

Document 1

Definition and Mapping of Research Questions

Working Title

Business School Business Models - Their relevance to Success

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Introduction

The working title for this research proposal is;

“Business School Business Models - Their relevance or other wise to success.”

The purpose of this document is to set out my area of research interest. This can be described as:

- the use of models in making sense of business school strategies
- developing and understanding of the models business schools use
- likely developments in business school business models
- the use of business models to help understand how business schools change and innovate and
- how these factors impact on a number of parameters that can be grouped together into a broad definition of success.

This will include framing the research question(s), the methods and methodologies of the research and a sample of the existing literature, set in a personal and organisational context. The result being a journey of learning and discovery for me, useful and relevant outcomes for the Nottingham Business School and a better understanding of business schools in a period of significant change.

Personal, Organisational and Managerial Context

Personal

The working title hints at my background and how it is shaping my initial view of the research path, approach and outcomes. I come from a finance discipline most commonly perceived as positivist, but believe myself to be on the ‘soft’ end of this spectrum. Listening to Tony Watson’s views on New Perspectives on Strategic Management (NBS DBA module2 2003) the idea of a post facto application of planning logic to a series of intentional and unintentional events has a resonance with how I feel I arrived here today. A series of events and choices, which I shall briefly describe, influenced by an underlying sense of what I wanted rather than a completely

pre-planned campaign, led me to bring my skills and experience to the business school.

Having been introduced to economics in the sixth form I chose this as my main subject along with politics and operational research when I went to Lancaster University in the early 70's. After experiencing the first year my direction shifted slightly when I chose Behaviour in Organisations for my minor subject to complement the Economics major.

I didn't follow my first degree with further academic study but began to train as a chartered accountant. This path led me into a number of organisations in a variety of locations. I have been struck as much by the similarities of organisations as their differences and whilst my roles have been factual and analytical I found that more of my time was spent helping the development of colleagues at the same time as working with them to improve the what and how of the function.

This leads me to the personal why in terms of undertaking this research. In truth the task is daunting both in terms of scope and scale but it is a significant opportunity for me to explore more widely and deeply and gain some understanding of the whats, hows and the whys of the structures, processes and logic employed by business schools as they strive for success. Why does a business school determine the strategies it does? Why are the strategies implemented in the way that they are?

Further, I'd like to investigate the changing context in which business schools operate and look at where these changes may lead their development in light not only of the external influences for change but also the internal capabilities for change and innovation.

Organisational and Managerial

My current role is that of Director of Finance & Resources at the Nottingham Business School (NBS) at The Nottingham Trent University (TNTU). The mission of TNTU is,

“The Nottingham Trent University is a **learning organisation** which develops and nurtures, through **partnerships** and **enterprise**, learning and research excellence for the lifelong benefits of **students, employers** and the **community**.” (Annual Report 2002. inside cover. Emphasis added).

The mission statement is useful in the context of this piece of research in that it helps to identify the position of the university in the broader UK HE framework as a modern post 1992 university, engaging with a number of stakeholders. Placed within this context NBS is a leading UK business school, 16th in the Guardian league table in 2002, with a large undergraduate and postgraduate student body in the region of 5,000 students. The main revenue sources vary from the government (Hefce) and individuals and corporations, split approximately 50/50 between Hefce and non-Hefce funds. The non-Hefce funds are largely derived from corporate clients or full cost open programme postgraduate students. This combination of scale and diversity supports my interest in the models adopted by NBS and other business schools as they pursue their missions.

The organisational interest in sponsoring the research is largely to gain a better understanding of the business models used in the HE business school sector, to understand how value is created by business schools and to what extent do different models enable, facilitate or restrict change and innovation within the schools. Success in terms of business schools will have many facets. If for simplicity we take the continuation of the organisation over time as a base line, then a better understanding of how value is created for a business school's stakeholders is likely to be a condition of, but not sufficient for, success and thus arguably of interest to the organisation. More specifically, given the Nottingham Business School's plans for the growth of non-government income and the achievement of external accreditation a better understanding of models facilitating change and innovation may be of interest.

Problem and Issue Description

What is a business model?

One description of a business model is a series of commercial relationships between an enterprise and its business offering in the market structured in such away so as to become financially self sustaining. (Hawkins.2001). Another is that they are "stories that explain how enterprises work" (Magretta, J.). With these broad definitions and the history of reducing per capita funding for HE from government the relevance of

business models becomes apparent. With a steadily reducing funding base business schools have had to adapt their provision and consequently the adoption of a different model could be an aid to sustain their level of activity. In the case of Nottingham Business School the increase in corporate activity, a change to the business model, has, along with changes in other activities supported school initiatives. The increase in the level of engagement with overseas students could also be viewed, in part, as a change to the NBS business model.

In reviewing the literature, the approach to business models appears complex and varied. Betz (2002) describes six generic models applicable in different conditions. (Linder and Cantrell 2000. 1) define the business model as, “the organization’s core logic for creating value”. They then go on to describe a business model in two parts, operational and change models. It seems appropriate to treat operational and change models as complementary elements whereby the capacity and capabilities built in the operations model within a particular time frame or life are supported by the capability to adapt to and anticipate changes in the environment.

Again the change model is not seen in a one dimensional way but representing different levels of change from merely realisation models where the change are simply enough to maximise the returns from the existing model through to shifts to new models discarding the old. (Linder and Cantrell.2000). The question then arises as to what, if any business model business schools are using to ensure their relevance and success currently and moving forward in the changing environment.

So far the models have been based in the for profit sector of the economy whereas typically the business school has one foot in the public sector and part of a foot in the commercial sector. The relevance of the for profit models in the essentially not for profit sector needs to be explored.

If for profit organizations are essentially profit led then not for profit organizations could be said to be value led. (Peizer. 2002) A business school needs to combine aspects of the profit led sector where appropriate without compromising its essentially value led mission. How will the business model be affected by this duality? Is the New Public Management form of organization applicable to the business school or should market forces be left to determine outcomes? James in, *Business Models and the Transfer of Businesslike Central Government Agencies* 2001, (sic.) discusses the relative merits of the Anglo-American approach and the generally more collegiate

systems of Germany and Japan where performance measures are designed on broader terms, trying to ensure efficiency and effectiveness across a number of agencies and not encouraging the success of one agency at the expense of another.

The idea of business schools transforming themselves is discussed in a paper by F Berry 2000, where he suggests business schools have a role in generating responsible citizens. Taking this a step further, will it become necessary for Business Schools to make these changes to remain relevant and subsequently sustainable? To do this would require the business schools themselves to re-focus the what is taught based on a shift of emphasis on the why. Do students leave business schools with simply a series of management, marketing or financial techniques or do they have a framework in which to apply them?

Business Schools, along with HE in general, face increasingly uncertain times with change occurring simultaneously on a number of fronts. There are significant changes in the HE environment including changes in;

- the funding regime
- the forms of delivery
- the competitive environment and
- stakeholder expectations.

Listing these changes does not imply they are independent variables, in reality they interact with each other. An aspect of funding changes impacts the pricing model, which in turn affects stakeholder expectation. A higher fee price is likely to lead to an expectation of a higher quality of student experience. Better use of technology in distance learning delivery can attract new entrants or provide advantages to certain existing suppliers, changing the competitive landscape and possibly the pricing models.

The recent government White Paper, The Future of Higher Education, 2003, recognises the quality of and the benefits generated by, higher education but also the need for change and the,

“hard choices on funding, quality and management:” (The future of higher education, 2003. Executive Summary p4)

The White Paper puts forward the need for expansion of HE to:

- service the economy
- improve access
- improve HE’s engagement with business

This is set against a history of insufficient investment in HE, both absolute and relative to competitor economies.

To help secure their individual futures against this changing background it can be argued that it is increasingly important for business schools to understand how they add value for their stakeholders. Pressures resulting from government action including the issue of differential fees, but also broader changes in both the economy and society mean that interwoven within these issues is the ability of schools to manage and anticipate change. This changing environment means that an understanding of and an ability to adapt and innovate are becoming as important to business schools as they are to businesses in general.

The issue of funding HE has a major impact on the nature of HE and has been a topic of discussion for a number of years (Eicher and Chevaillier, 1992). The Dearing Report 1997 The National Committee of Inquiry into Higher Education indicated that over the 20 years preceding this writing of the report;

- the number of students has much more than doubled;
- public funding for higher education has increased by 45% in real terms;
- the unit of funding per student has fallen by about 40%;
- public spending on higher education, as a percentage of gross domestic product, had stayed the same

(Dearing, 1997. Summary Report section 14).

The report suggested that whilst students could not afford to pay more for their education graduates could. Others have put forward the idea of student loans and

income contingent repayments combined with differential fees and more autonomy for universities (Barr and Crawford 1998).

The funding issues surrounding HE can be seen as important in setting the context of this research. The substantial decrease in the level of university funding per capita over the last decade has meant that some business schools have sought to generate alternative sources of income, others reducing their cost base, doing less or going into deficit. All these consequences can be argued to be revisions to their particular business models to a greater or lesser extent. Going into a deficit could be a conscious decision, an incorrect change or a failure to react at all.

The reduction in funding per capita has been driven through the massive increase in the size of the HE student population without a proportionate rise in funding.

“During the last decade the numbers of young people going on to higher education has doubled as a share of the age group.” (Glennerster 2002)

It could be argued that this level of expansion itself would require a shift in the business models of business schools as they organise themselves to handle much larger volumes of students. A change in scale such as has happened in HE over the last twenty years has had a profound impact on the relationship of the school with the student and other stakeholders. The relationship between a school and its students is likely to be less intimate when the number of students is large than when the number is small. As the proportion of 18 year olds engaging with HE has grown and the graduate employment profile changes it could be argued that a school’s relationship with employers changes. This change in relationships may then impact on the business model required to manage them.

The increase in the proportion of students going into higher education has happened in a number of other economies. Rekiö refers to Trow’s development model of higher education, which categorises three stages of higher education in terms percentage enrolled; elite up to 15 %, mass 15-50% and universal or post-massification above 50% (Rekiö. 2001). In a number of these economies similar debates around funding such expansion have occurred. In Australia Income Contingent Loans were introduced in 1989 under the name Higher Education Contribution Scheme HECS. (Harding 1995). The introduction of higher student fees into UK HE in 2006 may have a significant impact on the stakeholder relationships around HE and thus may require a review of the business models used by business schools.

Whilst HE funding is a major component of the issues facing business schools there are other significant issues which may help shape the models business schools use. The forms of delivery of education are increasingly affecting the shape of business schools and their partnerships. Distance learning has been around for some time but as e-learning becomes more established geographic barriers to competition are being eroded. Additionally the technology is argued to be changing both the business model of HE and process of teaching and learning. (Oblinger and Kidwell, 2000)

The provision of HE is no longer simply the realm of traditional universities. There are private institutions such as Buckingham University and there are a number of business schools relying on government funding for only a small proportion of their funds such as Cranfield, Ashridge, Templeton, Roffey Park, Henley and London and Manchester business schools (Harry. 2003). In the USA there are a number of for-profit internet based education providers such as Achieve Global, Knowledge Universe, Thomson Learning and Pearson Knowledge whose business models may allow them to eventually move from the corporate market into the province of the more traditional provider (Collies D. 2003). Other corporate players are entering the field both in terms of Corporate Universities e.g. Unipart U. Recently there was speculation in the press as to whether corporate institutions should be given degree-conferring rights. Even in the public service arena the establishment of universities is gaining ground with potentially very large and significant NHSU, (National Health Service University) and the smaller BLU (Business Link University).

The term corporate university can mean a variety of things in practice, from a simple renaming of the training and development function through to a comprehensive set of structures and processes designed to facilitate fundamental change in the functioning of an organisation. A corporate university may be seen as a business model for developing a learning organisation in that initiatives such as continuous improvement, kaizen process, innovation management and knowledge management can be structured and managed in a sustainable holistic way. The traditional business school model usually has the delivery of learning outside the work environment on selected case study or theory with the manager applying this learning once back at work. A core feature of the corporate university model is the delivery in the workplace of learning built around real issues facing the manager and the corporation (Sandelands 1998). A significant question for business schools is how they engage with the

corporate university model. Is it a threat or opportunity? The answer is probably either and or both.

The changing environment requires business schools to constantly ensure they add value for their stakeholders.

There are a number of stakeholders in the HE process:

- students and increasingly their parents, particularly since fees were introduced;
- government, most recently through its recent White Paper 2003;
- employers an increasingly important group as employability becomes a significant element in the decision where to study;
- corporate clients as they are seen as significant partners for business schools for programmes both sub degree, degree, and postgraduate and research funding blue sky and applied;
- accreditation bodies whose endorsement is seen as a key differentiating factor in an increasingly competitive marketplace.

It may be argued that any business school model will have to address some or all of the needs of the various stakeholders.

Academic field – overview of literature

This section will outline the likely areas of the existing literature that will be critically reviewed to inform and help place the research in an academic context.

The main areas for review are:

- **Organisational Models**
 - Business Models
 - Business School models
 - Learning Organisations
 - Corporate Universities
- **Organisational Performance**
 - Business School performance
 - High Performance Organisations
 - Education Management Strategy
 - Stakeholder Analysis, Value Added

- **Change and Innovation**
- **HE funding and Enterprise**

Organisational Models

Given that part of the research objective is to understand the application of business models to business schools a wide reading around such models could be argued to be a prerequisite to this research. The relatively small amount of reading around learning organisations and attendance at a seminar on corporate universities has helped shape this document and support the idea that using models is a useful way frame the research. In addition, the relatively small amount of literature found in the initial literature search may indicate a gap in the application of business models to the research of business schools.

Organisational Performance

As noted in the working title the success of business schools is an important element of the research. Thus, part of the research will be around what success could be defined as and how it might relate to different business models. Part of success will be measured by the views of stakeholders in the business school and a review of some of the literature around stakeholders may be useful in addressing what success is.

Change and Innovation

To ignore change and innovation may lead to a static one-dimensional view of business schools. To include change and innovation could enhance the usefulness of the research in informing future action.

HE Funding and Enterprise

HE funding appears to be in a state of flux and is likely to be an important factor in the shaping of business schools. Enterprise in the commercial sense may be seen as a field of activity that business schools are being encouraged to engage with as evidenced by the recent government White Paper on higher education and may also be a significant factor in the shaping of business schools into the future.

Preliminary Literature Review

The main source of the preliminary literature review was the TNTU library and the electronic databases and journals available there. This revealed a large body of literature around:

- the growth in UK HE student numbers
- the lack of relative growth in funding
- the consequences of the policy if the status quo remained unchanged

Searches around Enterprise were also fruitful revealing surveys and discussion on the interactions of universities with largely commercial enterprises. (Wright, Vohora and Lockett 2002. Charles and Conway 2001).

During the course of the literature review from the main areas of review should evolve a series of themes which at this early stage include value added, innovation, performance, and change.

Discussions with my first supervisor led to a refining of the field of review to focus more on business models and their applicability to business schools. Literature on business models is readily available but the application to business schools relatively low. This suggests there may be a gap in the research with the possibility of applying an established body of work to a relatively un-researched area.

Research Questions and Objectives

My research interest and resulting questions revolve around business models adopted by business schools and how the business model itself can become a research tool.

As indicated earlier the likely research questions will fall into the following categories:-

- determining the current landscape of business and business school models
- business school models and their relation to change and innovation
- the use of business models in making sense of business school strategies
- success and business school models

The likely specific questions are noted below.

Determining the current landscape of business and business school models

- **What are business models?**

Here the term business model will be defined and illustrated initially in its business context but then as it is seen to be applied in a business school context. The result should be an initial review of a variety of business models available to business schools.

- **What business models are present in the selected business school population?**

Here the results of the first question will be mapped against the business school sample. This should indicate the different models used by business schools and aid the forming groups of business schools using similar models.

- **Why are the particular business models used?**

In this question the process behind the selection of a particular model will be researched.

Business school models and their relation to change and innovation

- **Do business school models display a propensity to facilitate change and innovation?**

Here the research will try to establish if in the cases investigated the models adopted aid or hinder change or innovation.

In addition, the research will look for evidence of instances of change and how these relate to the model in place.

The use of business models in making sense of business school strategies

- **Can business models be used as a lens to view and make sense of business schools strategies?**

Here the process is to try to use the business model as research tool to gain an understanding of a set of business school strategies.

Success and business school models

- **Is there evidence of a link between the business model operated by a business school and the achievement of particular objectives set by it?**

The aim is to determine if a particular model is more effective in achieving a particular set of objectives than another.

- **Is success a function of the effectiveness of the implementation of a model or the particular model used?**

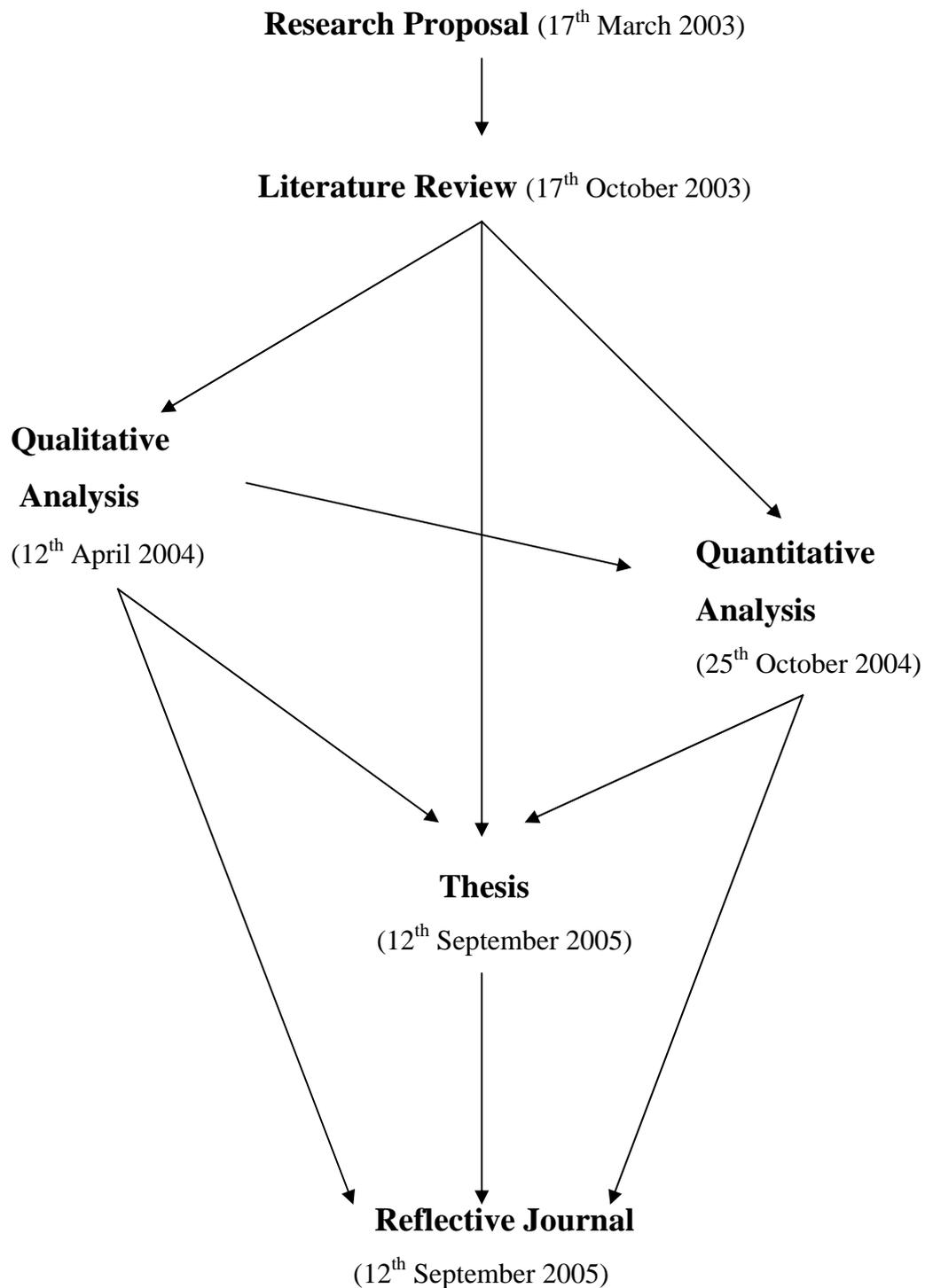
Here the aim is to try to tease apart the impact of the model and the effectiveness with which it is implemented.

- **What models do business schools plan to use in the future?**

Here the aim is to develop an understanding of how business schools are planning to respond to the changes in their environment.

My objective is to gain an understanding of the models as they appear to exist and operate and try to make sense of them as they change, grow, collapse and reform.

Research Plan, Methods and Timetable



(Adapted from Linkages in DBA module 1 2002 notes)

The steps in the research process follow the path laid out in the course handbook.

The basic outline of the literature review is described above.

Qualitative Research

The qualitative research will consist of semi-structured interviews with members of a number of business schools in both academic and support functions. In addition, I would also include similar interviews with staff in the central function of the university whose roles had a significant connection with the business school in terms of both its commercial and non-commercial activities. The purpose of the interviews would be to initially to clarify what model was being operated by the school but more importantly, what factors led to the adoption of a particular model and how and why they plan to change the model. Could this help explain the effectiveness of the model, the nature of choices made in the school and the success or lack of it at any a particular business school?

Quantitative research

The quantitative research will consist of a survey of a number of business schools designed to explore the issues around the questions discussed earlier;

- determining the current landscape of business and business school models
- business school models and their relation to change and innovation

The data could be mapped against the attributes of different models e.g. learning organisations and high performance organisations. There is the possibility of conducting this piece of research in conjunction with a firm of educational consultants and the ethical issues are discussed in the next section. Again having begun a brief literature review the notions of change, innovation and learning organisations are starting to inform the nature of the research proposal. The survey will be designed to draw out how change, innovation are managed and how the respondents expected the model they were operating to change. These changes could be driven either by internal imperatives or from external forces from the various stakeholders.

I discuss below in the political and ethical issues section the possibility of also using an Association of Business Schools programme as a springboard to access participants in both the quantitative and qualitative work.

Thesis

The thesis will extend and develop the work of the quantitative and qualitative pieces looking further at the business school in a context of learning organisations, high performance organisations, creativity and innovation building on the work of others such as Ashton D. 1994. The possible link between business models and success will be explored here looking at questions such as success the result of using the “right” model or the result of effective implementation of a model.

As my knowledge and understanding of business models, their complexity and variation develops during the earlier parts of the research I believe my use of models may become more sophisticated and become a two-way flow. The research data may be used not in a deterministic way to judge which model is being applied but also the model will become a research tool to make sense of the information collected.

Political and Ethical Issues

Political

The main political issues will be around the sensitivity and confidentiality of the data collected. This will be primarily around the quantitative data, although I expect the discussions in and around the qualitative interviews could also be a source of concern.

I attended an Association of Business Schools (ABS) programme in February 2003 and raised the issue of benchmarking business schools. The response was less than positive but not terminal. The relatively short history of benchmarking in the ABS is somewhat chequered. Previously one project was agreed but not started and another agreed, surveys completed but as yet no report from the sponsors of the project. It is likely the main obstacle to gaining access to the data will depend on being able to meet the concern over the confidentiality of the data. I hope that a guarantee of anonymity and access to the results will help overcome their concern.

Encouragingly the ABS have raised the possibility of including a presentation and discussion around business school models as part of their current programme. The

discussion went onto cover the possibility of a survey of some of the members and this time I detected more support from the ABS representative, which could be useful for both the quantitative and qualitative pieces particularly around access.

Ethical

Essentially ethics in the context of a research project refer to the what; the subject being researched; the how; how the research is to be conducted; the funding of the research; and finally to what use the research will be put to. (Remenyi, Williams, Money and Swartz 2002).

Research into the models used by business schools in HE i.e. the what, shouldn't create too many ethical issues. The method(s) of research carry more potential for ethical issues to arise. However, I intend to carryout the research in an open and honest manner sharing the results with all the participants.

The funding issue is in part an issue of independence i.e. can someone funded by a participant in the research be independent. I will need to develop the trust of the participants, which I hope my attendance on the ABS programme will help create. In addition, in terms of the how, I hope to involve a firm of consultants in the collection and analysis of the numerical data. This creates an issue of the authorship of the research but a careful construction of the process should resolve this satisfactorily.

Outcomes

I have noted below the expected outcomes both personal and organisational of my participation in the DBA programme. There is some ambiguity around the differentiation of personal and organisational outcomes. Personal outcomes may increase an individual's knowledge or understanding leading to an increase in effectiveness to the benefit of the organisation. Organisational outcomes can be more discreet, particularly in respect of the outcomes of the qualitative and quantitative pieces of research. I also expect there will be unanticipated outcomes both in terms of the nature and relative impact of the individual outcomes.

Personal:

- I hope the experience will improve the clarity and rigor of my thinking.
- I believe that working with the staff and students on the programme will expose me to a variety of insights and perspectives that I would not normally come across or use.
- I expect to have a better understanding of the nature and language of research including the numerous 'isms and 'ologies.
- I believe that the DBA will help me to develop skills that enhance the effective communication with and between the managerial, business and academic communities. It is at this juncture that my role operates and therefore the programme is particularly relevant to me.
- I believe that having joined the university relatively recently, the DBA will allow me to develop a deeper understanding of the issues, interactions and functioning of the HE sector over the next three years. I see the DBA as a path by which I can develop my understanding of these interactions and be better able to challenge the institutional / sectorial assumptions and precedents, and contribute positively to both debate around change and the nature of the change required.

Organisational:

The main organisational outcome should be the results of the qualitative and quantitative and pieces of research. These will, hopefully include a better understanding of the variety of models adopted by business schools, their structure and anticipated direction for the future. This should inform NBS decisions around its position now and into the future. Once the model was understood its strengths and weaknesses could be reviewed so that if for example we found that the model adopted was inadequate in promoting or restricted innovation further work could be done to rectify this.

Another organisational benefit could be the strengthening of links to ABS deriving from the work done with its members and possibly feeding results back to them in conjunction with them. The possibility of having ABS support the research in some non-financial way will be considered as the relationship unfolds.

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Document 2

A Critical Literature Review and Initial Conceptual Framework

Business Models and Business School Performance

John Gallacher

**Document 2: submitted in partial fulfilment of the
requirements of the Nottingham Trent University for the
degree of Doctor of Business Administration.**

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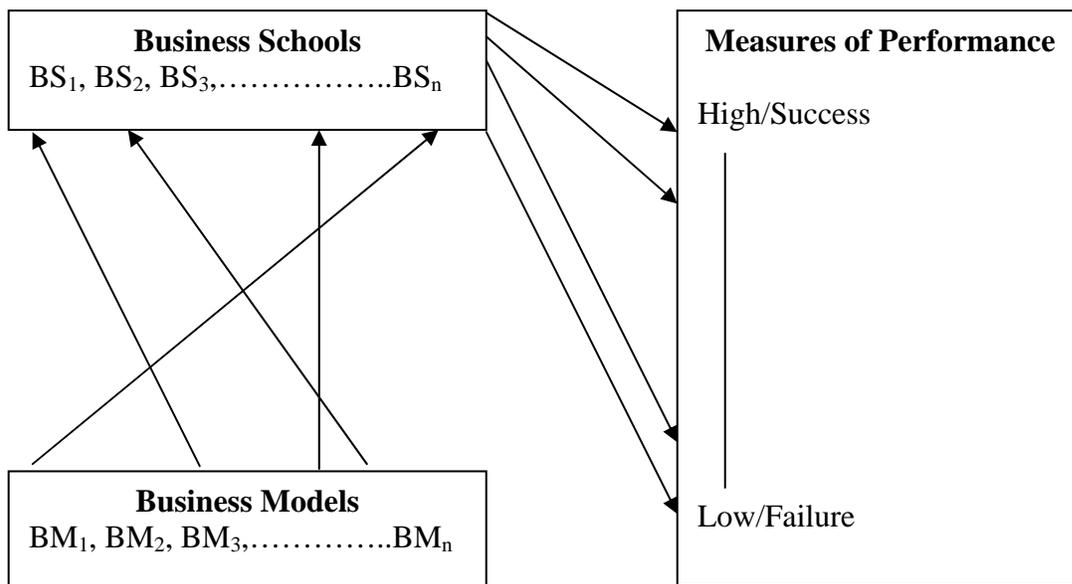
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Introduction

The Research What

The purpose of this literature review is to explore the understanding of business models, and review the possibility of applying a business model conceptual framework to better understand Business Schools and Business School performance. It is hoped that an outcome of the research will be a to determine if business models could be appropriate tools for informing, developing Business School policy formulation and ongoing performance management. In another sense the research is seeking to better understand how the variety of relationships and interactions within Business Schools and the expression as success or failure can be at first understood and then influenced if looked at through the business model framework.

Figure 1 Research framework



The definitions of business model, Business School, and success as used in this paper are articulated in later sections.

The Research Why

Having outlined the, 'what,' of the research above, I will briefly address the, 'why,' i.e. why is this proposed research subject important and of interest?

Business Schools, like other parts of HE and indeed education generally, are under greater review evidenced in part by the popularity and thus importance of league tables. This is not limited to the UK with publications comparing Business Schools and Business School products, largely MBAs, across Europe and the US. Comparative performance in these tables impacts on the schools in a number of ways through the quality statement implicit in the rankings i.e. the higher a school's ranking the better the educational experience will be and the greater the value of the award. This can then impact on the school's ability to raise funds from a variety of sources. Student recruitment may be adversely affected by a poor ranking and thus government and external funding may fall. The for-profit sector may be unwilling to purchase research or training from a school with a low league table ranking. Conversely a good ranking may enhance a School's ability to recruit more undergraduate and postgraduate students and attract a variety of corporate funds. In times of reducing government resources per student available to HEIs and thus Business Schools, the ability of Business Schools to develop new revenue streams becomes important to fund a high quality student and staff experience.

The structure of the review will follow the areas identified in fig. 1 Research Framework;

- **Business Models** - definitions, structure, taxonomies and conceptual framework
- **Business Schools** - the wider HE context, theoretical Business School business models
- **Performance** - as it might relate to Business Schools
- **Identify** potential gaps in the literature and where the research might be placed.

Business models

Introduction

Porter, in the context of a discussion of the Internet and strategy, suggests that, ‘The business model approach to management becomes an invitation for faulty thinking and self-delusion.’ and ‘The definition of a business model is murky at best.’ (Porter, 2001, p.73). Porter is not alone in the view that business models are generally loosely defined, poorly articulated or misunderstood. (Rappa, 1999), (Leahy 2003,), (Linder & Cantrell 2000), (Osterwalder & Pigneur, 2002). However Porter’s criticism appears to be more fundamental suggesting that business models are flawed as a tool in that they do not address the importance of industry structure. (Porter, 2001)

The questioning of the robustness of business models as a concept, particularly by someone as respected Porter requires, in the context of this research, a review of business model definitions and structures. This is necessary in order to determine whether or not the concept of business models has validity in this context and if it might be useful in gaining an understanding of Business School performance. I will attempt to show that, whilst there are many different definitions and usages of the term business model there is an underlying consistency and value in using the concept of business models and that it is useful as a lens through which to view Business Schools.

Searching through the literature on business models it became apparent that a significant proportion of more recent writings have focussed on e-business models, (Timmers, 1999), (Hawkins, 2001), (Osterwalder & Pigneur, 2002). For the purpose of this research I will be looking at both e-and more traditional business models together but will not be highlighting the differences between them generated solely by the e- aspects.

Business models can be thought of as structures made up of components sometimes explicitly brought together in a definition. The components that make up a business model vary between authors and will be discussed later in the review. In some cases the structure of a business model is not referred to in the definition but discussed separately.

Thus to make help sense of the writings on business models I have broken this part of the review into sections covering, business model definitions, components and taxonomies.

Definitions

This section will attempt to review the various definitions and determine how the term business model might be used for the purposes of this research project.

A relatively common style of definition is one which might be characterised as a ‘concise’ definition. This is a definition, which tries to capture the essence of a business model without going into the architectural or structural details that make it up. The author may later expand on the definition through examples, (Magretta, 2002) or develop the ideas of components or elements of a business model. As part of the process of determining the validity of the business model as useful concept in terms of this research, I will discuss the components of business models in more detail in the next section but use the term here to denote the building blocks, such as the value proposition, which together with the relationships between them, constitute a business model.

An alternative approach in style to the definition is the structural definition. Here the author refers explicitly in the definition to the components that make up its structure.

Concise definition

Magretta, (2002, p4), explains the essence of a business model as follows, ‘stories that explain how enterprises work.’ Whilst this is a neat and accessible definition it doesn’t of itself easily lead to further analysis of business models. Magretta goes on to develop the explanation of what a business model is by posing the questions a business model should enable organisations to answer, e.g. ‘What is the underlying economic logic that explains how we can deliver value to customers at an appropriate cost?’ (Magretta, 2002, p4).

Here the term economic logic implies a linkage to other elements and ‘appropriate cost’ the profit or sustainability referred other definitions noted below. A reference is made to value although the term value proposition is not used and later in the same article business models are described in terms of variations to the value chain. This reference

will be discussed in the business model structure section of the review. In terms of my research this high level view of business models as narrative, whilst interesting, particularly as a starting point does not readily lend itself to expression as a conceptual framework.

Linder & Cantrell (2000) define a business model as, ‘the organisation’s core logic for creating value.’ This is a succinct, even catchy, definition of a business model, which not surprisingly comes from the consultancy domain, The Accenture Institute for Strategic Change. Linder and Cantrell discuss business models in terms of component models, which they suggest are often referred to as business models but are in reality only parts of a business model. I shall return to the components making up some authors’ views of business models in a later section.

Rappa’s definition, ‘the method of doing business by which a company can sustain itself – that is generate revenue’ (2003, p.1), links back to Linder & Cantrell’s reference to value through, ‘sustain itself’ and ‘revenue’, whilst the, ‘method of doing business,’ supports Magretta’s idea of, ‘how the enterprise works’. Rappa then expands on his definition by suggesting how a business model describes the place occupied by the business in the value chain, again echoing Magretta, (2002).

Whilst these concise definitions are useful as a first step to understanding business models, in that they present an easily accessible starting point, they are almost inevitably limited in that they take a ‘black box’ approach revealing what business models do with little insight as to how. To be fair to the authors they do go on to expand their views of business models. Magretta, (2002) develops her stories theme introducing examples, Linder & Cantrell (2000) describe model components, which are discussed below, and Rappa (2001) goes straight into categorising business models.

The definitions in the second group incorporate business model structure into the definitions. This creates a fuller definition and begins to show how simplifying or modelling reality helps to explain that reality.

Definitions with structural and relationship references

In this section I shall look at those definitions that refer to the structure or elements of business models and the relations between those elements in order to build up an understanding of business models and how they might be applied in this research. As noted earlier I believe it is necessary to try and make sense of the diversity of definitions and usage of the term business model before using it as a key element in my research. This should help identify the themes within the definitions, aid in the choice of definition for use in my research and help develop a conceptual framework. It is important to look at the various ways in which business model components have been used to describe business models as the components will be used later to construct theoretical Business School models.

Table 1 is the starting point in an attempt to discover whether the variety of definitions and usage of the term business model can be made sense of in some kind of framework in order to be having confidence in the robustness of the concept as core element in viewing Business Schools. I have grouped the common terms used by the authors above in the construction of their definitions of a business model in table 1 under the following headings:

Internal operations / relations - These are the internal processes of the organisation.

External operations / relations - These are the relations with entities outside the firm such as suppliers, partners and customers.

Value / Utility - This can be seen as the net benefit to the participants in the transaction.

Product / Services - These terms are used to describe the organisation's offering to the market.

Table 1 Business model definitions

Author(s)	Business model components				
	Internal Ops/Relations	External Ops/Relations	Value / Utility	Profit / Revenue	Products / Services
Leahy, 2003	'internal operations'	'external partners'	Provide value		
Hawkins, 2001		Commercial relationship between a business enterprise and the product and services it provides in the market		'business becomes viable'	'Products and services it provides in the market'
Chesborough & Roesnbloom, ****	'underlying organisation of people and the operational infrastructure'	'distribution'	'create value'		Combination of product and services
Slywotsky (in Tapscot, 2001)	'configures its resources'	'outsource'	'creates utility'	'captures profit'	'offerings'
Rameirez & Wallin in Day, (2000)	'internal and external resources' 'relates with stakeholders'		'value creation'		
Mahadevan in Day, (2002)		'supply chain'	'value stream'	'revenue generation'	
Weill & Vitale, (2001)		'allies, and suppliers'	'benefit to participants'	'money'	'product'
Timmers, (1998)	'architecture for product/service flows'		'potential benefits'	'revenue'	'product/service'
Osterwalder & Pigneur, (2002)	'architecture of the firm'	'network of partners for creating, marketing and delivering'	'value'	'profitable and sustainable revenue streams'	
Amit & Zott, (2001)	'transaction content structure'		'value creation'	'exploitation of business opportunities'	

From the analysis there appears to be a consistency behind the various terms used to create definitions of business models. Most of the authors refer in some way to the internal and external activities and relations, and the creation of value leading to a notion of sustainability.

