Does investing in excellence pay?

Professor Tony Bendell

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Lord Jamie Lindsay

Ladies and gentlemen, I am delighted to be involved in tonight's event, as Chairman of the United Kingdom Accreditation Service, or UKAS.

For those of you who do not know about UKAS, and by way of explanation as to our interest in Professor Bendell's lecture tonight, we are the sole national accreditation body recognised by Government. So what we do is we assess against internationally recognised disciplines and standards organising who are certifying, verifying, calibrating, testing, inspecting - in other words, we are underpinning standards, the credibility of standards in respect of products, performance and systems, personnel, and so forth. There is a huge relevance of our activity in accrediting standards in terms of the business community, the business sector, and the performance standards which have been quite a feature of that sector. I would also just add that, as the sole national accreditation body, we are under an obligation, through a memorandum of understanding with the Government, to act in the public interest at all times, but the particular interest, as I said, in tonight's lecture is our role in the business sector and their adoption of different standards.

Professor Bendell is a world-renowned authority on the subject of organisational excellence and process improvement. He was the Rolls Royce Professor of Quality and Reliability Management and Director of the Centre of Quality Excellence at the Universe of Leicester. He is the principal author of eight books on quality methods, management, measurement and benchmarking, as well as the UK Government DTI 'Managing in the '90s' booklet on the quality gurus. Tony was a member of the British Standards Institute QSI Committee, which dealt with the year 2000 revision to ISO9000, and he also was a member of the Board of Midlands Excellence, and is currently President of the East Midlands Quality Club. Tony is a fellow and registered senior consultant of the Institute of Quality Assurance, he is a fellow of the Royal Statistical Society, and he is also a BQF licensed trainer for the EFQM excellence model.

Tony - the floor is yours!

Tony Bendell

I am delighted to be here this evening. Thank you for the introduction and thank you for the invitation to be here.

My remit this evening is really to deal with this issue of does investing in excellence pay. A lot of people like myself get up on platforms and talk about quality, how important quality is, how inclusion of the people's interests and stakeholders' interests is so important, but very rarely when we get up on these platforms do we have any evidence, other than a feeling in the heart and a belief in the quality message. What I want to share with you today is some hard information, some hard facts, based on a study across Europe, looking at this exact issue - do organisations which pursue a balanced approach to quality and excellence, do better in terms of financial performance and share value, than other organisations? - and this time, we have got the evidence.

So here is my question for tonight: we have a number of companies who have invested in this pursuit of quality and excellence as a core of their business strategy, many more have not and are doing very well in many cases, but who is right?

We have some evidence from North America which has been around now for quite a while, but we do not really have evidence across Europe, and I will share both of these with you.

What is the strategy to deliver business performance? We have everything from a focus on low cost, with very lean activities in organisations, through to sales-led strategies, which perhaps take the customer relationship not as far as one would like to see, so that we focus on the technology of delivery, we focus on the sales and the profitability, but perhaps we do not pay enough attention to all the stakeholders involved in the organisation. Some companies believe that this system approach, which 'Tomorrow's Company' was a good example of from the Royal Society of Arts, which puts emphasis on looking at all the stakeholders involved in the organisation and balancing the wants and the needs of those stakeholders. They believe that this is a good and balanced approach, and to do this in a systematic way. But many more do not, and who is right?

So does the pursuit of a balanced approach to company excellence pay, what's the evidence, and how do we get evidence? Because in fact there is very little evidence historically which has been out there. How do we get evidence on this rather important question?

Now, we have a number of these systematic and balanced approaches to excellence in place around the world, and there are probably three which are the most important.

We have the Deming Prize model in Japan. The Deming prize model is named after Edward Deming, an American civil servant who took the quality message to Japan in the early 1950s, helping to rebuild the Japanese economy. The lecture notes from his lecture tour of Japan were published, and the royalties from the lecture notes were used to set up the Deming Prize. This became the premier prize for Japanese companies, and was a major part in the transformation of the Japanese economy from a third world provider into a first world one.

