to be less equipped to deal with the reallocation of resources, between and within sectors, needed to take advantage of growth opportunities or in times of restructuring to recover after a downturn (IMF, 2006). Conversely, in situations of financial distress, such systems may be more able to smooth shocks because banks have better information about their borrowers than bondholders. Hence they can more promptly address problems, limiting costs. Moreover, bondholders probably face greater co-ordination problems when debt needs to be restructured, delaying the resolution of distress and increasing costs.[6] For the moment, however, these potential advantages of its bank-based system have not shielded Italy from credit tightening.

Households are thrifty

Italian households[7] have a positive net financial position. Its ratio to GDP has diminished over the last 10 years, but remained higher than the euro area average, according to 2006 figures. Households' financial assets mostly consist of stocks, then come cash and deposits, and private and public bonds (Table 2.2). The share of bonds in total financial assets is larger than in most other countries. Government bonds traditionally represented the largest share, but in recent years the relative share of bank bonds has been increasing. Net wealth of Italian households[8] in 2007 consisted of 60% real assets and 40% financial assets. This distribution reflects changes in asset prices, but the share of real assets was larger even before the beginning of the latest housing market upswing.

Table 2.2. **Assets and liabilities of the household sector**

2006

	Cash and deposits	Bonds	Equity and mutual fund shares	Other assets	*Financial assets and liabilities as a ratio to disposable income*		
					Financial assets	Financial liabilities	*of which:* Financial debt
	Per cent of total assets						
France	29.1	1.4	29.3	40.1	2.90	0.84	*0.70*
Germany	33.9	10.3	24.9	31.0	2.80	0.97	*0.96*
Italy	**25.6**	**18.3**	**36.3**	**19.8**	**3.62**	**0.67**	***0.47***
Japan	50.1	4.7	16.1	29.2	4.91	1.29	*1.07*
Spain	38.1	2.5	41.9	17.6	2.81	1.33	*1.24*
United Kingdom	26.0	0.8	14.6	58.6	4.60	1.68	*1.53*
United States	13.1	7.1	45.5	34.4	4.45	1.40	*1.35*
EU area	*31.3*	*8.7*	*29.8*	*30.3*	*3.05*	*0.95*	*0.89*

Note: Includes non incorporated firms and non-profit institutions. Funded occupational pensions are included in "other assets."
Source: Bank of Italy.

Although it has recently risen relative to disposable income, household indebtedness remains well below that of other countries. In 2006, the ratio of debt to disposable income was about 50% in Italy, compared with about 90% in the euro area, and more in Japan, Spain, the United Kingdom and the United States. According to the Survey of Household Wealth, only 12% of households had a mortgage and 13% a consumer loan in 2006 (Bank of Italy, 2008c). This compares with about 30% in France and 50% in the United States (data for 2004). Moreover, while credit to households has increased in recent years, this is mostly due to households in higher income brackets, with a more solid financial position.

The impact of the crisis

Globally, the financial crisis affected the banking system through: losses on subprime and, more recently, prime mortgages granted by banks or mortgage brokers; increased liquidity needs to face losses incurred by structured investment vehicles which were taken off balance sheet but that were directly sponsored by banks; losses in portfolio investments in so-called "toxic" assets such as Asset Backed Securities, Collateralized Debt Obligations or shares of speculative funds investing in securities whose underlying assets were subprime mortgages; and difficulty in refinancing and funding due to tensions in interbank markets. Losses were also amplified by high levels of leverage worldwide.

Italian banks were less exposed

Italian banks were, overall, relatively less exposed in these asset classes, and were also less leveraged: at the end of 2007, the ratio between total assets and tier 1 capital was below 30 for the top 5 Italian banks, but around 40 for the average of the biggest European banking groups. Portfolio investment in "toxic assets" was also limited: Italian banks did invest in Asset Backed Securities, Collateralized Debt Obligations and other structured products, but their exposure, at the end of 2007, amounted to € 4.9 billion, only about 2% of supervisory capital. Exposure to counterparty risk connected with the possible default of financial guarantors (also known as monoline insurers)[9] was low, too. As a consequence, write-offs and losses have been limited: up to the third quarter of 2008, top banking groups made crisis related write-offs totalling € 4.5 billion. The top 5 banking groups were still reporting profits in the third quarter of 2008 and for the year as a whole, although these are substantially below the levels of previous years. Profits were partly sustained by the revision of international accounting standards (IAS) which allowed banks to value a smaller amount of assets at market prices.

Mortgages with very high loan to value (LTV) ratios are not common in Italy, as mortgages with a LTV ratio above 80% cannot enjoy the preferential risk weighting unless additional personal guarantees are provided to the lender. Indeed, the average loan to value ratio (around 50% in 2006) was one of the lowest among OECD countries. Moreover, equity extraction instruments were not offered (Calza *et al.*, 2007, Rossi, 2008). No Italian bank offered subprime mortgages either domestically or abroad. The dynamics of the residential housing market in Italy were also different from elsewhere. House prices rose significantly during this cycle, but less so than in some other European countries and still rose slightly in 2008 (see Figure 1.4). The price-to-income ratio did not rise so much either, and residential investment, though still relatively high, has been less buoyant than in other countries (OECD, 2009). The volume of transactions has nevertheless fallen considerably and a stronger feedback into prices can be expected in the near future. There has been no increase in non-performing mortgages, which are at low levels. Moderate loan to value ratios (new mortgages in 2006 had an average LTV of 68% (Rossi, 2008)) ensure that incentives to default are less likely to arise, as house prices must fall very much to bring households into negative equity.

Italian banks did use securitization to move risk off their balance sheets and as a source of funding. Securitizations of assets located in Italy were about 7% of total gross emissions in Europe in 2007 (about 9% of the total amount outstanding),[10] mostly in the form of residential mortgage backed securities. In Italy securitized mortgages are less likely to become classified as non-performing than non-securitized mortgages (Bonaccorsi *et al.*

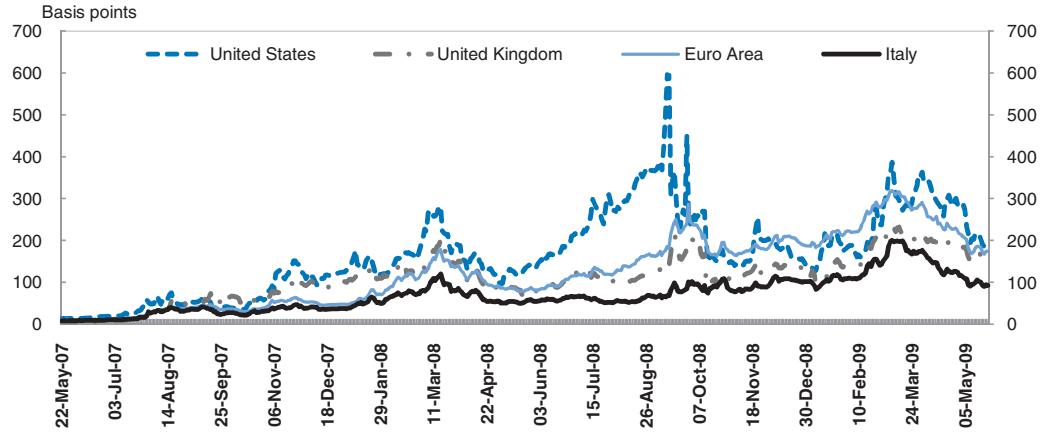
2008).[11] This suggests that banks were not using securitization just to clean their balance sheets. The quality of nearly all mortgages and therefore of securitized mortgages was relatively high, due to the absence of subprime borrowers. Thus, investment vehicles creating asset backed securities from such securitizations should have been relatively solid too. Still, Italian banks had little exposure to directly sponsored Structured Investment Vehicles[12] and what they had was mostly due to acquisitions of foreign banks. In these cases, the supervisory authority pressed banks to consolidate such vehicles in their balance sheets, so that risks were kept "inside" the system.

But credit has tightened severely nonetheless

The Italian banking system was nonetheless strongly affected by the crisis. Stock prices of financial firms plummeted: the index of financial shares lost 64% of its value from September 2007 to January 2009, in line with the losses suffered by the same index for the US (–62%) and the euro area average (–63%), although the fall was milder for the Italian index if computed from October 2008, when Lehman Brothers failed and the crisis became, globally, more acute. Credit default swap (CDS) spreads on Italian banks, which reflect market perceptions of default risk, rose significantly after the onset of the crisis (Figure 2.3). Although the average spread is lower than that of European and American banks, CDS spreads vary among Italian banks and some are relatively wide in comparison with European peers.

Figure 2.3. **Bank credit default swap rates**

Last observation 22 May 2009



Source: Datastream.

StatLink http://dx.doi.org/10.1787/638687537820

Interbank market funding has been difficult since mid-2007. Trading volumes have contracted significantly since then and spreads remained high and volatile for much of 2008. This was partly attributable to the much lower activity of foreign traders operating on the Italian interbank platform (e-MID). Interbank rates have fallen significantly following measures taken by the ECB and national central banks to boost liquidity and restore the proper functioning of the market. Since December 2008, interbank rates have been slightly below the average level reached in 2006, across all maturities. It was mainly uncollateralized transactions and the commercial paper market that were affected by the turmoil so that banks relied more on funds made available by the Eurosystem.

Italian banks have also been unable to issue significant volumes of bonds on the international bond market. They have thus increased the issuance of bonds to retail domestic investors, but this has implied an increase in overall funding costs, even though ECB refinancing rates have fallen significantly. Gross margins[13] are nevertheless not particularly low compared with the past. Whether this is a sign that banks are able to pass the increased costs of new funding to borrowers and use the margin to rebuild capital, or that higher gross margins are needed just to offset higher credit risk, is uncertain.

As the global financial crisis unfolded at an alarming pace, deposits from retail customers accelerated in 2008, helping to offset the fall in net interbank funding from abroad. The guarantee on an individual's account from the deposit insurance scheme, € 103 000, was already high by international standards, and the government acted early to support the guarantee fund. This may have helped banks' efforts to raise more deposits. In any case, given the sharp decline in stock markets and uncertainty on the financial soundness of borrowers, deposits could represent a relatively attractive alternative for investors.

The impact of the crisis on securities markets was severe. So far, insurance companies, with little direct exposure to subprime-mortgage related investments and to monoline insurers, have been much less affected. Overall, total exposure ranged between 0.17 and 0.2% of total reserves, and no insurance company has so far been in distress. The large fall in equity markets has, as elsewhere, discouraged new listings, with 7 IPOs in 2008, after 32 in 2007. Net private bond issues fell in the third quarter of 2008, but they are still at high levels compared with previous years. Spreads on Italian 10-year Treasury bonds rose significantly as markets demanded higher rates on Italian government debt even as rates on German debt were falling (see Chapter 1). Yield differentials widened also for private borrowers as the difference in rates on investment grade bonds issued by non-financial corporations and Italian Treasury Bills widened throughout the year, exceeding 160 basis points in early January 2009.

Why was the Italian banking sector less exposed?

Hence, the Italian banking system was less vulnerable to the "first round" of the crisis than that of other countries. This more limited impact can be attributed to a series of factors such as the reliance of Italian banks on a more "traditional" business model, their relatively small exposure to toxic assets, the characteristics of their funding base, and the limited recourse of Italian households to the credit market, discussed below.

The reliance of Italian banks on traditional lending activity to firms and households is to some extent visible in income and balance sheet data, although data may not be fully comparable across countries. Italian banks in aggregate have a relatively high share of loans to customers (as opposed to securities and other assets) but lower than in some countries more affected by the crisis (Table 2.3). Net interest income represented over half of total income in Italian banks, noticeably higher than French and Belgian banks but similar to Ireland and the United Kingdom. Among non-interest revenues, those from trading activities are an especially low fraction of total revenues, while revenue from services accounts for a large share. In 2006, when markets were still buoyant, revenues from trading activities constituted about 6% of total revenue, with the largest share of non-interest income represented by fees and commission charged for the sale of financial products on behalf of asset management and insurance companies, as well as fees for payment services.

Table 2.3. **Net interest, per cent of total income; loans to customers, per cent of assets**

All banks, 2006

	Per cent				Per cent		
	Loans to customers, share of assets	Net interest, share of total income			Loans to customers, share of assets	Net interest, share of total income	
	ECB	OECD	ECB		ECB	OECD	ECB
France	35	25	37	Ireland	62	65	63
Belgium	41	43	46	Spain	69	63	54
Germany[1]	42	68	48	Denmark	71	53[2]	56
Czech Republic	45	55[2]	41	Finland	71	65	54
Austria[1]	49	45[2]	65	Switzerland		35	
Poland	53	57[2]	63	Canada		49[2]	
United Kingdom[1]	55	n.a.	65	United States		59[2]	
Netherlands	58	54[2]	51	Norway		70	
Italy	**59**	**60**	**52**	Korea		85[2]	
Sweden[1]	60	43[2]	52				

Note: ECB data report consolidated accounts for "domestic banks", including their foreign subsidiaries. OECD data report consolidated accounts for all banks operating in the country. There are some potential inconsistencies between the two sets of data.

1. ECB data use International Financial Reporting Standards, *except* for these countries.
2. OECD data for these countries refers to 2005.

Source: ECB (2007), OECD.

The structure of funding also helped Italian banks overcome the tensions affecting the interbank market. Funding from retail customers, more stable than wholesale funding, constitutes a large share of the total. In June 2006, deposits from retail customers represented 37.4% of total funding, more than in Germany, France and the Euro Area average, although less than in Spain. Bonds sold to retail customers[14] contributed to 17% of total banks' funding, more than in the aforementioned countries and in the Euro Area on average, so that, overall, funding from retail customers represented 54.4% of total funding, a high value in international comparisons (Table 2.4). Banks were not raising funds through market instruments such as covered bonds,[15] which became very difficult to place as the crisis intensified, because the rules enabling Italian banks to issue such instruments were enacted only in mid-2007. Before that date, the issuance of covered bonds was not allowed. Even in the second half of 2007 no such bonds were issued, perhaps due to unfamiliarity with such instruments and the turmoil that was then erupting in global financial markets.

Finally, the limited recourse by Italian households to the credit market when compared with those of other countries suggests that the Italian market for retail products such as consumer credit was probably less mature, and banks likely had lower incentives to look for new and more complex products as they could still make money on more standard business lines.

These proximate causes of the relatively mild initial impact of the crisis on the Italian financial system may in turn depend on a prudent supervisory and regulatory stance as well as on more fundamental institutional factors, though it is difficult to provide hard evidence supporting some of the arguments.

Table 2.4. **Funding structure of the banking system, selected countries**

June 2006	Italy		Germany		France		Spain		Euro Area	
	mln euro	%	mln euro	%	mln euro	%	mln euro	%	mln euro	%
RETAIL FUNDING[1]	1 129 132	54.4	3 007 372	47.1	1 768 244	42.0	963 012	48.5	9 488 973	46.9
Deposits	775 615	37.4	2 030 155	31.8	1 260 047	30	814 344	41.0	6 811 732	33.7
Bonds[2]	353 517	17.0	977 217	15.3	508 197	12.1	148 668	7.5	2 677 241	13.2
WHOLESALE FUNDING[3]	945 642	45.6	3 371 837	52.9	2 438 209	58.0	1 021 762	51.5	10 736 116	53.1
From residents in the country	533 361	25.7	2 489 771	39.0	1 347 740	32.0	600 883	30.3	5 942 098	29.4
MFI	454 007	21.9	1 911 641	30.0	1 249 576	29.7	268 108	13.5	4 480 754	22.2
Deposits	374 849	18.1	1 334 038	20.9	1 028 386	24.4	234 200	11.8	3 505 785	17.3
Bonds	79 158	3.8	577 603	9.1	221 190	5.3	33 908	1.7	974 969	4.8
From residents abroad	412 281	19.9	882 066	13.8	1 090 469	25.9	420 879	21.2	4 794 018	23.7
MFI	402 520	19.4	826 570	13.0	1 064 067	25.3	404 712	20.4	4 579 657	22.6
Deposits	318 406	15.3	688 183	10.8	993 730	23.6	272 154	13.7	3 958 166	19.6
Bonds	84 114	4.1	138 387	2.2	70 337	1.7	132 558	6.7	621 491	3.1
Total	2 074 774		6 379 209		4 206 453		1 984 774		20 225 089	

1. Funding from clients different from monetary and financial institutions and other financial corporations.
2. Includes bonds held by MFI resident outside the euro area.
3. Funding from MFI and other financial corporations.
4. Includes bonds held by MFI resident within the euro area, only.

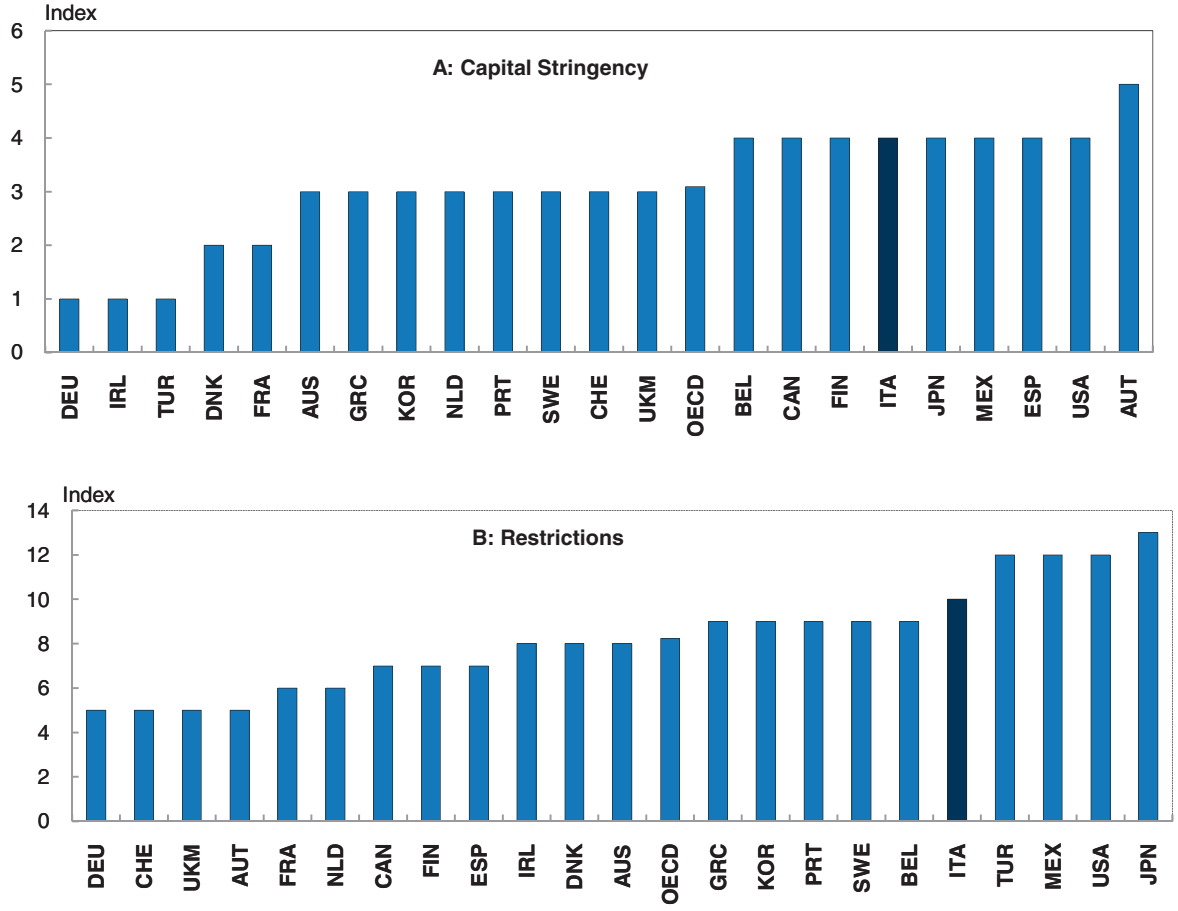
Source: National central banks.

Prudential supervision and regulation

An obvious candidate to explain why Italian banks were less involved in the market for "toxic assets" is banking supervision. Both explicit regulation and supervisory practices seem to have played an important role in ensuring the Italian banking system did not increase its risk exposure or leverage excessively. World Bank indicators give Italy high scores in measures of "capital stringency" and of "restrictions" imposed on banks' activities (Laeven *et al*. 2008 and Figure 2.4). "Capital Stringency" is an index of regulatory oversight of bank capital which incorporates information on whether funds that count as regulatory capital are invested in assets other than cash, government securities, or borrowed funds, whether the authorities verify the sources of capital, and whether regulation requires that unrealized losses are deducted from capital. "Restrictions" is an index of regulatory restrictions on the activities of banks measuring regulatory impediments to engaging in securities market activities (*e.g.*, underwriting, brokering, dealing, and all aspects of the mutual fund industry), insurance activities (*e.g.*, insurance underwriting and selling), real estate activities (*e.g.*, real estate investment, development, and management), and ownership of nonfinancial firms. These indicators are clearly neither direct measures of excessive regulation (*i.e.* that which unnecessarily stifles innovation) nor of immunity from crisis; the United Sates scores higher than Italy on both measures whereas the United Kingdom scores below.

Some detailed aspects of prudential regulation and of supervisory practices are relevant, however. In mortgage lending, the requirement for personal guarantees discourages mortgages beyond an 80% loan to value ratio; banks are held responsible for the respect of the rules governing lending and the sale of credit products through third parties – for example, banks must ensure that mortgage brokers conform to regulations; and legislation against usury prevents mortgages with excessively high interest rates, effectively forbidding subprime mortgages.

Figure 2.4. **Indices[1] of regulatory oversight and restrictions**



1. Coverage of these indicators differs across countries and may significantly affect the rankings, notably for the United States.

Source: Laeven and Levine, 2008, Appendix 1.

StatLink http://dx.doi.org/10.1787/638687731500

Regulation and prudential practice are also strict concerning disclosure and transparency. First, the supervisory authority can prescribe what information banks have to disclose in their balance sheet. As International Accounting Standards (IAS) set only general accounting principles, bank supervisors have some leeway about what information they require banks to report. Historically, Italian supervisors have asked banks to report a large amount of information on their assets, liabilities and exposures, thus enhancing the transparency of banks' balance sheets.

The prudential treatment of securitization in Italy has been stricter than that of the Basel I accord. Securitised loans can be considered as outside a bank's balance sheet only if there is an effective transfer of risk; this is similar to the more restrictive framework adopted in the Basel II accord. Furthermore, a law from 1999 requires that special purpose vehicles be recorded inserted in a dedicated register and must report information to the Credit Registry, ensuring that the supervisory authority has a large set of information about their capital situation. Finally, the crisis was also propagated in other countries and internationally by the liquidity needs of structured investment vehicles (SIVs), that were off-balance sheet but sponsored by banks, exposing the latter to risks that were not accounted for in computing capital ratios. In this respect, the Bank of Italy made it clear

that sponsoring SIVs, although possible in practice, would be subject to strict oversight, and that banks would have been required to consolidate sponsored SIVs into their balance sheets. A similar approach was taken by the Spanish authority and contributed to prevent the development of a shadow banking system (OECD, 2009, Chapter 3).

Separately, in 2003 the insurance industry regulator forbade the indexation of index-linked products to securitizations or credit derivatives. Regulation has also discouraged the offering of guarantees against the default of bonds or other debt securities, thus reducing the extent to which Italian companies operated in the monoline market. These practices have also helped to limit the exposure of the insurance sector to the crisis.

Finally, the structure of the supervisory system is important. The Bank of Italy also has a duty of supervision on non-bank financial intermediaries that provide credit in different forms. Among such intermediaries are leasing and factoring (trade credit intermediary) companies, intermediaries offering consumer credit and, in general, all entities performing "any financing activity". In order to operate, such intermediaries must be officially registered and when obtaining registration they automatically become subject to prudential regulation. Thus, they have to comply with prudential capital requirements, they are required to adopt an appropriate governance structure, and must abide by regulatory rules to issue financial instruments. As the regulator is the same as for banks, regulatory arbitrage is difficult, even if the rules for "other intermediaries" are somewhat less stringent than those designed for banks.

Supervisory authorities showed awareness of the need for collaboration and exchange of information. Since the early 2000s agreements have been signed among Bank of Italy, CONSOB and ISVAP to exchange information on a regular basis, to identify financial conglomerates[16] and assess their capital adequacy, and to manage the application of the IAS accounting principles. In 2003, the Bank of Italy and ISVAP created a working group to monitor credit risk transfer between banks and insurance companies (Bank of Italy, 2004 and ISVAP, 2004).

Institutional factors

The relatively large protection given to deposits by the deposit insurance scheme, even before the crisis, may have made bank deposits more attractive to retail customers, favouring banks' funding. Moreover, as banks distribute a large share of financial products through their branches, they have an advantage in placing their own products with investors. All these factors likely contributed to the relatively high weight retail funding had, and still has, in banks' overall funding policy.

The relative underdevelopment of household credit may be partly due to bankruptcy legislation. Even after the 2005 reform of the bankruptcy code, there is no provision for individuals to declare default and obtain a "fresh start". This is likely to keep demand for credit lower than it would be if bankruptcy were available. This might be offset on the supply side by lower interest rates required by lenders who have higher security, in theory. In practice, however, the long delays in many civil court cases can mean that when default does occur, lenders often obtain repayment only with long delays and at high costs. This is probably a particularly inefficient equilibrium, depressing both demand for and the supply of consumer credit (White, 2005).

The ownership structure of some banks, where shareholders' agreements limit contestability,[17] may reduce pressure on CEOs for short term results and to improve upon the performance of their peers. Moreover, the transition from public to private ownership of

Italian "savings and loans" banks was achieved through the creation of "fondazioni bancarie" (banking foundations); their boards include representatives of local governments, business associations and other institutions and non-profit organisations. They may be less focused on maximizing share price value, at least in the short term, than private investors. The "fondazioni bancarie" are still among the main shareholders, even of large banking groups, although in most cases with non-controlling capital shares. In this environment, senior managers may have better incentives to create value in the medium run, rather than simply to outperform their peers in the short run, or to satisfy shareholders with immediate dividends and high share prices and avoid a take-over that may cost them their jobs. However, there are disadvantages in relatively closed structures, too; less competition means less pressure to keep costs to customers down, to innovate and to improve overall efficiency.

Indeed, Italian banks have been under close scrutiny in recent years following financial scandals related to the default of major non-financial corporations operating in the food industry, and following the Argentinean default. In both cases, banks placed bonds that were subsequently defaulted upon to retail investors; some investors won lawsuits against the bank that sold them the bonds on the grounds that the bank knew that the bonds were risky and that it placed bonds with retail investors so as to remove risk from its balance sheet. These episodes, and the ensuing clamour, may have put some pressure on banks to avoid taking on too much risk.

The structure of top executives' pay is a further factor that contributes to raise risk-taking incentives, particularly if variable pay is prevalent and takes the form of options, or other instruments whose value increases with volatility. Even though the incentive structure of lower level agents such as traders is also very important, top executives have decision powers over general strategies such as the resources to be used in trading activities, whether to operate in certain markets, or to develop certain risky products.

International data suggest that, on average, CEO pay – aggregating over all sectors – in Italy, in 2005, included a lower share of variable pay than, for example, in the United States, France, Germany and Spain (Towers Perrin, 2006). These data may not be representative of the particular situation in the financial industry but they provide a signal that payment structures for top executives in Italy put less weight on variable results. The difference with the United States is especially striking. In that country more than 60% of pay is variable, against 35% in Italy. Data from balance sheets of Italian banks suggest that in 2007 only 6 among the 27 listed banks and banking groups were using stock option plans for their top executives, including only 2 of the major 5 groups (LaVoce, 2009).

Performance pay, especially as stock options, can be a strong incentivizing mechanism and it can have beneficial effects for boosting productivity and for directing the action of the management towards creating shareholder value. However, as has emerged from the development of the crisis, payment structures that rely on stock options can also severely distort incentives and induce excessive risk taking. In March 2008, the Bank of Italy approved a new regulation on bank corporate governance requiring compensation mechanisms to provide incentives aligned on appropriate risk taking and directed at achieving the long term goals of the organisation; compensation policies should also be subject to endorsement and review by shareholders (Bank of Italy, 2008d).

Finally, the modest involvement of Italian intermediaries in the market of "toxic assets" and the prevalence of the relationship lending model do not seem to originate from limited competition. Weaker competition can indeed reduce the incentives to introduce

new products and, possibly, to take on risk (Hellman *et al.* 2000). However, extensive reforms took place in 1993, following the implementation of the 2nd Banking Directive, and empirical work on the Italian banking system indicates that competition increased significantly in the second half of the nineties (Angelini *et al.*, 2003). International comparisons do not suggest that the Italian banking system was less competitive than its European peers in the early 2000s. OECD data indicate that Italy was around the OECD average when comparing indexes of regulation of activity, regulation of domestic and foreign entry, and the extent of government ownership (OECD, 2006). Measuring the degree of competition in banking is a complex task and different indicators often provide different answers. Although the picture that emerges from existing studies is blurred (Bikker *et al.*, 2006), Italian banking does not stand out as particularly uncompetitive, so this may not be a good explanation for the relatively limited direct exposure of Italian banks to the financial crisis.

Not all the factors that have contributed to shield Italy from the direct impact of the crisis may be beneficial for long run growth, an issue not treated here. While the solvency of banks themselves may be less in question than in many countries, they are nevertheless part of the mechanism that is propagating the credit crunch and recession: the authorities have taken some measures to try to avoid a negative spiral between the current recession and further credit tightening (see Box 2.1).

Recent developments

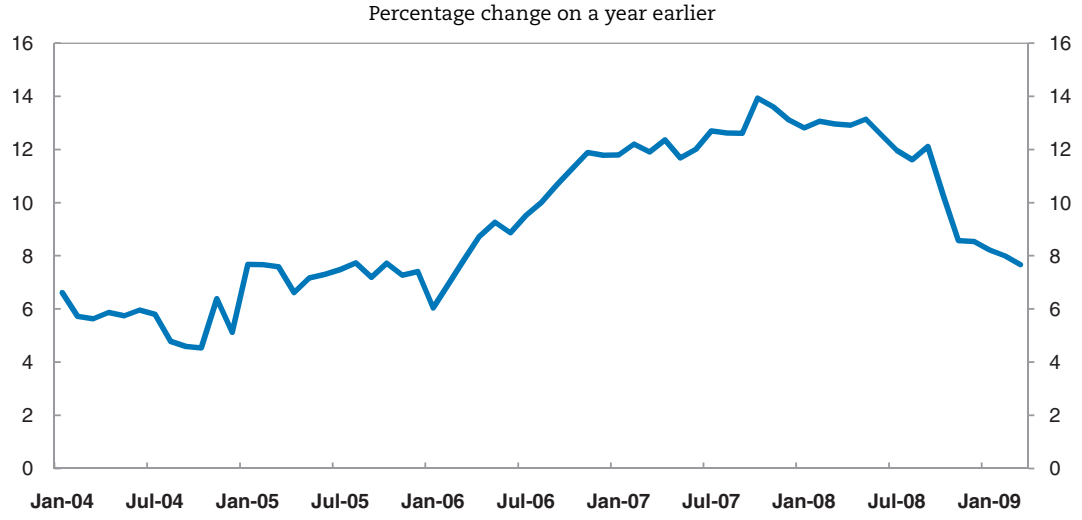
Credit is slowing down…

The flow of credit to households and firms, as well as its costs, both in terms of interest rates and in terms of collateral and guarantees required, exert important effects on real activity. Although the slowdown of credit may reflect a lower demand for new financing, in a context of increased uncertainty, it could also result from the reduced supply of credit by banks eager to deleverage. The contraction of credit could trigger a feedback loop, with weaknesses in the financial and real sectors feeding on each other.

After six years of sustained expansion, the growth rate of loans to non-financial corporations, corrected for securitizations, slowed significantly in the last quarter of 2008 (Figure 2.5). This was especially true for firms with less than 20 employees. The slowdown in loans has also been particularly marked for firms based in Southern Italy, the least developed area of the country.

Recent surveys of manufacturing firms report a significant worsening in credit conditions especially for firms that applied for obtaining new loans, or for expanding existing ones (Bank of Italy, 2008e and 2008f). Bank of Italy surveys report both increasing numbers of loan refusals and cuts in the size of existing credit lines, as well as increased costs on existing credit. Another survey on "Inflation and growth expectations", jointly run by the Bank of Italy and the financial newspaper Il Sole 24 Ore, in the first half of December 2008, indicates that about 40% of firms reported a worsening in access to credit, while 26.7% did so in September 2008, and about 20% in March (Bank of Italy, 2008e). The increase in the percentage of firms reporting worse credit conditions was especially pronounced among firms with 50 – 199 employees.

Figure 2.5. **Growth rate of loans to non-financial corporations**



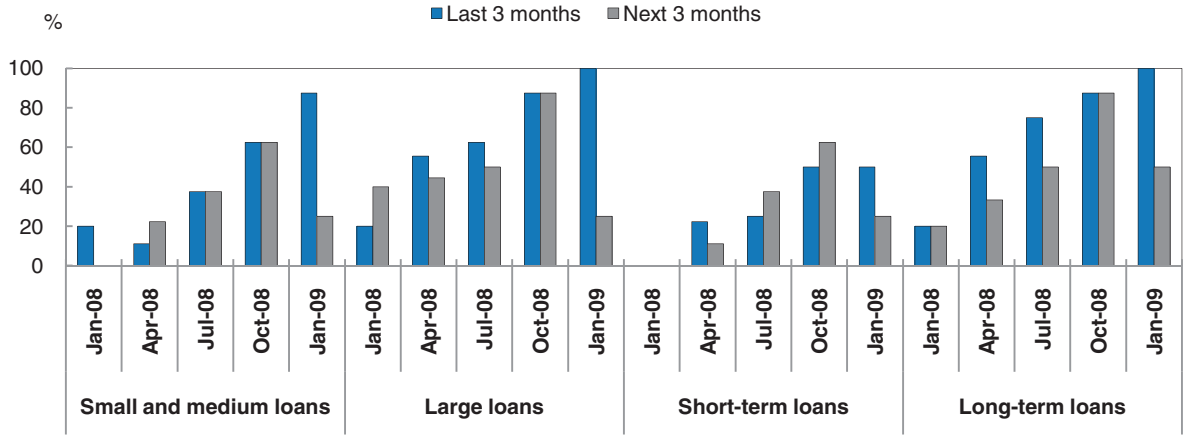
Source: Bank of Italy.

StatLink http://dx.doi.org/10.1787/638713107238

... due to both demand and supply side factors

The slowdown in credit is partly attributable to weaker demand, as firms are revising down their investment plans and cutting production, as both export and domestic demand weakened and then fell. Separating demand factors from supply is difficult, but it is clear that supply side factors contributed to the deceleration in lending. According to the Bank Lending Survey, credit conditions to non-financial companies were tightened in the second half of 2007 and for households as from early 2008 (Figure 2.6). The tightening involves amounts, margins, maturities and specific covenants aimed at limiting risk. Banks attribute the tightening both to the worsening of the crisis with the absence of liquidity in wholesale funding markets following the failure of Lehman Brothers, and to the increased riskiness of borrowers stemming from the poor economic outlook. The fourth quarter of 2008 was the first time credit managers reported that they expected significantly less tightening in the future than in the recent past.

Figure 2.6. **Credit conditions according to the Bank Lending Survey**

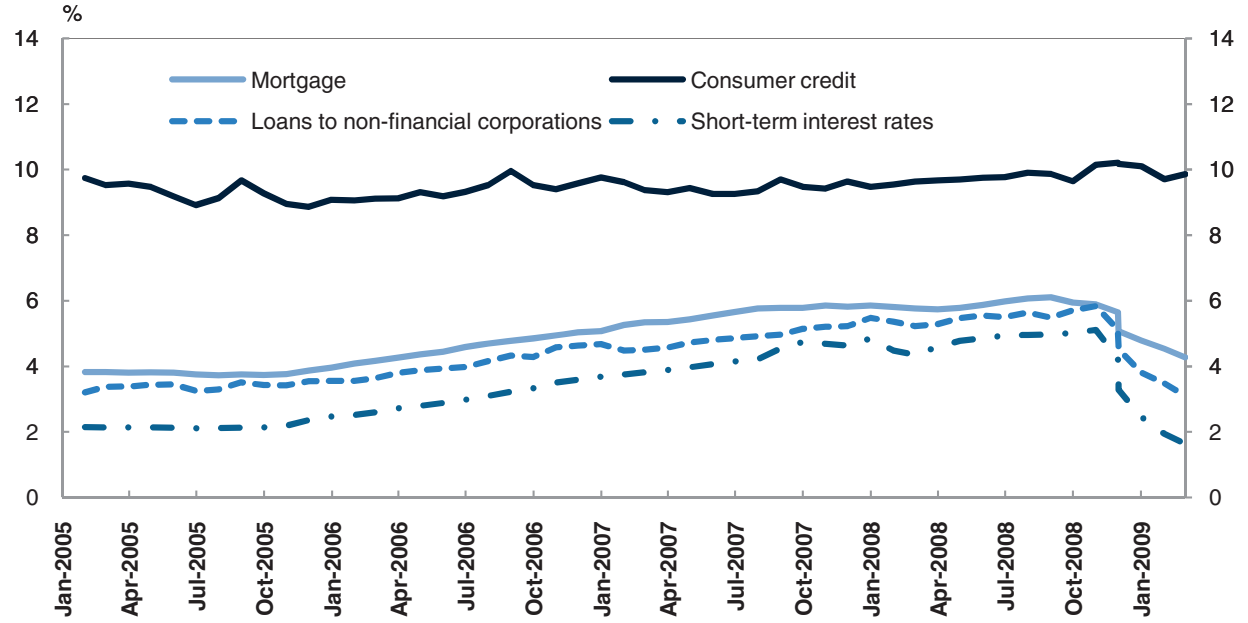


Source: Bank of Italy.

StatLink http://dx.doi.org/10.1787/638723007546

Lower tension on the interbank market and measures to ensure provision of liquidity have started to produce some effects on loan interest rates. The cuts in the policy rate enacted by the ECB and the facilities it created to enhance liquidity provision helped to stabilise interbank rates. Even though funding conditions for banks are improving, rates may still be relatively high, on average, reflecting increased riskiness of borrowers induced by the recession. There has been a slight decrease in interest rates on new loans to non-financial corporations, in particular on larger loans. Interest rates are still high, and rising, on consumer credit, probably reflecting a riskier composition of borrowers applying for new loans in this market segment (Figure 2.7). The seasonally adjusted flow of non-performing loans increased, and the rise has been stronger in Southern Italy and in the construction sector. On the other hand, there has been no significant change in the default rate of loans to households.

Figure 2.7. **Average interest rates for mortgages, consumer credit and business loans**



Source: Bank of Italy.

StatLink http://dx.doi.org/10.1787/638747323123

All major Italian banking groups issued statements indicating they plan to raise their capital ratios in 2009 and this is almost certainly contributing to credit tightening. Even though no bank has fallen short of minimum regulatory requirements, the current situation of Italian banks may at first sight appear worse than that of international competitors. As of June 2008, the 2 top Italian banking groups had a core tier 1 ratio below the average of major European competitors. However, the Italian authorities have adopted a relatively strict approach, within the Basle II accord, for what classes of capital can be included into core tier 1, so that a lower core tier 1 ratio may not necessarily signal a weakness in a cross-country comparison. In fact, when analyzing the ratio between bank capital and total assets, major Italian banks fare better than their European counterparts.[18]

Higher capital ratios may nonetheless be needed to weather the increase in nonperforming loans that the recession will bring and to provide a buffer in case further losses, for example from foreign exposure, materialize. This seems to be confirmed by the

OECD ECONOMIC SURVEYS: ITALY – ISBN 978-92-64-05435-6 – © OECD 2009

fact that equity markets appear to require banks to have higher capital ratios, and higher ratios are probably a key condition for the recovery of a bank's share price. Capital ratios can be increased in several ways: by selling non-core assets,[19] raising more capital from current shareholders or raise equity on the market, or using government recapitalization facilities. The alternative is to reduce the amount of credit granted to customers, which is likely to exacerbate the recession and therefore ultimately be of no benefit to the banking sector in aggregate.

Risks

Even if the financial crisis had a milder impact on the Italian financial system than in other countries, and no bank found itself in conditions of financial distress, there are significant downside risks, stemming from the severity of the contraction in economic activity and its impact on the financial soundness of firms and households, both in Italy and abroad, especially for larger banks that have significant foreign activities.