Whilst there is evidence of consistency in the definitions shown in the table 1 there are aspects of the definitions that were not readily captured within it. These aspects are explored below in order to try to understand if they represent a different and significant view of business models.

- Amit and Zott, (2001, p.511) view a business model as a, ‘unifying unit of analysis that captures the value creation arising from multiple sources. A business model depicts the design of transaction content, structure and governance so as to create value through the exploitation of business opportunities.’ The reference to a business model as a unit of analysis is interesting as it implies the notion of a business model not as a statement of what is but as a way of looking to see what is. This describes a potential way of using business models to look at Business Schools so that the logic or structure of the business model becomes a reference understanding the processes and relationships within the Business School.
- Timmers’ (1998), definition talks of, ‘architecture for the product/service/information flow’ along with, ‘actor benefits’ and ‘revenue sources’. This definition is worth commenting on because at the same time as expressing the idea of a structure business models it doesn’t prescribe the elements. In one sense this sits between concise and more structural definitions.

The two definitions with the least best fit, Amit & Zott, (2001) and Timmers, (1999) appear to act at a higher level of abstraction than that used by the other authors. They define the nature of the groups into which the components might fall rather than the components themselves. However in these views are references to process, benefits and value creation and thus I believe exhibit a common thread albeit viewed from a different perspective.

Given the various definitions of business models reviewing them has been useful in identifying common themes around processes, and value creation suggesting a consistency and possibly a validity that wasn’t apparent at first sight.

Beyond Business model definitions

Business model structures -components

In this section I will explore the notion of the components of business models, identified by the various authors, which underlie the various definitions and try to find an underlying consistency. The existence of common themes in the definitions of business models makes me hopeful that the various components of business models will also exhibit a similar consistency. This section of the review should inform the choice of business model or perhaps assist in the construction of a new model to be used in the research by highlighting those components that feature in a number of the model structures.

After comparing the various components in order to tease out a common theme a reasonable fit was achieved using Porter's value chain analysis as a grid to organise different structures put forward by the authors.

The purpose was not to achieve an exact match but to see if the various views of business model components were largely not exactly compatible. This consistency might then be seen as increasing their robustness. The exceptions, i.e. those components that did not fit would potentially be interesting to investigate precisely because they suggested alternative or missing views. Those that did fit would hopefully illustrate the use of the value chain as a way of looking at the wide variety of business model components. Obtaining a fit to such a well-recognised model as the value chain would also enhance confidence in the use of the business model as a tool in this research.

Porter's (1985) value chain analysis has been used to create the columns of table 2.

Primary activities

Inbound Logistics

- managing the inflow of inputs to the process

Operations

- transformation of inputs

Outbound Logistics	- managing the outflow of outputs of the process including order management
Marketing & Sales Service	- creating demand - after sales activity
Support Activities	
Procurement	- purchasing and related activity
Technology development	- process and product development
Human Resource Management	- recruitment, reward, retention
Firm's Infrastructure	- other management support services e.g. finance, corporate affairs

Table 2 – Business model structures

Author(s)	Value Chain									Other
	Primary activities					Support Activities				
	Inbound logistics	Operations	Outbound logistics	M&S	Service	Firm Infrastr'ure	HRM	Tech Dev.	Proc'ment	
Magretta, 2002	Making things			Selling things		Making and selling things				
Linder & Cantrell (2000)			Channel	Price & Revenue		Organisational form				Value proposition Internet enabled
	Commerce process & Channel									
Hawkins, 2001				Transaction mode direct & indirect		Revenue modes, procurement, retail, wholesale and broker				
	Revenue mode – procurement									
			Revenue mode – wholesale	Revenue mode – retail						
				Revenue mode – broker						
Chesborough & Roesnbloom, ****				Exchange mode						Value proposition Value network Competitive strategy
	Market segment									
Timmers 1998	Internal value chain, Cost structure / profit									Interaction,
	Value chain – deconstruction / reconstruction									
Osterwalder & Pigneur 2002	Infrastructure Management, Production Innovation – Capabilities, Financials									Value proposition, Partner network
				Customer relationship – channels Product Innovation – Target customer	Trust & loyalty	Information strategy				

In table 2, Business model structures, I have mapped the components of business models as described by the various authors to Porter's value chain analysis. The components of the various models appear to sit reasonably comfortably under the value chain headings. The value proposition and competitive strategy are more problematic but given the process orientation of the value chain this is not unexpected. It should be noted that a number of authors exclude the competitive dimension from business models.

One of Porter's criticisms of business models is the lack of a competitive context but in one sense the value proposition could be seen as this context in as much as the value proposition is the value of the offering in a customer's or the markets view in relation to similar or competing offers.¹

Magretta's, (2002), making something and selling something are expressed in terms of the value chain. She continues the theme of business models as stories describes the two parts of a business model in a narrative. This concise description of the elements or components of a business model is in tune with her earlier definition and perhaps because of its breadth fits in with value chain approach. The new business model is seen as a new story, 'a variation on old ones.' This is in sharp contrast to the proposition put forward by Hamell, (2000, p69) where, 'New business models are more than disruptive technologies, they are completely novel concepts.' This contrast in views echoes the more general comments around the loose use of the term business model

Linder and Cantrell (2000, p.1), begin with a concise definition of a business model, 'the organisation's core logic for creating value.' An organisation's business model is made up from the only those components that are needed to deliver the particular value proposition and thus the structure of different organisations' business models could be very different from each other not only in how a component is represented but also in the components used.

¹ Conversation with P. Bowker at Nottingham Business School Nov 2003

Table 3. Business model components

Business model Components	Examples
Pricing model	Cost plus, Cost per thousand
Revenue model	Advertising, Subscription, Fee for Service
Channel model	Bricks and Mortar, Clicks and Mortar, Direct to Customer
Commerce process model	Auction, Reverse Auction, Community
Internet –enabled commerce relationship	Market maker, Aggregator, Virtual supply alliance, Virtual Network
Organisational form	Stand-alone Business Unit, Integrated Internet Capability
Value Proposition	Less Value and Very Low Cost, More Value and at Same Cost, Much More Value at Greater Cost

(Linder and Cantrell, 2000, p.3)

The relevant components are not business models in themselves, although are often mistakenly referred to as such, and can be assembled into what Linder & Cantrell, (2000, p 2) refer to as, ‘Operating business models.’ The components in table 3 can be mapped in a large part to the value chain activities with overlaps between the components and activities. The channel and commerce process models appear to relate best to the all the primary activities whilst the revenue and price models have a closer fit to the marketing - creating demand activity. The Internet enabled commerce relationship sits outside the value chain as does the value proposition. Part of the reason is the emphasis in Linder & Cantrell (2002) on the e-commerce area, which tends to shift the emphasis away from discussing the model in value chain terms which largely reflect traditional companies. An interesting, and in this context relevant differentiation is made by Afuah, (2004) when he describes, value chains, value networks and value shops. He sees the value chain as a sequential addition of value in an essentially manufacturing situation. A value network occurs when mediating organisations create networks of contacts. Finally a value shop refers to situations where problems or issues are resolved by the application of processes but not in a necessarily linear fashion such as consultancies or the practice of medicine. A Business School model may appear superficially to be a production line with school leavers or mature students entering in year 1 and after a series of educational experiences

have acquired a certain level of knowledge, exit the degree factory, (university) with a suitable award in year 3 or 4.

A more sophisticated view might be to see the Business School as a value shop where the student presents to the Business School as a series of 'problems,' to which the appropriate educational processes are applied. In this review the adoption of the value chain as an aid to understanding the various ways in which business model components are expressed is consistent with the possible non-sequential nature of their application.

Hawkins, (2001, p.23) refers to the structure of a business model in terms of, 'three definitive modes of interaction.' These are transaction, revenue and exchange see table 4. At this level connections to the value chain approach are difficult to see. However if we use Hawkins' next more detailed level of description, sub mode, it is possible to map these descriptions on to the value chain activities and thus the underlying consistency is revealed.

1. The transaction mode defines the producer - user relationship and can be linked to the marketing and sales activities in the value chain.
2. The revenue mode is a very broad definition covering activities from make and sell to brokerage which spans the whole of the value chain.
3. The exchange mode or how items are priced appears to fall into the marketing and selling activities of the value chain.

Support activities are not explicitly included in Hawkins analysis and I have assumed they are implied in the revenue modes on the grounds that all operations require support activities of some sort.

Table 4 Business model structure		
Modes of Interaction	Sub mode	Definition of sub mode
Transaction Mode – relationship between producer and user	<ul style="list-style-type: none"> ○ Direct Transactions (Td) ○ Indirect Transactions (Ti) 	User gets product directly from producer User gets product from produce via intermediation
Revenue Mode – how revenue is generated from production and or distribution of goods and services	<ul style="list-style-type: none"> ○ Procurement Mode (P) ○ Retail Mode (P) ○ Wholesale Mode (W) ○ Broker Mode (B) 	<ul style="list-style-type: none"> ○ Make and sell ○ Buy and sell ○ Distribution ○ Facilitation
Exchange Mode	<ul style="list-style-type: none"> ○ Fixed price transactions (Fp) Negotiated price transactions (Np) 	<ul style="list-style-type: none"> ○ Outright sale ○ Subscription sale ○ Rent/Lease ○ Franchise ○ Instalment sales ○ Supplementary sale ○ Trading markets ○ Discount markets ○ Auction market

Adapted from Hawkins, (2000)

Chesbrough and Rosenbloom, (2003) were looking at business models from the perspective of technological innovation and table 5 below has been adapted to give a more generic view.

Function	Description
Value proposition	The value created for users
Market segment	Users for whom the value is created
Internal Value Chain	Value chain within the firm required to create and distribute the offering
Cost structure and profit potential	Determine the cost structure and profit potential given the value proposition and internal value chain
Value network	Identify the position of the firm within the value network linking suppliers and customers, complementors and competitors
Competitive strategy	How to gain and hold competitive advantage

(Adapted from Chesbrough and Rosenbloom, 2003)

Chesbrough & Rosenbloom,(2003, p7) refer to, ‘The functions of a business model..’ rather than elements or components. However it is still possible to map some of the functions to the value chain if we treat them as activities.

Chesbrough & Rosenbloom refer to the value proposition, value network and competitive strategy each of which fall outside the scope of the value chain. The value chain describes the activities that create value whilst the value proposition describes what the value is that has been created and competitive strategy is concerned with selection of those activities with the potential to create and maintain competitive advantage. The inclusion of competitive strategy in the definition of a business model illustrates a different use of the term business model and source of confusion as described earlier. The value network appears to sit outside the traditional value chain as it is concerned with positioning relative to others rather than activities undertaken. The market segment could if generously interpreted be included under the marketing and selling activities whilst the reference to the internal value chain appears to be simply another way of referring to the value chain. The cost and profit structure can be seen to be represented in the elements of the value chain in that the activities incur costs and the combination of activities generate profits or losses.

Timmers, (1998) is cited a number of times in papers and books forming part of this literature review. (Weill and Vitale, 2001), (Hawkins,2001), (Amit and Zott, 2001), (Day, 2002), (Osterwalder and Pigneur, 2002) and his deconstruction and reconstruction of business models has been influential in terms of e-business models. As noted previously I will be looking at business models and e- business models from the position of business models rather than the impact of any special e based attributes.

Timmers, (1998) limits the definition of a business model by excluding elements such as competitive advantage, market positioning and mix, and product – market strategy, grouping these into a marketing model. Part of a marketing model is what he terms a business model. The structure of a business model described by Timmers (1998) is shown below in table 6.

Table 6 Business model structure

Business model Elements	Sub Elements
Value Chain Deconstruction	Value Chain Elements <ul style="list-style-type: none"> ○ Inbound logistics, Operations, Marketing & Sales, Service ○ Technology development, Procurement, HRM, Corporate infrastructure
Interaction patterns	<ul style="list-style-type: none"> ○ 1-to-1 * ○ 1 –to many** ○ many – to – 1
Value Chain Reconstruction	<ul style="list-style-type: none"> ○ integration of information processing across a number of steps in the value chain ○ combinations of the value chain elements

* this refers to the number of parties involve in the interaction

** many means that the information from a number of players is combined

Timmers (1998)

In table 6 we can see Timmers has used the value chain as a starting point highlighting the value chain concept as once again at the core of business models. He breaks down the value chain into its elements and recombines it in a number of ways using the interaction patterns or relationships. By deconstructing and reconstructing the value chain, a number

of theoretical combinations and hence business models are possible and these will be covered in the business model taxonomies later in the review. This process does not refer to the economic viability of any given business model which is quite different from all the other models I have looked at, where the notion of sustainability is often a key element. This again illustrates the variety of ways the term business model is used.

The idea of the deconstruction and reconstruction of business models is picked up later by Weill and Vitale (2001), when they discuss 'atomic e-business models' which they see as 'business models' that can be combined to generate 'e-business initiatives' (Weill & Vitale, 2001, p21).

The inclusion of interaction patterns 1 to 1 and 1 to many, allows the creation of business models to cover the spectrum of e-shop, e-auction and e-malls and more generally could be seen as part of the marketing and selling activities within the value chain.

Osterwalder and Pigneur (2002) agreed with Linder (Linder et al., 2001) that the term business model was poorly articulated and often the components of business models were referred to as business models.

Osterwalder and Pigneur (2002, p.4) identify three elements to a business model

1. 'revenue and product aspects'
2. 'business actor and network aspects'
3. 'marketing specific aspects'

but perhaps more useful here is the analysis of their definition of a business model in terms of, 'four pillars' (Osterwalder and Pigneur, 2002, p1).

Table 7 Business models Four pillars

Pillars- Elements	Sub Elements
Product innovation	<ul style="list-style-type: none"> ○ Value proposition ○ Target customer segment ○ Capabilities
Customer Relationship	<ul style="list-style-type: none"> ○ Information strategy ○ Feel and Serve – Channels ○ Trust and Loyalty
Infrastructure Management	<ul style="list-style-type: none"> ○ Activity/Value configuration ○ Partner network ○ Resources
Financials	<ul style="list-style-type: none"> ○ Revenue model ○ Cost structure ○ Profit/Loss

(adapted from Osterwalder and Pigneur, 2002)

The sub elements shown in table 7 can be mapped to the value chain analysis in table 2. Again, the reason being to confirm the value chain as the underlying theoretical base of business models.

Under product innovation capabilities and target customer fit across the value chain in the marketing and selling columns respectively with capabilities reflecting the activities required to create the offering and bring it to market.

Customer relationship map to under marketing and selling and service.

Infrastructure management consists of the

- activity framework - which reflects the value chain activities
- resources - for the creation of value and
- the partner network - reflecting activity outside the firm which sits outside the value chain.

Financials represent the financial flows arising from the value chain.

Having successfully mapped the structure of a number of business models to a value chain analysis in order to test the consistency of the business model concept it appears that a business model approach can be supported as a means of looking at Business School performance.

Business model Taxonomies

A number of the studies in the literature noted above have attempted to classify the different types of business model. (Timers, 1998), (Rappa, 2003), (Linder & Cantrell), (Weill & Vitalle, 2001).

Whilst each taxonomy is the author's particular view of a categorisation I would like to try and bring these distinct views together in some way. The reason for this is that later in my research I will be creating a number of theoretical business models which I will then test against the models that members of Business Schools say, imply or believe they are using. Thus an understanding of the ways in which authors have grouped or classified models will help inform the generation of these possible business models. If the taxonomies can be clustered around the value chain and its non-sequential derivatives, the value shop and network, this should support the validity of the business model as more consistent expression of the value chain instead of a loosely applied term with little value.

The value chain as described in Porter, (1985) as a series of primary and support activities has been developed to encompass value creation in non linear and network environments. (Stabell & Fjeldstad, 1998), (Fjeldstad & Hannoes, 2001). The Porter model may be looked on as applicable to the more traditional manufacturing situations where value is created through a series of sequential steps. Raw materials are usually input and product is usually the output.

The value shop has a similar structure in the sense of a series of activities but these are not necessarily applied sequentially. Here problems are the starting point and knowledge is brought to bear to generate solutions.

The value network refers to examples where value is created primarily through mediation.

There is some irony in the fact that given Porter’s scepticism about the value of business models, his value chain analysis, albeit enhanced by the value shop and network, is key to making sense of the various approaches to business models.²

Table 8 Business model Taxonomy Summary

Author	Value Chain	Value Shop	Value Network
Timmers, 1998	e-shop, e-procurement,		e-auction, e-mall, 3 rd party marketplace, virtual community, information brokers
	value chain service provider, value chain integrator		
Rappa, 2003	advertising, merchant, manufacturer, subscription, utility		brokerage, affiliate, community
	infomediary		infomediary
Manyworlds, ****	product innovator		relationship owner, value network architect,
Linder & Cantrell, 2000	produce-sell, channel		intermediary
Weill & Vitale, 2001	direct to customer, content provider		intermediary, value network integrator, virtual community
	full service provider		

Applying the definitions of value chain, shop and network to the various taxonomies, table 8, for the reasons noted above, some fell easily into one of the categories, whilst some spanned more than one. Timmers, (1998) e-shops and procurement can be seen as activities within the value chain whilst e-auction e-malls, 3rd party marketplace, virtual communities and information brokers are essentially mediators and fit into the value network category.

² Conversation with P Bowker 26th November 2003

Value chain service providers and integrators span value chain and shop because the sequential nature of the value chain is not explicit in the author's writings reviewed in this research.

In Rappa (2003), brokerage is clearly a mediating function and sits under the value network. Within infomediary, which refers to organisations which collect information about potential customers, is the metamediary which aids exchange through the supply of information. Other aspects of infomediary such as incentive marketing or loyalty programmes are elements of the value chain activities, hence infomediary falls into value network as well as value chain. The affiliate model where an internet site acts as a link to other sites could be seen to be delivering a mediation service. Community models tend to reflect a common interest hence their inclusion in the value network. Advertising, merchant, manufacturer, subscription, utility models although used by Rappa as e-models, can be viewed as more traditional value chain models transferred to an e-mode.

The Manyworlds' taxonomy is a little different from the other examples, in that it describes types of business models at a higher level of abstraction than the other authors included in the review. The Product Innovator (Manyworlds, 2003) where product includes service, reflect models with a new idea or better process and sit within the value chain or value shop. Many product innovators eventually move from this position to value network architects, where they dictate the ways in which the area of activity they are engaged in is conducted. Others move to relationship owner model whereby they become the point at which the customer engages with the area of activity. An example of a product innovator moving to value network is WalMart which offered low prices made possible by superior process efficiency. This success then enabled Walmart to change the relationships within the network previously dominated by the manufacturers.

Linder and Cantrell, (2000), approach the classification of business models by looking at the central profit generating activity in combination with the relative position on the price/value spectrum.

The core activity can be seen as one of three types:

- Sales Product/Service
- Channel offerings whereby it enhances, complements the offering of another provide
- Intermediary facilitating buyer seller transactions

The price/value spectrum ranges from high price and high value innovations to low priced standard offerings. To match this approach to the value chain, shop and network view produce and sell could appear in either the traditional value chain or value shop. The intermediary offering would appear to sit within the value network. Channel offerings complementing other providers could be any one of the value chain, shop or network.

Weill & Vitale (2001) describe eight models, which can be combined in a variety of ways to create new e-business models and analyse potential business models.

They refer to these models as, 'atomic e-business models' (Weill & Vitale, 2001, p21) which appear to fall between the component and the definitions of business model used elsewhere. Although these are not full business models it is possible to categorise them in terms of the value chain, shop and network. The direct to customer and content provider models appear to be a product or service provider model and could sit in either the value chain or value shop. Intermediary, shared infrastructure, value net integrator and virtual community are all mediation models and fall under the value network category.

More problematic are the full service provider and whole of enterprise models. The full service provider provides, as the name implies, all the services a particular customer might need in a particular market e.g. financial services, a sort on one stop shop. This particular sub model has elements of network, product and service provision. The whole of enterprise model reflects an internal network such that a diverse commercial group or public body presents a single face to the outside world. In web terms this could be having a single corporate web page as well as individual organizational units retaining their own web page. As such there are elements of network but on balance it is mainly an internal support activity and thus sits within the value chain category.

Hawkins' approach to the types of business model is different from the previous ones discussed, in that there is not a list of models, with names and descriptions reflecting actual or possible business model configurations. Other authors have identified components and then assembled business models from them. Hawkins identifies the components but does not use them to generate a sequential transaction model instead he presents the modules in a simple framework which can be used to analyse particular business models.

Having looked at the various taxonomies of business models and mapped them against a value chain, shop and network template I now have a clearer view of some of the different types of business models and how whilst they have different origins the value chain, shop and network can act as an overarching framework. The process of starting from a variety of business model definitions, components and taxonomies, loosely used, sometimes criticized and seeing them as largely consistent within a value chain, shop and network framework gives me confidence in using the business model at the core an approach to explore Business School performance.

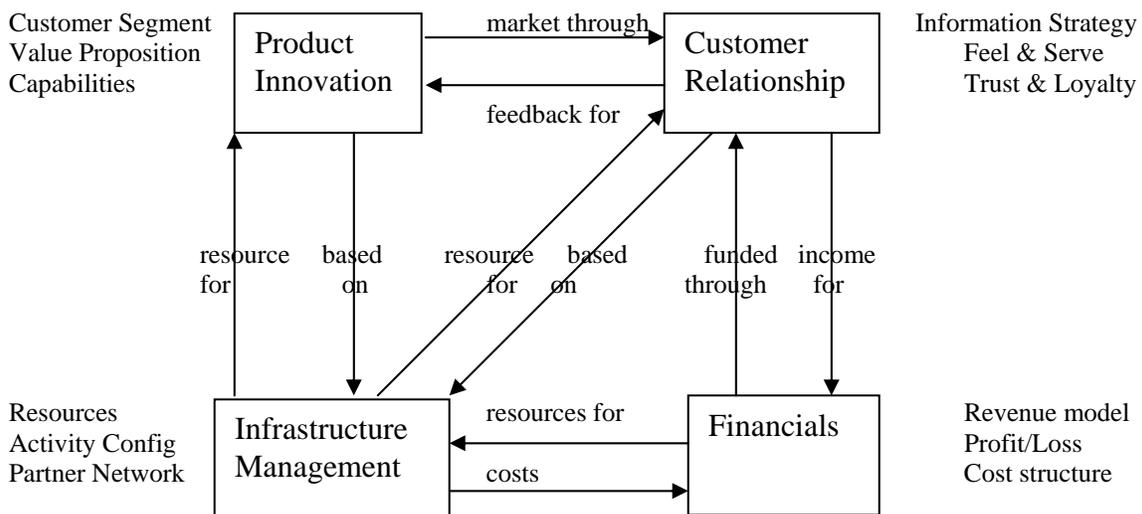
To round off this review of the literature around business models I will look at some conceptual frameworks that may aid my research.

Business models - Conceptual Frameworks

A number of authors have described their view of a business model in terms of conceptual frameworks. I shall discuss two of these frameworks in order to inform the creation of a new framework or the selection of an existing framework that I will then use in the later stages of this research.

The framework developed by Osterwalder & Pigneur (2002) shows the components or elements of a business model and their relationship to each other. Whilst this framework refers to an e-business model it can be used more generally and include non e models.

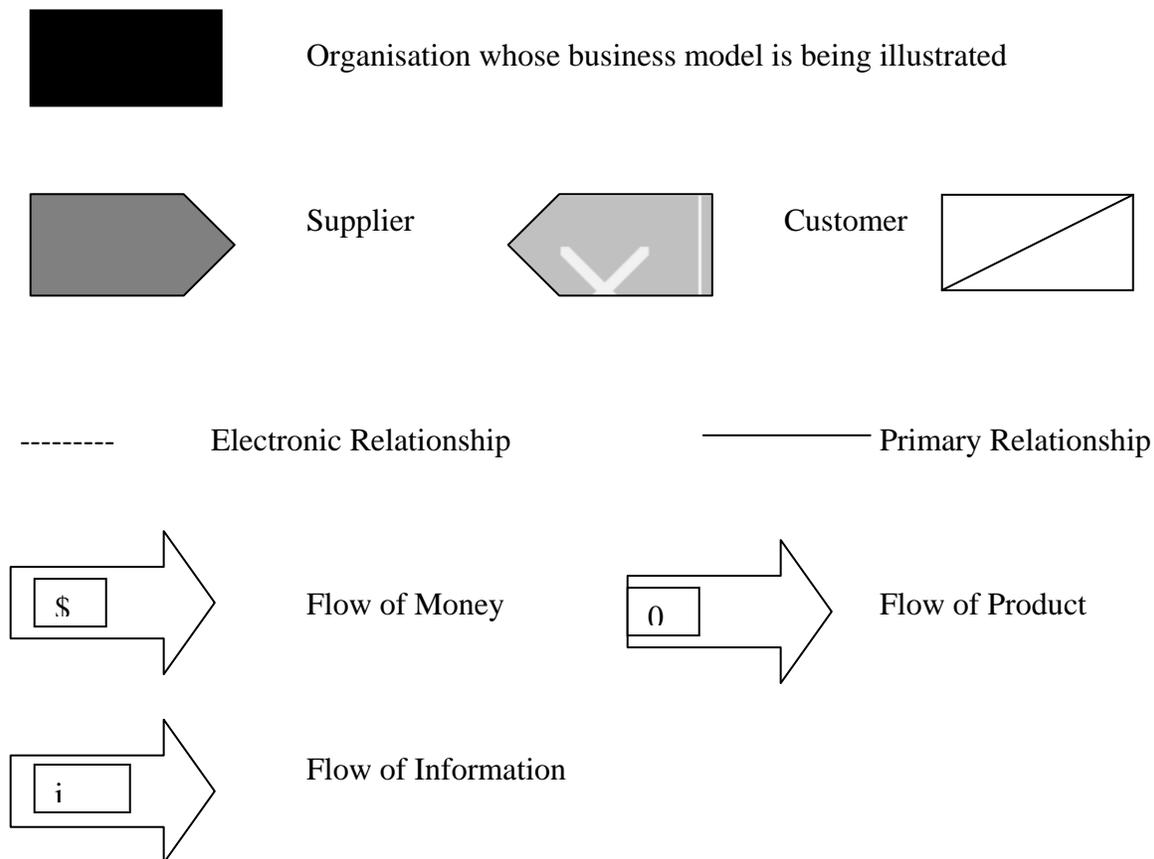
Figure 2 The e-business model Ontology Osterwalder & Pigneur (2002)



This framework captures the main business model elements and relationships and can be used to decompose current models. Osterwalder and Pigneur illustrate this by mapping their framework onto the Easyjet business model. This is useful as a variation of this approach would be to take a number of general models of Business Schools and express them in terms of the Osterwalder & Pigneur framework.

As noted earlier, Weill and Vitale, (2001) developed a series of schematics, called e-atomic business model to describe and analyse business models. These schematics can be used to build business models either as single atomic e-models or as combinations of all or parts of the atomic e-models. These could also be used to express different types of business models that Business Schools might use.

Legend for E-business model Schematics Weill & Vitale (2001)



The schematic is useful as a means of representing e-business models but in principle need not be limited to e-business models. Whilst both frameworks allow the construction of theoretical business models, I find the Osterwalder and Pigneur framework more intuitively appealing and complete. The Weill & Vitale structure is useful in the new models can be easily constructed and will be using it in my research.

Business Schools and the HE context

In this section I will look at;

- The current HE background in the UK
- What is the role of a Business School and is/are it/they being achieved?
- What is the future of Business Schools?
- How Business Schools might usefully be mapped onto or viewed in terms of a business models discussed earlier.

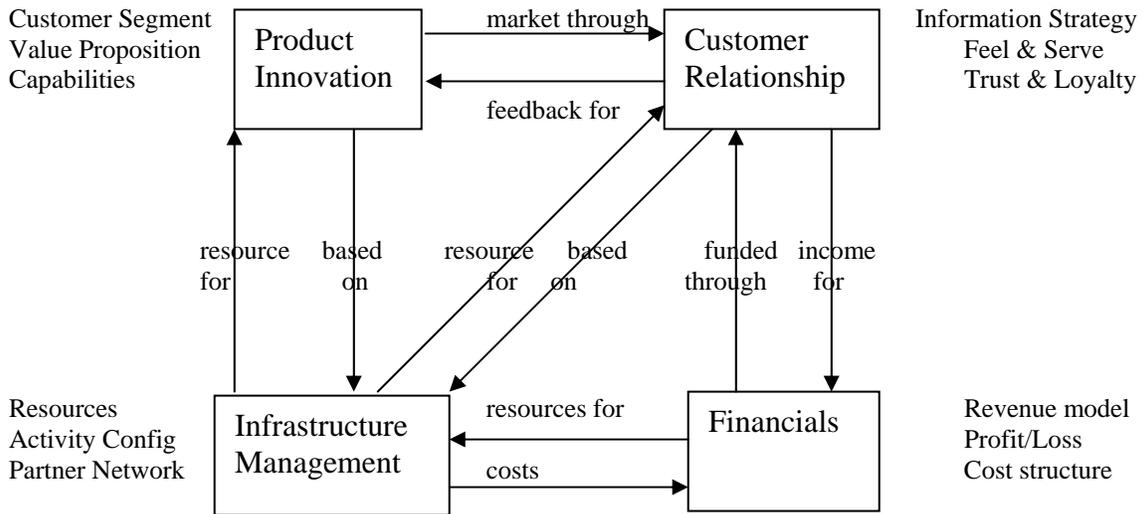
H E Background

The purpose of looking at the background to HE in the UK is to put the issues facing Business Schools into some context; that is, to outline this context in order to later place Business Schools in their marketplace and explore their relationships with their funders, competitors, suppliers, partners and customers.

One of the most significant changes, if not the most significant change, to have occurred in HE over the last 30 years has been the expansion of HE and the subsequent decrease in the level funding per student. According to the Dearing Report (1997) in the 20 years preceding the publication of the report, the number of students had doubled, public funding of HE in real terms had increased by 45%, funding per student had fallen by 40% and public spending on HE as a proportion of GDP had remained the same.

Some of the consequences of this expansion have been the introduction of tuition fees, the introduction of student loans in place of grants, the increase in the proportion of students working in term time, the increase in Business Schools' diversification of revenue streams beyond government funds. The expansion of student numbers will of itself change the student experience and the relationships between the students and faculty.

If we take these changes and review them in light of Osterwalder & Pigneur's (2002), framework



Osterwalder & Pigneur (2002)

we can see how the existence of radical change could make a business model a useful tool for Business Schools.

Product Innovation

Customer Segment expansion means that no longer is HE the province of the educational elite. Business Schools are now facing a broader market. Additionally as Business Schools develop non-governmental sources of funding they inevitably enter new markets.

Value Proposition with only 10% of 18 year olds in HE employability was a given and not an overt element of the value proposition. With 30%+ of 18year olds in HE and graduate unemployment a reality, employability becomes an overt element of the value proposition for many students.

Capabilities Pre expansion staff were dealing with fewer more able students within a relatively narrow ability range. Post expansion staff are now dealing with larger numbers and a larger range of abilities.

Customer relationship

Information

strategy with larger student numbers and the development of life long learning the ability to analyse applications, track students and maintain contact with alumni has become more important in maintaining and developing revenue streams.

Feel & Serve even though the expansion of student numbers has been dramatic HE environment is very competitive and students are offered different ways of accessing HE; fulltime study, part-time on site, in-company, distance learning.

Trust & Loyalty in an HE context this may be seen as reputation.

Infrastructure Management

Resources HE are similar to the resources required in other service knowledge based activities such as staff, estate, IT infrastructure and library.

Activity

Configuration this is the value chain, shop, network structure the application of which will form part of this research.

Partner network this is the sharing of activities which create value. In the HE context this is reflected in progression agreements such as top up awards, franchise and validation arrangements.

Financials

Revenue model HE has a number of revenue streams potentially available to it; government funds, open postgraduate full cost provision, in-company provision, training and consultancy, research funding both government, quasi government and private

Cost model this measures the costs incurred as a result of the other element of the framework.

Profit model revenue model less cost model

Having populated the framework with a likely HE scenario and found that the structure can accommodate the general it seems possible that the framework will be useful in understanding Business Schools

The role and purpose of Business Schools

In this section I will look at the purpose of Business Schools as a way of beginning to think about how Business School success may be defined and ultimately measured.

Business Schools are generally accepted to have started in the USA with the establishment of Wharton School at the University of Pennsylvania in 1881 (Crainer & Dearlove, 1999). In 1959 two significant reports were published Higher Education for Business, (Gordon & Howell, 1959) and The Education of American Businessmen (Pierson, 1959), in which Business Schools were criticised for the lack of academic rigour and an insufficient proportion of their staff held doctoral level qualifications. Business Schools were not attracting the most able students and were not creating new knowledge as would be expected in a more standard academic discipline. This led to a review by the AACSB, which developed and introduced a system of accreditation designed to overcome these criticisms.

In the mid 1980's following criticism suggesting that Business Schools were now too academic and not meeting the requirements of business, the ACCSD commissioned a report by Porter & McKibbin (1988). The report confirmed this criticism and led to the ACCSB redefining its accreditation approach. Essentially the ACCSB redeveloped its accreditation around the goals and mission of the Business Schools, (Cotton et.al, 2001). This swing from, professional to academic to professional, reflects a fundamental tension within Business Schools, ' a constant tension between rigor and relevance' (Crainer & Dearlove, 1999 p 47). This tension is particularly relevant in this review as it goes to the heart of what a Business School's product is and who its customers are. These will not be the same for all Business Schools at all times but it is difficult to envisage a Business School developing or using a business model without resolving this issue.

At this point it is useful to look at what Business Schools 'do.'

'A key function of a university Business School is the creation, and dissemination of knowledge through publication and teaching.' (Starkey and Madan, 2001)

The majority of UK Business School activity is the provision of delivering first and postgraduate degree programs. HESA reported that Business and Administration was the

single largest grouping with over 227,000 students with 12.2% of the combined undergraduate and postgraduate numbers for 99/00. (CEML, 2001 *119*)

A second part to the provision offered by Business Schools is that of Management Development including Executive Education. The client here is usually a company with the products tailored to meet the clients' needs whilst maintaining the academic requirements of the relevant award. This is a highly competitive market and there is a wide range in the level of engagement with these activities. (Prince, ****).

Research and Knowledge Transfer make up the final segment of Business School activity. (CEMEL, 2001 *119*)

Each of these activities should support the others creating a virtuous circle. New knowledge or practices created from research or experienced through contact with corporate clients should influence the design, content and delivery of undergraduate, postgraduate and corporate programmes. Postgraduate students may highlight possible areas of applied research, which could then be followed up within the Business School. As noted earlier there is a fundamental issue for Business Schools around rigor or relevance. Starkey and Madan, (2001) suggest that there is a relevance gap in management research but also conclude that to bring about any change will require movement from the current positions of both the academic and business worlds. This analysis concentrates on the relevance gap in research but given the interlinking nature of the activities of a Business School could we not anticipate that if the core idea generator, research, is asking the less relevant questions then the teaching may not be as well informed as it could be. If we take a business model view of the Business School, it may be possible to see the Business School in a more holistic way and see where the connections are and where the weaknesses in the connections are.

Business Models and Business Schools

A significant amount of the discussion around business models has taken place about e-business. (Timmers, 1998), (Osterwald & Pigneur, 2001), (Hawkins, 2001). Some of the discussion of the future of Business Schools has strong e aspects to it such as distance and asynchronous learning and this point of convergence is an interesting place to begin to look at business models for Business Schools.

One area where new entrants and possibly new business models are being applied in HE is through Distance and Virtual learning. Distance learning is by no means new and students have been studying what were referred to as correspondence courses for a number of decades. The arrival of the internet and its rapid adoption has been a significant enabling factor for the delivery of learning electronically at a distance or virtually. The market in the US for HE has been estimated at \$225 billion per annum with significant growth anticipated in both traditional academic and the corporate education markets. (Oblinger and Kidwell, 2000) This has attracted significant investment from venture capitalists as shown in table 10 below.

Table 10 Investors in electronic learning

Company	Financial Sponsor
Blackboard.com	Carlyle Group
WebCT	CMG @Ventures, BaneBoston Capital Inc. Kestral Venture Management
Learning Ventures	Cherry Tree
Varsity Books.com	FBR Tech Venture Partners, Mayfield Fund
eCollege.com	Pritzker Family
OnlineLearning.net	St. Paul Ventures
Academic Systems	Kleiner Perkins
click2learn.com	Vulcan Learning systems
University Access	Franklin Street/Fairview Capital, Rockefeller & Co
Pensare	GE Capital, Battery Ventures

(Oblinger and Kidwell, 2000)

The large potential revenue streams associated with distance learning has led in part to the discussion of business models in education becoming almost a shorthand for e-learning derivatives limiting the discussion of business models to one area.

In terms of the model(s) adopted for distance learning, we can go back to Osterwald and Pigneur (2001) and see that an element in their conceptual model was partner network.

It is possible to model some different types of partnership options between an academic institution and a for-profit provider.