Japanese companies took the Deming Prize very seriously, and they worked for years to win it, and eventually it was won by a company called Kansai Electric, an electricity generator and distributor. This caused a company they were working with in the United States, called Florida Power and Light, to ask the Japanese authorities if they could apply for the Deming Prize. The Japanese were somewhat surprised. They still had images of American quality being above theirs in some ways, but eventually, they allowed them to apply, and they won the award. At this point the American Congress went bananas. The only way an American organisation could be recognised as excellent was for the Japanese to say so - it was seen as rather 'un-American'.

So America decided it was going to have its own award for quality and excellence, and it was going to be known as the President's Award for Excellence. The President of the time was Ronald Reagan - just imagine being the proud winner of the Ronald Reagan National Quality Award - it may not have stood the test of time! Fortunately, or perhaps unfortunately for him, a friend of the President, the Secretary of the Treasury, who was working on the bill to establish the President's Award by act of Congress, was also a bit of a rodeo freak, a guy called Malcolm Baldridge. Malcolm Baldridge managed to get himself killed in a rodeo accident, riding a bull, whilst working on the bill, so they named the prize after him - the Malcolm Baldridge National Quality Award. Only in America is the national quality award named after a dead cowboy! He's in the Oklahoma Cowboy Hall of Fame if you're ever visiting and you want to look him up.

At this point, we have an ununified market in Europe. We have a dominance for American standards, and here was even the concept of excellence being defined by the Americans. There are a number of issues with that: there are questions of governance, questions of social inclusion and a whole set of issues about social responsibility. So some of the largest organisations in Europe, organisations like BT and Fiat, lock themselves in a hotel in Rome and do not come out until they come up with their own European version of the concept of excellence. I will tell you about these concepts in a bit, but it was similar in many ways but was more inclusive, it was focused on some governance issues, it was focused on some societal issues, which were missing in the very shareholder-led, process-led American model. That was the basis for the so-called EFQM excellence model. EFQM stands for the European Foundation for Quality Management.

So we have three models which have become essentially world dominators: the Deming Prize Model, in Japan; the Malcolm Baldridge National Quality Award Model, coming out of the United States; and the most recent, the European Foundation for Quality Management Excellence Model.

In Europe, the EFQM model is used at regional level within countries - for instance, we have an Excellence South-West award scheme or the Midlands Excellence Award scheme. At the national level, we have the UK Excellence awards, and at the European level, we have the European Excellence awards. So we have a hierarchical system, where organisations who really want to develop themselves and want to be seen by the stakeholders, and by themselves in many senses, as excellent organisations use it as a way of achievement at a regional, national and European level.

Around the world, we have something of a competition in the awards market. Most of the world users are based either on the Baldridge Model or on the FQM Model. The Deming Model is not so transparent as the other two models, partly because of the language issues, but partly because of the structure of the model. So if you look in Abu Dhabi, with the Sheikh Khalifa Excellence Award, it is based on the EFQM model.   If you look in Dubai, the Dubai Excellence Award is based on the EFQM model. They are the couple I have been associated with.

If you look at the award winners at the national level in the UK, we have companies which are not essentially, in terms of Head Offices, necessarily UK-based, but are operating within the UK and being successful within the UK, and we have got parts of Siemens and TNT, for example. Some key international players, and this is particularly true in terms of the very high growth organisations, and Dubai Holding I think is a very good example of this, are using the model as a fundamental part of their business strategy on a very aggressive basis indeed.

The basic EFQM Excellence Model has nine criteria, and below them, 32 sub-criteria. The nine criteria, strangely enough, start with leadership. No organisation, private, public or voluntary sector, all of which use the model, is going to be particularly good if it does not get its leadership right. It needs to know where it is going, it needs to carry its people with them, so the leadership is a very key issue. The leadership requirements of the model are very stringent, from role model behaviour to making available resources for improvement, through support for the people in the organisation in all kinds of changes, as well as the usual things perhaps you would expect of leadership.

