

Differentiated trends in student access and performance during the “Bologna Process”. The case of universities in Milan

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Abstract: The aim of this article is to examine trends in student access and performance at university during the implementation of the “Bologna Process”. We focus on the universities in Milan in order to assess whether and to what extent institutions with different characteristics experienced differentiated changes in both first-year students composition and performance. The analysis of administrative data suggests that the reform favored a growth of enrolments and an heterogeneous change in student characteristics. Public and large universities attracted mainly students with a weaker school background, while in the private and more prestigious universities the proportion of new entrants from the secondary academic track did not decrease at all. Furthermore, there has been an overall improvement in student performance (early drop-out and exams inactivity) and a reduction of its heterogeneity across universities. Further research should address whether this is due to organizational improvements or simply reflects a lowering of academic standards.

Keywords: university, reform, Bologna process, access, performance

Introduction: changes in the Italian university system

During the 1990s, Italian universities underwent a period of major reforms. These consisted firstly of a shift from a strongly centralised

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system to one that gave universities more autonomy (Capano, 1998; 2000), in line with what other European countries had done in the 1980s (Clark & Neave, 1992). This was followed by a radical redesign of course programmes across the country. The university reform (Italian Ministerial Decree 509/99) entailed a transition from a unitary system based on four-year courses of study to a vertically tiered system of “bachelor+master+postgraduate programmes”, in line with what happened earlier in other European countries (Meek *et al.*, 1996).

Therefore, after decades of immobility, failed reforms and emergency changes, the Italian university system finally saw a relevant structural reform. It is important to note that this was – at least in part – driven by an external stimulus: the desire to participate in the creation of a European higher education area, otherwise known as the “Bologna Process”. This was thus a change entrained by Europe, and pushed for mainly by the university deans and a minority of academics.

The policy formulation period was prolonged, and the ensuing implementation, after a few critical years (2001-2003), is now in its consolidation phase. On the one hand, adherence to the Bologna Process had the advantage of setting requirements and constraints which permitted a comprehensive redesign of the course structures. On the other hand, it also imposed timescales that prevented the reform objectives from being fully assimilated by all faculty; as a matter of fact, only the personnel directly involved in the implementation of the reform (e.g. Deans) seemed to share the reform rationale.

In consequence, the endeavour to comply with European organisational standards had uncertain effects, which moreover appear to vary between universities and faculties, depending on their individual institutional, organisational, academic and geographical characteristics. Within this context it is likely that a process of differentiation between universities, faculties and departments occurred and this is clearly at odds with the legal value of degrees, which remains an idiosyncratic feature of the Italian university system.

Against this backdrop, it is interesting to understand whether and to what extent the “Bologna Process” affected different universities, which vary in their course supply, dimension, tradition and other characteristic of their student population. In order to address this topic we focus on the case of the higher education system in Milan, which is characterized by a high variability between different institutions. Our research questions are as

follows: did the reform encourage a larger proportion of school-leavers to continue their studies, and did it create incentives for adults to return to education, thereby boosting the overall investment in human capital? Did the expansion of tertiary education equally affect all the universities of Milan? Did the new system help ease the impact of entering university, reducing the drop-out and inactivity rates? Did the reforms help to close the gap – or did they conversely increase the divergence – between the various universities and their performance? This work seeks to give some preliminary answers to these questions, through an analysis of institutional data. Before presenting the data and commenting on the analysis, we provide an overview of how the educational offerings and attendance patterns of Milan's universities have changed during the 1990s, and put forward some hypotheses as to the expected trends.

Milan's university system and its transformation

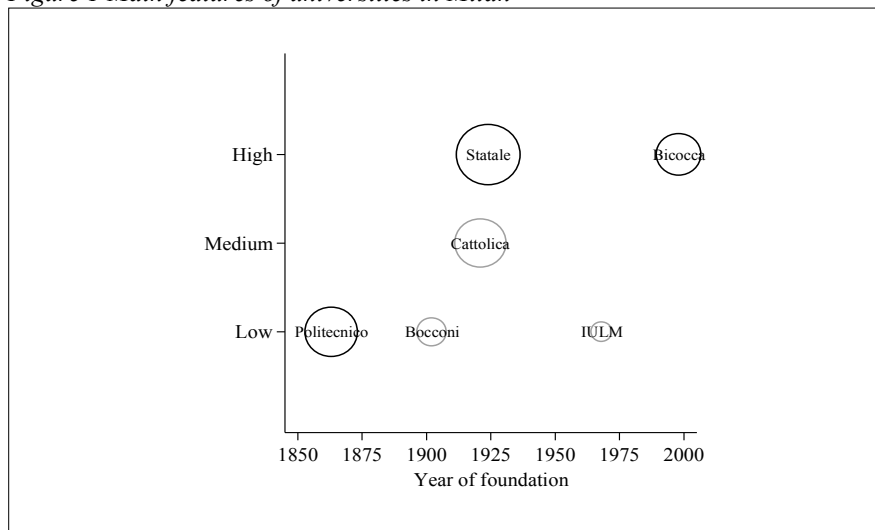
The university system of Milan is an interesting case study because it exhibits notable variability between institutions, which can help cast light on how different types of universities have experienced the reforms, and whether the effects of these have been differentiated. Milan's system comprises six main universities:³ Università degli Studi di Milano (Statale), Università di Milano-Bicocca, Università Cattolica del Sacro Cuore, Politecnico di Milano, Università Bocconi and IULM (Libera Università di Lingue e Comunicazione). These universities differ in their size and student populations, legal description, breadth of course offerings and academic tradition.