Domestic borrowers face hard times

The effect of the deteriorating economic environment on borrowers' capacity to service their loans is a major source of risk. National accounts data indicate that firms' operating profits continued to decline in the twelve months ending in September 2008, following a trend which started in 2004 and became more pronounced in the second half of 2007. Self-financing as a ratio to value added reached its lowest level in 15 years. Worsening financial conditions of borrowers can have a direct effect on banks' profitability, and could, in principle, affect the solvency of some banks. The latest significant banking crisis occurred in the early nineties, when Italy also experienced a large devaluation of its currency and was close to a public debt crisis, although the contraction in economic activity was lower than that forecast for the current recession (GDP growth dropped from 0.8% in 1992 to –0.9% in 1993, bouncing back to 2.2% in 1994) (see Figure 1.5).

Moreover, the Italian enterprise sector enters the present recession in an already fragile state, following a decade of slow growth with low productivity. The Italian financial system could be highly exposed to the contraction of economic activity. The interest margin is a large component of banks' revenues and this could constitute a source of weakness during the "second round" of the crisis, as borrowers' defaults are likely to increase. Small firms in Italy tend to rely a lot on short term bank borrowing, and with high leverage and less easily available collateral than large firms they are likely to suffer from the drying up of credit during a downturn. The widespread use of trade credit can also increase fragility and amplify the intensity of downturns, as financial conditions of different firms become interlinked through trade payables and receivables.[20]

Foreign subsidiaries may be vulnerable

A key source of risk is Italian banks' exposure to foreign markets, notably Central and Eastern Europe, where two major Italian banks have recently finalized important acquisitions, mostly establishing subsidiaries. Such exposure topped 148 billion euros in December 2008, 5% of total assets of the Italian banking system. This is not particularly large, although major banking groups, those most affected by the financial crisis, are also those most exposed and may have to absorb important losses in a context in which they are struggling to increase their capital ratios. At end 2007, Italian-owned banks held large fractions of total bank assets in Croatia, Slovakia, Hungary, Poland, Austria, Bulgaria and

Slovenia.[21] In absolute terms, Italian banks are mostly exposed to Poland, Croatia, Hungary and Russia (Table 2.5). In recent years these countries experienced a strong growth of credit relative to GDP, although it still remains at modest levels in comparison with Western European countries. Most loans, even if issued in local currencies, are indexed to the Euro, so that although foreign exchange risk is borne by borrowers, this increases counterparty risks for Italian-owned banks. As the recession hits these countries, Italian-owned banks could suffer losses both through deterioration in credit quality due to the adverse business cycle and due to devaluations of local currencies which may raise incentives to default. On the other hand, the overall exposure of the Italian system towards developing countries[22] (which include Eastern Europe) was, in 2007, lower than that of German, French, Spanish and Dutch banks.

Table 2.5. **Italian banks assets in Central and Eastern Europe**

	Exposure (loans) bln euros	Share of banking system's assets owned by Italian owned banks
Poland	35	18.2
Croatia	22	43.6
Hungary	18	20.3
Russia	16	1.6
Slovak Republic	13	25.5
Czech Republic	12	9.1
Romania	8	8.8
Bulgaria	5	14.5
Slovenia	5	10.4

Source: Bank of Italy (2008a), p. 249 (Italian version) and Table 21.2 for Column 2 (share of assets).

The commercial property market may be less risky than elsewhere

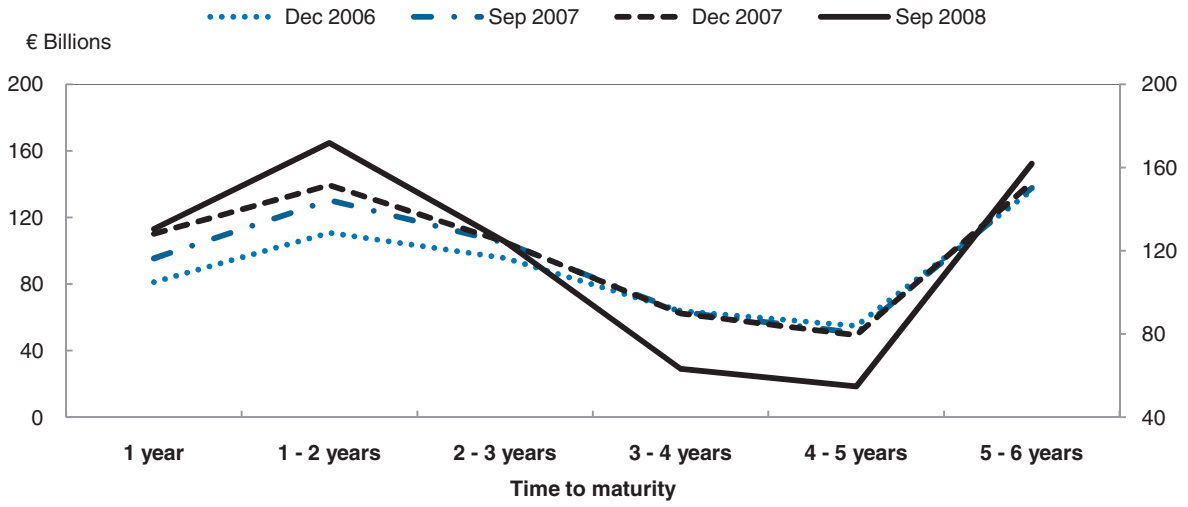
The Italian commercial property market seems to pose less risk than in other European countries, being relatively under-developed in Italy (ECB, 2008). The share of invested property in investible property[23] is below 50%, while it is around 70% or more in the United States, Germany, Canada, Japan and the United Kingdom. Available price data, even though not very representative for Italy, indicate a moderate increase in nominal terms in the 2004-06 period, at around 2-3%, that is significantly lower than the increase that occurred in other countries such as Ireland, UK, Spain, France (above 12% for the former two countries, around 8% for the latter two). Survey results indicate that Italian banks have an exposure to commercial property-related loans comparable to that of the euro area average, which is not particularly large, at around 5% of total assets.

Raising funds from retail customers may become more difficult

As noted, Italian banks have recently become more reliant on retail funding, attracting more deposits and issuing bonds to small domestic investors. As the recession unfolds, relying on this source of funding will become increasingly difficult: weaker appetite for risk from households could reduce the demand for bank bonds and the widening spread between Italian and German government bonds might increase the cost of new issuances. Even if the recession decreases funding needs as the demand for credit weakens, due to scrapped investment plans by firms and deferred purchases of durables by households, banks will face significant disbursements to repay maturing bonds, unless they can roll them over. In the 12 months following September 2008, bonds worth € 130 billion are due to be repaid. In the

12 months following September 2009, a further € 172 billion of bonds is due to mature (Figure 2.8). These amounts are larger than a few months ago, reflecting increased bond issues during 2008 and shortening maturities. Moreover, more than 300 billion of government bonds will mature in 2009-10 (about € 150 billion in each year, and in addition to a similar amount of short term government debt). It is possible that financing this much will strain the supply of funds, and could be reflected in a reduction in lending. However, the return to normal functioning of interbank markets is likely to ease funding conditions, as will government and monetary authority liquidity assistance programs; furthermore, investors who might previously have directly invested their funds or placed them with non-bank intermediaries may be happy to lend to sound banks at the moment.

Figure 2.8. **Maturity structure, bank bonds**



Source: Bank of Italy.

StatLink http://dx.doi.org/10.1787/638765438582

Policy measures by Italian authorities

The authorities have adopted several measures to help the financial system weather the global financial storm (Box 2.1). Measures were designed to ease liquidity constraints faced by the banking sector, such as reducing the minimum size of loans eligible for refinancing operations with the ECB and the possibility to swap Italian treasury bills held by the Bank of Italy with assets held by banks. In order to improve interbank lending, the Bank of Italy, the Italian Banking association and an electronic interbank platform set up a system to allow anonymous collateralised borrowing. This initiative has been criticized on the grounds that it may contribute to fragmenting European interbank markets, as its participation is open to non-Italian bank branches only subject to agreement with the foreign institution's central bank, and that it represents an implicit subsidy to participating banks. The main issue is that the Bank of Italy provides a guarantee of last resort in case the collateral posted in the mutual scheme is not sufficient to cover the amounts due by an insolvent institution. Foreign banks can participate as long as the respective national central bank takes part in the guarantee scheme on the same terms as the Bank of Italy. To the extent to which other countries' central banks do not agree to participate in the guarantee scheme, this will end up being open only to Italian banks. However, while this may be thought of as fragmenting markets to some extent, it is hard to see who actually

suffers from this compared with the absence of the facility. The potential implicit subsidy to Italian banks would arise only if a trader fails to make a payment and both that trader's collateral and the mutual guarantee were insufficient to cover the amount due; it is not out of line with various guarantees that have been given to both banks and non-financial corporations in other OECD countries.

Bank recapitalization measures were established in October 2008 and further measures taken in February 2009. The October measures are for use only if the Bank of Italy deems a bank to have a dangerously low level of capital; this has not yet occurred. The February measure is intended for voluntary use by sound banks. The conditions have been the subject of protracted negotiations and are quite complicated (see Box 2.1).

The conditions attached to the "Tremonti bonds" in the February measures are intended to strike a balance between the need to avoid subsidies to banks, which would affect competition, and the need to encourage banks to use the funds and recapitalize so that they can be more robust to face the recession. The government wished to avoid taking a direct equity stake which might have allowed a more simple set of conditions. But the government argues that since these are designed for basically sound banks there is no need to take any ownership stake, and that it is more appropriate to design a hybrid instrument with strong incentives for the borrowers to repay early. The option to convert to equity is one-sided, as banks may redeem the bonds with equity at their own choosing, but the government bears no downside risk in this case since equity conversion cannot take place at a price below 110% of the share price at the time of the original bond issue. The other conditions attached to the bonds have laudable aims but would probably be better pursued through other means. Conditions on ensuring funds to SMEs are likely to be difficult to enforce and the moratorium on mortgage payments should be part of a coherent social safety net rather than specific to homeowners with mortgages.

The government enacted measures to cap the actual interest rate paid on existing adjustable rate mortgages to 4% (or the interest rate when the mortgage was taken out, if higher) during all 2009. This is to avoid households facing increasing costs on their payments. This measure does not look particularly convincing for two reasons. The first is that it is likely to be of little use: in practice, most adjustable rate mortgages will have a rate below 4% during the year because the Euribor interbank rate, to which most adjustable rates mortgages are indexed, has fallen and is expected to remain low for some time. The second is that it distorts the market: people choosing an adjustable rate mortgage chose not to buy insurance against interest rate risk and for some time they enjoyed a pretty low rate on their mortgage; on the other hand those choosing a fixed rate mortgage did insure against interest rate risk, which they would probably not have done if free governmental insurance had been available.

Recommendations

In order to further improve supervisory practice, it is important to keep strengthening information sharing and co-ordination both among domestic regulators in charge of different areas of the financial system and between domestic and foreign regulators. The authorities had already strengthened domestic co-ordination and information sharing before the onset of the crisis and this should be continued and extended to all regulatory authorities. The greater international profile of Italian intermediaries increases the need to monitor the activity of cross border operations. Risks for Italian banks are likely to come

Box 2.1. **Measures to support the financial system**

In October 2008 (ratified in December, Law 190/2008) measures were taken in relation to the deposit guarantee scheme, bank liquidity, and emergency bank recapitalization:

- A supplementary state guarantee to the retail bank deposits guarantee system. This did not change the level of deposit insurance, already at € 103 000, but provided a guarantee of state finance to underpin the insurance fund for three years.
- Instruments to improve bank liquidity, in place until December 2009: a state guarantee for certain bank liabilities; a facility for swapping certain bank debt for Italian government securities; and a temporary state guarantee for non-bank securities sold to banks and eligible for Eurosystem re-financing operations. The cost of the state guarantee and of the swaps are in line with the Eurosystem recommendations.
- For recapitalisation of banks deemed by the Bank of Italy to have inadequate capital. Up to 31 December 2009 the Ministry of Finance can subscribe capital increases in the form of non-voting preference shares, in such banks or bank holding companies.

Other measures taken directly by the Bank of Italy in October reduced the minimum size of loans eligible for refinancing and provided for swaps, against commission, of government debt held by the Bank of Italy for assets held by banks that were not eligible for Eurosystem refinancing.

A system for anonymous but collateralized interbank lending was put in place and has been operational since 2 February 2009. The Bank of Italy evaluates the collateral provided by participating banks. It provides prompt settlement of transactions if a party to a contract defaults. It collects the collateral itself. Participating banks jointly guarantee the collateral of defaulting parties, up to the limit of 10% of their own collateral. Access to this facility, for the moment, is restricted to Italian banks, or banks from the European Union provided agreement is reached with the respective central bank.

A decree introduced in November 2008 (ratified in January, Law 2/2009) includes a very heterogenous set of measures, some fiscal (see Box 1.1). Article 12 relates to banks. It provides for the Ministry for the Economy and Finance to buy specific financial instruments (which have become known as "Tremonti bonds") issued by listed Italian banks or bank holding companies, up to the end of 2009; it is up to banks themselves whether they wish to issue the bonds which, under certain circumstances, are also open to non-government subscribers. The instruments would qualify as core tier 1 regulatory capital and carry no voting rights. The main financial and other conditions of issue are as flows:

- Two types of repayment schedule for the first 4 years, where the issuer can choose an option with lower redemption price and higher coupon payments, or one with higher redemption price and lower coupon payments.

The bonds may be perpetual, but the interest rate rises through time, while interest is payable only if the bank has distributable profits pursuant to the last profit and loss statement.

- The bank has the option of repaying with ordinary shares, provided the share prices exceeds 110% of its level when the bonds were issued.
- The bank must maintain an adequate volume of lending on appropriate terms and conditions, to be agreed in a memorandum of understanding, to families and small and medium size enterprises; the Ministry of Economy and the Bank of Italy will monitor lending flows.
- The bank must adopt a code of ethics, particularly regarding executive compensation and dividend policy, and grant a one year moratorium on mortgage payments due by unemployed people or put on reduced time.

Also specified in Law 2/2009:

- A cap of 4% (or the interest rate when the mortgage was taken out, if higher) on the interest rate households pay on flexible interstate mortgages during 2009, with the difference paid by the government.
- Banks must offer, among their products, mortgages indexed to the ECB main refinancing rate.
- A fund of (up to) € 1.6 billion to provide guarantees on loans given to small and medium sized enterprises; up to 30% of the fund can be used as a further governmental guarantee to those provided by Mutual Guarantee Institutions ("Confidi").

from foreign operations and timely sharing of information and co-operation among home and host country authorities can be critical. This is also important for the insurance market as some foreign intermediaries operating in Italy are supervised by their home country supervisor, while others are supervised by ISVAP, and smooth systems of information sharing and co-ordination of activities are needed to ensure adequate monitoring.

The measures implemented so far seem to have no adverse implications for regulatory arbitrage, and care must continue to be taken to avoid creating opportunities for such behaviour. As argued above, regulatory arbitrage does not seem to be an important issue within national boundaries as the supervisory system is relatively comprehensive. However as Italian institutions increase their international scope so, potentially, they could undertake risky activities that the relatively conservative Italian regulators would not permit, but this should be unlikely because the Italian regulators supervise the consolidated position of Italian banks, so can intervene on risk-taking at a group-wide level. Nevertheless, strengthening communication and co-operation can also serve the purpose of reducing the scope for regulatory arbitrage.

In general, for all capitalization measures, guarantees and so on, it is important to strike the right balance between incentives for banks to use the facility and avoiding implicit subsidies and other market distortions. This is of course much easier said than done even in "normal" times. In the case of the recapitalisation bonds, paying attention to these issues, but also mixing them with other objectives, has led to a somewhat complicated structure, though not out of line with measures in a number of other countries. Nevertheless, the government is seeking to influence some aspects of bank behaviour; such measures are understandable but unlikely to be very useful. Insofar as they are felt to be essential, a more level playing field would be obtained if they applied to all financial institutions, not just those issuing recapitalisation bonds.

In the longer run (and largely irrelevant to resolving the current crisis, but nevertheless of importance), the authorities, in co-ordination with others in the euro area, should consider ways to revise capital requirements to make them less pro-cyclical, with

Box 2.2. **Summary of recommendations on the financial system**

In the short term

While giving banks appropriate incentives to use recapitalisation facilities, avoid thereby introducing market distortions such as sector specific subsidies.

Continue information sharing and co-ordination both among domestic regulators in charge of different areas of the financial system and between domestic and foreign regulators.

Continue to ensure that changes in the regulations or supervisory structure do not create room for regulatory arbitrage, either within Italy or between the domestic and foreign operations of Italian banks.

In the longer term

Consider ways to revise capital requirements to make them less pro-cyclical.

Establish the regular publication of a financial stability report (preferably around a core format standardised with other countries).

one interesting option being to build on the Spanish-style dynamic provisioning mechanism, or building capital buffers (not just accounting provisions) in good times. Also a much longer-term issue, and probably not decisive, is the possibility of re-considering the proprietary structure of the Bank of Italy (it is formally owned by supervised banks). In practice it has not made much difference, but a change would avoid the accusation of "being owned by those who are regulated" which might sometimes undermine support for good policies. Finally, the regular publication of a financial stability report would be a useful way to communicate supervisory authorities' actions and judgements about the soundness of the financial system.

Notes

1. For insurance corporations the figure refers to technical reserves. These figures do not include assets under management by foreign mutual fund controlled by Italian intermediaries. These are mostly based in Luxemburg and Ireland, and do not raise funds only in Italy. The inclusion of the assets of such intermediaries does not alter the picture.
2. Leverage is measured as the ratio of financial debt over financial debt plus equity valued at market prices.
3. It is also the counterpart of a relatively high capital-output ratio in Italy, according to national accounts data.
4. However the 2008 changes in company taxation, limiting the deductibility of interest expenses over a certain threshold, has moved the system towards an increased tax neutrality between debt and equity.
5. See Gompers, P. *et al.* (2004), data from the European venture Capital Association, Bentivogli *et al.* (2009) and Bank of Italy (2008b).
6. In this respect, bankruptcy law plays an important role, too.
7. The category labelled "households" includes also non incorporated firms and non-profit organisations, according to the European system of accounts (SEC95).
8. Including only individuals and non incorporated firms, excluding non profit organisations.
9. Insurance companies offering assurance against default risk.
10. Data from the European Securitizations Forum and Bank of Italy Annual Report on 2007.
11. Nevertheless, Bonaccorsi *et al.* (2008) also show that the average loan of a bank that securitizes part of its loans is riskier than those of banks that do not participate in securitization.
12. SIVs typically receive a credit line called "liquidity backstop" by the sponsoring bank to ensure funding liquidity.
13. This is computed as the difference between the average rate on new loans to non-financial corporations and the rate on new bond issues by banks.
14. This aggregate also includes bonds held by monetary and financial institutions resident outside the Euro Area.
15. Debt securities backed by assets that remain on the borrower's consolidated balance sheet.
16. Large financial groups active in different financial sectors, often across borders.
17. Shareholders' agreements are not currently in place in the top 2 banking groups. At the beginning of 2008, about 70% of the capital of the top 5 banking groups was freely traded on the stock market.
18. See IMF (2008) and Mediobanca (2008). In 2006 Italian banks had an average capital to assets ratio of 7.1, as against 6.0 in France and 4.3 in Germany. Admittedly, the UK stood at 8.9 and Iceland at 7.8.
19. The two top banking groups recently sold part of their real estate assets.
20. See, among others, Kiyotaki, N. *et al.* (1997), Boissay, F. (2006), and Battiston *et al.* (2007).
21. Countries are listed in order of the share of total banking system assets intermediated by Italian-owned banks.

22. As defined by the Bank for International Settlements (BIS).

23. "Invested" property: not owner-occupied and thus owned by professional real estate investors for investment purposes. "Investible" property: investment grade quality which can be sold to professional investors or currently owner-occupied, but could become available for sale later.

Bibliography

Aghion P., T. Fally and S. Scarpetta (2007), "Credit Constraints as a Barrier to the Entry and Post-Entry Growth of Firms", Economic Policy, 22, 731-79.

Angelini, P. and N. Cetorelli (2003), "The Effects of Regulatory Reform on Competition in the Banking Industry", *Journal of Money*, Credit and Banking, 35, 663-84.

Angelini, P. and A. Generale (2008), "On the Evolution of Firm Size Distributions", American Economic Review, 98(1), 426-38.

Bank of Italy (2007), Annual Report 2007.

Bank of Italy (2008a), Annual Report 2008.

Bank of Italy (2008b), "Rapporto sulle Tendenze del Sistema Produttivo".

Bank of Italy (2008c), Survey on Household Income and Wealth 2006, in Supplement to the Statistical Bulletin No. 7.

Bank of Italy (2008d), Bollettino di Vigilanza, No. 3, March 2008.

Bank of Italy (2008e), "Supplements to the statistical bulletin No. 57, Survey on inflation and growth expectations".

Bank of Italy (2008f), "Supplements to the statistical bulletin No. 66, Business outlook survey of industrial and service firms".

Bank of Italy and ISVAP (2004), "Il trasferimento del rischio di credito tra il settore bancario e il settore assicurativo: l'esperienza Italiana".

Battiston *et al.* (2007), "Credit chains and bankruptcy propagation in production networks", *Journal of Economic Dynamics and Control 31*, 2061-2084.

Bentivogli, C. *et al.* (2009), "Il private equity in Italia", Bank of Italy, Occasional Paper No. 41.

Bikker, J.A., L. Spierdijk and P. Finnie (2006), "The Impact of Bank Size on Market Power", DNB WP. 120.

Boissay, F. (2006), "Credit chains and the propagation of financial distress", European Central Bank Working Paper, No. 573.

Bonaccorsi di Patti, E. and R. Felici (2008), "Il rischio dei mutui alle famiglie in Italia: evidenza da un milione di contratti", Bank of Italy Occasional Paper, No. 32.

Calza, A., T. Monacelli and L. Stracca (2007), "Mortgage Markets, Collateral Constraints, and Monetary Policy: Do Institutional Factors Matter?", CEPR DP 6231.

Carmignani, A. (2004), "The working of the civil justice system and the financial structure of firms: the role of trade credit", Bank of Italy WP 497.

Champenois, S. (2008), "Comparing financial systems: a structural analysis", mimeo, University of California at San Diego.

De Blasio, G. (2004), "Does trade credit substitute for bank credit?", Bank of Italy WP 498.

ECB (2008), "Commercial property markets: financial stability risks, recent developments and EU banks' exposures".

ECB (2007), Corporate Finance in the Euro Area, Structural Issues Report.

EVCA – European Venture Capital Association, Annual report, various years.

Finaldi Russo, P. and L. Leva (2004), "The use of trade credit in Italy: how important are the financial motives?", Bank of Italy WP 496.

Gompers, P. and J. Lerner (2004), "The Venture Capital Cycle", MIT Press.

Hellmann, T., K. Murdock and J. Stiglitz (2000), "Liberalization, Moral Hazard in Banking, and Prudential Regulation: Are Capital Requirements Enough?", American Economic Review 90, 147-165.

IMF (2008), Global Financial Stability Report 2008.

IMF (2006), World Economic Outlook, September 2006.

Kiyotaki, N. and J. Moore (1997), "Credit Chains", mimeo, London School of Economics.

Laeven, L. and R. Levine (2008), "Bank Governance, Regulation, and Risk Taking", NBER Working Papers, No. 14113.

LaVoce (2009), "La banca paga. I suoi top manager", *www.lavoce.info*.

Magri, S. (2006), "Debt maturity of Italian firms", Bank of Italy WP 574.

Mediobanca (2008), "Le maggiori banche europee nel 2008", Mediobanca Studi e Ricerche.

OECD (2006), Policy Roundtable, Competition and Regulation in Retail Banking.

OECD (2009), *OECD Economic Surveys: Euro Area*.

Omiccioli, M. (2004), "Trade Credit: problems and theories", Bank of Italy WP 494.

Rajan, R.G. and L. Zingales (1998), "Financial Dependence and Growth", American Economic Review, 88, 559-86.

Rossi, P. (2008), "L'offerta di mutui alle famiglie: caratteristiche, evoluzione e differenze territoriali. i risultati di un'indagine campionaria", Bank of Italy Occasional Paper 13.

Schivardi, F. and R. Torrini (2004). "Firm size distribution and employment protection legislation in Italy", Bank of Italy WP 504.

Towers Perrin (2006), World Wide Total Remuneration Report 2006.

White, M. (2005), "Economic analysis of corporate and personal bankruptcy law", NBER WP 11536.

ISBN 978-92-64-05435-6
OECD Economic Surveys: Italy

Chapter 3

Supporting regulatory reform

Even prior to the recent financial turmoil, Italy was being left behind by economic growth in many other countries. Low productivity growth has a number of causes, some of which have their origin in poor or excessive regulation, public services and administration, and the legal system, which an ISAE report refers to as the "non-material" infrastructure. As the OECD Regulatory Reform Review of Italy to be published this year describes, progress has been made in improving regulation, although the results have yet to show themselves in productivity growth. Continued reforms are needed, and must be supported by a more efficient public administration and more purposeful use of Regulatory Impact Assessment and exercises such as the Spending Reviews by the Technical Committee on Public Finance, in parallel with efforts through the Taglia Legge and Taglia Oneri programmes.

The first Regulatory Reform Review of Italy, published in 2001, applauded the progress that had been made during the 1990s, while urging action in a wide range of areas to allow competition and more market-friendly regulation to promote stronger growth. Since then the trend to increased deregulation has continued, partly as a result of incorporation of EU directives into national legislation, and partly following two important laws adopted in 2006 and 2007. Despite this continuous improvement in regulatory indicators, overall productivity performance has improved very little. Some potential explanations for weak performance can be found in the structure of the economy.

This chapter reviews a number of possible structural explanations, especially their links with competitive conditions and regulatory policy. Using a model developed to assess the links between OECD indicators of product market reform and growth, it presents a quantitative assessment of the impact that further reform might have. There are sometimes gaps between the intentions of policymakers, the letter of the law and actual regulatory practice or performance of public services; the chapter suggests that improved functioning of parts of the legal system and public administration could help to close these gaps.

Low growth and the structure of the economy

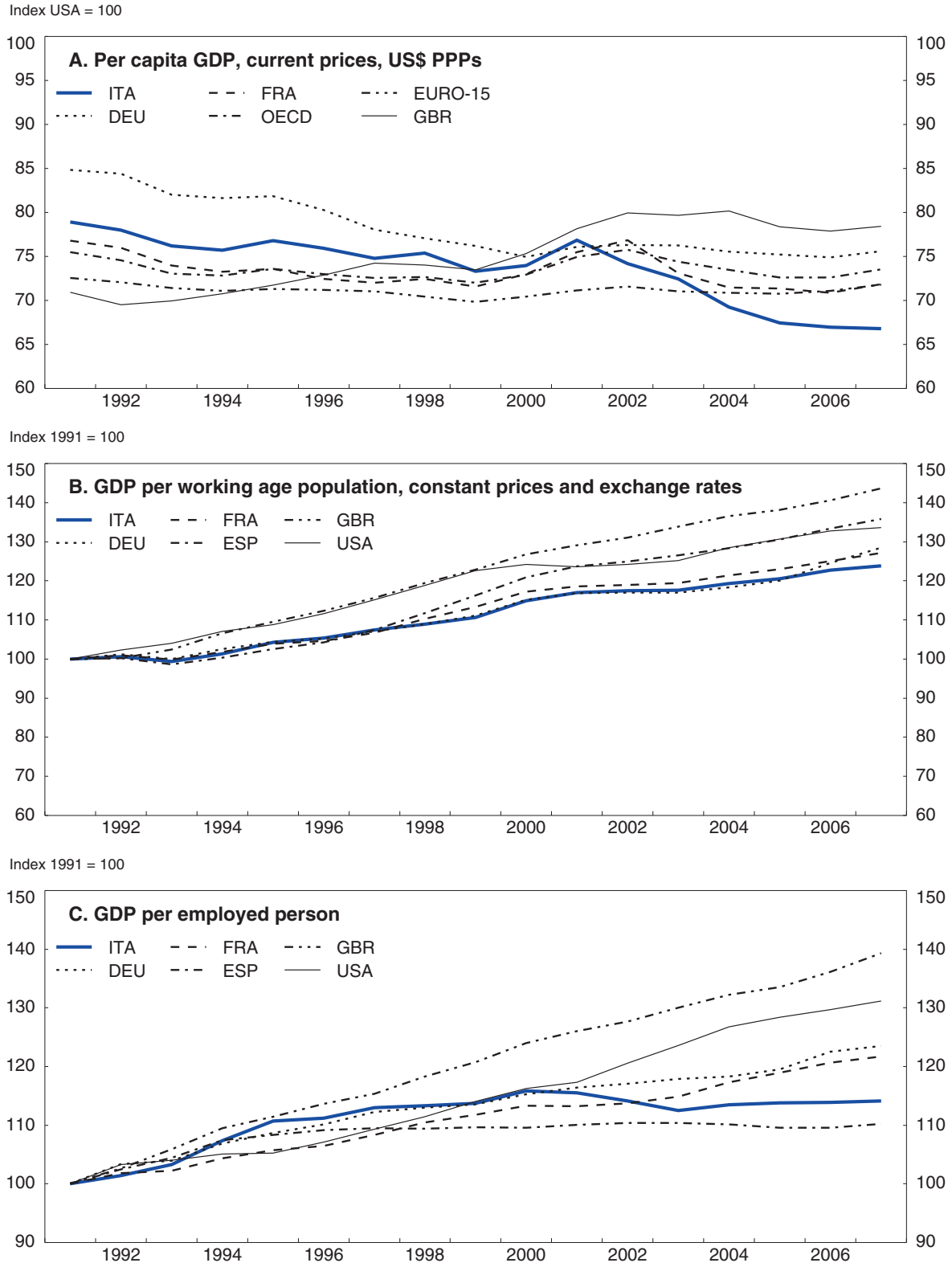
Although, in common with a number of other European countries, Italy's GDP per capita was no longer "catching up" with the United States by the late 1980s, it did maintain its relative position throughout the 1990s. But while the other large European economies continued broadly to maintain their relative position into the new century, Italy began to fall back quite abruptly after 2000 (Figure 3.1, Panel A). That this phenomenon reflects productivity growth differentials is clear from the relative decline in output per person employed after 2000 (Figure 3.1, Panel C), less visible in terms of output relative to the population of working age (Figure 3.1, Panel B).

Low labour market participation

In recent years, per capita GDP has been affected by the level of labour force participation. The employment rate in Italy is well below average for OECD countries. Measured on the population aged 15-64, only 59% of Italians are employed compared with an EU average of 67% and an OECD average of 69%. For males aged 25-54 the employment rate is similar to the EU and OECD averages. But all other age-gender groups show relatively low employment, including prime-age females, although the difference there is actually somewhat lower than for both older females and the 15-24 age group (Figure 3.2). The gap between female and male employment has been falling faster in Italy than in most other countries, but it still remains relatively high by OECD standards, even for prime age groups (OECD, 2008). For the other groups identified in Figure 3.2, Italy is one of the 3 or 4 countries with the lowest employment rates in the OECD.

The relaxation in restrictions on temporary employment has encouraged employment growth, but has also accentuated the duality in the Italian labour market, because it has been very difficult to change any of the employment protection legislation (EPL) for workers on

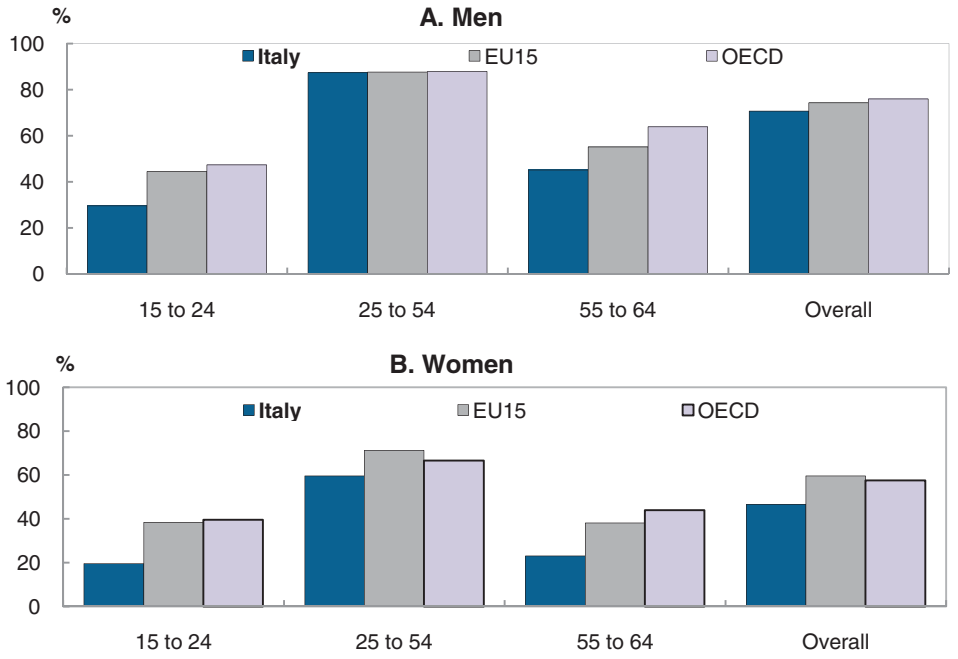
Figure 3.1. **Measures of per capita GDP**



Source: OECD Main Economic Indicators.

StatLink http://dx.doi.org/10.1787/638768358274

Figure 3.2. **Employment rate by age, 2007**



Source: OECD Labour Force Statistics.

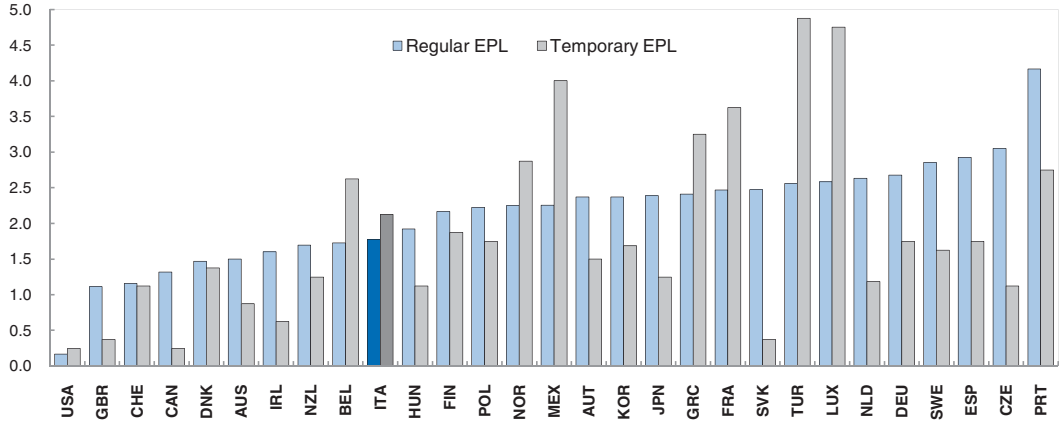
StatLink http://dx.doi.org/10.1787/638770528444

permanent contracts. Notably, the labour code establishes the basic rules that make dismissals in large companies relatively difficult; its implementation is a source of rigidity in that part of the labour market, even if a relatively small proportion of the labour force, perhaps one quarter, is directly protected by it.[1] Opinion on the impact of EPL has evolved in recent years; while early studies claimed that it increased overall unemployment, this is not now thought to be the case for prime age workers. But EPL can reduce demand for workers from groups at the margins of the labour market, and this may well be a contributory factor to the low employment rates for some of the groups mentioned above.

Despite the attention it receives, employment protection does not seem to be outstandingly strict by comparison with other OECD countries (Figure 3.3). The fact that temporary contracts have been an important factor behind employment growth in recent years, despite the apparently relatively strict conditions attached to such contracts, does suggest that regular EPL is quite constraining because at least at the margin many employers seem to prefer such temporary contracts; less rigid pay structures and, in certain cases, lower social security contributions may also make them more attractive. A survey of workers suggested that most *workers* would prefer a labour market where it was difficult to get a job but where protection was strong to one where protection was weak but jobs were easy to find (Boeri, 2002). The main reason why the indicator for regular employment in Italy is relatively high is the provisions on collective redundancies, whereas other aspects of employment protection related to required notice and individual severance pay are among the least stringent of all countries.

For the older age groups,[2] low activity rates are associated with a pension system which gives strong incentives to retire at an early age. Major reforms have resulted in a new system which is being progressively introduced and participation rates of older workers seem to have begun to respond, but the phasing in of the new arrangements is slow so that the

Figure 3.3. **Regular and temporary employment protection legislation (EPL), 2006**



Note: Level in index points, 0 = least and 6 = most restrictive.
Source: OECD Going for Growth, 2007.

StatLink http://dx.doi.org/10.1787/638773142284

incentives are still skewed against continued employment for older workers. For younger people, as in most countries, low activity is strongly associated with the level of education, but also with mobility; some parts of northern Italy have consistently maintained high employment rates with shortages even of unskilled labour, but migration of young people from areas of high unemployment has not helped to fill the gap. This is in contrast to the strong mobility shown in the period after the Second World War – admittedly in response to much higher income gaps – and contrasts with current immigrants, who appear more ready to move to areas with jobs. In part the reluctance to move may be related to aspects of regional policy where efforts to stimulate the economy of the south and the islands have tended to have the effect of generating higher levels of public sector employment in those areas. However, it has proved impossible to negotiate regionally differentiated wages in the public sector, even though both the cost of living and wages in the private sector are much lower in the south than in the north. As a result, for an unemployed person in the south the prospect of eventually getting a well-paid public sector job may outweigh the incentive to move to a private sector job in another region.

Female employment rates and average wages are both relatively low, while the level of education of younger females measured in terms of years spent in full time education is, for the new generations, somewhat higher than that of males. While low educational attainments may explain activity rates among women over 45-50, low female participation rates even among the youngest cohorts may have several other causes. Low provision of formal child care services means that the opportunity cost of work for mothers with young children is higher than in many other countries; this is also likely to be an important factor behind relatively low female participation (see for instance Jaumotte, 2003, D'Addio and Mira d'Ercole, 2006, OECD 2007). Implicit discrimination might be another possibility for low activity rates among Italian women, though there is no solid evidence supporting this explanation. OECD (2008) shows that effective legal protection against discrimination may be significantly weaker in Italy than in most countries: while the basic legal provisions are similar, there is little provision for protection of a person who actually makes a complaint, or of witnesses, and this may explain why complaints are rather few. While reinstatement is a right in the case of unfair dismissal, rights to any additional monetary compensation are unclear so the incentive to complain is probably low.

Competitive conditions on product markets can also affect employment: lack of competition allows producers to exploit market power to gain economic rents, which may be shared with workers (Ichino, 2008). This of course benefits the employed but may tend to raise wages and therefore reduce employment. Cross-country empirical evidence supports this view (Conway *et al.*, 2006), and there is corroborating evidence for Italy. For example, Viviano and Schivardi (2007) study regional variations in entry restrictions to retail trade and find that entry barriers have a negative and sizeable impact on employment growth.

Explanations for slow productivity growth

The growth in relative unit labour costs mentioned earlier, combined with low labour supply, might have been expected to encourage entrepreneurs to switch towards relatively capital intensive production. This would have the effect of raising recorded labour productivity, though it might not increase efficiency in the sense of total factor productivity. In practice, labour productivity growth has been low and total factor productivity appears actually to have fallen.

Potential explanations for low productivity growth in Italy since 2000 are easy to find but hard to evaluate empirically. Some data issues are important. A significant amount of activity takes place in the informal sector, so much so that the national statistical office corrects the official national accounts for this factor. However, it is much harder to estimate either the level or the growth rate of productivity when estimates of significant components of both employment and output are based on highly indirect methods.

Besides data and measurement issues, the following explanations can be considered:

- The industrial and export structure.
- The nature of the Italian family firm.
- Low educational attainment and inadequacies in tertiary education.
- The lack of innovation and R&D activity.
- The integration of large numbers of immigrants, and
- Regulatory barriers to growth.

This section briefly discusses each of these in turn, as background to the discussion of regulatory public administration reform in the rest of the chapter. One of the difficulties in understanding low productivity growth is the fact that the divergence between Italy and the other major EU countries appears to have been quite sudden, whereas most of the potential explanations listed above are phenomena that do not change very rapidly. An exception to this might be immigration; although immigration flows are spread over a number of years, the change from being a country of emigration to being a country of immigration was quite important, and in the late 1990s and early 2000s inflows of labour were so substantial compared with earlier periods that they qualify as a supply shock on the labour market.