We start with leadership. To deploy leadership, once we know where we are going, if we know our vision, our mission, we need to have a strategy, so we have policy and strategy coming out of leadership, based on the leader's view of the future. The concept of leadership, I might add, is actually a deployed concept. It is not just the top leaders we are talking about here; we are talking about leadership at all levels in the organisations. We have got the people, the development and the management of the employees in the organisation, and we have got the resources of the organisation - the money, the knowledge, the technology, the buildings, the plant, and the partnerships, partnerships in the supply chain and elsewhere, and we have got the processes. To be an excellent organisation, we need good leadership, we need clear strategy, well deployed, we need to develop our people, our resources and our processes well. These are our enablers. If we can get these things right, we should get good results though it will take time, maybe two or three years.

Most important in the model's weighting are the customer results. I think Tom Peters talks about the fact that customers are all there is. Well, in the model, customers are important, but we also link it very much to other stakeholders, like the employees. It is hard to have happy customers if you have got unhappy employees.

And society results - does this organisation, whether it is private sector or public sector, act as a responsible corporate citizen? It may be doing a public sector purpose, but how is it on the environment, how is on its community, how does it relate to the society it lives within, as a corporate person?

And then our key performance results are about all the targets we would set ourselves, in the private sector - take in market share, making profit - and in the public sector, achieving our outcomes, our desired outcomes, and sticking within budget.

So this model is about doing the good things, the enablers, achieving the good results that we are trying to achieve, and then going back and learning where we fall short perhaps against our own targets, against our benchmarks, and changing things, innovating. It is a linear model with a feedback loop. This model is in widespread use across Europe. It started only in the private sector. The British public sector is now actually the most major user of the model, and it is also being used across the voluntary sector, and in such diverse organisations from primary schools, through to parts of Government Departments, through to major organisations of all sizes, right down to small hotels, small manufacturing organisations, etc.

Behind this concept of excellence are fundamental concepts underpinning the model. The model's got a dynamic: it goes forward from enablers to results and then back in terms of innovation and learning. But underlying this is a set of values which underpin this idea, this inclusive idea of systematic approach to excellence with its focus on results. For an organisation to be good, it needs to know what it is got to achieve, and that needs to carried throughout the organisation, so a results orientation is a very key principle underlying the model. A focus on customers: the people for which the organisation is providing a service or a product. Leadership and constancy of purpose, that we know where we are going and we will stick to our ground and see it through. Management by fact and by processes, not by gut feel, a scientific approach to management, seeing the dynamic of how things are connected. Developing our people and involving them, so the employees of the organisation are part of the process. A learning organisation in terms of the people, the teams and the whole organisation learning, innovating and improving; developing partnerships with other organisations to fulfil its objectives; and being a good corporate citizen at a society level. These are the underlying concepts behind the model.

At this point it is worth just saying where this fits on the history of quality, because we all have different views of quality. The history of quality begins with the guilds, which of course had a major impact on our concept of quality. The guilds were about training for quality, about control of quality. The guilds, in many senses, were the custodians and establishers of standards and the whole process of the development of people - it always connected to the wonderful work done by the guilds.

Probably the next most important point in the history of quality is the Industrial Revolution. When manufacturing moves out of the craft workshop and moves into the large factory, as the entrepreneurs set them up, we start using mechanisation and unskilled labour. We suck unskilled labour out of agriculture, and what happens to quality in the product? It falls dramatically! How do we get it back? How do we rebuild it? In the craft workshop, producing an item, like this lectern perhaps, it often that would be made by one person assembling the parts and making each part fit. If I am trying to do this in a modern factory, then the parts are probably made by different people, working on different machinery, and we are hoping that the end of this process it is going to assemble correctly. In order for that to take place, if we are working with unskilled labour, we need some people checking the parts to make sure they fit the specification. So instead of making each item uniquely, we start to make standard parts for assembly, and to do that we need inspectors.