Table 11 Partnership Models

Function	Technology	Admin Services	Promotion & Mktng	Content Develop't	Instruction	Award	Quality Control
Model 1							
Academic Partner	x	XX	XX	XX	XX	XX	XX
For profit Partner	XX	x					
Model 2							
Academic Partner		x	X	XX	XX	XX	XX
For profit Partner	XX	XX	X	x			
Model 3							
Academic Partner		x	x	X	XX	XX	X
For profit Partner	XX	XX	XX	X	x	X	X
Model 4							
Academic Partner				X	X		
For profit Partner	XX	XX	XX	X	X	XX	XX

(adapted from Baer, 2000)

Notes: **x** – secondary responsibility
 X - shared responsibility
 XX - primary responsibility

Model 1 – For Profit Partner as a traditional technology vendor. Examples of this are WebCT and eCollege.com

Model 2 – For Profit Partner provides technology, admin services and marketing. Here the For Profit Partner may handle student registration, tracking, fee collection and promotion. Examples of this are Online Learning.net

Model 3 - For Profit Partner provides technology, admin services, marketing and shares content development. This model is less common at the present but the co-production by Duke University and Pensare is an example.

Model 4 – For Profit Partner supplies all elements with some academic contributions. An example of this model is Unext.com's, Cardean collaboration with Columbia, Stanford, Carnegie Mellon universities and LSE.

The collaboration with for-profit partners as shown in table 11 can also have the interesting impact on unbundling the educational model. With one or more partners, the traditional aspects of HE can be shared amongst the partners, (Baer, 2000). It is interesting to note that unbundling was as a characteristic of a business model, (Hamel, 2000), (Weil & Vitale, 2001).

Oblinger & Kidwell, (2000), take the disaggregation and re-model a stage further. The adoption of the value chain, again linking back to a business model, allows the education process to be described as follows:

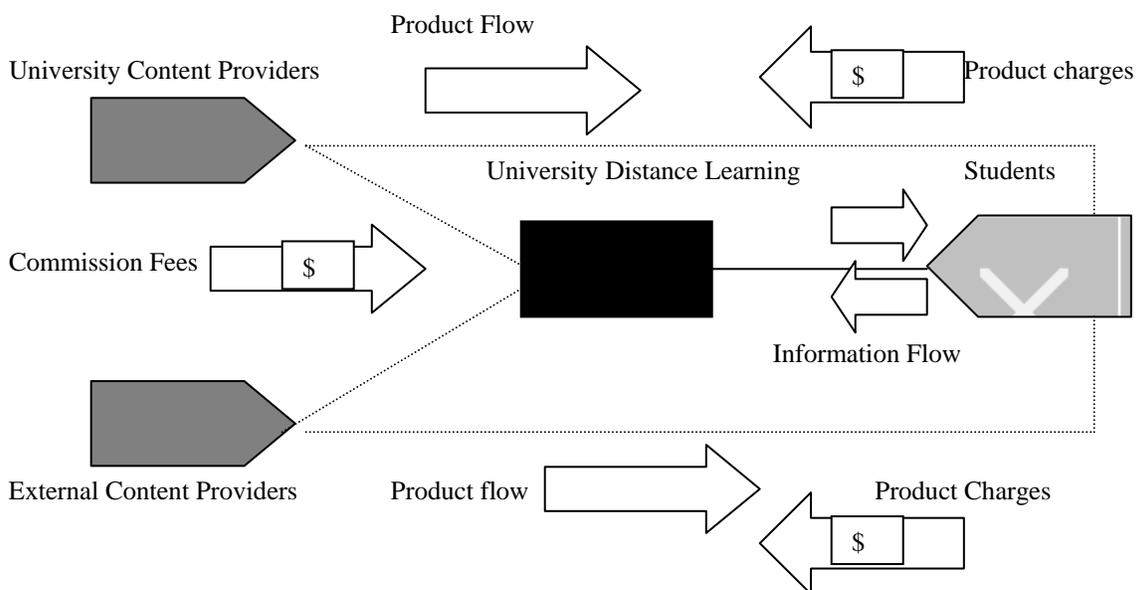
Curriculum development >> Content development >> Learner acquisition and support >> Learning delivery >> Assessment and advising >> Articulation >> Credentialing.

From here Oblinger & Kidwell, (2000), put forward three hypothetical models created by combining some of the elements noted above. This has a resonance with Weill and

Vitale's (2001), schematics of combinations of atomic business models and Timmers' (1999) deconstruction / reconstruction approach.

Model 1 Broker – the university creates an entity to act as the distance learning access point for students linking them to other functions within the university and external providers.

Adapted from Weill & Vitale's schematic for business models



Model 2 – Virtual Campus

The Virtual Campus could be likened to a full service provider in terms of what was required to achieve a given award. The structure is seen as a small core of faculty, with sub contract staff for content development and delivery. Third party delivery software could be purchased. The Virtual Campus would be a focalpoint for students, it may issues awards or credits which could be combined with credits earned elsewhere.

Model 3 – University .com

This model is seen as providing high quality online delivery aimed at the corporate market. The emphasis would be on competency based certificates rather than degrees.

The models are not intended to be exhaustive but to illustrate some of the possible configurations that could be constructed from the elements identified. The approach taken by Oblinger & Kidwell, (2000) is informative but a more structured and rigorous approach to the use of business models would have improved the analysis.

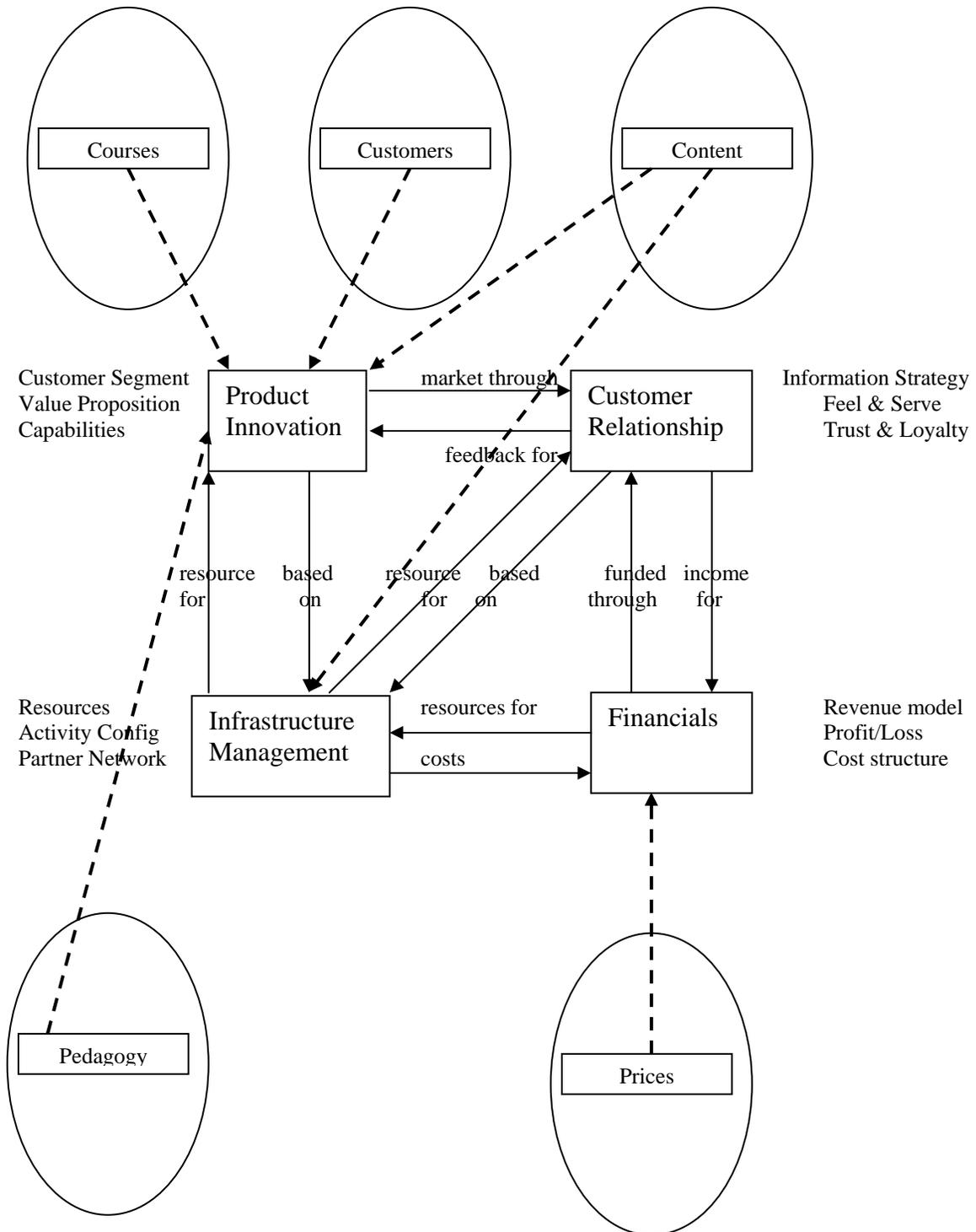
Having identified HE as a large, growing and potentially profitable market, it would be interesting to review the models that might be adopted by corporations as they develop their presence in the HE sector.

Collis, (****) reviews the strategies of new entrants and uses this to identify the likely impact on existing HE institutions' business models. He analyses the impact on universities of the potential new entrants to the higher education market. It is worth noting that Collis uses the term strategies of the new entrants and business model of the existing players. Are the terms strategies and business models being used interchangeably? The approach taken by Collis, (****), is to identify five entry strategies employed by the new entrants. These are:

- Courses offered
- Customer groups targeted
- Content source
- Pedagogy used
- Pricing

Taking Osterwalder & Pigneur's conceptual framework (2001) and trying to map Collis's strategy analysis onto it is shown in figure 3. The purpose of this exercise is to explore how using a more rigorous framework such as Osterwalder & Pigneur's could expose gaps or weaknesses in a more narrative based analysis as well as testing the framework against a different model.

Figure 3 Mapping Collis's framework onto Osterwalder and Pigneur



- **Courses** – these have been found to be largely business related and on the framework map to Customer Segment.
- **Customers** – given the courses offered the customers are corporates and map to the Customer Segment
- **Content** – this is how the new entrants create the content;
 - Write their own product
 - License courses from other providers
 - Commission content from knowledgeable individuals.

This element appears to map most closely to Resources, but the management of the process could be seen as a Capability in Product Innovation.

- **Pedagogy** – teaching in terms of adopting an asynchronous, on-line approach could map to Customer Relationship as part the delivery channel and Infrastructure Management in terms of Resources.
- **Prices** – probably the most unambiguous mapping to Financials. The cost model is potentially low with a high front-end but low marginal costs.

Mapping the narrative of Collis, (****), to the Osterwader & Pigneur, (2001) framework is useful as it allows us to compare two approaches. Osterwalder & Pigneur present a more complete picture illustrated by the concentration of the Collis model on the Customer Segment part of their framework. The framework almost forces a completeness to models drawn from it and thus I believe it will be useful in this research.

It is worth noting Collis's conclusions. The first is that the non-traditional providers will attack the lucrative postgraduate business education market first thus delaying the impact on the broader HE market. Secondly by the time the non-traditional providers turn their attention to the other segments of the HE market they will have become so well establish that they will be unstoppable. Thus the existing providers need to act quickly even though the current threat is only to part of their market.

The Corporate University a new business model?

A significant development in the way in which HE is 'delivered' to the corporate sector is what is referred to as the Corporate University.

The history of corporate work related programmes can be traced to 19th century (Eurich, 1985) which can be characterised as an alternative to the state provision. This is contrast to the late 20th century models, which built on or reinforced the state offerings. The third phase can be seen as exposing employees to and instilling in them the corporation's culture. The current phase can be seen as organisations perceiving learning and knowledge management as sources of competitive advantages. (Taylor & Paton, 2002)

The traditional way that corporations purchased HE was to send selected staff to a place of learning, the Business School, where they were taught current theory using a variety of techniques including case study and developed analytical skills. The staff returned to the organisation and applied the knowledge they had acquired (Sandelands, 1998). This is a relatively expensive model with a significant cost being the absence of staff from the workplace.

The corporate university model takes the faculty to the workplace, addresses current issues in the workplace whilst maintaining academic rigor. The programmes are more tailored to the achievement of the corporation's goals. Learning becomes just in time rather than just in case.

In what way could the corporate university be described as a new business model? Using Osterwalder and Pigneur's framework we could try to identify the different business models that Business Schools might employ and include in this analysis a corporate university business model.

Theoretical business models for Business Schools

Having reviewed some of the literature around business models and Business Schools it is apparent that there has been little research combining business models and Business Schools. Collis, (****) has written specifically about business models and higher

education and a number of reports have looked at higher education's role in society but not explicitly at the business models used, implied or possibly required.

This section will consist of taking the business model conceptual framework put forward by Osterwalder & Pigneur, (2002) and developing a number of theoretical Business School business models. These models will then form the basis of the next stages of the research. The characteristics of the theoretical models proposed will be mapped against the characteristics of the models that emerge from interviews with the faculty of a number of Business Schools. Thus the framework will act as a guide to the structure of the interviews and as a way of bringing together the information held within the interview notes. The approach taken was to flatten out Osteralder and Pigneur's model into a tabular representation and exclude the relationships between each segment. Several types of Business School were mapped against the model segments.

The process was in part iterative, in that the model segments particularly the Target Customer segment aided the initial identification of the various theoretical models.

The table shows that there are key elements that reflect an underlying difference between the models and some common elements.

Table 9 Theoretical Business School business models						
Business model Element	Business model sub-element	Business model				
		Traditional B1	Modern Aspiring – B2	Modern Access - B3	Postgraduate B4	Private B5
Product Innovation – all things relating to the offering	Target Customer Segment Where the organisation competes	Small undergraduate. Large FT/PT postgraduate and international students. Exec education Active blue-sky research.	Large undergraduate. Some FT/PT postgraduate. Some Exec education. Extensive commercial training and some consultancy.	Large undergraduate Some PT postgraduate. Some commercial training	FT /PT postgraduate Corporate education inc Exec education. Consultancy.	Small FT undergraduate. Small FT/PT. Exec education.
	Value Proposition Value offered to market segment	High quality / reputation. Exclusive. Research led and informed learning. High reputation award.	Relevant learning Good reputation. Employment focused.	Access to HE otherwise not available.	High quality. High reputation relevant learning	High quality / reputation. Exclusive.
	Capabilities use of assets / resources	UG- low contact intensity, high independent student learning PG-some stars. High research outputs	UG high contact less independent learning. PG few stars. Develop applied research, generate commercial activity	UG high contact less independent learning. PG no stars	FT PG some stars independent learning	UG- low contact intensity, high independent student learning PG-some stars.
Infrastructure Management	Resources	Strong research led faculty, library, campus buildings.	Faculty, library, campus buildings.	Faculty, library, campus buildings,	Faculty, library, campus buildings	Faculty, e-access, modern campus

Table 9 Theoretical Business School business models						
Business model Element	Business model sub-element	Business model				
		Traditional B1	Modern Aspiring – B2	Modern Access - B3	Postgraduate B4	Private B5
	Activity Configuration Internal and external processes	Student recruitment & management. Teaching, learning research feedback. Internal & external research. Alumni management	Student recruitment & management. Teaching, learning research feedback. More external than internal. Alumni management	Student recruitment & management. Teaching, learning, research feedback. Largely internal. Alumni management	Student recruitment & management. Teaching, learning research feedback. Internal & external research. Alumni management	Student recruitment & management. Teaching, learning research feedback. Internal & external research. Alumni management
	Partner Network	Significant international, national, regional institutions. Govt bodies. Corporates.	Some international, national, regional institutions and govt bodies. Some corporates	Small number of international & national mainly linked to regional institutions and govt bodies. Regional corporates	Significant international, national, regional institutions. Govt bodies. Corporates.	Significant international, national, regional institutions. Govt bodies. Corporates.
Customer Relations – how the organisation presents in the market and contacts its customers inc customer information management	Information Strategy - information to aid customer relations	Alumni tracking, enquiry management	Alumni tracking, enquiry management	Alumni tracking, enquiry management	Alumni tracking, enquiry management	Alumni tracking, enquiry management
	Feel & Serve Channels - how the organisation reaches its customers / potential customers	Advertising in specialist media web presence, open days, prospectus, overseas locations	Advertising in specialist and general media, web presence, open days, prospectus clearing	Advertising in specialist and general media plus popular media, web presence, open days, prospectus, clearing	Advertising in specialist media web presence, open days, prospectus, overseas locations	Advertising in specialist media web presence, open days, prospectus, overseas locations
	Trust & Loyalty Partner and customer trust	Strong brand image as elite institution Accreditation	Strong brand image as applied institution Accreditation	Strong brand as access provider Accreditation	Strong brand image as elite institution Accreditation	Strong brand image as exclusive institution Accreditation

Table 9 Theoretical Business School business models						
Business model Element	Business model sub-element	Business model				
		Traditional B1	Modern Aspiring – B2	Modern Access - B3	Postgraduate B4	Private B5
Financials	Revenue model - potential revenue streams	State funding: Undergraduate, Research Private funding: Postgraduate, Franchise, Research IP Spin-off, licence Alumni	State funding: Undergraduate, Research Private funding: Postgraduate, Franchise, Corporate training programmes Limited alumni	State funding: Undergraduate, Little research Private funding: Postgraduate, Franchise, Limited corporate training programmes	State funding: Private funding: Postgraduate, Franchise, Research IP Spin-off, licence Alumni	State funding: Non Private funding: Postgraduate, Franchise, Research IP Spin-off, licence Alumni
	Profit/Loss	Profit potential from IP, spin-off licence	Profit potential from training, consultancy and postgrad programmes	Limited profit potential possible training programmes	Profit potential from postgraduate programmes	Ptprofit potential from all programmes and activities.
	Cost model - major cost elements and drivers	Staff, Estates, IT Low staff student contact single point assessment	Staff, estates, IT high staff student contact multiple point assessment	Staff, estates, IT high staff student contact multiple point assessment	Staff, estates, IT high staff student contact single point assessment	Staff, estates, IT high staff student contact single point assessment

Business School Performance

This research will attempt to explore the use of business models in looking at Business School performance and thus we need to review what will be used to differentiate between various levels of performance. It will also be necessary to differentiate between the effectiveness of management education in society and for the individual on one hand and the relative performance of Business Schools as measured by league tables, teaching scores and research assessment exercises or possibly by methods not yet applied to business schools on the other. It should also be recognized that whilst some differentiation can be made there will be valid linkages that remain. The success of individuals may intuitively impact on the success of the economy and vice-versa. The success of the individual may form part of the measures for the relative performance of individual Business Schools. Thus in developing this research the complexity of these relationships has to be acknowledged and their implications considered.

Pfeffer & Fong (2002) have argued that there is little evidence to show the effectiveness of Business School education, finding no significant correlation between the achievement of an MBA and the salary level or position attained. Whilst it might be said the MBA is only a small part of management education in the UK it is nonetheless still a flagship qualification.

Measuring performance has been discussed in a European Federation for Management Development, (Efmd) forum. Here possible performance measures for Corporate Universities were being discussed which may be of interest in the discussion of appropriate measures for Business Schools.

The discussion, as represented at an Association of Corporate Universities and Academies special interest group at Nottingham Business School 2003, covered the balanced scorecard, Kirkpatrick's four levels Model of Training Effectiveness and Phillip's model for Return on Investment in Training. The speaker discussed the history of the development the Corporate University group indicating that the measurement of the effectiveness of the corporate university was a subject the group returned to a number of times. Interestingly no satisfactory measures had been made by any of the members.

Why this is the case may be returned to later in this project but almost certainly could be the subject of other research projects.

Whilst the effectiveness of management education and training is of fundamental importance to Business Schools, in relation to this piece of research the effectiveness of management education may be returned to later in the research whilst the initial focus will be on relative measures of Business School performance.

There are a number of existing measures, which are used to measure relative performance. League tables for both University and Business School performance with perhaps the Financial Times, The Times and The Guardian being the most well known in the UK. The main benefit in terms of this research of these measures is that they are already widely applied but the main problem is the acceptability of the measure as an appropriate measure of performance. Teaching assessments have been carried out over a number of years and whilst focusing on only one element of Business School activity may be a useful measure.

A number of Research Assessment Exercises, RAE, have been carried out with scores of between 5* and 1 achieved by subject area.

Another narrower, in that it only measures one dimension of performance, but potentially useful measure of performance is the first destination information gathered each year. The measures referred to above have been designed specifically for the assessment of university or Business School performance, however it may be possible to apply or adapt some measures more not traditionally associated with the provision of HE or Business Schools. The balanced scorecard is one such approach.

The Balanced Scorecard

The balanced scorecard (Kaplan & Norton, 1992) is an attempt to produce a multi-faceted performance measurement system aligned to an organisation's strategic plan.

The balanced scorecard is represented by four perspectives shown below;

Learning and Growth - is the organisation

- are we flexible, adaptable and capable of growth?
- are we developing staff capabilities, innovation and knowledge?

Measures

- employee satisfaction survey
- employee turnover statistics
- innovative ideas per member of staff

Business Process - what processes do we excel at?

- are we able to develop improved, innovative processes to meet/exceed future customer demands?

Measures

- % product development, implementation timelines met
- % new products revenue of total revenue

Customers – how do our customers see us?

- are our customers seeing us in away that positively affects our revenue and profit?

Measures

- % market share
- customer profitability

Financials - what is important to our funders?

- Is our strategy development and implementation adding to our profitability?

Measures

- Return on Investment
- Revenue, contribution

In terms of this research, the use of a balanced scorecard approach has the potential to be very powerful in that it looks at a range of measures but it may be limited by the accessibility of the information required. Business Schools may be reluctant to release financial information around aspects of their performance and may not currently collect or be able to collect the information for the non - financial indicators. It may be possible to introduce the Balanced Scorecard to a Business School, most obviously Nottingham Business School as the author's home institution, in order to explore its potential more fully.

League tables

The use of league tables in higher education is now widespread in the UK and elsewhere although not free of criticism (Yorke, 1997). Whilst their accessibility makes them an attractive source of information, their applicability in terms of this research as well as their general robustness, needs to be carefully considered.

A number of questions have been raised about the use of league tables, not least the assumption that comparisons across such a diverse range and large number of institutions with distinctive missions can sensibly be made (Drennan & Beck, 2001), (Oswald, 2001). The various elements within a league table and the weightings given to them could lead institutions make poor decisions simply in an attempt to improve their league position, such as directing expenditure to areas with the highest impact on the league table score rather than by a more objective measure of cost and benefit. Another possible distortion could arise from the fact that some of the tables use resources per student but do not take into account the efficiency of usage of such resources. (Oswald, 2001). Overall the tables may simply demoralise those institutions ranked in the lower reaches of the table (Oswald, 2001), whilst not improving student choice because the tables appear to assume a homogeneous student demand (ABS, 2003). The demoralisation of the institute could be explored in the context of the more general questions around the desirability of rankings in society as a whole and their overall impact (Bowen, 1995).

Accepting that there are limitations on the usefulness of league tables, I will be using them as one of a number of measures of success in this research

I doubt that all UK Business Schools could sensibly be compared in a single group. I think there is an opportunity here to develop a peer driven analysis similar to the, “Most Admired Company Survey ,“ produced by Laverick Brown, where companies in an industry- sector are asked to rate each other across a set of parameters. It may be possible to segment UK Business Schools in such a way that they would be willing to answer a small number of simple questions about who they saw within their segment as being most worthy of admiration over a number of facets.

The Guardian league tables offer a ranking sort against four variables by each subject area. The variables are teaching scores, university statistics, student statistics and the Guardian ranking. (Major 2002). The teaching scores are a combination of teaching assessment scores, spend per student, student: staff ratio, job prospects, reputation and value added. The university score is based on graduate destination scores. The student statistics include a profile of the student intake.

The Guardian system of ranking appears to offer a more focused approach as it is possible to concentrate on business and management and the weightings used are visible and capable of change. This offers some potential as one of the methods for representing relative success in Business Schools with the ability to manipulate the rankings by adjusting weights and factors included.

Teaching Quality Assessments and the Research Assessment Exercise both provide a source of measures of success and I will return to these later in the research project.

Conclusion

Having reviewed some of the literature around business models, Business Schools and Business School performance, I believe that there is a gap in this literature in so far as there is little discussion that brings these three subjects together. In the literature there are discussions about Business School performance both in terms of its effectiveness at the micro-economic level in respect of the individual's benefit, (Pfeffer & Fong, 2002), and at the macro-economic level in terms of its support of national wealth creation, (Crainer & Dearlove, 1999) and the jury is still out on both counts.

Business models are discussed extensively in the literature but as might be expected, concentrate on the world of commercial business. Where the term business model is used in conjunction with education such as in Collis's *The New Business Models for Higher Education* the term is not closely defined. Again, this is not surprising given the general looseness with which the term business model is generally used in the literature. This looseness and the critical nature of the validity of business models in the proposed research required a detailed review of business model literature.

Thus whilst business models and Business schools each had a substantial literature part of the purpose of this research will be look at the two concepts together and explore their relationship not only with each other but also to the concept of performance.

The importance of the research is driven by the current economics of HE, where diminishing resources more than ever need to be effectively and efficiently used, and novel approaches to revenue generation encouraged.

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Points to consider

A business model may be seen as the blueprint for sustainable net value creation in that the suppliers, producers and consumers are all better off as a result of the activity.

Business Models and Higher Education Institutions.

Looking for business models in the higher education
landscape.

A piece of qualitative
research

By

John Gallacher

[Document Three - submitted in partial fulfilment of the
Nottingham Trent University requirements for the degree of
Doctor of Business Administration.]

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Part 1 Introduction

The main themes of my research are the extent, if any, to which business models are used in Higher Education Institutions (HEIs), their potential usefulness as a tool or approach in managing or analysing HEIs, and their impact, if any, on HEI performance.

I intend to explore in this document, through interview whether the language of business models appears, or the use of a business model can be discerned, in discussion with three senior managers in three HEIs. The two previous documents, a research proposal, and a critical literature review set out the context of the programme of research. This qualitative research is the first of three pieces of research in this programme.

The focus in the previous document, a critical literature review, written whilst I was Director of Finance at the Nottingham Business School (NBS), a school at Nottingham Trent University, looked at business models and business school performance. Since completing that document, I have moved to York St John, a university college that has recently achieved taught degree awarding powers, as the Director of Finance. This career move makes my earlier focus on business schools less appropriate. The DBA at NBS has a practitioner orientation, and as a practitioner my field of interest has broadened, I intend to broaden the scope of my research from business schools to HEIs. In this document, I am looking at three universities.

Recap Business Models and HEIs

In my critical literature review, I explored some of the literature surrounding business models with a view to developing an understanding of how business models were defined, discussed and to discover if a common theme or themes could be drawn from the literature, which could then be applied to the analysis business schools.

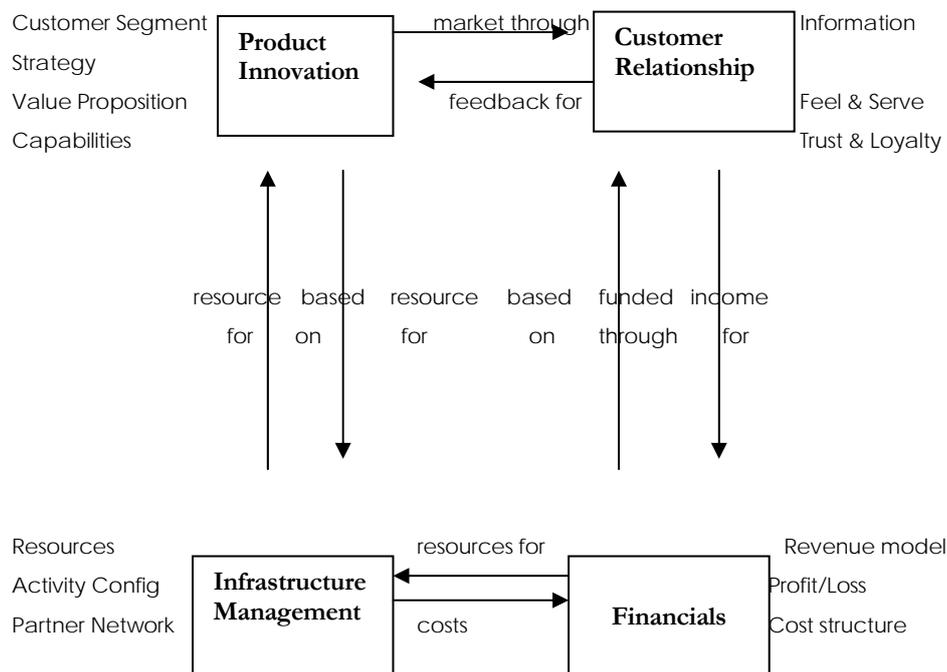
Early in the review, it became apparent that not only was the term business model widely used, but that there was a wide range of definitions and usage. Porter put forward the view that, 'The definition of a business model is murky at best.' (Porter, 2001, p73.). In addition, business models were frequently described as, loosely defined, poorly articulated, or misunderstood. (Rappa, 1999), (Leahy, 2003), (Linder& Cantrell, 2000), (Osterwalder & Pigneur, 2002).

This lack of clarity led me to look at the taxonomies of business models produced by a number of authors, Timmers (1998), Rappa, (2003), Linder& Cantrell, (2000) and Weill & Vitalie, (2001). I mapped these taxonomies to the value chain, value shop and value network model developed by Stabell & Fjeldstad, (1998) and having thus increased my understanding of the themes and threads of a business model approach I am confident in the potential value in the concept of the business model as a concept on which to base my research.

The question now became one of developing or selecting a particular conceptual framework to aid the structuring of the qualitative research project.

I chose this model largely because the graphical depiction was simple yet comprehensive and had an intuitive appeal. This helped me to map this particular representation to activities and concepts relevant to universities. I will return to the Osterwalder & Pigneur model in later documents.

Figure 1 An e-business model Ontology - Osterwalder & Pigneur (2002)



The model in fig 1 developed by Osterwalder & Pigneur, (2002) above comprises four main components namely;

Product Innovation, Customer Relationship, Infrastructure Management and Financials and a lower level of disaggregation a number of elements. In my previous paper I mapped these elements to the HEI environment using plausible examples to discover if the model could be a useful tool. For example using student destination data, particularly employment success, as a value proposition. The increased prevalence of engaging the student via ICT being an example the way in which customer relations are managed.

Having populated the framework with a possible HEI scenario and found that the structure could be accommodated, it seems that the framework may be useful in better understanding HEIs. If we were to accept Marginson's proposition that, "the shift in organisational culture towards models derived from business is greater than expected" (Marginson, 1999) or that "Managerialism seems an irresistible force in universities today" (Green, F., Loughridge, B., and Wilson, T., 1996) the usefulness of business models as an analytical tool in the study of universities maybe even more relevant. Winston contests this view saying that the application of economic models based on profit making firms would be a "poor guide to understanding higher education" (Winston ,1999). In the same vein Cooper (2005) warns against a simplistic transfer of a business based approach to universities suggesting that some adaptation needs to be made to account for significant differences, primarily the need for universities to "continue to have multiple, contradictory and ambiguous purposes" although

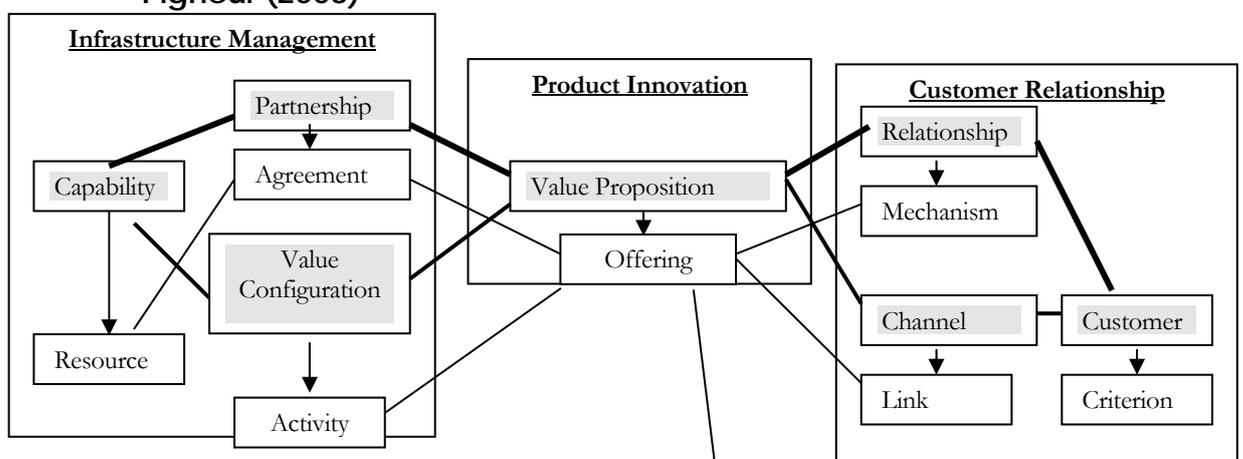
stakeholder analysis would appear to have some use in analysing relationships.

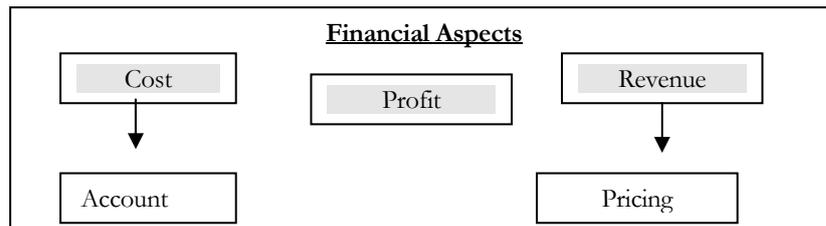
Having reviewed, in document two, some of the literature around business models, and found that this business model structure can largely accommodate the organisation and activity of HEIs I will continue this research with the view of business models as means of better understanding the organisation and activity of HEIs whilst noting the issues and difficulties raised by some authors in applying business models to universities.

The model described above has during the time of this research been updated and the later model is shown in Fig 2.

The “business model blocks” Osterwalder & Pigneur (2003) Infrastructure Management, Product Innovation, Customer Relationship, and Financials have been retained whilst the elements within these blocks have been developed.

Figure 2 An ontology for e-business models - Osterwalder & Pigneur (2003)





Product Innovation describes the Value Proposition whilst the Customer Relationship describes the way in which the organizations makes and maintains contact with its customers. Infrastructure Management contains the activities, resources and partnerships that allow the Production Innovation and Customer relationship activities to take place and the Financial Aspects continue to express the monetary results of the other blocks.

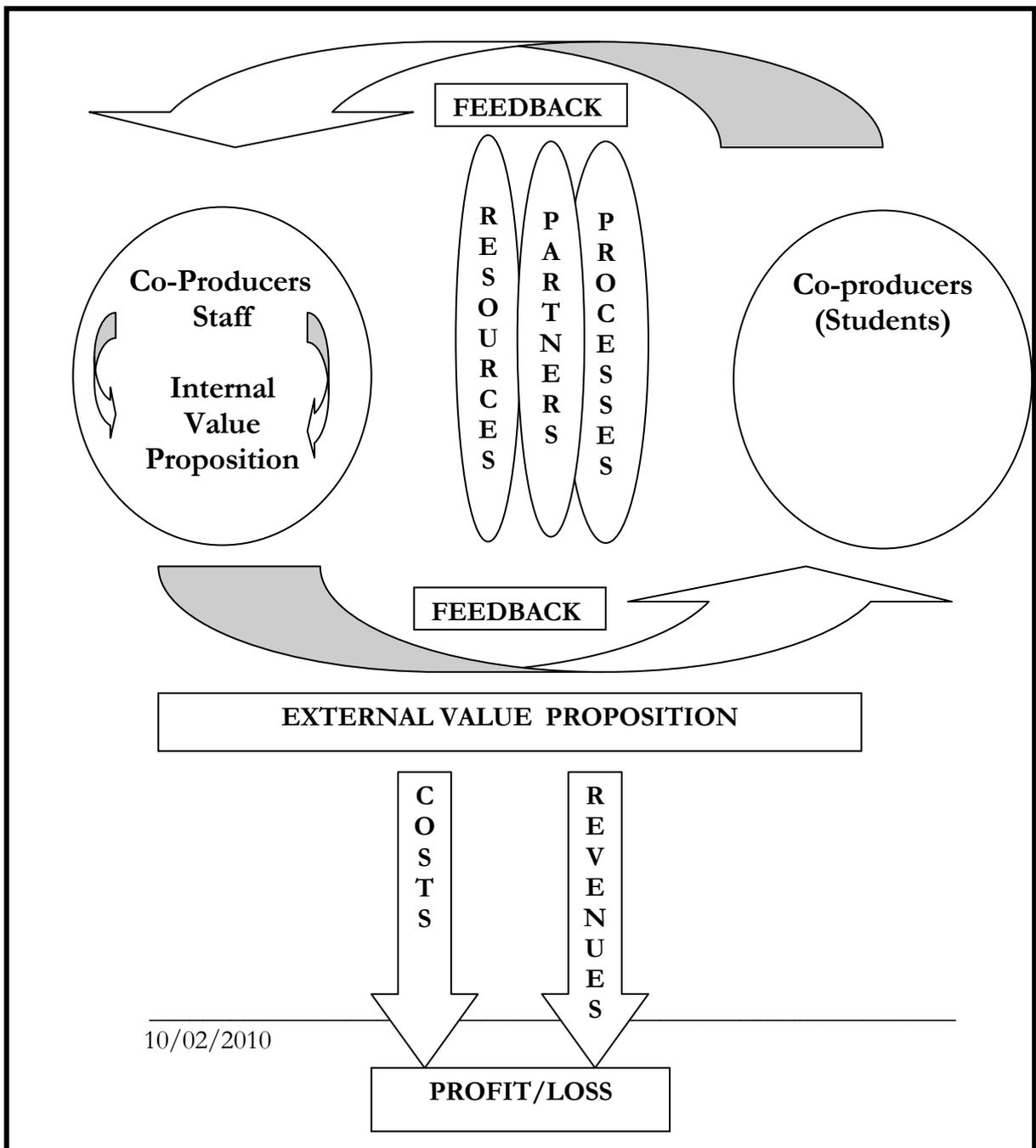
Whilst this is only a brief description of the development of this particular model, I believe it is worth noting for completeness and to emphasise the fluid and developing nature of the business model as a concept.

