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Selective Education: Who Benefits from Grammar Schools?

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*The politics of selection at the age of 11 is back at the top of the education debate in England. New research by **Adele Atkinson** and **Paul Gregg** examines what impact grammar schools have on educational performance – in particular, whether they offer a real opportunity for bright children from disadvantaged backgrounds.*

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Selection in schooling is firmly back on the political agenda. Michael Howard recently indicated that grammar schools would be allowed to 'survive and thrive under a Conservative government' and writing in The Times, William Rees-Mogg argued strongly in favour of grammar schools under the headline 'The Greatest Political Mistake of the 20th Century – and what it has cost us'.

Proponents of grammar schools suggest that they offer a route for advancement to bright children from deprived backgrounds. Yet early last year, Education Secretary Charles Clarke's call for a debate on the impact of grammar schools on standards came less than two weeks after he had been quoted in the Times Educational Supplement saying that selection at 11 'inhibited educational opportunities'.

Our research informs this debate by using data from the national pupil database – the Pupil Level Annual School Census – to track children's test and exam results from the ages of 11 to 16. We explore whether local education authorities (LEAs) that still have significant numbers of grammar schools achieve better GCSE results for their pupils, as well as which children benefit from academic selection.

The overall results are very clear. On average, there is no substantive difference in achievement between pupils in selective LEAs and similar pupils in similar non-

selective LEAs. But pupils at grammar schools do outperform children of similar ability in non-selective LEAs, while pupils who are not at grammar schools do slightly less well than comparable children in non-selective LEAs.

This finding stems from the fact that the poorest children are concentrated in the non-grammar schools, while grammar schools have very few poor children. What is most worrying is that poor children are not securing places in grammar schools even when they are of high ability. The small minority of poor children at grammar schools do very well in terms of achievement, but very few gain entrance.

Our analysis first considers differential access to grammar schools at age 11 by pupil characteristics, including eligibility for free school meals (which indicates that a child lives in a low income household). We investigate whether selection is more or less socially divisive than comprehensive education. If selection improves the chances of poor children getting into the best schools, we might expect to see less socio-economic segregation in selective areas than in similar LEAs without overt selection but with high demand for good schools. Where there is no selection, affluent parents can choose to live near good schools, creating a house price premium that prevents access for low income families.

Both proponents and critics of selection are overstating their case: on average, there is little difference in achievement between pupils in selective LEAs and similar pupils in comparable non – selective LEAs

In fact, the data reveal a huge gulf between the population mix of pupils as a whole and the mix in LEAs with grammar schools. In the 19 LEAs that retain substantive selection (each typically with 25% of pupils at grammar schools), just 5.8% of all pupils eligible for free school meals attend grammar schools while 26.4% of all other children within the LEA gain a grammar school place. 12% of pupils in non-grammar schools in these areas are entitled to free school meals; the figure is only 2% in the grammar schools.

The disadvantage of poor children applies even to those of the highest ability. Using Key Stage 2 (KS2) test scores at age 11 as an independent measure of children's ability, we find that of those in the top three KS2 groups, just 32% of those eligible for free school meals attend grammar schools compared with 60% of better-off children. Poorer children in selective LEAs are only half as likely to attend a grammar school as other children with the same underlying ability. This pattern is also true of children with special needs and those for whom English is a second language.

Looking at attainment under selective education, we need to deal with three issues to pick out the relative performance of grammar schools, and the overall gains and losses. First, the attainment of those at grammar schools cannot be divorced from any effects on the other pupils in these areas who are not attending these elite schools. As Peter Robinson (Institute for Public Policy Research) has noted, 'If your child goes to a school surrounded by a lot of disadvantaged kids, your child is likely to do less well'.

This cuts two ways in selective areas: grammar schools have fewer children with special needs, learning deficits or from poorer backgrounds, but correspondingly, these pupils will be concentrated in the alternative schools within the LEA. In addition, grammar schools may secure benefits from their superior status, ranging from greater resources to the ability to attract higher quality teachers. High achievement in grammar schools needs to be balanced against any lower achievement elsewhere. So to assess whether grammar schools improve children's attainment, we need to look at attainment for all pupils, not just those at grammar schools.

The second issue is that selective LEAs are not comparable with all LEAs. Those LEAs that resisted the move to 'comprehensivisation' were politically Conservative, affluent and had a higher population density (which makes travelling to a grammar school easier). So comparing performance in these LEAs with, for example, authorities in inner-city London means we would not necessarily be comparing like with like across selective and non-selective LEAs.