The industrial and export structure

The slowdown in productivity seems to be quite generalised across economic sectors, so it is hard to attribute it to the experience of particular industries (Table 3.1). (Revisions to productivity data since Table 3.1 was compiled show that productivity growth, while weak, was somewhat stronger than shown by earlier data.) The Italian economy has traditionally been quite export-oriented, which in turn exposes the economy to

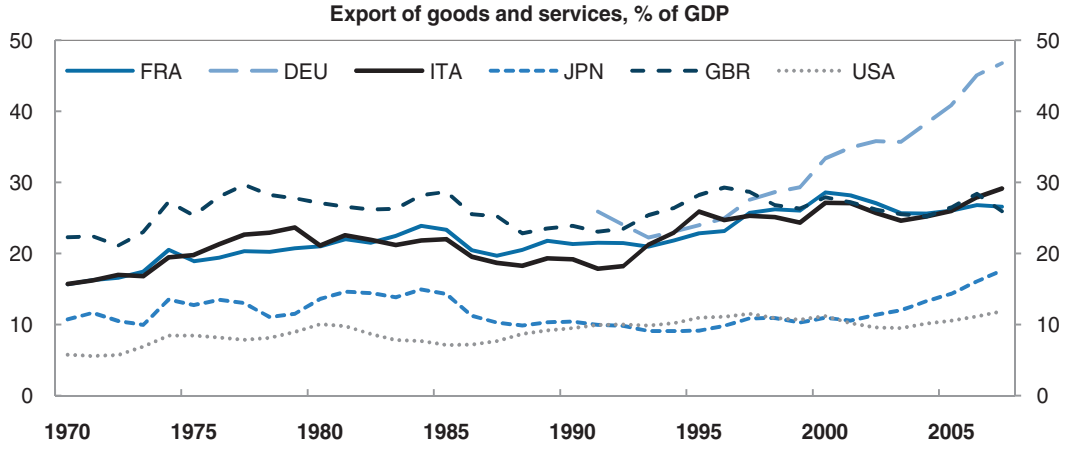
Table 3.1. **Productivity[1] growth by sector, period annual averages**

	1990-95	1995-2000	2000-06
Total	2.1	0.8	0.1
Agriculture, hunting, forestry and fishing	7.4	5.0	0.4
Industry including energy	3.8	0.9	0.0
Mining and quarrying	7.7	3.0	–2.1
Manufacturing	3.9	0.9	–0.2
Food products, beverages and tobacco	1.5	1.5	–1.1
Textiles, textile products, leather and footwear	5.4	1.0	–1.8
Wood and products of wood and cork	2.8	4.3	–0.2
Pulp, paper, paper products, printing and publishing	2.8	1.9	–0.5
Chemical, rubber, plastics and fuel products	5.2	–1.5	0.3
Other non-metallic mineral products	3.4	3.1	0.7
Basic metals and fabricated metal products	5.7	0.3	–0.2
Machinery and equipment	3.7	0.0	0.3
Transport equipment	0.3	2.0	0.0
Other manufacturing; recycling	3.1	1.4	0.4
Electricity gas and water supply	3.6	1.9	3.9
Construction	–1.7	–0.5	0.3
Total services	1.3	0.5	0.1
Wholesale and retail trade; restaurants and hotels	3.0	1.3	0.2
Transport storage and communications	4.4	2.8	2.0
Finance insurance real estate and business services	0.4	–2.9	–2.0
Community social and personal services	–0.7	0.2	0.4

1. Value added (volume, chained prices) per hour worked.
Source: OECD STAN database.

international competition, generally thought to be an element in stimulating productivity gains in the longer run. The share of exports in GDP is comparable to that in the United Kingdom and France (Figure 3.4). In the short run, specific aspects of the export structure, either in terms of the goods and services involved, or the geographical composition of exports, may have an impact on demand that swamps the potentially stimulating effect of competition. Even in the longer run, a positive reaction can only be expected if the framework conditions for growth, discussed in subsequent sections, are appropriate.

Figure 3.4. **Exports in the economy**



Source: OECD Economic Outlook No. 85.

StatLink http://dx.doi.org/10.1787/638776071078

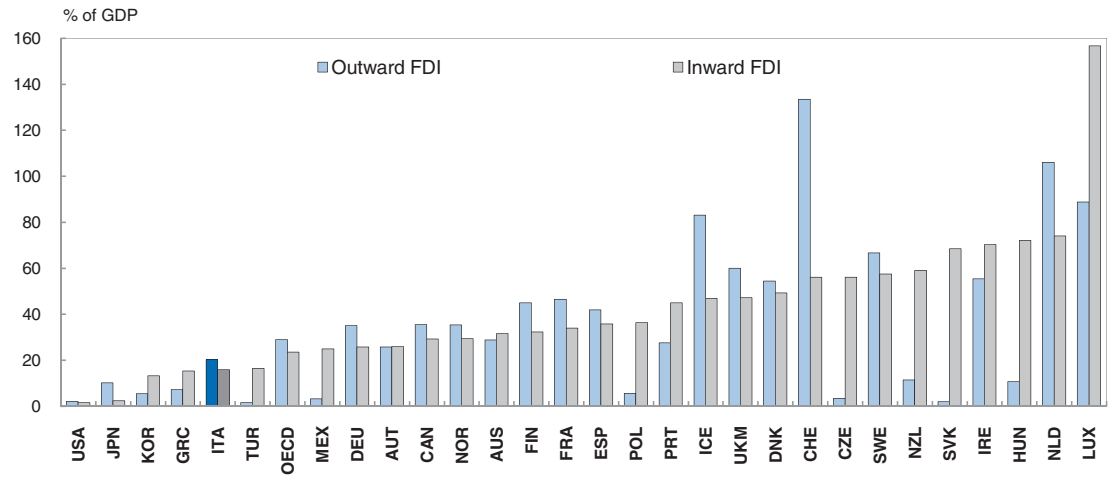
On some measures, Italian export performance has in fact been weakening. When compared with the volume of demand growth in the markets it typically supplies, export volumes have been growing more slowly for some time (see Figure 1.2). With the rise of some large non-OECD exporters, such as China, most OECD countries have lost market share to some extent. On the other hand Italian exports have, on average, been rising in price relative to those of their OECD competitors so that their share of total OECD exports, though it did tend to decline during the 1990s, has been more stable since 2000 (Figure 3.4).

This phenomenon of rising relative export prices and falling relative volumes can be interpreted in different ways, aside from possible statistical artefacts (see Codogno, 2008, for an extensive discussion).[3] It may represent an active move by Italian entrepreneurs into more profitable product lines with higher value added, or it may be purely defensive as firms can no longer sell into certain markets. This adaptation of the Italian economy to the challenges of globalisation may reflect the strength of the *made in Italy* brand, which is not fully accounted for in statistics for patents and innovation. Another part of the process is likely to be Italian entrepreneurs moving production abroad: they have been particularly active in Romania, for example. Significant numbers of Romanians moved to north-eastern Italy to work in manufacturing industry, probably helping some companies to remain in low value-added production longer than otherwise, but the links between the countries now seem to have partially reversed as Italian entrepreneurs invest in Romania itself, moving some of the low value-added production out of Italy. While the magnitude of such "off-shoring" of capacity is not clear, it is at least one demonstration of an active entrepreneurial spirit in Italy.

The role of Foreign Direct Investment

However, results in terms of the attractiveness of the Italian economy in terms of Foreign Direct Investment (FDI) are less satisfactory. The total amount of FDI in Italy is small compared with that in other similarly sized countries. This is true not only in comparison with historically relatively liberal countries such as the United Kingdom, but also with France, for example (Figure 3.5). This has two implications. First it is a likely

Figure 3.5. **The stock of foreign direct investment, 2006**



Source: OECD Factbook 2009.

StatLink http://dx.doi.org/10.1787/638800380033

culprit for low productivity growth, since foreign investment is certainly one of the ways that new ideas spread internationally; secondly, it is at least suggestive of an environment that is difficult for foreign investors.

Besides the regulatory environment, discussed below, other factors such as tax policy, public administration and infrastructure, and the financial and corporate governance systems may also contribute to lower FDI inflows. Ichino (2008) presents a persuasive argument that, at least in a number of specific examples, FDI appears to be inhibited by just such a combination of interests, often including workers themselves (or, at least, their union and bargaining representatives), that combine to keep foreign investors out, and that the result is that potential efficiency gains are missed.[4] He attributes this in large part to the Italian industrial relations model, noting that this model is successful only "in a relatively closed and static national productive fabric". The 2008 cut in the standard rate of corporate tax from 33% to 27.5% may improve the attractiveness of Italy to FDI somewhat.

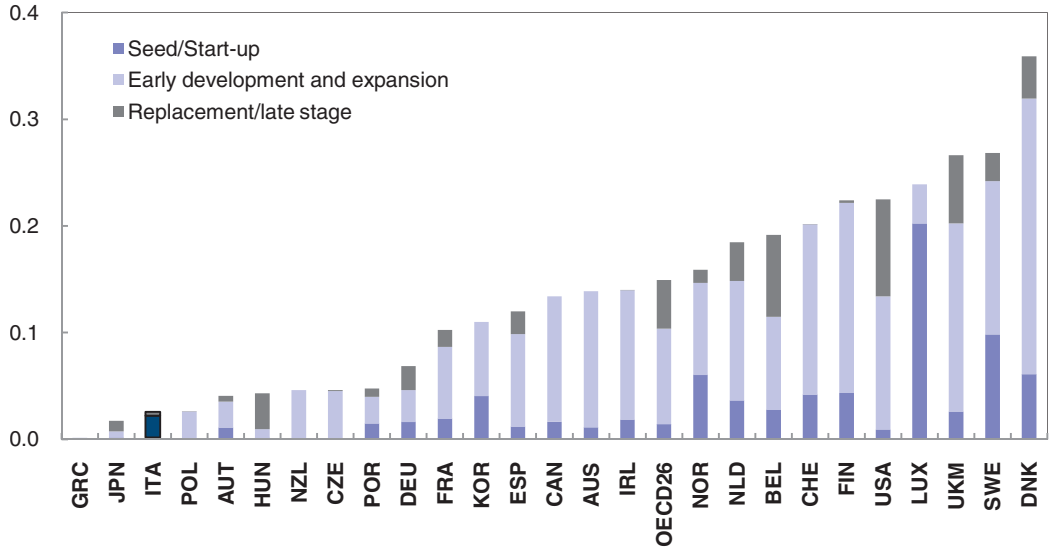
Entrepreneurship, dynamics of new firms and firm size

Another aspect of the industrial structure that is often highlighted in Italy is the high proportion of employment in small firms. Often these have been family firms. If small firms (or a sufficient number of them) nevertheless grew fast, their high numbers might be an advantage, but this does not appear to be the case. In practice, it is hard to separate discussion of why small firms are predominant from why this might affect overall growth.

One set of reasons put forward for the importance of small firms concerns explicit threshold effects in regulation, notably in labour law; others are related to some combination of corporate governance arrangements and the role of the state; and more "cultural" explanations are often advanced too. The cultural explanation – that Italian entrepreneurs themselves *prefer* their companies to stay small – is difficult to refute, but requires explanation itself. One possibility is that with a poorly functioning commercial legal system, growing beyond a certain point, where family and close personal connections can no longer serve to enforce contracts, requires a considerable increase in risk and costs of control. In addition, bankruptcy until recently exposed entrepreneurs to risky criminal proceedings, often putting personal wealth at risk due to the low proportion of external equity in most Italian companies. This may have generated significant disincentives to expansion for risk-averse entrepreneurs. The 2006 bankruptcy reform and attempts to expand the role of external equity finance may help to reduce these disincentives in the future. Nevertheless, it will probably be some time before diffuse equity (where most large quoted companies are owned by large numbers of shareholders with few really dominant ones) becomes very important in Italy; the stock market is still dominated by established firms, where cross shareholdings limit the effective rights of minority shareholders, and a few newly-privatised companies (see Micossi, 2006, 2008). Giacomelli and Trento (2005) suggest that the basic ownership structure in Italian firms changed rather little between 1993 and 2003; family control is still prevalent, financial institutions rarely own or play a role in controlling non-financial firms, though cross-holdings among non-financial firms are still common. There has been some increase in foreign ownership however and, while the share of ownership accounted for by non-financial companies has fallen, that of holding companies has risen (Bianchi *et al*., 2005, Bianchi and Bianco, 2009).

In parallel to the relatively underused equity markets as a source of finance, venture capital has also been slower to develop in Italy than elsewhere, perhaps partly because of the traditional importance of personal or family control, perhaps also because of the perceived

Figure 3.6. **Venture Capital[1] as a % of GDP in OECD countries, 2007**



1. Venture capital includes Seed, Startup, Early Development and expansion stages, Replacement and later stages. Buyouts are excluded.
2. OECD26 includes all OECD countries except Iceland, Mexico, Slovak Republic and Turkey. Investments in European countries are measured by the portfolio company's country.

Source: OECD based upon Thomson Financial, PvC, EVCA, LVCA and National Venture Capital Associations.

StatLink http://dx.doi.org/10.1787/638824213121

difficulties for foreign financial investors (Figure 3.6). Venture capital is nevertheless of growing importance.

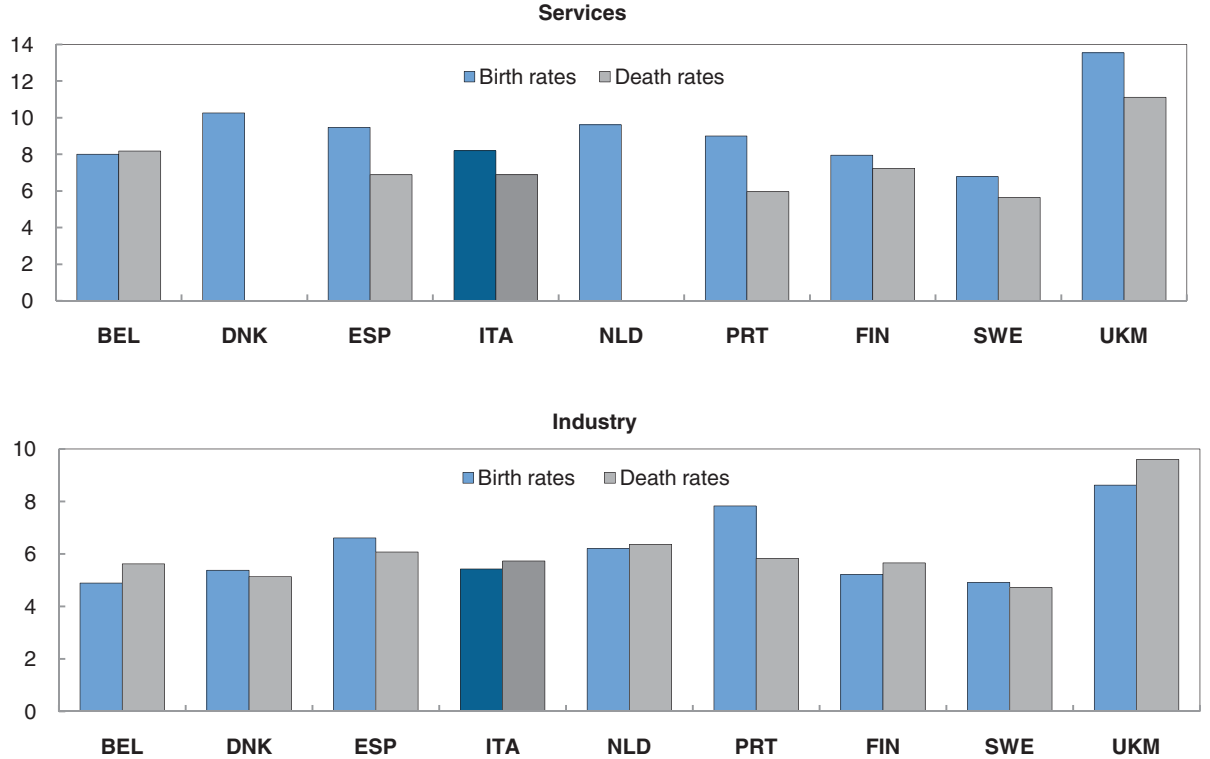
As for the importance of corporate governance, the unusual nature of the ownership structure in Italian capitalism has been analysed in previous OECD reports (OECD 2005).[5] Holding structures tend to obscure beneficial ownership and to give some insiders a degree of control that significantly exceeds their share in ownership. For a long time, public policy did little to discourage this relatively closed ownership structure but since the late 1990s, as rules of transparency and investor protection have been increasingly brought into line with European standards, the situation has improved. For example, the use of pyramidal and cross-ownership structures has diminished, while the importance of coalitions of shareholders has risen. As OECD (2005) noted, however, it is taking time for actual outcomes to be brought fully into line with best practice, for example compliance with codes of corporate governance is sometimes more formal than substantial. Opposition to foreign control was in the past particularly clear in the banking sector, but this had become more relaxed even before the transfer in 2005 of responsibility for competition issues in the banking sector from the Bank of Italy to the Competition Authority, and foreign stakes have become quite significant (see Chapter 2).

At various times, the high proportion of small firms in the Italian economy has been thought of as either a strength or a weakness in the industrial fabric. Small firms producing in a highly flexible (perhaps because partially informal) environment, notably in industries such as textiles, leather and small scale engineering, were successful in supplying both domestic and export markets. But increased international competition has significantly reduced the advantage that Italy once had in low-cost production. One response has been the movement by some medium-sized Italian companies of all or part of their production to

other countries. Another has been to concentrate more on lower volume niche markets. Either response can be highly successful for the companies concerned, but for the economy as a whole the labour and capital thereby released need to find new, efficient uses.

Such reallocation involves many mechanisms; two key ones are the creation of new firms and the rapid expansion of successful existing ones.[6] Steps to significantly reduce formal barriers to firm creation have been taken, though there is always uncertainty as to how quickly they may take effect; for example "one stop shops" have been developed to support the aim of reducing the time required to create a new business from the 23 days estimated for 2003 to 7 in 2007. These figures may not always be fully representative of the benefits of reform. The theoretical time that it should take was already down to 7 days in 2003 and the actual time taken had fallen to only 13 days by 2006 (ISAE, 2007) and the decline in cost was also smaller than the text of the regulations might suggest – but there has been significant progress, nonetheless. The 2006 reform of the bankruptcy legislation should make firm exits easier, too. In terms of actual demographics of firm creation and exit, in recent years Italy exhibits creation rates which were lower than Portugal, Spain and the UK for both Services and Industry, though higher than France and Sweden for Industry (Figure 3.7). If reforms could boost firm creation, the environment would clearly become much more dynamic, though the direct impact on overall growth in the economy is uncertain, as this has to do more with the prospects for expansion of firms than simply their rate of creation.

Figure 3.7. **Business demographics, average 1998-2005**



Note: Firms' birth (death) rate is defined as the number of enterprises created (closed) in the reference period divided by the number of enterprises active in that period.

Source: Eurostat business demographics.

StatLink http://dx.doi.org/10.1787/638841103476

Specific threshold effects due to labour regulation do exist, but in practice they are relevant only for very small firms – those with fewer than 16 employees. Such firms are subject to less costly penalties for certain kinds of dismissal than larger firms. However, although some studies have shown that this does act to reduce average firm size, the effect is very small, barely noticeable, in fact (Schivardi and Torrini, 2004).[7] Even if this effect might be significant for some very small companies and for start-ups, it is probably not very relevant for the large majority of SMEs.

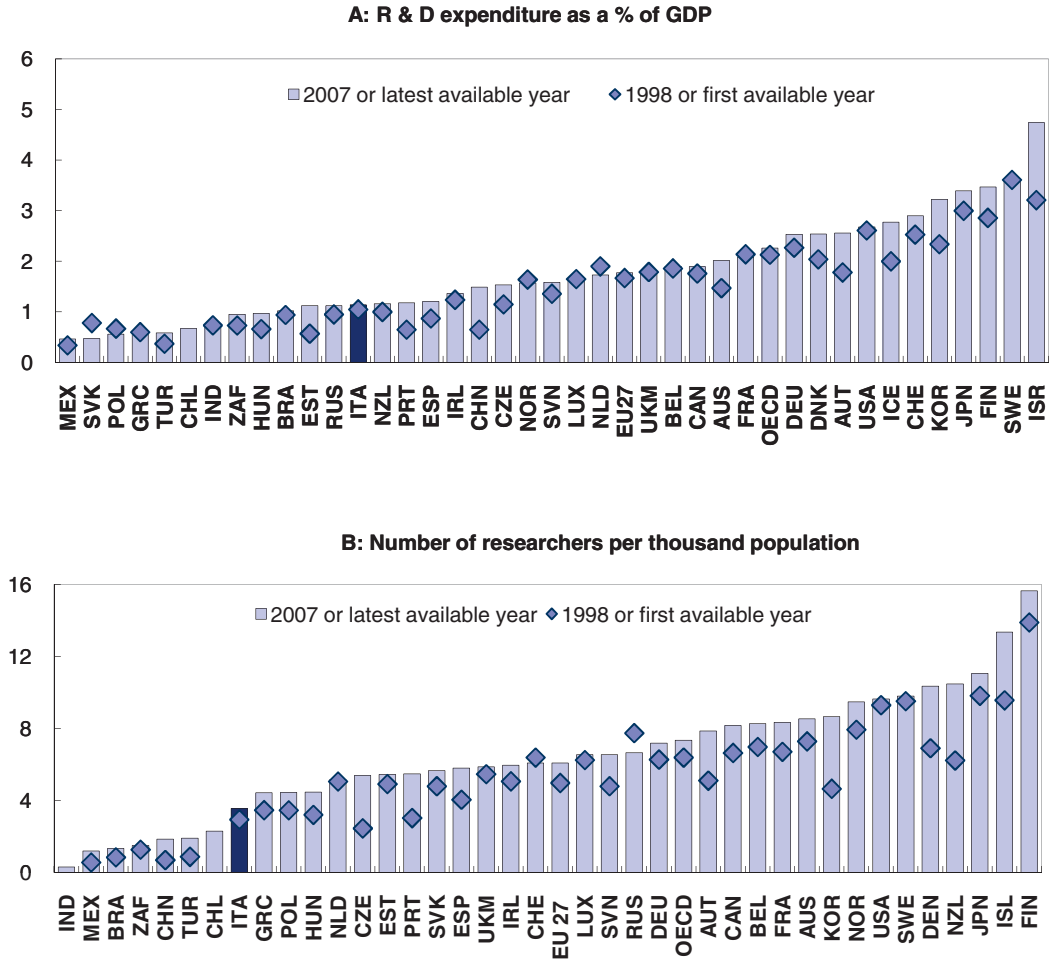
Some recent work nevertheless confirms the importance of avoiding constraints on the growth of high-performing firms. Arnold *et al.* (2008) present evidence that the association between the degree of regulation and overall productivity growth passes partly through the variation of firms' growth rates within a country; faster growing countries appear to have a narrower distribution of growth rates across firms, but with a significant "tail" in the distribution of high growth performers. In turn, the number of firms in this "tail" is linked to the degree of regulation and the importance of information and communication technology (ICT) in different industries. Regression analysis shows that poor performance of ICT-using sectors is, in turn, particularly strongly associated with high levels of regulation. As it happens, the introduction of ICT-related innovation in Italy has been particularly slow, and Italy is among the countries with a relatively wide distribution of growth rates and only a small high-growth tail. This corroborates the hypothesis of Arnold *et al.* (2008), and also suggests that recent trends in deregulation could have quite a significant impact in stimulating productivity growth.

Research and development

The slow introduction of ICT may also be linked to the research and development effort, another area where growth-related indicators are not favourable to Italy. The examples of Ireland and catch-up countries in central Europe show that low R&D need not prevent strong productivity growth. But in a high income country such as Italy, especially where foreign direct investment is not currently playing the role in transmitting new ideas that it plays in those countries, technical progress is likely to be quite dependent on domestic R&D efforts. Expenditure on R&D in Italy is low: slightly above 1% of GDP, compared with the OECD average of 2.3% (Figure 3.8, Panel A); this is true for both private and public sector research activity, with industry financing 40% and performing 50% of it. Italy is also among the OECD countries with the smallest number of total researchers – with fewer than 4 in every 1 000 employees, less than half the OECD average (Figure 3.8, Panel B). Under-recording of R&D activity in small and medium sized enterprises, where it is often performed informally, may bias these figures down somewhat.

Measuring actual innovation is not straightforward and different indicators may sometimes paint a different picture (see OECD, 2006). The input indicators just mentioned unambiguously suggest a significant shortfall; one important direct output indicator (apart from lower overall productivity growth) corroborates this: 1.25 patent families are produced per million population, compared with an OECD average of almost 50, some forty times greater. Many studies have shown the strong impact of innovation on economic growth (see for instance OECD, 2003, for a comprehensive review). Del Monte and Papagni (2003) showed more specifically on Italian data that R&D activity is associated with faster growth, because it leads firms to successfully compete and thrive in product markets. Bronzini and Piselli (2006) also established a strong long-run relationship between regional

Figure 3.8. **Indicators of R&D effort in OECD countries**



Source: OECD Factbook 2009.

StatLink http://dx.doi.org/10.1787/638851208382

total factor productivity, R&D, human capital and public infrastructure. Though human capital turns out to be the main driver, R&D activities produce significant regional productivity spill-over for neighbouring regions.

Research suggests a number of reasons why R&D activity in Italy is low and why innovation is slow. One explanation is the small size of Italian firms and the consequent difficulty of meeting the up-front cost of R&D with only limited access to external capital. Ughetto (2008) for instance finds that Italian firms use very little debt to finance R&D, even though debt is the main source of external finance for Italian firms, in the absence of significant external equity. Innovation therefore has to be financed mainly through internal cash flow. Ughetto (2008) finds that small innovative firms are indeed subject to significant financing constraints, while larger companies investing in R&D have easier access to external financing.

In most countries, a significant amount of R&D effort occurs in universities or research institutions that are part of the tertiary education sector. In Italy this sector is underdeveloped; indeed, it has been a concern for some time that Italy suffers a net loss of young graduates through emigration and that few foreign researchers appear interested in working in Italy.

In 2005, a decree authorised the Ministry of Higher Education to subsidise universities who wished to recruit researchers or professors from abroad, either foreign citizens or Italians who had worked abroad as researchers or in university education for several years; this programme has now ended, and it is not clear whether it had any permanent effect. Foreigners can also sometimes face obstacles in coming to work in Italy: for example the procedure for recognising foreign university qualifications can be cumbersome.

The role of education

Apart from the specific effect of low levels of research and development activity, low overall educational attainment in Italy is also likely to affect economic performance (see Sianesi and Van Reenen, 2003, for a comprehensive review; see also Chapter 4 of this *Survey*). Among the main established results, human capital, measured by years of education, has been found to increase productivity. A one-year increase in average education is associated with an increase in the *level* of output per capita of between 3 and 6%; some models interpret the effect in growth rates, with an extra year of education leading to an increase in growth of more than 1 percentage point. Increasing tertiary education seems to be more important for growth in OECD countries than lower levels.

The initial qualification and skills of founders of new technology-based firms (NTBFs) have been shown to be critical for the rapid growth of young firms specialising in "edge-segments" of the market (Colombo and Grilli, 2005). The role of human capital is both direct (providing the right managerial and technical competences for running a business) and indirect (facilitating the firm's access to external financing, which is usually more complicated for small firms). Bertoni *et al.* (2008) show, analysing a panel of Italian firms, that access to venture capital financing increases with the education of NTBF's founders, and that firms financed through venture capital grow the most.[8] This is particularly significant given that venture capital is still relatively underdeveloped in Italy (see Figure 3.6), perhaps itself due to a vicious circle linking low educational attainment and inflexible financial markets. More generally, cross-country evidence, on a sample that includes Italian firms, finds that management practices matter substantially for firms' productivity growth and a number of other business outcomes and education of managers plays a key role in efficient management (Bloom and Van Reenen 2007; Bloom *et al.*, 2007).

The importance of these results is all the greater in view of the fact that the average level of educational attainment in Italy is among the lowest in the OECD area. Simple quantitative indicators of education show that only slightly more than 10% of the working age population has a tertiary degree compared with the OECD average of 26%; similarly, less than one person in three holds an upper-secondary degree *versus* the OECD average of two in five. The recent trend is more encouraging, nevertheless: Italian graduation rates in tertiary-A programmes (*i.e.* theoretically based) almost doubled between 2000 and 2005, making Italy one of the fastest human capital accumulating countries (OECD 2007a). Even if progress has been made, completion of tertiary studies remains insufficient: in 2006 the drop out was as high as 20% (stable from previous years). Duration of tertiary studies also continues to be extremely long, with 66% of graduates taking at least one year longer than the theoretical duration of the study programme (Istat, 2008). Both the drop-out rate and the duration of studies are significantly higher than in the OECD average.

At tertiary level, available indicators cannot easily compare actual educational achievements across countries. For example, the hypothesis that Italian students may take longer than those in other countries to complete their degree-level studies but actually learn more as well cannot be directly tested. Indirect tests such as calculations of rates of return to education and/or wage premia suggest the opposite – the returns to higher education in Italy are rather low, so spending a long time in it is particularly inefficient (Boarini and Strauss, 2007). At compulsory school level, however, a number of indicators are available, notably the OECD's PISA (Programme for International Student Assessment) survey which shows that average educational achievement among 15-year olds leaves much room for improvement. Another feature of Italian education is the wide regional variation in student performance. As both a cause and a consequence of long-standing regional imbalances in the labour market, schools and universities do not seem to produce the same results in the North and in the South of the country. Chapter 4 of this *Survey* discusses education in detail.

Immigration

A development related quite closely to the measurement difficulties mentioned above is the integration of large numbers of immigrants into the workforce. In practice this has been something of a success story for the Italian labour market and economy (OECD, 2005). Up to the early 1980s very few immigrants were present as Italy was historically very much a country of emigration. But this situation changed in the mid-1980s. Between 1995 and 2002, OECD (2005) estimated that the non-EU population rose by over one million, nearly doubling, with immigration accelerating particularly after 1998 when large illegal flows of Albanians and then Romanians were added to the "traditional" inflows from North Africa. The non-EU population has probably risen by another million since then.[9] Without this immigration, the total population would have been stagnant or falling. By and large, non-EU immigrants were relatively unskilled: many of them were certainly absorbed initially into unskilled jobs and very frequently into the informal economy (OECD, 2005). This was often for reasons of language and/or because they were resident illegally, even though they may often came from among the more highly qualified in their home countries.

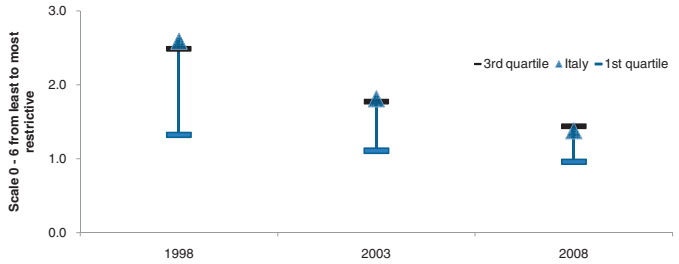
The successful absorption of large number of immigrants into unskilled work probably reduced average productivity. The fact that Spain, whose experience with immigration was similar in many ways, also shows a similar pause in GDP per employed person is suggestive of the link between immigration and recorded average productivity. In both countries, immigration also appears to have been responsible for at least part of the considerable increase in average participation rates, as employment rose faster than the working age population, so that GDP relative to that population barely slowed in Italy and grew quite respectably in Spain.

However, the sectors where immigrants are the most concentrated (agriculture, construction, certain manufactures such as textiles, hotels and restaurants, and personal home services) do not systematically show a larger slowdown in productivity than in other sectors (see Table 3.1). There is no correlation between the growth rates, or changes in growth rates, in Italy and those in Spain, despite some similarity in their migration experience; this casts further doubt on the strength of a simple link between migration and productivity growth.

Progress in regulatory reform, 1998-2008

According to OECD indicators of product market regulation (PMR) there has been a significant movement in the direction of less restrictive regulation in Italy since 1998 (Figure 3.9). A large part of this improvement has been due to a decline in the importance of public ownership. Government ownership in electricity and gas companies has fallen substantially, and in other sectors the number of publicly-owned companies has fallen. The decline in indicators related to barriers to entrepreneurship is partly the result of implementing EU directives in national legislation, as opposed to "indigenous" initiatives. Since 2003, EU directives implemented in Italy have concerned: retail trade; transport; consumer protection; professional qualifications; electricity and gas; procurement procedures in water, energy, transport and postal services; treatment of foreign parties; and professional services. Having traditionally been rather a laggard in implementing EU legislation, Italy has caught up significantly since 2006. Indeed, in some areas (air transport, telecoms, electricity and rail) Italy has implemented directives faster than other countries.

Figure 3.9. **Aggregate regulation (integrated PMR) and its dispersion across countries over time**



Note: Level in index points, 0 = least and 6 = most restrictive.
Source: OECD Regulatory database, 1998, 2003 and 2008.

StatLink http://dx.doi.org/10.1787/638886288281

The main relevant national legislation came in 2006 in decrees (known as "Bersani" decrees, after the then minister for economic development) reducing the level of regulation for a number of professional services and retail distribution (which had also been tackled in the first Bersani liberalisation decree in 1998). Important changes in professional services (which also serve to illustrate the degree of regulation in some areas) include the abolition of minimum fees for professions such as lawyers (maximum fees remain, although their effectiveness in promoting clients' interests is unclear), relaxation of restrictions on advertising, removal of some restrictions on how professionals can form corporations, and the end of the ban on forming multidisciplinary firms. Other potentially important legislation includes the setting up of the Legislative Simplification Unit in 2006, whose activities in identifying and removing redundant legislation and administrative bodies, and in finding ways to improve the quality of existing legislation and regulation, will however be felt through time rather than immediately. The government estimates that regulatory simplification in 2008 reduced the administrative burden for firms by € 5 billion.

Nearly all OECD countries have been liberalising regulation and therefore seen significant declines in their PMR score too, so that Italy still belongs to a group of countries with relatively restrictive legislation, but the difference between this group and the least restrictive group has shrunk considerably, on this measure, over the past decade. Improvements in one country can have spillover effects on other countries so that Italy

should be benefiting from the decline in restrictiveness elsewhere as well as from that at home (Conway *et al.*, 2006).

The PMR indicators cover a wide range of regulation. Italy scores least well in areas related to regulation of the professions but scores among the least restrictive countries when it comes to barriers to entrepreneurship, notably those related to transparency of administrative procedures. In some cases the low scores may be misleading when they refer to official targets rather than to actual experience, as the example of the time needed to register a public limited company, mentioned earlier, shows.

One reason for the difference between official targets and actual experience is that the "one-stop shop" system, intended as one of the tools for speeding up administrative procedures, is not working as well as had been intended. Formez (2006a) notes that an important justification for developing one-stop shops, whether for personal or business issues, is to offset what was seen as an increasing tendency for bureaucratic systems to generate new "complications" that can offset efforts towards simplification. But the same report notes that some users feel that in practice the one-stop shops have not affected the underlying administrative logic, so that instead of simplifying procedures it actually makes things more complicated, creating yet another level of bureaucracy; furthermore, although by the end of 2007 over 70% of municipalities had established one stop shops, less than 60% of these were operational. ISAE (2007a) recognises that moves towards simplification have made considerable progress, including through the operation of one-stop-shops, but notes that persistent problems – in the context of business activity – include excessive regional variation in regulations, the still incomplete one-stop-shop reform, inefficient co-ordination between different public agencies and the still excessive number of authorisations required. Aware of these shortcomings, the authorities have taken steps to further simplify procedures and a "second generation" of one-stop shops is intended to become the single public access point for administrative matters related to economic activity.

Another area where there may be a gap between the PMR indicator and actual practice is transparency. These indicators are partly based on questions such as "Are there systematic procedures for making regulations known and accessible to affected parties?" or "Is there an explicit programme to reduce the administrative burdens imposed by government on enterprises and/or citizens?" These are both true in Italy, contributing to the low score, but the fact that programmes are in place does not mean they are working well. As far as accessibility is concerned, more and more information is now available online, and many administrative procedures can be started on the internet, although Italy's slow introduction of IT generally means that practice (in both public and private sectors) still lags somewhat behind other countries. It is important to ensure that administrative practice adapts to take full advantage of the new technology. Measures that have been taken to improve public access to information through the internet, such as the programme to develop a public database of all existing legislation and programmes to improve access to information through the one-stop shops, need to take account of the practical obstacles to implementation, as well as the need to ensure that the parts of the public administration charged with implementation have the right skills and incentives themselves.

As ISAE (2007a) signals, the increasing amount of rule-making responsibility that has been devolved to the regions can also act to impede simplification, at least in a transitional phase. OECD (2009) provides further information in a chapter devoted to the problems of "multi-level governance", and suggests that in some sectors at least, decentralisation is multiplying the number of bodies issuing regulations.

Quantifying the effects of liberalisation

This section looks at the potential economic benefit from reducing regulations.[10] Inappropriate regulations can affect the productivity performance of an economy in many ways, discussed in a voluminous literature including Conway *et al.* (2006) and Arnold *et al.* (2008). This research provides empirical evidence for a negative relationship between product market regulation and productivity growth in OECD countries. Applying these findings to the new vintage of OECD product market indicators provides illustrative, model-based, calculations of the impact of regulatory reforms on economic performance in Italy.[11]

A modelling approach

This section presents the results of four simulations of a model developed in the OECD (Box 3.1):

- The first assesses the impact of changes in product market regulation in Italy in the recent past on productivity.
- The second estimates the potential effect of adopting "best practice" regulation[12] in all non-manufacturing sectors of the economy on future labour productivity.
- The third is similar to the second except that it adopts a less ambitious benchmark, setting Italian policy to that of the 75% percentile among EU countries in 2007.
- Finally, a fourth set of simulations illustrates the benefits from the adoption of best-practice regulation professional services, electricity and gas, and retail.

Overall, the results show that product market regulation to date should have had some impact on labour productivity in Italy, and that gains from feasible future reforms are much greater. The rest of this section presents some detail from the simulations.

Evaluating the impact of past reforms

The reforms adopted between 1998 and 2007 are estimated in the first simulation to have increased labour productivity by 2 per cent, of which 0.36 per cent is accounted for by policy changes between 1998 and 2003, 1.6 per cent for the period 2003 to 2007. This compares with current national accounts estimates of essentially zero productivity growth over this period. These gains are rather small, considering the relatively large falls in the aggregate PMR indicator over this period.

Aligning the regulatory framework in non-manufacturing sectors to international best practice

According to the model, aligning Italian regulatory standards on current OECD best-practice in all non-manufacturing sectors[13], the model predicts that Italy could expect an additional increase in productivity of 14% over the next decade (Table 3.2). Table 3.2 also compares results for a number of other countries, showing that the potential benefits for Italy are relatively high. Cross-country differences in the potential benefit of a reform can be due to differences along three dimensions: how far a country is away from international best practice in regulation on average, in which sectors regulation is particularly behind and the industry structure of the economy.

It is asking a lot for a country to adopt best practice in all sectors. An illustrative simulation of a more realistic reform considers a scenario in which Italy catches up to the 75th percentile of all EU countries in 2007. Surprisingly, the expected productivity increase turns out to be

Box 3.1. **The model used for the simulations**

The set of quantitative simulations presented here evaluates the labour productivity impact of hypothetical regulatory reform in non-manufacturing sectors, using an empirical model of labour productivity based on the work of Aghion and Howitt (2006) and Conway *et al*. (2006). The model was estimated on industry-level panel data for 20 sectors in 20 OECD countries, over the period 1981 to 2003. Given the dynamic nature of the model so that there is a gradual adjustment of productivity to policy changes, the impact is calculated over a 10-year period after the change. Because the model is based on "catch-up" behaviour, a baseline estimate of what productivity growth in each country would be in the absence of policy changes is required; for Italy this baseline assumes that labour productivity in Italy would rise by around 5.9 per cent over the next decade.

The simulations proceed in two steps. First, the simulated policy changes are defined at the level of sector-specific regulation indicators for each non-manufacturing sector. These changes in service sector regulation are translated into corresponding indicators for each sector of the economy, including manufacturing sectors, on the basis of input-output relationships. This captures the idea that a sector that relies relatively heavily on inputs from a given non-manufacturing sector is likely to be affected relatively strongly by regulatory changes in that non-manufacturing sector. These are the indicators referred to as regulation impact indicators in Conway *et al*. (2006). Unfortunately, the specific legal or regulatory changes that are behind movements in the indicators cannot easily be identified.