Inspection came out of the Industrial Revolution and has remained, probably, one of our greatest lynchpins of the concept of quality as we have it today. We rely on inspection in everything. For clothing, we multiply inspect panels of cloth at every stage in the manufacturing process; aircraft engines, we inspect them at every stage as we run through the service; financial services, inspection is a fundamentally crucial concept we still rely on. But there are problems with inspection: it is expensive. We have already done it wrong when we find the problems. We have paid to do it wrong, and we do not find all the problems. Some of them lie there in the legacy systems and come to light in their own time.

But there is something more fundamentally wrong about inspection, because there is no learning in it. Inspection is about sorting out whether we have made a good one or a bad one, but not why we made the bad one, what led to it, the circumstances under which it occurs. It could be that all the jobs that we do at the end of the week perhaps are not so good. It could be that if I am producing lecterns, every third lectern is a bad one because of somewhere in our manufacturing process something has got a systematic effect which we have not spotted. Inspection will reject the bad ones, send them for re-work, but it will not work out why it is happening. That information about why, that learning which can help us improve, is something which inspection does not pay enough attention to, and that is the basis of quality control.

So we are now jumping from the Industrial Revolution into the 1920s and the 1930s. The next big step in the development was quality control, where we start looking for the pattern of failure; the pattern of things going wrong.

Finding the reasons and the pattern of failure is useful because we can then go back into the reasons, but really, we are going into the process of manufacture or the process of providing the service. So if you can understand the conditions under which we produce a bad product or conduct a bad service, that is even better, and that is our idea of process control. Again, we are talking here about the 1930s.

World War II comes along, and we notice that our munitions factories have an unfortunate habit of blowing up. It is not new, it happened in World War I as well, not from any reaction, but from lack of control of dangerous materials. We literally start to screw everything to the floor, and we invent what became known as quality assurance. Ideas of quality assurance were about prevention: having good systems, having good processes, writing down the way we did things and making sure everyone understands them and are adequately trained for them.

We are getting close to a lot of the issues about UKAS's work and its key place in terms of industry and society, which is about having systems to make sure things do not go wrong, preventive rather than just correcting problems, making sure that incoming goods are coming from suppliers who we are sure about, checking them when they come in, making sure people are following procedures and are adequately trained, quarantining suspect materials, making sure we have got records and traceability. These were the ideas of quality assurance. Now, quality assurance of course, coming up in this context, formed the basis for originally a NATO standard, after the War, formed the basis for a British automotive standard, and eventually became the basis for BS5750, the forerunner of ISO9000. So the concept of quality assurance was a very important one, tied up with preventing things from going wrong, and it is the first step. Inspection, we checked to see if they were okay; quality control and process control, we tried to find out why they were bad if they were bad; quality assurance, we started to think about stopping them from being bad in the first place.

Something else which came out of the War was this concept of Total Quality Management. After the War, in Japan, there were a lot of American forces and everything was being flown in to support them, and so the Americans decided to teach the Japanese about quality. In retrospect, it was probably a fairly serious mistake. The Japanese had various experts visit them, people like Edwards Deming, an American civil servant from the Bureau for Census, who went over to lecture to the Japanese about quality methods, which had been used in the American war effort, and were used over here as well, to try and ensure that, with more unskilled labour making munitions and making transportation systems, that we would not lose quality. A whole set of experts like Joe Juran and Homer Sarasohn went over to lecture the Japanese on quality. The Japanese listened, realised these methods were rather complicated and did not engage the workforce, so they simplified them - particularly the work of Dr Ishikawa was focused on simplification - and came up with their own version which became the basis for the quality revolution in Japan. They called it Company Wide Quality.