Even controlling for pupil characteristics may be insufficient to net out all, sometimes unobserved, population differences. Our research therefore adopts a matching technique whereby each selective LEA is compared with a non-selective LEA with characteristics similar to those in selective LEAs. The key driver in this matching is the degree of Conservative representation on the local council. The aim is that these matched authorities will be closer in unobserved population characteristics to the selective LEAs than all non-selective LEAs.

The third issue is to ensure that we are

comparing pupils with similar attainment at age 11, prior to entry into secondary education. We do not observe the 11+ test result (and of course nationally the vast majority of children do not take 11+) but we do observe the national KS2 test scores. These are good predictors of GCSE results and make it possible to compare the 'value added' achieved by pupils between the ages of 11 and 16 – a measure of extra attainment over and above that which would be expected based on prior attainment.

So what do we find from our analysis of value added performance? Without controlling for school type (grammar, non-grammar, religious or single sex), the results suggest that pupils in selective LEAs are achieving one additional grade point at GCSE given their KS2 results. As each grade above U is counted as one point (A*=8, G=1), this is equivalent to a single grade rise within a pupil's eight best GCSEs.

Next, we need to take account of selection by religion and gender since selective LEAs tend to have more religious schools (mainly among the non-grammar schools) and more single sex schools, and these characteristics are associated with small differences in attainment. It turns out that these school effects are moderate, with single sex girls' schools having the largest impact. But introducing them into the analysis drives the difference between selective LEAs and matched non-selective LEAs close to zero.

So, on average, being a pupil in a selective LEA compared with a non-selective LEA makes little or no difference to overall attainment. Both proponents and critics of selection are clearly overstating their case.

Two crucial questions remain: first, does getting into or missing out on a grammar school place make a difference to attainment within selective LEAs? And second, what happens to the poorer children who disproportionately miss out on grammar school places?

Repeating the analysis of value added performance but with the pupils at grammar schools and other schools in selective LEAs identified separately produces striking results. Those attending grammar schools are doing very well compared with peers with the same KS2 results in the matched non-selective areas, while those not getting into grammar schools within selective LEAs are performing slightly worse. So despite the overall result that there is no substantial difference on average, there are significant benefits to the elite 25% who attend grammar schools and a small degree of detriment to the other 75% of pupils in selective LEAs.

Our research then investigates whether this result is driven by the fact that children with special needs, learning deficits or from poorer backgrounds are concentrated in the non-grammar schools. What emerges is that large concentrations of poor children in a school reduces overall attainment and that selection results in far fewer poor children in grammar schools and far more in non-grammar schools than in comprehensive areas.

This polarisation drives all the under-attainment in the non-grammar schools and about a quarter of the benefits to grammar school pupils. In other words, if the selection process did not segregate the affluent into grammar schools and the poor into the remainder, then selection would be leading to gains among those at grammar schools with no disadvantage for the rest compared with comprehensive education.

Finally, our research explores the effects of selection at age 11 on children on free school meals. We already know that these poorer children are massively under-represented in grammar schools even given their attainment at age 11. Now we check how these children perform under the grammar and non-grammar school regimes.

It turns out that the small minority of poor pupils who make it into grammar schools do exceptionally well, getting nearly eight grade points more – equivalent to eight GCSEs being raised from a C to a B. Those not attending grammar schools do no worse than their peers in non-selective LEAs. It is clear from this that selection does indeed work in favour of bright pupils from poor backgrounds if they can get into the grammar schools in the first place. But even among the very able poorer children, only a small minority make it.

It is distinctly possible that the under-representation of poorer children in grammar schools stems from each grammar school operating separate admissions policies and sometimes exams. This places more onus on parents to apply to the grammar school and prepare children for the tests, a process that fell to primary schools when admissions were more standard. Thus it is possible that this more pro-active parent choice approach is leading to a gulf in access between affluent and poor children.

Grammar school pupils do outperform comparable children in non-selective LEAs but non-grammar school pupils underperform their counterparts in non-selective LEAs

Selection does work in favour of bright pupils from poor backgrounds – but only a small minority actually make it to grammar schools

Star System: Explaining the Regional Divide in NHS Performance

NHS hospitals in the North of England are performing better on the new star ratings system than those in the South. CMPO research by ***Simon Burgess, Denise Gossage*** *and* ***Carol Propper*** *suggests that the explanation lies in the labour market and regional differences in the gap between wages in the private and public sectors.*

As part of its continuing efforts to increase productivity in health care, in 2001 the government introduced a rating system that measures the performance of NHS hospitals against a wide range of targets. These include aspects of quality, volume and financial performance. The targets are allocated weights and aggregated up into a single measure of productivity known as star ratings. All non-specialist hospital trusts in England are given a rating ranging from zero to three stars.