First thoughts on a Generic Business model

Before leaving this brief review of my earlier documents and discussing my research proposition, I would like to introduce the beginnings of a generic business model, which I am developing as part of this research. The idea of this model came from a speech given by Terry Leahey, the CEO of Tesco at the launch of the Centre for Management Development at Nottingham Business School in 2004.

Tesco is a large and successful supermarket retailer based in the UK. His delivery was understated and modest. When describing the core of Tesco's success, he attributed it to listening to staff and customers, a simple statement, but difficult to execute, and then responding to the messages received. I have tried to incorporate this along with aspects of Ostwerwalder & Pigneurs' model in fig. 3.

Fig 3 Generic Business Model Framework



In general terms staff and non-staff resources combine with the processes to deliver the Value Propositions, which are continually refreshed by the feedback from customers and staff. Whilst this might seem a naïve model, the intent was to create simple approach, which captures the core elements at a summarised level but which might be developed as my research continues.

The use of the term co-producer came from conversations with Professor Paul Joyce at NBS. The term is used to illustrate the joint nature of education, requiring input from both the student and educator and distinguishes it from the more usual consumer producer relationship.

The core logic that the framework attempts to represent is:

- the creation of an external value proposition which is 'bought' by customers, continually updated by the staff in the organisation from feedback from the customer or co producer base.

- the creation of an 'internal' value proposition that is 'bought' by the staff in the organisation, supported and enhanced by other resources and processes, which in turn are enabled and enhanced by the staff. A strong or effective internal value proposition gives an organisation the opportunity to access more of the potential of its staff and other resources. Thus the internal value proposition could be seen as a motivating and enabling force.

Where the cost of delivering the external value proposition, a function of the inputs required and the strength or effectiveness of the internal value proposition is exceeded by the value placed on it by the customer or co-producer base, and thus what they are prepared to pay, there is the beginning of a sustainable business model. The strength of the internal value proposition increases efficiency and effectiveness reducing cost and thus increasing the attractiveness of the external value proposition.

If we look beyond the boundaries of the individual business model it might be proposed that at each boundary point between economic units, for economic activity to occur there has to be a value proposition.

Business models may be seen as interlinked in a micro-economic sense and viewed as an aid in the analysis of the functioning of the economy. Does the business model become an alternative expression of the Theory of the Firm in the sense it is an analysis of micro economic activity? Is the business model merely a re hashing of basic micro economic principles and is it significant if it is?

At this stage of my research this aspect is of interest but not integral as the business model as simply an alternative way of expressing micro economic behaviour does not necessarily reduce its usefulness.

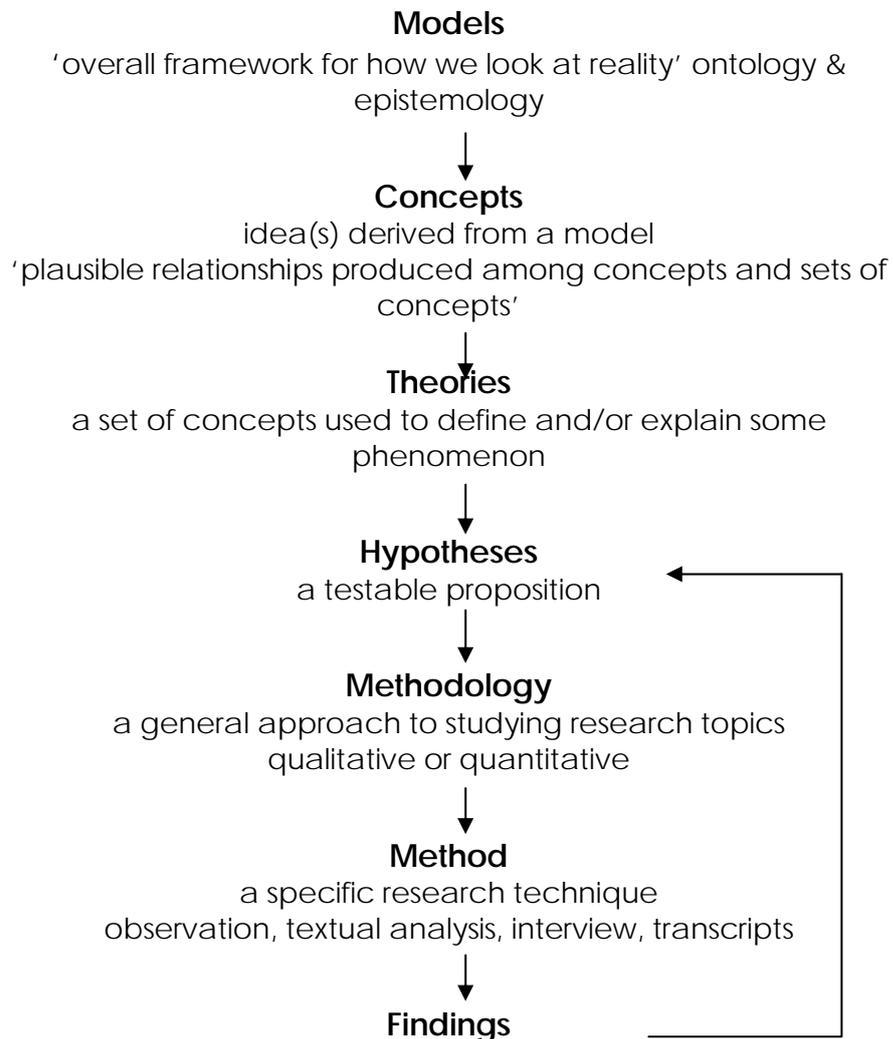
The business model illustrated in fig 3 is simply an outline and demonstrates a logic of value creation and economic activity

without describing the specifics of channels of delivery, customer segment etc. Does the generic model in fig 3 become a business model when the specifics around how the value proposition is created, delivered, and sustained are determined? Alternatively, is the generic framework a business model as well as the more specific representation? The breadth of the business model as a concept can be seen to lead to confusion. Porters comment, 'The definition of a business model is murky at best' (Porter, 2001, p73) comes to mind. I hope to return to these ideas in a later paper.

Part 2 Research Proposition

Introduction

The figure below is a combination of a table and a figure taken from Silverman (2005). It summarises an approach to research, which both informed and guided my actions in undertaking this piece of research.



Models

Burrell & Morgan state, "In order to understand alternative points of view it is important that a theorist be fully aware of the assumptions upon which his own perspective is based," (Burrell and Morgan, page ix, 1979) and this section of the paper is my attempt to try and surface my assumptions and bias.

Burrell & Morgan go on to describe the philosophical debate around the nature of research in the social sciences relating views on ontology, epistemology, and methodology. I will explore the nature of research and knowledge as a means to better understand my own assumptions and how they might influence my research.

Ontology may be described in terms of a theory of being, where the nature of reality is considered. Two commonly described alternative views of reality are, reality only has meaning when perceived and another, that reality exists independent of an individual's perceptions.

Epistemology or the study of the theory knowledge or, how we know, in the context of this section sets the scene in terms of two schools again posed as alternatives. These are the positivist and social constructivist or phenomenological.

Table 1 below is taken from Easterby-Smith *et al*/2002 and is a useful summary contrasting the Positivist and Social Constructionist approaches to research.

Table 1 Positivist and Social Constructionism

	Positivist	Social Constructionism
The Observer	must be independent	is part of what is observed
Human interests	should be irrelevant	are the main drivers of science
Explanations	must demonstrate causality	aim to increase general understanding of the situation
Research progresses through	hypotheses and deductions	gathering rich data from which ideas are induced
Concepts	need to be operationalised so that they can be measured	should incorporate stakeholder perspective
Units of analysis	should be reduced to simplest terms	may include the complexity of 'whole' situations
Generalisation through	statistical probability	theoretical abstraction
Sampling requires	large numbers selected at random	small numbers of cases chosen for specific reasons

Source: Easterby-Smith, 2002

This part of the programme requires a piece of qualitative research. However, this does not necessarily mean that one or other of the two schools noted above is more or less appropriate and either approach may be defended.

My background in finance suggests I would tend towards a positivist approach, whereby I would look for patterns, reducing reality to a simplified model in order to discover primary drivers or a truth. As I began to think about this piece

of research, I found I had some sympathy with the positivist approach of reduction, simplification, and objective truths.

As I read more about research philosophy, strategy and design (Burrell et al, 1979), (Easterby et al, 2002), (Hussey et al, 1997), (Silverman, 2005) I found that whilst I agreed with a positivist approach I had sympathy with strands of the phenomenological and social constructionist view. My experience of these views and my ambivalence led me to agree with the view put forward by Easterby et al, 2002 that the two approaches are not mutually exclusive but care needs to be taken to combine both approaches.

Reflecting on my experience of the three interviews, in the context of the lack of clarity in the business model literature noted earlier, I found that I adopted a more phenomenological approach. I used loosely structured interviews to try to encourage the interviewees to respond in broad terms in a discussion about their institution guided by, rather than simply responding to, more general questions. I would then review these responses to determine if their narrative could be related to the particular business model I was using. This was instead of a more positivist approach with set questions, posed in the same way and order. In some sense comparability across interviews and ease of replication were sacrificed but I felt that the apparent confusion surrounding business models meant that this approach would be more successful in generating usable narrative.

Concepts and Theories

Concepts or groups of ideas, in the context of this paper, can be seen as the business model building blocks Product Innovation, Customer Relationship, Infrastructure Management and Financials. Theory is the group of related concepts, which are expressed as a business model, used to represent how an organisation sustains itself.

Hypothesis

The hypotheses being tested in this piece of research are;

- business model is a term used in higher education
- business models are a useful tool of analysis of HEI activity.

Methodology

A methodology can be seen as the approach taken or a framework within which a research project is undertaken. (Hussey *et al*, 1997), (Easterby-Smith *et al*, 2002). This refers to the choice between qualitative and quantitative which for this piece of work is required to be qualitative.

Methods

Methods refer to the means used to collect and or analyse data and the methodological approach adopted will influence the methods used (Watson, 2003). The specific method I will use is a semi-structured interview.

Findings

The findings are generally the conclusion that the hypothesis has been disproved or not disproved and can lead to the restating of the hypothesis and the research cycle can start again.

Research Strategy

A research strategy can be seen as the framework within which the research question is pursued and the processes by which the research is undertaken. (Remenyi *et al.* 2002) and this echoes the Methodology aspect of Silverman (2005)

A number of factors, including the skills and experience of the researcher, the resources available to the researcher and nature of the research question, can influence the choice of a research strategy. (Remenyi *et al.* 2002)

In this case, the formal experience of the researcher, and the available resources were both limited. This meant that elaborate, extensive and resource intensive approaches were not practical. For example, the number of interviews was limited to three and very detailed conversation analysis of the recorded interviews where the construction of sentences including pauses etc was not undertaken.

My research questions could be approached using either of the two schools of thought, positivist or social constructionist.

The earlier critical literature review, which highlighted the confusion around and broad use of the term business model led this researcher to believe that the area of business models was rich and complex and that the research strategy needed to take account of this lack of clarity. In response to this lack of clarity, the nature of this piece of research will be exploratory in the sense of finding and discovery, (Fisher,2004), with the intention of discovering more about business models, in an HEI context and informing the development of the succeeding pieces of research.

Table 2 described the positivist and social constructionist approach to social science research and I will try to explain my choice of strategy using parts of that table as a guide.

The researcher as independent of what is observed from a positivist point has part of its logic in the aim of trying to uncover a truth or objective reality untainted by the influence of the researcher. However, this researcher takes the social constructionist view that reality is subjective rather than an absolute independent of its perception. The language I used in framing my questions could influence the interviewees' responses and my analysis of their responses would be influenced by my cumulative experience.

In terms of 'explanations' the research questions were not aimed at discovering simple causal relationships so that if 'a' was observed in conditions 'b' action 'c' would follow but at this stage of the research to discover if business models

formed part of the interviewees view of the world. If the interviewees used the term business models, what were they describing and did these descriptions coincide with definitions in the literature. Thus, the research objectives accord more with the social constructivist view of a rich and complex reality than that of the positivist.

Partly as a result of the uncertainty, and the complexity this creates, around the use of the term business model I chose to conduct a small number of interviews rather than attempt a statistically significant sample. I was hoping to give the interviewees the opportunity to express themselves in an unrestricted way and provide a rich data set to investigate. From a practical point, the researcher did not have the resources to conduct a large number of interviews. In addition, the question of access to, 'appropriate people' would probably have become more of an issue the larger the attempted sample size. I was able to use a personal contact to obtain the first interview a colleague's contact for the second and for the last interview, institutional relationships helped me gain access.

This part of the research will consist of interviews with senior staff from three universities. The staff will have similar roles in the administration of their institutions namely Chief Financial Officer, Finance Director, and Pro-Vice Chancellor Resources. The institutions were selected to represent the Russell Group, post '92 institutions, and institutions created in the 1960's.

The selection was designed to cover a wide range of institutions rather than a smaller group of similar institutions. This meant that comparisons between the institutions could be less useful. Differences might be attributable to the type of institution rather than indicating differences in what might be expected to be similar in similar institutions. Relating this back to my research questions, are business models used by HEIs and, are business models a useful tool with which to make sense of HEIs, the lack of similarity of institutions I was less important than seeing if business models existed in different types of institutions at different stages of development. In addition the institutions chosen represent the major groupings in higher education and each is at or near the top of its group if league tables are to be believed and thus I hope to be able to look at success of institutions in relation to business models.

Research Method

I had considered alternative data or evidence collection methods such as observation, questionnaire, interview, and critical incident technique. Whilst a particular choice of method may suggest a qualitative or quantitative strategy, the choice of method should not drive the research strategy. Rather the method of data collection should be selected on its perceived appropriateness to aiding the answering of the research question.

Observation

This was an option but the likelihood of gaining access to meetings discussing strategy and thus possibly business models I felt was low. In addition, I felt that this could be an inefficient method of data collection given the unclear nature of business models. I would need to collect data over a significant period and this could then over stretch my resources with little return. However, I will consider this approach for the larger piece of research informed by the experience of the smaller pieces of qualitative and quantitative research.

Questionnaire

This piece of research is designated in the DBA programme as qualitative and whilst a questionnaire could be constructed with a small number of open questions, it is likely that unless I found very willing volunteers I risked a poor response rate and insufficient detail in the answers. Not having constructed a questionnaire before I believe the complexity surrounding the use of the term business model suggests that it would not be a good first choice for a qualitative piece of research. The questionnaire does not allow the information gathering process to adapt as fluidly as the collection of data precedes which a complex subject may require but does enforce a consistency in the way the questions are framed. However, it does not ensure a consistency in the understanding of the question by the person completing the questionnaire. For

these reasons, I chose not to use a questionnaire for this part of my research

Critical Incident

In the critical incident approach the researcher asks the subject to recount a particular event which stands out in their memory connected to the research question, in this case business models, and then asks the subject a series of questions which allow the subject to expand on their selection was attractive. This approach seemed similar to the unstructured interview in that the subjects' answers would drive the direction of the discussion. I felt however, the vagueness of the term business model and my lack of research experience would make it difficult to identify and then expand upon a critical incident.

This led me to the selection of interview. The choice was now between structured, semi-structured, and unstructured interviews.

Interview

The interview as a research tool has a number of advantages and disadvantages, of which as a new researcher I needed to be aware. I saw the main advantage as the ability to deal with unclear or complex issues. I felt this was particularly relevant as I was still trying to understand business models and the literature indicated ambiguity and complexity surrounding their use.

I opted for a small sample of semi-structured interviews. The main reason for this choice reflecting the exploratory nature of this research, was to give the interviewees the opportunity to speak freely about business models with little prompting from the interviewer. I was not trying to eliminate the influence of the researcher but felt that a more structured approach could lead to the language of the responses being overly framed or directed by the questions. I hoped a more open structure would enable me to illicit a response couched in the interviewees own words. Their responses might then be a better indicator to the use or not of business model concepts or terms that could then be mapped the conceptual framework I had chosen. The interviews would be recorded and transcribed. The transcriptions would be read and re read with notes taken and some mapping to the framework. From this process would emerge a sense whether business model terms such as Value Proposition and Customer are used explicitly, or implied by the language used.

The choice of a semi-structured interview method requires careful consideration of the issues of reliability and validity. Validity and reliability were defined by Hammersley (1990) in Silverman (2005, p.210) as follows;

“By validity, I mean truth: interpreted as the extent to which an account accurately represents the social phenomena to which it refers” and “Reliability refers to the degrees of consistency with which instances are assigned

to the same category by different observers or by the same observer on different occasions”.

Marshall and Rossman (1995) argue that non-standardised research is not necessarily intended to be repeatable as it paints a picture at a particular point in time. Given the exploratory nature of this piece of research, I accept that it would not be easily repeatable and would not be reliable in that sense but suggest that it was not intended to be so.

The question of validity in a small piece of exploratory research with limited resources does pose serious questions in terms of the depth of the data analysis. Silverman (2005) suggests triangulation and respondent validation may be poor checks of validity and goes on to suggest a number of approaches that might be adopted e.g. tabulation. Whilst accepting the applicability of validity and challenging that of reliability I suggest that at this stage my research is only partially complete and the level of tabulation reflects this.

Institutional Selection

The selection of a university from each of the Russell Group, those established in the 1960's and a post '92 university was an attempt to look across the broad landscape of HEIs given the restrictions of time, access, and resources. I did not follow the alternative approach of selecting institutions, which were similar in age, research, and teaching profiles in order to compare how similar institutions differed in their approach to business models. A reason for this was that I felt that narrowing

my field of view at such an early stage of my research would limit my options later particularly in informing the detail of the research in documents 4 and 5. In addition a view across a broader range of institution types would allow me to determine if business models were evident in one type but not another so similarity of institution was at this stage not a priority.

Interviews and Initial Findings

In this section of the document I will,

- describe the institutions and the interviewees
- discuss the process of arranging and conducting the interviews
- discuss the data collected in the interviews

The Institutions and Interviewees

The order of the interviews was a function largely of ease of access but I will order this section chronologically as the nature of the interviews and data collected may vary in response to my relationship with the interviewee and my limited but increasing experience of interviewing.

The interviewees were by definition people who were willing to talk to me about business models and were selected because I believed they were of a type that would be likely to be knowledgeable about or at least interested in business models. One was a colleague from the past. The second was

the past colleague of a current colleague of mine, and the third from an institution the institution where I work has links with. They were all senior managers with finance backgrounds working in finance and strategy. Thus the grouping is small and will have a bias resulting from similar backgrounds and roles but equally this allows them to discuss business models with some knowledge.

Part 3 Interviews and Discussion

Interview with David Beeby

Nottingham University

Background

Nottingham University began as a civic college founded in 1881. The college grew quickly after the First World War and was gifted a site by the Boots family. In 1928 the College moved to its present site and in 1948 became, The University of Nottingham.

The University continued to expand with the opening of a medical school in 1970. In 1999 the £50 million Jubilee Campus development opened. Recent developments include the opening of campuses in Malaysia and China. (www.nottingham.ac.uk)

This short history is intended to give a flavour of a well established, though not ancient, university with a history linked with industry, i.e. its Boots heritage, and a member of the Russell Group of research-intensive universities.

The interviewee was David Beeby, the Chief Financial Officer at Nottingham University.

I will describe the main roles of the Finance and Business Services in order to place the interviewee's role in a context that may help to understand the responses in the interview.

David Beeby as Chief Financial Officer is the head of Financial and Business Services. The main roles of the Financial and Business Services is to;

- inform financial policy decisions
- oversees procurement policy to ensure that it receives value for money.
- leads the Research Innovation Service, encourages knowledge transfer to the business world, and identifies opportunities for collaborative research.
- works with the Estates Office on both strategic initiatives and operational matters

(www.nottingham.ac.uk/bursar/)

David's role thus exposes him to the strategic development as well as the more operational aspects of the institution thus I believe making him a good subject for the interview.

I obtained access to David at the university largely because we had worked together some years before in what was then the Glaxo group of companies, now GlaxoSmithKline. We had not met for some 15 years and David indicated at our meeting that it was because of this personal history that he had agreed to the interview.

At a practical level the issue of access required the use of personal contacts. I needed to be aware that this may involve bias in terms of the selection, the way the interview

progressed and the data collected. Equally, the personal connection may allow for a more open, less guarded interview.

Interview

The interview took place on morning of Friday 1st October 2004 in the Beeby's office, in the Trent Building on the Nottingham University Jubilee campus. After initial greetings had been exchanged and some discussion about our experiences together I outlined my research interest to David. This was expressed in terms of applying a business model framework to better understand or analyse the management and performance of universities and to see if business models are or could be and aid to policy development or management of universities.

At this point, I outlined some of the definitions of business models I had discovered in my literature review. I deliberately kept the definitions brief in an attempt to give an indication to David as to what I understood to be business models without influencing unduly his response. This may be the hidden positivist in me.

To begin what I hoped would be a free ranging discussion about the university and the use or other wise of the term and reality of business models I posed three questions. The first two were to try to discover if business models were used in the context of the university both in the language and as an operational tool. The last was an attempt to elicit some

responses that may at a later point be mapped on to a business model framework.

The questions were;

- does the term business model form part of the language of the university?
- if not, do you recognise anything in the definitions of business models I have described.
- could you discuss why you believe Nottingham University has been as successful as it has?

These questions resulted in a largely free flowing description of the business management of the university lasting almost 30 minutes. This covered the management structures, levels of autonomy and how potential developments were assessed.

David explained that the university used business terminology, had a central strategic planning team and that developments were required to have a business model that showed, "income streams, economic rationale and a bottom line surplus or deficit." This response seems to refer more to the narrower financial model rather than the broader business model.

This was the only time in the interview that David used the term business model. This might suggest that in a broader sense business models are not used in the strategic and operational decision-making processes or that terms other

than business model are used to describe the actors and processes contained within the business model concept.

Product Innovation

- **Value Proposition**

It may be possible to read in to the earlier reference to economic rationale the elements of a business model. Economic rationale might suggest a value proposition being delivered for a profit. Is this shorthand for a business model?

In an attempt to prompt consideration of the other aspects of the business model framework I asked David what he saw as the key offerings of the university to its various constituents. Would a reference to key offerings and constituents result in a conversation around value or customer or market?

David's response was to describe the need for the university to focus on the provision of high quality services thus enhancing the university's brand. A key objective of the university was the long-term enhancement of the value in the brand of Nottingham University, particularly in its overseas activities. The notion of building brand value may be seen as implying the existence of a value proposition, a key element in the business model framework. Therefore, whilst David did not use the expression, value proposition, the reference to brand may be taken to imply the existence of one. This may support the notion that whilst the business model was not used explicitly or in a formal sense, parts of it may be being used.

This leaves the question of its usefulness in making sense of the various resource decisions processes unanswered at this point.

Pursuing the notion of brand value in order to address my third question, that of reasons for the success of Nottingham University I asked David to elaborate on the overseas dimension where more emphasis was being placed on the Nottingham element of the title Nottingham University. The term Nottingham was seen as valued in the market and thus references emphasise the Nottingham campus in Malaysia or China. (www.nottingham.ac.uk) The name Nottingham now representing reputation thus implying a value proposition.

Customer relationship

No reference to customers was made by David during the interview. There were a number of references to students. One was in the context of student income devolved to departments and another was in terms of the high quality student experience offered by Nottingham university. This last reference is more an indicator of the value proposition than of customer relationships.

Infrastructure Management

The term business unit was used to refer to the operational units of the university delivering teaching, research or other activity where David was describing the devolved nature of certain decision making processes but this does not

approximate to a business model in the terms I had described earlier.

It may be argued that aspects of the infrastructure management component were referred to via the comments around a planning team, schools and business units. The structure of the university was described in terms of autonomous units with their own human resource, finance and academic support joined in a loose confederation and linked to the centre of the university by a system of six pro-vice chancellors each responsible for a number of schools. This description of structure may be used to develop a value configuration or identify capabilities but was not referred to in those terms in the interview.

There were around 30 business units grouped into schools. Some areas are less financially successful than others are and cross subsidisation it accepted as part of the cost of operating a full service model university providing, "everything apart from geography and aerospace engineering." In terms of a business model the aspects revealed here appear limited to infrastructure and financial aspects. Perhaps hidden in the reference to full service provider is a hint of the Product Innovation component i.e. value proposition, and capabilities. We explored further the aspect of partnerships. David suggested that Nottingham University had been less successful in partnering with other higher education institutions and felt Nottingham had until quite recently been seen as

“rather commercial,” and “opportunistic,” these terms being used in a pejoratively.

An international partnership pursued by Nottingham University is Universitas 21. This is a grouping of leading research intensive HEIs from around the world. This partnership has recently developed to include Universitas Global 21 “Graduate school for Global Leaders” including Thompson Learning as a partner to offer on line learning including Certificates of Management and MBAs. (www.nottingham.ac.uk)

David described the university as being in the mature phase of its development in the UK and looking to become a global player in the HE through its campuses in China and Malaysia and not focusing on enhancement of its reputation solely in or through activity in the UK. Becoming a global player would require a relevant value proposition, likely to be drawn from the reputational value of the Nottingham name, sufficient resources, represented by the campuses in Malaysia and China and the virtual network of Universitas Global 21, the capabilities to deploy them and probably a partnership network. Again the interviewee did not explicitly reflect this analysis but if viewing his comments in the light of the Ostwerwalder and Pigneur model supports the view that the business model framework may be implied in the actions of an organisation and thus may be a useful tool for analysis

Financials

Of the main components of the business model only the financial aspects of the business model were referred to explicitly in the discussion, income streams and surplus.

Brief Summary

I will combine the findings or insights of this interview with the remaining two in the last section of this paper. However, it seems from the interview data that whilst evidence for the use of business model terminology as represented in the framework I have adopted is sparse there is evidence to support the view that the business model framework can be usefully mapped to the content of the discussion and is a useful tool of analysis.

Interview with David Chesser

Pro Vice Chancellor Finance & Resources

Northumbria University

Background

Northumbria University, formally Newcastle Polytechnic, is a large metropolitan university of around 23,500 students of which 16,000 study full-time. The polytechnic was created in 1969 from the merger of three regional colleges specialising in Technology, Arts & Industrial Design, and Commerce. The

vocational themes continued with the development of teacher and health professional training and the polytechnic became a university as part of the expansion of universities in 1992.

www.northumbria.ac.uk/brochure/life/history/

This background is significantly different from that of Nottingham University and this difference will, I hope, allow me to explore the use or usefulness of business models in a more vocationally orientated institution.

I was given an introduction to David Chesser the Deputy Vice-Chancellor (Resources) by Julie Maughan, HR Director at York St John, who had worked with David at Northumbria. David's area of responsibility includes strategic management of the institution's finances, estates, and IT and in his role takes the lead in the implementation of the financial strategy. David's position at Northumbria was similar in a number of respects to that of David Beeby at Nottingham University with both responsible for finance, involved in setting strategy and the follow through in financial terms and covering areas wider than finance.

Interview

The interview took place in David's office at Northumbria University on Friday November 19th 2004 and lasted almost an hour. Before I introduced my research David described some aspects Northumbria University suggesting that recent investment in IT infrastructure, library, and teaching estate

refurbishment were key selling points in attracting and retaining students although there was still a long way to go before the whole estate would be attractive to students. This part of conversation was interesting in that unprompted David had described part of the university's value proposition i.e. the resources available to the student.

I introduced my research as I had at Nottingham University, outlining the varied perceptions of the nature of business models, and asking if the language of business models were used at Northumbria. I also explained that as well as trying to discover if business models or the language of business models were used in universities I was interested to explore the idea that business models could be useful in analysing activities in universities.

Having gained some confirmation from David that he felt clear about the research area, I asked the question as I had in Nottingham about what he believed made Northumbria University successful. Northumbria has consistently scored well in the Times league table, usually in the top four new universities.

David's response was, "the university knows what its good at," and it "plays to its strengths." I will leave aside the question of how, "the university knows." He then went on to describe a number of distinct and clearly articulated examples.

- A high quality student experience, in particular the support of high quality learning, evidenced by excellent QAA scores resulting in students telling potential

- High employability statistics derived in part through the university's history as a polytechnic with a strong vocational provision based around, business, law, and design.

A value proposition such as, this institution provides a high quality student experience; vocationally informed; enhancing the students' chances of employment at the end of their period of study could be derived from these statements. They were not described as such by Chesser and again the business model may be a way of structuring and understanding the different elements of activity rather than a conscious framework adopted by the institution.

David did describe how a brand had been built around these attributes and a brand could be said to embody one or many value propositions. Again, whilst the language of business models was not used, related concepts appear to be. This reference to brand has echoes in the earlier interview with David Beeby at Nottingham University. Brand appears to have entered the language of university management, at least in these two institutions.

Having built a brand around these attributes David went on to explain that the university is then organised and managed like a business. This term implies a managerial approach with objectives, measurement, and financial consequences.

David describes a vision, mission, aims, objectives, and strategies, which are constructed and expressed in similar ways to those, found in commercial organisations. The university is described as having "a clear vision, very aspirational, to be one of world's teaching universities renowned for innovation and research based practice...regional, national, international role through an extensive network of locations and partnerships" This quote from the interview can also be found in the Northumbria University Strategic Plan 2003-2006.

To achieve this vision for the university various strategies have been developed. "prime operational strategies, Learning and Teaching, Research, Growth, Business Development, Widening Participation and Regional Strategy." These were supported by functional strategies in the areas of human resource, finance, estates, and information.

These strategies were incorporated in to the Corporate Plan 2003-06. I was given a copy of this plan and David spent some time referring to it. The term business model does not appear in the document but it would be interesting to review the plan using the elements of the business model I am using. This may form part of the larger research piece in document five.

In terms of a cost structure or the financial element of a business model, David saw the university as spending no more than 60% of its income on staff costs and 34% on non-staff costs leaving a surplus of 6%. This is ambitious given the recent

report published by Hefce showing a significant proportion of HEIs running deficits. (Hefce, 2005).

Here, the connection to a business model in terms of revenues, costs, and profits is perhaps the most obvious. Financial outcomes may be being used as shorthand for a business model. This however may be problematic for the development of business models in that the financial aspects of the model are only the outcomes of the functioning of the other elements of the model and not the whole model.

Business model components

Product

- **Value Proposition**

Chesser did not use the term value proposition even when the interviewer introduced the term. He did refer to re-branding exercise that had been carried out some two to three years earlier. An outward sign of this was the change from the name the University of Northumbria at Newcastle to Northumbria University with a strap line, "great learning, great experience, great future." The term value proposition was not explicitly used by Chesser but the concept it represents through branding and a description of what Northumbria offered students and could offer potential students was.

Customer Relationship

- **Target customer**

Here I am using the term target customer to mean those customers or customer groups identified in the institution's strategy as those to whom the value proposition is expected to appeal. Chesser did not use the term, target customer, at all during the interview but the term customer was used four times.

The first instance was in two minutes into my introduction before I had described my research and the nature of business models. This may imply the importance of the customer to Chesser. This reference was in response to a general question about how Northumbria was successful in what it did. The interviewee's reply referred to the need to improve some areas, "as there will be customers paying a lot of money..." The early use of the term suggests Chesser sees it as a part of "normal" language.

The second use of the term customer came approximately half way into the interview in the context of recruiting and retaining students with customer being used interchangeably with student.

The use of the term customer can be problematic in higher education and there may be resistance to using the phrase as it can imply a simple exchange relationship. A customer in exchange for, usually, money obtains the rights to the benefits of a product or service. In higher education, it may be argued, that the student through the fees paid and possibly income forgone is purchasing the right to access information and guidance towards understanding rather

than the award of a degree. In this sense, the student may be described as the co-producer of the award along with the university staff

However given Chesser's background in the for profit sector I do not believe he would be reticent in using the term customer.

Even though the term customer was used infrequently and target customer not at all, it is possible from the text of the interview to discern language that might allow us to infer that there were target customers.

"Were not getting in total anymore student numbers but we're moving from engineering, modern languages and we're putting them into law. " This comment also reflects a comment about the vocational nature of the provision at Northumbria.

"aggressive growth path for overseas as well as U.K." Here overseas students have been targeted for recruitment for the opportunity to deliver additional income as well as for academic or other reasons.

In terms of geography, the target group and the majority of the students at Northumbria are from the local region, which also creates opportunities for lifelong learning. See table 2 below.

Table 2 Northumbria University

Percentage of FT/SW Students by Domicile			
(a) UK Region	%	(b) Global Region	%
North East	59.2%	Total UK	84.9%
Yorkshire & H'Side	9.3%	Channel Isles/IoM	0.1%
North West	4.8%	EU excl. UK	2.4%
West Midlands	0.7%	Total EU & Isles	2.5%
East Midlands	2.0%	Non-EU Europe	0.3%
East of England	1.2%	Middle East	0.4%
South East	1.2%	Africa	0.7%
London	1.7%	Western Asia	1.8%
South West	0.6%	Eastern Asia	9.1%
Scotland	1.7%	Australasia	0.0%
Wales	0.3%	Americas	0.2%
Northern Ireland	2.2%	Total overseas	12.6%

Source: northumbria.ac.uk

The purpose of table 2 is to support the notion that whilst target customer was not a term used by Chesser in the interview it is apparent that a sophisticated analysis of students/customers is undertaken and that there are target customers.

- **Channel**

The term Channel is used here to describe how the institution gets in contact with its customers and perhaps more importantly its potential customers. It is important also to see this in the context of higher education in that the contact extends over a period from initial enquiry, to offer to acceptance, and alumni.

The discussion about the channel was prompted by a direct question asking how the university attracted students and how a relationship was developed and maintained. This was a departure for the format used at Nottingham but was

appropriate in order to encourage an exploration of the different aspects of the business model.

The first part of the answer to the question of how students are attracted to the University of Northumbria was expressed in reactive terms describing how the university responded to enquires through open and taster days. The management of the process was through a PVC Student & Staff Affairs. Chesser described Northumbria as a regional university and the North East region as relatively poor with low educational achievement. This meant that the university had to be active in what is referred to as the widening participation agenda. This entails reaching out to people who may not believe that higher education is relevant to them, or that they are not sufficiently qualified to join a programme. Northumbria work extensively with schools and employ staff to promote the university across the region.

Surprisingly the traditional channels of advertising, web presence and university and college admission system and clearing were not referred to by Chesser. It may be that these are seen as common across the sector and as such are taken as given. I do not think it indicates that these channels were perceived as unimportant.

The discussion around the development of relationships with the students was covered together with that of channels. Developing the relationship was seen in terms of "some

handholding, some shoving, extensive support in year one and reduced in subsequent years”.

The support was also important in non-academic areas such as halls of residence, sports facilities, as well as learning and teaching support through extended library hours, access to IT, electronic course material and wireless networks.

The regional dimension also plays a part in the relationship building. The university largely recruits from its region, see table 2, which is probably a legacy of its history being formed from the merger of three regional colleges via a polytechnic and according to Chesser a significant proportion of its students stay within the region after graduating. This means that there is an alumni opportunity and the possibility of a lifelong engagement with the student. Chesser was very enthusiastic about the potential to develop the alumni base, which he felt was not well developed at present.

Infrastructure Management

In the business model I have adopted Infrastructure Management or the management of the internal dimension is divided into a number of components. These are Value Configuration, Capability, Resource, and Partnership networks.

During the interview, Chesser referred primarily to the partnership component. Progression routes for students

were identified as significant partnerships. Here the university develops agreements with other educational institutions to facilitate the movement of students from one institution to the other under defined circumstances. The university has some sixty agreements with local Further Education Colleges and overseas colleges. Other partnerships were also significant such as arrangements with the NHS accounting for some £18M revenue and smaller but nonetheless significant deals with corporations such as a Russian steel company. This relationship came about from single MBA students who on his return to Russia so impressed his bosses that they sent a cohort of eight students onto the MBA. This led to other training opportunities and now Northumbria has trained one hundred and fifty of the organisation's managers.

In a sense the capability component, although not called that by the interviewee, was the ability to create in response to an opportunity an offering and deliver that offering to the satisfaction of the customer. In this case, the quality of the MBA led to additional students and the institution's ability to adapt its provision in response to the customer demand, led to the commissioning of an additional programme.