In the 1980s, America had been beginning to realise for some time that it was getting to a point where it could no longer produce products to the quality levels the Japanese set, and started to talk about the quality crisis. Rear Admiral Kirkpatrick, desperately looking for what the Japanese were doing that was so special and hoping to transplant it into the United States, came up with the phrase Total Quality Management, the method to be used, which the Japanese were using, for the quality revolution, forgetting that actually it had been taught to the Japanese by the Americans in the first place.

In the 1980s, Total Quality Management became a really big thing in this country. The DTI started to support quality programmes, sometimes earlier, but then became very embedded in the Total Quality Management movement, but by the end of the 1980s, consultants' reports on both sides of the Atlantic were saying Total Quality had failed. The reason was we had some successful quality programmes, but we also had some incredible failures, organisations which had started on the quality journey but had not delivered.

In fact, I actually chaired a conference at the end of the 1980s, which the British Quality Foundation, the Institute of Quality Assurance, the CPI, were all involved in, which was looking at why quality was failing. But none of us actually realised it was on the 1st of April!

If you looked at the successful quality programmes and the non-successful ones, there was one big difference between them. The successful quality programmes were results-focused. It was not just about 'quality is good', it was about 'quality has to deliver' - we need to be checking that we are performing in all senses.

So this was really the beginning of the emergence of a new word - excellence, the desire to be results-focused, not just quality is something good, but quality as actually delivering on results began to be coined as the word 'excellence' to separate it from the quality movement which had gone before, which had really got a bit of bad press because of non-delivery in many cases.

The excellence models that developed through this period were based on successful organisations. They were looking at the ones who had got it right, related to Total Quality Management, but very much focused on results. The models were about checking that organisations actually used these principles instead of just talked about them, and the frameworks into which virtually every other initiative that you might find in the organisation might fit. All the three great models of excellence look at each other all the time and try to improve by studying each other. All three of the great models really focused on three things: an excellent organisation has good people and manages them well; an excellent organisation has good processes and manages them well; an excellent organisation produces good result and manages them well - the results do not happen by accident. To deliver performance, whether we are talking here about share value, financial performance, or customer satisfaction, we need to be working aggressively to do it. That was the realisation at the end of the '80s really.

I think you would agree with me that you cannot just have two of these, not if we are going to use excellence. If it is excellent: good people, managed well; good processes, managed well; good results, managed well - and developed, all three of them being developed.

You can represent the American Model, the Baldridge Model in the form of a hamburger for easy consumption. You can see that essentially it is has the same ingredients as the EFQM Model I spoke of before. Leadership is there; we have got strategic planning for the policy and strategy; we have got customers coming through in terms of customer and market focus; we have got process management, very much as before; we have got the people coming through human resource focus; and we have got the business results at the end; and we have got customer and market focus strategy and plans running over all of this; and we have got information and analysis supporting it. It looks very much like the EFQM Model, but the arrows go in all kinds of different directions - it much more complex, but you can see the similarity in the model structures.

One of the great things about these balanced models of excellence is they cover anything you can think of. I think we have all, if we work in organisations, seem to suffer from initiative-itis, death by 1,000 initiatives. I am reminded about a joke about a man who goes into a pub, asks for twenty pints of beer and a packet of crisps, and the barman says, 'Would you like a tray with that, Sir, so you can carry it back to your seat?' and the man says, 'No, don't you think I've got enough to carry?!'

That was the sort of baggage that we carry with management initiatives a lot of the time. Have we got a coherent view of strategy which connects all that together? The model, or any of these models, actually provides that in many senses. Our mission statements, vision statements, corporate values and beliefs, are very much about leadership, where we are going, what the leaders see as the direction. Succession planning and management development are very much about leadership too. Our plans and policy development and objectives are very much about policy and strategy. Standards like Investors in People are about developing our people to develop the organisation. Empowerment, appraisal is very much about our people management and development. Things like IT initiatives, outsourcing, are very much about managing our resources and our partnerships. Business process re-engineering, performance management, ISO9000 is very much, at its core, about our processes. In terms of our results, customer surveys and charters and guarantees very much about our customer results. Employment surveys, employee surveys and suggestion schemes are very much about our employees and our employee satisfaction. Standards like ISO14001, health and safety and very much really coming into our issues about corporate citizenship. And in terms of our key performance results, we have got the financial results, we have got our scorecards, our benchmarks, our quality costs and performance indicators and so on. So really, any initiative you can think of fits in here somewhere.