Figure 1 graphically illustrates the ranking of Milan's six universities with respect to four indicators. University size is expressed as the total number of students in the year 2005-06; the legal description distinguishes between public and private universities; the breadth of course offerings is captured through a variable expressing, on an ordinal scale, the diversity of disciplines taught, while academic tradition is captured through the year of establishment. The oldest universities are Politecnico and Bocconi, respectively founded in 1863 and in 1902. They are followed by Cattolica

³ We are here excluding San Raffaele hospital, which has peculiar features and, for this reason, will not be considered in the analysis.

and Statale, both established in the early 1920s (respectively in 1921 and 1924). The newest universities are instead IULM, established in 1968, and Bicocca, founded in 1998 to relieve the long-standing overcrowding of Statale. With over 57 thousand enrolled students, Statale is by far the largest university; it is followed by Politecnico and Cattolica, both with around 38 thousand students and by Bicocca, with slightly under 28 thousand enrolled students. The smallest universities are instead Bocconi (12 thousand students) and IULM (6 thousand students), which are both private.

Figure 1 Main features of universities in Milan



Note: the dimension of circle is directly proportional to the total number of students. *Source:* data on the number of students come from the MIUR, while other information was collected on the universities' websites.

Looking at the breadth of course offerings in relation to the type of institution, we find two public universities with comprehensive offerings, Statale and Bicocca, that teach technical-scientific as well as humanities and socio-economic disciplines. Cattolica, the only private university of medium-large size, offers a fairly varied range of courses, though with an emphasis on humanities (foreign languages, communications), statistics-economics and social sciences. The remaining universities instead have more specialised course offerings. Politecnico is focused on engineering,

architecture and design; Bocconi on economics and law, and IULM on foreign languages, communication sciences and tourism. Though it is difficult to formulate a ranking of universities' academic prestige, it is reasonable to say that the most prestigious universities are Bocconi and Politecnico. These are the two institutions with the longest-established tradition, the strongest links with business and industry, and the highest level of internationalisation. Immediately behind them are Cattolica and Statale, whereas the least prestigious universities, in terms of both student population and date of establishment, are Bicocca and IULM.

Let us now examine some of the changes in the educational offerings and student populations that took place in the fifteen after the start of the 1990s. During this period, Milan's university system underwent various transformations, which contradict the conventional view of Italian universities' immobility and resistance to change (Ballarino & Regini, 2005). The tertiary education system of the Milan area witnessed a notable expansion, in both the range of course offerings as well as in student numbers and first-year enrolments. The total number of courses (bachelor's and postgraduate programmes) rose in the 1990s from 265 to 645, and further to 831 in 2004/05. During these fifteen years, the number of bachelor's courses increased nearly four-fold, while the number of postgraduate courses (master's programmes, specialisation schools, research doctorates, advanced courses and vocational masters) more than tripled. In this period there was also a marked increase in enrolments, from 35 thousand to over 52 thousand. Much of this absolute growth can be ascribed to the expansion of enrolments in postgraduate programmes, which increased fully seven-fold, from around 2,400 to approximately 17,800. The expansion of participation in higher education is further confirmed by an indicator that is unaffected by demographic cohort size: the enrolment rate, relative to the total population of university-entry age. Whereas at the start of the 1990s the percentage of enrolments in bachelor's courses, relative to the total 19-year old population of Lombardy region, was around 34%, ten years later it had risen to 49%, a value aligned with that of the most advanced industrialised countries (Oecd, 2006).