Capability was also referred to in terms of the ability of researchers at Northumbria also being able to develop consultancy opportunities, which were rewarded by investment in their area of research.

The value configuration, or the way in which the organisation is aligned to deliver its offering was not properly surfaced in the interview. Chesser made reference to departments when describing the budget process. Given the nature of the role reflected in the title Pro VC Finance and Resources, the lack of a discussion around the wider use of resources is interesting. It may reflect a finance orientated view of a business model. I had referred to Porter's value chain and the later concepts of value shops and networks but Chesser did not pick these up.

Financials

The discussion of revenue and cost models took up almost a third of the interview. The time given to this element may reflect the interviewee's level of comfort with the financial aspects of the model or the perception of business models as largely composed of revenue and cost models or both. Familiarity with the financial aspects of an organisation could lead to a concentration on these as the key elements of a business model at the expense of the others.

The vision and mission of the university are clearly stated in the Corporate Plan along with supporting operational and enabling strategies. One of the enabling strategies is finance. Chesser referred to "finance strategy targets" which were seen as "a key part of how we manage the business." Here he is using business language applied to the institution. The organisation of the university is comprised of ten schools headed by Deans and eleven service

departments and there is a financial model of the university in terms of income and expenditure and this available down to the lower levels of the operation of the university.

In the discussion, there was no reference to a cost model but more of a summary in terms of a traditional profit and loss statement. The surplus target, being revenue less expenditure was set at 6% of revenue and costs similarly set at percentage of income, staff a maximum of 60% and non-staff 34% of income.

The financial targets were set with a "fair degree of rigour" and the budget containing information on current year forecasts and budget for the following year reflect the reporting structures and financial flows. The main revenue streams are identified, Higher Education Funding Council of England and Teacher Training Agency grants along with the associated fees, International student fees, NHS fees and accommodation charges.

Costs were analysed by both type and location, in much the same way, as a commercial organization would have done. Thus, the representation of the university's activities in terms of the financial outcomes for planning and reporting purposes was quite comprehensive. Financial results were measured against targets using both tabular and graphical presentational methods and action taken where agreed.

As in the earlier interview, the terms used in the business model I am using as an example were not readily used but the concepts and structure do appear to be useful in terms

of bringing coherence to the stories outlined in the interview.

Interview with Graham Gilbert

The University of York

Background

York University was founded in 1963 around the same time as Warwick, Sussex and Lancaster and began with 200 students. It has scored well both in terms of teaching quality and research assessment, ranking sixth for its research. In the Sunday Times league tables York has been remarkably consistent over a number of years maintaining a position of around sixth for the last six years.

The university has until now remained relatively small with around 6,000 fulltime students, attracting a high 'A' level intake score but still maintaining a good performance on widening access criteria. The university is located southeast of York, approximately 3 miles from the city centre. Growth is planned on the Eastern portion of the campus, Heslington East, with approximately a 50% increase in student numbers.

Interview

Graham Gilbert is the Director of Finance at York University based at Heslington Hall. The interview took place in his office 25th January 2005 and lasted just over one hour. I believe Gilbert agreed to the interview largely because York University

and York St John College, where I work, co-operate on a number of projects. Whilst the possibility of this benefit led me in part to pursue the interview, the success of York University in a relatively short period was a much stronger factor in my decision.

I began the interview, as I had the others, by explaining my research subject in terms of business models, if they were used by the university, and whether business models may be useful as a way of looking at university activity and performance. I introduced business models as stories that explain how organisations work, methods of doing business by which organisations sustain themselves and the core logic that creates value. I hoped that these expressions might stimulate the discussion by giving a guide as to how I viewed business models and give Gilbert a framework to inform his comments.

My first question was what had made York as successful as it was. There was not a direct answer to my question but more the start of a discussion. Gilbert described the university in terms of, "a machine for doing research, teaching students, and producing degrees. Delivering benefit for the community as a public good and as such it should essentially be funded by the community"

From this description, it is possible to see degrees as the value proposition or product for the individual and students with degrees as the value proposition for the community. The customers are thus both the person receiving the degree and the community who benefit indirectly.

Product Innovation

Almost half way into interview Gilbert referred to the brand of York University. He was describing how the university was shifting away from relying on one off income streams to a position where its core activities of research and teaching were capable of generating financial surpluses. He stated that there was a tension between maintaining, “the university’s reputation for excellence in teaching and research” and generating financial surpluses.

The excellence in teaching and learning was seen as driving the university’s attractiveness to potential overseas students, high A level grade UK students and organisations looking to place research contracts. So here, we have an expression of target customers and the implied value proposition drawn from excellence in both research and teaching.

From the interview, it appears that whilst value proposition as a term was understood, as shown by Gilbert’s reference to the importance of York’s reputation for excellence in both teaching and research, it has not formally entered the managerial vocabulary at York but is expressed through the recognition of what make York University attractive to its customers.

Customer Relationship

As noted in the previous section target customers were identified but the word customer was used only twice during

the interview but students were referred to twenty times. From this, it may be inferred that Gilbert does not readily relate the term customer to the university's relation students. There were also no references in the interview as to the how the university initiated or maintained or developed relationships with its customers.

Infrastructure Management

This part of the business model deals with the "how." How the institution delivers its offering; how it organises activities and how it works with other organisations. These aspects of the business model might be thought of as more practical and would be more likely to be discussed by a practitioner such as Gilbert.

The structure of the university was not described but there were twenty-four references to departments, which appear to be the key operating unit. Gilbert did not describe how the departments formed a coherent whole but his comments such as,

"we will do things because we trust each other. We can trust each other's competence " and

"we have the idea and can reach out and pull academic x and manager y together to work on this project and we still have that kind of dynamic which feeds that collaboration"

show that co-operation between academics and support staff was seen as an important capability.

These attributes of the university were clearly thought to be significant in the successful development of the institution and could be described as capability i.e. the ability to execute repeatable patterns of action (Osterwalder 2004)

External partnerships were not referred to in the interview. This surprised me, as York University is a key partner in one of the first Lifelong Learning Networks in the UK, with a national profile called Higher York. York University, York St John College, Askham Bryan, York College, York City Council, and the Higher Education Funding Council for England fund this partnership with a budget of over £1m.

Financial Aspects

In common usage business models may often be seen as budget or financial models, instead of a more comprehensive concept in which the financial streams only form a part. (K. Willoughby, 2003).

Revenue or income were referred to fourteen times and costs seven with only students and departments referred to more.. Revenues were associated with student numbers, in particular overseas student numbers, student accommodation and, research.

The research revenue stream was referred to early in the interview, in terms of relatively early success in obtaining substantial research funds, which allowed the university to take more risks than previously and extend their time horizons. Gilbert reported that later research funding was "felt to be, a

busted flush” where the ‘true’ or full cost of supporting research activity was seen to exceed the funding provided.

Gilbert said that as recently, as two years ago the university believed that potential revenues costs and contribution at a department level were limited. This restricted discussions and planning activity with departments and the main financial planning activity became cost control. If there was no business to discuss discussions of business models were hardly likely to occur.

At an institutional level, the growth of income streams was seen as more successful e.g. catering, spinouts and the science park. The core university activities required tight cost control as their core funding was inadequate and their success was funded by the diversion of uncertain one-off funding streams. Whilst a business model could be used to analyse this position it possible that the cost control approach brought on by the need to juggle uncertain funding did not encourage the use of business terminology or models.

Later in the interview, Gilbert referred to the impact of the additional student numbers being a catalyst for conversations with departments but did not expand the point.

Gilbert mentioned cost as a requiring constraining early in the interview and this was the main context in which the term costs were used. Constraint as a term was used fourteen times suggesting that was an important factor in the management of the university. The interview did not cover the

strategy or budget processes, which on reflection I am surprised given the role of the Director of Finance.

Gilbert used the term business model six times during the interview but none of the other terms in the business model structure. This is perhaps not surprising as the terms may be seen as almost technical, devised to encapsulate particular behaviours, actions or relationships. I will attempt to draw from the interview the points where the language and concepts used can be mapped to the business model structure.

The interview whilst lasting an hour and relatively free flowing didn't surface specific business model terminology although references to revenue streams, customers, capabilities and a financial structure were made. Of the three interviews this was the most fluid, Gilbert required almost no prompting, and perhaps because of this, the content was difficult to analyse in terms of the structure of the business model I had chosen. I would like to return to this interview later in my research.

Part 4 Reflecting on the Research Activity

In the previous section, I tried to take the data from the unstructured interviews and tease out specific references to business models or map aspects of the interviewees' responses to the framework I am using.

It was apparent from their responses that the language of the particular business model I am using did not form part of the interviewees' language. It is possible that other business models and terminology might have produced a different response but I did not discern in the conversations a coherent business model being described by any of the interviewees. By this, I mean that the main elements of a business model i.e. a value proposition or offering, a customer base and channel, an ability to deliver that proposition and a financially sustainable outcome were not described in a coherent sense.

In the interviews, there were references to brand, customer, infrastructure, and financial models. This may suggest that although a model was not in use and activity was not described in a formal business model framework the framework itself could be useful in organising the rather loose descriptions revealed in the interviews.

In table 3 below I have taken the main components of the business model framework I am using and selected a number of words which I felt could reasonably be argued to have a connection with a particular component. Thus, value, brand,

and reputation could be elements of, or proxies for a value proposition or offering.

I reviewed the recorded interviews and transcripts and noted the occurrence of the selected words. I have not taken fully into account the context in which the word was used although where I felt the use of the word was not related to the business model component I ignored it. However, the number of these instances was limited.

I have attempted to allow for the length of the interviews and the number of occurrences of the words used per minute is remarkably consistent, falling in a range of 1.5 to 1.7 words per minute for the total of all the components of the model. However, at the individual component level this consistency is only visible in the section on Financials.

Does this exercise throw any light onto the use of business models or business model language?

The high level of overall consistency is interesting but probably only indicates that finance professionals when discussing business models will refer to aspects of business models at similar, reasonably frequent, intervals.

If we look at the Osterwalder and Pigneur components, the differences are more striking than the similarities.

Under Product Innovation or Value Proposition Nottingham University scores highly on the time adjusted scale. Would we expect the oldest university to be more concerned with reputation, whilst York the highest ranking in The Times league tables refers to reputation only twice? Probably not.

In the Customer Relationship section the references to students is the main factor driving the differences. Might the large number of reference to students in the Northumbrian interview reflect the difficulty of recruitment and its financial impact for a post 1992 university relative to the other more established institutions? Possibly.

The differences in Infrastructure Management reflect the number of references at York to departments and schools. It was apparent in the interview that the development of departments and their success both academically and their ability to work with the university administration was seen as a significant element in the university's success.

The financial section response rate was the most consistent. This may simply reflect finance people talking about finance.

The review of the word count does not of itself lead to any conclusions about the use particular business model language in universities. It does however seem to indicate that the business model framework might be useful in analysing university activity and processes as the language used in the interviews was capable of mapping to the structure of the model.

Table 3 Interview Word Count

Osterwalder Pigneur Business Model Components	Word(s) Used	D A Beeby Nottingham University	D Chesser Northumbria University	G Gilbert York University
Interview length		26 mins	60 mins approx	65 minutes
Product Innovation/ Value Proposition	Value	4	4	1
	Brand	5	2	3
	Quality	5	3	4
	Reputation	5	0	1
	Strength	2	0	4
	Offer	0	2	1
Total		21 (0.8)	11(0.2)	18(0.3)
Customer Relationship	Customer	0	4	2
	Student	3	34	20
	Relationship	0	2	2
	Total		3(0.1)	40(0.7)
Infrastructure Management	Resource	0	5	9
	Partner(ship), Link	5	4	0
	Dept, School	5	3	24
	Total		10(0.4)	12(0.2)
Finance	Revenue, Income	6	14	14
	Cost, expense	0	12	7
	Surplus, Profit, Deficit, Loss	4	1	7
	Total		10(0.4)	27(0.4)
Grand total		44(1.7)	90(1.5)	103(1.6)

(Figures in brackets time adjusted)

In table 4, on page 63, I have tried to summarise how the conversations might be mapped onto the particular business model framework I am using. This is not a word count as in table 3 but a looser mapping of impressions from the interviews to the business model framework I am using.

The "*****" indicate where the conversations did not appear to touch on an aspect of the model either directly or in a way that could be easily attributed to that aspect.

There are no gaps in Product Innovation where references to brand appeared in all three interviews. The Financial elements of the model were also covered. This may not be surprising given that the interviewees work in the area of finance and may view business models primarily as simply budget or financial constructs.

The gaps that appeared were in the Customer Relationship and Infrastructure elements in the perhaps more esoteric aspects and I believe if questioned directly some response could have been elicited. However, they did not appear during the interview and from this, I am suggesting that they were overlooked as they were not obviously part of a business model in the view of the interviewees.

However my experience of and some of the information drawn from the interviews leads me back to the proposition that the business model concept may be a useful tool in bringing together the various aspects of HEIs in a way that aids further analysis.

Table 4 Mapping Comments from the Interviews to the Business Model Framework

Business Model Framework		Nottingham University	Northumbria University	York University
Product Innovation	Value Proposition	Brand, Academic Reputation	Brand, student employment	Brand Academic Reputation
Customer Relation	Relationship	***** *****	Progression Agreements, Student Support	***** *****
	Channel	***** *****		***** *****
	Customer	Global, Industry	Student, NHS, Regional	Staff, Student, Community
Infrastructure Management	Value Configuration	Devolved Business Units	***** *****	Departments
	Partnership	Universitas 21	Progression Agreements	***** *****
	Capabilities	Full Service provision	Clear vision, strong planning	Strong academic teaching & research Academics & Support staff working well
Financials	Revenue	Referred to business model as Revenue, economic rationale, surplus / deficit	Financial model linked to budget and strategic plan.	Student fees, International Students, research income
	Cost			Cost control
	Profit/Surplus		Staff cost 60% of revenue, other costs 34% target surplus 6%	Past surplus from one off funding Current from core activity

J. Collins and J.I.Porras (1994) suggest that long-lived visionary companies have a sustaining core ideology with unchanging core values and a purpose beyond simply shareholder return. This view of business has a resonance with HEIs in that the objective of the institution is not financially focussed. This view of business increases my belief that a business model, not simply a financial model, would be a useful framework to make sense of HEIs. A business model approach may allow the none financial aspects to be foregrounded in a structured way and place the financial aspects in a facilitating role. The process of mapping and then disseminating this information may be a way in which the business model framework could be introduced into HEIs as a planning or analytical tool.

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Business Models and Higher Education Institutions.

Looking for business models in the higher education landscape.

A piece of quantitative research

By

John Gallacher

[Document Four - submitted in partial fulfilment of the Nottingham Trent University requirements for the degree of Doctor of Business Administration.]

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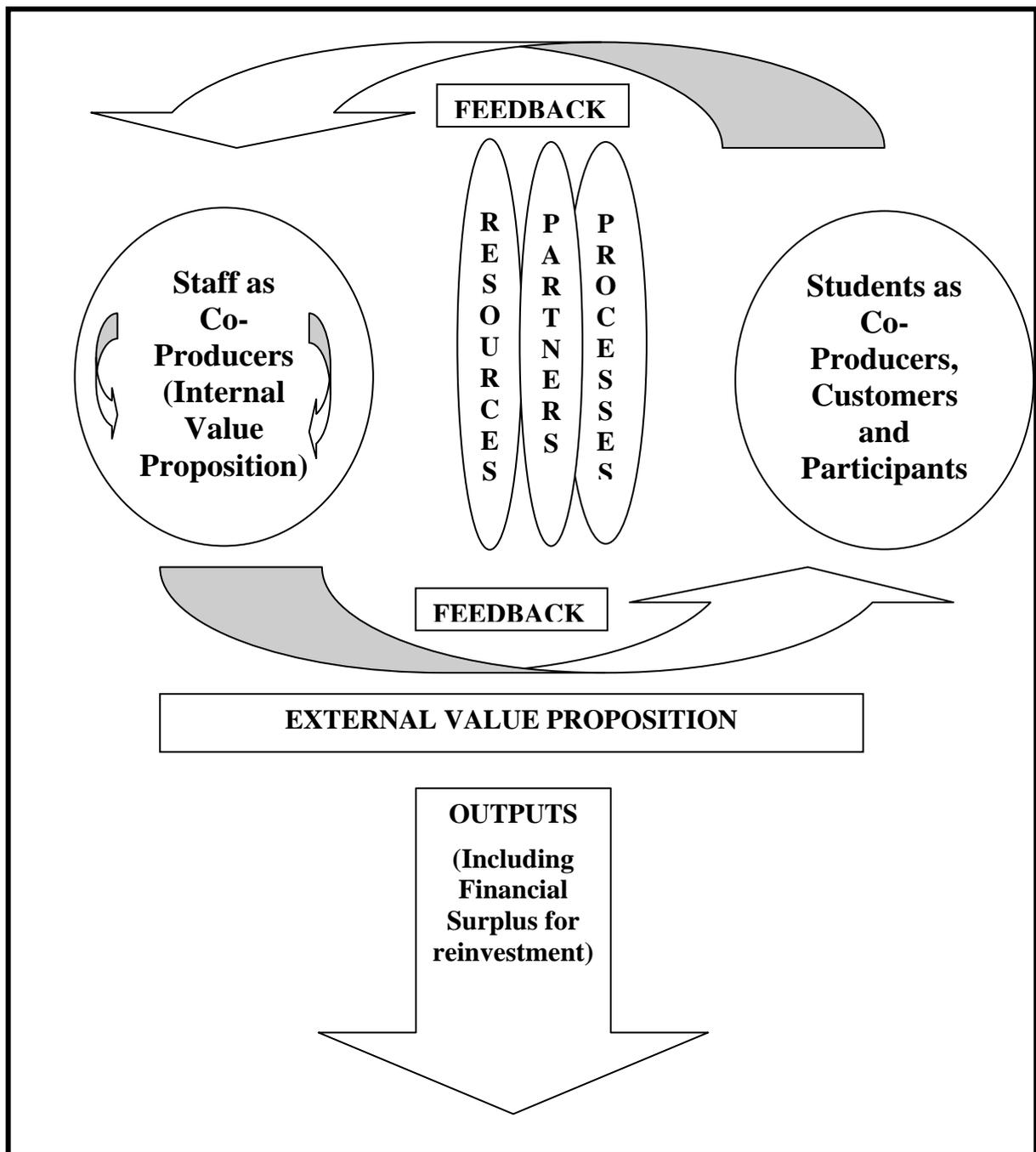
Part 1 Introduction

My area of research interest is the use of business models in higher education institutions, their possible use in terms of better understanding and managing HEIs and their impact, if any, on HEI performance. This interest was reflected in my previous three documents, a research proposal, a critical literature review and a short piece of qualitative research. In this document I shall undertake a piece of quantitative research using secondary financial data on over 100 HEIs over the ten year period 1995 to 2004. The source of this data is CaritasData Limited, publishers of the Higher Education Financial Yearbook, an annual summary of HEI financial information. The institution I am employed by, York St John University College, subscribes to this information in hard copy with limited electronic access and for an additional payment of £120 I was able to obtain the data in a Microsoft Excel spreadsheet format for manipulation and statistical analysis.

Business Models Revisited

The business model I used at the start of my research was one developed by Osterwalder and Pigneur (2003), which was built around four major components or building blocks. These building blocks were Infrastructure Management, Product Innovation, Customer Relationship and Finance with Finance seen very much as an outcome of the other three. This model has since been updated in 2005 by Osterwalder, Pigneur and Tucci. From my initial research, including conversations with staff at the Nottingham Business School, I introduced in my last document a business model which emphasised both the internal and external value propositions which, when viewed in conjunction with physical resources, partners, processes, and particularly staff and students as co-producers forms a simple representation of a business model. I have further adapted this model shown in Fig 1 below to reflect significance of non financial outputs in the social sector (Collins, 2006) and I hope to develop it further in my next document.

Fig. 1 A Possible HEI business model (Gallacher J., 2006)



Introduction

In the business model I am using there are a number of components or elements that make up the model namely:

Value Propositions

- **External** – the value offered to students, partners, and funders.
- **Internal** – the value offered to staff. This may include how the value is offered. Academic contracts may be seen to have an explicit component represented by their terms and conditions but there may also be an implicit contract associated with degrees of operational autonomy. If we accept a relatively high level of autonomy in academic roles the balance between the explicit and implicit contracts may be significant. Thus the internal value proposition may be shaped by amongst other things both the explicit and implicit contracts.
- **Resources** – physical resources such as buildings, information technology infrastructure and staff available to deliver the value propositions.
- **Processes** – activity or routines developed to utilise resources to deliver the value proposition.
- **Partners** – resources external to the institution engaged to help deliver the value proposition and may in fact form part of the value proposition such as is the case with a network model, (Stabell & Fjeldstad, 1998).
- **Students** – students may be seen to act in their relations with a higher education institution in three main ways,
 - the first is as a **Co-Producer** in the learning process.
 - the second is as a **Consumer**, purchasing services and products such as accommodation and catering and

- the third is as a **Participant** in the governance of the institution taking part in various committees and similar decision making bodies.
- **Feedback** - connecting the components or elements are feedback channels that may be seen as internal networks complementing the idea of external networks referred to in Partners above.

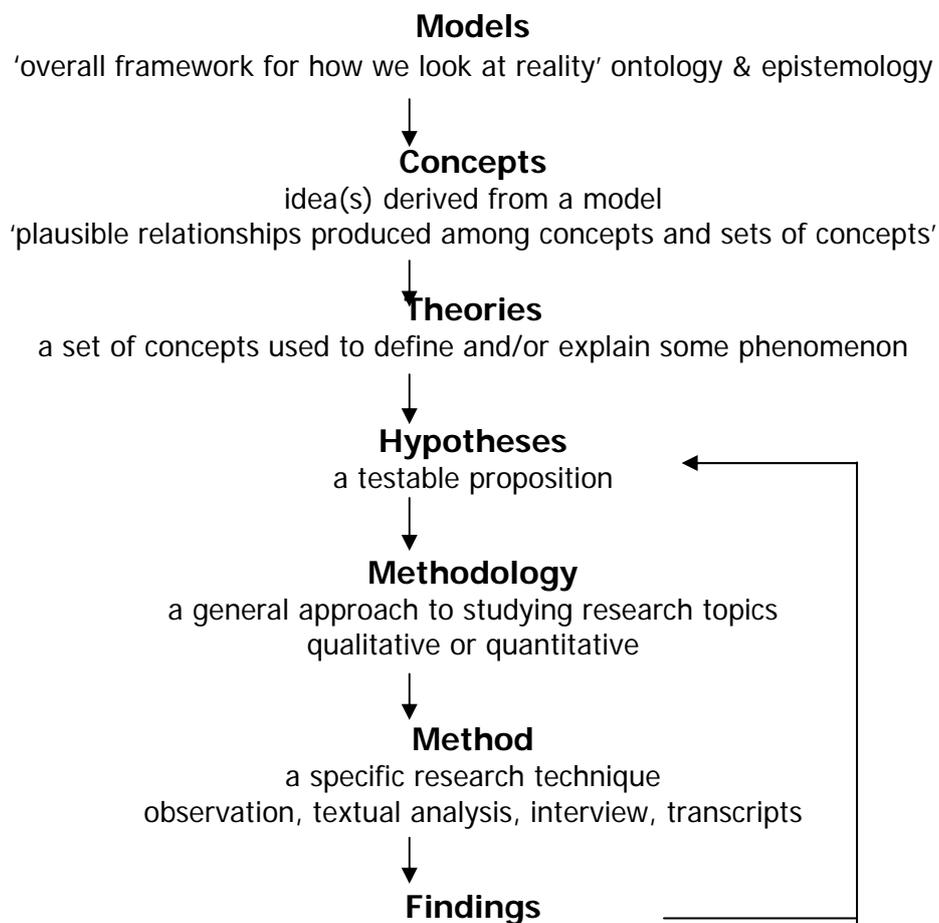
In my critical literature review, a variety of views as to what constitute business models became apparent, Linder & Cantrell, (2000) Magaretta, (2002) and Manyworlds, (2006). However in this part of my research I will limit my field of view to the income streams of HEIs and explore the data to discover if relationships or patterns emerge from these streams. If relationships or patterns appear to exist within this data I will examine them to see how they might assist in the development of a business model shown in figure 1. In this sense my approach starts from a more exploratory or descriptive position, in that I am exploring a data set rather than testing specific pre-determined hypotheses.

Whilst I have deliberately chosen to narrow the scope of the data to income streams in this document I hope to use the full breadth of the data more fully in document five. I have outlined the full data set available to me in appendix 1.

Part 2 Research Proposition

Research Approach

In document three I presented a figure, reproduced below, a combination of a table and a figure taken from Silverman, (2005). It summarised an approach to research, which both informed and guided my actions in undertaking this piece of research.



In this document I will discuss the research method section having covered the previous sections in document three and because the methodology for this document is required to be quantitative.

Research Method

In determining my choice of research method, I considered three main methods of investigation namely, survey, case study, and experiment. I felt

that given the tight time constraints and the fact that this document together with the preceding three documents, leads to a more comprehensive piece of research in document five, that both a case-study and experiment were overly ambitious and not wholly appropriate. This left the survey.

My choice was now whether to devise my own survey or use secondary data i.e. the results of a third party survey or surveys. I understood that the process of constructing, conducting and then analysing the results of the survey would of itself be developmental and a valid part of the learning process regardless of any particular research outcomes, but I felt compelled to use some of the large amount of data that had already been amassed by various agencies and private organisations before adding to it. Collecting additional data could be worthwhile but given my emerging preference for exploratory quantitative research a journey in a wider landscape might be more useful than the more limited but focussed world of a necessarily short survey.

In my role as finance director at York St John University College (YSJUC) I was aware of a number of sources of secondary data e.g. Higher Education Funding Council for England (Hefce), the Higher Education Statistical Agency (HESA), Higher Education Innovation Fund (HEIF), Universities UK (UUK), Standing Committee of Principles (SCOP) and the Higher Education Policy Institute (HEPI) and university annual financial reports. This is an indicative, rather than comprehensive, list but does go some way to indicating the rich nature of data available to a curious researcher. I was also aware of the financial data collected by CaritasData Limited over a number of years. This data was limited to financial returns but had an appeal both because of its very structured and familiar nature – Income & Expenditure Accounts, Balance Sheets, and Cash-flow Statements, its longitudinal nature i.e. 1995 to 2004 and its relative completeness with almost all HEIs represented. Finally it had a resonance and applicability to my role as a finance director in the higher education sector.

From figure 1 it can be seen that finance is only part of a business model although business models are often expressed in financial terms and this may be where part of the confusion arises in terms of what a business model may be. A further complication arises using the term business model in the social sector as finance may be seen as primarily an input in contrast to its role in the for profit sector where it is both an input and an output. Indeed it is possibly the single most important output and is used extensively as a performance measure (Collins, 2005). This perspective may change the way in which business models apply to HEIs in contrast to the way they apply to for-profit organisations and I hope to explore this aspect of business models as my research proceeds.

Research Questions

Although I am attempting to take an exploratory and descriptive approach to the data I have obtained I am framing, but not limiting, my exploration with the points noted below.

- Are there identifiable trends or patterns in the income data over the period reviewed in either;
 - the sources of income, grant , fees, research or other
 - the distribution of income
 - the growth or decline in income

for the sector as a whole or for individual or groups of institutions, either in absolute or relative terms or that might be helpful in describing types of business models adopted by HEIs?

Statistical Approach

Having chosen a third party survey which includes almost 100% of the population I am studying, I feel I do not need, at this stage, to be concerned about sample selection. However, whilst issues surrounding sample size and

selection should not be an issue I need to be aware of a range of statistical ideas and concepts whilst analysing this data.

I will now consider the data collection method and the data collected which I propose to use, in terms of validity, reliability and generalisability.

Validity

Validity is traditionally divided into three types; construct, internal and external (Balnaves and Caputi, 2001), (Easterby-Smith, Thorpe and Lowe, 2002).

Construct validity can be seen as a measure of the extent to which the research constructs represent what the researcher is trying to measure. In this case I am looking at the differences or similarities in reported income flows, by income source, as indicators of the use of different business models. HEI income sources are normally grants, fees, research and a mix of other sources. Whilst financial flows may form only part of a business model they are an external trace of activity and it seems plausible to investigate these traces as possible indicators of business models and hence I believe there is construct validity.

Internal validity tends to look at the level to which the research design can be said to allow conclusions to be drawn about the relationships between the variables measured in the research and whether bias has been eliminated. The data I am using has been collected from published financial information and the techniques I shall be applying are standard statistical techniques thus the exercise should have internal validity.

External validity refers to the extent to which the research findings can be generalised beyond the original dataset. The data here is very comprehensive in its coverage and becomes more like a census than a sample thus external validity becomes less of an issue as the extent to which any findings require application beyond the data set is at this stage limited.

Data types

Having looked at the validity of the data in terms of its usefulness in this piece of research I need to examine the nature of the data to be analysed. Data may be seen in terms of four types of namely, nominal, ordinal, interval and ratio although the difference between interval and ratio is somewhat obscure and probably not relevant for this piece of research.

The data I will be analysing is drawn from financial returns and as such is ratio data thus I can say that the reported grant income of Anglia Ruskin University in 2004 at £98.6m, is 8.5 times greater than the grant income of The Arts Institute at Bournemouth at £11.6m for the same period.

A common example of nominal data is gender data where it is possible to label and count occurrences but not rank the data. In the data set I am using the geographical location of each institution and their clustering into regions may be seen as nominal data. Thus I can label institutions according to the region in which they are located and form groups for further analysis. Ordinal data is data which can be labelled, the occurrences counted and ranked but the intervals between the occurrences are not necessarily consistent thus not all statistical tools are appropriate. In this piece of research I will not be using ordinal data. Interval data is data where the gap or interval between data points can be quantified but the lack of an absolute zero restricts the use of ratio analysis. Ratio data has all the attributes of interval data but has a value at absolute zero.

The nature of the data type may change with the question asked. Thus data about household levels of income can be ratio data when used to compare income levels by geographical area but becomes interval data when used as an indicator of social status (Easterby-Smith, Thorpe and Lowe, 2002). It may be more meaningful therefore to refer to interval and ratio questions, rather than interval or ratio data given the impact of the context of the question and not just the characteristics of the data in determining which category it falls into. The importance of recognising which category of data or what questions we

are asking is significant in the appropriateness of the statistical analysis tools we choose.

Where data is interval or ratio, means, standard deviation and measures of variance can be used whereas if the data is nominal or ordinal the analysis is more restricted to medians and modes. This is not to imply that only interval or ratio data are useful or even that a hierarchy exists with ratio data at the pinnacle and that ordinal and nominal data are in some way less useful and are to be considered only in the absence of ratio or interval data (Byrne, 2002). Ratio data analysis tends to analyse levels of similarities or deviation using variables collected during the research and represented in the data.

There has been some debate around whether in fact when we are measuring so called variables we are in reality measuring the impact or traces left by changes in the state of complex systems and that the variables do not in fact exist (Byrne, 2002). This is not to say that measurement is less useful more that classification may be underestimated in relation to what are sometimes seen as more powerful statistical techniques.

The notion that the simplification of complex systems to derive models that are then used to predict the likely future paths of those complex systems, has been argued to be a flawed process referred to as the Platonic backhand and forehand (Hayles, 2002). What is required, it is suggested, isn't simplification but the identification of the essentials of complex systems in order to drive forward understanding (Byrne, 2002). I hope in this piece of research I will be able to identify relevant essentials in income streams to aid the description or identification of a or some business model(s).

Approach to the Data

In exploring or analysing the data it is possible to use descriptive and classification techniques to reveal patterns or trends within the data. The first step is organising the data and there are a number of useful techniques including, stem and leaf displays, histograms, box-plots, graphs and tables.

Before examining these techniques and discussing their suitability for data analysis in this piece of research I will briefly discuss two possible ways of approaching analysis using clustering.

The first is where the data is organised into pre-defined groupings and the second is where clusters are allowed to emerge from the analysis. These approaches have been described as typology and taxonomy respectively (Lambert, 2006).

Typology may be seen as scouring the data looking for clusters or sets of data that may support a pre existing hypothesis. The approach is essentially deductive where the researcher pre-defines clusters to represent particular conceptualisations and then allocates the data demonstrating the relevant characteristics to the appropriate cluster. This allows the researcher to develop a theory or amend an original conceptualisation in light of the empirical results. Weill and Vitalie's approach to atomic business models is an example of the deductive approach in the area of business models (Lambert, 2006)

A taxonomy, in contrast, is allowed to emerge from the data by the process of identifying clusters and is not concerned with gathering evidence of the existence of pre defined groupings and can thus be described as inductive. The researcher through the use of one or more tools gathers research data which is then subjected to analysis from which, hopefully, identifiable clusters emerge. These clusters may then be used as a basis to develop generalisations.

Another way of scouring the data for connections or patterns is the use of artificial neural networks. Artificial neural networks are basically sophisticated techniques for modelling data in a non-linear manner. The basis of an artificial neural network is a collection of a large number of highly interconnected processing units which are used to solve problems where algorithms aren't clearly defined but large amounts of data exist from which patterns can be extracted. They differ from conventional computer programs in that

conventional computer programs only follow the instructions they have been given i.e. the program, whereas the artificial neural network is by virtue of its interconnectedness is able to try different and novel solutions. The results therefore are unpredictable and need to be viewed with care. Artificial neural network software is now available at reasonable prices and whilst I will not use it in this particular piece of research I am curious to discover what results might be achieved if an artificial neural network approach were to be applied to the large amount of financial and non financial data available.

Part Three - The Data

Introduction

As noted above I chose to restrict the data in this piece of research to HEI income from the years 1995 to 2004. There was however some data for the year 1994 but this has been ignored as there were only four cases. Not all institutions submitted data for all years and appendix 2 - Missing Data shows those cases and the years in which the responses were missing. Perhaps the most significant missing case missing was University of Oxford as its income has been consistently one of the three highest. Given the potential impact of the omission of an institution with a large income value I updated the download from hard copy I had available. Data for three institutions was missing for 1996 and 1996 which had implications for the analysis of movement in the top 25 institutions by total income and this is referred to in the relevant section. The gaps in the data amounted to 71 records out of a total of 1,576 or 4.5% and given their relatively low income values I believe do not influence the validity of the research.

The complete data set I obtained is described in appendix 1- Data Type Summary and contains data on income, expenses, balance sheet, and cash-flow. In addition, at my request, data on the age of the institutions, the number of subsidiaries and mission statements were included in the files I received from CaritasData Limited. I felt that this non-financial might be useful variables to analyse in conjunction with the more traditional elements of the financial data in document 5.

Obtaining the data

York St John University College (YSJUC) subscribes to the CaritasData Higher Education Financial Yearbook. The YSJUC subscription entitles me to both hardcopy and access to electronic data but unfortunately the electronically accessible data is limited to simple queries with outputs that were not easily manipulated for further analysis and thus was not suitable for this piece of

research. I contacted CaritasData Limited and discussed the availability of this data in a more user-friendly electronic format and whilst they had been considering a more accessible format and extending the query functionality, they could not give me a timescale for these changes. I negotiated with CaritasData Limited and was successful in obtaining copies of their financial data sets imported into Microsoft Excel spreadsheets. The data available was extensive and covered a wide area of financial information and some non-financial information for a period of ten years, 1995 – 2004. There was a small cost for this data of £120, which was funded by YSJUC.

As this document is being written the 2006 handbook has been published containing information for the years 2002 to 2005 but I have not extended the data for this document. As noted previously in this document, I will restrict the quantitative analysis to the income data. This is in part to make the analysis more focused but also it is a more manageable data set which might be expanded in document 5, a much larger piece of research work.

Manipulating the Data - Test

In order to test the application of exploratory or descriptive statistics and to discover some of the potential of SPSS first hand, I imported the income data for the year 2004 into the statistical software package SPSS. The process was relatively straightforward as the data was originally held in Microsoft Excel file and part of the functionality of SPSS is data exchange with this and other packages. Using the commands, analyse, descriptive statistics, explore and selecting Total Income with income data for 2004 as the dependent variable the following results were found;

Table 1 - 2004 Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Total Income1	158	9.5%	0	.0%	158	100.0%

There were 158 institutions in the data set, total income was taken as a dependant variable and period 1 was taken as the factor variable.