The mechanism of the European model is very common in the other models as well: they are results-focused. Well, what does results-focused mean? It means we start by defining what we are trying to achieve. We then deploy approaches to get there - we have to develop them first and then deploy them, and then we check how they are working and adjust as necessary. So we have results, approach, deployment, assessment and review. If you take the first letters of those, we come up with this terrible RADAR phrase - Results, Approach, Deployment, Assessment and Review.

The concept of the model is that we improve over time. You do not become excellent in a year. You do not become excellent in two years. In fact, the trick of course is you never become excellent. You keep trying to get closer to it, towards the horizon. The models work on a 1,000 point score, and the idea is that, over time, we work increasingly towards achieving that score.

Therefore a score of 300 is a very good score actually, early on - we may have ISO9000 in place, maybe ISO14000 in place, we are starting continuous improvement to some extent - but in fact, it is 300 points out of 1,000, and yet it is a pretty good organisation. The best in Europe are only at 700 or 800. This is a Utopian model. Of course if it was easy to achieve, if it was completely compliance-driven, there would not be any point. This is to stretch organisations as they struggle towards getting better, year on year.

But, we have got these models - do they work? Do they actually pay? Or are we, in the quality movement, really trying to deal with a self-evident truth, akin to the quality religion? I always accuse my students of the quality religion. They write things like 'companies must' and then a string of things come out - 'they must lay down their objectives, they must take a balanced approach, they must focus on improving their workforce'. Why? What is the evidence? Where is the evidence that doing that works? It is just an assumption.

Where we have had analyses in the past, most of them have been in the form of case studies, qualitative research, and a lot relies on management perception. But what is the objective evidence?

The seminal work in the United States was undertaken by two guys called Vinod Singhal and Kevin Hendricks at Georgia Tech. This was carried out towards the end of the 1990s, and Vinod Singhal was a partner in the work we have done across Europe and he helped direct the work and worked with us on this. The technique that was developed by the team at Georgia Tech focused on using publicly available data to compare performance of excellence award winners and other companies in the sector, and the arguments on this was that excellent award winners must understand the principles of excellence and be using them well, so well that they are winning these awards, but does that help them perform financially better? Does that mean their share prices increase disproportionately? Does that mean that they are financially more efficient and more successful? The way we can do this is we can compare them to non-award winners inside their sector and look at their performance. The great thing about this is that we can use publicly available data to do it. So that was the basis of the methodology. It was relatively easy to do in the United States of course because we were talking about one financial system, but it is much harder to do across Europe, but we will come back to that issue.

What they found out from their studies was that award winning companies have superior performance on share price and all the usual financial measures for up to five years following an award. It is five years is not because it changes then; it is because we did not have data beyond that when the studies were undertaken. So here we had a perfect investment portfolio which actually outperformed any other investment portfolio. If you can invest in award winners, you really are doing well, but the trick is you have to invest in them one year before they win the award - now that is difficult!

We used the methodology that was developed for the American team which, adapted in the European context. We looked at award winners that effectively implemented the principles of excellence. At the national level upwards, it is pretty impossible to get that balanced approach without understanding the nature of the award. We do find at the regional level we might find some small organisations that have never heard of the excellence principles but are doing it instinctively from a good management point of view, but when we start getting up to the real performers, at the national and at the European level, that is really not the case. So award winners become proxies for organisations that really understood the excellence framework. We look at the year in which they first received an award of any sort, we collect accounting data from the award winning companies, we identify comparison companies by matching them in terms of all their characteristics - sector, size, etc. company of incorporation - we collect accounting data for the comparison companies, we calculate the performance difference between each award winner and its comparison company, and then we trim for outliers, particularly performing companies which are behaving in a different way for one reason or another - which is a fairly standard statistical method.