This marked expansion of tertiary education can be attributed to various factors (Ballarino & Regini, 2005; Ballarino, 2006), the principal ones being: 1) changes in the employment market, 2) demographic shifts and 3) factors endogenous to universities. In the first place, the absolute increase in enrolments and in the propensity to continue education after upper

secondary schooling was a response to the growing demand for high and medium-high level professionals in the industrial and services sectors. The employment market of the Milan area has an advanced structure, with a large proportion of high-level positions. Alongside this, the expansion of tertiary education was driven by institutional factors internal to the university system. In particular, the university reforms of 1999, as we shall see below, may have produced institutional changes that influenced the higher-education investment decisions of young people in Milan and Lombardy. This view is supported by the fact that enrolments increased notwithstanding an unfavourable demographic trend, marked by a reduction in the size of entry cohorts (de Francesco, 2001).

The rapid expansion of postgraduate education can likewise be understood in the light of changes originating from the job market, with an increasing demand for medium-high professional profiles in the services sector. This seems to be borne out by the fact that, in the 1990s, the greatest rise in enrolments concerned postgraduate courses with a strong career focus (advanced courses and vocational masters), rather than the more traditional, academically-oriented programmes (research doctorates and specialisation schools). Finally, the growth of participation in postgraduate education also reflects a demographic trend: the progressive ageing of the population of Milan's metropolitan area reduced the number of young people in the 20-year age band and increased the over-30 age group, which tends to be most interested in career-focused postgraduate education.

Objectives and hypotheses

In the preceding paragraphs we have described the backdrop against which the expansion of Milan's tertiary education took place, illustrating some general trends concerning participation and course offerings. We shall now proceed to expand upon some aspects of this growth that have not yet been adequately investigated. In particular, our objectives are to analyse:

- 1) The effects of the “Bologna process” on enrolments, comparing the trends for Italy and for Lombardy region. In particular, it is of interest to understand to what extent these changes can be deemed “exceptional” or, contrariwise, destined to endure.

2) The enrolment trends of Milan’s principal universities, identifying which institutions most absorbed the increased demand for higher education.

3) Changes in the proportion of entrants from a liceo classico or liceo scientifico (academic-track secondary schools specialising, respectively, in classical studies or sciences) at the different universities, to gauge the differential effects of the reforms on the social composition of incoming students.

4) Changes in the performance of Milan’s universities (rate of failure to re-enrol between the first and second year, and proportion of students inactive during the first year of the course), to highlight how the reforms affected the progression of students' careers in the different universities.

With regard to the first point, one might think that, after a rapid rise coinciding with the reforms, the demand for tertiary education would subsequently have reverted to the pre-reform levels. In other words, the effect of the transition from a system based on four-year courses to one with a “bachelor+master” structure might have been temporary, and driven by two factors: a sort of “novelty effect”, and the absorption of latent demand that had accumulated over time but hesitated to emerge under the old system. It should be noted that we are not yet in a position to observe any long-term changes ensuing from the reforms. That said, it is likely that the reorganisation had the effect of keeping enrolments at a significantly higher level than the under old system, also in the years immediately following its implementation. Adopting a framework for explaining educational choices based on RAT (Rational Action Theory) (Erikson & Jonsson, 1996; Breen & Goldthorpe, 1997), it seems reasonable to expect that lowering the duration of courses, and thereby also the attendant costs, would make attending university attractive to a larger proportion of school leavers. In particular, as suggested by Argentin and Triventi (2011), a broader array of educational offerings, the creation of new courses of study (more targeted at specific segments of the job market than in the past), and the institution of shorter three-year programmes are likely to have reduced the expected costs of university attendance and increased the expected benefits, in terms of time-to-degree and employment opportunities.

Secondly, one might think that all the universities of Milan would have been affected equally from the reforms, with comparable rises in enrolments. Yet it is likely that the new university entrants (i.e. those who enrolled in three-year courses but who probably would not have attended

university under the old system) come from weaker academic and social backgrounds compared to traditional university students. In particular, they are likely to have technical-vocational secondary school diplomas, and to come from medium-low income families or non-tertiary educated parents. Given these premises, we hypothesise that the new entrants will have tended to favour public universities, where the registration and tuition fees are lower, and to avoid those disciplines perceived as overly difficult. Such choices can be understood with reference to the theoretical perspectives focusing on the impact of education costs on schooling decisions (Boudon, 1979), as well as the theories emphasising the importance of qualitative and “habitus” distinctions between social classes (Bourdieu & Passeron, 1971; Bourdieu, 1972). We would accordingly expect a larger increase in enrolments at the public universities (Statale and Bicocca) than at private universities (Bocconi) or those prevalently focused on highly challenging disciplines such as engineering (Politecnico).

A similar argument could be applied to the third point, concerning the change in composition of university entrants, given that the “new” students are not uniformly distributed among universities, we would expect the proportion of liceo entrants to have remained virtually unchanged at prestigious private universities such as Bocconi, while public universities with humanities-oriented courses (Statale and Bicocca) should have seen an increase in entrants from other types of secondary schools. This conjecture is consistent with an argument in the literature on educational inequality known as the “diversion hypothesis” (Brint & Karabel, 1989), according to which, educational expansion increases access to university by lower class students, but they tend to more frequently enrol in the less prestigious and less challenging educational routes.