To sharpen incentives further, the government has linked performance on these star ratings to the degrees of freedom to be given to hospital managers. Managers of hospitals that achieve the highest rating will have greater autonomy over how they manage their hospitals and pay their staff, and whether they can borrow from the private sector.[1] Managers of hospitals with the lowest rating will be replaced, and management of these hospitals franchised. Managers at hospitals with the highest rating will be able to bid for these franchises.

Hospitals in areas where nurses are paid relatively well compared with the private sector score higher on a range of performance targets

On inspection of the variation in star ratings across hospitals, an interesting puzzle emerges. As the Figures overleaf show, there is a clear regional pattern with hospitals in the North of England performing better on average than those in the South. Why should this be? It cannot be due to differences in the health of the population since, in general, this is better in the South than the North.

New research by Simon Burgess, Denise Gossage and Carol Propper suggests that differences in relative pay between hospitals located in high costs areas – basically the South – and those located in low cost areas – basically the North – may be a factor driving the differences in star ratings.

Pay in the NHS is still primarily set centrally. Hospitals in London and the South East pay more than hospitals located elsewhere. All other hospitals pay the same amount to staff at a given grade and experience.

[1] http://www.doh.gov.uk/nhsfoundationstrusts

But wages in the private sector are not fixed in this way. They reflect the state of the local economy. Areas of high demand for labour will have high private sector wages; areas with low demand will have low private sector wages. And since the pay differences between regions within the NHS do not fully reflect these private sector wage differentials, the differential between NHS pay and private sector pay varies considerably across the country. Hospitals in high cost areas are likely to pay less compared with the private sector than hospitals in low cost areas.

This means that hospitals located in high cost areas – those where wages outside the NHS are high – are likely to face more competition for staff than hospitals located in low cost areas. Low relative pay can lead to two possible shortages: staff and quality. It can cause problems in hiring and retention, which are likely to have knock-on effects on productivity and quality.

Nurses are key staff in the NHS. Burgess and his colleagues examine whether the gap between what nurses are paid and what they might earn outside the NHS has an impact on the star ratings – a measure of the quality – of NHS hospitals. They find that there is no association between performance across all the dimensions that go into the star ratings (which include financial performance and performance against waiting list targets) and this wage gap.

This may not be so surprising, given that the star ratings measure up to 36 attributes of quality. But when the researchers unpack the star ratings into their separate components, they find that hospitals located in areas where the outside options for nurses are good, have poorer outcomes on several components of the star ratings.

For the 2001 targets, the nurses' pay gap is statistically associated with seven of the 21 targets. Four of these are 'key' targets – the total number of patients waiting for an

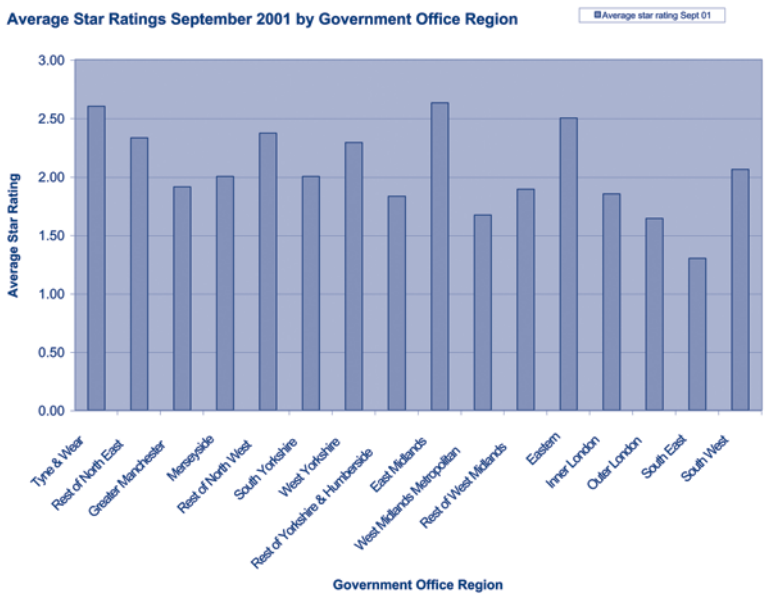
inpatient appointment, and measures of outpatient waiting, trolley waiting and hospital cleanliness. One is a clinical target – the level of compliance with risk management standards in the Clinical Negligence Scheme for Trusts. One is a performance target – the percentage of patients waiting less than six months for an inpatient appointment. And one is a staff target – the three-month vacancy rate for qualified nursing, midwifery and health visiting staff.