In the second step, the impact of this reform on labour productivity growth is simulated for each sector of the economy using a dynamic empirical model. In the empirical model, labour productivity growth in a given sector and country depends on its ability to keep pace with the growth of the same sector in the country with the highest sector-specific level of labour productivity (the productivity leader) by either innovating or taking advantage of technology transfers. Aghion and Griffith (2005) stress the role played by institutions that promote (or hinder) firm rivalry and/or entry of new firms in raising (or curbing) incentives to enhance productivity. In the model presented here these institutions are proxied by the OECD indicators of anti-competitive regulations described earlier.

There is growing evidence on the particular role for productivity growth of industries that are intensive in the use of information and communication technologies (ICT), and to some extent the recent disparities in productivity growth across OECD countries reflect differing degrees of adaptability across countries to recent ICT shocks (Triplett and Bosworth, 2004, OECD, 2003b, van Ark *et al*., 2002). To allow for this particular role of ICT-intensive sectors, the model distinguishes between the effect of regulation on ICT-intensive and non-ICT intensive sectors. The empirical findings obtained in the estimations suggest that there is a stronger effect of regulation in ICT-intensive sectors.

The labour productivity effects of the simulated regulatory reform are calculated for each sector separately, and then aggregated to a weighted average at the economy-wide level. The estimation equation used in the empirical model is the following:

$$\Delta \ln LP_{ijt} = \delta\,(\Delta \ln LP_{ijt}^{\,leader}) + \sigma\, prodgap_{ijt-1} + Y_1\, PMR_{ijt}^{\,ict} + Y_2\, PMR_{ijt}^{\,non\text{-}ict} + \alpha\,(PMR_{ijt-1} * prodgap_{ijt-1}) + \text{country/industry dummies} + \text{time dummies} + \varepsilon_{ijt} \quad \text{with } \varepsilon \sim N(0, \Sigma).$$

In this equation, the indices *i*, *j* and *t* denote countries, industries and years, respectively; *LP* denotes labour productivity; prodgap is the "productivity gap" – which is measured as the (log) ratio of the level of productivity in each country or sector relative to that of the productivity leader – and *PMR* is the regulation impact indicator of anti-competitive product market regulation. Country, industry, and country-industry fixed effects are included as appropriate so as to account for unobserved time-invariant factors affecting productivity growth in a particular sector or country (*e.g.*, natural endowments or location). Time dummies are also included to control for global productivity shocks in any given year.

Table 3.2. **The potential effects of improving regulation in the future**
Percentage increase in productivity over 10 years

	Sectors simulated:							
	All sectors		Electricity and gas		Retail		Professional services	
	Degree of reform							
	To 2007 best practice	To EU 75th percentile	To 2007 best practice	To EU 75th percentile	To 2007 best practice	To EU 75th percentile	To 2007 best practice	To EU 75th percentile
Italy	**14.1**	**13.7**	**2.6**	**2.5**	**4.9**	**4.8**	**7.4**	**7.3**
Belgium	15.8	15.6	3.5	3.5	11.9	11.7	4.4	4.3
Canada	14.4	14.1	5.6	5.5	7.8	7.6	8.5	8.3
Denmark	8	7.3	2.6	2.3	5.4	5.1	3	2.6
Finland	6.8	6	2.1	1.8	4.2	3.9	1.8	1.3
France	10.3	10	1.4	1.3	7.4	7.2	1.9	1.8
Netherlands	8.3	7.4	3.2	2.8	4.8	4.3	4.9	4.2
Portugal	12.2	11.8	3.8	3.6	7.2	6.9	4.3	4.1
Spain	13.9	13.8	4.5	4.5	10.9	10.8	5.1	5.1
Sweden	1.6	7.7	0	0	0	0	0	1.2
Total	11.4	10.9	2.6	2.6	6.9	6.4	4.2	3.7

Source: OECD calculations.

essentially the same as in the previous exercise, for two reasons. First, countries near best practice in particular sector indicators are somewhat bunched in the actual level of regulation. The 75th percentile is thus not always very far from best practice, even though it may be some way down the ranking. On the one hand this means that the absolute effort required for Italy to get the 75th percentile may not after all be much less than that to reach best practice; on the other hand, it shows that a significant number of countries have managed to get close to best practice, so that it may not be so difficult for Italy after all. The other reason is more directly related to the model. Since it is a model based on catch-up, and the tendency to catch up is stronger the further a country is from best practice, the marginal gain from liberalisation declines the nearer the country is to the "leader".

Table 3.2 also reports simulations undertaken to evaluate the impact of moving to best practice in individual non-manufacturing sectors taken on their own.[14] This exercise may be helpful to establish reform priorities based on where reform may have the largest impact. Focusing on professional services, the electricity and gas sector, and retail distribution, the simulations show that thorough reform of professional services is likely to give larger gains in Italy than in most countries and also that in Italy it would give the most significant effects of the three sectors considered. This result reflects the poor regulatory policy currently in effect for professional services in Italy compared with that in other countries. Aligning regulation in this sector to international best practice or to the EU 75% percentile, without any reform in other sectors, would increase overall labour productivity by just over 7% over the next 10 years. In other sectors, aligning on international best practice gives smaller but significant gains: 2½ per cent over 10 years for electricity and gas, nearly 5% for retail distribution.

The OECD Review of Regulatory Reform

In line with the indicators of reform described earlier, the latest OECD Review of Regulatory Reform (OECD, 2009) reports that there have been significant improvements in the regulatory situation in Italy since 2001. In particular many of the recommendations from the 2001 review on competition policy have been implemented and the Competition

Authority has shown itself to be independent and effective. The policy areas highlighted for attention in the Review include, among others:

- Strengthening capacity for reform, through investment and staffing, both in ministries and agencies.
- Making better use of tools such as consultation, regulatory impact assessment, and administrative simplification.
- Improving the efficiency of the system of civil justice.
- Strengthening competition in the context of the more complicated "multilevel" regulatory system that regional decentralisation has created. This includes strengthening competition policy as a key tool for the development of an efficient national market.
- Introducing productivity-enhancing liberalisation in key service sectors such as retailing, transport and professional services.

One of the important conclusions of the Review is that Regulatory Impact Assessment (RIA) needs to be developed much more widely and strongly in Italy than at present, in parallel with the *Taglia Leggi* law[15] which is beginning to reduce the actual number of laws that regulate the economy; some political impetus may have been given to the process by the designation of a specific Minister for "Normative" (*i.e.* in the sense of administrative rules and regulations) Simplification. RIA is supposed to be a regular part of legislative design, having been largely experimental until legislation in 2005. But despite the experimental period, the technical capacity for carrying it out is very weak, and in practice it seems very rarely to affect the choice of regulatory approach. For example, an important aspect of RIA is to ask whether the intended aim of a regulation could be better achieved with some other approach. European Union Council (2004) reports that the rules governing use of RIA in Italy *do* require early investigation of alternative options. But in practice RIA in Italy is most often carried out at the end of the process of developing a law so that this important part of it is largely irrelevant. The same report notes that the frequency of use of RIA is relatively low. It seems that the guidelines in place in Italy for use of RIA reflect good practice to a large extent, but that its use in reality falls well short of what the guidelines recommend.

A parliamentary Committee for Simplification of Legislation was established in 2005 (succeeding an earlier Committee on Improving Public Administration, with similar aims, set up in 1997) to promote better quality legislation. Promoting wider and more sophisticated use of RIA should also be part of this body's aims. A frequent practice in developing legislation has been for laws to be first published in the form of "decree laws" which are later converted into normal laws, a process that seems to squeeze out the requirement for RIA. This was the case for the main measures of the 2009 finance laws, published as decree laws in June/July 2008, so that measures such as exempting overtime from income tax were not subject to RIA. Simplified guidelines for RIA were issued in late 2008 to try to increase their use, with some danger that the result would be less useful analysis than if the rather good, but largely ignored, existing guidelines were followed more systematically. Better planning of legislation and strengthening of the analytical capacity for carrying out RIA in public administration are needed as well.

On the other hand, the idea of formalised analysis for some purposes is gaining ground in various ways – as an example, most regions now require large stores who wish to open a new outlet to evaluate such things as the effect on the existing commercial

network, transport infrastructure, or the environment. But use of RIA by the regions to evaluate their own, regulatory, actions appears in most cases still to be largely a formal "box-ticking" exercise, at best.

The role of public administration

Efficient regulation depends on efficient public administration – in the design of laws and regulation and in their implementation. In general these two aspects involve different parts of the administration and, with the growth of responsibilities at the regional and local level, the opportunities for introducing inefficiency may have increased. The existence of the Unit and Committee for Simplification and the earlier committee to improve public administration testifies to the recognition by successive governments that both aspects of public administration need improving. While anecdotal evidence of inefficiency is easy to find, a global assessment is much more difficult. This section briefly discusses four areas that illustrate problems or possible solutions: the judicial system; aspects of local government; the status of government employees and agencies; and the Public Expenditure Review.

The judicial system

The administration of civil justice (this section does not address criminal justice) is an area where subjective views and some objective data concur. Courts are very slow, with average duration of cases at the lowest level of courts being 223 days (in courts before a justice of the peace) or 494 days (before a tribunal) in 2004, compared with 246 days in France and between 200 and 350 days in Germany (Bianco *et al.*, 2007). Italy also scores poorly on a number of other measures (Table 3.3).[16] Of course, improving judicial efficiency – speed – in the judicial system has to be done with due regard for the basic objective of the system, of giving fair and consistent interpretations of the law. The time it takes to decide any individual case is not a clear indicator of whether it was handled efficiently. But there

Table 3.3. **Indicators of legal system efficiency**

	Court and trial expenses per capita	Trial judges per 10 000 residents	"Honorary" judges (*Giudici Onorari*)	Completed proceedings per euro[1]		Average duration of cases (days)		
				Penal	Civil	Divorce	Dismissal	Contractual dispute (*adempimento*)
	2004	2004	2004	2001	2001	2004	2004	2005
Austria	62.4	2.1	n.a.	0.8	2.9			342
Denmark	28.7	0.7	n.a.	3.8	3.6	100		190
Finland	46.7	1.7	7.2	1.5	2.3	240	264	228
France	46.7	1.0	3.6	2.2	2.2	423	342	331
Germany	96.3	2.5	4.3	0.7	4.0	302		394
Ireland	31.3	0.3	0.0					217
Italy	**67.0**	**1.0**	**1.0**	**1.4**	**1.4**	**582**	**696**	**1 210**
Netherlands	67.4	1.1	0.6	1.0		117	19	408
Portugal	49.8	1.5	0.7			308	244	495
United Kingdom	22.6	0.4	5.5	2.1	4.1			229
Spain	55.5	1.0	0.3			251	80	515
Sweden	61.2	1.9	8.5	0.9	0.9			208

1. Calculated using PPP, with Netherlands as numéraire.
Source: ISAE (2008) Table 1, p. 5, quoting: European Council – Commission for the efficiency of justice; RGS; Netherlands Council for the Judiciary; World Bank.

OECD ECONOMIC SURVEYS: ITALY – ISBN 978-92-64-05435-6 – © OECD 2009

is sufficient evidence in international comparisons on the one hand, and in variability within Italy on the other, to show that there must be room for considerable improvement without jeopardising justice itself. There is huge regional variation, even at the lowest level of courts where the nature of the cases is likely to be quite homogeneous across the country; in 2006 the slowest district averaged 1 599 days, against 555 for the quickest (Istat data, quoted in Bianco *et al.*, 2007).

As in many countries, judges have no explicit incentives to increase their "throughput". But research shows large variations in the speed with which judges in the same court (who have no control over which cases they hear and thus presumably have, on average, equally "difficult" workloads) complete their cases (Contini *et al.*, 2007). If judges could be made aware of and induced to adopt the methods of faster colleagues, processing speeds could no doubt be substantially increased. Incentives faced by lawyers also tend to encourage longer trials: they are required to be paid for each judicial act they undertake, such as an interview or production of a document, and cannot be paid a fixed sum per trial, although as from 2006 contingency fees have been permitted. They thus have a strong incentive to multiply the number of acts they perform, increasing both the time taken and the size of court files. Modifying the fee system for lawyers to reduce these perverse incentives is one important step; fees could be fixed *ex ante* according to criteria related to the nature of the case.

A more technical reform could allow specialisation by judges. Currently, judges in the lower courts receive cases at random, a useful procedure for avoiding corruption; but if there were some specialisation, many cases could proceed faster. In some geographical areas, specialisation would be difficult because there are not enough judges in each court to allow random allocation within each type of case, so some merging of local courts may be a pre-requisite to improved efficiency. The Spending Review by the Technical Committee on Public Finance (Ministry of Finance, 2008) recommends reform of the fee system and specialisation by judges with some mergers of the smallest courts, along with a number of other recommendations based on an assessment of which incentives and procedures currently favour inefficiency.

Uncertainty over the outcome and the length of time court cases take has led to a dichotomy between small and large cases. The lower courts are overwhelmed by a large number of cases covering small claims. But larger commercial claims, generally involving larger companies, are very frequently settled through arbitration clauses, which may be written into many contracts partly, or even specifically, to avoid the problem of slow procedures in the courts. Such "privatisation" of civil justice is in one sense an efficient response to slowness in public courts, but may add to private contract costs. For example, it could be a barrier to the expansion of small firms if this expansion involves taking on outside partners, because this might mean that the firm is now so big that social networks cannot be expected to regulate behaviour – more formal contract enforcement through the courts would be required and that might be felt to be too onerous.

Local government and local services[17]

As in many countries, services such as refuse collection and treatment, public transport, waste-water treatment and sometimes water supply, electricity and gas, have in the past been provided directly by local government, responsible only to itself. Gas and electricity supply have now been largely reformed, with a national regulator, but the other services are not generally subject to effective competition and are regulated at the local level.

In most cases, services are now provided by incorporated companies rather than local governments themselves, providing greater accounting transparency at least. But these companies are frequently the former municipal departments transformed into wholly-municipally-owned companies. Their employees may have the same *de facto* job protection as when they were civil servants. Local governments thus still face conflicts of interest, having to act variously as a regulator, employer of sub-contractors, service manager and shareholder, and the companies themselves are also likely to have limited flexibility in adjusting their workforce. Despite strong recommendations from national government, few public services have been subject to competitive tenders. This should soon become compulsory (a law to this effect has been passed, but implementing regulations have yet to be issued), but according to the Competition Authority, of the 20% of contracts so far opened to tender in the period prior to tenders being compulsory, 9 out of 10 were awarded to the incumbent operator.

Full privatisation of these companies (or at least a separation from local authorities sufficient to ensure the absence of any conflict of interest) thus seems to be a pre-requisite to using competition to improve productivity. Just as at national level, this would require some attention to underlying structure to take account of possible elements of natural monopoly and to separate ownership of network infrastructure from that of service operators. Hence, while local road transport could benefit from having several competing operators, water and refuse disposal services could be awarded through competitive tender to a single operator, for a specified period. Finally, to monitor these services effectively strong independent regulators are necessary. National regulators, such as for electricity and gas supply, would be best placed to ensure efficient regulation, both by gaining economies of scale in regulation and to minimise the likelihood of local regulatory capture (See Bianco and Sestito, 2008).

Managing public employment and public agencies

Improving public sector efficiency is a difficult challenge everywhere. There seems to be more room for improvement in Italy than in many OECD countries, however. But measures that change incentives can work; a recent pilot project (*Operazione fannulloni* – "Operation do-nothings") was able to reduce absenteeism significantly in a number of ministries when it was made clear that effective disciplinary action would be taken where abuses were found.

The terms under which civil servants are now employed have indeed been changed. The standard contract is now a fixed term of 5 to 7 years, and performance pay is now permitted. Such reforms are likely to need some time to change mentalities, and need to be pursued consistently both by ministers and by civil service managers. Former minister for public administration Bassinini reported that resistance to some aspects of the changes still comes from the trade unions, even though they agreed with and even actively supported the principle of introducing aspects of private sector employment to the public sector (Bassanini, 2008). Furthermore, the intended system of performance related incentives has not been very effectively implemented: little effort has been put into designing appropriate objectives and performance pay has been highly diluted, so that the discipline that it could exert on managers is absent.

One success story has been the conversion of the tax collection system into a semi-independent agency, the *Agenzia delle Entrate*, with its own budget that management can use flexibly to achieve targets and the ability to recruit some managers from outside. The result has been improved performance in tasks such as checking tax declarations. Revenue

performance was also surprisingly strong in 2006-08 as the government introduced a tighter policy on reducing tax avoidance, though it is hard to say whether the reorganisation of the *Agenzia* played a significant part in this. This example is in some ways a special case because tax collection has some fairly obvious quantitative measures of performance (though simple quantity of revenue is not sufficient, accuracy and fairness matter as well, for example). But while the *Agenzia* may not be a model that all administrations can follow, it does show that where objectives are specified and performance is evaluated, outcomes do improve.

The Ministry for Public Administration is enthusiastically promoting renewal of reforms which were in many cases started in the late 1990s but not fully followed through. Its objectives range from increased transparency[18] to continuing to push for objective-setting and performance management in ministries. There is a degree of bipartisan support for this kind of reform; for example, one parliamentary proposal is for an independent commission to be set up to monitor the progress of reform of the public administration. More important, however, is full commitment by successive governments to the development and implementation of reform. For example, in France, the development and implementation of the framework law on finance laws was spread over 6 or more years, started under a left-leaning government but continued and implemented more or less unchanged under a right-leaning government.

The public expenditure review

The first report of the Technical Committee on Public Finance, published in June 2008, covered the judicial system (as described earlier) and the Ministries of Education, of the Interior and of Infrastructure and Transport. It focuses particularly on identifying ways to reduce costs without compromising basic objectives; this may be through budget reform or improved information systems, better co-ordination between different public bodies, personnel recruitment and career management, or through use of evaluation tools. Often, in parallel with the message of the previous section, it suggests ways to introduce incentives to improve performance of the public administrations involved and, in some cases, for individuals or for teams. This is particularly important in the context of the need to contain and reduce overall public spending given the high level of public debt. With effective guidance as to which kinds of spending are more effective than others, necessary spending restraint, or even reduction, can be accompanied by improvements in efficiency.

There are signs that this approach has at best been only partially taken on board. For example the review of education expenditure and the 2007 white paper on education both correctly observe that the teacher/pupil ratio in Italy is much higher than in other OECD countries and that other countries get better results with relatively fewer teachers. The budget plans for 2009-11 therefore include significant cuts in teacher numbers, but whether the legislative provisions will be sufficient for successful implementation and provide the right incentives has yet to be seen. As for performance incentives, the white paper and the spending review contained many suggestions and the Education Minister does seem to be in favour of introducing such incentives. Chapter 4 of this *Survey* takes up this point, among others.

In the longer term, public expenditure planning should use the results of exercises like the spending review to improve efficiency. It was intended that the Technical Committee should produce further reports on other spending ministries. The tasks related to spending review work have now been transferred to the General State Accounting Office within the Ministry of the Economy and Finance; work is now focusing on issues that cut across all

administrations, such as budget management and spending procedures, identifying bottlenecks and improving flexibility, and identifying performance indicators. It is to be hoped that such work will be reinforced, with adequate resources, and continue to focus on identifying ways to increase cost efficiency, including further detailed studies of specific programmes. It should be able to complement the implementation of the public administration reforms, since both processes need to identify measures of performance and incentives that lead to their improvement. The new approach to planning public spending over a three year period, which includes giving spending managers some more flexibility in allocating resources, will also benefit from having a dispassionate review of where resources are most needed. The review of the judicial system found that two different sets of accounts, the *Bilancio dello Stato* and the *Conto Annuale*, are inconsistent. This is apparently a problem which also affects most other parts of the public administration and it must clearly be a priority to eliminate such apparent inconsistencies.

Box 3.2. **Key recommendations on growth-promoting regulatory reform**

Implement recommendations from the Regulatory Reform Review, notably by following up and completing the Bersani reforms in areas such as the liberal professions, from lawyers to taxis, and in transport, retail and commercial distribution.

Maintain and strengthen the basic rule that competition policy's key yardstick must be the interests of customers, not of producers, employees or the state.

Improve efficiency in the administration of civil justice by permitting fee structures and procedures that encourage simplification of documentation and accelerated handling of cases.

Pursue reform of public administration to increase the focus on improving output-based measures of performance.

Reinforce the use of auditing mechanisms, whether *ex ante* such as Regulatory Impact Assessment or *ex post* such as Public Expenditure Reviews.

Notes

1. Workers in the public sector have similar protection in practice.
2. For a discussion of the challenges of raising employment rates for older workers in Italy, see OECD (2004).
3. A recent revision to the method for deriving export prices and volumes made a big difference. Relative prices are now seen to have risen much less than earlier thought, undermining arguments based on this data.
4. Ichino (2008) mentions a number of example, including an unsuccessful attempt by the Swiss-Italian rail company Ti-Lo (Treni regionali Ticino-Lombardia) to introduce working conditions – and pay – for its Italian workers similar to those for its Swiss employees, the opposition to a foreign takeover of Alitalia, and other examples in which choices that were at least potentially Pareto-improving for Italian workers could not even be offered to them.
5. OECD (2005) devoted a chapter to corporate governance issues. See Micossi (2008) for one perspective, also P. Ichino (2008).
6. See *e.g.* Foster *et al.* (2006), Griliches and Regev (1995), Bartelsman *et al.* (2007).
7. Schivardi and Torroni (2004), in a study using a longitudinal database of firms between 1986 and 1998 estimate that removing the threshold effect would increase average firm size by only 1%.

8. However, the authors find that venture capital financing has a positive impact on firms' success which is not due to founders' education, but has most likely to do with the true added-value in terms of networks, resources and skills of venture capitalists.

9. A number of important origin countries (notably Romania, also Poland) are now EU members. Changes in official population numbers are complicated by regularisation of illegal immigrants, when sharp rises in the official population do not necessarily imply such large true increases.

10. Regulation is necessary to correct market failure, for example. Not all regulations are well-designed however, and an estimate of the output foregone is useful to judge whether regulations have costs that exceed their expected benefits.

11. The model takes into account certain specific conditions in Italy – notably the distance between levels of productivity in different industries and that in the corresponding industry leader country; but the small sample size obliges the econometric model to assume that the reaction to policy changes, conditional on these specific country characteristics, is the same in all countries. The simulations thus show the expected reaction of an "average" OECD country, if its economic structure were similar to Italy's.

12. Note that "best practice" is interpreted here in terms of the numerical value of the relevant PMR indicators, not the specific underlying policies; different sets of policies can result in the same level of the indicator.

13. Note that there is currently no country that has the least restrictive regulatory policy in every single sector, whereas this simulation would imply bringing Italy to the forefront of regulatory practices of all OECD countries.

14. Note that the effects reforming single non-manufacturing sectors are not simply additive in the simulation model. In fact, the sum of the impact of the single-sector reforms is larger than the expected impact of a thorough reform of all services sectors, due to the non-linearities and the catch-up process built into the empirical model.

15. The "law for cutting laws". This provides for a systematic assessment of existing legislation to establish whether laws still in force have not in fact been superseded by subsequent legislation and, where they have, to abolish them. Under the *Taglia Leggi* process, the budget legislation in autumn 2008 (decree-Law 112) abolished 3 500 obsolete laws and a later decree-law abolished a further 29 000. But with the second phase of the programme, intended to improve legislation still in force, still under preparation, its contribution to simplification in practice is hard to assess so far. The legislation also instituted a search for administrative "entities" (the *Taglia-enti*) that could be cut. In one example of how good intentions are not always fulfilled, nine "entities" were identified for closure in the first phase of this process, but none of them were in fact closed, owing to the number of exceptions and special cases allowed for in the law (Il Sole 24 Ore 15/12/08.).

16. See Marchesi (2008) for more information and more detailed presentation of possible measures.

17. This section draws substantially on AGCM (2008).

18. In mid-2008 it launched a campaign to oblige each ministry to publish the curricula vitarum and salaries of all senior officials on the ministerial Website. By December 2008 about half of the ministries had done so.

Bibliography

Aghion, P. and R. Griffith (2005), *Competition and Growth*, the MIT Press, Cambridge, Massachusetts.

Aghion, P. and P. Howitt (2006), "Appropriate Growth Policy: A Unifying Framework", *Journal of the European Economic Association* 4, No. 2-3, pp. 269-314.

AGCM (2008), "Considerazioni e proposte per una regolazione proconcorrenziale dei mercati a sostegno della crescita economica", Autorità Garante della Concorrenza e del Mercato, Rome.

Ark, B. van, J. Melka, N. Mulder, M.P. Timmer and G. Ypma (2002), "ICT Investments and Growth Accounts for the European Union 1980-2000", Research Memorandum GD-56, Groningen Growth and Development Centre, September (downloadable from *www.eco.rug.nl/ggdc/pub/*).

Arnold, J., G. Nicoletti and S. Scarpetta (2008), "Regulation, Allocative Efficiency and Productivity in OECD Countries: Industry and Firm-Level Evidence", OECD Economics Working Papers, No. 616, OECD, Paris.

Bartelsman, E.J., J. Haltiwanger and S. Scarpetta (2007), "Cross-Country Differences in Productivity: The Role of Allocative Efficiency", mimeo.

Bassanini, F. (2008), "Dieci anni dopo la legge 59 del 1997: un bilancio delle riforme amministrative degli anni novanta", *www.astrid-online.it/rassegna/13-10-2008/Bassanini –-Tavola-rotonda-Roma-Tre-TER-_3_-_2_.pdf*.

Bertoni, F., M. Colombo and L. Grilli (2008), "Venture Capital Financing and the Growth of New Technology-Based Firms", available at SSRN: *http://ssrn.com/abstract=1102233*.

Bianchi, M., M. Bianco, S. Giacomelli, A. Pacces and S. Trento (2005), Proprietà e controllo delle imprese in Italia, il Mulino, Bologna.

Bianchi, M. and M. Bianco (2009), "Le riforme nella corporate governance negli ultimi 15 anni: quali effetti?", in Rondi L. and F. Silva (eds.), "Prove di Cambiamento nel Sistema Produttivo Italiano", Il Mulino.

Bianco, M., S. Giacomelli, C. Giorgiantino, G. Palumbo and B. Szego (2007), "La durata (eccessiva) des procedimenti civili in Italia: offerta, domanda o rito?", Rivista di Politica Economica, September-October.

Bianco, M. and P. Sestito (2008), "La riforma della regolamentazione dei servizi pubblici locali in Italia: linee generali e insegnamenti per il futuro", Bank of Italy, Questioni di economia e finanza, No. 18.

Bloom, N. and J. Van Reenen (2007), "Measuring and Explaining Management Practices across Firms and Nations", *Quarterly Journal of Economics*, 122 (4).

Bloom, N., Sadun R. and J. Van Reenen (2007), "Il gap managerial del vecchio continente", La Voce, *www.lavoce.info/articoli/pagina2872.html*.

Boarini, R. and H. Strauss (2007), "The private internal rates of return to tertiary education: new estimatesfor 21 OECD countries", *OECD Economics Department Working Paper*, No. 591.

Boeri, T. (2002) "The political economy of flexicurity", mimeo, Università Bocconi, Milan.

Bronzini, R. and P. Piselli (2006), "Determinants of long-run regional productivity: the role of R&D, human capital and public infrastructure", Bank of Italy Economic Research Paper, No. 597.

Colombo, M. and L. Grilli (2005), "Founders' human capital and the growth of new technology-based firms: A competence-based view", Research Policy, Vol. 34, No. 6, August.

Codogno, L. (2009), "Two Italian Puzzles: Are Productivity Growth and Competitiveness Really so Depressed?", in M. Buti (ed.), *Italy in EMU*, Palgrave Macmillan.

Contini, F., D. Coviello and A. Ichino (2007), "Duration of Trials and the Individual Productivity of Judges", mimeo, Università di Bologna, *www2.dse.unibo.it/ichino/lpj_catt_3.pdf*.

Conway, P., D. de Rosa, G. Nicoletti and F. Steiner (2006), "Product Market Regulation and Convergence", *OECD Economic Studies No. 43*, 2006/2, OECD, Paris.

D'Addio, A. and M. Mira d'Ercole (2005), "Trends and Determinants of Fertility Rates: The Role of Policies," OECD Social, Employment and Migration Working Papers, No. 27.

Del Monte, A. and E. Papagni (2003), "R&D and the growth of firms: empirical analysis of a panel of Italian firms", Research Policy, Vol. 32(6), June.

European Union Council (2004), "A comparative analysis of regulatory impact assessment in ten EU countries", Dublin, May, *www.betterregulation.ie/attached_files/Pdfs/Report%20on%20RIA%20in%20the%20EUa.pdf*.

Formez (2006a), "L'amministrazione per sportelli", Quaderni Formez No. 38, Ministry of Public Administration, Rome.

Foster, L., J. Haltiwanger and C.J. Krizan (2006), Market Selection, reallocation and restructuring in the US retail trade sector in the 1990s. The Review of Economics and Statistics, 88(4), 748-758.

Giacomelli, S. and S. Trento (2005), "Ownership, control and transfers of Italian firms. What changed in the ten years 1993-2003?", *Bank of Italy Discussion Papers*, No. 550.

Griliches, Z. and H. Regev (1995), "Firm Productivity in Israeli Industry: 1979-1988", *Journal of Econometrics*, 65:1 (January), pp. 175-203.

Ichino, P. (2008), "What prevents workers from choosing their employer: new labour policies frontiers in the globalization era", mimeo.

ISAE (2007), "Priorità nazionali. Ambiente normativo, imprese, competitività: I vincoli amministrativi allo start-up", Istituto di Studi e Analisi Economica, Rome, June.

ISAE (2008), "Priorità nazionali. Infrastruttura materiali e immateriali", Istituto di Studi e Analisi Economica, Rome, June.

Istat (2008), "Università e Lavoro", Istituto nazionale di statistica, *www.istat.it/lavoro/unilav/*.

Jaumotte, F. (2003), "Female labour force participation: past trends and main determinants in OECD countries," OECD Economics Department Working Paper, No. 30.

Marchesi, D. (2008), "Giustizia civile, buoni obiettivi e occasioni mancate", in M.C. Guerra and A. Zanardi (editors), *Rapporto sulla Finanza Pubblica*, il Mulino.

Micossi, S. (2006), "L'impresa tra dirigismo e mercato", Rivista di Politica Economica, July-August.

Micossi, S. (2008), "The decline of the Italian economy: weak entrepreneurs or bad policies?", Scuolasuperiore della pubblica amministrazione, Reggia di Caserta, mimeo.

Ministry of Finance (2008), "La revisione della spesa pubblica, Rapporto 2008", Ministero dell'economia e delle finanze, Commissione tecnica per la finanza pubblica, Rome.

OECD (2001), *OECD Reviews of Regulatory Reform: Regulatory Reform in Italy*.

OECD (2003), "ICT and Economic Growth: Evidence from OECD countries, Industries and Firms", OECD, Paris.

OECD (2004), *Ageing and policy challenges: Italy*.

OECD (2005), *Economic Survey of Italy*.

OECD (2006), *Going for Growth*, OECD Publishing, Paris.

OECD (2007), *Babies and Bosses – Reconciling Work and Family Life: A Synthesis of Findings for OECD Countries*, OECD Publishing, Paris.

OECD (2008), *Employment Outlook*.

OECD (2009), *Regulatory Reform in Italy: Better Regulation to Strengthen Market Dynamics*, forthcoming.

Schivardi, F. and R. Torrini (2004), "Firm size distribution and employment protection legislation in Italy", Economic Working Papers, No. 504, Bank of Italy.

Sianesi, B. and J. Van Reenen (2003), "The Returns to Education: a Review of the Empirical Macro-Economic Literature", *Journal of Economic Surveys*, 17(2).

Triplett, J.E. and B.P. Bosworth (2004), *Services Productivity in the United States: New Sources of Economic Growth*. Brookings Institution Press, Washington DC.

Ughetto, E. (2008), "Does internal finance matter for R&D? New evidence from a panel of Italian firms", Cambridge Journal of Economics, Vol. 32, No. 6.

Viviano, E. and F. Schivardi (2007), "Entry Barriers in Italian Retail Trade", Bank of Italy Economic Research Paper, No. 616.

ISBN 978-92-64-05435-6
OECD Economic Surveys: Italy

Chapter 4

Towards better schools and more equal opportunities for learning

Compulsory school education in Italy produces poor results in terms of 15-year olds' performance on PISA tests, compared with other OECD countries, despite a relatively high level of expenditure. While the influence of social background is smaller than in many OECD countries, it is largely transmitted through a kind of self-segregation resulting from family choices among the different types of upper secondary school. Large differences in pupils' performance between regions cannot be explained by the quantity of resources available; separating the influence of socioeconomic conditions from school efficiency is difficult and must be treated carefully in plans for extending fiscal federalism. The Italian government is rightly concerned to get better value for money and this chapter argues that policies to improve the information available to schools and teachers on the results they are achieving, while giving them appropriate incentives, responsibility and power to respond to such information, are necessary accompaniments to expenditure-saving policies. An improved focus on good quality training, both for new recruits and experienced teachers, and recruitment procedures themselves, should also pay dividends on efficiency.

The average educational outcomes of 15-year old Italian pupils, according to the OECD PISA study, are among the poorest in the OECD area although education expenditure per pupil is high. Many international surveys show that learning outcomes of younger Italians are much better, which would point to a relatively strong weakness of secondary education. Furthermore, education seems to play a part in maintaining relatively low social mobility in Italy; families tend to select upper-secondary schools according to their income, leading to strong social clustering. There are also significant regional disparities across the country, partly associated with background socioeconomic factors. Poor overall educational attainment is a matter of concern in itself and is particularly important for Italy with its record of very low productivity growth and poor youth labour market performance; research has shown that while many structural and institutional features of an economy affect growth and the labour market, human capital is certainly a key influence.

This chapter covers compulsory education, exploring the reasons for poor and unequal performance in secondary education. After presenting the main challenges facing education in Italy, the chapter outlines the structure of spending and then considers how certain aspects of policy should be better aligned with good practice. Focusing on accountability and incentives, it then looks at how to motivate schools to improve performance and how teaching quality can be improved. There is a clear need for some fundamental reform, and a key difficulty will be getting the support of key schools' stakeholders, especially teachers themselves.

The main challenges facing Italian education

Italian educational outcomes at secondary level lag behind the OECD average, and PISA results show systematic differences between socioeconomic groups and regions. Education policy faces the challenges of improving average outcomes and the transition from school to the labour market, ensuring that education does not accentuate existing social and regional differences, and improving overall cost-efficiency. The ongoing process of fiscal federalism, with increased financial responsibility for education intended to be allocated directly to regions, might complicate reform, even though there remains a lot of uncertainty on the effective extent of devolution.

Enhancing school results

Until the early 1960s, education was generally compulsory for only five years, eight years as from 1963, ten as from 2007.[1] At that time only 9% of the adult population had completed lower-secondary education and 4% held an upper-secondary education diploma, well below the OECD averages of 26% and 20%. By 2008, participation rates in upper-secondary education, which is still not compulsory, were above 80% and in line with the OECD average. The completion rate in upper-secondary education is 86%, in line with the EU19 average and slightly above the OECD overall (83%). While participation in education has been increasing rapidly, the legacy of the past is such that only half the population has attained upper-secondary education, compared with two thirds in the OECD area as a whole.

Despite rising participation, Italians have mediocre results in international education assessment surveys. PISA surveys finds that Italian pupils in upper secondary school achieve levels of numeracy and literacy among the lowest in the OECD (Figure 4.1). This is despite very good average performance in Italy for younger children – aged around 10 – on reading and science (PIRLS, 2007, and TIMSS, 2008). Performance in mathematics is however below average even for younger children. In the most recent PISA study, the average science score recorded by an Italian 15 year-old is lower than that of the average OECD student by an amount equivalent to nearly two-thirds of one school year, and more than two school years behind that of Finnish 15 year-olds, the best performers in the OECD area. Low achievers have a lower performance in Italy than in the rest of the OECD area (the mean PISA score of the (lowest) 5th percentile is 318, as compared to 340 in the OECD area and 419 in Finland); similarly, high achievers have lower score results (Italian pupils in the 95th percentile of PISA distribution score 20 points lower than those at the same position in OECD distribution). There has been a significant deterioration in relative reading performance (by nearly the equivalent of two-thirds of one school year) over 2000-06, but relatively stable achievement in science and maths.

National data also reveal problems. In 2007, almost half of all upper-secondary pupils failed to reach the level in mathematics required to go to the next year, one-third of them failed in foreign languages and over 10% in Italian.[2] Although most students failing in one subject at the end of the term manage to be admitted to the next grade after successfully retaking the exam in the summer, 16% of those enrolled in a given grade had to repeat the year (*La scuola in cifre*, 2007).

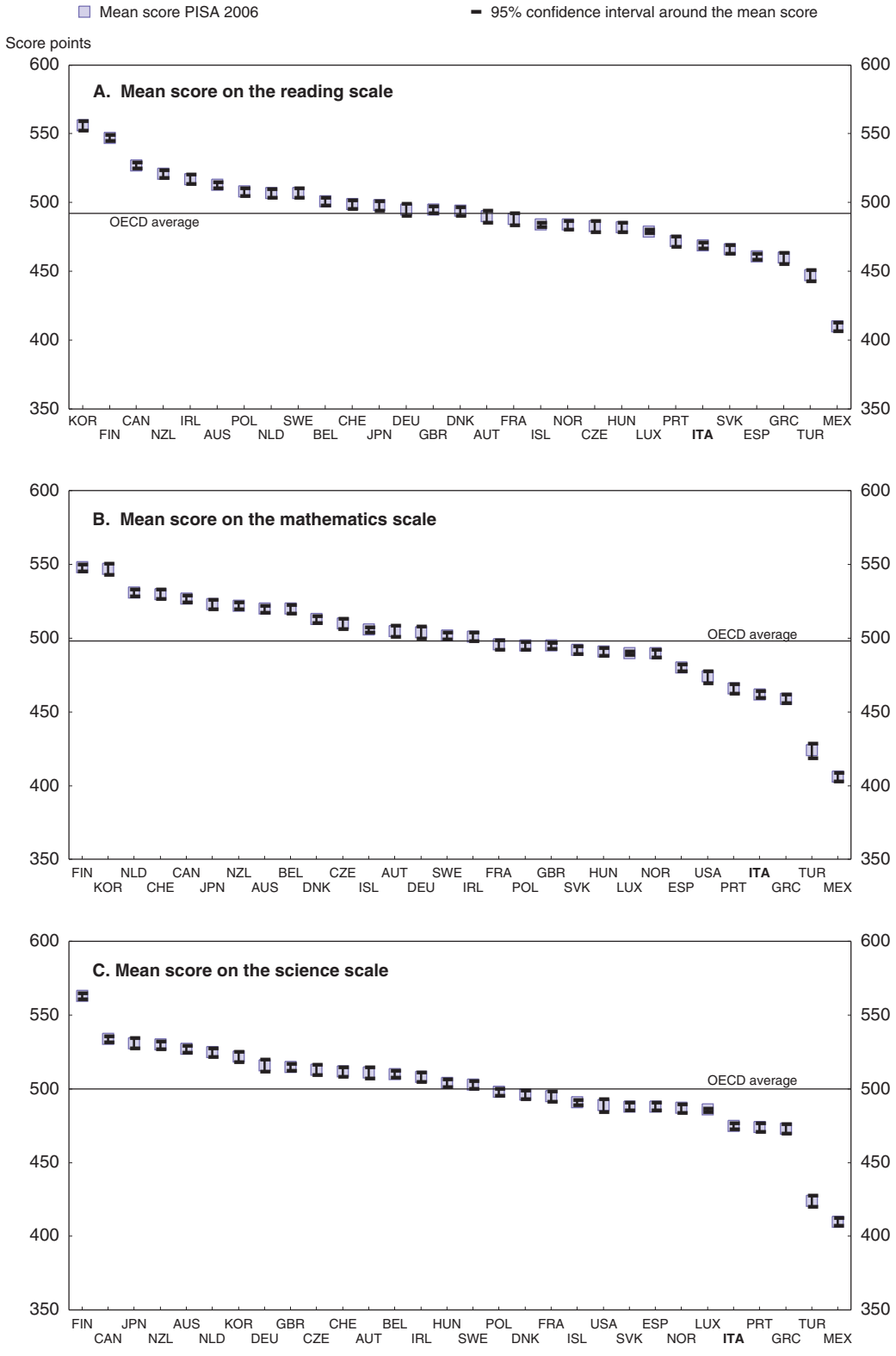
This chapter does not investigate the reasons of good performance of primary education as opposed to secondary education. Potential explanations include the different, somewhat more specific training structure of primary education teachers; the organisation of curricula (primary education learning time is not strictly divided into subjects but in curricular areas); and the type of curricula (primary education curricula are closer to those tested by the relevant international surveys). Unfortunately empirical evidence corroborating these hypotheses is scarce.