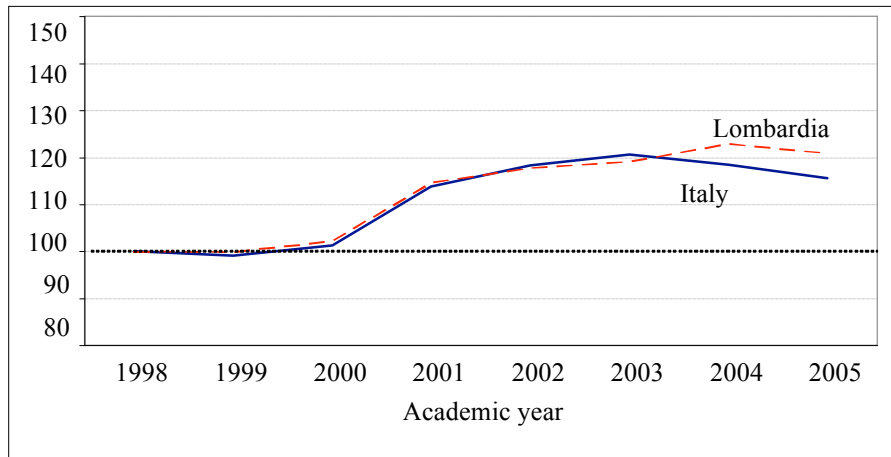
At the end, we look at some indicators of new entrants’ progress. The success of students in their first year is considered here to be a measure of university performance. If this performance were solely dependent on student composition, we would expect it to be essentially unchanged at the prestigious private universities, but to have declined at the public universities preferred by the majority of new non-traditional students. However university performance – at the aggregate level – also depends on other factors, such as changes in the assessment structure (from courses to modules, from exams to credits), the organisational quality and the evaluation criteria. If all these changes improved students’ performance sufficiently to counteract the weaker background of new entrants, then we

would expect a reduction in the drop-out and inactivity rates, as hoped for by the promoters of the reform.

Enrolments and performance of Milan’s universities

In this section we shall attempt to answer the questions presented in the introduction, through an analysis of public domain data gathered and published by CNVSU (Italian National Committee for the Evaluation of University Studies), and available at the website: <http://nuclei.cnvsu.it/>. It should be noted, though, that these data have several limitations, so that they cannot provide definitive answers to our research questions, nor firmly corroborate the hypotheses set out in the previous paragraph. In fact, a rigorous investigation of these points would require data collected at the individual level, through longitudinal study protocols, and the use of sophisticated statistical analysis tools. Nevertheless, in the absence of such resources, a first examination of the institutional data and some simple indicators of university attendance may help cast light on certain macro-trends that have marked the transition of Milan’s universities from the old to the new system. The analysis for the most part considers a span of time between the academic years 1998/99 and 2005/06, a period for which information about the universities under study is readily available. This time horizon can be considered sufficient for examining how the indicators of interest changed during implementation of the reforms, which began in the 2001/2002 academic year.

Figure 2. University new entrants in Italy and Lombardy, a.y. 1998/99-2005/06 (1998=100)



Source: authors' elaboration on data from Cnvsu, <http://nuclei.cnvsu.it/>

The diachronic comparison focuses on first year enrolments, rather than on the student population as a whole. This because an analysis conducted on total student numbers might be misleading, due to variability among universities in course durations, time-to-degree and drop-out rate. The time comparison is concerned with first year enrolments in single cycle degree programmes (under both the old and new systems), university diploma courses (old system), three-year bachelor's programmes (new system) and master's programmes (new system). In other words, the focus is on how the proportion of students entering the “standard” academic track has changed over time, under the two systems. Enrolments in specialisation schools, advanced courses, vocational masters or doctoral programmes are instead not considered. What is more, for the sake of brevity, we have decided not to distinguish between the bachelor's and master's programmes, nor to separately analyse the different faculties or discipline groups.

Figure 2 shows the trends of university enrolment rates for Italy and for Lombardy region during the years immediately before and after implementation of the reform. An analysis by Ballarino (2006) demonstrates that the universities of Lombardy and Milan follow comparable patterns, so that the results observed for the region can be reasonably applied to Milan's universities. To allow comparability between the nationwide and regional trends, the graph shows the relative change in

the number of students, setting the enrolments for 1998/99 equal to one hundred.