The limitations of the study then are they need to be publicly traded. That is a limitation. We have got some private companies in here, but they need to be publicly traded. Where a subsidiary of an award winner is actually a winner, we actually use the data at the parent company level, and that is a practical limitation. We have not got a way round that, unless we are going to use subjective data, unfortunately. Award winners sometimes get multiple awards - one division wins an award, another division applies, and so they get multiple awards, so we have taken the first award as an indicator - that is all we can do. How we choose the comparison companies is as good practice as we can get, but it still has limitations - they are not always directly comparable. And we have got the outlier issue - it is standard statistical methodology that's been used for generations now, but it is open to criticism. They are the limitations, I believe.

The European study was commissioned by the European Foundation for Quality Management and the British Quality Foundation, which is its UK-based partner. It was undertaken by my team at the Centre of Quality Excellence at the University of Leicester, and Dr Louise Boulter was the project leader. We worked with Vinod Singhal, who did the original American study, and in fact Jens Dahlgaard from Linkoping University was also involved in this and helped with quite a lot of the data identification. We used a similar methodology to the US study, but it was much more difficult due to the different accounting systems.

Now that I have talked about the comparison companies, let me just stress exactly what we did. The criteria we used was we went for the same country of incorporation of the parent company in each case, so the comparison company would be in the same country as the company we matched it with from the award winners. We took the same accounting data over at least the same period as the award winning company, so we had to have availability of that data, and that means that all kinds of issues of mergers and de-mergers etc. complicated that and caused us to reject both some comparison companies and some award winners because we did not have that comparability. We had at least the same first digit industry code as classified by Datastream, so we tried to look for it being in the same business, but it was not that much in the same business because of practical reasons and was closest to its size, as measured by total assets at the fiscal year end before the winning of a first award, with the constraint that the ratio of value of assets is always less than a factor of three. So basically, we were ruling out gross differences and we were looking for as similar as possible.

The time period we looked at was essentially eleven years. We look at the year the company first received an award, and we go back five years where we can, and we go forward five years. Now let me emphasise 'where we can' because of this problem about new entrants, about mergers, de-mergers, etc. It is very difficult to do this sort of analysis over time. It causes us to eliminate a lot of organisations and the ones we have got left sometimes do not have that range of data.

The five years either side of the receiving of the award are called the implementation period and the post-implementation period. The idea here is the implementation period of the period in the five years running up to an award where the organisation would have been working on excellence. It may well have started much earlier, but it certainly should be true through that period. We all know that excellent organisations do not always stay that way, and they could well be changing their management style and declining, or continuing. So we have differentiated that in the post implementation period. We have taken one year before the award as the beginning of the post-implementation period.

What measures did we look at? Well, we looked at share value. That's our main measure, a fairly sort of basic thing to do - are they good investments? We look at revenue and sales, we looked at cost, we look at operating income, and we looked at a number of other accounting-based measures.

Share value was the primary measure for the study. We looked at the return on shares that we would have if effectively we bought and held through the period, so the buy and hold returns for each award winning company has been calculated, compared against the buy and hold returns for each comparison company. It was a matched pairs approach. The returns, just to make it clear to any specialists, include capital gains, regular dividends, and special dividends. They have already been adjusted for the data source Datastream for any stock splits. The aggregate differences gives us an estimate of the element of share value that corresponds to the effective implementation of the principles of the excellence model - that was our argument. So we have looked at the difference in share value and growth between companies which have won awards and are thus in fact, presumably, good examples of organisations using this balanced, inclusive approach and systematic approach, and companies in their sectors matched as closely as possible to them, which have not, as far as we know. It is a bit conservative methodology because they may also have pursued excellence, but even if they did, then actually anything we find should be even larger than what we suggest.