Reducing regional disparities in learning outcomes

School performance varies markedly across Italian regions, notably between the North and the South (Figure 4.2, Panel A). While the variance of overall PISA scores in Italy is slightly lower than for the OECD area, around 12% of it is accounted by between-region differences – as much as by individuals' family background. There is a difference of 2½ school years between the best and worst performing regions. In southern regions and in the Islands the majority of pupils record a proficiency level of 2 or below, but in the north the majority reach a level of 3 or above. The lowest-performing region has almost one pupil in 5 who does not even reach the first – very basic – level of proficiency.

In their replies to the PISA student questionnaire, pupils in the northern regions have a correct assessment of their ability and skills. In contrast, pupils coming from the southern regions always overstate their capabilities. The standards against which they are assessed seem lower and/or they receive insufficient feedback on their skills. Schools probably adapt to pupils' greater needs by imposing lower pressure and to some extent it is legitimate that schools take into account the specific context in which they operate. But inaccurate feedback may penalise students when it comes to preparing them to compete on an equal footing with peers in other regions or other countries, when entering universities and the labour market.

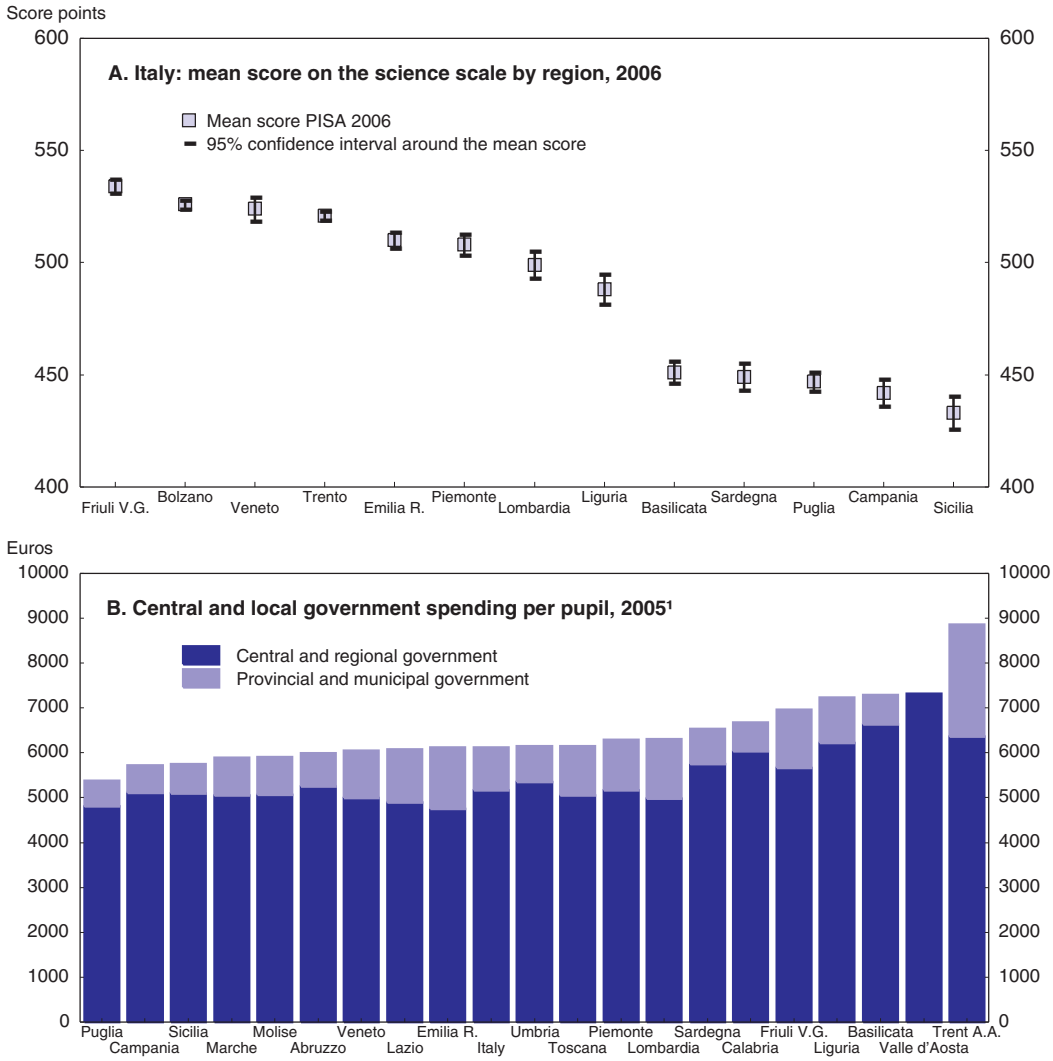
Figure 4.1. **Italy has below-average PISA scores**



Source: OECD PISA database, 2006.

StatLink http://dx.doi.org/10.1787/640007445888

Figure 4.2. **Strong disparities in educational outcomes across regions**
and unequal local government funding



1. Data refers to spending per pupil by the central level government and by the federal government (including communes, provinces and regions) covering financing of core educational services and ancillary services.
2. In Trentino and Valle D'Aosta, two fiscally independent regions, the overall funding comes from regional government.

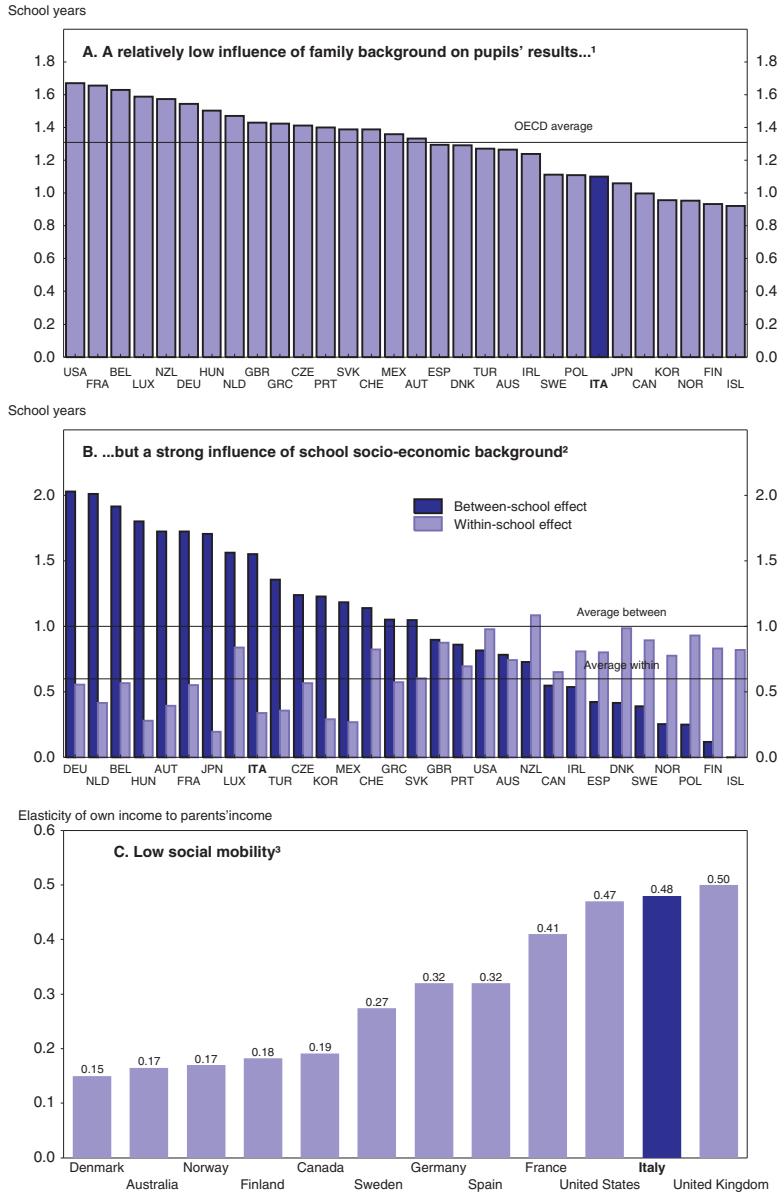
Source: *OECD PISA database*, 2006; Ministry of Education.

StatLink http://dx.doi.org/10.1787/640037250161

Reducing inequality in education outcomes

Variation in performance is also linked with the extent to which the education system helps individuals with unfavourable social origins. The impact of the socioeconomic background on educational achievements can be measured directly (Figure 4.3, Panel A), or by analysing the extent to which it occurs though peer effects – social clustering at school level (Figure 4.3, Panel B). On the basis of these two indicators, the Italian situation is mixed. The direct impact of family origins on educational achievement for a pupil within a given school is in fact slightly smaller than in the OECD area as a whole: Italian pupils coming from a lower social background than the average lag behind by the equivalent of 1.1 school year, compared with 1.3 for the OECD area. However, the large between-school

Figure 4.3. **Social segregation between schools may hinder social mobility later in life**



1. This figure shows the impact of family background on educational achievement, measured by PISA scores, at individual level. These estimates, which are obtained by a bivariate regression of PISA scores on the PISA index of socioeconomic background, are expressed in terms of gaps that one may accumulate during one or more school years. The school lag equivalent is obtained by calculating the difference of PISA score between two students enrolled in the two grades (everything else being equal). One school year corresponds to 38 points on the PISA science scale.
2. The within-school effect of economic, social and cultural status is defined as the difference in performance on the science scale associated with the difference between the 75th and the 25th percentiles of the average within-school distribution of the PISA index of economic, social and cultural status, calculated at the student- level. The between-school effect of economic, social and cultural status is defined as the difference in performance on the science scale associated with the difference between the 75th and the 25th quartiles of the country-specific school-level average distribution of the PISA index of economic, social and cultural status, calculated at school level. These estimates, which are obtained by regressing PISA scores on the PISA index of socioeconomic background at individual and school level, are expressed in terms of the school lag that one may accumulate during one or more school years. One school year corresponds to 38 points on the PISA science scale.
3. The height of each bar represents the best point estimate of the intergenerational earnings elasticity resulting from various studies reviewed by D'Addio (2007). The higher the parameter, the higher is the persistence of earnings across generations and thus the lower is intergenerational earnings mobility.

Source: Panel A and B, Pisa 2006 and OECD calculations. Panel C based on D'Addio (2007).

StatLink http://dx.doi.org/10.1787/640047424215

effect in Figure 4.3 Panel B shows a strong effect from social clustering; a pupil moving up the "social ladder" would improve her PISA score by three times more by moving to a school with a higher average socioeconomic background than by staying within the same school.

The effect of social segregation on performance can be explained by a number of interrelated factors: peer and neighbourhoods effects, as well as teachers' self-selection into better schools (Bratti *et al.*, 2007; Leonardi, 2007; Barbieri *et al.*, 2007). Social clustering in schools occurs through the selection of type of upper-secondary school (theoretically-based in a *liceo* or vocational-based in an *istituto tecnico* or an *istituto professionale*). This selection is the free choice of parents and, as Bratti *et al.* (2007) show, is very highly correlated with social origins. Although this clustering is the result of self-selection, and not an involuntary consequence of tracking policies as in Germany and Luxembourg, it seems in practice to be an important source of social immobility in Italy, shown in the bottom panel of Figure 4.3. While income and wealth persistence across generations is a consistent finding in many national and international studies (Brandolini *et al.,* 2004, OECD 2008j), there are other factors besides the education system that may account for it. Labour market and welfare policies are among the most important ones (Checchi *et al.* 1999; Colonna, 2007; D'Addio, 2007), although education and labour market institutions exert interrelated influences.

Raising cost efficiency

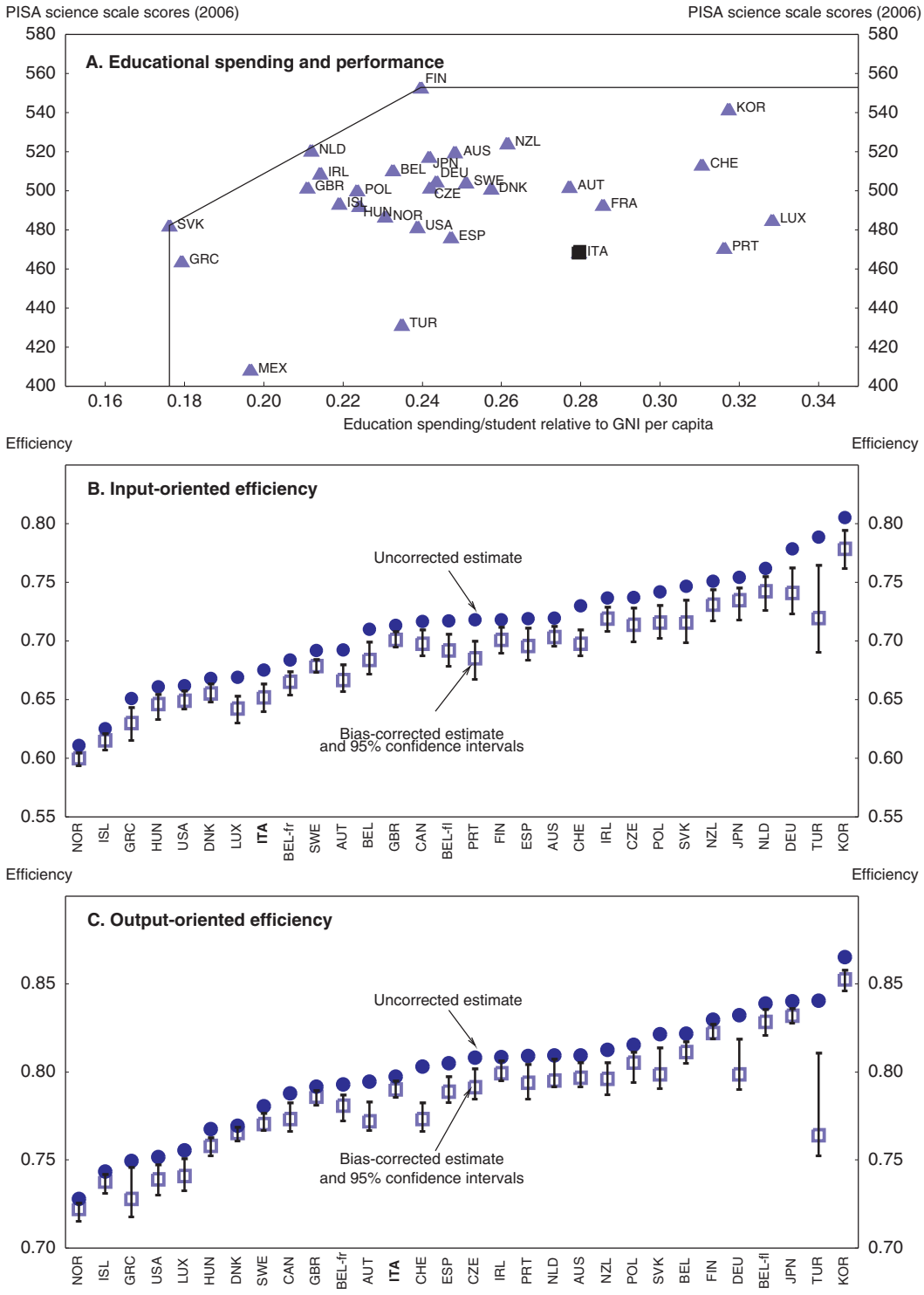
Italian schools appear to be less cost-efficient than those of other OECD countries, with high expenditure per pupil and poor educational outcomes (Figure 4.4). There are a number of possible explanations, such as the failure to exploit economies of scale in class formation or the lack of incentives for schools to make the best use of available resources. With strong budget constraints on expenditure, there is pressure to reduce Italy's high spending on education and, as Figure 4.4 shows, it should be possible to spend less without compromising educational outcomes; this is an important conclusion of the 2007 White Paper on education and of the Spending Review (2008). However, it is unlikely that severe cost-cutting measures, unless accompanied by a comprehensive change in schools' organisation and functioning, can avoid some deterioration in performance. It is thus of the uppermost importance that part of the savings obtained by reduced expenditure are reinvested appropriately in the measures aimed at increasing schools' incentives to raise performance, as outlined in the rest of the chapter.

In fact, the 2009-11 Budget Law includes quite severe cuts, implying a 10% reduction of the teaching working force over three years. These measures, partly inspired by the 2007 White Paper, are in line with commitments by the last two governments to tackle the inefficiency of public expenditure. The reasoning behind these measures, which will be explained in more detail in the following section, is twofold: first, children are not allocated to classes and schools as efficiently as they could be; secondly, the number of students per teacher, which the literature has generally shown to be unrelated to educational outcomes, is lower in Italy than the OECD average. The Budget Law allocates 30% of the savings to measures to raise the profile of the teaching profession. The exact measures are not however identified yet.

Managing regional diversity and fiscal federalism

The level of central government funding is fairly homogenous across schools, reflecting relatively uniform rates of teacher compensation. There are quite large differences in the local funds transferred to schools from provinces and communes (local

Figure 4.4. **High expenditure per student and low educational outcomes**



1. Efficiency estimates apply to the median school in each country. The estimates are obtained through data envelopment analysis performed with four inputs (teaching and computing resources, socioeconomic status of students. and language background) and one output (average PISA score).

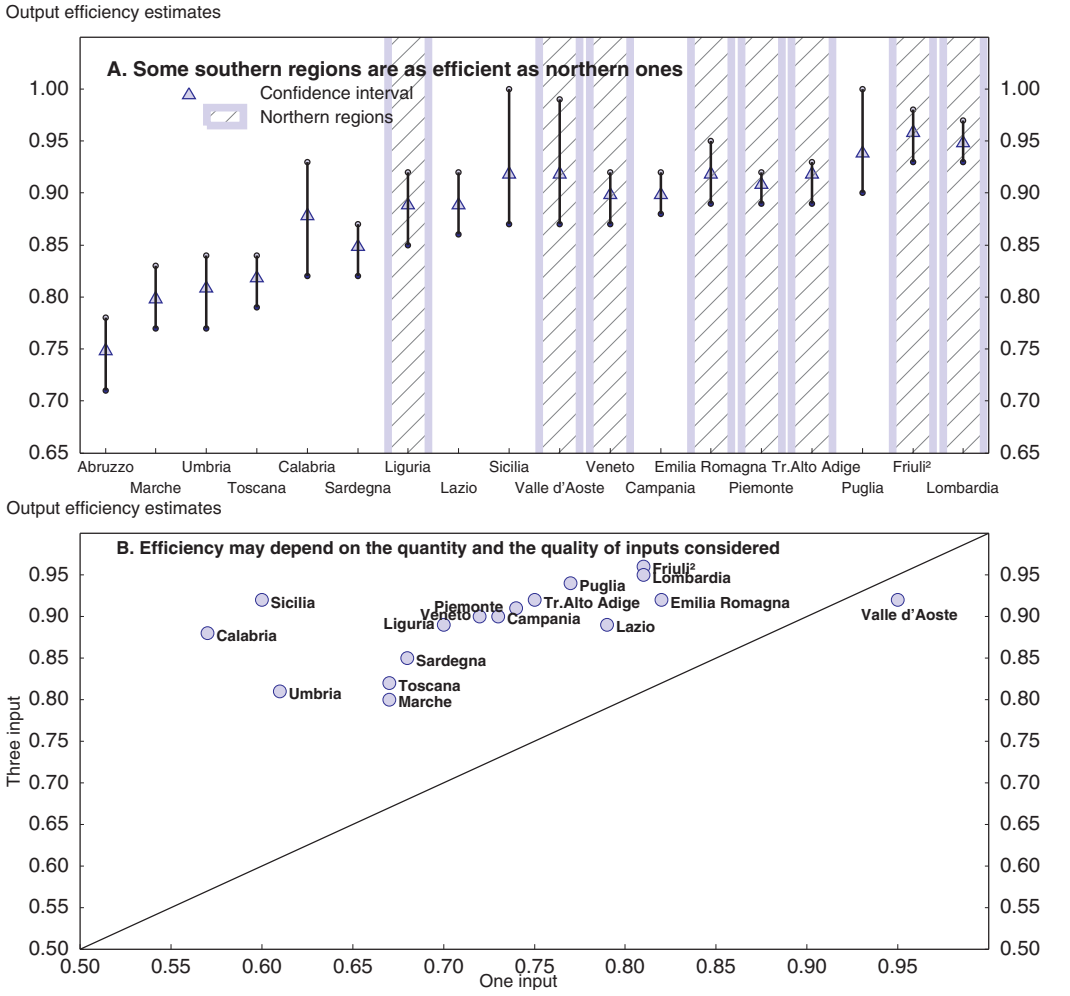
Source: OECD (2008a) and Sutherland *et al.* (2007).

StatLink http://dx.doi.org/10.1787/640105582235

funding per student being more than as twice as much in Emilia Romagna than in Puglia, for example), although the share of local funding is typically less than one fifth of the total at the moment (see Figure 4.2, Panel B).

The observation that there is wide regional variation in pupils' performance but relative homogeneity in funding levels suggests considerable variation in efficiency, with lower PISA scores in southern regions implying lower efficiency. This is not certain, however, as some simple analysis shows. A Data Envelopment Analysis (DEA) using one input (student per teacher ratio) and one output (average PISA score) does indeed imply that northern regions are generally more efficient than central and southern regions (Figure 4.5, Panel A). However,

Figure 4.5. **Efficiency in provision of education services across regions,[1] 2003**



1. The first panel shows DEA estimates and corresponding confidence interval of efficiency in provision of educational services. The DEA specification uses three inputs (teacher per student ratio, socioeconomic family background and possession of computer at home) and one output (average PISA score). Efficiency scores are bias-corrected output efficiency scores, under the assumption of constant returns to scale. The second panel shows efficiency scores for one input (teacher per student ratio) and one output on the x axis, and efficiency scores for three inputs and one output. Efficiency estimates vary between 0 and 1, where 1 denotes maximum efficiency. Abruzzo (not shown in Panel B) has an one-input score of 0.41.
2. Friuli Venezia Giulia.

Source: OECD calculations on 2003 data.

StatLink http://dx.doi.org/10.1787/640144630241

results depend on a number of background and contextual variables outside the school's control. Using a DEA specification based on three inputs (student per teacher ratio, index of socioeconomic background of parents and computer possession), as in Sutherland *et al.* (2007), regions that are disadvantaged in terms of their social and cultural environment improve their relative position, in some cases considerably, such as Calabria and Sicily (Figure 4.5, Panel B). In this specification, there is considerable clustering of output, such as efficiency estimates, though there are four or five low performing outliers. A similar analysis in Giordano *et al.* (2008) finds that efficiency in education services provision is more homogeneous across regions than in other public services (health, civil justice and child-care), supporting the idea that differences in school efficiency across the country may be lower than at first sight.

However, regional variation in cost-efficiency certainly exists and is indeed one of the main challenges of fiscal federalism. According to the fiscal federalism law that, together with other previous laws, devolves education to regions although at a very general level (see Box 4.1), basic finance has to be provided from central funds as to provide national standard levels of service (LEP), based on estimates of the "standard cost" of providing such levels of service. At the moment the interpretations of LEP and the related implications for

Box 4.1. **Institutional responsibilities in the Italian education system: current setting and changes under fiscal federalism**

In Italy the central government is currently responsible for:

- General guidelines and legislation on education, including objectives of school curricula; definition of educational programmes; staff contracts.
- Specification of subjects studied, instruction time, share of compulsory and non-compulsory instruction time, quality standards for services provided, general guidelines on evaluation of students, teaching time, evaluation of school system, determination of staff needs and the level of central resources to finance them.

The regional governments are responsible for:

- Legislating on specific education guidelines, together with the central level government (potestà legislativa concorrente). They hold exclusive legislative power however on vocational education and training issues.
- Providing and planning the supply of vocational training (the provision of vocational education being a responsibility of central level government).
- Fixing the calendar school year.
- Planning the school network on the regional territory, including the merging of schools with insufficient rolls.
- Provide financial help to students from low-income families.

Finally, the regional education offices ("Uffici Scolastici Regionali", reporting directly to the Ministry of Education), are responsible for:

- Intermediating the teacher allocation process (from the central level government to the schools).

The law on fiscal federalism (L. 42, 2009) reaffirms the general lines of devolution of education responsibilities to regions, though it is not clear whether it innovates with respect to the existing legislation (according to the law, national standard level services refer to "administrative functions already under regional responsibility"). Some, forthcoming administrative by-laws will provide the substantive regulation by 2011. Not only will these laws have to specify the exact responsibilities of regions but also how "basic levels of educational services" (*livelli essenziali delle prestazioni*) should be defined and what this will imply in terms of resources transferred to regions.

redistribution of resources, are still very much debated and will be the object of negotiations between the central level government and the regions. It is however unlikely that resources transferred to regions will cover staff salaries.

Another open issue, which might have consequences in terms of regional inequality in educational outcomes especially if LEP are output based, is the definition of standard costs. This is likely to be controversial – will it, for example, take into account the contextual variables used in Figure 4.5? If it did, and if regional variation in efficiency did not increase, there would be less inequality of outcomes; if not, especially with – as might be expected – increased variation in efficiency, inequality could increase. Further complications may arise from cultural or contextual differences across regions in the ability of sub-national governments to use autonomy effectively; Giordano *et al*. (2008), find that in southern regions public services are more efficient when they are provided at central level, while in the North decentralised services tend to be more efficient. Finally, standard costs will also have to properly take into account uneven migration trends within the country.

While the extent of devolution is a political choice left to each country, it has to be borne in mind that if fiscal federalism is meant to increase efficiency among sub-national governments, LEP ought to rely on a notion of measurable output performance. In this respect the last *Economic Survey on Italy* recommended specifying national standards of social services to reflect output rather than input and to set clear attainment and achievement standards, leaving the mix of inputs and organisation of services to regions, while providing better national testing, monitoring and guidelines for compliance.

Whatever the precise model of fiscal federalism, differences across the country in various factors, not least in institutional capacity to deal with managing education and in local social and political contexts, will lead to some variation in outcomes. If central and regional governments collectively wish to avoid this, policies to reinforce the competencies of local administration may need to be envisaged in addition to the reform of the national education system. In addition, the potential reforms to the education system will have to be designed as to ensure the consistency and the co-ordination of the various levels of governance, as also recommended by the White Paper on Education (Box 4.2).

Improving the transition from secondary to tertiary education and the labour market

Secondary education should prepare pupils either for higher education or for entry into the labour market. With respect to the former, entry rates into tertiary education have recently reached the level of other OECD countries after having lagged behind for many years (Figure 4.6, Panel A). Part of this improving performance depends on the almost total absence of any selection at university entry (including the type of upper-secondary education attended), but high drop-out rates at university may indicate that the school system does not prepare pupils well enough for higher education (Boarini *et al.,* 2008).[3]

As for direct entry into the labour market, quite apart from the fact that a significant share of children does not enter upper-secondary education, secondary school leavers have difficulties when entering the labour market (Quintini and Martin, 2006). The unemployment rate for 15-24 age group fell between 1995 and 2005, but the ratio of youth to adult unemployment remains the second highest in the OECD. In Italy only one-third of the 15-24 year olds are employed, *versus* two-fifths in the OECD area. Half of the young unemployed experience long unemployment spells, compared with one-fifth in the OECD. The share of young adults who are neither in education nor in employment has also fallen

Box 4.2. **The 2007 White Paper on Italian schools**

Recommendations put forward by the White Paper on Italian schools (*Quaderno Bianco sulla Scuola*), issued under the previous government, include:

- Strengthen school autonomy while at the same time reaffirming the role of the State in defining general orientations and providing national standard levels of services.
- Building up a forecasting model to plan the medium and long-term demand for teachers at regional level, with the aim of informing decisions on teachers' allocation so as to increase the efficiency of resources use across regions.
- Designing a national evaluation system encompassing external evaluation of students' progress and promotion of specific evaluations at individual school level, with support provided to school lagging behind and remedial programmes designed.
- Reforming teachers' career and work organisation including the reform of initial training and recruitment, the introduction of performance incentives, actions to improve the matching between teachers and schools, and reform of in-service training.
- Specific additional actions to be undertaken in the South over the 2007-13 period.
- Designing a multi-level governance system to implement regional action plans including special measures (such as suitable classroom size, merging schools, retraining teachers, etc.) to meet the targets fixed at national level. The governance system would ensure commitment and co-ordinated action between central Government, Regional and Local Authorities and schools, where responsibilities are clearly defined and incentives are provided across the board.

Source: See Ministry of Education (2007).

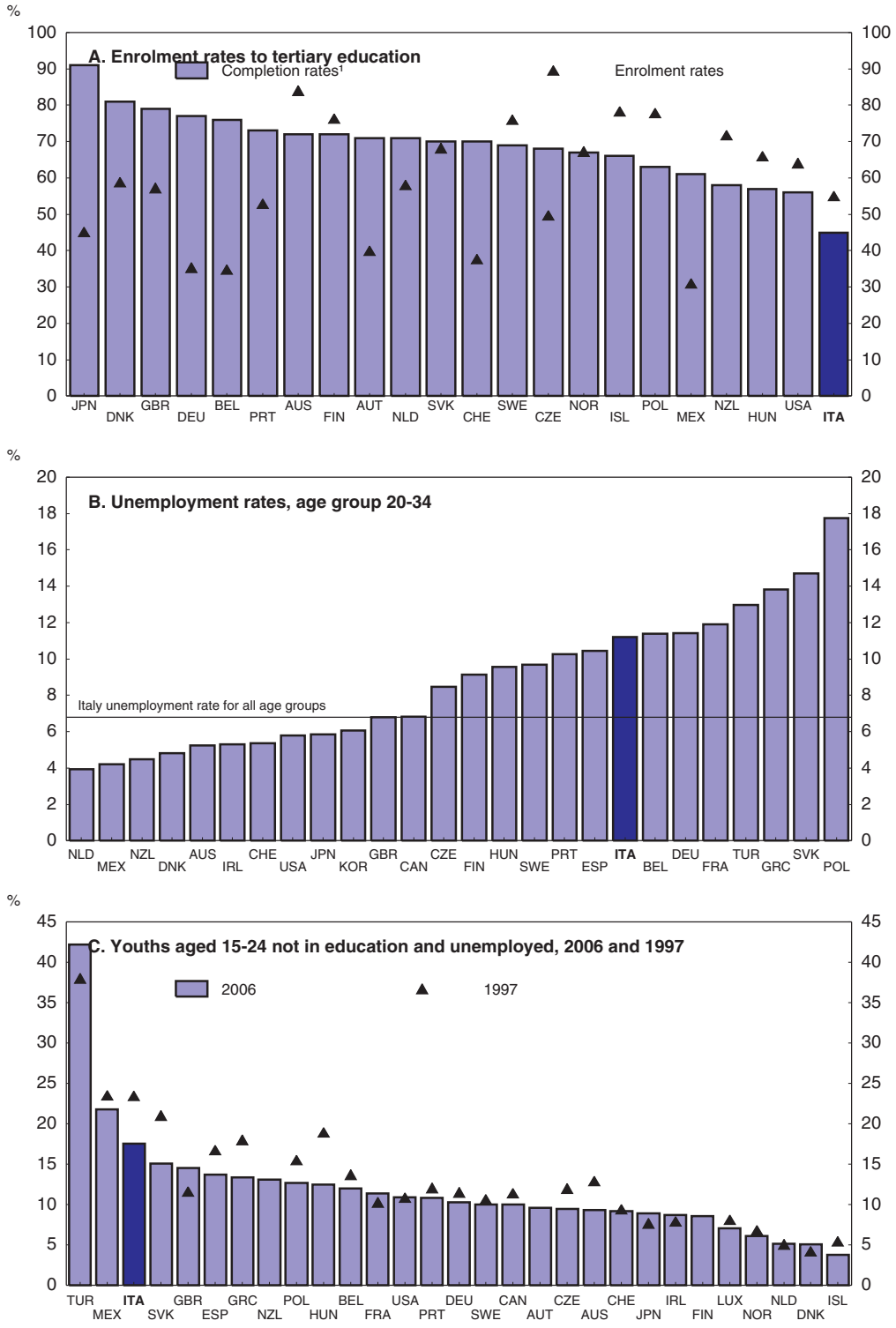
since the mid 1990s, but it stands at 10% of 15-19 year olds and 25% of 20-24 year olds, compared with the OECD averages of 8% and 16% respectively (Figure 4.6, Panel C).[4] Transition to the labour market is especially difficult in central and southern regions, where the unemployment rate of 18-24 year olds is around 26%, as compared to 10% in the North and 13% in the OECD area.

A comprehensive reform is needed to take up all the challenges

So far, government initiatives on school education have focused only on expenditure reduction, although the previous government's 2007 White Paper and the Spending Review (2008) provided a considerable number of recommendations to complement expenditure reduction (Box 4.2). A draft law covering teacher training, incentives and career development was introduced by a member of parliament in July 2008 (Box 4.3), but has yet to be formally adopted by the government. This law is a very good opportunity for putting in place the framework necessary for raising the attractiveness and the effectiveness of the teaching profession, making concrete the possibility of reinvesting some of the saved resources under the Budget Law 2009-2011.

As the rest of this chapter argues, the system needs to be reformed in several dimensions, and piece-meal reforms have less chance of success than broader, integrated ones, notably because they impose the up-front cost of reform on a well-defined category of stake-holders (teachers and schools in this case), but do not spread the benefits across a sufficiently large group of citizens (Høj *et al.*, 2006). Successful reforms[5] are often those that

Figure 4.6. **Low completion rates in higher education and a difficult transition to the labour market**



1. Completion rates in tertiary-type A education represent the proportion of those who enter a tertiary-type A programme and obtain at least one first tertiary-type A degree.

Source: *OECD Education database* and OECD Employment Statistics.

StatLink http://dx.doi.org/10.1787/640204565502

Box 4.3. **Planned legislation on schools**

A draft Law was presented to parliament by Deputy Aprea (the "Aprea" law) with four key propositions:

- Teacher training, to be provided in universities, would last 5 years with greater emphasis on pedagogy and teaching practice. Conditions for access to training would vary for teachers of primary and secondary schools.
- Schools would be able to directly hire teachers through competition or direct recruitment from regional pools of pre-qualified teachers.
- A teaching career would be differentiated into three steps: "beginner" (*iniziale*); "tenured" (*ordinario*) and "expert" (*esperto*), with responsibilities and salaries varying accordingly. Promotion to *ordinario* would be decided by a commission internal to the school. Promotion to *esperto* would require specific training and a final competition. The number of promotions (at both levels) would be fixed by the Ministry of Education every year.
- School governance would be reformed, giving responsibility for administrative, financial and pedagogical decisions to a new school board chaired by the principal. Each school should have a valuation committee to assess school results and quality on an annual basis.

The draft law was presented to parliament in July 2008, but has not been explicitly adopted by the government. Many details that would be required for implementation are not spelt out, including the administrative infrastructure that would be needed for the new training and certification system, and how to integrate existing teachers into the new career structure. Its principles are in line with good practice, however.

bring stake-holders on board for both the principles of a reform and its implementation. In the case of Italy, schools and teachers may have been insufficiently involved in the policy-making process up to now.

Researchers have argued that insufficient consideration of the political economy aspects of reform as well as the narrowness of government measures has been a common feature of past Italian educational reforms, generating distrust among schools (Cavalli, 2000; Cavalli, 2008; Ferratini, 2008). This may help to explain why some of the measures taken, which look appropriate in theory, have not produced the expected results (*e.g.* the law on autonomy). The many conflicting interests at stake in education make reform complicated; involving stakeholders and explaining the motivation for change to the public may help both to design a comprehensive reform and to avoid frequent changes of direction, which can in themselves undermine even well-conceived policies.

Containing spending in primary and secondary education

Trends of spending per student in primary and secondary education and main determinants

While the share of GDP spent on school education is below the OECD average, expenditure per pupil is higher (particularly for primary and lower secondary schools). This feature reflects a historical pattern rather than a recent phenomenon; spending per pupil (in real terms) has grown more slowly than in the rest of the OECD area in recent years. Education has also lost some ground with respect to other public spending (Table 4.1). As in many other OECD countries, the bulk of expenditure on education goes to current expenditure, essentially to pay teachers and other staff. However, the share of capital

Table 4.1. **Education expenditure in Italy**

		Italy	OECD
Total education expenditure, share of GDP		3.3	3.8
Private expenditure, share of total		3.9	8.3
Primary and secondary education expenditure as a share of total public spending		6.7	9
Primary and secondary education expenditure per student	Share of per capita GDP	27	23
	Real growth, 1995-2005	4	29

Source: EAG, 2008.

expenditure, which some studies have shown to be associated with better educational outcomes[6], is slightly lower than the OECD average, reflecting a lack of investment in buildings and infrastructures, which are known to be especially poor in the South of the country (Bratti *et al.*, 2007).

The higher cost of Italian education is largely due to the teacher-per-student ratio being about 50% higher (9.6 teachers per every 100 pupils in Italy, *versus* 6.5 teachers in the OECD area).[7] The ratio is quite homogenous across regions, schools in the South having slightly fewer teachers per student at primary and upper-secondary education but more in early and lower-secondary education. On the other hand, the level of wages is lower in Italy (see sections below).

Many studies have found that the teacher-per-student ratio, or its determinants, have no influence on learning for "median" pupils (*e.g.* OECD, 2004); it does have an impact in classes with a high proportion of pupils with learning difficulties, however. The evidence is more mixed for wages paid to teachers, which appear to be positively correlated to outcomes in some studies (OECD 2008d, Sutherland *et al.*, 2007) but not in others (Hanushek *et al.*, 1999), though in theory higher compensation provides better incentives to enter and stay in the teaching profession. Considering that Italy spends quite a lot due to a relatively teacher-intensive technology, but pays its teachers relatively less, redesigning the trade-off between the number of teachers and wages could increase efficiency. However, as argued in later sections, it is preferable to link salary increases to good performance rather than increasing wages for all teachers unconditionally.

Why does Italy have more teachers per student?

The high teacher-per-student ratio in Italy reflects two sets of factors. First, certain regulatory provisions (on the number of instruction hours, teaching time, school size, class size, allocation of teachers to subjects taught, length of schooling)[8] lead to a large number of teachers. Second, the education authorities seem fall well short of optimising class and school size within the bounds set by regulations.

Taking the first group of factors, the higher teacher-per-student ratio is explained in almost equal proportions by a higher instruction time for children than the OECD average, lower teaching time for teachers and smaller class size, irrespective of the educational level (Table 4.2). Historical political choices, partly based on the questionable premise that more instruction time and smaller class size lead to better outcomes, were at the origin of the current curricular and class structure. While these policy choices ought to be reconsidered in the light of the evidence that the impact of instruction time and class size is small, there is leeway to reduce the cost of education, simply through better planning and allocation of teachers to schools (White Paper).

