If you want to ruin your family business, give it to your eldest son. This is the stark conclusion of five years of research to be published today by the Centre for Economics Performance at the London School of Economics, and McKinsey, the consultancy.

The research into the gap between Britain's productivity performance and that in the US, France and Germany found that objective assessments of managerial performance were important in explaining why UK manufacturing companies tended to have lower productivity and profitability.

But the finding that surprised those involved in the project was that half of the difference between British companies and their overseas competitors in terms of management practices could be explained by the prevalence in Britain of second or later generation family-run companies. If those were removed from the analysis, British performance did not look nearly so bad.

So strong are the results, says Nick Bloom, one of the authors, that Gordon Brown should scrap the 100 per cent inheritance tax relief given to large family businesses in next week's Budget. If tax relief were to be capped at £1m, he argues, it would spur productivity growth, save taxpayers £250m a year and avoid entrenching poor management in Britain's boardrooms. "Can you imagine if the current England football team was picked from the sons of the team in 1966? We wouldn't win anything."

The research team spent years pulling together detailed performance indicators for 730 medium-sized manufacturing companies in the UK, the US, Germany and France, to try to discover the underlying reasons for Britain's poor productivity performance.

John Dowdy, a partner at McKinsey in London, said there had always been a paradox that the UK was an open and competitive economy, but its companies seemed to underperform those in the US and in continental Europe.

So long-standing has been Britain's weaknesses that blame has often been put at management's door. Part of the 1947 Marshall plan to reconstruct Europe after the second world war, for example, looked at Britain and reported: "Efficient management was the most significant factor in the American productivity advantage."

But collecting objective evidence on management practices, rather than anecdotes, has eluded most studies. The researchers got round this problem by employing research students to interview senior managers in manufacturers. They were asked whether their companies had adopted lean operating techniques and the degree to which they monitored employees, set targets and provided incentives for good performance.

They then compiled scores for each company ranging from one, representing a company that had not progressed from antiquated management techniques, to five, representing a company at the cutting edge.

While the UK had almost as many extremely strong companies as the US, France and Germany, the problem was that it had the largest proportion of companies that scored particularly poorly.

First, the researchers had to check these management scores mattered. They did. There were strong statistical links between management scores and sales, productivity, profitability and the likelihood of bankruptcy.

Then the researchers investigated the factors that explained the management scores. Two issues dominated. The first was competition. Companies in highly competitive industries had much better management, presumably because they had to be good to survive. Britain scored highly on this front, since the economy is more open and competitive than France or Germany.

But in the second important area, Britain's performance was much worse. Bad management, it seems, tends to run in families, and the UK is particularly prone to its worst effects. Britain has a large proportion of family-owned companies in which the families like to keep control of day-to-day management issues and pass the business to the eldest sons.

Mr Dowdy says "family ownership seems to be modestly positive on management", since it is easier to give clear direction to companies and hold the management to account.

Germany has many family-owned, but professionally-run companies that score highly for management. But the guarantee of becoming the next chief executive seems to bring out the worst in the sons due to inherit the business.

The effect is large: a third of Britain's productivity gap with the US can be explained by the poor performance of Britain's family-run companies. That is why Mr Bloom is calling for a cap on inheritance tax relief.