Table 2 - 2004 Descriptive Statistics

			Statistic	Std. Error
Total	Mean		105.610	8.4056
Income 1	95% Confidence Interval for Mean	Lower Bound	89.008	
		Upper Bound	122.213	
	5% Trimmed Mean		92.506	
	Median		82.702	
	Variance		11163.463	
	Std. Deviation		105.6573	
	Minimum		1.8	
	Maximum		644.3	
	Range		642.5	
	Interquartile Range		103.1	
	Skewness		2.175	.193
	Kurtosis		6.077	.384

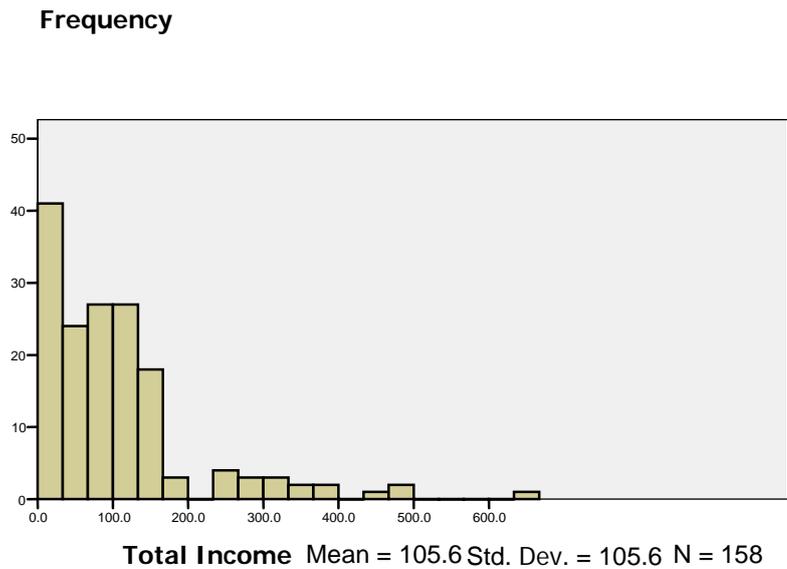
Table 2 - 2004 Descriptive Statistics, demonstrates the powerful statistical nature of SPSS. The mean value of total income in 2004 was £105.6k, rounded to one decimal place, with a median value of £82.7k. A median value lower than the mean value can suggest a skew or bias in the data with a high proportion of lower values or a number of extreme values at the larger end of the sample. Other measures of dispersion are recorded such as range, total and inter quartile and standard deviation. The range in this data set is £642,5m with a maximum of £644.3m and a minimum income value was £1.8m giving a very wide range of values.

The standard deviation is a measure of the spread around a mean and in a population with a normal distribution we can expect 95% of values to lie within 2 standard deviations of the mean. With a standard deviation value and a mean of £105.6k, 95% of the population can be expected to lie within -£105.6k and £311.2k. However given the nature of income a negative figure is unlikely and illustrates that a statistical result should always be viewed in the context of the data being analysed. In addition and of more interest in a quantitative paper the population under consideration is more of a census than a sample and from inspection is not normally distributed. Thus the usefulness of the standard deviation in this instance can be questioned as may have been noted from the theoretical negative value. A technique called transformation can be applied where each data point is divided by the median and the resulting plot is a normal distribution. Alternative transformation techniques include taking the square or square root of each data point for left or right sided skewed distributions. At this stage I have not pursued these calculations.

The positive kurtosis figure of 6.6 is another indicator of the skewed nature of the distribution and of clustering and a long tail.

The histogram, stem and leaf table, extreme value table and box plot below all further demonstrate the skewed nature of the distribution of the total income data for 2004. The histogram visually illustrates the skewed nature of the distribution with the preponderance of results below £150k demonstrating a reversed J shape.

Graph 1 - 2004 Total Income Histogram



The leaf and stem clustering illustrates the clustering at lower levels of income with 132 institutions with an income level below £150k. At first glance the leaf and stem analysis may look simplistic but the method allows the integrity of the data to be retained, the display is economic and overall this method of summarising frequencies can be visually quite appealing.

Table 3 - 2004 Total Income Stem-and-Leaf Plot

Frequency	Stem & Leaf
11.00	0 . 14467777889
17.00	1 . 00000112334457888
11.00	2 . 00022344467
6.00	3 . 023499
8.00	4 . 00022669
10.00	5 . 0122467889
4.00	6 . 2378
8.00	7 . 02233448
10.00	8 . 0002234588
7.00	9 . 0038899
4.00	10 . 2346
14.00	11 . 02223455777899
6.00	12 . 124489
9.00	13 . 012588999
7.00	14 . 0123689
3.00	15 . 339
2.00	16 . 15
.00	17 .
1.00	18 . 0
2.00	19 . 27

```

.00      20 .
Frequency Stem & Leaf
.00      21 .
.00      22 .
1.00     23 .  3
3.00     24 . 469
.00      25 .
.00      26 .
2.00     27 .  38
1.00     28 .  4
11.00  Extremes      (>=304)

```

```

Stem width:      10.0
Each leaf:       1 case(s)

```

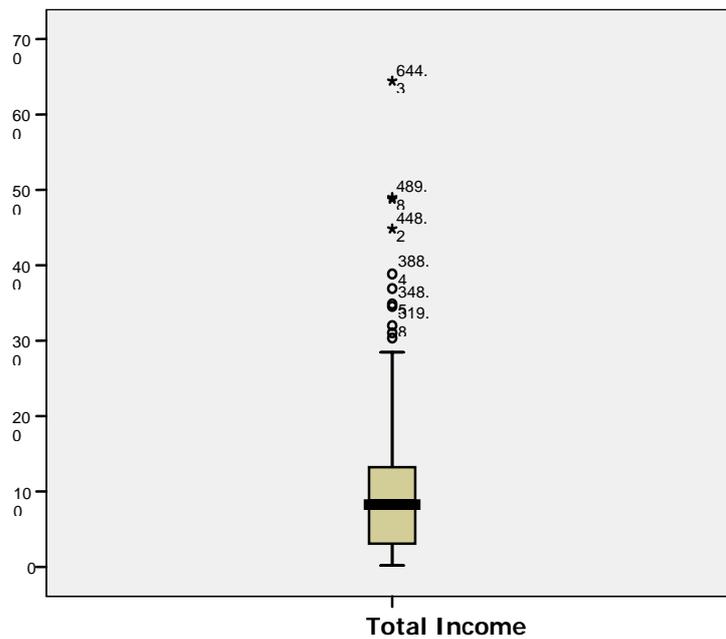
Table 4 Extreme value highlights the high and low values and also illustrates the range of values in the top five institutions by income. The highest income at £644.3m drops to £388.4 within 5 institutions. This is a significant range over five institutions and led to additional analysis of the top 25 institutions by income over the period 1995 to 2004.

Table 4 - Extreme Values

			Case Number	Total Income	Value
Total Income	Highest	1	158	644.3	644.3
		2	156	489.8	489.8
		3	157	487.7	487.7
		4	155	448.2	448.2
		5	154	388.4	388.4
	Lowest	1	1	1.8	1.8
		2	2	4.0	4.0
		3	3	4.6	4.6
		4	4	6.2	6.2
		5	5	7.0	7.0

The box plot display can also be a useful way of showing graphically dispersion in data. Here the quartile ranges are clearly illustrated and by checking the labels box the values of the high value outlier institutions can be seen.

Graph 2 - 2004 Total Income Box



Manipulating the Data Test - Initial thoughts

The usefulness of this simple analysis, although limited to the total income, is that it illustrates both the wide value range of HEI income and begins to suggest at the possibility of clusters within the data such as the concentration in the sub £150m group and the large value range in a small number of high income generators. The different statistical tools all demonstrate the skewed nature of the income and thus inform further analysis. It also suggests additional lines of enquiry such as movements in this concentration over time or movements by individual institutions within their original income groupings.

In my roles in finance I have often used Microsoft Excel and initially used that software to summarise the financial data and it has been interesting to discover how powerful SPSS is in this field. Testing the data manipulation within Microsoft Excel is more familiar to me and I describe the process in a later section. For the next document I will investigate more fully the functionality of SPSS.

Preparing the Data

As previously indicated, the data was emailed to me by CaritasData Limited in a zipped Microsoft Excel format as attachments with a file for each data type i.e. income, expenses, balance sheet, cash-flow and non-financial. Each file contained data for the period 1995 to 2004 for between 145 and 168 institutions for the United Kingdom and some Irish institutions. Thus, I had data on almost the whole HEI population, which meant sampling issues should not be a concern at this stage. Gaps in the data are noted in appendix 2 - Missing Data.

The income data was split into separate Microsoft Excel spreadsheets, one for each year, and organised in the same way to aid comparison whilst keeping the original data intact. During this sorting I found that in the extraction from their database CaritasData had misclassified some of the data. This was apparent from the year field which indicated the data related to any earlier year than the rest of the data. I checked this against the information in the annual publication and confirmed the errors. I moved those pieces of data that had been allocated to an incorrect year to the correct year and I now had the data in rows by institution and columns by type of income for each year. I inserted total columns for grants, fees, other, investment and total income and sorted the data in ascending order of total income.

My approach to the data was in the first instance to look at it as a whole and then to explore the data in terms of clusters or groupings that may be sought or emerge. By looking at the data as a whole I hoped to be able to determine any overall shifts or trends that may aid insight into the business models underlying them and also might assist the development of the second level of analysis in terms of the different types of income in the data set.

Analysing the Data

The total data set when recorded in Microsoft Excel consisted of 1,576 rows or approximately 157 cases per annum and 27 columns or responses. The number of columns increased as I added various formulae, mainly totals and

ratios. Taking the data in annual chunks I performed basic statistical operations using Microsoft Excel the outcomes of which are summarised in tables 5 and 6 below.

Table 5 – Basic statistical measures (£m - at actual year prices)

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Standard Deviation S	54.8	58.5	61.9	69.0	72.4	77.3	82.9	87.8	98.3	105.6
Standard Deviation P	54.6	58.3	61.7	68.7	72.2	77.0	82.6	87.5	98.0	105.3
Mean	61.0	63.9	68.0	71.4	79.0	77.6	82.2	88.7	95.9	105.6
Median	51.0	53.1	57.0	59.2	62.0	61.0	63.9	70.5	73.3	82.7
Mean/Med	1.20	1.20	1.19	1.21	1.27	1.27	1.29	1.26	1.31	1.28

Table 6 - Basic Statistical measures (£m - at 2004 prices)

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Standard Deviation S	67.1	69.2	70.9	78.1	82.0	84.9	89.3	93.2	101.4	105.6
Standard Deviation P	66.9	69.0	70.7	77.8	81.7	84.7	89.0	93.0	101.1	105.3
Mean	74.7	75.5	77.8	80.8	85.0	85.3	88.5	94.3	99.0	105.6
Median	62.4	62.8	65.3	67.0	70.1	67.0	68.9	74.9	75.6	82.7
Mean/Med	1.20	1.20	1.19	1.21	1.21	1.27	1.29	1.26	1.31	1.28

Table 7 - Changes in Measures of Spread over time 1995 base (using 2004 prices)

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Standard Deviation sample	100%	103%	102%	113%	118%	123%	129%	135%	147%	153%
Standard Deviation population	100%	103%	102%	113%	118%	123%	129%	135%	147%	153%
Mean	100%	101%	103%	107%	113%	113%	117%	125%	131%	140%
Median	100%	101%	104%	107%	112%	107%	110%	119%	120%	132%
Mean/Median	100%	101%	99%	100%	101%	106%	107%	105%	109%	106%

Standard deviation is a measure of the deviation or variance of the individual data points from the mean or average of the data set and is thus a measure of spread. The calculation can be based on a sample (Standard Deviation S) or a population (Standard Deviation P). The data I have tends more to a population than a sample but for completeness I have calculated the standard deviation using both measures. The difference in the result was 0.2, or 0.3, with the sample standard deviation greater than the population formula and whilst interesting is not material in this piece of research.

So what do these statistical measures tell us?

Firstly we need to recognise that the data in table 5 has not been adjusted for inflation over the period 1995 -2004 and the increases in values are therefore not real in terms of buying power and an increase in the standard deviations over time would be expected. Table 6 has been adjusted for inflation using the basic Retail Price Index, National Statistics (2006) to inflate the earlier years' income values to 2004 prices. Whilst this is a general index and it might be argued an index more specific to higher education inflation might be used I have chosen this because of its ready availability and an exact adjustment is not required simply one that removes the general impact of inflation.

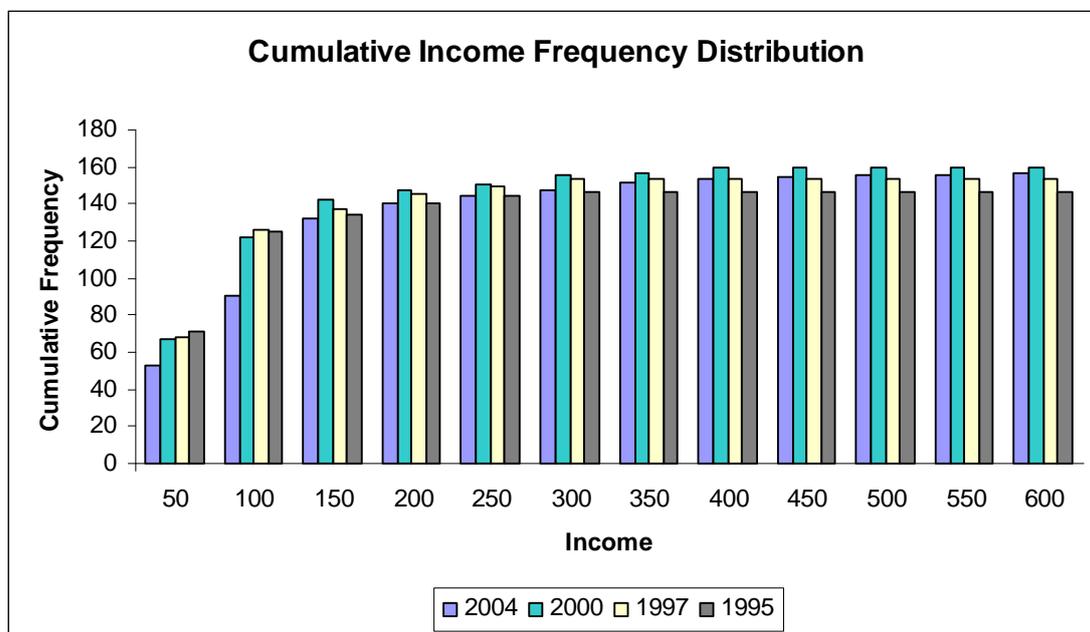
Table 6 shows an increase in all the measures of spread albeit at different rates. The population calculated standard deviation has risen from £66.9m to £105.3m. At the same time the mean rose from £74.7m to £105.6m whilst the median rose by a smaller amount from £62.4m to £82.7m. Taking the mean and median together, i.e. the arithmetic average and the middle value result, the value of the mean divided by the median in 1995 was 1.20 rising to a maximum of 1.31 in 2003 and ending the period in 2004 at 1.28. The increase in this ratio seems to suggest that the growth in income was skewed towards the higher earners as the mean grew faster than the median.

Table 7 expresses the results as percentages of the 1995 values at 2004 prices. The standard deviation has continued to grow suggesting that the

spread of income values has increased. The mean has grown slightly faster than the median suggesting that income in higher value institutions has grown more than lower value institutions. This suggests that the bias in the data set has increased. I will look at skewness or bias below.

The skewness of the data can be illustrated in a number of ways. Perhaps the simplest is to look at a frequency graph and a histogram. From this type of presentation it is more useful to present the data using a selection of years to get a feel for changes in the nature of the bias or skew over time.

Graph 3 - Cumulative Income (unadjusted) Frequency Distribution

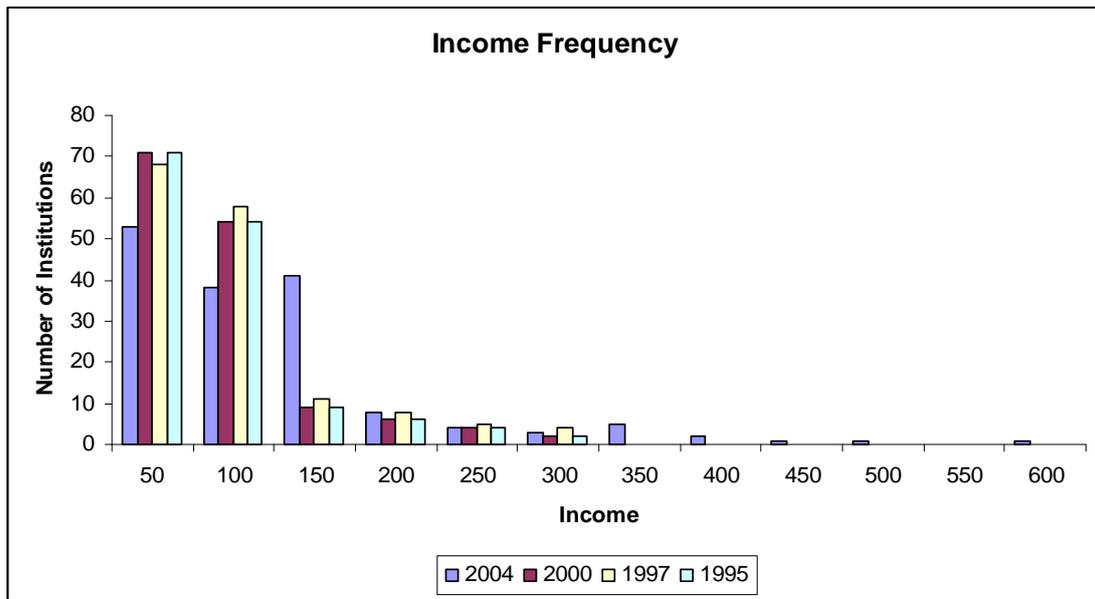


In graph 3 I have selected four years, 1995, 1997, 2000 and 2004, from within the time period under review. To include all the years would lead to a cluttered graph and potentially reduce its usefulness. From this graph we can see that an income level of £150m includes 120 to 140 of the 160 or so institutions. In addition the height of the columns in the blocks £50m and £100m show a steady decline in the number of institutions. This will be impacted on by inflation and will be investigated later in the paper.

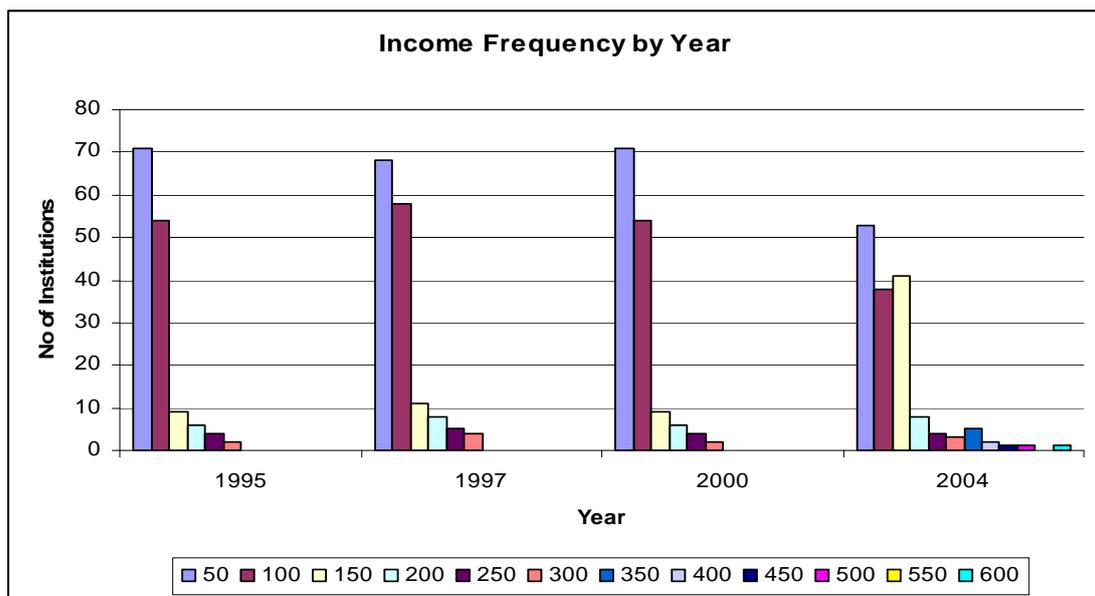
Graph 3a shows a simple histogram for the same period. The income groups £50m and £100m show a general fall in numbers but not for every year and

the growth in the group £100m -£150m in 2004 is quite striking whilst the same information presented by year would look like this. Again the decline in the number of institutions in the £50m and £100m groups is evident.

Graph 3a Total Income (unadjusted) Frequency 1995, 1997, 2000 and 2004



Graph 3b Total Income (unadjusted) Frequency in Year Clusters



The higher level of frequencies occurs at the lower levels of income and the differences are sufficiently large that it is difficult to represent all the data on a single scale. Again the decline in the lower two income groups and the increase in the £150m group is evident.

From the graphs we can see a preponderance of institutions in the lower income levels. This is supported arithmetically when we look at the ratio of the mean to median. With more institutions in the lower income bands we would expect the median to be lower than the mean.

Over time the number of institutions below £50m falls although given that this is not inflation adjusted some movement of this nature is to be expected. By inspection the group which changes most prominently is the £101 - £150m and there appears to be the development of a longer tail by 2004.

Having looked at graphical representations we can now look at a table of skewness which takes the total unadjusted income by institution by year and uses a statistical measure of skew. Skew is a measure of the asymmetry of the distribution of the data about the mean of the data. A positive result indicates a majority of the data below the mean and a negative result indicates a majority of the data above the mean. This is sometimes described in terms of a long tail. A long tail to the right of the distribution indicates a positive skew whilst a long tail to the left of the distribution indicates a negative skew. The results in table 8 below are positive indicating a bias or skew to lower values of income and another way to describe this is to say that this distribution is one with a long right sided tail.

Table 8 - Skew by Year

	1995	1996	1997	1998	1999	2000	2001
Skew	1.56	1.57	1.54	1.75	1.82	1.98	2.04

Interestingly the measure of skew gets larger in a positive direction over the period. This is supported by the increasing value of the mean/media. To

understand that the data is skewed is useful in itself as it will inform how the data might most appropriately analysed, as well as being useful information about the distribution of the population. The increasing level of skew displayed in the table indicates that the long right tail is getting longer or that the population is growing faster in the above average levels of income. Further investigation of this is required.

Table 9 - Income (unadjusted) Frequency Table

	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	M'ent
50	53	59	62	67	69	66	67	68	70	72	(19)
100	38	43	53	54	55	53	58	58	56	54	(16)
150	41	39	31	22	20	19	15	11	9	9	32
200	8	5	4	6	5	6	6	8	5	6	2
250	4	5	5	4	4	4	4	5	7	4	-
300	3	4	3	4	5	4	4	4	2	2	1
350	5	3	5	2	1	3	3	-	-	-	5
400	2	2	1	2	3	1	-	-	-	-	2
450	1	1	3	2	-	-	-	-	-	-	1
500	2	2	-	-	-	-	-	-	-	-	2
550	-	-	-	-	-	-	-	-	-	-	-
600	1	1	-	-	-	-	-	-	-	-	1
Total	158	164	167	163	162	156	157	154	149	147	11

Table 9 Income (unadjusted) Frequency table shows the numbers behind the distribution graphs. It is apparent that a significant movement has been the decline in the number of institutions in the income groups £0m- £50m and £50m -£100m with reductions of 19 and 16 and an increase in the group £100m -£200m of 32. In 1995 92% of institutions had an income below £150m. By 2004 this percentage had dropped to 84%. However given that the measure of skew has increased this shift was insufficient to reduce the skewness in income distribution and we are still left with a preponderance of institutions in the lower income levels.

The view of the data as a whole cannot be expected to give any particular insight into the possible nature of business models as the make up of the income is required for that, however it is worth looking at the spread of income levels to remind ourselves of the nature of the sector viewed from the perspective of income. From the analysis of income in total differentiated only by institution the most striking feature appears to be the skewed nature of the distribution.

The skewed nature of the distribution of income has two significant but related aspects. The first is the lower income level cluster and the second the long right sided tail. Table 9 looks at the second of these and shows the top 25 institutions by total income over the period 1995 to 2004. The blank squares are years where the institution was not in the top 25. By formatting the 1995 top ten institutions in bold it is possible to see that only Glasgow University dropped out of the top ten and only King's College entered it. Only four institutions that were in the top 25 in 1995 were not in that group in 2004. Seven institutions entered the top 25 of which only four remained. Of the seven noted as entering the top 25 Leicester, Nottingham and Southampton universities are included but this is because their data wasn't available for the two years 1995 and 1996. Their income levels suggest that had the data been available they would have been included in the original top 25. The significance of the table is the apparent lack of movement in the top 25 institutions and the even less movement in the top 10.

Does this tell us anything about business models? As previously noted total income data cannot tell us anything about a business model peculiar to an institution or group of institutions but an understanding of the lack of mobility at the top of the sector can only help inform further analysis. Where there is a diversity of business models or a developing diversity in a sector, movement in the income ranking might be expected. Such a lack of movement in the ranking suggests strong barriers to change and this might extended to the ability to develop new significant and business models. Such a barrier to movement might be the Hefce funding regime where student numbers at

institutions are closely controlled, thus reducing the potential movements in income. Research funding mechanisms might also be a factor. A countering influence to this lack of fluidity could be the encouragement from government for institutions to engage more fully with industry and the generation of 3rd stream income. (Lambert, 2005).

Table 10 - Top 25 Institutions by Total Income

Top 25	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Position										
University of Oxford	1	1	2	3	4	2	2	3	3	3
University of Cambridge	2	2	3	4	3	3	3	1	1	1
University of Manchester	3	3	4	5	5	5	5	5	5	5
University of Edinburgh	4	5	6	7	7	7	8	7	6	6
University College	5	4	1	1	1	1	1	2	2	2
University of Leeds	6	6	5	8	9	9	9	8	8	8
Open University	7	7	7	9	8	8	7	9	9	9
University of Birmingham	8	9	9	10	10	10	10	10	10	10
Imperial College	9	8	8	2	2	4	4	4	4	4
University of Glasgow	10	10	10	11	11	11	11	11	11	13
University of Sheffield	11	11	11	12	12	13	13	13	13	12
King's College London	12	12	13	6	6	6	6	6	7	7
University of Bristol	13	14	15	16	16	16	16	16	16	16
University of Liverpool	14	13	16	15	15	15	15	17	17	18
University of Newcastle upon	15	15	17	17	17	17	17	15	15	15
University of Strathclyde	16	16	19	19	19	19	20	20	21	21
University of Warwick	17	17	18	18	18	18	18	18	18	17
Queen's University	18	18	20	20	20	21	21	21	20	20

Top 25	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Position										
Queen Mary, University of	19	19	21	23	23	24	24	24	24	24
Manchester Metropolitan	20	20	23	22	22	22	22	23	25	22
Cardiff University	21	21	22	21	21	20	19	19	19	19
De Montfort University	22	22			25	25				
University of Reading	23	23								
Cranfield University	24									
University of Ulster	25									
Nottingham Trent University		24								
University of Salford		25	25	25						
University of Southampton*			14	14	14	14	14	14	14	14
University of Leicester*			24	24	24	23	23	22	22	23
University of Nottingham*			12	13	13	12	12	12	12	11
University of Durham							25			
University of Surrey								25	23	25

*Data missing for 1995 and 1996

Manipulating the Data - Total Income Initial Thoughts

Having explored the total income data using a variety of statistical tools there does appear to be some identifiable patterns. These are a positively skewed distribution with most institutions falling into the sub £150m income group, a long Right sided tail. There has been movement of institutions from the £0-£50m and £50m-£100m into the next group but at the top of the income range i.e. the 25 highest earners there has been little change over the period. This lack of change seems to suggest that whilst differential growth is possible hence the movement in the lower groupings significant or breakthrough change has not occurred. This may be the result of the managed funding structures surrounding HEIs in the UK and thus the

adoption of and impact of business models is unlikely to be significant enough to register in a total income analysis unless perhaps a more detailed tracking of individual institution activity was included.

Income Composition – Changes of over the period 1995-2004

Having reviewed income as a whole it would be beneficial now look at the components that make up total income and explore this data to see if any patterns emerge in the make up or movement in the various types of income that may reveal traces of one or more business models.

In the total income all years sheet for each year I added columns to the right of the data which expressed each type of income as a percentage of the total income. I added a further column to the left of the data containing the formula which is referred to as a nested If statement. The formula is as follows;

```
=+IF(AM2>75%,"A",+IF(AM2>50%,"B",+IF(AM2>25%,"C","D")))
```

This formula assigned a letter A, B, C, or D to each institution determined by whether the grant proportion of an institution's income was greater than 75% = A, between 75% and 50% = B, between 50% and 25% = C, or less than 25% = D. This was an attempt to form clusters from the data set and follows the deductive method where the researcher pre-defines groups and sorts the cases to fit those groups. Later this classification was extended to all the main types of income namely, fee, research and other. The next question after attempting to form clusters would be to see if the clusters revealed any patterns e.g. having been determined by a measure of grant dependency could they be a proxy for different income models and in turn different business models being developed by different institutions. From this simple assignment of a letter, I was able to create two tables shown below as tables 11a and 11b.

Table 11a - Number of Institutions with Grant Income as a % of Total Income in the groups X>75%, 75%>X>50%, 50 %>X>25%, X<25%

Year	A	B	C	D	
	X>75%	75%>X>50%	50%>X>25%	X<25%	Total
1995	1	71	73	2	147
1996	1	57	87	4	149
1997	0	49	100	5	154
1998	0	46	105	6	157
1999	0	62	88	6	156
2000	2	60	95	6	163
2001	3	62	92	7	164
2002	3	61	93	8	165
2003	2	57	96	9	164
2004	2	57	89	9	157

Table 11b % of Institutions with Grant Income as a % of Total Income in the groups X>75%, 75%>X>50%, 50%>X>25%, X<25%

Year	A	B	C	D	
	X>75%	75%>X>50%	50%>X>25%	X<25%	Total
1995	0.7%	48.3%	49.7%	1.4%	100.0%
1996	0.7%	38.3%	58.4%	2.7%	100.0%
1997	0.0%	31.8%	64.9%	3.2%	100.0%
1998	0.0%	29.3%	66.9%	3.8%	100.0%
1999	0.0%	39.7%	56.4%	3.8%	100.0%
2000	1.2%	36.8%	58.3%	3.7%	100.0%
2001	1.8%	37.8%	56.1%	4.3%	100.0%
2002	1.8%	37.0%	56.4%	4.8%	100.0%
2003	1.2%	34.8%	58.5%	5.5%	100.0%
2004	1.3%	36.3%	56.7%	5.7%	100.0%

Table 11a indicates that in the period from 1995 to 1998 there appears to be a shift in institution numbers from group B with 75%>X>50% of their income in the form of grant to group C with 50%>X>25% of their income from grants. The number of institutions with grant income in group B, 75 %>X>50%, fell from 71 to 46, whilst the number in group C, 50%>X>25%, rose from 73 to 105. Part of the increase in group C could be due to the increase in the population from 147 to 156 but the decrease in group B cannot be explained by this.

However in 1999 there was a dramatic shift in this trend with a significant increase in the number of institutions in group B, 75%>X>50%, from 46 to 62 and a similar decrease in institutions in group C, 50%>X>25 from 105 to 88. Grants in this case are Recurrent, Specific, Deferred, Inherited, Liability and Other.

Table 11b expresses this data, in percentage terms and we can see that whilst groups B and C each accounted for approximately 49% of the institutions in 1995, by 1998 group B had fallen to 29.3% whilst group C had risen to 66.9%. Why this trend changed abruptly in 1999 with group B now representing 39.7% and group C 56.4% and remaining reasonably constant to 2004 with group B at 36.3% and group C at 56.7% has yet to be determined. Also from tables 11a and 11b we can see that in group D with less than 25 % dependency on grant income the number of institutions rose suggesting that some movement in income diversification has taken place.

Expressed differently we can say that from 1995 to 1998 HEIs as a whole became less grant dependant but that there was an increase in dependency in 1999, since when the proportion of grant income as a percentage of total income has remained relatively constant. Does this shed any light on business models used? Indirectly perhaps if the change in the proportion of grant income reflects deliberate actions by HEIs to re position their income flows.

When the data is expressed in a graphical form, graph 4, the two extremes of the range $X > 75\%$ and $X < 25\%$ are too small to be usefully represented on the same scale with the other two groups and I have omitted them from the data set. The diverging trend from 1995 to 1998 and a sharp convergence in 1999 and then the maintenance of those proportions are clearly visible in graph 4. What might have caused this s apparent shift in the proportion of institutional income made up by grant income?

Graph 4 - % of Institutions with Grant Income as a % of Total Income in the groups B 75%>X>50% and C 50%>X>25%

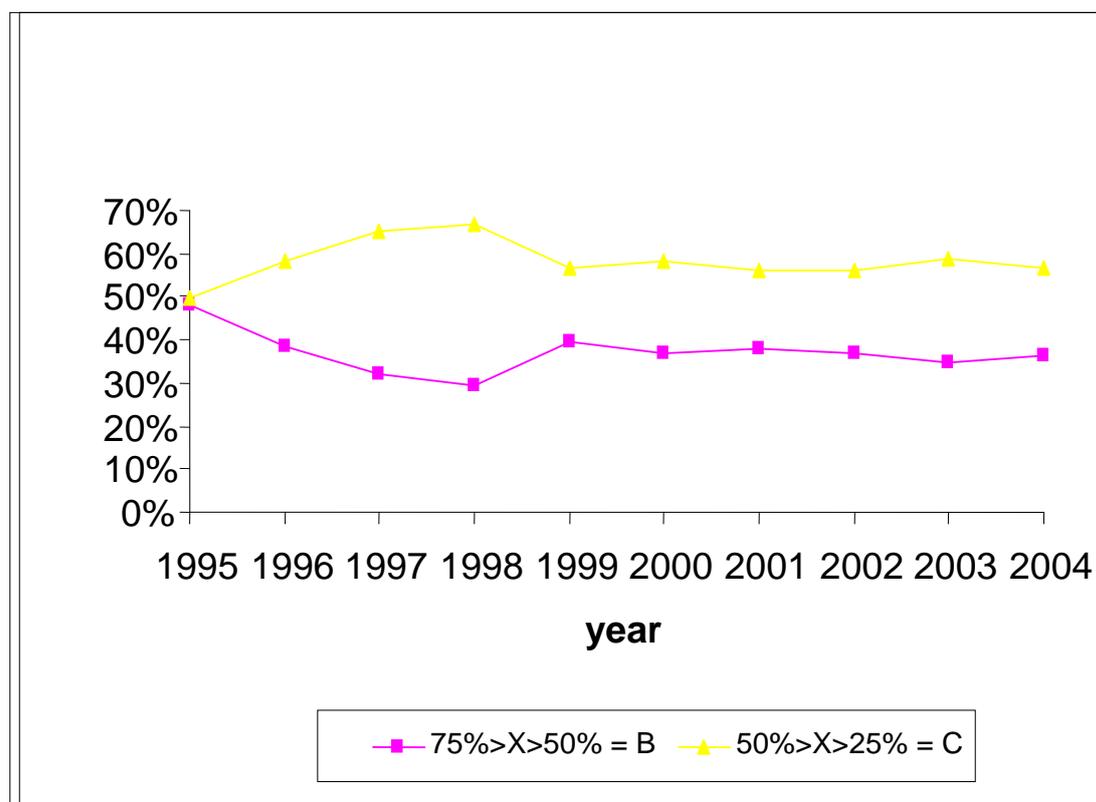


Table 12 - Sector Change in Grant Income as a Percentage of Total Income

Year	% Growth in Grant Income	%Growth in Total Income	Total Grant Income Growth Rate / Total Income Growth Rate
2003 – 2004	+3.1%	+3.0%	1.05
2002 – 2003	+3.3%	+6.1%	0.55
2001 – 2002	+10.7%	+10.6%	1.01
2000 – 2001	+4.7%	+6.5%	0.72
1999 – 2000	+6.9%	+7.4%	0.93
1998 – 1999	+9.3%	+4.5%	2.05
1997 – 1998	+4.8%	+7.0%	0.69
1996 – 1997	+3.3%	+10.0%	0.33
1995 – 1996	+1.4%	+6.1%	0.22

In table 12 above the period from 1995 to 1998 shows a much faster rate of growth in total income than grant income with the ratio of growth rates being less than one and this is reflected in graph 4 % Grant income to total Income, as the diverging paths of groups C and B. In 1998-9 however the grant income

growth rate was more than twice that of total income creating the convergence of groups C and B. In this year not only was grant income growth the second highest of the period under review but it coincided with the second lowest year of total income growth. Thus with high grant growth and low total income growth the movement of institutions from group C to B is not unexpected.

For the balance of the period, growth in grant and total income moved at similar rates with the exception of 2002-03 where total income grew almost twice as fast as grant income. (At this point I will not be investigating this change but may come back to it at a later point in my research.) If we express the two growth rates as a ratio by dividing the grant growth rate by the total income growth rate 1998-99 stands out with a factor of 2.05. The change referred to in 2003 is reflected as the factor changes from 1.05 in 2002 to 0.55 in 2003 and by a divergence of the graphs lines but not as prominent as for 1998-89.

Another point to be taken from table 12 - Sector Change in Grant Income as a Percentage of Total Income, is that for six out of the nine years in the period under review total income grew faster than grant income and for two other years the growth rates were very similar with a factor of approximately 1. In fact 1998-99 would appear to be an anomalous year. With total income consistently growing faster than, or as fast as, grant income there would appear to be a case to suggest that income diversification was to some extent successful. Thus it might be said that higher education institutions had to some extent changed or adapted their business model(s) particularly if we stretch Rapp's idea of a taxonomy of business models (Rappa M., 2006) built around how revenues are generated to include shifts between and differential growth in grant, fee and other sources of revenue.