Table 4.2. **Determinants of teacher per student ratio Italy**

OECD average gap[1] various levels of education, 2006

		Primary schools	Lower-secondary schools	Upper-secondary schools
Teacher per student ratio, gap		1.51	1.30	1.14
Instruction time, gap		1.24	1.17	1.12
Net teaching time, gap		0.90	0.84	0.90
Class size, gap		0.86	0.88	0.86
Teachers per 100 students	**Italy**	**9.4**	**9.7**	**9.1**
	OECD average	6.2	7.5	8.0
Instruction time	**Italy**	**990**	**1 089**	**1 089**
	OECD average	796	933	971
Net teaching time	**Italy**	**735**	**601**	**601**
	OECD average	812	717	667
Class size	**Italy**	**18.4**	**21.0**	**23.4**
	OECD average	21.5	24.0	27.0

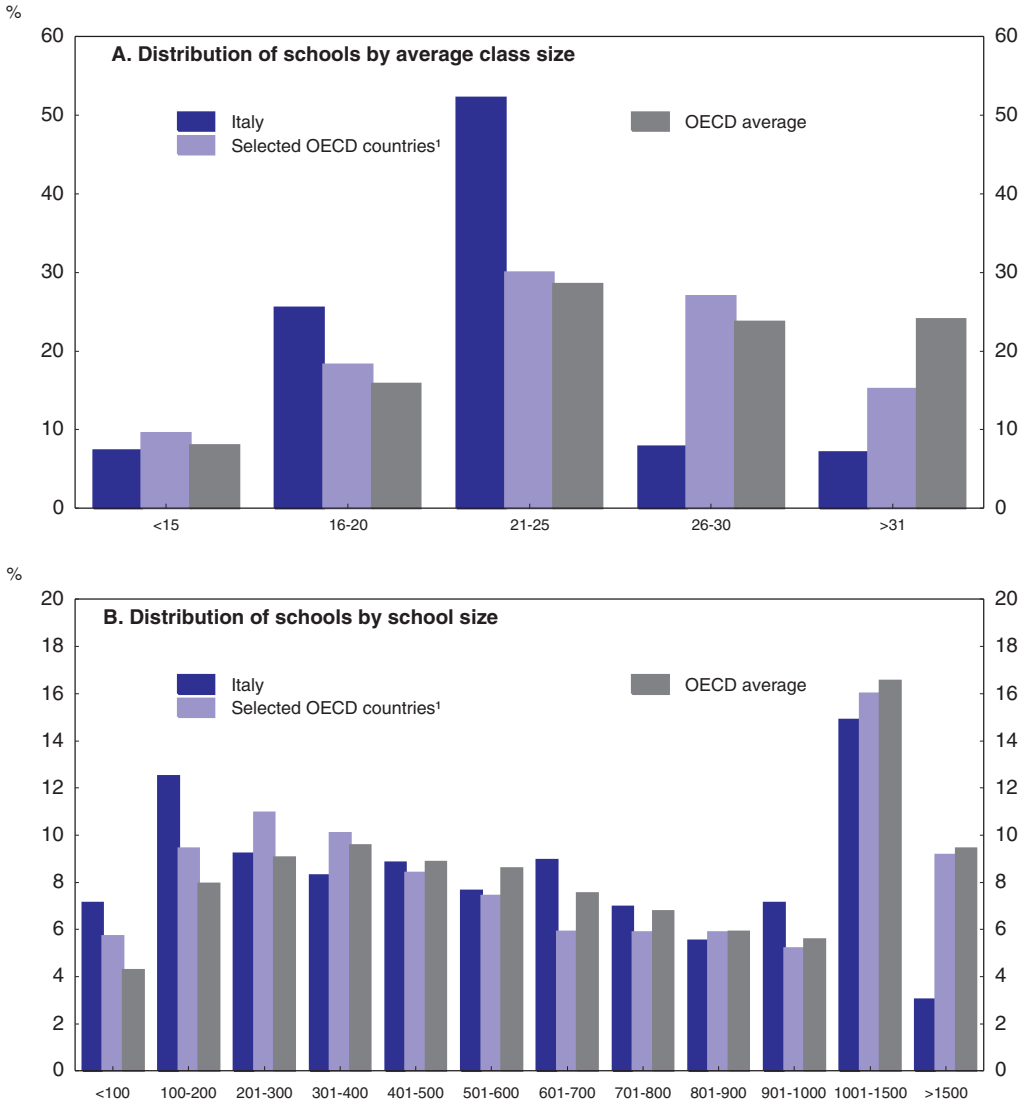
1. The gap is calculated as the ratio of the Italian figure to the OECD average.

Source: OECD calculations on EAG, 2008, Tables D1.1, D2.1, D2.2, D4.1; and on PISA data as concerns class size for upper-secondary schools.

According to current legislation, classes can include 10 to 25 pupils in primary school, 15 to 25 in lower-secondary school and a maximum of 25 pupils in upper-secondary school (thresholds can be exceeded by 10%). In practice, however, class size is skewed towards the lower bound of the tolerated interval, with an average of 18.5 pupils in primary schools, 21 in lower-secondary schools and 22 in upper-secondary ones (but with one class in four with less than 15 students in primary schools and one in three in lower-secondary schools). Though Italy is one of the European countries where the regulatory provision on the maximum class size is the lowest, there are other countries with an equally restrictive regulation but where the actual class size is bigger, such as Hungary and France (Eurydice, 2008). Indeed, even if average school size is relatively comparable to that of other OECD countries, class size is smaller in Italy: schools have many small classes (Figure 4.7, Panel A). Italy stands out for the small size of its classes and for its high number of small schools, even when compared with countries where expenditure per student is higher (Figure 4.7, Panel B).

Geographical patterns do not explain the large number of small schools and small classes: they are as frequent in large as in small towns. According to the 2007 White Paper, the small size of buildings does not constrain the expansion of schools, although there may be some infrastructural problems especially in buildings that were not initially conceived to be schools. Generally, classes tend to be small because pupils are assigned to classes within relatively small groups (the school section, *plesso*); the existence of spare capacity in a class in one section is not taken into account when calculating the number of classes needed in another. According to the White Paper, if classes were put together at school or at commune level, class size would be reduced by 2 to 3 pupils in primary schools and by 1 pupil in lower-secondary school. This would eliminate the class size gap to the OECD average for primary schools and reduce by one-third the gap at lower-secondary level. No substantial gains would be achieved for upper-secondary schools, where classes are bigger and more efficiently put together. These gains would be pretty much the same irrespectively of the size of the commune.

Figure 4.7. **Small schools and small class size in Italy**



1. With higher expenditure per student than in Italy.

Source: PISA 2006.

StatLink http://dx.doi.org/10.1787/640204710288

Another factor underpinning the high teacher-per-student ratio is the specific national provisions for disabled students which, since they aim at their integration within the ordinary school system, imply additional teachers (nearly 90 thousands) and a smaller class size.[9] There are no comparative studies on the cost-efficiency of this model, as compared for instance with that of other OECD countries where special needs children go to special schools and/or where part of the funding comes from social protection. The integration of disabled children is an important goal *per se*, however there is some leeway for increasing efficiency as certification for disability could be stricter and the allocation of teachers supporting disabled students could be organized at a wider territorial level instead of the school or class level.

Another source of inefficiency is the timing and the allocation of teachers to schools, which occurs in three stages each year and is managed by the school with little transparency.[10] According to the 2007 White Paper, schools' negotiation in the first stage is deliberately opaque in order to leave the possibility of hiring additional teachers, so as not to reduce the number of classes or teaching positions. Neither schools nor the regions are held responsible for poor planning of classes, so that none has strong incentives to make appropriate use of the available information. If this system is retained, future reductions in the number of teaching positions will have the same impact on transparent and efficient schools as on those which have not fully disclosed information on their actual needs. This highlights a limitation of the government's plan to make across-the-board reductions in the number of teachers, without taking into account past efforts to contain class size.

Besides leading to inefficient school planning decisions, the current system produces insecurity of employment and distorts teachers' incentives (see Barbieri *et al.*, 2007 and section below). To address this concern, the White Paper suggested introducing multi-year planning of teacher needs, on the basis of demographic projections at the regional level. Multi-year planning can be quite resource-intensive and perhaps not even necessary if demographic changes are small and some flexibility is preserved, but it supports negotiation process and transparency in the allocation mechanism. Moreover, it makes it possible to face the specific challenges set by uneven demographic trends in the country considering the relatively limited mobility of teachers across regions as well as the regional heterogeneity of permanent *versus* temporary jobs. The delegation of planning authority and accountability to regions is certainly desirable, and is consistent with the fiscal federalism process under way.

In most cases, therefore (with the notable exception of schools with a large proportion of pupils with learning difficulties, such as vocational schools in southern regions), there is substantial leeway for increasing class size without harming student achievement. For most schools, new class size criteria should be defined (in terms of teacher-per-student ratio) so as to make them consistent with the agreed national standard level of services (*Livelli Essenziali di Prestazione*) benchmarked at standard cost. Under the new fiscal federalism arrangements, it would be logical to make regions responsible for defining and implementing these targets; moving the planning of class and school size to a higher level (regional or provincial), would increase the economies of scale in school network planning. Similarly, regions should plan transparent consultation with schools to determine the required change in the number of teachers. Alternatively, regions could directly manage the teacher allocation process, by collecting students' preferences and assigning students to schools, taking into consideration students' preferences and travel distances.

Among other possible ways to increase cost-efficiency, the recent measures to reduce instruction time by about 10% at all educational levels seem appropriate: statistical evidence suggests that longer overall instruction time has no beneficial impact on educational achievements. But such reductions should be focused on non-core activities, where instruction time is long by OECD standards, rather than on mathematics and scientific subjects, where Italian students are particularly weak and where there is evidence that instruction time matters. Lengthening teachers' teaching hours could contribute to expenditure reduction if salaries were unchanged, but, with teachers' wages already relatively low, such an increase in the number in teaching hours might not seem realistic.

The main drivers of educational outcomes

A growing literature, especially using PISA data (*e.g.* Wößmann *et al.*, 2007a), has identified a number of key facets of education policy that influence educational outcomes. Many, though not all, of the results confirm the intuition that outcomes respond to incentives when the system is designed to be performance oriented. Thus, autonomy and accountability are key concepts, the first requiring that teachers and schools are free to organise teaching and teaching methods in the way they think will give the best results, the second requiring that decision makers are held to account in some way for the consequences of their decisions. Autonomy (such as in staffing decisions or budgetary allocation within schools) *without* appropriate accountability can be worse than no autonomy at all. This literature has also produced the perhaps surprising result that the overall level of educational spending, or the pupil-teacher ratio, has no clear impact on outcomes, with the exception of pupils coming from a difficult socioeconomic background and pupils at the very early stage of education (Piketty and Valdenaire, 2006; Gufstafsson, 2003; OECD 2004). Nevertheless, other plausible influences on outcomes, such as instruction time for particular subjects (though not overall instruction time), and nationally standardised exit exams to provide objective information on performance, are confirmed as important.

For this *Survey*, an empirical exercise was conducted using PISA data, building on the results of Wößmann *et al.* (2007a) to identify other influences on education performance particularly in the context of regional variation within Italy (Box 4.4; details can be found in Annex 4.A1).

Box 4.4. **An empirical analysis of determinants of educational outcomes in Italy**

The empirical analysis was carried out to identify the main determinants of PISA scores, both from a cross-country perspective and within Italy. The analysis was first conducted at the OECD level, so as to highlight international education best practices, taking into account a number of determinants of pupils' achievements. This analysis was repeated separately on the Italian sample alone, so as to assess whether there are significant differences among the main drivers of educational outcomes between the OECD as a whole and Italy. A third analysis focuses on Italian regional disparities in educational achievements and aims at assessing whether and how educational policies should respond to these differences and how they should better adapt to local contexts.

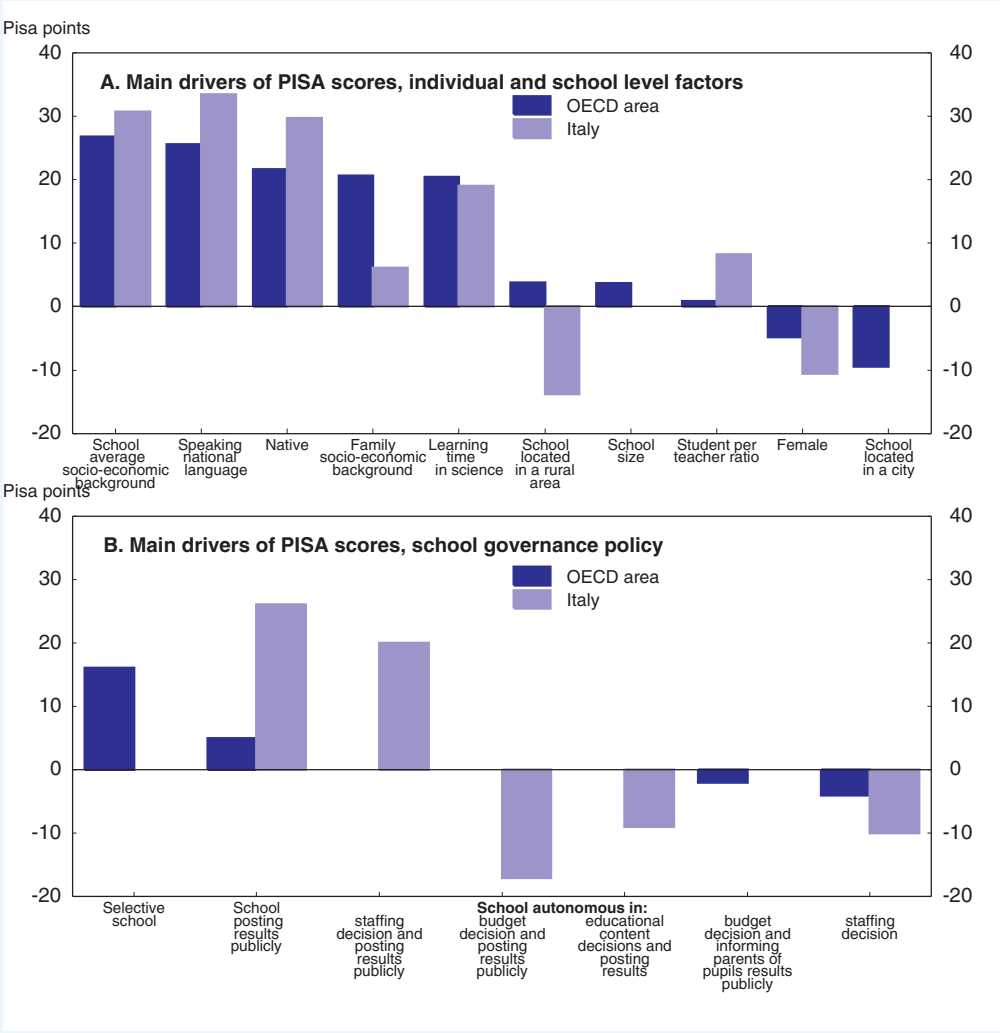
Illustrative results from these two analyses are shown in Figures 4.8 and 4.9 (see Annex 4.A1 for detail on the estimation). Figure 4.8 shows the impact of the main determinants of PISA scores in the OECD sample and in the Italian sample. Figure 4.9 shows the relative contribution of PISA score determinants to the overall explained variance of PISA scores. The figure reports the results for the overall Italian sample and separately for the North and the South.

The most important drivers of PISA scores are individual characteristics related to family status and origin. The number of instruction hours in science also matters a lot for attainment in science. School-governance policies, such as accountability and autonomy, matter but explain less of the overall distribution of performance, especially in the OECD-level analysis. In the national sample, regional fixed effects, school location and school average socioeconomic background are the strongest determinants of PISA scores in Italy (Figure 4.9). School governance policies again explain less, but their influence is similar across the country. The influence of the type of secondary school is strong and captures a lot of the influence of school average socioeconomic background, especially in the South. Teacher mobility (defined by three indicators: teacher turn-over; exit rate from a given school; willingness to move to a given school),

Box 4.4. **An empirical analysis of determinants of educational outcomes in Italy** *(cont.)*

intended to proxy the quality and the continuity of the teaching environment, also affects pupils' results. Estimates of the effect of both upper-secondary school type and teacher mobility should be interpreted with caution, as they may be endogenous to pupils' ability. The annex discusses this issue more in detail.

Figure 4.8. **What matters for educational outcomes?**



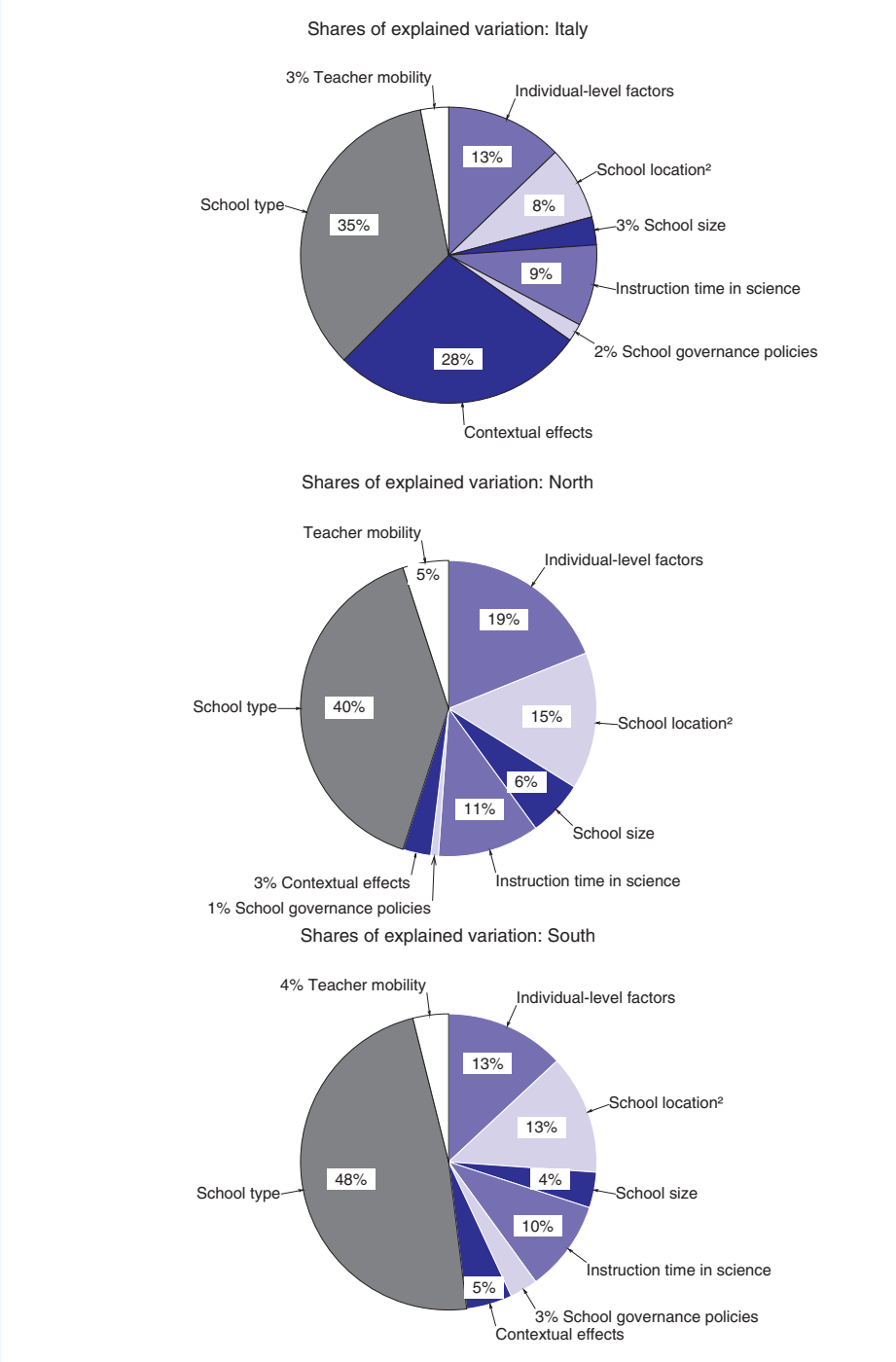
1. The two figures show the standardised coefficients obtained when regressing PISA scores on a number of individual and school-level variables (see Annex 4.A1, Table 4.A1.2, Columns 1 and 2). Standardisation is obtained by multiplying the regression coefficient by the standard deviation of the explanatory variable, if the latter is continuous (this is indicated by an asterisk close to the variable) or dummies variables, coefficients shown correspond to those directly obtained in the regressions. All coefficients that in the regressions were not significantly different from zero were set to zero. Coefficients read in terms of PISA points: for instance the fact of speaking the national language increases PISA scores by 26 points in the OECD area and 33 in Italy. Fuller information on the regression results, with robustness analysis around the baseline specification, is given in Annex 4.A1.

Source: OECD calculations.

StatLink http://dx.doi.org/10.1787/640224586842

Box 4.4. **An empirical analysis of determinants of educational outcomes in Italy** *(cont.)*

Figure 4.9. **Explaining educational outcomes: the North and South are not so different**



1. The charts decompose the total variance explained by the regression model into the relative contributions of the main sets of explanatory variables. Each part of the pie is calculated as the partial R2 of the regression for a specific set of explanatory variables. The regression model for Italy is that in Table 4.A1.3 Column 1; details of the other results will be available in a working paper.
2. School location and average socioeconomic background.

Source: OECD calculations.

StatLink http://dx.doi.org/10.1787/640228117486

Among the non-policy determinants of students' results, social origin has a very important influence, both at the individual level and at the school level (*i.e.* through "peer" and "contextual" effects, respectively) as well as migrant status. Across the whole OECD sample, one standard deviation of the index of socioeconomic background is associated with 21 PISA points, *i.e.* the equivalent of half of one school year. The impact of social origin is slightly higher when it operates through social clustering at school level (27 PISA points). Pupils born out of the country and those who do not speak the national language at home have substantially lower results than natives. In Italy, the impact of family background at individual level is smaller than in the OECD in general (and tends to decrease at higher levels of socioeconomic background), but the family has a greater influence in school choice. The disadvantage associated with immigrant status or from not speaking the native language is slightly higher in Italy than in the OECD area average.

Autonomy and accountability of schools should be increased across the country

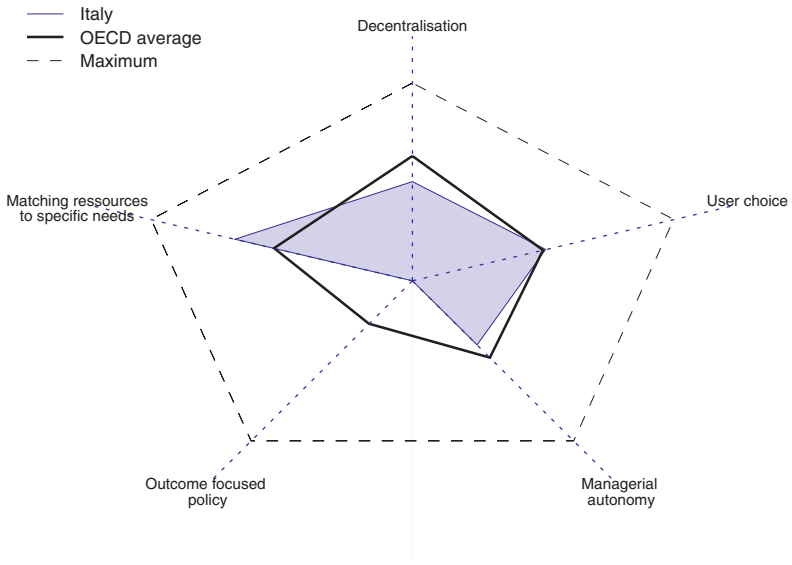
This empirical exercise confirms that institutional arrangements of the school system, in particular the distribution of responsibilities among actors and the importance of performance incentives, do affect educational achievements quite significantly. This is true not just across different OECD countries but also in accounting for variation within Italy. The result that school autonomy in staffing decisions is detrimental for educational outcomes unless it goes together with accountability is especially noticeable in Italy, although the reliability of the underlying data is uncertain (in principle there should be very little variation in the – very low – level of school autonomy). By contrast, in the Italian sample, autonomy in choosing the educational content and in allocating the budget within the schools are associated with lower PISA scores even in schools assessed as relatively accountable. This may well be related to the fact that these two forms of autonomy are widespread among Italian private schools, which (in a similar statistical exercise) tend to perform worse than public schools.

Current regulations do give school principals some notional autonomy. But, as discussed in the following sections, they do not in practice have the freedom they would need to manage their schools so as to improve results. Furthermore, Italy lags behind other countries in autonomy, but even more so in accountability (Figure 4.10). Schools must be made accountable for their results, to ensure that autonomy is used for the sake of increasing performance.

Regional variation and weak vocational education: treat results with care

Certain regions, and certain types of school – those concentrating on vocational education and training (VET) programmes – are associated with poor results. To help interpret this and other patterns in the data, a similar econometric analysis to that discussed above was carried out separating the country into two macro-areas (North *versus* Centre and South). Contextual variables, such as local labour market conditions and crime rates, explain a considerable part of the disparities in performance. The contribution of education policy-related variables to variation within the two regions is very similar (Figure 4.9 and Annex 4.A1). This suggests in turn that institutional settings are quite similar across regions, with no region specialising in best-practice management, despite the existence of some statutory autonomy in running schools. Unfavourable socioeconomic and other contextual effects are better explanations of poor performance in certain parts of the country than variations in school governance. However, the analysis may omit other variables capturing

Figure 4.10. **Italian schools have relatively little autonomy and accountability**



Source: OECD, Gonand *et al.*, Economic Department Working Paper, No. 543, 2007.

StatLink http://dx.doi.org/10.1787/640238746152

school management and organisation which could be relevant to the Italian context (see Paletta, 2007).

The analysis of the Italian sample also shows that pupils in VET schools (of various orientations) perform substantially worse than peers attending general programmes (see Annex 4.A1): in fact the type of school attended is the next most important driver of PISA scores after regional location. This is in line with OECD (2007), which shows that the earlier a system segregates children between general (*i.e.* academically-oriented) and vocational education and training (VET) programmes, the worse is the overall average performance (*i.e.* taking both VET and general programmes together). Likewise, a longer instruction time in science, which is also a feature of general programmes compared with VET ones, also brings better results.

However, VET programmes tend to attract weaker students, so that one cannot simply interpret the statistical effect of attending a VET school as an indication that these programmes are of a lower quality. In fact it is quite likely that the direction of causality is twofold: VET schools have to educate pupils with lower skills but, at the same time, VET schools offer a less good education because better teachers are not attracted to such schools (Barbieri *et al.*, 2007) and possibly because the depth of curricula is not as satisfactory as in the academic upper-secondary schools. Overall, since it is very difficult to disentangle these two directions of causality, policy makers should be aware that VET schools are probably attracting students with learning difficulties, but not providing them with enough tools to overcome those difficulties.

This discussion and the empirical analysis suggest a number of policy implications:

1. Mechanisms (such as seniority-based choice) that allow teachers to select their school but where schools cannot choose teachers (see below), should be removed. The statistical analysis shows that teacher mobility can be bad for performance, and the discussion highlights how more experienced teachers may avoid VET schools if they can.
2. Following the research on the influence of tracking, the first two years of upper-secondary education should follow a common track in all schools, specialising only in the last three years. This would reduce variation in pupil results and increase the overall average level of attainment.
3. While free choice for upper-secondary schools can increase competition among schools and ultimately their quality, it would be desirable to introduce orientation policies for pupils choosing between VET and other types of school to take into account their aptitude and ability (rather than simply residential criteria or families' perhaps uninformed requests), and to provide low-income high achievers the same choices as their more advantaged peers.

Specific policies may be needed for low-performing schools

The overall education reforms discussed so far and developed further below should improve outcomes in most schools. But there will still be some schools where they do not work, or which operate in such critical conditions, mostly in central and southern regions, that it is unlikely that they will be sufficient. Reforms that increase autonomy and accountability, though they should be applied to these schools as much as to the rest, might not be sufficient to compensate for their initial disadvantage. To protect pupils in such schools, mechanisms are needed to identify and respond to the problem. This might take the form of extra resources, either from central government or regional government, including the possibility to recruit highly-qualified teachers as well as restructuring: for example, the appointment of a new principal as well as the specification of targets, means and timing to achieve them. When schools continue to fail pupils, even after the adoption of various remedial actions, their closure should be envisaged, with the pupils being transferred to other schools.

Introducing schools' incentives to performance

The lack of evaluation hinders performance

Making schools accountable is impossible without adequate information. This is needed to provide feedback to both pupils and teachers on how well pupils are learning; without it, fixing incentives for schools to pursue the goals set by the education system (average performance, equality of learning opportunities, social cohesion, etc.) is largely impossible. Increasing attention has been given in the literature to the forms under which feedback is provided to the various actors in the education system (Box 4.5). While most agree that providing feedback is a key condition for improvement, it is still controversial how evaluation should be carried out in practice and what consequences should be attached to it.

OECD countries display a diversity of practices for taking stock of educational performance, which can be grouped into five categories (OECD, 2008f): external standard-based examinations at national level (usually at the end of an education cycle), national and international assessments, external evaluation/inspection (at national or regional

Box 4.5. **Relation between feedback arrangements and schooling outcomes, some results from the literature**

Type of feedback	Effect on quality of outcomes	Effect on equity of outcomes
Curriculum-based external exit exams	Strongly positive	Benefits low SES students, but benefits high SES more.
Use of assessments for decisions about retention and promotion	Strongly positive	Neutral; benefits low SES students in the same way it benefits high SES students.
Use of assessment for grouping students by ability and performance	Negative	Neutral; benefits low SES students in the same way it benefits high SES students.
Monitoring of teachers by school heads/senior teachers	Positive	Benefits low SES students, but benefits high SES more.
Regular standardised testing	Positive in presence of exit exams; negative otherwise	Neutral.
Subjective assessment by teachers	Slightly positive	Benefits low SES students more than it benefits high SES students.
Benchmarking of school performance against that of other schools, district and/or national performance	Positive	Neutral; benefits low SES students in the same way it benefits high SES students.

Note: SES is socioeconomic status.
Source: The table is reproduced from OECD 2008f, based on Wößmann *et al.* 2007a and 2007b.

level) of schools, internal evaluation of schools, assessment tools developed by teachers. Italy has very few evaluation tools at the moment (Table 4.3). The few that exist have no influence on schools, teachers or (for the most part) pupils.

The only systematic evaluation of pupils' attainment comes in examinations at the end of lower-secondary and upper-secondary levels. However, while all children across the country are subject to examination at these times, lower-secondary exams in particular are not standardised across the country. The Ministry of Education provides schools and teachers only with general guidelines about the objectives of the exam and the curricular objectives that it should test. Exam standards (for both preparation and grading) remain in the hands of schools. In 2008, however, the lower-secondary exam included, as a pilot, a national standardized test, in addition to the traditional written and oral examination. The standardized test from the year 2009 onwards will account for one fifth of the overall final score (Box 4.6). Another limitation of the current system is that while passing the lower secondary exam is necessary for access to upper-secondary school, grades have no impact on the choice of school.

Unlike the earlier exam, the upper-secondary education final exam is the same for all candidates (according to the educational programme they are following). However, it is not assessed by a fully external commission; unlike in most other OECD countries, pupils are largely assessed by their own teachers. The scope of the exam is also restricted to a few disciplines while in many other countries it covers almost all subjects studied. It is therefore not surprising to see that results at this exam are not in line with those from international assessments, with little variation across regions and educational programmes (*La scuola in cifre, 2007*).

To improve information it will thus be necessary for lower and upper-secondary exit exams to be fully set with national standards and external supervision and grading. For lower secondary, this means that improvements on the 2008 exercise must be made, by putting in

Table 4.3. **Italy has few school or pupil evaluation tools**

	Final examination at the end of lower-secondary level	National periodical assessments in your country	Requirement for school evaluation/inspection	Requirement for school self evaluation
Australia	No	Yes	1 per 3 years	1 per year
Austria	No	No	None	None
Belgium (Fl.)	No	Yes	1 per 3 years +	None
Belgium (Fr.)	m	m	m	m
Canada	m	m	m	m
Czech Republic	No	No	1 per 3 years	1 per year
Denmark	Yes	No	m	m
England	No	Yes	1 per 3 years	1 per year
Finland	No	Yes	m	m
France	Yes	Yes	m	m
Germany	m	m	m	m
Greece	m	m	m	m
Hungary	No	Yes	a	1 per 3 years +
Iceland	Yes	No	1 per 3 years	1+ per year
Ireland	Yes	No	1 per 3 years +	None
Italy	**Yes**[1]	**Yes**[2]	**None**	**None**
Japan	No	No	m	m
Korea	No	Yes	1 per 3 years	1 per year
Luxembourg	No	Yes	None	1 per year
Mexico	No	Yes	m	1+ per year
Netherlands	No	No	m	m
New Zealand	No	No	1 per 3 years	1 per 3 years
Norway	Yes	Yes	m	none
Poland	m	m	m	m
Portugal	Yes	No	1 per 3 years+	1 per year
Scotland[1]	Yes	Yes	1 per 3 years+	1 per year
Slovak Republic	m	m	m	m
Spain	No	No	None	None
Sweden	No	Yes	1 per 3 years +	1 per year
Switzerland	No	No	m	m
Turkey	Yes	Yes	1 per 3 years	1 per year
United States	m	m	m	m

1. Italy does not have fully external standard-based national examinations (exams are prepared and run by teachers).
2. Currently, national periodical assessments in Italy are done on a voluntary basis because of the lack of a legal obligation for the school to participate.

m: Data is not available.

Source: EAG 2008, Table D5.1, D5.2 and D5.5.

place: *a)* external, fully-independent administration of exams (*e.g.* in written exams this can be reinforced by the anonymity of assessors); that would imply a new, specific law; *b)* sizeable investment in the school administration of exams and in the follow-up expected from results to the exams; *c)* sanctions to be imposed on opportunistically behaving schools. Matriculation exams at the end of upper secondary education should possibly be extended to cover more subjects and must in any case be graded by external evaluators.

National assessments have been undertaken in recent years, since the national quality assessment agency INVALSI was instituted.[11] There has been increasing involvement of schools but evaluation procedures remain imperfect because participation is on a voluntary basis (due to the lack of legal obligation for schools) and because additional resources would be needed to prevent opportunistic behaviour, through for instance recruitment of external test administrators. In addition, in order to compute value-added indicators, it would be

Box 4.6. **Results and lessons from the first national external standard-based exam at the end of lower-secondary education**

In the school year 2007-08, the law introduced an additional, standardised test in mathematics and Italian to be run at the end of lower-secondary school. The test was prepared and administered by the national agency for evaluation of the education system (INVALSI); INVALSI was also responsible for preparing a final report and returning detailed information on the results of the exam to every single school at class level. As for the other national exams, the test was supervised by a board of examiners, composed by school's teachers and an external member acting as president.

While most welcome in principle, the test was only partly successful in practice. Since examiners did not exert strict control over the administration of the test, many schools helped students with the test (see INVALSI, 2008). In addition, many schools did not take into account the results of this test in the matriculation grade (the Ministry of Education having left them with the freedom of considering or not the results for the matriculation grade). However, as from the school year 2008-09, schools have the obligation to have the standardized test counting for one fifth of the final grade.

The experience of other countries has shown that, to avoid cheating in high-stake tests, it is of the uppermost importance to clearly communicate the purpose and the nature of this test to schools, as well as to undertake a previous consultation on its actual modalities and the consequences that would be attached to it. From this preliminary experience a certain number of conclusions can be drawn:

- It is necessary to fully explain the rationale and the implications of the exam to schools and to consult schools and teachers' organisations on test content.
- The external examiner and the school's teachers should be held responsible for unfair administration of the test.
- Specific follow-up to schools with mediocre results should be provided. Teachers should be given training on how to use feedback received from this test to improve performance.

important to test students at the start and the end of an education track. Due to the three-level structure of the Italian system, an accurate measure of value-added would require testing pupils at six points in time. Because of its cost and the possible assessment fatigue this would imply, the number of tests should be set at the minimum (for instance four levels or three if value-added indicators are calculated for secondary education only). It is important that national assessment tests are continued, intensified if possible and conducted on all schools, if they are to be used to give feedback to practitioners. All in all, it is necessary to increase the financial and human resources of the evaluation agency as well as to strengthen its independence from the Ministry of Education, as suggested by the White Paper. To spread a wide acceptance of an evaluation culture, the contents and modalities of national assessment tests should be discussed and possibly agreed with school representatives and school trade unions.

Around one third of OECD countries have a national or regional agency that regularly inspects schools. No such agency exists in Italy. Where there is little autonomy or accountability at school level a central inspectorate would serve to monitor both teaching quality and efficiency in the management and administration. It can help the educational authorities to identify weak schools in order to provide them with tailor-made support. An alternative is to encourage schools to engage in self-evaluation: defining objectives and the

strategy to reach them; relating specific schools' objectives to the system ones, as specified by national curricula; and provoking an internal discussion among school staff to reflect upon areas of improvement and of professional development. Such methods are quite widespread in the OECD, though often without statutory criteria on the procedures to be followed. Nevertheless, the objectives and the benchmarks that schools must meet are nearly always spelt out (OECD 2008f).

In Italy, two pieces of regulation encourage self-evaluation practices.[12] In particular, the regulation on school autonomy states that schools are free to choose the criteria for periodic assessment of the goals established by the school plan (Piano dell'Offerta Formativa, POF). This assessment is exercised by the teachers' board, headed by the principal. The school plans should in principle set the actions necessary to fulfil schools' context-specific goals, while remaining in line with national guidelines on goals and methods. They are meant to be a tool to help schools use their own discretion on a number of curricular matters such as optional disciplines taught and instruction time but in practice they seem to be a meaningless exercise in many Italian schools (Madama and Maino, 2007). The Ministry of Education has not systematically monitored the plans in recent years, although wide-scale monitoring was carried out in the early years of their implementation in collaboration with the agency for Educational Innovation and Research (INDIRE); thus, there is the concrete risk that schools may see them more as a burden than as a useful tool, probably because the advantages are obscure to most teachers and families and the consequences of ignoring them are minimal.

In these conditions school development plans should either be reformed or abandoned. Reform could be part of a programme to increase accountability. This needs to help school management to take stock of pupils' progress and to encourage them to participate more actively in the definition of assessment methods, aiming to standardise assessment across teachers and to benchmark on national or international examples of best-practice. Equally, developing national or regional capacity for school inspection could be designed to support both accountability and internal evaluation. A national inspectorate would be best placed to monitor variation in regional performance if this is a concern once the new fiscal federalism arrangements are in place.

Improving teaching quality

Although it is clear that teaching quality matters above everything else for achieving good educational outcomes, it is not easy to identify good teachers and teaching methods that give the best results. A widespread view is that the initial qualification of teachers is a necessary but not a sufficient condition for good teaching. Professional experience and continuing professional development over the career are also important factors, but the most crucial element seems to be the motivation to teach and to help pupils improve through time. Generally speaking, the motivation of Italian teachers seems to be relatively weak, the result of inadequate policies and institutional settings. This section analyses how these policies and settings need to be changed to get the most out of teachers' skills and abilities.

Composition of the Italian teaching workforce and the link with teaching quality

The average age of Italian teachers is above the OECD average, and there are more women (OECD 2008a, see also Barbieri *et al.*, 2007). These two features have no clear implications on the average quality of Italian teaching: an older workforce is more

experienced, but may also be less qualified and less able to satisfy the needs of new generations. The share of women teachers is not linked with educational outcomes, but the increasing feminisation of the Italian labour market may have resulted in a female brain-drain from the education sector, traditionally a sector where the most gifted women would work (Hoxby and Leigh, 2004, establish this for the United States). In addition, the compression of teachers' wages *vis-à-vis* that of other professions may also have affected average teacher quality in Italy.

Cross-country statistics on the qualification of teachers are not available. However, it is likely that, as for the population as a whole, Italian teachers lag behind in terms of human capital. According to Barbieri *et al.* (2007), 41% of teachers have no more than an upper-secondary education; low educational attainment among teachers is more prevalent in the South than in the North. Only 27% of primary school teachers have more than an upper-secondary diploma; this reflects different formal access requirement to the teaching profession for different grades taught but does not necessarily result in lower teaching quality.[13] Teachers have better graduation marks than average, suggesting that their human capital is above average, at least. There is also some evidence that the proportion of teachers with a lower initial socioeconomic background is rising (Cavalli, 2000). This trend is common in other OECD countries; while its implications for teaching quality are not clear, it is possible that it is associated with a loss of self-perceived prestige attached to the profession, also frequently reported in other OECD countries.