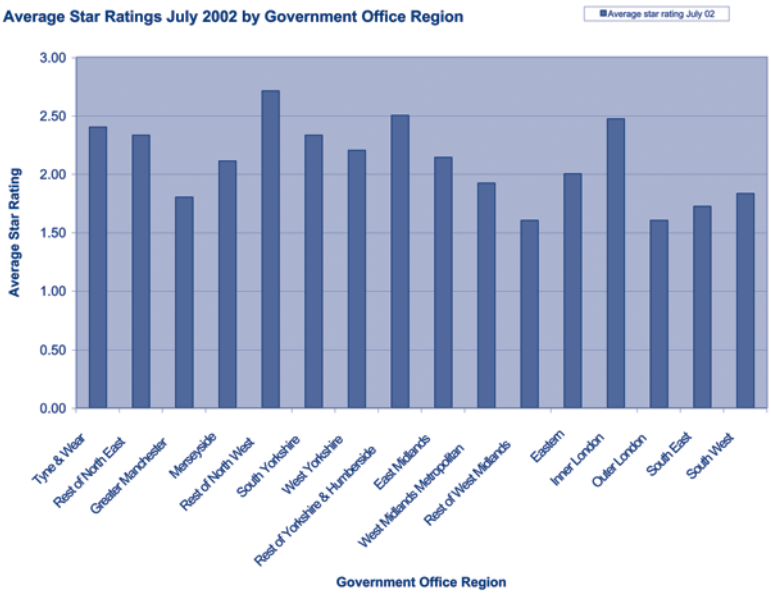
For the 2002 targets, the pay gap is negatively and significantly associated with 11 out of the 37 targets. Ten of these are performance targets, six of which are based on inpatient surveys. In summary, across the two years, over a third of the individual targets (18 out of 53) in the star ratings are negatively associated with the pay gap. Only three are positively associated.

Many of the targets associated with the pay gap are based on patient surveys. Patient experiences are likely to depend, to a large extent, on their contact with nursing staff. The fact that these outcomes are rated as better where staff are paid relatively more points to a link between the ratings and pay.

In contrast, no other measures of resources, or of the ill health of the population in the local area, or whether the NHS hospital is a teaching hospital or how big it is appear to be consistently associated with hitting targets.

Despite the considerable media attention given to the star ratings, there have been few attempts to explain them. A recent commentary by the Commission for Health Improvement, which noted but did not investigate the reasons for these differences in any depth, stated that 'there may be





Allowing hospital managers to raise pay in parts of the country where it is relatively low may be a way to improve NHS performance

reasons for this variation associated with difficulties in recruiting staff and difference in culture and attitude'.[2] The CMPO research provides support for this view.

The results imply that some of the performance of NHS hospitals may be less related to managerial ability than to the labour market in which the hospital is located. This in turn suggests that allowing managers to raise pay in areas where it is relatively low may be one way to improve the performance of the NHS. But it also suggests that allowing the management of three star performers to take over failing hospitals may not necessarily be bringing in better managers but bringing in managers who have worked in areas where the quality of NHS staff is higher.

[2] http://www.chi.nhs.uk/eng/cgr/emerging_themes.pdf

This article summarises 'Explaining Differences in Hospital Performance: Does the Answer Lie in the Labour Market?' by Simon Burgess, Denise Gossage and Carol Propper, CMPO Working Paper No. 03/091.
For the full paper, see: http://www.bris.ac.uk/cmpo/workingpapers/wp91.pdf

Portfolio Power: The Significance of Brands in European Competition Policy

Should competition authorities block proposed mergers if they will create large portfolios of leading brand names? Focusing particularly on the merger of Guinness and Grand Metropolitan, CMPO Associate ***Thibaud Vergé*** *provides support for the European Commission's view that 'portfolio power' must be taken seriously.*

There is a clear rationale for the European Commision's view that 'the market power deriving from a portfolio of brands exceeds the sum of its parts'

The European Commission's July 2001 decision to prohibit the proposed merger between General Electric and Honeywell was the starting point for a fierce debate between the European and US competition authorities about the theory of 'portfolio power' or 'range effects' in conglomerate mergers. One of the main US criticisms is that 'the portfolio power approach is made up of a number of disparate ideas which are not supported by a unifying economic theory'. My research addresses this concern.