The graph reveals a clear change in enrolment numbers in both geographical contexts, coinciding with implementation of the reforms. In both Italy and Lombardy, enrolments remained essentially stable during the three years preceding the reform, and then rose sharply between 2000/01 and 2001/02. Subsequently, the growth continued, but at a much less rapid pace. Enrolments in Italy as a whole and in Lombardy followed very similar trends until 2003/04, but after that point began to diverge: while Italy as a whole suffered a rather marked drop in its enrolment rate, the decline was much more modest for the universities of Lombardy. Looking at the endpoints of our time interval, there was an overall increase of 16% nationwide, and 21% in Lombardy region.

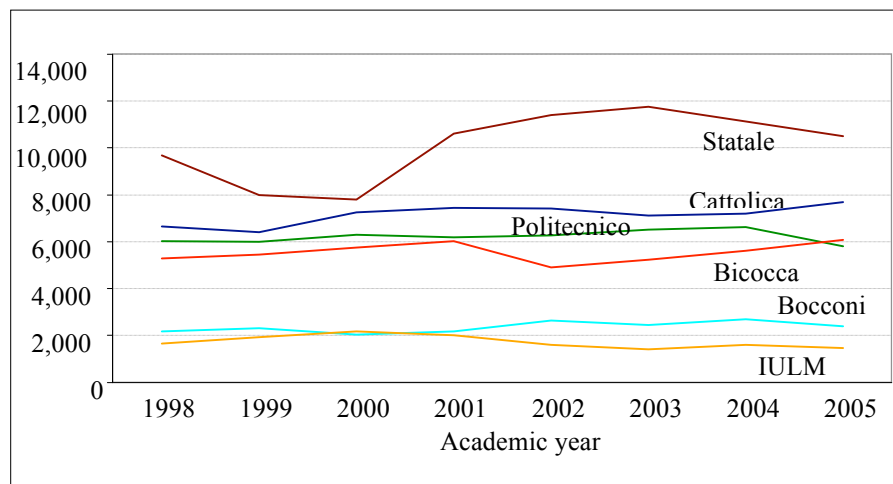
As mentioned previously, a simple analysis of the change in enrolment rates is insufficient for evaluating the net impact of the reforms on university participation, because the observed trend might be a “genuine” effect of the reforms, but could also be due to other factors that haven't been controlled for (such as demographic shifts in the cohorts of school leavers, variability over time of the attractiveness of university qualifications, changes in the educational offerings, etc.). An analysis conducted by Bondonio (2007) at the national level, on university data obtained from the statistical department of MIUR (Ministry of Education, University and Research), attempts to isolate the portion of changes ascribable to the reform from those that would have happened in any case, even without the reform. The author concludes that the transition to the new course structure had a positive impact on enrolments, quantifiable as a rise of 8 to 10% in the first year of implementation, and of 12 to 15% in the second year of implementation. Though these results are not automatically applicable to the universities of Milan, they do suggest that much of the rise in enrolments observed around the year 2000 can be attributed to the university reform.

At this point, it is of interest to understand whether the transition to the new system is associated with an heterogeneous rise of enrolments across all of Milan's universities. Figure 3 shows the enrolment trends for the principal universities of Milan, expressed in absolute terms. Table 1 instead reports the percentage changes in enrolments over different time intervals; column one shows the percentage change in enrolments from 2000/01 to 2001/02 (i.e. the years of the transition from the old to the new system),

while column two shows the percentage change in first year enrolments over a longer time span, from 1998/99 to 2005/06.

Figure 3 first of all reveals the great variability in enrolment numbers among universities: in 1998/99, the university with the highest number of enrolments in bachelor's programmes and university diploma courses was Statale (9,670), followed by Cattolica (6,637), Politecnico (6,024) and Bicocca (5,274). The enrolment figures were instead markedly lower for Bocconi (2,174) and IULM (1,641), with around two thousand first year entrants. These differences reflect both the public-private nature of the universities, and the breadth of their educational offerings. In fact, it is the private universities with more “specialised” course offerings that have the fewest students and first year enrolments. Looking at the transition from the old to the new system, we observe a differentiated rise in enrolments among universities (Table 1): the most notable was at Statale (over 36%), followed by Bocconi, Bicocca and Cattolica (no more than 7%). Running counter to the main trend, the data for Politecnico and IULM both show reductions in enrolment numbers. However, if we examine a longer span of time, some of the above changes appear different. It was in fact Cattolica and Bicocca that saw the greatest rises in enrolment rate (15%), followed by Bocconi (10%) and Statale (9%). Instead Politecnico and, to a more marked extent, IULM, both saw a negative enrolments trend.