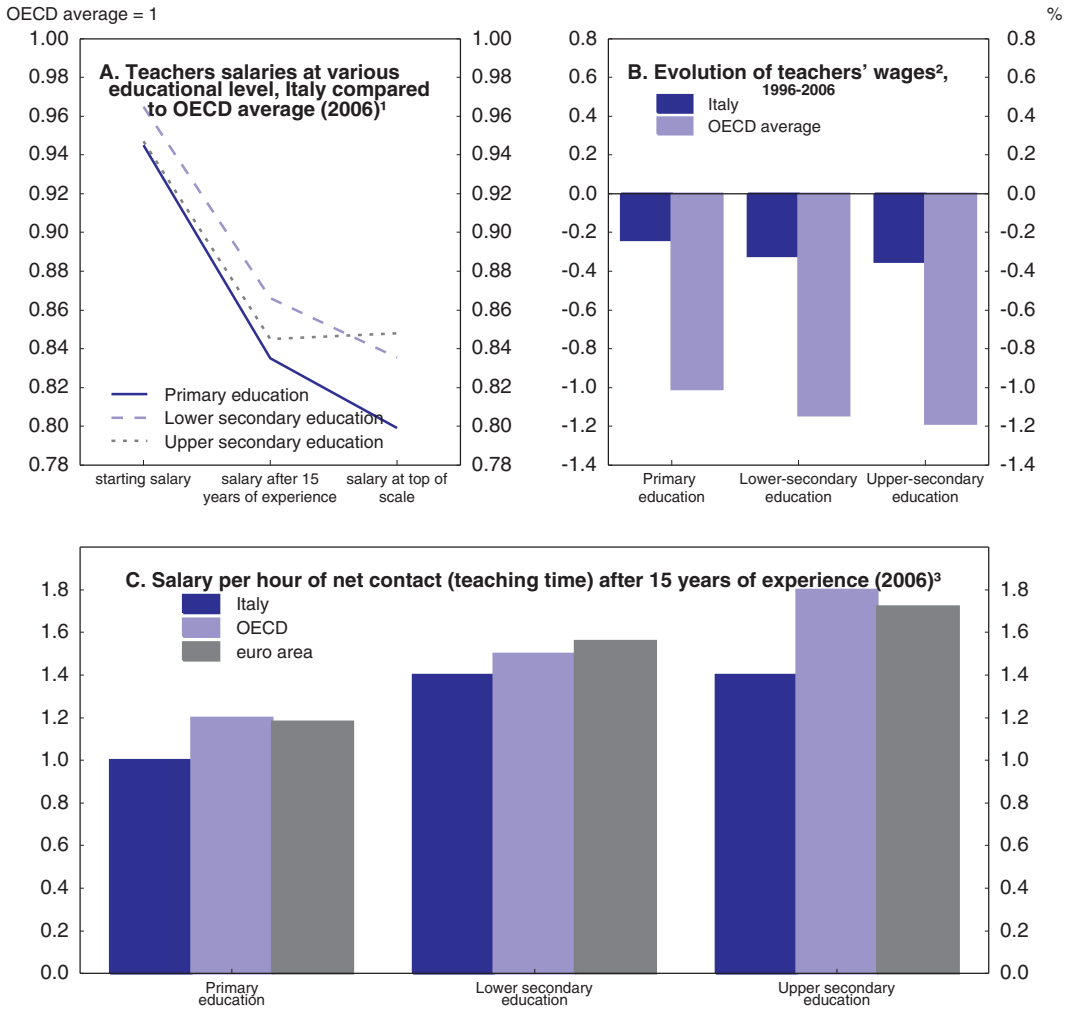
A relatively low-profile profession…

Italian teachers are less well paid than their average OECD counterpart (although the gap has declined somewhat over the last ten years), in absolute terms, with respect to GDP per capita and on a per hour basis. This is true at all educational levels taught and at various points of their career (see Figure 4.11; see also OECD, 2008a). The largest differences are for more experienced teachers and for those in primary and upper secondary schools. They also typically earn less than Italians of similar levels of education in other professions, though this gap too has recently been declining slightly. Finally, because teachers are paid under a national contract that takes no account of the lower cost of living in the south, real wages are lower in the North than in the South; however, the cost of living has been rising faster in southern regions.

In most OECD countries, teachers' wage structure is quite flat (OECD 2008a). In Italy this wage compression is particularly strong. Salary increases depend on a very narrow range of factors (*e.g.* teaching in a disadvantaged, remote or high-cost area, or some involvement in management responsibilities – though this only results in a small additional incidental payment, which is often paid late). In some countries (*e.g.* the Netherlands, Denmark and Finland) teachers' wages are based on a larger and more diversified number of criteria, resulting in higher wage differentiation along teachers' careers and according to effective responsibilities taken. This arguably creates stronger incentives for the profession as a whole.

Another crucial aspect in comparing the relative attractiveness of teaching across OECD countries is contract and career stability. The number of teachers with temporary (sometimes very short[14]) contracts has increased significantly in the last ten years, especially in primary and lower secondary education: the ratio of fixed-term to tenured teachers has tripled. There are now four tenured teachers for every teacher on a temporary contract; in other professions the average is around 6 to 1, and for the economy as a whole it is about 8 to 1. This suggests somewhat more "precarity" in teaching than elsewhere, and

Figure 4.11. **Italian teachers' wages are lower than the OECD average, but the gap has been closing**



1. The Panel A shows the ratio of normalised wages for Italy to normalised wages for the OECD area as a whole, where normalisation is obtained by dividing wages by GNP per capita. The chart reads as follows: in primary education the top salary in Italy is 20% lower relative to GNP per capita than in the average OECD country, while in lower and upper secondary education the top salary is respectively 16% and 15% lower in Italy than in the average OECD country.
2. The Panel B shows the change of normalised wages (*i.e.* divided by GNP per capita) for Italy and for the OECD area between 1996 and 2006. The data refer to a teacher with 15 years of professional experience.
3. The Panel C shows teachers' hourly wage divided by average national productivity, measured as GNP/(hours*employed), for Italy, the euro area and the OECD area.

Source: Education at a Glance, 2008.

StatLink http://dx.doi.org/10.1787/640247302433

its degree has also risen faster than the average. But without systematic comparative data for other countries, and given the high degree of job security once tenure is obtained (see below), it is not clear whether this is a major problem for recruitment of good teachers.

Apart from financial and contractual considerations, teachers' careers are not attractive by international standards (OECD, 2004, and OECD, 2008a). Formal professional development is relatively limited in Italy, being neither compulsory nor required for promotion. Teachers have to bear the cost of training, including leave, since there is no

statutory research or training leave (OECD, 2004, Table 4.3). This situation is very different from that of other OECD and non-OECD European countries, where in-service training is part of teachers' professional duties (*e.g.* Finland, the UK, Germany) or is at least required for promotion (France, Sweden). Overall, there are no specific initiatives taken at central or at school level for encouraging teacher participation in continuing professional development activities (OECD, 2004; Eurydice, 2008).

There is no single best-practice model for teaching career structures, with countries adopting a variety of approaches (OECD, 2004). However, an important common feature is that a teaching career is divided into different stages, each of them associated with a different range of responsibilities and corresponding financial rewards. Progression across stages is not automatic but made contingent on a specific evaluation, often requested by the teacher herself. Professional prestige or the enjoyment of the working environment can be important factors behind the decision to enter teaching, but comparative evidence on this is not conclusive.[15] Propositions in the draft "Aprea" law may go a long way to improving the situation if finalised in the law (see Box 4.3).

... with weak recruitment procedures

Teacher recruitment procedures lack transparency and rigour, by international standards. The main formal channel for obtaining a tenured position is supposed to be a competitive national examination (which does not, however, assess teaching ability). In practice this is held extremely irregularly (it may be nearly 10 years from one to the next), success does not in itself guarantee an immediate permanent contract and in practice the majority of teachers are recruited locally, initially with fixed-term contracts. Tenure is eventually obtained after several years of waiting and continual movement from school to school.[16] These procedures neither encourage good quality applicants to the profession nor reward good teaching performance or motivation, failings recognised in the 2007 White Paper on education and the Spending Review (2008). With the exception of France and Korea, teachers in all other OECD countries are selected through open recruitment procedures. These vary quite considerably from one country to another and can be centralised or managed by the schools themselves. They often involve screening candidates based on many factors, including academic performance, prior experience, motivation, interpersonal and other skills (OECD 2004, Table 5.2). OECD (2004) shows that these factors are all important for teaching effectiveness. OECD experience also shows that hiring at school level – with accountability – makes it easier to select the right teachers for the school and the neighbourhood.

A survey of Italian teachers' views on working conditions suggests that more rigorous recruitment could strengthen professional commitment (Cavalli, 2000). Teachers regretted not having received very rigorous training and were worried that a lack of entry selection to the profession undermined the value of the profession itself. The same survey also showed that teachers were in favour of decentralisation and autonomy and of periodic teacher evaluation. However, there was clear opposition to having this carried out by external evaluators or through direct observation of teaching.

Raising initial training and selection requirements, with better organisation of induction programmes for new teachers (currently only formally required for tenured teachers), and provision for continuing training are necessary for raising professional standards. This would no doubt bring improvements even if the current centralised

recruitment system were retained. More benefit would be obtained if it were introduced along with well-aligned accountability and autonomy in recruiting at the local level, as discussed below.

Low incentives to keep up motivation and skill updating

The strong job security enjoyed by tenured teachers appears to be an important reason for entering and remaining in the profession (Giavazzi, 2008). Most teachers eventually obtain a job for life, without ever undergoing any performance assessment (Table 4.4). They can be dismissed only for disciplinary reasons; unlike in the majority of OECD countries, neither underperformance nor redundancy are valid grounds for dismissal.[17] There is no procedure to handle ineffective teachers[18] and principals have no formal means to influence performance. With great freedom in pedagogy yet subject to little evaluation, Italian teachers can afford to do very little and yet never be sanctioned.

Table 4.4. **Teachers in Italy are not subject to any kind of evaluation**

	Teacher inspection on an individual or collective basis	School self-evaluation	Individual evaluation by school heads	Individual evaluation by peers	No evaluation
Belgium	•		•		
Czech Republic		•	•		
Denmark	•				
Germany	•				
Ireland	•	•			
Greece	•		•	•	
Spain	•				
France	•		•		
Italy					•
Luxembourg					•
Hungary		•	•		
Netherlands			•		
Austria	•	•	•		
Poland			•		
Portugal	•	•	•	•	
Slovak Republic	•		•	•	
Finland					•
Sweden	•	•			
England and Wales	•				
Scotland	•	•			
Iceland		•			
Norway			•		

Source: Eurydice, 2008.

Teachers are allocated to schools based on seniority, so they have little influence on where they go until late in their career. They spend the beginning of their career working under temporary contracts and changing schools each year, getting tenure only after several years of this. But from then onwards they cannot be dismissed or moved to another school without their explicit consent. Schools can neither influence the Ministry's decisions nor refuse the teachers assigned to them.

Empirical analysis suggests that this allocation mechanism is inefficient and has a negative effect on teaching quality (Barbieri *et al.*, 2007). In particular, high turnover results in teaching discontinuity from one year to another and the likelihood of a move reduces

even well-motivated teachers' incentives. About half of teachers move from one school to another each year: about 30% of those in primary schools, 60% in upper-secondary school. Adjusting for possible structural determinants of turnover (*e.g.* share of temporary contracts, gender, and age), turnover is found to be the highest in southern schools and in technical and professional upper secondary schools; such schools might thus suffer more from lack of teaching effectiveness. Empirical analysis also suggests a high degree of mismatch between teachers and schools; almost 18% of teachers wish to leave their school on average, especially in the South and VET schools. Teachers seem to prefer northern schools to southern schools, and also prefer the more academically oriented schools.

These results cannot prove that the current policy for allocating teachers to schools results in ineffective teachers' performance, but the revealed high degree of dissatisfaction and high mobility strongly suggest it.[19] The rising share of temporary contracts among teachers, a policy to enhance flexibility but one that likely also increases teacher mobility, is also probably detrimental to pupil performance, in the absence of performance evaluation. Taking job performance into account when allocating teachers to their preferred schools could provide an incentive that might partly offset the cost of high turnover. Ideally, schools themselves should have the authority to hire teachers, choose between offering a temporary or a permanent contract and undertake independent performance evaluation. Of course, schools themselves should be held accountable for their own performance.

How should teachers be evaluated?

Teachers' evaluation may take different forms. It may be direct assessment of teachers' results by the principal (*e.g.* Belgium, Spain) or the inspectorate (*e.g.* Denmark, Sweden, France); indirect assessment based on pupils' results in national examination or national assessment tests (Australia, Netherlands, Sweden); or a direct test of teachers' abilities and skills at the beginning of their career (United Kingdom, United States) or later on (United States, some Canadian provinces, Chile). Most countries undertake an annual evaluation of all teachers, and some combine different evaluation procedures (see OECD 2004) or diversify the recipients and frequency of evaluation (*e.g.* in the United Kingdom all teachers are assessed periodically by the principal but teachers may also apply for a voluntary external evaluation for promotion). Evaluation tools are diverse, but they mainly comprise classroom observation, documentation on the teacher, interviews and pupils' learning data.

Procedures using pupils' results over time to build up "value-added" measures of teachers' and schools' contribution to pupils' learning are attractive, though at first sight expensive, evaluation tools. Since many aspects of a pupil's progress reflect teaching teamwork, they can be difficult to apply on their own to individual teachers, but this difficulty can be reduced if they are used to evaluate teams. OECD (2008b) shows that value added indicators can in the end be very cost-effective, because of the accurate information flow that they can provide; such benefits justify the investment in the long run.

Periodic recertification of teaching abilities is an alternative evaluation procedure. Through teacher recertification, currently a practice in the United States, in Canada and in Chile, teachers regularly renew their teaching licence. Renewal is conditional on proving that the teacher has obtained positive assessment in performance evaluation and/or has taken part in professional development courses (see OECD, 2004). It can be costly if a specific certification authority has to be created, but less so if it is handled by existing

teaching colleges or universities. Introduced on a voluntary basis, recertification would be taken up by high achievers aiming at promotion; this reduces costs and facilitates the identification of "virtuous" teachers without compulsion.

Given the current absence of teacher performance evaluation, and overall resource constraints, a desirable initial strategy might include both internal and external evaluation tools, using results from national assessment tests and reformed national examinations, as well as principals' judgement. A recertification procedure might be a useful addition, provided that existing institutions can be used reliably; but it is not clear what recertification might mean, given the absence up to now of any formal *initial* certification and the suspension of the specialised teacher training institutes (SSIS). The "*di ruolo*" competition might be a model (though not its irregular timing), or the new teacher training system planned under the draft law Aprea could include provision for recertification. In the longer term, Italy should introduce evaluation procedures allowing for the construction of value-added measures, which may progressively replace raw scores from national assessment tests/exams.

The current government plan to cut the number of teachers by 10% envisages using 30% of the saving on measures to raise teachers' job profile. Part of this money should be used to introduce teachers' evaluation procedures or refine those already existing at school level, while the rest of it could be directly allocated to reward teaching performance, as the next few paragraphs argue.

What consequences should be attached to teachers' evaluation?

Teachers' assessment, based on objective information on their pupils' progress, provides an essential tool for tasks such as planning class programmes and assessing training needs. It could also be used to hold teachers accountable for their performance, with consequences varying from differentiating wages and career development according to performance, compulsory requalification for ineffective staff and ultimately dismissal if no improvement is observed.

Although the debate on the effectiveness of performance-based pay is still open, there is some experience that suggests that it can work (OECD, 2008d). Merit pay schemes are not completely new in Italy, a small share of the budget for salaries is allocated by school principals as a function of performance. In practice, the principal has to consult with union representatives in the school; resistance to distribution on the basis of performance is strong and equal distribution of the additional money is the norm. Screening of teachers' work and eligibility for performance pay by the principal should complement other evaluation procedures, but this requires trust in principals from their staff – for which appropriate accountability for principals themselves is a pre-condition.

The importance of school leadership

Good leadership is a key asset for schools (OECD 2008k). Principals' profiles are especially important when schools are largely autonomous. In Italy teachers currently wishing to become principals undergo some compulsory form of training once they have succeeded in the open competitions to become principals. However, the effectiveness of this kind of training has never been the object of proper assessment. In addition the current set of responsibilities and rewards for school heads is not attractive. Special training programmes (initial or in-service) should be created to give the appropriate management and pedagogical tools to leaders, especially in schools with very difficult

background conditions. At the same time financial incentives to become and perform as an effective principal should be introduced. In an analogous way as for teachers, a systematic evaluation of principals' performance and progress of their schools is needed. In Italy there are concrete windows of opportunity for implementing a system of school principal evaluation because both the law and the national labor agreements foresee it. INVALSI (2009) has recently put forward a proposal to evaluate principals on the basis of school drop-out reduction and learning achievements. This and other models are being examined at present by the Ministry.

The political economy of educational reforms: lessons for Italy?

The involvement of social partners in designing reforms can help to gain their acceptance. In Italy, trade unions are often consulted "top down" rather than actively putting forward reform proposals "from the grass roots" (Eurydice, 2008). In other countries, even without an institutionalised relationship, trade unions have been crucial players in reforming the working conditions of teachers, as for instance in the United Kingdom.[20] Decentralisation and school autonomy in Italy have not led to local bargaining of wages and working conditions; there is little support for empowering schools and teachers with the necessary governance tools at school level; local wage bargaining is also absent in other public sector contexts, mainly due to union hostility to this, despite attempts by different governments to encourage it.

To build support for significant reforms, it would be desirable for government to engage directly in systematic discussions with both trade unions and schools on the rationale and design of reform. Building on the diagnoses of the 2007 White Paper and the Spending Review (2008), discussion could usefully focus on how different parties (teachers, schools and pupils) stand to benefit. The trade-off between efficiency-focused reforms and teachers' interests may not be as straightforward and negative as teachers fear (see Box 4.7).

Such suggestions follow the general conclusions of empirical research dealing with conditions which facilitate successful implementation of reforms. While relatively little work has been done specifically on educational reforms, conditions which are relevant both in general and for education include: uncertainty about the size and distribution of costs and benefits of educational reforms; loss of advantages of privileged positions for clearly defined groups of stake-holders; timing, when reforms imply significant up-front costs and delayed benefits.[21]

In the absence of concrete examples of successful strategies to overcome resistance to education reforms, ideas may be adopted from other contexts. For instance, "PISA shock" – a sense of crisis in the performance of the education system – might be helpful, although it is not clear whether added pressure from the financial crisis makes educational reform easier or not. The need for further integration in the European labour market (encouraging convergence of education and training levels) might be another source of support. Integrated, extensive reforms are generally more successful than piecemeal ones. This would imply, for example, the need to introduce autonomy and accountability at the same time, and to reform teachers' career structure at the same time as introducing merit-based pay or other forms of financial reward. As stressed above, using part of the saved resources under the last Budget Law to finance schemes aimed at enhancing school performance, will make it more acceptable for key actors in the system to undergo a significant restructuring. OECD (2008e) argues that reform strategies are more effective when: *a)* they

Box 4.7. **Can education reform further the interests of teachers?**

Discussion of education reform can be polarised between the apparent opposition between efficiency and teachers' interests. Many teachers and teacher's organisations see efficiency-focused reforms as implying less education spending and ultimately either lower pay or fewer jobs. There is, of course, some trade-off between efficiency-focused reforms and the *short-term* interests of *existing* teachers which it is likely to be counter-productive to deny. Two sets of arguments could soften the perceived opposition between efficiency and teachers' interests:

- By improving the productivity of the education system, efficiency-enhancing reforms can support salary increases of the most deserving teachers. By providing demonstrable information of value for money in education spending, reforms can engender popular and government support for such spending.

This is partly a long-term argument based on the idea that more efficient education produces more human capital, increasing overall productivity and real wages in the economy. It is unrealistic to expect such effects to benefit existing teachers noticeably in any reasonable time-period. However, if it is possible to present reforms in this way, and to ensure a clear link between pupils' performance and recognition for the schools and teachers that contributed to it, popular support for educational spending may be increased.

- There are additional, non-financial benefits to teachers from reforms. Benefits that have been described by some teachers who have worked in systems with such reforms, or reported in economic studies, include: higher job satisfaction; greater flexibility for teachers to work in the most effective ways; better information about successful teaching strategies; the potential to improve social status by highlighting particularly successful teachers; and, in some countries, broader career opportunities.

These factors should hold for reforms such as increasing school accountability and performance benchmarking, where they are based on collecting and disseminating dispassionate information on educational performance and methods, and where career development is some predictable function of use of this information. But where there are winners there are certain to be – at least perceptions that there are – losers. Successful reforms therefore have to be designed to reward effort and success rather than explicitly to punish poor performance, particularly given the real difficulties in isolating individual teachers' contributions. Sanctions such as eventual dismissal have to be credible, but the process that leads to them has to be seen to be fair.

are accompanied by significant up-front investment in building institutional capacity to make the reform work; *b)* they take into account multi-level governance, by clearly defining respective responsibilities and power, providing for effective co-ordination between levels; and *c)* they are based on widely disseminated performance data, so as to reinforce evidence-based policy making.

To conclude, to enhance the acceptability of educational reforms, it is necessary to:

- Continue dialogue with the teachers' trade unions, but also interact directly with schools and teachers to promote the principles of reform, making them acceptable to the teaching community. Benefits for teachers and schools should be highlighted where possible, but full transparency on cost and implications of the reform should be preserved.

- Promote informed public debate on the virtues of reform, by reinforcing data collection of educational outcomes and derived benefits and by disseminating these data in appropriate forms. In particular, involve parents in the discussion of the reforms, by promoting the creation of parents' associations at national or local level.
- Adopt an integrated, extensive approach to educational reforms, which includes a number of co-ordinated and complementary actions, and takes properly into account the various levels of governance as implied by the fiscal federalism structure.

Improving transition from upper-secondary school to the labour market and tertiary education

Too many early school leavers and difficult entry into the labour market

Research on school drop-out rates in other countries identifies five sets of factors: school-related factors (schools failing to adapt to the needs of low achievers, inadequate academic and social organisation of schools, etc., Hanushek *et al.*, 2006); student-related factors (lower motivation, disruptive behaviour, lower ability, etc.; Eckstein and Wolpin, 1999); family related factors, either social (unstable family situation, lack of family support, poor education of parents, etc.; Cardoso and Verner, 2006) or economic (credit constraints, higher risk aversion, myopic behaviour; Carneiro and Heckman, 2002; Oreopoulos, 2007). All these factors seem to be at work to some extent in Italy. Dropping-out behaviour appears to be strongly influenced by mismatch between school and pupils, *i.e.* by the fact that the school is unable to fit specific students' needs and the student cannot keep up with the demands of schooling (O'Higgins *et al.*, 2007). The outside labour market clearly makes a difference, dropping-out is relatively common in some northern areas where the labour market is tight since full-time employment may be a rational alternative to education for some, and PISA result are already more satisfactory than in the south. This explanation is less reasonable in the south where the (formal) labour market performs less well and the general environment is not supportive of continued investment in education. According to Montanaro (2008) drop-out rates in the South are in any case lower than they would be if standards for promotion from one school grade to the next were the same as in the North.

Some policy implications follow directly from this analysis. An increasing amount of research shows that investment in early schooling boosts children's motivation and ability from the very start, particularly beneficial for socially disadvantaged children.[22] Italy currently lags behind in such provision. It is also possible to introduce specific methods of teaching and formative assessment that are directly targeted at youth with the greater difficulties (Yeh, 2008). Better information on pupils' progress, that could follow from reforms to assessment discussed above, would help to identify children at risk earlier on so as to offer targeted supplemental instruction time or put them in smaller classes (Piketty, 2004; Gufstasson, 2003). All these measures may need to be differentiated according to local conditions. Despite significant progress in terms of secondary school participation rate, the share of early-school leavers is still high, in particular in the South: overall in 2007 about one 18-to-24-year-old out of five had prematurely abandoned education without either achieving an upper secondary school diploma or following any further education or training path, against an EU average equal to 15% and *versus* a Lisbon strategy target set at 10% by 2010. This rate is about 25% in the South, but has dropped in many southern regions[23] over the past three years, partly due to specific policy action under the National Operational Programme (ISTAT 2009).

The whole country can benefit from certain policy measures in addition to general reforms to increase evaluation and accountability. As well as increasing participation in early childhood education and care, and providing strengthened support to students at risk of drop-out, career guidance should be provided to students from an early stage of upper secondary education, involving parents and employers too; similarly improved apprenticeship and work-experience programmes in VET schools could be useful. Finally, adult educational policies and policies going beyond the educational realm, by looking for ways to encourage school students to aim for "mainstream" labour market opportunities rather than the informal economy or organised crime, are also desirable even if difficult.

Conclusions

Raising the performance of the school education system is a major challenge. Current education policy settings contribute to mediocre results: the system lacks a performance culture, with information on performance itself being obscure; few, if any, incentives are in place to encourage schools and teachers to improve performance. These problems are common to all regions: most regional disparities in outcomes seem to be due to factors other than schools' organisation and function. There is room for expenditure savings to be made, but this needs to be done with care, and some of the savings have to be "reinvested" in measures to improve educational outcomes. Lifting average outcomes requires effort in a number of areas. First, accountability has to be strengthened, by improving the existing national evaluation test carried out at school level and by reforming final exams at the end of lower and upper secondary education according to international best practice. Second, specific action to enhance the quality of teaching should also be envisaged. Third, average results can be increased by focusing some attention on improving educational achievement, particularly in VET schools, while at the same time moderating the negative impact of the social aggregation effect in those schools.

Successful reform of national policies will improve education everywhere but could, especially with increased decentralisation, exacerbate regional disparities in outcomes. Policymakers and the public need to be aware of this. Closing the education gap between the North and the South is one of the key ways to close the underlying economic and social gap, so measures – which need not have a specifically regional focus – to pick up weaker schools and students, especially those at risk of drop-out, should also be encouraged.

Box 4.8. **Summary of the recommendations on Education**

To contain spending, it is recommended that:

- **Average class size is increased,** by minimizing the number of classes within a school and by merging small schools. This should be achieved by revising upward the regulatory thresholds and by co-ordinating class formation across schools so as to maximize economies of scales in school network planning.
- **Class size is not increased in schools with very poor results.**
- **Reduction of instruction time is confined to non-compulsory subjects and avoids MST hours,** especially in VET schools.
- **A sizeable proportion of saving obtained by increasing class size and instruction time is reinvested in policies aimed at boosting outputs**.

OECD ECONOMIC SURVEYS: ITALY – ISBN 978-92-64-05435-6 – © OECD 2009

Box 4.8. **Summary of the recommendations on Education** *(cont.)*

To improve accountability and autonomy, the following policies should be adopted:

- **Improve external evaluation of schools and providing special support to schools to take stock of it.** National assessment tests should be continued but conducted on all Italian schools. The administration of the test should be with external and fully-independent assessors. National examinations at the end of lower and upper-secondary education should be fully transformed into external exams with national standards.
- **Results of national assessment test and final exams should be published at the school level,** both in raw terms and, more important but also more difficult, in terms of value-added.
- **Periodically evaluate the performance of teachers,** for instance through results of external schools evaluation, recertification procedures, principal's judgment and possibly regional or national inspectorate activity. **Reward outstanding teachers through salary increases and career advancement, provide compulsory training to ineffective teachers and ultimately dismiss the extreme cases.**
- **Provide greater managerial autonomy to school headmasters,** including for the selection, evaluation and career development of teachers. Autonomy of headmasters should go along with accrued evaluation of schools. Further efforts have to be made to fully enforce a system assessing principals, as already foreseen by legislative provisions and collective labour agreements.

To improve teaching and school quality:

- **Strengthen initial qualification of teachers and tighten recruitment procedures,** by increased selection on entry to teacher training colleges and standardisation of certification procedures. **Raise the attractiveness of teaching profession** by promoting teacher professional development, introducing financial rewards based on achievements, providing career development opportunities based on recertification and performance achieved.
- **Strengthen the ability of school principals to manage their schools effectively by introducing specific training and ensuring the availability of support from sub-national or central administration.**

To improve outcomes in cost-effective but low-performing schools, and to reduce the large regional differences in pupils' performance, it is recommended that:

- **Extra-resources are transferred to those schools** so as to compensate for critical conditions of learning and adverse contextual effects on performance of their schools.
- **Encourage the restructuring of schools with poor score results.** Conditional grants should be accorded on the basis of a substantial restructuring plan for schools, implying for instance the appointment of a new principal and the specification of a set of targets and means to achieve them.
- When schools continue to repeatedly fail pupils, even after the adoption of various remedial actions, their closure should be envisaged and children transferred to other schools.

To increase performance of vocational (VET) schools:

- **A common educational track for the first two years of upper-secondary education should be created or alternatively, the first two years of VET programs be made more generalist.**
- Mechanisms encouraging teachers to self-select into schools should be eliminated. If such behaviour cannot be avoided, **specific incentives should be given to orient good teachers towards poor performing schools**.

To improve performance of the weakest pupils and reduce drop-out rates, it is recommended to:

- **Provide quality early childhood education and care,** especially for children from low-income backgrounds.
- **Provide strengthened support to weak students,** through better teachers and infrastructures, supplementary instruction time and special follow-up in small classes.
- **Provide career guidance to students from the early stages of upper-secondary education** and involve parents in professional orientation plans.

Notes

1. In practice, eight years study was effectively the norm somewhat before 1963.
2. Failure ("giudizio sospeso") refers to the fact that at the end of the year, the school judges that a pupil did not reach a sufficient level of competence in a specific subject. Pupils can re-take exams in up to three subjects over the summer. Unless they succeed in these exams they have to repeat the school year.
3. Boarini *et al.* (2008), show that higher PISA scores (at country level) result in higher completion of tertiary studies, when controlling for a number of other variables including rates of return to education, availability of financial help for students and institutional arrangements of tertiary education supply.
4. Two sets of factors lie behind this mediocre situation: on the one hand many drop out from upper-secondary education (above 20% in Italy, *versus* an OECD average of 14%); on the other, a very long school-to-work transition as shown by Quintini and Martin (2006).This may be labour-market related or due to the fact that the type of educational degree is inadequate for finding a job (Pozzoli, 2007; Confindustria, 2008), though the two kinds of explanation are clearly interdependent.
5. Høj *et al.* (2006).
6. Some evidence on the positive impact of capital expenditure on educational outcomes (Guichard, 2005) is corroborated by a national study showing that lack of infrastructures and poor status of school buildings explain part of the Italian regional disparities in educational outcomes (Bratti *et al.,* 2007).
7. This ratio refers to the standardised OECD definition of teachers, which includes religion teachers but excludes both teachers for special needs children ("insegnanti di sostegno") and teaching assistants ("assistenti di laboratorio"). In addition, the number of teachers entering in this ratio refers to those having a central-level contract ("organico di diritto") excluding school-level contracts ("organico di fatto"). Including the latter, special needs teachers and teaching assistants, the Italian teacher per student ratio rises to 11.5 teachers per 100 pupils (White Paper, 2007).
8. The number of years of primary and secondary schooling is 13 in Italy, while in most countries this is 12. Grade 13 classes are often small as a result of selection and drop-out in previous years.
9. According to these provisions: 1) there is one supporting teacher for every two students with disability; 2) the maximum class size is reduced by 5 students when a disabled pupil is in the class. Some estimates suggest that, all together, the special support to disable students requires as many as 150 000 additional teachers (White Paper, Spending Review 2008).
10. In the spring, the number of teachers for the next school year is decided at the central level on the basis of the expected enrolment rate ("organico di diritto"). From then to the beginning of the school year, negotiations between schools and the Ministry of Education tend to keep job positions open even if it is not clear they are needed ("organico di fatto"). Finally, during the new school year, schools may hire temporarily additional teachers, to fill unexpectedly vacant positions or gaps due to sick leave ("organico di fatto effettivo"). Overall, in 2005, for 100 teachers, 90 were hired at the first stage of negotiation, 4.2 at the second one and the remaining 5.8 at the end of the process.
11. Overall there have been 7 national evaluation tests between 2001 and 2007, in some years on all schools and in others on a sample. Before 2007, tests were conducted in the 2nd, 4th,6th, 9th and 11th grades. In 2007-08, the test was replaced by new sample-based pilot on six grades (2nd, 5th, 6th, 8th, 10th and 13th). The tests assessed competencies in Italian, Mathematics and Science. The tests used multiple-choice questions, with open questions in some years, prepared by a panel of teachers, university professors and INVALSI researchers. The administration of the tests was internal to the school (except in 2007). It is not possible to compare pupils' results over time or across grades.
12. These two pieces are Carta dei Servizi Scolastici (issued in 1995) and the Regulation on school autonomy (1999).
13. Barbieri *et al* (2007) note that the different level of initial qualification across grades does not imply a corresponding quality gap, because while educational tracks for primary teachers are shorter, they tend to be much more specialised and chosen at an earlier stage, indicating a strong motivation for joining the profession. Secondary education teachers, however, generally opt for the teaching profession only after graduation because of very low opportunity cost and not because of a specific professional vocation.
14. There are three types of temporary contracts in Italy: those lasting a full calendar year; those lasting one school year (with no pay over the summer) and those between fifteen days and one school year. The first two are signed at central level, for vacancies due to sickness and also to cover

the gap between the number of tenured positions and actual teaching positions. This gap is due to constraints on public finance that prevent the ministry of education from filling all posts with teachers on permanent contracts.

15. Although there are very few comparable data on this, the general view is that teachers have been subject to loss of prestige and increasing distrust from society. This seems to have happened in most of OECD countries however, nothing distinguishing Italy in this regard. With respect to the characteristics of the working environment, PISA 2003 data suggest that learning environment of Italian schools is less enjoyable and objectively less straightforward (in terms of pupils) than in other OECD countries, which would indicate a lower "consumption value" from teachers in Italy compared with those in other OECD countries.

16. In 1999, secondary education teachers' colleges (Scuole di Specializzazione per l'insegnamento nella scuola secondaria, SSIS) were created to replace the competitive examination recruitment procedures with a more rational track from tertiary education to the profession. The training would include traineeship in schools and theoretical specialisation in the relevant subject. Graduation from these colleges would allow students to qualify for competitive examinations (without going through previous selection) to join national candidates lists by discipline and to be called for temporary replacement teaching positions. The recent Law 2008/133 suspended the access to these schools for the year 2008/09, remaining silent on what the recruitment procedure would be in the future.

17. See OECD (2004), Table 5.1.

18. With the rare exception of when they are the subject of a complaint. Even in such cases, their assessment may be left to the principal rather than to an external body. Teachers enjoy a large amount of pedagogical autonomy, being free to choose the content of optional subjects, teaching methods and textbooks. They have freedom to decide the criteria for the internal assessment of pupils and also, up to the end of lower-secondary, for preparing and carrying out matriculation exams. Most European peers have only a limited autonomy or no autonomy at all in assessment and examination of pupils (Eurydice, 2008).

19. The empirical analysis carried out in Annex 4.A1, which makes use of similar indicators to those in Barbieri *et al.* (2007) for more recent years, corroborates the conclusion that high mobility of teachers and dissatisfaction with the school working environment are detrimental to pupils' performance.

20. In the United Kingdom an agreement was signed in 2003 by teaching unions, local government employers and the central government to raise teaching standards. The agreement acknowledged that the pressure on schools to raise standards led to problems with teacher workload, with some perverse effects on recruitment, retention and morale. A number of administrative tasks were removed from teachers' responsibilities, and more time was given for planning and preparing teaching and for pupils' assessment.

21. See OECD (2008e), Høj *et al.* (2006).

22. See OECD (2008g, 2008h, 2008i).

23. Between 2005 and 2008 drop-out rates have declined from 33.1% to 28.9% in Campania, from 23.7 to 16% in Basilicata, from 32.8% to 27.9% in Puglia, from 43.3% to 31.1% in Sardinia and from 34.8% to 30.9% in Sicily.

Bibliography

Barbieri, G., P. Cipollone and P. Sestito (2007), "Labour market for teachers: demographic characteristics and allocative mechanisms", Giornale degli Economisti e Annali di Economia, Vol. 66, No. 3, pp. 335-373.

Bishop, J.H. and L. Wößmann (2004), "Institutional Effects in a Simple Model of Educational Production", Education Economics 12, pp. 17-38.

Bishop, J.H. (1997), "The Effect of National Standards and Curriculum-Based Exams on Achievements", American Economic Review, 87 (2), pp. 260-264.

Boarini, R., J. Oliveira Martins, H. Strauss, C. De la Maisonneuve and G. Nicoletti (2008), "Investment in Tertiary Education: Main Determinants and Implications for Policy", CESifo Economic Studies, Vol. 54, 277-312.

Boarini, R. and H. Strauss (2007), "The private internal rates of return to tertiary education: new estimates for 21 OECD countries", OECD Economics Department Working Papers, No. 591.

Brandolini, A., L. Cannari, G. D'Alessio and I. Faiella (2004), "Household Wealth Distribution in Italy in the 1990s", Bank of Italy Demi di Discussione, No. 530.

Bratti, M., D. Checchi and G. De Blasio (2008), "Does the expansion of higher education increase the equality of educational opportunities? Evidence from Italy", Bank of Italy Temi di Discussione, No. 679.

Bratti, M., D. Checchi and A. Filippin (2007), "Da dove vengono le competenze degli studenti italiani", Edizioni Il Mulino, Bologna.

Cardoso, A.R. and D. Verner (2006), "School drop-out and push-out factors in Brazil: the role of early parenthood, child labour and poverty", IZA Discussion Paper, No. 2515.

Carneiro, P. and J.J. Heckman (2002), "The evidence on credit constraints in post-secondary schooling", NBER Working Paper, No. 90955.

Cavalli, A. (2008), "Consigli per vincere la depressione", *Il Mulino*, 2/2008, pp. 250-258.

Cavalli, A. (2000), Gli insegnanti nella scuola che cambia. Seconda indagine IARD sulle condizioni di vita e di lavoro nella scuola italiana, Edizioni Il Mulino, Bologna.

Checchi, D., A. Ichino and A. Rustichini (1999), "More equal but less mobile? Educational financing and intergenerational mobility in Italy and in the US", *Journal of Public Economics*, No. 74, pp. 351-393.

Colonna, F. (2007), "Labour market and Schooling Choice: Italy *versus* US", paper presented at XXII Annual Conference of the European Society for Population Economics, London.

Corak, M. (2006), "Do Poor Children Become Poor Adults? Lessons from a Cross-country Comparison of Generational Earnings Mobility", IZA Discussion Paper, No. 1993.

D'Addio, A. (2007), "Intergenerational Transmission of Disadvantage: Mobility or Immobility Across Generations?,"*OECD Social Employment and Migration Working Papers* 52.

Eckstein, Z. and K.I. Wolpin (1999), "Why youth drop out of high school: the impact of preferences, opportunities and abilities", *Econometrica*, Vol. 67, No. 6, pp. 1295-1339.

Eurydice (2008), "Levels of Autonomy and Responsibilities of Teachers in Europe", *http://eacea.ec.europa.eu/ressources/eurydice/pdf/0_integral/094EN.pdf*.

Ferratini, P. (2008), "Tante riforme, nessuna Riforma", Il Mulino, 2/2008, pp. 267-275.

Fuchs, T. and L. Wößmann (2007), "What Accounts for International Differences in Student Performance? A Re-examination using PISA Data", *Empirical Economics*, Vol. 32 (2-3), 433-464.

Giavazzi, F. (2008), "Scuola, il tabu dei concorsi", *Il corriere della sera*, 15 June 2008.

Giordano, R., P. Tommasino and M. Casiraghi (2008), "Behind public sector efficiency: the role of culture and the institutions", Paper presented at the "The quality of public finance and economic growth" Workshop, Brussels.

Gonand, F., I. Joumard and R. Price (2007), "Public Spending Efficiency: Institutional Indicators in Primary and Secondary Education", OECD Economics Department Working Paper, No. 543.

Gufstafsson, J.E. (2003), "What do we know about effects of school resources on educational results?", *Swedish Economic Policy Review*, 10, pp. 77-110.

Guichard, S. (2005), "The Education Challenge in Mexico: Delivering Good Quality Education to All", OECD Economics Department Working Papers, No. 447.

Hanushek, E.A., V. Lavy and K. Hitomi (2006), "Do students care about students quality? Determinants of dropout behavior in developing countries?", NBER Working Paper, No. 12737.

Hanushek, E.A. and E.M. Raymond (2004), "The Effect of School Accountability Systems on the Level and the Distribution of Student Achievement", *Journal of the European Economic Association,* Vol. 3(5), pp. 1134-1155.

Hanushek, E.A., J.F. Kain and S.G. Rivking (1999), "Do higher salaries buy better teachers?", NBER Working Paper, No. W7082.

Hanushek, E.A. (1993), "The Failure of Input-Based Schooling Policies", *Economic Journal*, 113 (485), pp. F64-F98.

Hanushek, E.A. (1978), "Conceptual and empirical issues in the estimation of educational production functions", *Journal of Human Resources*, Vol. 14 (3), pp. 351-388.

Høj, J., V. Galasso, G. Nicoletti and T. Dang (2006), "An Empirical Investigation of Political Economy Factors Behind Structural Reforms in OECD countries", in *OECD Economic Studies*, No. 42, 2006/1, pp. 87-136.

Hoxby, C. and A. Leigh (2004), "Pulled Away or Pushed Out? Explaining the Decline of Teacher Aptitude in United States", *American Economic Review,* Vol. 94, No. 2, 236-240.

INVALSI (2008), "La prova nazionale al termine del primo ciclo. Aspetti operativi e prime valutazioni sugli apprendimenti degli studenti", *www.invalsi.it/areadati/SNV/07-08/Rapporto_finale.pdf*.

INVALSI (2009), "La valutazione dei dirigenti scolastici", *www.invalsi.it/download/Rapporto_IParte.pdf*.

ISTAT (2009), *www.istat.it/ambiente/contesto/infoterr/assi/asseIII.xls*.

La scuola in cifre (2007), Ministero dell'istruzione.

Lamberti, A. (2008), "Le determinanti della spesa pubblica per l'istruzione in Italia: 1996-2005", *www.unipv.it/websiep/2008/2008204.ppt*.