The portfolio power approach was first introduced by the European Commission in 1996-7, when it was considering three big merger proposals: Coca-Cola and Amalgamated Beverages; Coca-Cola and Carlsberg; and Guinness and Grand Metropolitan – which resulted in GMG Brands, later renamed Diageo.

As noted by Dimitri Giotakos of the Commission's DG Competition, 'the anti-competitive likelihood of portfolio effects is based on the proposition that the combined portfolio of products/brands of the merged firm represents an essential facility for the downstream agents in a manner that the individual product lines of the undertakings pre-merger did not.' The holder of a complete line of products could, for example, impose exclusive contracts on retailers or force them to buy the complete line, a practice known as 'full-line forcing'.

The Commission's arguments have been widely criticised by the US authorities. At a recent OECD Best Practices Roundtable, the US Department of Justice expressed concerns that 'the range effects theory of competitive injury that is gaining currency in certain jurisdictions places the interests of competitors ahead of those of consumers and will lead to blocking or deterring pro-competitive, efficiency-enhancing mergers'.

It is certainly true that while there have been many studies of the effects of bundling complementary products, the economic theory of portfolio power when a merger will create a portfolio of substitutable products (as with GMG Brands) is fairly limited. The first attempt was made by Valérie Rabassa, who showed that when producers are able to modify the quality of their products after a merger, mergers that increase the breadth of the portfolio may have anti-competitive effects. Moreover, the post-merger market share of the new firm will be higher than the firms' combined market share pre-merger, confirming the view that a wider portfolio creates 'sur-additivity'.

In a recent CMPO Working Paper, I propose an alternative analysis of portfolio effects.

Although I do not argue that any merger that creates a large portfolio of products should be prohibited *per se*, the Commission's view that 'the market power deriving from a portfolio of brands exceeds the sum of its parts' has a clear rationale.

In 1997, Guinness and Grand Metropolitan notified their intention to merge. The case was then investigated by both the US Federal Trade Commission and the European Commission. The merger brought together two complementary portfolios of brands. Guinness was a producer and distributor of spirits with some world-renowned brands. It was strong in the gin market but relatively weak in the vodka market. Grand Metropolitan was involved in large number of businesses including the distribution of wine and spirits. It was particularly strong in vodka but weak in gin.

In its evaluation of the case, the European Commission identified each type of spirit as an individual product market and concluded that because tastes differ from country to country and the distribution of spirits is organised at a national level, the relevant geographical markets were national. In this sense, the market shares in most of the individual markets would not be significantly increased by the merger, one firm being strong where the other was weak.

Nevertheless, the Commission was concerned that the creation of a very large portfolio including an important number of leading brands could in itself create or strengthen a dominant position. The Commission was particularly concerned with this potential portfolio power because the products were typically sold to a common buyer – usually a large retail chain – which buys a range of products.

The rationale behind this analysis is that the holder of a comprehensive portfolio of brands could force retailers (or chains of bars and pubs) to buy the whole range of products. This could raise barriers to entry in two ways. First, a new entrant would need to develop a range of desirable products in order to counter the portfolio power of the merger company. Second, because brand names are an important feature of the spirits markets, there would be significant entry costs because a newcomer would need to promote its brand heavily to encourage retailers to put it on their shelves.

My results are consistent with this approach to portfolio effects. Even when retailers have buyer power – which seems to be the case with GMG Brands, at least for sales made through large retail chains – a portfolio of brands can be used to reduce the space available on their shelves, which makes entry virtually impossible.

As the Commission's decision suggests, this can be achieved through 'vertical restraints', such as full-line forcing or exclusive dealing. Even though retailers would in general favour entry because they benefit from more competition between brands, the holder of a large portfolio of products that includes a leading brand can prevent entry through full-line forcing because retailers cannot afford not to have the leading brand on their shelves.

This suggests that analysis of this type of merger cannot be limited to the computation of different market shares or the narrow definition of product and geographical markets. A more careful analysis of each case needs to be carried out even when the market shares of the identified product markets would not increase.