Figure 3 Absolute number of new entrants in Milan's universities, a.y. 1998/99-2005/06



Source: authors' elaboration on data from Cnvsu, <http://nuclei.cnvsu.it/>

These data thus seem to support the hypothesis that the reform affected differently upon enrolments at the various universities; however, no clear differentiation pattern emerges. In the short term, the most noticeable rise effectively occurred at the largest public university, but if we consider the longer span of time, the enrolment rate also grew significantly in Cattolica and Bocconi, two private universities with partially specialised course offerings. It should be noted that these trends refer exclusively to the standard bachelor’s and master’s degree programmes, but disregard the vast (and growing) array of postgraduate offerings, particularly the career-focused courses.

Including these course levels in the analysis might lead to different results, as the work of Ballarino (2006) suggests. In fact, if postgraduate courses are also considered, Politecnico shows a notable rise in enrolments, while the increase at Cattolica and Statale is much smaller. Meanwhile IULM, consistently with our findings, records a modest rise, in the wake of its strong increase in enrolments of the 1990s.

Table 1 Percentage of variation in the number of university new entrants

	Δ 2000/01-2001/02	Δ 1998/99-2005/06
Bicocca	4.5	15.2
Statale	36.1	8.6
Politecnico	-2.0	-3.8
Bocconi	6.7	10.4
Cattolica	2.6	15.7
IULM	-6.6	-11.4
<i>Total</i>	<i>10.0</i>	<i>7.9</i>

Source: authors’ elaboration on data from Cnvsu, <http://nuclei.cnvsu.it/>

Trends in new entrants composition and performance

Thus far, we have investigated new entrants to university in an undifferentiated manner, disregarding the fact that first year students are by no means all alike, and instead come from different secondary schools, diverse academic backgrounds, and families with varying levels of financial and cultural capital. It would be interesting to evaluate to what extent the university reforms altered the propensity of students from different social backgrounds to enrol in university in general, and to choose

certain universities or disciplines in particular. Unfortunately, the available data do not allow these questions to be investigated⁴.

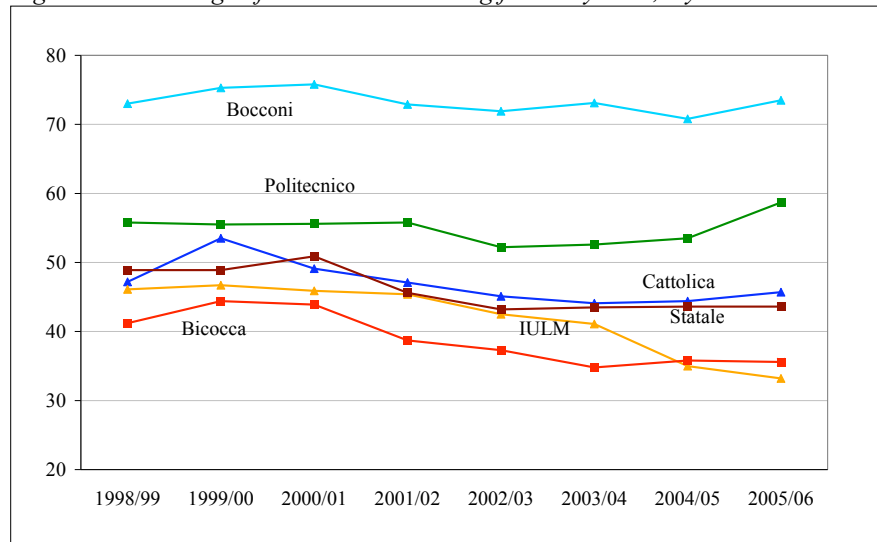
However the data do enable us to examine how the composition of first year entrants at different universities changed, in terms of their type of upper secondary qualification. In particular, we are interested in students from the academically-oriented secondary schools specialising in classics or science (liceo classico or liceo scientifico). They have traditionally been more likely to attend university and to choose high-status universities or more demanding faculties, and they often have an higher socioeconomic and cultural family background. The proportion of liceo students enrolling at university can be interpreted in different ways, depending on the mechanism of first-year admission. Where there are no formal barriers to entry (admission test, limited number of places), it is an indicator of self-selection on the part of students, who choose certain types of universities over others on the basis of personal judgements. At universities or faculties that have restricted intake or admission tests, the percentage of liceo entrants may provide a measure of the “elitism” of an institution, given the fairly close link that still exists today between social class and choice of upper secondary school (Gasperoni, 1998).

Figure 4 shows the change in the percentage of first year entrants from a liceo classico or liceo scientifico at Milan’s universities over an eight year time span. In the first place, we notice a significant variability in the composition of first year entrants (and consequently of the student body) among the universities. In 1998/99 the university with the highest proportion of liceo entrants was Bocconi (73%), followed somewhat further behind by Politecnico (56%). Meanwhile Statale, Cattolica and IULM were all similarly placed (from 46 to 49%), whereas in last place was Bicocca, with a 41% proportion of liceo first-year students. This variability reflects a number of characteristics of universities that can influence school leavers’ choice of higher institution, the most important ones being the tuition fees, the “prestige” and “tradition” of the institution, its geographical location, and the socio-demographic composition of its user base.