Leonardi, M. (2007), "Do parents' risk aversion and wealth explain secondary school choice?", *Giornale degli Economisti e Annali di Economia*, Vol. 66, No. 3, pp. 177-206.

Madama, I. and F. Maino (2007), "Governance scolastica e differenziazione regionale della scuola secondaria italiana", Chapter 7 in *Da dove vengono le competenze degli studenti italiani*, Edizioni Il Mulino, Bologna.

Ministry of Education (2007), *Quaderno Bianco Sulla Scuola*, Ministero della Pubblica Istruzione (part of the Ministry of Education, Universities and Research, *www.miur.it*), *www.pubblica.istruzione.it/news/2007/allegati/quaderno_bianco.pdf*.

Montanaro, P. (2008), "I divari territoriali nella preparazione degli studenti italiani: evidenze dalle indagini nazionali ed internazionali", *Questioni di Economia e Finanza No. 18*, Banca d'Italia.

OECD (2004), "Teachers Matter", Paris.

OECD (2008a), *Education at a Glance*, OECD, Paris.

OECD (2008b), *Measuring Improvements in Learning Outcomes: Best Practices to Assess the Value-Added of Schools*, OECD, Paris.

OECD (2008c), *Tertiary Education for the Knowledge Society*, OECD, Paris.

OECD (2008d), *Economic Survey of Norway*, OECD, Paris.

OECD (2008e), Assessing the Challenges of Policy Implementation in Education, EDU/EDPC(2008)30.

OECD (2008f), *How Do OECD Countries Take Stock of Progress and Performance in Education Systems?*, EDU/EPC(2008)33.

OECD (2008g), *Jobs for Youth, Netherlands*, OECD, Paris.

OECD (2008h), *Jobs for Youth, United Kingdom*, OECD, Paris.

OECD (2008i), *Jobs for Youth, Spain*, OECD, Paris.

OECD (2008j), *Growing Unequally*, OECD, Paris.

OECD (2008k), *Improving School Leadership*, OECD, Paris.

O'Higgins, N., M. D'Amato, F.E. Caroleo and A. Barone (2007), "Gone for good? Determinants of schools dropout in southern Italy", *Giornale degli Economisti e Annali di Economia*, Vol. 66, pp. 207-246.

Oreopoulos, P. (2007), "Do dropouts drop out too soon? Wealth, health and happiness from compulsory schooling", *Journal of Public Economics*, Vol. 91, pp. 2213-2229.

Paletta, A. (2007), "Prime riflessioni sugli aspetti organizzativi della scuola italiana", *Ricerca INVALSI*, available at: *www.invalsi.it/invalsi/download.php?page=Convegno07*.

Piketty, T. and M. Valdenaire (2004), "L'impact de la taille des classes sur la réussite scolaire dans les écoles, collèges et lycées français : Estimations à partir du panel primaire 1997 et du panel secondaire 1995", Paris, ministère de l'Éducation nationale, *Les Dossiers n° 173*.

PIRLS (2007), "PIRLS 2006 International Report: IEA's Progress in International Reading Literacy Study in Primary Schools in 40 Countries", TIMMS and PIRLS International Study Centre, Lynch School of Education, Boston College.

PISA (2006a), Science Competencies for Tomorrow's World. Vol. 1: Analysis, OECD, Paris.

PISA (2006b), Science Competencies for Tomorrow's World. Vol. 2: Data, OECD, Paris.

Pozzoli, D., "High School and Labour Market outcomes: Italian Graduates", *Giornale degli Economisti e Annali di Economia*, Vol. 66, No. 3, pp. 247-293.

Quintini, G. and S. Martin (2006), "Starting Well or Losing their Way? The Position of Youth in the Labour Market of OECD countries", *OECD Social, Employment and Migration Working Papers No. 39*.

Spending Review (2008), La Revision della Spesa Pubblia, Rapporto 2008, Commissione Techica della Finansa pubblica.

Sutherland, D., R. Price, I. Joumard and C. Nicq (2007), "Performance Indicators for Spending Efficiency in Primary and Secondary Education", *OECD Economics Department Working Paper*, No. 546.

TIMMS (2008), "TIMSS 2007 International Science Report: Findings from IEA's Trends in International Mathematics and Science Study at the Fourth and Eighth Grades", TIMMS and PIRLS International Study Centre, Lynch School of Education, Boston College.

Todd, P.I. and K.I. Wolpin (2003), "On the Specification and Estimation of Education Production Function", *The Economic Journal*, 113, F3-F33.

Yeh, S.S. (2007), "The Cost-Effectiveness of Five Policies for Improving Student Achievement", *American Journal of Evaluation*, Vol. 28, No. 4, pp. 416-436.

White Paper on Italian Schools (2007) (Quaderno Bianco sulla scuola), Ministero delle Finanze e Ministero della Pubblica Istruzione, *http://62.77.63.181/ISN_Istruzionesicilia_it/Upload/c8db0f85-d67b-44ac-9776-baedd549c438.pdf*.

Wößmann, L. (2003), "Schooling, Resources, Educational Institutions and Student Performance: the International Evidence", *Oxford Bulletin of Economics and Statistics*, 65, No. 2, pp. 117-170.

Wößmann, L. (2005), "The Effect of Heterogeneity of Central Exams: Evidence from TIMMS, TIMMS-Repeat and PISA", *Education Economics*, 13, No. 2, pp. 143-169.

Wößmann, L., E. Lüdemann, G. Schütz and M.R. West (2007a), "School Accountability, Autonomy, Choice and the Level of Student Achievement: International Evidence from PISA 2003", *OECD Education Working Paper*, No. 13.

Wößmann, L., G. Schütz and M.R. West (2007b), "School Accountability, Autonomy, Choice and the Equity of Student Achievement: International Evidence from PISA 2003", *OECD Education Working Paper*, No. 14.

ANNEX 4.A1

The determinants of PISA scores: the cross-country perspective and a study of drivers of disparities across Italian regions[1]

1. Empirical analysis of educational outcomes: methodological background and findings from the literature

The literature on the determinants of educational outcomes has expanded significantly in recent years, placing an increasing focus on the study of international data. A relatively standard approach consists of estimating an educational production function (Hanushek, 1978; Todd and Wolpin, 2003; Wößmann, 2003; Wößmann *et al.* 2007a, PISA 2006a), where educational outcomes are measured by test results and inputs include a wide range of potential determinants of pupils' achievements, comprising policy and non-policy variables. This chapter follows this approach closely and in particular Wößmann *et al.* (2007a) and Bratti *et al.* (2007) for the empirical strategy.

As in OECD (2008d), a distinction can be drawn between factors under direct educational policy influence and those which do not depend on policy when estimating the impact of various drivers of educational outcomes. Demographic and socioeconomic background variables, which are less likely to be affected by school and system-level factors, were selected based on previous empirical findings (see PISA, 2006a). Controlling for background variables allows the net effects of school and system-level variables to be examined. The background variables used in this study were:

- At student level: PISA index of economic, social and cultural status (ESCS); gender; language spoken at home; immigrant status.
- At school level: School average PISA index of economic, social and cultural status; school size; school location.
- At system level: country fixed effects.

Following a very similar specification to Wößmann *et al.* (2007a) and PISA 2006a, the following main policy variables are tested:

- Educational resources: student per teacher ratio; learning time in science; quality of educational resources.
- Accountability: schools informing parents about pupils' results (comparatively within the school); schools posting achievement data publicly.
- Autonomy: budgeting autonomy, staffing autonomy and curricular content autonomy.

- Interaction between accountability and autonomy.
- Other school policies variables: ability grouping; selectivity in admissions.

2. Econometric analysis of PISA 2006 scores: cross-country and within-country empirical strategy

The analysis is conducted in two stages. In the first stage international best-practices are elicited through a cross-country regression of PISA scores on various policy and non-policy determinants of educational outcomes. In this stage the Italian sample is also looked on its own to assess whether there are significant differences among the main drivers of educational outcomes compared with the OECD area as a whole.

Italy shows marked geographical variation in educational achievements; a key question is whether this is related to exogenous factors or to the characteristics of the education system. To start with, a similar conceptual framework to that used in the previous section, is presented. This time the focus of the analysis is Italian regions, and thus the empirical exercise is only carried out on the Italian sample, which allows for this disaggregated level of analysis.[2] Following Bratti *et al.*, (2007), the analysis introduces a fixed effect at macro-regional level (north *versus* centre/south[3]) to control for possible contextual effects of various types (results not shown in the table). In a second step, this fixed effect is supplemented by explicit proxies for contextual effects at the province level (provinces are a sub-division of regions), such as labour market, criminality rate and number of immigrants, and by variables identifying the school type[4]. This regression was also estimated separately for the North and the South to assess if there are any differences in drivers of educational outcomes across these two macro-areas.

3. Data sources

The initial sample size is 246 562 students for the OECD area and 21 773 students for Italy, however the sample size decreases whenever independent variables with missing observations are included in the analysis. In order to control for environmental and geographical factors correlated with pupils' performance the information contained in PISA 2006 survey is merged with school-level and provincial-level variables from other statistical sources.

PISA 2006's student and school questionnaires are the main data sources. For the treatment of missing values and for the definition of individual-level and school-level variables PISA 2006's guidelines have been followed. For further clarification, the reader is referred to Annex A.8 in PISA 2006a. Missing data (under 5% for most variables) has been treated by imputing plausible values. In the OECD sample, France is excluded due to the unavailability of the school-level information.

School-level data on teachers' characteristics and mobility come from the Ministry of Education and the National Institute for the Evaluation of the Educational System (INVALSI). These data only cover schools under the direct authority of the Ministry of Education, and therefore do not provide information on vocational schools under the jurisdiction of local governments, on experimental curricula, and on school located in the autonomous provinces of Trento and Bolzano. The three indexes of teachers' turnover, preference for mobility towards the school and away from the school refer to year 2006, while school level data on teachers' gender and tenure status refer to year 2007-08. No missing data imputation was used.

Provincial level controls come from the National Statistical Institute (ISTAT). The percentage of immigrant residents refers to year 2006, while criminality rate, employment and unemployment rate refer to year 2005. No missing data imputation was used. Additional information on variable definitions and descriptive statistics is reported in Table 4.A1.1.

Table 4.A1.1. **Descriptive statistics of the variables used in the empirical model**

Variable	OECD (n = 246562)		Italy (n = 21597)		Italy: North (n = 13320)		Italy: Centre-South (n = 8277)	
	mean	sd	mean	sd	mean	sd	mean	sd
Pv1scie	496.79	99.65	488.19	95.42	511.20	93.16	451.15	86.99
Family socioeconomic background	–0.05	1.03	–0.07	0.95	–0.01	0.93	–0.18	0.99
Family socioeconomic background (square)	1.05	1.52	0.92	1.16	0.86	1.13	1.00	1.21
Female[D]	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Native[D]	0.90	0.30	0.94	0.24	0.93	0.26	0.96	0.20
Speak national languages at home[D]	0.92	0.27	0.85	0.36	0.85	0.35	0.84	0.37
School located in rural area[D, 1]	0.33	0.47	0.25	0.43	0.24	0.42	0.28	0.45
School located in a city[D, 1]	0.34	0.47	0.25	0.43	0.28	0.45	0.20	0.40
School size	7.64	5.46	6.69	4.12	6.14	4.07	7.56	4.04
School size (square)	88.19	199.46	61.66	75.14	54.29	72.26	73.52	78.11
Family socioeconomic background, school level	–0.05	0.65	–0.07	0.51	–0.01	0.50	–0.18	0.50
School with ability grouping for all subjects[D]	0.15	0.36	0.20	0.40	0.15	0.35	0.27	0.45
School with low academic selectivity[D, 2]	0.40	0.49	0.47	0.50	0.45	0.50	0.50	0.50
School with high academic selectivity[D, 3]	0.17	0.37	0.05	0.22	0.04	0.19	0.06	0.25
Student-teacher ratio	14.85	7.66	8.78	2.59	8.57	2.54	9.12	2.63
Index of quality of school educational resources	–0.02	1.04	0.22	0.97	0.35	0.93	0.01	0.99
School average learning time in science	10.84	2.13	10.97	2.15	10.97	2.31	10.99	1.87
School informing parents on children's' performance relative to other students in the school[D]	0.54	0.50	0.18	0.39	0.17	0.38	0.20	0.40
School posting achievement data publicly[D]	0.36	0.48	0.32	0.47	0.38	0.48	0.24	0.42
School autonomy in staff decisions	–0.12	1.01	–0.89	0.61	–0.82	0.70	–1.01	0.39
School autonomy in budget decisions	0.13	0.90	–0.43	0.71	–0.46	0.73	–0.39	0.66
School autonomy in educational content decision	0.03	0.92	0.37	0.65	0.28	0.63	0.50	0.66
Vocational schools (teaching, art)[D, 4]			0.09	0.29	0.08	0.27	0.12	0.32
Vocational schools (technical)[D, 5]			0.32	0.47	0.32	0.47	0.33	0.47
Professional schools[D, 6]			0.17	0.37	0.15	0.36	0.19	0.40
Other schools[D, 7]			0.09	0.29	0.14	0.35	0.00	0.07
Percentage of immigrant residents, province level			4.29	2.43	5.89	1.31	1.71	1.38
Criminality rate, province level[8]			4.20	1.79	4.50	1.92	3.71	1.42
Employment rate, province level			58.66	9.27	65.18	2.74	48.13	5.74
Unemployment rate, province level			7.61	4.96	4.10	1.06	13.28	3.23
Teachers turnover, school level[9]			0.43	0.21	0.43	0.21	0.43	0.22
Teachers want to move to that school, school level[10]			0.02	0.04	0.02	0.04	0.02	0.04
Teachers exiting from the school, school level[11]			–0.14	0.12	–0.12	0.12	–0.15	0.13
Tenured teachers, school level[12]			80.76	3.43	79.27	2.91	82.46	3.17
Women teachers, school level[12]			61.07	3.55	62.13	3.70	59.86	2.94

D: Dummy variables.
1. Omitted category: school located in a town (between 15 000 and 100 000 inhabitants).
2. Schools where students' past academic records and recommendation of feeder schools are not taken into account for admission.
3. Schools where students' past academic records and recommendation of feeder schools are a prerequisite for administration.
4. *Istituto d'arte, scuola magistrale*.
5. *Istituto tecnico*.
6. *Istituto professionale*.
7. Other upper secondary curricula.
8. Number of criminal offenses over 100 inhabitants.
9. Total number of teachers moving in or out the school over average teachers' number in two adjacent years.
10. Number of teachers who want to move in the school minus number of teachers who want to move out.
11. Share of tenured teachers filling requests to move elsewhere.
12. Expressed as a share of overall school teachers.

4. Main results from cross-country regressions

In line with previous studies, family background significantly affects educational outcomes. This happens directly, *i.e.* at pupil level, but also indirectly through peer effects occurring when there is social segregation at school level (Table 4.A1.2). The effect of family background is also seen in the impact of ethnic origin (country of birth and language spoken at home). These findings broadly apply to both Italy and the OECD as a whole, a significant difference being the relative importance of the direct and indirect effect of family background, Italy being particularly characterized by social segregation at school level. Location in big cities is systematically associated with worse school results in the OECD as a whole, but in Italy poorer scores are observed in rural schools.

Table 4.A1.2. **The determinants of educational achievements, cross-country and within country analysis**

	Stage 1		Stage 2		
	OECD area	**Italy**	**Italy**	North	Centre and South
Family socioeconomic background	20.079 [0.000]***	6.39 [0.001]***	5.889 [0.000]***	6.030 [0.000]***	5.686 [0.000]***
Family socioeconomic background (square)	4.171 [0.000]***	–2.589 [0.184]	–1.411 [0.035]**	–1.786 [0.034]**	–1.342 [0.113]
Female	–4.815 [0.000]***	–10.487 [0.001]***	–13.059 [0.000]***	–11.122 [0.000]***	–13.914 [0.000]***
Native	21.629 [0.000]***	29.743 [0.007]***	32.633 [0.000]***	43.069 [0.000]***	21.404 [0.001]***
Speak national language at home	25.599 [0.000]***	33.367 [0.000]***	27.097 [0.000]***	26.497 [0.000]***	26.713 [0.000]***
School located in a rural area	3.768 [0.000]***	–13.814 [0.010]**	–6.717 [0.074]*	11.098 [0.020]**	–13.784 [0.005]***
School located in a city	–9.44 [0.000]***	–2.736 [0.594]	–3.539 [0.334]	–3.055 [0.528]	2.878 [0.555]
School size	0.686 [0.000]***	–0.567 [0.700]	2.817 [0.034]**	3.612 [0.006]***	2.416 [0.195]
School size (square)	–0.002 [0.464]	–0.002 [0.975]	–0.090 [0.181]	–0.114 [0.060]*	–0.089 [0.333]
Family socioeconomic background, school level	41.444 [0.000]***	60.044 [0.000]***	13.626 [0.011]**	27.863 [0.000]***	6.110 [0.417]
School with ability grouping for all subjects	–0.443 [0.742]	–5.335 [0.180]	3.848 [0.279]	2.626 [0.618]	5.767 [0.217]
School with low academic selectivity	1.034 [0.339]	–2.194 [0.469]	6.629 [0.020]**	2.706 [0.406]	7.792 [0.031]**
School with high academic selectivity	15.705 [0.000]***	2.295 [0.776]	12.574 [0.126]	17.630 [0.013]**	9.575 [0.309]
Student-teacher ratio	0.115 [0.242]	3.158 [0.000]***	1.566 [0.094]*	1.338 [0.235]	2.157 [0.085]*
Index of quality of school educational resources	1.112 [0.009]***	1.903 [0.177]	1.218 [0.508]	2.344 [0.279]	0.685 [0.755]
School average learning time in science	9.572 [0.000]***	8.778 [0.000]***	6.079 [0.000]***	6.709 [0.000]***	5.493 [0.000]***
School informing parents on childrens' performance relative to other students in the school	1.904 [0.024]**	–5.332 [0.594]	–2.116 [0.863]	–6.412 [0.653]	–10.514 [0.436]
School posting achievement data publicly	5.173 [0.000]***	25.757 [0.000]***	6.518 [0.476]	7.840 [0.421]	1.878 [0.935]
School autonomy in staff decisions	–3.864 [0.001]***	–9.945 [0.002]***	–9.072 [0.020]**	–12.208 [0.001]***	–2.168 [0.783]
School informing parents and being autonomous in staff decision	–0.586 [0.638]	1.544 [0.845]	–1.625 [0.883]	–19.825 [0.162]	–2.603 [0.832]

Table 4.A1.2. **The determinants of educational achievements, cross-country and within country analysis** *(cont.)*

	Stage 1		Stage 2		
	OECD area	**Italy**	**Italy**	North	Centre and South
School posting achievement data and being autonomous in staff decision	1.395 [0.174]	19.751 [0.000]***	13.152 [0.094]*	12.080 [0.164]	18.613 [0.392]
School autonomy in budget decisions	1.744 [0.012]**	0.81 [0.742]	–1.136 [0.660]	–1.744 [0.693]	2.211 [0.469]
School informing parents and being autonomous in budget decision	–2.281 [0.009]***	–7.92 [0.277]	–3.102 [0.674]	9.089 [0.419]	–7.630 [0.399]
School posting achievement data and being autonomous in budget decision	0.471 [0.597]	–16.963 [0.001]***	–8.747 [0.055]*	–8.028 [0.246]	–12.495 [0.106]
School autonomy in educational content decision	0.231 [0.810]	–3.621 [0.305]	–0.714 [0.801]	–1.655 [0.705]	–2.458 [0.499]
School informing parents and being autonomous in educational content decision	–1.063 [0.302]	–6.564 [0.274]	–4.358 [0.383]	1.427 [0.870]	0.347 [0.959]
School posting achievement data and being autonomous in educational content decision	0.429 [0.716]	–8.837 [0.062]*	3.037 [0.597]	5.022 [0.391]	8.331 [0.423]
Percentage of immigrant residents, province level			1.220 [0.348]	–0.211 [0.874]	2.947 [0.161]
Criminality rate, province level			–1.531 [0.030]**	–3.715 [0.000]***	–1.735 [0.139]
Employment rate, province level			–0.048 [0.953]	–4.480 [0.000]***	0.973 [0.387]
Unemployment rate, province level			–4.384 [0.005]***	–15.199 [0.000]***	–2.182 [0.243]
Vocational schools (teaching, art)			–37.635 [0.000]***	–32.387 [0.000]***	–42.026 [0.000]***
Vocational schools (technical)			–44.037 [0.000]***	–37.136 [0.000]***	–49.050 [0.000]***
Professional schools			–74.696 [0.000]***	–64.161 [0.000]***	–78.561 [0.000]***
Other schools			–65.099 [0.000]***	–46.212 [0.000]***	–70.034 [0.002]***
South			–18.292 [0.007]***		
Country-level fix effects	Yes	–	–	–	–
Constant	273.395 [0.000]***	305.576 [0.000]***	415.611 [0.000]***	737.569 [0.000]***	344.075 [0.000]***
Observations	246 562	21 773	21 567	13 320	8 247
R-squared	0.352	0.345	0.421	0.398	0.378

BRR t-statistics in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Big schools perform better in the OECD area but not in Italy. However, in Italy a higher student per teacher ratio is associated with better outcomes. The impact of instruction time in science on PISA scores is strongly positive, both in the cross-country sample and the Italian one. As far as the OECD area as a whole is concerned, the quality of educational resources (proxied by the existence and the adequacy of teaching material, computers, library and other facilities) is associated with higher PISA scores, but no similar effect is observed for Italy.

School governance policies matter for pupils' results, though less than individual and other school level factors (as shown in Figure 4.8). Pupils in highly selective schools record better outcomes, possibly because the pupils are more able, or because such schools attract the best teachers, or a combination of both. Admission policies do not matter for Italy, which may reflect a lack of variance in this respect (*i.e.* there are too few schools practicing selection at entry) but also the ineffectiveness of selective schools in producing better outcomes.

In the OECD area accountability policies (as self-reported by schools) affect educational outcomes, as shown by the fact that schools posting results of national assessment test/final exam publicly and those who inform parents about pupils' relative results within the school, are schools where pupils obtain higher PISA scores. In Italy only the former type of accountability has a positive impact on pupils' results, and to a much greater extent than in the OECD area as a whole, especially when accountability goes together with autonomy in staff management.[5]

The role of autonomy is found to be more ambiguous. For the OECD as a whole, schools which can freely manage their staff tend to do worse, while those who are autonomous in budget allocation do slightly better. In Italy, autonomy in staff management is also associated with lower pupils' results, unless the school publishes results publicly. This can be related to two facts: first, that staff management autonomy in public schools is limited to non-tenured teachers (and non-tenured teachers are not recruited through a strict selection process, as discussed in the chapter); second, full autonomy in hiring and firing decisions in Italy is limited to private schools, nearly all of which have poor results. The effects of other forms of autonomy are either negative or not significantly different from zero. In further estimates (not reported here but to be available in a working paper) the interaction of autonomy and accountability was investigated. The results are in line with the baseline shown in Table 4.A1.1 and in addition indicate that accountability and autonomy policies are complementary: both are needed to avoid that an uncontrolled use of autonomy leads to bad school results.

5. Main results from within country regression

The diversity of upper-secondary education programmes across OECD countries makes it inappropriate to study the impact of the type of school with a cross-country approach. However, in the Italian national sample the impact of VET schools compared with general education programmes can be assessed. As shown in Table 4.A1.2 (Stage 2 columns), pupils attending VET schools (of various orientation) perform significantly worse than those in general education ("licei" in Italy, the reference variable in the specification). The effect is large: the difference in scores between professional and general schools is 75 points, *i.e.* almost the equivalent of two years of schooling; the difference between teaching or art schools (*licei magistrali* or *licei artistici*) and general programmes is just over half of this. The type of school is by far the biggest determinant of PISA scores in this specification: its impact ranges between the equivalent of that of family background to its double. Endogeneity is a serious problem, however; VET schools may be are more likely to attract weak students, as they have the reputation of being easier (Bratti *et al.*, 2007). This endogeneity problem cannot be dealt with directly in the absence of suitable instruments in the PISA dataset, so these large estimated impacts may not be the genuine effect of lower quality education in VET schools.

As expected, another important driver of PISA results is the region in which schools are located. As the main text pointed out, much of this variation is accounted for by contextual variables, but even when they are included, regional fixed effects are still significant in the within-country regression carried out on the Italian sample (Table 4.A1.2, third column). Contextual factors may be related to the social, cultural and economic school environment or to schools themselves. The former set of factors is proxied by contextual variables as in Bratti *et al.* (2007). The second set is captured by PISA accountability and autonomy indicators. In a robustness analysis, other variables indirectly proxying school-level teachers characteristics and preferences are tested (Table 4.A1.3; further analysis is available in the forthcoming working paper).

Table 4.A1.3. **Robustness analysis of within country regression**

	Controlling for school average socioeconomic background, teachers mobility and type of school	Controlling for school average socioeconomic background	Controlling for teachers mobility	Controlling for type of school	Controlling for school average socioeconomic background and teachers mobility	Controlling for school average socioeconomic background and type of school	Controlling for teachers mobility and type of school
Family socioeconomic background	5.635*** [0.000]	6.079*** [0.000]	11.61*** [0.000]	7.251*** [0.000]	5.692*** [0.000]	5.948*** [0.000]	6.359*** [0.000]
Family socioeconomic background (square)	–1.620** [0.014]	–1.427** [0.031]	–1.760*** [0.008]	–1.400** [0.038]	–1.682*** [0.007]	–1.399** [0.035]	–1.632** [0.016]
Female	–14.59*** [0.000]	–10.22*** [0.000]	–11.36*** [0.000]	–13.12*** [0.000]	–12.91*** [0.000]	–12.96*** [0.000]	–14.64*** [0.000]
Native	30.36*** [0.000]	33.59*** [0.000]	31.97*** [0.000]	31.88*** [0.000]	32.29*** [0.000]	32.05*** [0.000]	30.13*** [0.000]
Speak national language at home	26.86*** [0.000]	28.48*** [0.000]	31.35*** [0.000]	26.79*** [0.000]	28.58*** [0.000]	26.43*** [0.000]	27.04*** [0.000]
School located in a rural area	–8.185* [0.073]	–9.582* [0.068]	–5.635 [0.300]	–9.146** [0.019]	–8.144 [0.133]	–8.517** [0.029]	–7.951* [0.080]
School located in a city	0.00666 [0.999]	–8.339** [0.045]	–3.425 [0.474]	0.144 [0.970]	–6.949 [0.125]	–1.965 [0.605]	1.152 [0.780]
School size	2.326* [0.088]	2.181 [0.165]	0.0672 [0.967]	3.016** [0.024]	1.283 [0.427]	3.110** [0.021]	2.251* [0.098]
School size (square)	–0.0698 [0.298]	–0.0772 [0.271]	0.0114 [0.875]	–0.101 [0.128]	–0.0325 [0.647]	–0.103 [0.118]	–0.0673 [0.318]
Family socioeconomic background, school level	9.716 [0.101]	50.55*** [0.000]			47.10*** [0.000]	13.79** [0.011]	
School with ability grouping for all subjects	5.008 [0.136]	1.697 [0.675]	6.102 [0.134]	3.041 [0.400]	4.886 [0.198]	2.942 [0.415]	5.133 [0.129]
School with low academic selectivity	4.640 [0.123]	6.261* [0.093]	7.240* [0.071]	6.519** [0.027]	5.278 [0.144]	6.162** [0.035]	4.852 [0.115]
School with high academic selectivity	10.10 [0.196]	6.614 [0.489]	8.687 [0.239]	10.46 [0.157]	8.434 [0.392]	10.30 [0.197]	10.25 [0.159]
Student-teacher ratio	1.819* [0.069]	4.134*** [0.000]	7.520*** [0.000]	1.885* [0.052]	4.161*** [0.000]	1.576* [0.098]	1.983* [0.051]
Index of quality of school educational resources	–0.00217 [0.999]	–0.569 [0.789]	–1.177 [0.571]	1.236 [0.524]	–1.317 [0.520]	0.864 [0.655]	0.190 [0.918]
School average learning time in science	6.126*** [0.000]	8.176*** [0.000]	9.779*** [0.000]	5.924*** [0.000]	8.296*** [0.000]	5.831*** [0.000]	6.173*** [0.000]
School informing parents on childrens' performance relative to other students in the school	19.91 [0.171]	–2.602 [0.852]	7.365 [0.704]	–2.595 [0.834]	19.31 [0.302]	–2.856 [0.821]	18.64 [0.197]
School posting achievement data publicly	3.523 [0.752]	3.927 [0.742]	–9.202 [0.538]	8.243 [0.415]	–7.981 [0.572]	7.002 [0.487]	4.698 [0.674]
School autonomy in staff decisions	–5.909 [0.263]	–10.90** [0.029]	0.726 [0.910]	–9.080** [0.022]	–2.649 [0.648]	–9.378** [0.020]	–5.940 [0.261]
School informing parents and being autonomous in staff decision	19.18 [0.128]	–1.841 [0.882]	7.915 [0.627]	–2.125 [0.852]	18.08 [0.262]	–2.667 [0.816]	18.26 [0.141]
School posting achievement data and being autonomous in staff decision	7.710 [0.443]	8.556 [0.386]	–6.043 [0.660]	12.93 [0.146]	–2.681 [0.832]	12.18 [0.162]	8.518 [0.399]
School autonomy in budget decisions	–0.935 [0.714]	–0.723 [0.810]	–0.860 [0.810]	–1.221 [0.657]	0.707 [0.799]	–1.199 [0.649]	–1.280 [0.628]
School informing parents and being autonomous in budget decision	–10.11 [0.172]	–4.767 [0.516]	–17.10* [0.071]	–4.724 [0.529]	–12.40 [0.109]	–4.101 [0.576]	–10.52 [0.168]
School posting achievement data and being autonomous in budget decision	–7.909* [0.089]	–8.291* [0.089]	–6.260 [0.289]	–7.684* [0.094]	–9.349* [0.067]	–8.005* [0.075]	–7.389 [0.115]
School autonomy in educational content decision	–0.945 [0.745]	–0.290 [0.926]	3.570 [0.293]	0.240 [0.937]	0.00990 [0.997]	–0.378 [0.898]	–0.612 [0.836]
School informing parents and being autonomous in educational content decision	–3.922 [0.458]	–2.724 [0.676]	–7.780 [0.206]	–4.967 [0.325]	–4.535 [0.472]	–5.130 [0.317]	–4.061 [0.452]

Table 4.A1.3. **Robustness analysis of within country regression** *(cont.)*

	Controlling for school average socioeconomic background, teachers mobility and type of school	Controlling for school average socioeconomic background	Controlling for teachers mobility	Controlling for type of school	Controlling for school average socioeconomic background and teachers mobility	Controlling for school average socioeconomic background and type of school	Controlling for teachers mobility and type of school
School posting achievement data and being autonomous in educational content decision	–1.393 [0.751]	–1.614 [0.802]	–8.344 [0.224]	1.832 [0.749]	–5.165 [0.360]	1.863 [0.743]	–1.458 [0.744]
Teachers turnover, school level	5.208 [0.711]		–8.647 [0.434]		7.525 [0.519]		2.679 [0.847]
Teachers want to move to that school, school level	122.1** [0.045]		362.5*** [0.000]		196.4** [0.013]		136.4** [0.026]
Teachers exiting from the school, school level	–3.657 [0.890]		–30.86 [0.450]		–19.31 [0.590]		–3.592 [0.891]
Vocational schools (teaching, art)	–39.58*** [0.000]			–43.39*** [0.000]		–37.69*** [0.000]	–43.60*** [0.000]
Vocation schools (technical)	–44.89*** [0.000]			–52.07*** [0.000]		–44.64*** [0.000]	–49.98*** [0.000]
Professional schools	–74.01*** [0.000]			–87.17*** [0.000]		–76.28*** [0.000]	–81.18*** [0.000]
Other schools	0 [.]			–79.57*** [0.000]		–68.49*** [0.000]	0 [.]
South	–17.48** [0.014]	–17.07** [0.047]	–19.49*** [0.008]	–13.74** [0.038]	–21.34** [0.014]	–15.05** [0.032]	–16.95** [0.012]
Constant	453.0*** [0.000]	322.3*** [0.000]	142.2 [0.108]	492.4*** [0.000]	282.7*** [0.002]	493.1*** [0.000]	451.7*** [0.000]
Observations	16 028	17 586	16 028	17 586	16 028	17 586	16 028
R-squared	0.418	0.397	0.374	0.421	0.396	0.423	0.418

* significant at 10%; ** significant at 5%; *** significant at 1%.

This specification is also conducted separately on two macro-areas (the North and the Centre-South) to gather more insights on the possibly different contribution of contextual and school drivers of performance to pupils' results. In line with previous studies (Bratti *et al.*, 2007) contextual effects are found to explain part of the variation in educational outcomes: higher unemployment is associated with lower PISA scores, as is a higher criminality rate.

The analysis by macro-area finds that the drivers of educational outcomes are generally quite homogenous across regions. Exceptions to this include the advantage of being native, which is higher in the North, and the disadvantage of attending a school located in a rural area, which is higher in the South. The first factor may reflect a more difficult integration of immigrants in Northern regions (where they are also much more numerous) while the second finding may indicate that the cultural backwardness of some rural areas in southern regions act as an impediment to pupils' learning.

In a further exception the role of school average background and school type are not of the same size across regions. Peer effects are stronger in the North, but virtually nil in the Centre-South. By contrast, attending a VET school has a much stronger negative effect in the South than in the North. To the extent these two variables (school type and school average socioeconomic background) are correlated, it is likely that social segregation at school level does occur in both parts of the country, but in different ways (in the North it may be due to the school reputation through peer effects, in the South to the type of school).

Finally, there seems to be very little difference in the impact of school governance across the country, as also illustrated by Figure 4.9. In fact when splitting the sample into the two

macro-areas, school governance policies seem to matter very little, if not at all for educational outcomes. This could be either due to insufficient variation in school governance within each region when controlling for other variables correlated with governance (for instance the type of upper-secondary school), but also to the fact that accountability and autonomy are implemented in ways that are ineffective for pupils' results.

Some robustness analysis was carried out around the baseline specification to see whether other school characteristics may explain the different performance of pupils in the North and in the South. In the absence of any direct measure of teaching quality, three variables measuring teachers' working environment and the willingness of teachers to change schools are considered. These indicators (based on Barbieri *et al.*, 2007), described in the main chapter, are teachers' turnover, teachers' revealed preference to be in a given school and the teachers' exit rate at school level. Only the revealed preference indicator is significantly and strongly associated to higher PISA scores (the elasticity is around 5%, almost as much that of the family background at individual level). However, one cannot distinguish the hypothesis that this is because more motivated teachers (*i.e.* those who work in the most requested schools) get better results from the hypothesis that teachers strive to go to the schools with the better pupils.

Some evidence in favour of the former explanation is shed by comparing regressions where these three indicators are tested with and without two other variables that may capture for school reputation effect (see Table 4.A1.3). When school average socioeconomic background and type of upper-secondary school are not controlled for, the impact of the revealed preferences indicator is three times larger (third column of Table 4.A1.3). When school average socioeconomic background is also included, the effect of revealed preferences indicator decreases quite significantly (see second last column of Table 4.A1.3). The school type is correlated with both the revealed preference indicator and the school average socioeconomic background, nevertheless coefficients for this variable are largely unchanged across all specifications; there is a robust negative impact from attending those schools irrespective of the average social background of vocational schools and the quality of their teaching environment.

To summarise, this robustness exercise shows that some of the reasons why teachers want to move to (or way from) a given school have to do with peer effects and school type. It is thus important to control for the three sets of regressors at the same time, to assess the importance of teachers' willingness to move across schools on pupils' results. Endogeneity bias arising from the use of the revealed preference indicator may still remain if school reputation is linked to pupils' ability besides their social origin and the type of school chosen. This could be the case, for instance, if schools made systematic use of admission policies based on ability or on previous pupil's results. However, as noticed earlier, this is rare in Italy.

6. Discussion and caveats

This empirical exercise has looked at the impact of various determinants of PISA scores, both with a comparative perspective across OECD countries and within Italy. The main findings are that individual level factors, such as a pupil's family background and ethnic origin, matter the most for explaining PISA scores. School governance policies, such accountability and autonomy, are also important though to a lower extent. This is true for both the cross-country and the within-country analysis. The latter has also found that

drivers of PISA scores are not very different across regions, even though pupils in the South perform significantly worse than pupils in the North. Unfavourable contextual effects in the South may explain part of the disparity in learning outcomes, while school level factors do not seem to matter. A caveat has to be made in that respect: variables used to control school contribution to pupils' results may not be satisfactory, suffering from measurement error or not being relevant for the Italian context. Some further insight has been obtained by using data on teachers' mobility across schools as an indicator of teacher quality. Results show that schools with a better teaching environment are associated with higher PISA scores, this holds true when controlling for other school factors that may capture pupils' ability through school reputation effects through, thus suggesting that the quality of teaching environment matters over and above pupils' skills.

Some caveats have to be borne in mind when interpreting the findings from this empirical analysis. First, the cross-sectional nature of PISA data allows one to study the impact of educational policies on pupils' results only under some assumptions that might not be met in practice (see OECD 2008d). Thus policy variable effects do not necessarily indicate causality, but many correlations are clear and causality often plausible. Second, this methodological approach relies on parametric assumptions on which there are few priors. Third, PISA dataset suffers from some limitations, notably the lack of information on learning inputs before age 15; a limited coverage of schools in each country; measurement errors arising from using survey data and, in particular, from using subjective answers from schools to capture national policy settings. Finally, it is worth noticing that the problem of socioeconomic stratification by type of school is particularly severe in the Italian case, and no light can be shed of the causal nature of the issue with the data at hand.

This analysis has only looked at the influence of drivers of average learning outcomes and not of equity of achievements. However, Wößmann *et al*. (2007b) as well as the initial international report for PISA 2006 (OECD, 2007) find that most of educational policies which matter for average performance (namely school accountability and autonomy) do not have a detrimental impact on equity of achievements.

Notes

1. A fuller version of this annex, prepared in collaboration with Margherita Comola, will be published in an OECD Economics Department Working Paper.
2. Italy is one of the few OECD countries which stratifies PISA sample at regional level. Other countries include Belgium, the United Kingdom and Spain. However, since the geographical divide in these countries is structurally very different from the Italian one, the analysis has focused on the Italian regions only.
3. The Centre has been analyzed together with the South due to the exiguous number of observations (3.7% of the overall Italian sample).
4. In order to ensure school-type comparability, in the last three column of Table 4.A1.1 (as well as in all other specification including the type of school) the pupils still attending lower secondary school (less than 1% of observations) have been excluded from the sample.
5. In Italy general education schools mainly do that, while VET schools tend to be less accountable.

OECD PUBLISHING, 2, rue André-Pascal, 75775 PARIS CEDEX 16
PRINTED IN FRANCE
(10 2009 08 1 P) ISBN 978-92-64-05435-6 – No. 56791 2009

OECD Economic Surveys

ITALY

SPECIAL FEATURE: EDUCATION

Most recent editions

Australia, October 2008
Austria, July 2007
Belgium, March 2007
Canada, June 2008
Czech Republic, April 2008
Denmark, February 2008
Euro area, January 2009
European Union, September 2007
Finland, June 2008
France, April 2009
Germany, April 2008
Greece, May 2007
Hungary, May 2007
Iceland, February 2008
Ireland, April 2008
Italy, June 2009
Japan, April 2008
Korea, December 2008
Luxembourg, June 2008
Mexico, September 2007
Netherlands, January 2008
New Zealand, April 2009
Norway, August 2008
Poland, June 2008
Portugal, June 2008
Slovak Republic, February 2009
Spain, November 2008
Sweden, December 2008
Switzerland, November 2007
Turkey, July 2008
United Kingdom, May 2009
United States, December 2008

Non-member Countries: Most recent editions

Baltic States, February 2000
Brazil, November 2006
Bulgaria, April 1999
Chile, November 2007
China, September 2005
Estonia, April 2009
India, October 2007
Indonesia, July 2008
Romania, October 2002
Russian Federation, November 2006
Slovenia, May 1997
South Africa, July 2008
Ukraine, September 2007
Federal Republic of Yugoslavia, January 2003

Volume 2009/8
June 2009

ISSN 0376-6438
2009 SUBSCRIPTION
(18 ISSUES)

OECD*publishing*
www.oecd.org/publishing

ISBN 978-92-64-05435-6
10 2009 08 1 P

9 789264 054356