Attention should be given to such mergers whenever the competition authority has identified brand names as being an important feature of the market: full-line forcing is more likely to occur when the threat of refusal to supply is serious, that is, whenever a retailer cannot afford not to carry a brand. This will happen when the merged entity owns particularly strong brands. In these cases, the authorities should identify whether entry is particularly difficult for a newcomer.

Specific attention should be given if retailers' shelves can be seen as an 'essential facility': if this is the case, then the holder of a large portfolio of products could easily try to prevent entry by blocking the access to these shelves by 'flooding' them with its secondary brands. Deep portfolios of brands are thus a threat to competition.

This research does not provide a unifying economic theory of portfolio effects, but it provides a useful counter-argument to the view that the theory cannot have any economic foundations.

Deep portfolios of brands are a threat to competition since they make it difficult for new entrants to get their products onto retailers' shelves

This article develops arguments in 'Portfolio Analysis in European Merger Control: An Economic Analysis' by Thibaud Vergé, CMPO Working Paper No. 02/046.
For the full paper, see: http://www.bris.ac.uk/cmpo/workingpapers/wp46.pdf
Dr Vergé is at the University of Southampton and is a CMPO Associate.

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http://www.bris.ac.uk/Depts/CMPO/events/reports/public04.pdf

Performance and Choice in Education
Keynote speakers: Doug Staiger and Harvey Goldstein
http://www.bris.ac.uk/Depts/CMPO/events/reports/perf04.pdf

Analysing Neighbourhoods and their Impact
Keynote speakers: William AV Clark and Greg Duncan
http://www.bris.ac.uk/Depts/CMPO/events/reports/neigh04.pdf

A Dynamic Approach to Europe's Unemployment Problem
http://www.bris.ac.uk/Depts/CMPO/events/reports/daeup04.pdf

The Music Industry in the Digital Age

New information and communication technologies – notably file sharing networks like Napster and KaZaA – are having a huge impact on the music industry. New research by **Maija Halonen-Akatwijuka** and **Tobias Regner** anticipates some major changes, including:

- Information technology provides alternative ways to promote and distribute music to the traditional music industry, which is based on marketing and control of the retail distribution network. Labels become less important.
- Artists can promote themselves directly or indirectly via the web and virtually costless electronic distribution becomes possible. As a result, there is reduced ownership of music copyrights by labels and more by the artists themselves.
- The quality of the music itself improves, as we move away from the era of label ownership, one of relatively low quality music that is packaged and marketed well.
- We see the emergence of mentors, established artists who can provide newcomers with exposure and funds.

The researchers analyse the organisational structure of the music industry, describing two periods: the traditional music industry before widespread file sharing; and the music market under the impact of peer-to-peer networks – the 'post-Napster scenario'

Music labels and artists depend on each other as they work together to produce music products for the mass consumer market. Artists create music, while labels promote and distribute the copyrighted work. The study focuses on the question of efficient ownership: does it provide the best incentives for production if the label owns the copyright or if the artist owns it?

The findings for the traditional music industry are that labels can do more efficient marketing and have command over the essential retail distribution network. Hence, their role in the production process is indispensable and they should own the copyright. Indeed, this is the reality of the music business today.

But as information technology advances further, alternative ways to promote and distribute music emerge. Labels become less important as artistic inputs dominate the innovation process. Artists can promote themselves via the web and costless electronic distribution becomes possible. The analysis shows that the incumbent ownership structure stops being optimal as labels become more replaceable.

The analysis distinguishes between established artists and newcomers. Change of ownership is less likely for new artists as they still face big obstacles in getting exposure for their works. They are also cash constrained, which keeps them from acquiring the copyright.

Finally, the researchers discuss new organisational structures of the music industry. They introduce the concept of mentors, third parties who are an alternative to label promotion and distribution. These are established, already famous artists who can provide the newcomer with exposure and funds. For example, they would support the aspiring musician by linking to the newcomer website from their own frequently visited websites and endorsing him or her there. Generally, they would act as venture capitalists, who believe in, promote and finance the project of the newcomer. In this situation, again, it becomes less likely that record labels own copyrights.

This article summarises 'Digital Technology and the Allocation of Ownership in the Music Industry' by Maija Halonen-Akatwijuka and Tobias Regner, CMPO Working Paper No. 04/096.
For the full paper, see: http://www.bris.ac.uk/cmpo/workingpapers/wp96.pdf

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