⁴ Some studies analysing the impact of social origins on university enrolment choices before and after the reforms are Cappellari and Lucifora (2009) and Argentin and Triventi (2011). The results of these works suggest a diminution in the effect of social background on the transition to university, but only of modest magnitude. Both these studies are based on the Istat survey of school leavers, which does not however include information about the specific university chosen.

The transition from the old to the new system increased access to university among people from non-lyceum secondary schools (teacher training colleges, high schools specialising in languages and the arts, and most of all vocational and technical institutes). However, the increase in these types of students, accompanied by a corresponding reduction in liceo students, did not affect all universities to an equal extent: in fact, Bocconi retained its proportion of liceo students virtually unchanged, and at Politecnico it even slightly increased. Cattolica instead saw a slight reduction in liceo students, and the decline was more marked at the two public universities with comprehensive course offerings, Bicocca and Statale. The most obvious change in the composition of university entrants was observed at IULM, where the proportion of liceo students dropped by a full 13 percentage points in just eight years.

Figure 4. Percentage of new entrants coming from a lyceum, a.y. 1998/99-2005/06



Source: authors' elaboration on Cnvsu data, <http://nuclei.cnvsu.it/>

Finally, it is interesting to observe whether, and to what extent, the university reforms have brought about a change in the drop-out and inactivity rates, which can be considered as indicators of university performance at the aggregate level. This analysis is important for at least two reasons. In the first place, since we have observed an increased

differentiation among universities in the composition of first year entrants, it seems legitimate to ask whether this change has been accompanied by a corresponding differentiation of performance. In the second place, one of the goals of the reform, at the national level, was precisely to reduce the drop-out and inactivity rates, which have been problems of long standing in Italian universities (Triventi & Trivellato, 2009).

The two graphs in Figure 5 show the performance indicators for universities in 1998/99 and in 2004/05: graph a) shows the percentage failure to re-enrol between the first and second year, while graph b) shows the percentage of students inactive in the first year, i.e. who did not take any examinations or did not earn any credits. The former can be considered a "rough" indicator of the drop-out rate, though with a tendency to overestimate since it also includes students who decide to transfer to another university. Still, since we are interested in the performances of universities, this does not pose a particular problem because even a transfer can be considered a sign of student dissatisfaction. The second indicator is the inactivity rate of first year students, meaning the proportion of those who, despite having enrolled in the first-year and paid the tuition fees, have not taken any examinations⁵.

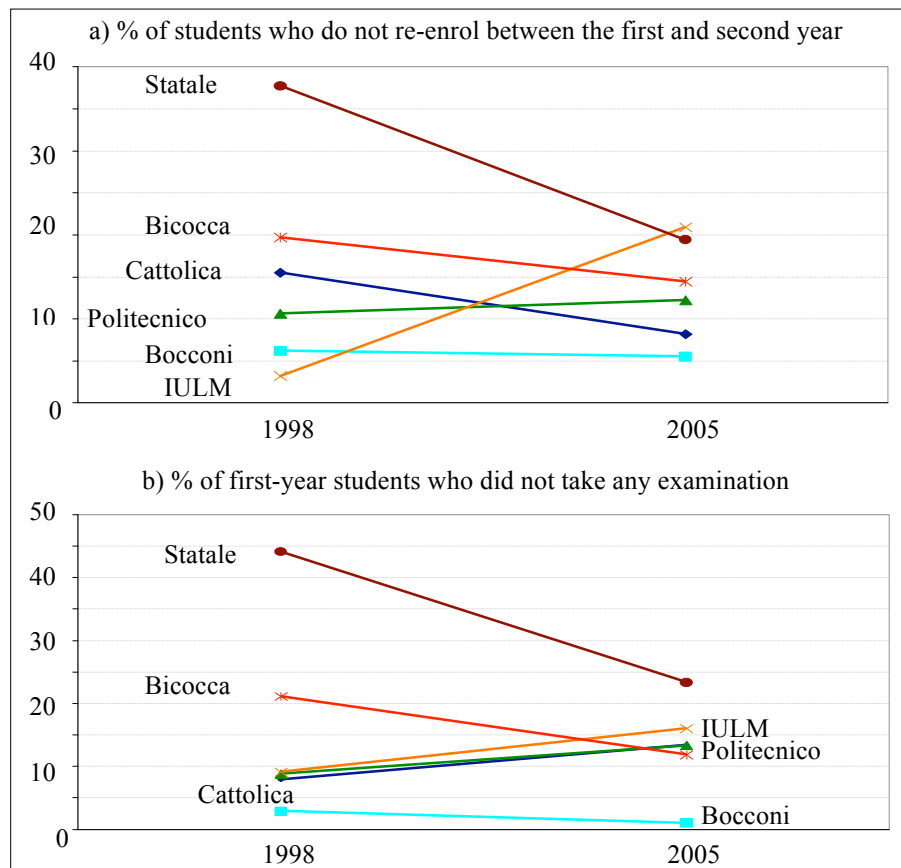
The graphs show that, before the reform, the university with the highest drop-out rate was Statale (38%), followed by Bicocca (20%) and Cattolica (16%); in other words the universities of larger size, with comprehensive course offerings and a lower proportion of liceo students. In contrast, at Politecnico only around one in ten first year students failed to re-enrol in the second year, and this proportion was even lower at Bocconi and IULM. Looking at the inactivity rates, the picture is fairly similar: the proportion of students who took no exams in the first year was very high at Statale, at just under 45%, whereas it was only slightly above 20% at Bicocca. At Cattolica, Politecnico and IULM it was instead around 8%, and just 3% at Bocconi.