We lose a lot of data in this process, unfortunately, and we do so because we have to find companies where we have got the track record of data and we also have to find comparison companies. We end up with 120 companies which fulfil all the tests. 85 have their head offices in Europe; the others, even though they are European award winners at various levels, are owned outside Europe in terms of the head office of the organisation. We got a fairly wide spectrum of these, from the largest being outside the Europe, 24 in the US, 21 in the UK, down to ones and twos in various parts of Europe, etc.

So the results? To begin with, we can look from one year before winning an award to one year after, at the difference between the award winner's performance and the comparison companies in the group. If you look at share value, we see a 3% difference - i.e. in that period, the award winners have outperformed the comparison companies by an additional 3%. It is not much, but it is something. We look at sales and it is 8% on sales, they are outperforming by 8%. On sales over assets, it is 3%; on capital expenditure over assets, it is 13%; on capital expenditure over sales, 10%; on assets, it is 12%; on employees, it is 3% - the number of employees has grown more in award winning companies by 3%; and total cost over sales has declined by 1.5% more in award winners - the costs have come down relative to sales compared to the non-award winners. Now, okay, it is not shock-horror, but it is certainly showing that the award winning companies seem to be outperforming the others. It gets better, as we will see. But even within a short period of time, we are seeing advantages coming through to organisations pursuing the principles of excellence in a large number of obvious measures including of course share value.

Three years after, things start to hot up. The advantage in terms of share value is now up to 36%. Asset growth is up 20% in comparison, a 20% difference; sales, 17% difference - we are talking about pretty big advantages.

After five years, we are talking about a 77% difference in sales; we are talking about a 44% difference in assets, and so on. So we are talking about pretty major differences which are appearing through that period.

If we put all of that together and look at the implications. The first thing we see is it seems fairly obvious that an excellent strategy pays. Companies which are good enough to win excellence awards, which are really pursuing excellence principles, outperform comparative companies, selected on objective criteria, pretty consistently across the board. It is a good strategy.

Secondly, the cost differences were relatively small, but the sales and assets differences were relatively large. Improvements in excellence-focused companies compared to the comparison companies are more about increased improved sales and assets, etc. than cost reduction. It is not just taken-out cost. Cost reduction and quality are not the same thing. Lean is important, but it is more about the creativity, the growth, the energy of the organisation, I would suggest, than it is about the savings that quality actually delivers. Quality is about delivering the energy of the people and of the systems and of the direction, not just about saving money.

Performance over time is complex and varies between companies, industries and countries, and I just want to emphasise this. I am not going to show you much of this today. There is some evidence that European excellence award winners do much better. We are talking about some fairly major differences. If we look at the European level award winners, which should really be the best in Europe in many senses, in terms of applying excellence principles, you can see that we are talking about essentially 100% differences. They outperform their competitors, their comparison companies, by essentially here about 100% in terms of growth and share value which is pretty serious. You can see that the national level and the regional level, it is much less. There is various other measures that show similar things.

If you look at industry sectors, there is big differences, because the history of industry through this period has changed dramatically. Only four sectors have enough data for analysis, but we can see the effect if we look by industrial sector or the IT industry. So there are differences which are very real sector to sector as well.

So to summarise, investing in excellence as a core of business strategy pays. We now have objective evidence of this, not just in North America but across Europe as well. The studies are not perfect, but we believe they are the best methodology currently available. They contribute to business performance through increased sales etc. not primarily through reduced cost and efficiency issues. Performance over time is complex and varies by company, industrial sector and country.

Finally, the work presented here, as I have indicated previously, essentially is a team project work. The sponsors of the work were EFQM and BQF. We are no longer working as a team unfortunately. I took early retirement from Leicester University about a year ago. I currently work with Middlesex University as a Visiting Professor, but we are very happy to discuss the project in all its form and the work of the project.