I have clustered the data around income groups and have approached this analysis from a typological and deductive method by assigning the variables to pre-determined classifications (Byrne, 2002). Given the functionality of Microsoft Excel and my previous experience of manipulating data using this

piece of software this is probably not an unexpected approach for an initial piece of analysis. The structure of Microsoft Excel may perhaps facilitate the deductive approach at the expense of the inductive thus there is the potential for the choice of analysis tool to influence the research method and this needs to be recognised by the researcher.

Having identified the shift in income source reflected in the change from a decreasing dependence on grant income to a position of higher dependence I was then interested in identifying those institutions that moved from group B to C in 1998-9 in order to perhaps shed some light on reasons for these movements. I used a filter on the data set to select the years 1998 and 1999 and then copied the data for these two years into a new area and sorted it by institution. This allowed me to identify those institutions which had changed status and the amount of income that had moved. From this analysis of the number of institutions in each category there was a shift of 16 institutions from the group C 50%>X>25% range into the group B 75%>X>50% range plus 1 institution that did not appear in the 1999 return but was in the range 50%>X>25% in 1998. This institution was in category B for the nine years of results reported and I will therefore ignore this institution in the further analysis of the change in the trend. The result is shown in table 13 below.

Table 13 - Institutions that moved from a Grant Percentage of Income of 50%>X>25% group C to 75%>X>50% group B between 1998 and 1999

Institution	Total Income	% Tot Inc Growth Av 9.3%	Year & Grant Inc	% Grant Inc Growth Av 4.5%	Grant Inc % of Total Inc
Total Income >=£100m					
Nottingham Trent University	1999 - £107.2m	0%	1999 - £56.5m	15.3%	1999 52.7%
	1998 - £107.3m		1998 - £49.0m		1998 45.7%
Total Income >=£50m<£100m					
University of Plymouth	1999 - £94.2m	5.6%	1999 - £50.4m	16.7%	1999 53.5%
	1998 - £89.2m		1998 - £43.2m		1998 48.4%
University of Wolverhampton	1999 - £84.7m	2.4%	1999 - £43.4m	9.0%	1999 51.2%
	1998 - £82.7m		1998 - £39.8m		1998 48.1%
University of Central Lancashire	1999 - £83.1m	5.7%	1999 - £42.0m	9.9%	1999 50.5%
	1998 - £78.6m		1998 - £38.2m		1998 48.6%
University of Portsmouth	1999 - £81.0m	-1.6%	1999 - £41.6m	7.2%	1999 51.3%
	1998 - £82.3m		1998 - £38.8m		1998 47.1%
University of Glamorgan	1999 - £62.3m	3.5%	1999 - £33.0m	10.7%	1999 53.0%
	1998 - £60.2m		1998 - £29.8m		1998 49.5%
University of Derby	1999 - £54.6m	1.5%	1999 - £28.1m	6.8%	1999 51.5%
	1998 - £53.8m		1998 - £26.3m		1998 48.9%
Southampton Institute	1999 - £53.3m	-1.1%	1999 - £27.2m	15.2%	1999 51.0%
	1998 - £53.9m		1998 - £23.6m		1998 43.8%
Total Income > = £10m<£50m					

Institution	Total Income	% Tot Inc Growth Av 9.3%	Year & Grant Inc	% Grant Inc Growth Av 4.5%	Grant Inc % of Total Inc
Q. Mar. U.C Edin	1999 - £17.7m 1998 - £17.2m	2.9%	1999 - £9.7m 1998 - £8.3m	16.9%	1999 54.8% 1998 48.2%
College of Mark & St John	1999 - £14.7m 1998 - £14.3m	2.8%	1999 - £7.7m 1998 - £6.3m	22.2%	1999 52.4% 1998 44.0%
Kent Institute of Art & Design	1999 - £14.2m 1998 - £13.3m	6.8%	1999 - £7.2m 1998 - £6.1m	18.0%	1999 50.7% 1998 45.9%
Harper Adams University College	1999 - £12.4m 1998 - £12.6m	-1.6%	1999 - £7.0m 1998 - £5.7m	22.8%	1999 56.4% 1998 45.2%
Edinburgh College of Art	1999 - £11.6 1998 - £10.8	7.4%	1999 - £6.2m 1998 - £5.3m	17.0%	1999 53.4% 1998 49.1%
Writtle College	1999 - £10.8m 1998 - £10.1m	6.9%	1999 - £5.7m 1998 - £4.9m	16.3%	1999 52.7% 1998 48.5%
Total Income <£10m					
Trinity College of Music	1999 - £4.5m 1998 - £4.3m	4.6%	1999 - £2.3m 1998 - £2.0m	15.0%	1999 51.1% 1998 46.6%
Rose Buford College	1999 - £3.6m 1998 - £3.0m	20.0%	1999 - £2.2m 1998 - £1.4m	57.1%	1999 61.1% 1998 46.7%

The institutions in table 13 are made up of post 92 universities, and colleges or specialist institutions. However, not all these type of institutions are represented here. So what were the characteristics of these institutions that led to them falling into this cluster?

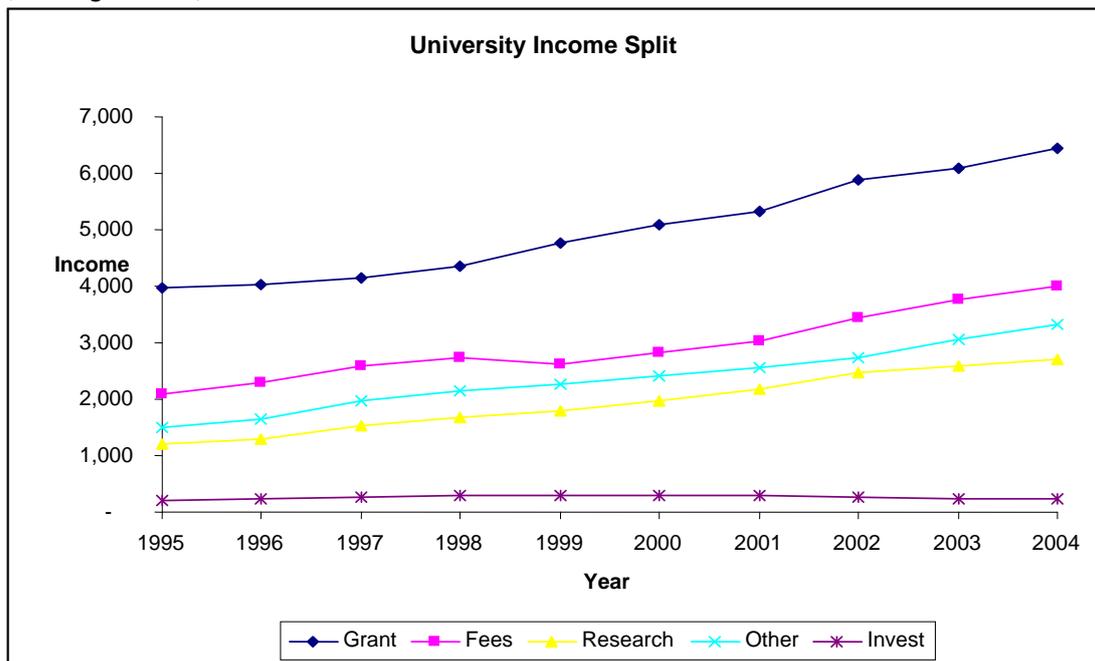
From table 13 in 1999 grant income rose on average by 9.3% over 1998 with the largest element recurrent grant rising by 12.0% whilst total income rose on average by only 4.5%.

The movement of any institution from group C, 50% > X < 25% to group B, 75% > x > 50% suggests that the change in the existing ratio was relatively large or that the institution was very close to having 50% of its income in the form of grant and thus even a small shift in the relative proportion in favour of grant income would result in the institution moving from category C to B. Testing this the range of percentage of grant to total income in those institutions moving from group C to B in was 1998 43.8% - 56.4%, which whilst close to 50% is a deviation of 10%. This would tend to suggest that the change in funds was significant and not simply a normal shift across an artificial boundary. Grant income in 1998 was £4.4m and in 1999 was £4.8m or 9.3% growth. This would also appear to be a significant growth particularly as the RPI moved 1.1% over that period.

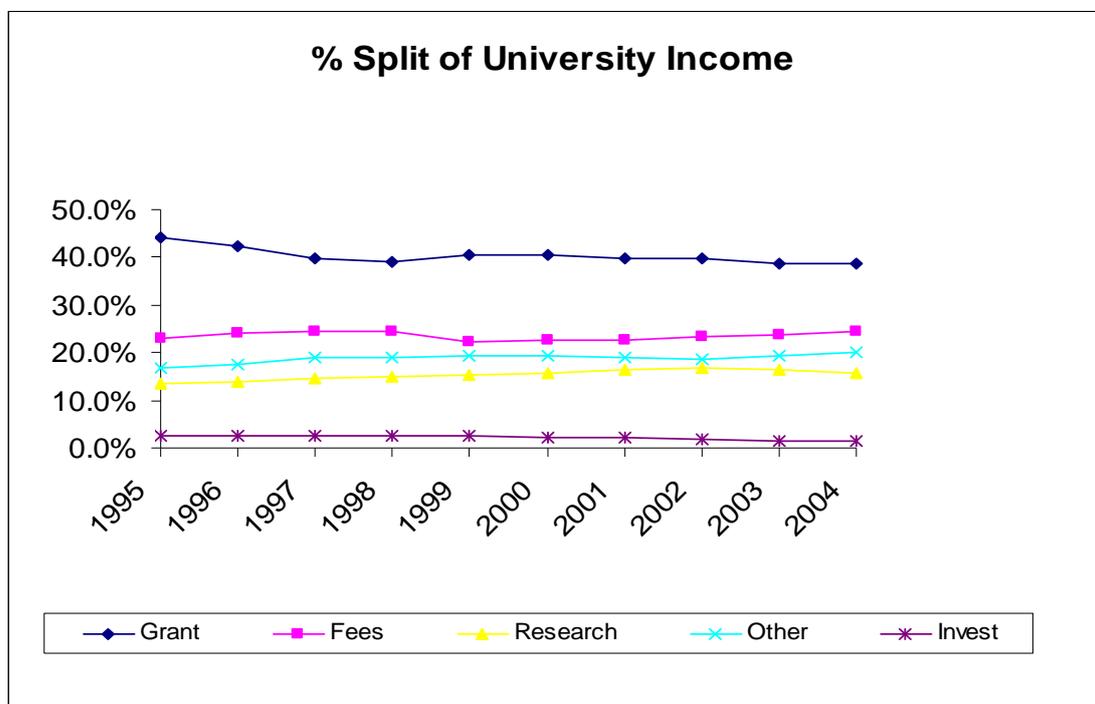
It would be useful to look more closely at the make up of total income in more detail. Graphs 6a and 6b show income by the main categories. These are Grant Funding, Fees including the student component from 1998, Research and Other Income. By inspection it appears that the gap between grant income and fees was narrowing between 1995 and 1998 in percentage terms and perhaps research as a percentage of total income was showing a slight increase. In 1999 a shift occurred with a growth in grant and a reduction in fee income as a percentage of total income. From 1999 onwards there has been a slight narrowing of that gap.

Graphs 6a and 6b present a large amount data but like graph 4 lead to the question as to why in 1998-1999 what were the factors that led to the growth in grant income in and the fall in fee income?

Graph 5a - University Income by Major Type 1995-2004 £'000 (unadjusted)



Graph 5b - University Income by Major Type 1995-2004 % (unadjusted)



This movement reversing the trend of at least the previous three years led me to look at the data more closely. There was a rise in recurrent grant funding as noted earlier of 12% and a fall in EU income of 13% and this funding

movement led me to look at the Hefce website. Here I found a paper, Recurrent Grants 1998-99, which detailed the funding allocations for 1998-99. A significant point was the introduction of the new funding method for teaching. The new method included an amount of £190m fee compensation which was to offset reduced fees from Local Education Authorities and students. (Hefce,1998). In the data sets, I am using, grant funding rose £404.6m whilst fee income fell £125.5m. Thus the most significant change in the relativities of higher education institution income streams over the period 1995 to 2004 appears to be the change to the Hefce funding method. Initially I felt disappointed that the apparent cause of this shift in the relativity of funding source was “only” the result of a change in the Hefce funding method but on reflection given the significance of Hefce in the funding of higher education in England it was always likely that they might be involved in such changes. In terms of business models clearly Hefce as a major funder has to be represented.

The two tables 14a and 14b below which are represented above graphically show the values and percentages of the various streams of income.

Table 14a Total Unadjusted Income £M by Income type

Year	Grant	Fees	Grant & Fee	Research	Other	Invest	Total
1995	3,968	2,076	6,044	1,205	1,503	216	8,968
1996	4,022	2,298	6,320	1,303	1,662	234	9,519
1997	4,155	2,578	6,733	1,517	1,968	253	10,471
1998	4,356	2,750	7,105	1,676	2,141	283	11,205
1999	4,760	2,624	7,385	1,781	2,266	280	11,712
2000	5,088	2,835	7,924	1,956	2,412	287	12,578
2001	5,326	3,040	8,366	2,189	2,552	289	13,396
2002	5,896	3,450	9,346	2,478	2,741	256	14,821
2003	6,093	3,756	9,849	2,600	3,052	228	15,729
2004	6,431	4,000	10,431	2,693	3,335	228	16,686

Table14b Total Income % by income type

	Grant	Fees	Grant & Fee	Research	Other	Invest	Total
1995	44.2%	23.2%	67.4%	13.4%	16.8%	2.4%	100.0%
1996	42.3%	24.1%	66.4%	13.7%	17.5%	2.5%	100.0%
1997	39.7%	24.6%	64.3%	14.5%	18.8%	2.4%	100.0%
1998	38.9%	24.5%	63.4%	15.0%	19.1%	2.5%	100.0%
1999	40.6%	22.4%	63.0%	15.2%	19.3%	2.4%	100.0%
2000	40.5%	22.5%	63.0%	15.6%	19.2%	2.3%	100.0%
2001	39.8%	22.7%	62.5%	16.3%	19.1%	2.2%	100.0%
2002	39.8%	23.3%	63.1%	16.7%	18.5%	1.7%	100.0%
2003	38.7%	23.9%	62.6%	16.5%	19.4%	1.5%	100.0%
2004	38.5%	24.0%	62.5%	16.1%	20.0%	1.4%	100.0%

From table 14b it can be seen that grant income has fallen from 44.2% of total income in 1995 to 38.5% in 2004 whilst fee income has hardly moved. If we look at the combined proportion of grant and fee income the impact of the Hefce new teaching funding method is reduced and the combined proportion falls from 67.4% in 1995 to 62.5% in 2004 Research income rose from 13.4% to 16.1%. If we combine Other and Investment income we can see that there has been an increase from 19.2% to 21.4%. Grant income over the period has risen by only 62%, whilst fee income almost doubled, research income and other income rose by slightly over 220%.

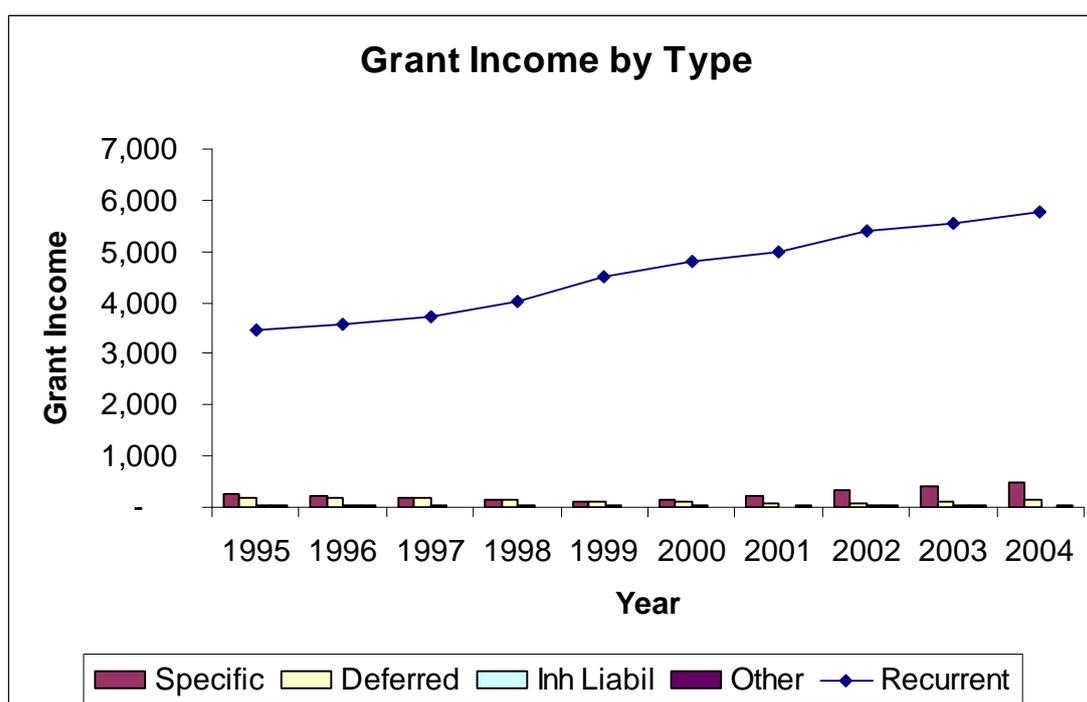
From this it would seem that the greater diversification of income streams has been partly successful. So did the business model change? To explore this it might be useful having looked at how the income stream to institutions are made up and how they have changed over time to now look at each element separately.

Grant income is made up of five major types, namely; recurrent, specific, deferred, inherited liability and other. This group is dominated by recurrent grant which graph 6 and table 15 clearly demonstrate. The graphical presentation illustrates the dominance of recurrent grant quite effectively with the other elements of grant being so small they barely register on the graph.

Table 15 - Grant Income Analysis

Year	Recurrent	Specific	Deferred	Inh Liabil	Other	Total
1995	3,478	250	183	38	19	3,968
1996	3,558	216	190	29	29	4,022
1997	3,742	186	184	28	15	4,154
1998	4,009	153	161	27	6	4,356
1999	4,492	120	119	22	7	4,760
2000	4,812	139	100	20	16	5,088
2001	4,977	206	91	16	35	5,326
2002	5,409	323	93	20	51	5,896
2003	5,531	408	97	19	38	6,093
2004	5,761	474	142	16	38	6,431

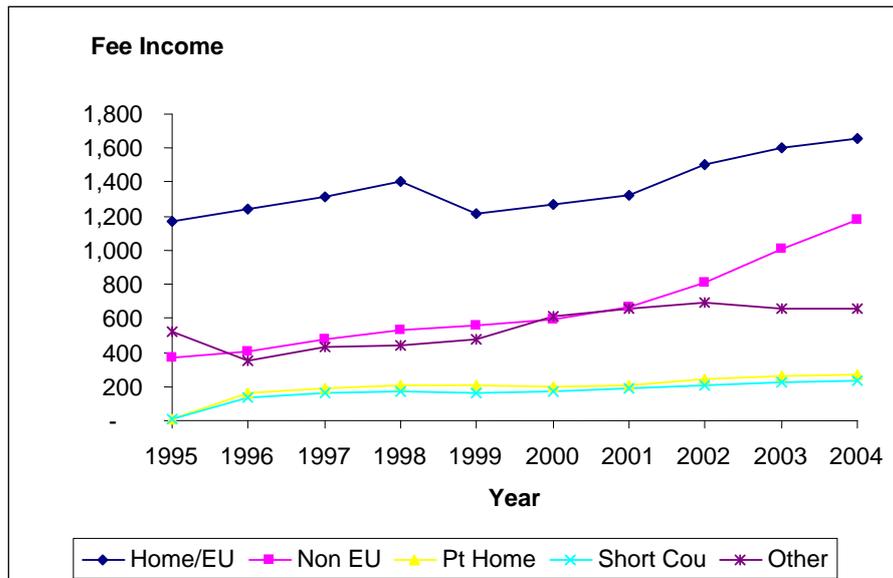
Graph 7 - Grant Income Analysis



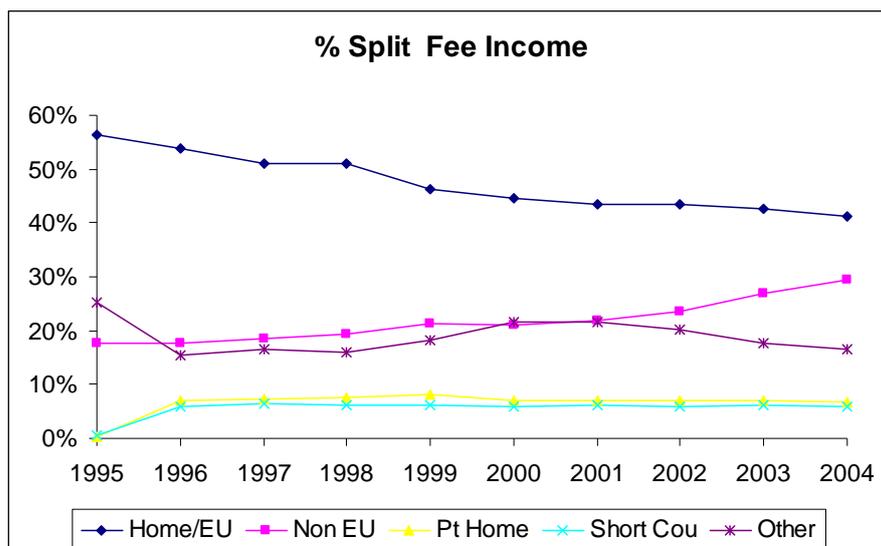
If we look solely at fee income in graph 7a, a graphical presentation is perhaps more useful. From the graph we can see fall in Home/EU tuition fees in 1998-99 noted earlier the result of the new teaching funding method with a steady increase over the remaining period. Of particular interest is the growth in Non EU fees which show tremendous growth from 2001. Part-time and Short

Course income appears to be static, whilst other income by 2004 is barely above the 1995 level. This picture with the exception of Non EU fees is disappointing given the agenda for income diversification and may indicate difficulties with introducing changes to business models. Perhaps the addition of data for 2005 and 2006 may reveal improving trends.

Graph 7a - Fee Income Analysis £m



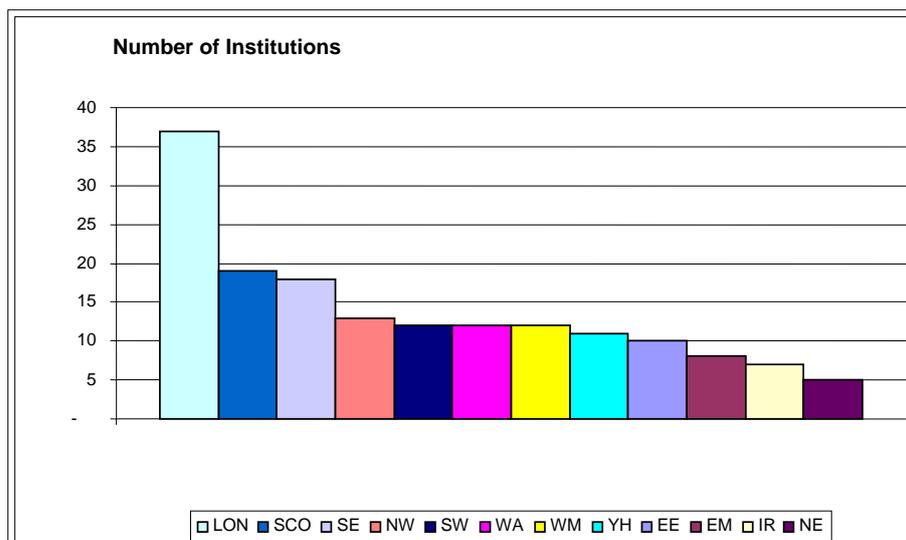
Graph 7b - Fee Income Analysis %



Graphs 7a and 7b show the diminishing proportion of fee income from Home/EU students and the increasing importance of Non EU tuition fees. Part-time and Short course incomes have grown from a very small base but are still relatively small income streams. The potential for growth in these areas should not be overlooked, particularly given the emphasis on life-long learning and the largely untapped, by higher education, professional development and training markets. However given the growth in Non EU tuition fees is it possible to identify clusters within it and from that hypothesise different business models associated with these clusters?

- To explore this idea, I allocated each institution to a region using Hefce's list of regions and summed the total by region in descending order as shown in graph 8.

Graph 8 - Numbers of HEI's by Region

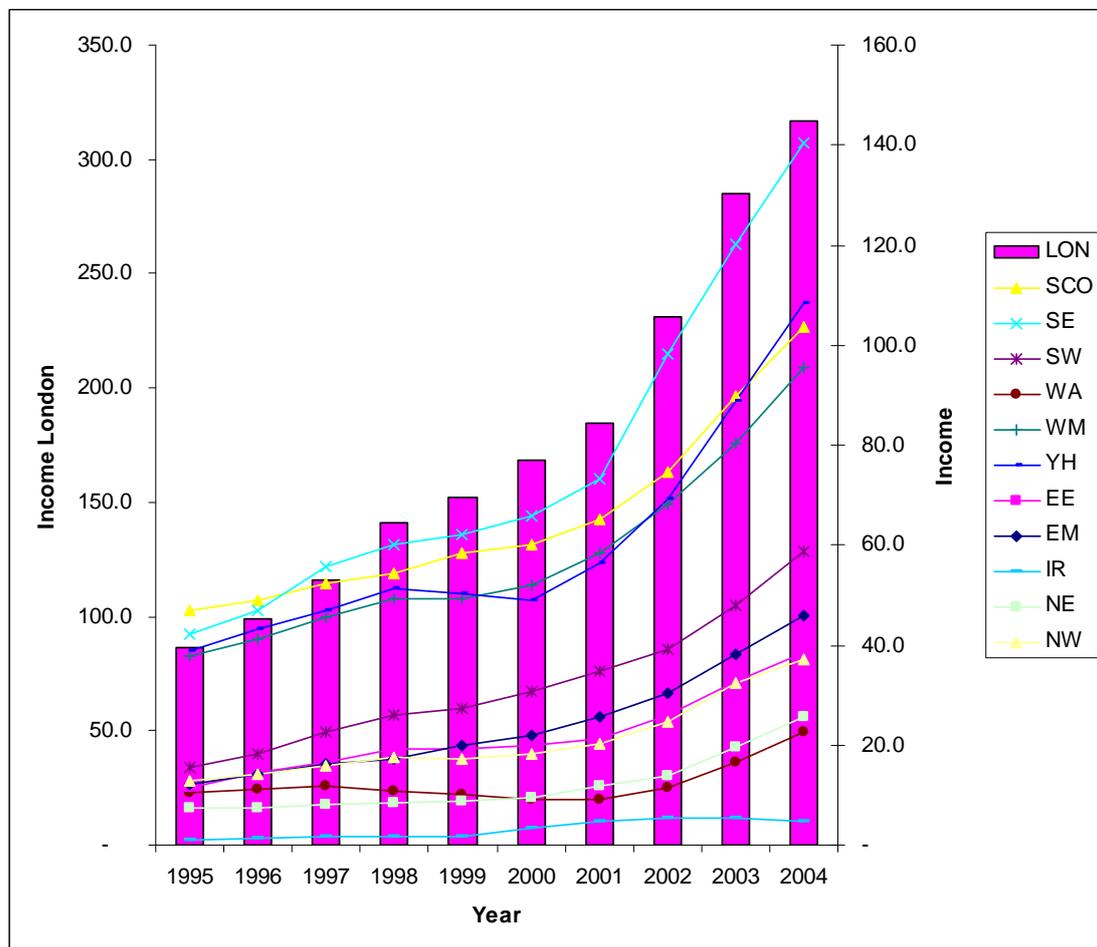


London clearly dominates the distribution but there appears by inspection to be four clusters if number of institutions in an area are used,

- London,
- Scotland, Southeast,
- Northwest, Southwest, Wales, West Midlands, Yorkshire & Humberside, Eastern England
- East Midlands, Ireland, Northern England

I extracted the Non EU fee income data for each year by institution by region and plotted them on the graphs 9 and 10 below. Not surprisingly the London region was the most significant in terms of income generation for Non EU students, so much so in fact that the presence of the London data required a scale that made the other regions' data less distinct. London started from a higher base in 1995 at £86.1m. London appears to have experienced two points of high growth, the first 1997-8 and the second 2001 to 2004. To aid analysis I repeated graph 10 but deleted the London region data.

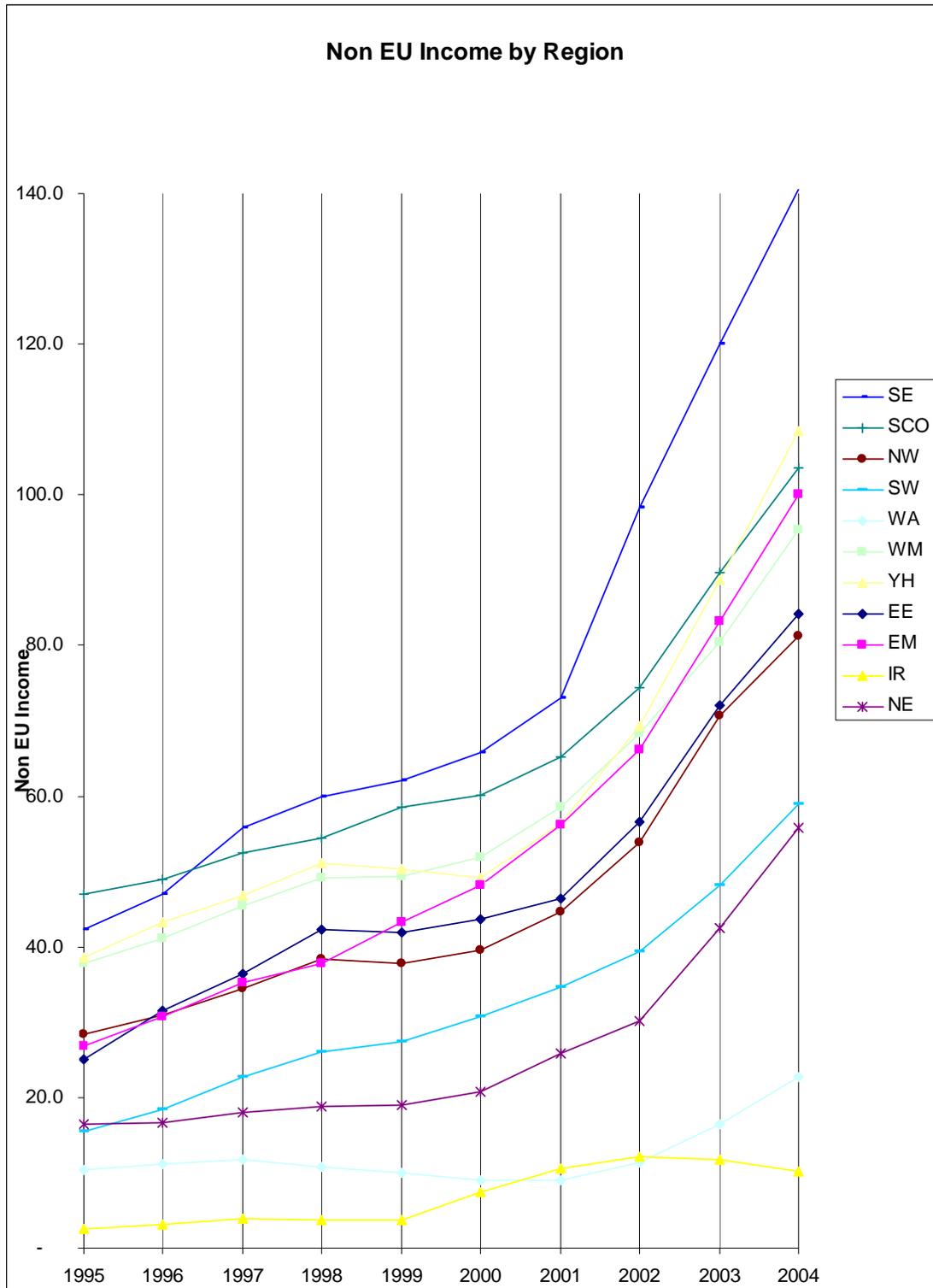
Graph 9 - Non EU Fee Income by Region



From graph 9, the South-east experiences growth in 1996-97 and from 2001 very similar to the London profile. Most of the other regions appear to experience accelerated growth from 2000-01. Does this reflect the impact of different business models? It might be argued that London and the Southeast led the way in Non EU recruitment stimulating other regions less well known

outside the UK to engage more actively in this area. This is simply a hypothesis at this stage but may form part of my research in document 5.

Graph 10- Non EU Student Fee Income (excluding London Region)



To review the pattern of Non EU fee income growth in the regions the table below shows the growth year on year for each region using unadjusted income. The growth rates were scored as follows where X was the growth rate year on year

- $X > 20\% = 5$,
- $20\% > X > 15\% = 4$,
- $15\% > X > 10\% = 3$,
- $10\% > X > 5\% = 2$ and
- $5\% > X = 1$

**Table 16 - Regional Growth Rates Non EU Income –
Scored 5 - Very High to 1 - Very Low**

Region	1996	1997	1998	1999	2000	2001	2002	2003	2004
LON	3	4	5	2	3	2	5	5	3
SCO	1	2	1	2	1	2	3	5	4
SE	3	4	2	1	2	3	5	5	4
NW	2	3	3	1	1	3	5	5	4
SW	4	5	3	2	3	3	3	5	5
WA	2	2	1	1	1	1	5	5	5
WM	2	3	2	1	2	3	4	4	4
YH	3	2	2	1	1	3	5	5	5
EE	5	4	4	1	1	2	5	5	4
EM	3	3	2	3	3	4	4	5	5
IR	5	5	1	1	5	5	3	1	1
NE	1	2	1	1	2	5	4	5	5

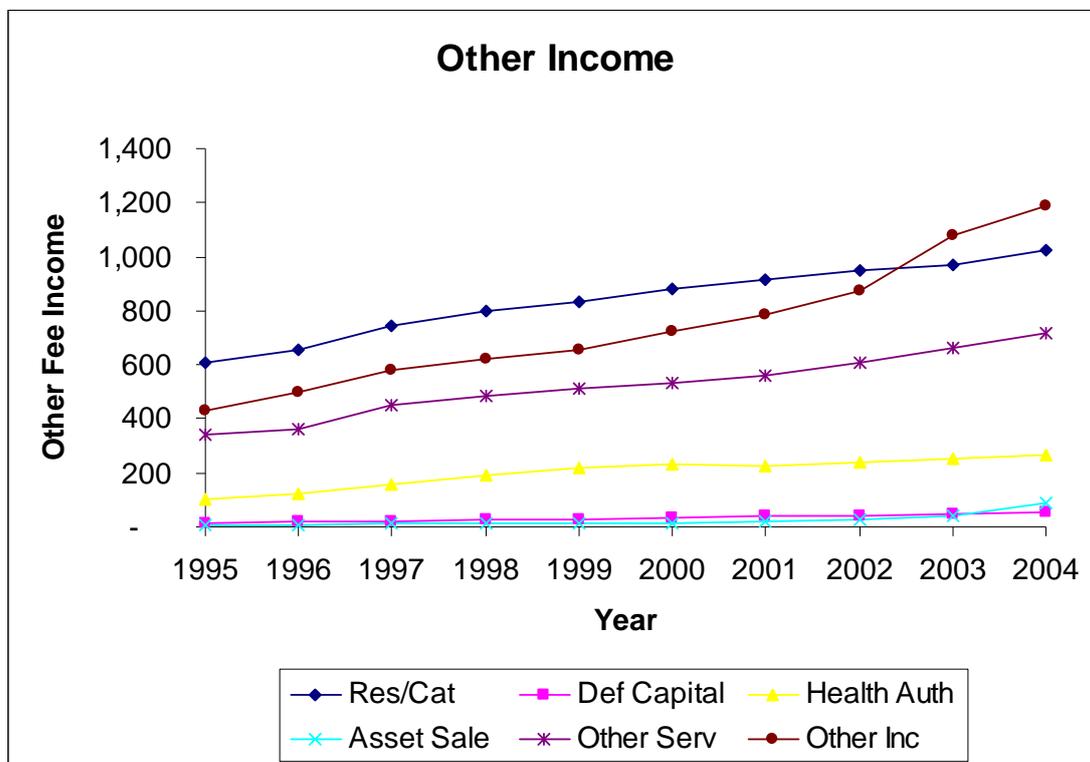
Taking the scores 5 and 4 and highlighting those in the table using a bold font some groups and patterns emerge. Looking at the results by year growth appears to peak in 1997 begin to rise in 2002 and grow strongly to 2004.

The early growth is limited to southern and eastern regions plus Ireland. The Irish data is patchy and would need strengthening before too much reliance is placed on it.

Other Income

Having reviewed the income types grant and fee we are left with what might be referred to as Other Income, (Research income will form part of the analysis in document 5). The income streams making up Other income are Residence & Catering, Other Services, Other Income, Deferred Income, Asset sales and Health Authority income. From graph 11, unhelpfully, the most significant change appears to be the growth of Other Income in 2002. It may be possible to disaggregate Other Income in the next document but is not available in the original data.

Graph 11 - Other Income (unadjusted) £m



Income Streams - Changes in proportions over time.