The transition to the new system, the changes in the course offerings, teaching methods, organisation of study programmes and examinations, and the shifts in the composition of university entrants have partially altered this situation. In line with the objectives of the reforms, the rate of failure to re-enrol after the first year and the percentage of inactive students

⁵ The reliability of this indicator depends on the accuracy and promptness of administrative offices in recording student's examination results.

generally decreased, with some exceptions. The most visible drop occurred at Statale, where the early drop-out or transfer rate went down by a full 18 percentage points, to approximately 19%. Cattolica and Bicocca also improved their situation, with reductions of around 8 percentage points. Meanwhile Bocconi, from its very low starting base, remained stable, whereas Politecnico saw a slight rise in the rate of failure to re-enrol. However, the most notable increase affected IULM, which went from a rate of around 3% to one above 20%, placing this university ahead even of Statale in terms of rate of failure to re-enrol in the second year.

Figure 5 Performance indicators of Milan’s universities, a.y. 1998/99 and 2005/06



Source: authors' elaboration on Cnvsu data, <http://nuclei.cnvsu.it/>

Looking at the changes in the first-year inactivity rate, we notice conspicuous improvements, again affecting the two public universities with comprehensive course offerings: at both these institutions, the percentage of students who did not take examinations in the first year was halved. This allowed Bicocca to become the university in the Milan area with the second-lowest inactivity rate, behind Bocconi where in 2005/06 only one first-year student in a hundred failed to sit any examination. In contrast, the inactivity rates at the other three universities increased, with rises from 5 to 7 percentage points. This finding is unexpected and somewhat surprising, given that the new course structures based on modules and credits should have reduced the workload for each individual exam, thereby making them easier to undertake.

Conclusions

We now discuss the most important findings, comparing them with our starting hypotheses. With respect to overall trends in enrolment, we showed that there has been a significant growth of student access both at the Italian and the Lombardy level. Whether these changes will prove to be transient or enduring, the results are less clear-cut. On the one hand, the enrolment trends seem to indicate that the effects of the reform were not merely transitory, since the rates of enrolment in bachelor's and masters' programmes remained at decidedly higher levels than before the “Bologna process”. On the other hand, however, there are signs of a falling-off in the enrolment rate in recent years. Therefore, further studies are needed that examine the question over a longer time horizon.

Looking at the enrolment composition, accordingly with our hypotheses, we find that the institutions which traditionally attracted students from medium-high social classes and the academic secondary track (Bocconi and Politecnico) have maintained, and even relatively increased, their “compositional” advantage over other universities. Large state universities instead seem to have absorbed the majority of new students coming from technical and vocational institutes. The sharp drop in entrants from the lyceum at IULM instead appears to signify a notable decline in this university's reputation, at least for what concerns the bachelor's and master's degree programmes. If we consider that this university offers courses centred on humanities and languages, it is possible that the

shrinking proportion of liceo entrants could be ascribed to a growth in entrants from secondary schools specialising in foreign languages.

Looking at the performance indicators, notwithstanding an increased diversity in the composition of university entrants, there was a reduction in the gap between students at different universities. How is this possible? In our view, this could have been the result of two factors, one positive and the other negative, which are not necessarily mutually exclusive. On one side, the reforms may have effectively brought about the desired effects. The changes made to the course structures and assessment methods may have effectively facilitated students' progression, or at least helped soften the daunting impact that the traditional Italian university had upon many students. On the other hand, there remains the suspicion that the improved performance of students—among whom the proportion of young people with “weaker” secondary qualifications has increased—stems from a lowering of standards and a relaxation of the evaluation criteria, as suggested by the analysis of Boero and Staffolani (2007) on specific universities.

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