Having looked at total income, the split of income by type and regional variation around Non EU fee income, I now want to look at changes over time in the mix of income streams and explore those changes to see if there are any for traces of a business model. I will use the matrix I devised earlier where income is split into four groups. Thus for each type of income what are the

relative proportions of these following groupings $X > 75\%$, $75\% > X < 50\%$, $50\% > X < 25\%$ and $25\% > X$.

Income streams here are being used as a proxy for a business model and changes may indicate shifts in the existing model.

Thus far we have looked at Grant and Fee income. The remaining types of income are research, other and investment. Within each group are a number of sub elements. Unfortunately the data I have does not breakdown research income into other types. Grouping the data as described above into four categories A, B, C and D, each occurrence of a change between consecutive years of group by an institution was noted and reported in table 17. To do this 0 was assigned to no change to category from one year to the next and 1 for a change. At this point the direction of movement was not differentiated but simply recognised as a change. Starting with 1995 the change by year and type of income are shown in table 17 below.

Table 17 Change of Relative proportions of major income types to Total Income

	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	Total
GTI/TI	17	14	8	18	6	10	13	10	7	103
FI/TI	13	12	7	27	19	11	9	11	8	117
RI/Ti	4	7	3	6	7	4	6	6	4	47
OI/TI	10	11	13	11	14	13	8	11	8	99
	44	44	31	62	46	38	36	38	27	366
No Inst	146	148	153	156	155	162	163	164	163	1410

The peak perhaps unsurprisingly occurs in 1998-99, the year in which Hefce changed the method of funding teaching driving changes in both proportions of grant and fee. The number of changes to Research Income was the second highest and other income changes was the third highest. The information shown in the table indicates apart from the changes to the ratio of grant and fee income there appears to be no obvious pattern to the

changes. It seems plausible to suggest that with the exception of 1998-99 there appears to be a trend of reducing volatility with the number of movements decreasing. This does not really help move forward regarding business model definition but might again suggest that whatever model or models are in use, if income is a valid indicator, changes to business models appear infrequent.

Part Four - Findings

The research questions that framed this quantitative exploration were;

are there identifiable trends or patterns in HEI income data over the period reviewed in either in;

- the sources of income – grant, fee, research or other
- the distribution of income
- the growth or decline in income

for the sector as a whole or for individual groups of institutions which might assist in determining the existence or identification of business models.

The research question thus fell into two parts being the search for patterns and then their possible relevance to the study of business models in higher education. The approach taken to this short piece of research was to explore third party financial data for as many institutions as possible looking firstly at total income then at various elements of the whole.

Taking total income the main findings were

- a highly positively skewed distribution and a long right sided tail
- a slight increase in the level of skew over the period 1995 - 2004
- small movement of institutions in, out or within the top 25 by income
- even smaller movement in or out or within the top 10 by income

In relation to business models the analysis of total income did not identify any evidence as to the existence or nature of business models in HEI's. However it may be possible to make some inferences about the nature of possible business models in light of the initial findings. The highly skewed nature of the

distribution of income might suggest that there are two different business models or might simply be the result of different scales of activity within the same model. The lack of movement at the higher levels of income suggests that there may be significant barriers to income growth. These barriers may be inherent in the funding regime given the current Hefce domination of funding in the EU undergraduate area. The introduction of variable fees may affect this over time although the high proportion of institutions choosing a variable fee of £3,000 may militate against this. Thus the highly skewed distribution when combined with a lack of mobility may be a function of a historically heavily controlled market in which business models have little influence in terms of financial outcomes and hence may not easily visible through a financial lens.

A summary of the movement in the structure of HEI funding is shown in table 18.

Table 18 % Analysis of Total Income

Year	Grant	Fees	Research	Other +Inv	
1995	44.2%	23.2%	13.4%	19.2%	100.0%
2004	38.5%	24.0%	16.1%	21.4%	100.0%
M'ment	-5.7%	+0.8%	+2.7%	+2.2%	100.0%

This table indicates a reduction in the proportion of grant income with research and other income increasing in their significance and this shift in the makeup of HEI funding whilst apparently small has been consistent over the period, with the notable exception of 1999. Over the period in question growth in research funding has been promoted by government, (Hefce 2006), (Bekhradnia, 2003) and this growth has been largely funded from research councils and others (Hefce, 2006). Research income has not been covered in detail this document and will form part of a further analysis in document 5.

When looking at the percentage of income grant funding represents table19 is a useful summary.

Table 19 - % of Institutions with Grant Income % in groups A, B, C and D

Year	A	B	C	D	Total
	X>75%	75%>X>50%	50%>X>25%	X<25%	
1995	0.7%	48.3%	49.7%	1.4%	100.0%
2004	1.3%	36.3%	56.7%	5.7%	100.0%
M'ment	+0.6%	-12.0%	+7.0%	+4.3%	100.0%

The overall trend appears to be a reduction in grant dependency over the period with the largest shift being from 75%>X>50% to 50%>x>25% where X is the percentage of total income represented by grant. This is consistent with an overall decrease in the percentage of total sector funding formed by grant. This may be represented in terms of a change to a business model but would depend on how the shift came about. Interestingly an increase in grant dependency has been noted at the two extremes of the range with both group A and D experiencing increases. At the extremes the change is most notable in the percentage of institutions with a less the 25% dependency on grant funding. This group may reflect a different business model but would require further investigation.

The impact of Non EU fees can be seen to have a regional profile but at this stage it is uncertain as to how this can be used to better identify or define business models and again would need further research.

Overall the analysis of income data as a means to reveal patterns in growth and distribution has been successful, but in terms of relating those patterns to business models has been inconclusive. This outcome may be said to have resonance with Collins' (2006) comments where finance is seen as an input to rather than and output of not for profit organisations. This approach has been useful in setting out a background or context for further work in document 5

when other variables can be brought into the analysis which may allow connections to business models to be uncovered. Additionally the nature of the market in which HEI's operate in terms of apparent barriers to movement has also been a useful outcome of the research which will inform its development in document 5.

Appendix 1

Data Type Summary

Time period - From 1994-95 to 2003-04

Revenue	Expenses	Balance Sheet	Cashflow	Other
<ul style="list-style-type: none"> • Grants <ul style="list-style-type: none"> ○ recurrent ○ specific ○ deferred ○ inherited liability ○ other • Fees 	<ul style="list-style-type: none"> • Staff costs <ul style="list-style-type: none"> ○ academic ○ academic support ○ other support ○ administration ○ premises & maintenance ○ residence & catering 	<ul style="list-style-type: none"> • Fixed Assets <ul style="list-style-type: none"> ○ intangible ○ tangible ○ investment • Endowment Assets • Current Assets <ul style="list-style-type: none"> ○ stock ○ debtors & prepayments 	<ul style="list-style-type: none"> • operating cash • net-investment income • interest received/paid • tax paid • tangible assets sales/purchases • investment sales/purchases 	<ul style="list-style-type: none"> • Date founded • Subsidiaries • Objectives

Revenue	Expenses	Balance Sheet	Cashflow	Other
<ul style="list-style-type: none"> ○ home/eu ○ non-eu ○ part-time ○ short course ○ other ● Research ● Residences ● Deferred Capital ● Asset Sale ● Health Authority 	<ul style="list-style-type: none"> ○ research grant ○ restructure ○ other ● Non staff costs <ul style="list-style-type: none"> ○ academic ○ academic support ○ other support ○ administration ○ general education ○ premises & maintenance ○ planned 	<ul style="list-style-type: none"> ○ short-term investments ○ cash ● Current Liabilities <ul style="list-style-type: none"> ○ Short-term finance lease/loans/mortgage/creditors/accruals ○ Overdraft ● Long-term Liabilities <ul style="list-style-type: none"> ○ Long-term finance lease/loans/mort 	<ul style="list-style-type: none"> ● deferred capital grant released ● endowment income received ● other income ● management ● loans received/repaid ● other finance 	

Revenue	E	Bala	Cashflow	Other
<ul style="list-style-type: none"> • Other Income <ul style="list-style-type: none"> ○ Services ○ Operational Income • Interest <ul style="list-style-type: none"> ○ Endowmenr ○ Investment ○ Bank ○ Other 	<ul style="list-style-type: none"> ○ maintenance ○ residences & catering ○ research grants ○ other expenses ○ other income generating ○ sale of assets ○ other costs ○ other operational costs ○ depreciation 	<ul style="list-style-type: none"> ○ gage/creditors/bes/lea ○ Inherited liabilities ○ Provisions • Reserves <ul style="list-style-type: none"> ○ deferred capital grant ○ revaluation ○ capital ○ other ○ income/expendit 		

Revenue	Expenses	Balance Sheet	Cashflow	Other
	<ul style="list-style-type: none"> • Interest <ul style="list-style-type: none"> ○ bank loan interest ○ finance leases ○ other loans • Audit fees 	<ul style="list-style-type: none"> ○ ure ○ specific endowment ○ general endowment ○ minority 		

Appendix 2 Missing Data

	1	2	3	4	5	6	7	8	9	10	11
Year	2003-04	2002-03	2001-02	2000-01	1999-2000	1998-99	1997-98	1996-97	1995-96	1994-95	1993-94
Cumbria Institute of the Arts									X	X	
Edge Hill College of Higher Education	X										additional
Institute of Education										X	
London Metropolitan University				X	X	X	X	X	X	X	
National University of Ireland						X	X	X	X	X	
Norwich School of Art & Design	X									X	
Royal Academy of Music	X							X	X	X	
Royal College of Music										X	
Scottish Agricultural College							X	X	X	X	
Trinity College of Music								X	X	X	
Trinity College, University of Dublin						X	X	X	X	X	
UHI Millennium Institute					X	X	X	X	X	X	
University College Chester									X	X	
University College Dublin	X	X				X	X	X	X	X	
University College, Cork	X					X	X	X	X	X	
University of East London	X										additional
University of Leicester									X	X	additional
University of Limerick						X	X	X	X	X	
University of Nottingham									X	X	
University of Oxford											additional
University of Southampton									X	X	
University of Wales, Swansea									X		
Writtle College	X										
Number of Instances of Missing Data	70										

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Business Models and Higher Education

by

John Gallacher

[Document Five - submitted in partial fulfilment of the Nottingham Trent University requirements for the degree of Doctor of Business Administration.]

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Abstract

The researcher believes that the wide ranging use of the term business model in academic and practitioner arenas suggests that the clarification of its use rhetorically, strategically or managerially or lack of use would be of interest to both academics and management practitioners. Universities face increasingly challenging economic conditions and the identification of the use within higher education of business models using interview data, cross-referenced to institutional success, measured by a variety of metrics, may allow inferences to be drawn about the relationship of the relative success of institutions and the role, if any, of business models which may then inform future decision making.

The researcher suggests that a business model approach, whilst not introducing new concepts is a useful descriptive and analytical tool for both practitioners and academics. In a discursive sense the term can act as a useful short hand whilst as a framework for value propositions it can aid the identification and development of the underlying economic reality of business activity. Furthermore, business models when viewed in the context of competing value propositions and business model innovation provide a link to and an aid in, the development of strategy.

The researcher found that the term business model was frequently described in interview as inappropriate and no evidence of significant explicit usage of the term business model was found in university strategic plans. Further evidence from interview and the analysis of strategic plan documentation highlights the use of business-like language and practices suggesting that implicit, rather than explicit, business model approaches are being adopted in universities for decision making purposes.

No evidence of a correlation between the use of business models, business like terms or reference to Hefce strategic aims and financial or league table success was noted.

Whilst relative institutional income levels remained largely static over the period 1994-95 – 2006-07, the income patterns of institutions interviewed indicated that as the level of success as measured by researcher increased,

as a proportion of total income grant and fee income reduced and research and other income increased. In addition the top twenty-five universities measured by average surplus over the period 1994-5 to 2003-04 tended to have a higher than average proportion of their total income represented by research and other income.

To aid the realisation of potential benefits to be gained by universities from the adoption of a more explicit business model approach the research findings suggest the consideration of three factors.

Firstly the clarification of the location of business models in relation to the more traditional management tools of strategy development and resource planning.

Secondly, the lack of appetite for the explicit adoption of a business model approach, in at least some parts of the sector, suggests that the language of business models needs adapting to a higher education context. The researcher suggests the language of social enterprise which would explicitly recognise the societal dimension of university activity.

Finally, but related to the second point is that the constrained economy of higher education needs to be recognised in the development of a business model approach with complex stakeholder relations recognised in value propositions and outcomes and financial sustainability as a necessary facilitator rather than primary driver.

Key words: business model, business-like, strategy, value proposition, university performance, social enterprise and income.

Part 1: Introduction

1.1 Structure

The research questions explored in this paper are;

1. Is the term business model used within universities in describing their activities, and, if they do, in what sense or form do they use it?
2. Do managers in universities use a business model approach as a tool for decision making explicitly or implicitly or rhetorically thus shaping managerial behaviour?
3. Does the application of a particular business model influence the relative performance of the university?
4. Is there a business model which should be applied by universities for ethical and social as well as economic reasons?

The researcher believes that the wide ranging use of the term business model in the academic and practitioner arenas suggests that the clarification of its use rhetorically, strategically or managerially or lack of use would be of interest to both academics and management practitioners. The identification of the use within higher education of business models cross-referenced to institutional success, measured by a variety of metrics, may allow inferences to be drawn about the relationship of the relative success of institutions and the role, if any, of business models.

To answer the questions posed above the proposed structure for this document comprises of five parts.

The first part comprises this introduction and brief review of the researcher's earlier documents to set the context for this final thesis. The second continues the investigation begun in document 2 into the ways that the term business model is used in an attempt to better understand the term and the confusion that surrounds it. This consists of a review and analysis of the theory of business models accessed through academic papers, including microeconomic, strategy and stakeholder theories, with a view to identifying common or overlapping areas and an analysis of the use of the term by management practitioners using examples in the popular media. The third

outlines the research approach setting out the researcher's position in terms of ontology, epistemology and methodology. The fourth part details the collection and analysis of the research data from interview, strategic plans, league table data, financial data, business models on the web, and rankings derived from the analysis of the strategic plans, league table and financial data.

The interviews consist of sixteen face to face or telephone interviews with finance directors from universities selected to represent the range of success across the sector.

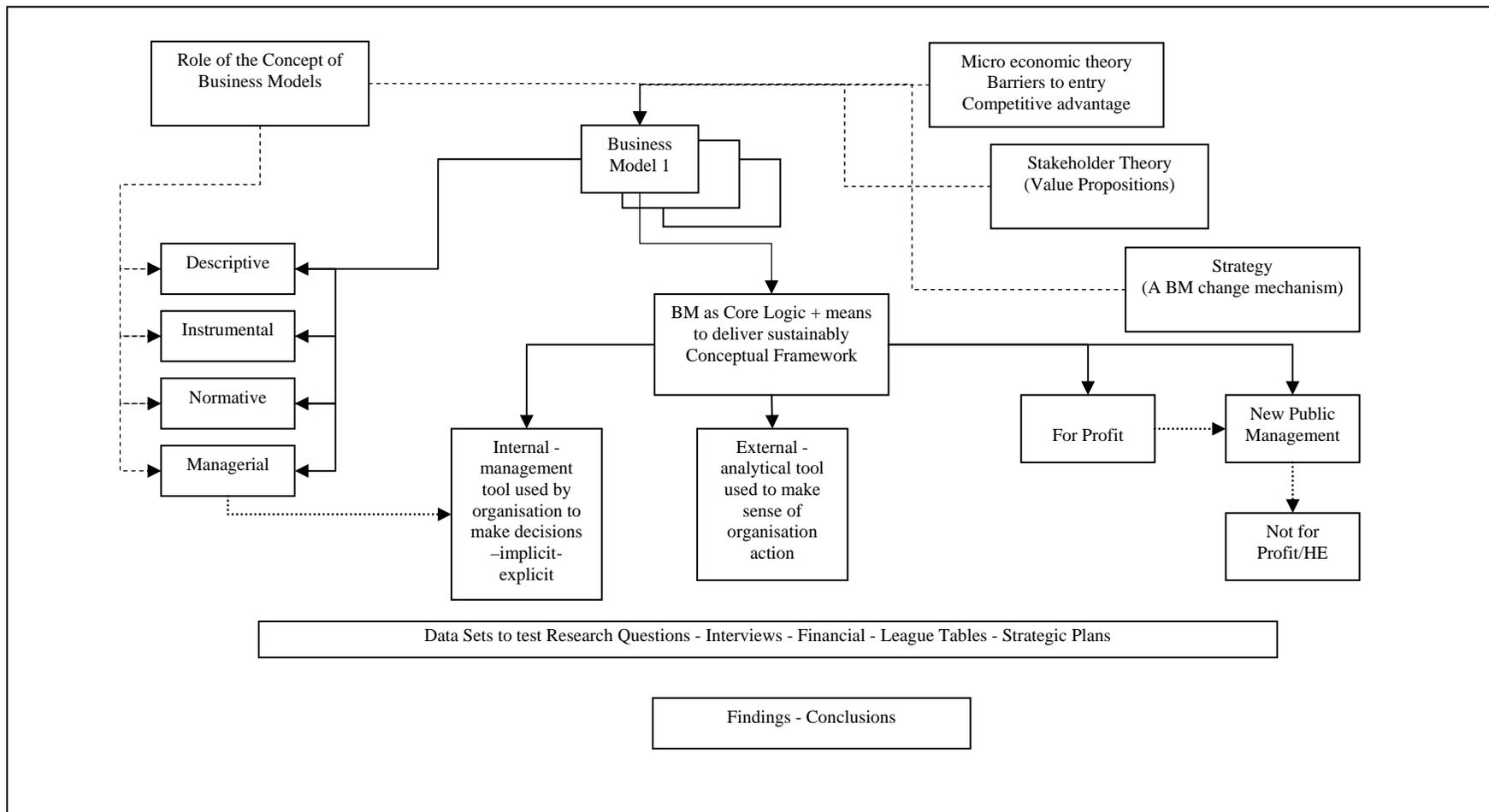
The analysis of strategic plans looks at the occurrence of words taken from; the conceptual framework shown in figure 2, other common business terms, words and phrases taken from HEFCE's Strategic Plan, (HEFCE, 2007), and in the strategy documents or corporate planning statements of eighty-nine universities. The results are used to rank institutions by occurrence for comparison with financial and league table metrics. In addition the use of the term business model on the web was monitored to capture basic statistics over time reflecting the link between business models and the web, (Rappa, 2007).

The analysis of financial and league table data is used to create rankings which are then reviewed, alongside results of the use of business model language highlighted earlier, in order to discover if the use of such language correlates to success measured by the financial and league table rankings.

The fifth and final part is a narrative exploring the results of the research in relation to the research questions and conclusions that might be drawn.

A diagram summarising these steps is shown as figure 1.1 A Research Road Map below

Figure 1.1 A Research Road Map



1.2 Setting the Context: A brief review of Documents 1, 3 and 4

To set the context for this thesis it is necessary to briefly review the researcher's preceding submissions in the form of documents, 1, 3 and 4. Document 2, a critical literature review, will be referred to in part 2.

1.2.1 Document 1: Definition and Mapping of Research Questions

This paper defined the researcher's interest in potential business models adopted by business schools and how the business model itself might become a research tool.

This proposed research path was refined as the initial research steps were taken and events impinged on the process. It was suggested, as part of the DBA programme feedback, that the number and breadth of the questions was too broad for a single piece of research in the form of a taught DBA. In addition the researcher moved from the Nottingham Business School, at Nottingham Trent University, to York St John University, an institution offering management education but at that time without a formal business school. This combination of feedback and events led to a review of the research direction. Rather than focus on a part of a university, a business school, the research area was expanded to take in the whole institution but became more focussed in terms of the questions posed.

In addition the review of the literature of business models whilst undertaking document 2, "A Critical Literature Review and Initial Conceptual Framework. Business Models and Business School Performance" was a significant influence on the direction of the research. The lack of clarity or elasticity of use emerging from the critical literature review, reflected in the wide ranging use of the term business model, surprised the researcher and consequently the focus of this critical literature review was redirected to trying to make sense of this varied use. Attempts to tabulate or map the characteristics or elements of the various models used resulted in a business model taxonomy. A conceptual framework for a business model presented by Osterwalder & Pigneur, (2002) presented, in the researcher's view, a clear, comprehensive and concise picture of a business model, both in terms of the narrative and diagrammatic representations. The framework consisted of four key themes; Product Innovation, Customer Relationship, Infrastructure Management and

Financials and whilst at this stage did not constitute a finished product presented a base on which to build. Thus the process of completing documents 1 and 2 had changed the direction of the research from a broad investigation into business models in business schools to a more focussed thesis about business models in universities.

1.2.2 Document 3: Working Title: Business Models and Higher Education Institutions. Looking for business models in the higher education landscape, a qualitative piece of research.

This document, a piece of qualitative research, grew essentially from the broad way in which the term business model was used in the literature. Porter put forward the view that,

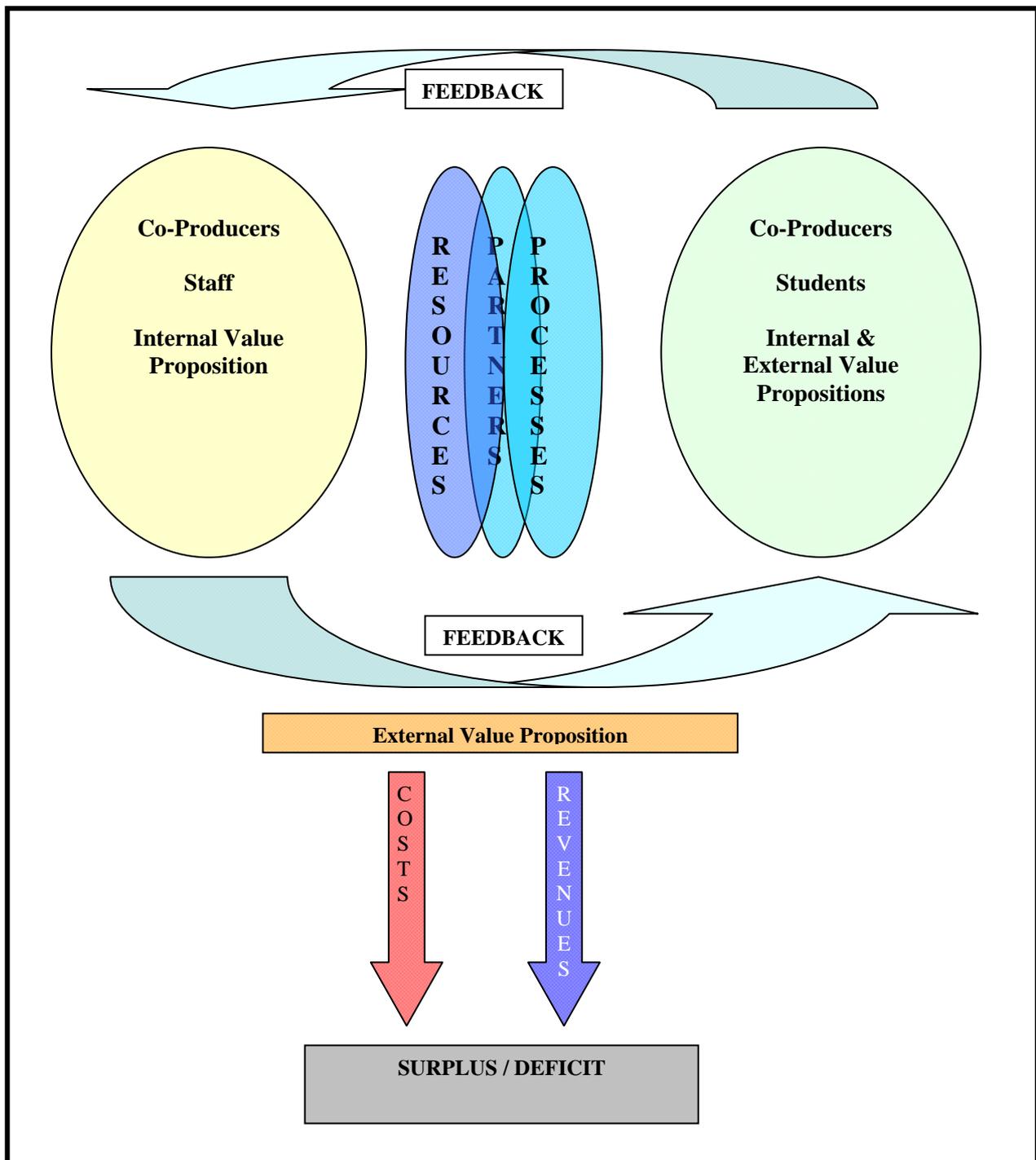
‘The definition of a business model is murky at best’
(Porter, 2001, p73).

In addition, business models were frequently described as, loosely defined, poorly articulated, or misunderstood, (Rappa, 2007), (Linder & Cantrell, 2000), (Osterwalder & Pigneur, 2002). Taking Osterwalder and Pigneur as a starting point, below the researcher developed a business model conceptual framework shown in figure 2. and mapped to Osterwalder & Pigneur’s conceptualisation in table 1.2 below

Table 1.2 Developing a University Business Model Conceptual Framework from work undertaken by Osterwalder and Pigneur 2002

Osterwalder Pigneur 2002	Document 2 University Business Model Conceptual Framework	
Product Innovation	Co Producers Staff & Students Internal Value	
Customer relationship	Proposition	
Infrastructure Management	Resources, Partners Processes	External Value
Financials	Revenues, Costs surplus Deficit	Proposition

Figure 1.3 - A University Business Model Conceptual Framework



The researcher suggests that in universities and other organisations, internal value propositions drive the delivery, by staff, through processes, utilising resources and engaging with partners, of defined and undefined and emerging, external value propositions. In a university context students have a multifaceted role as consumers, co-producers and active participants; consumers when they buy goods and services such as accommodation, co-

producers as they engage in the learning and research processes and active participants as they engage in activities such as the governance of the institution. Wagner (see O'Brien & Deans, 1996) appears to support this view when he talks about a business approach applied to higher education

"At its heart is the treatment of the student who is both input and part consumer."

Enacted value propositions or value exchange takes place, captured in the form of revenue streams and costs which come together to generate surpluses or deficits. The idea of being sustainable into the future (Rappa, 2007) suggests that in a business model, through the implied high prioritisation, by the use of the term business, of commercial factors, that over a period surpluses should exceed deficits. The implied high priority given to 'business', over other factors perhaps academic, will be explored in the interview analysis in Part 4.

For this piece of qualitative research, data was collected in interviews conducted with three members of staff at three universities; The University of York, Northumbria University and The University of Nottingham. As a result of the unclear picture of business models that emerged from Document 2 the researcher adopted an open, semi-structured interview approach. Interviews were conducted with senior managers who had responsibility for the financial aspects of their institutions. In selecting this group the researcher was aware that their roles might generate a bias in their responses and thus if they were to be found to use business model terminology routinely this might not be representative across the sector. During these discussions none of the interviewees referred explicitly to the main themes of the business model framework the researcher had adopted namely, Product Innovation, Customer Relationship, and Infrastructure Management although the financial aspects of a university were discussed. The failure to detect the explicit use of business models from the interview data was disappointing although the lack of clarity around business models in the literature supports pursuing further the topic of business models to try to achieve some clarity. In addition, if we accept that universities operate largely in the social sector, in that they have educational and social rather than economic priorities, business models might be manifested differently from those in the for profit economy. Alternatively, the

business model may be so ingrained or embedded that people do not have to think about it.

1.2.3 Document 4: Business Models and Higher Education Institutions. Looking for business models in the higher education landscape a quantitative piece of research.

Document 4, a necessarily quantitative piece of research, looked at income streams as an indicator of business model type. Universities operate in an essentially not for profit economy, or as commented at a recent conference attended by the researcher, 'a not for loss' economy, thus surpluses may be depressed as universities strive to improve and expand delivery. Taking Collins' view, (2005), of finance as an input in the social sector, in contrast with its role as both an input and an output in the commercial sector, this outcome is perhaps not unexpected. Financial indicators are not primary measures of success rather successful finance is a pre-requisite and facilitator of activity from which the successful delivery of planned outcomes is a measure of success. In an attempt to identify business models relative income or income growth may be more relevant indicators of success. However the outcome of this research was that the analysis of income streams did not appear to give a sense of the application of different business models in different institutions except that relating to the proportions of teaching and research income. An additional contributing factor may be the highly regulated nature of the financing of HEIs in the UK, in that any freedom of movement, in terms of business models available to universities, may be restricted due to the significant portion of university income sourced directly or indirectly from government. The existence of a highly regulated funding regime, with a significant proportion of university income sourced from government through funding body grants, education grants and research funding, might alter the expression or language of business models. For 2007-08 higher education funding was sourced approximately, 55% from government or government agencies, (HEIDI, 2009) A further review of financial data including income, surpluses and deficits in this document for patterns may shed light on financial success and thus perhaps business models in use.

Part 2: Business Models, Microeconomics, Strategy, Stakeholder Analysis the Public Sector and Universities

2.1 Introduction

Confusion and lack of clarity in some management theories can be seen in Donaldson & Preston, (1995, p 66) who suggested that stakeholder models, management and theory,

“are explained and used by various authors in very different ways and supported (or critiqued) with diverse and often contradictory evidence and arguments.”

The blurred character of stakeholder theory is also emphasised by Brummer, (see Donaldson and Preston, 1995,) and echoes Mintzberg's comments on the use of the term strategy,

“To conclude a good deal of the confusion in this field stems from contradictory and ill-defined uses of the term strategy”
(Mintzberg, 1987 p 21)

This theme of a lack of clarity can be further extended to the use and meaning of the term business model.

“Even a great business model is not enough. The rise and fall of dot-coms left markets reeling and CEOs scratching their heads. The most important lesson of the debacle: squishy thinking about "business models" is no substitute for a distinctive strategy.”
(Harvard Business Review, 2001 p.1) and

‘The definition of a business model is murky at best.’
(Porter, 2001, p.73).

Porter was not alone in this view and business models have been described as, loosely defined, used inconsistently, poorly articulated or misunderstood. (Rappa, 1999), (Leahy 2003,), (Bagchi & Tulskie, 2000), (Linder & Cantrell 2000), (Osterwalder & Pigneur, 2002), (Schweizer, 2005).

To better understand the concept of stakeholder theory Donaldson & Preston (1995), proposed four views or theses , namely, descriptive, instrumental, normative and managerial which were essentially complementary but when not distinguished led to confusion. Whilst later in the same article, Donaldson and Preston (1995) reduce these four aspects to three, descriptive/empirical, instrumental and normative, the researcher believes it is possible to use these views or taxonomy to describe the different views and uses of business models, which leads to the confusion noted above.

Used descriptively a business model describes through a simplified abstraction the resources and capabilities a business uses to create value and how it delivers that value to a market or market segment in a financially sustainable way. Thus, the business model describes organisation's core logic, (Magretta, 2002). This descriptive approach can be invoked as a persuasive device. Whilst the speaker in the example is not trying to persuade his audience, they require an explanation framed in business model terms in order to be persuaded of its validity. In *The Guardian* (Lilley, 2007) describes pleas from floor of a conference

“What, they begged from the floor was our business model? Er, we try to make more money than we spend I said. Yes, yes, they replied - but how do you do that? Er, we try to make more money than we spend by doing things people value and might like to pay for. Cue both shocked expressions and sage nodding. When the blindingly obvious causes a stir, you know all is not right.”

The audience will only be convinced of the validity of the speaker's proposition if expressed explicitly as a business model, such that the term becomes a persuasive or rhetorical device.

In an instrumental view, the business model is a framework, which can be used to investigate whether the adoption of a business model approach and the achievement of long-term organisational objective are linked. In a commercial or for profit organisation these are usually expressed in financial terms such as profit, return on investment or shareholder return. In the Not for Profit, Public or Social Sectors the objectives are usually expressed in terms of the delivery of objectives or services. The use of business models is often put forward as a means of improving performance, although as with stakeholder theory, there are difficulties with evidencing this. Weill et al (2005, p 2) claim to have shown this,

“The results show that business models are a better predictor of financial performance than industry classifications and that some business models do, indeed, perform better than others.”

The normative view asks if there is a business model that should be followed, because it is right, moral or fair to do so. Right in this sense is differentiated from successful, although there might be a tendency for convergence if right leads to success as suggested in *Built to Last* (Collins and Porras, 1995).

Discussions over the funding mix for universities may be framed in a

normative manner in that the relative contribution from the state, student, employers and benefactors can be seen from a socially justified as well as economic perspective.

The managerial view, is referred to by Donaldson & Preston (1995, p.87), in relation stakeholder theory as,

“recommends the attitudes, structures and practices.”

Business models in this sense are internal analytical or decision-making tools. Northern Rock's business model was criticised in terms of the bank's loan-book risk profile, a failure of its decision-making processes and thus the business model as an aid to decision making (Wearden, 2007). Johnson et al (2008) propose that business models drive success and that a limiting factor is that managers fail to make decisions that change their business model and organisational performance suffers due largely to insufficient understanding of the process of business model development and a lack of understanding of their current business model by managers.

As a descriptive tool the business model offers a useful means of identifying key elements of what is offered to whom and how it is delivered.

Instrumentally, as a framework, a business model can aid an analysis of comparative organisational success and managerially can facilitate decision making, with changes, through the selection of alternatives, to some or all parts of the business model reflected in improved performance. Thus, the business model has the potential to be descriptive, instrumental and managerial describing the core logic, comparing different applied logics and organisational success and facilitating business model innovation through managerial action.

Whilst developing this approach the researcher has on different occasions merged and separated the notions of the instrumental and managerial views of business models. For this thesis, they are treated as distinct with the instrumental view an external analytical view of an organisation to understand if business models are linked to organisational performance and the managerial view and internal analytical management decision aide.

The business model concept does not appear to the researcher to be explicitly normative in the sense of giving,

“moral or philosophical guidelines for the operation and management of corporations”

(Donaldson & Preston, 1995, p71)

rather the statement and delivery of value propositions may contain normative aspects for example a social enterprise business model may or in discussions around corporate social responsibility (Porter, Kramer ,2006) or sector funding discussions. The elements of social enterprise and responsibility will be discussed later in terms of a normative business model and through a review of development of New Public Management; the role of business models in the public sector and universities will be explored.

The researcher will try to locate the term business model in a context of traditional microeconomic, strategy and stakeholder theory with a view to exploring the notion of the business model as a concept reflecting a new expression of previously conceived ideas and an addition to the language of management rather than a new or novel concept.

2.2 Business Models - A Descriptive Approach

The lack of clarity surrounding business models or their use to describe a wide range of applications noted above is illustrated in a recent paper by Froud et al. (2009).

“Since the early 2000’s academics have been trying to make sense of the term within a private sector frame in a post – New Economy era, though the literature is still fragmentary and inconclusive.”

Magretta, (2002), Linder and Cantrell, (2000), defined business models in simple and elegant terms. Magretta, (2002, p4), explains the essence of a business model as,

“stories that explain how enterprises work.”

going on to develop the explanation by posing a question that a business model should enable organisations to answer.

‘What is the underlying economic logic that explains how we can deliver value to customers at an appropriate cost?’
(Magretta, 2002, p4).

Linder & Cantrell (2000, p1) define a business model as,

‘the organisation’s core logic for creating value.’

The underlying or core logic supports the idea of the business model as the definition, description and application of the value proposition. In this context

strategy might be seen as the process of ensuring value proposition is achieved and protected in a competitive environment. A value proposition was defined as

“a set of needs a company can meet for its chosen customers that others cannot “
(Porter, and Kramer, 2006 p.9)

The researcher applies this view internally as well as externally to create internal value propositions, which facilitate value creation.

Boulton et al (2000), describe business models in terms of the utilisation of assets to create value with assets widely defined as physical, intellectual and relationship assets.

Mahadevan, (2000) describes business models in terms of three streams and although the focus of the paper is on the e-economy, the approach is useful in a wider context. The three streams are a “value stream”, which sets out the value propositions but limited to business partners and customers, a “revenue stream”, outlining how income will be generated and “a logistical stream” describing the supply chain. The streams in one sense describe the core logic, and some of the requirements for sustainability supporting Magretta, (2002) and Linder & Cantrell (2000).

Jansen argued that the business model as an idea or concept grew out the dot com revolution,

“Business model was one of the buzz words of the Internet Boom.”
(Jansen, et al, 2007 p 15)

In addition, Agarwal, (2001) describes an e-business model in terms of tool for planning which included developed strategies, knowledge management capabilities and strong e- business processes.

Another view of a business model, taken from the technology sector, is that put forward by Cusumano, (2003) as business models being either service or product business models. The development of software as service, (SAS), and application service provision (ASP), might be seen as examples of this question. Here technological innovation allows the development of new business models, which create new revenue streams.

The earliest reference to business model the researcher found was in a 1980 press release for the Nobel Prize for Economics awarded for Empirical Analysis of Business Fluctuations to Professor Lawrence Klein (Klein, 1980).

In this context, the term business model was used to describe models of fluctuations in business activity in economies as a whole and the transmission of changes in activity between economies. This is a macro economic view of business models. In current usage, business models are more closely related to the area microeconomics.

In another use of the term business model Kay, in the Financial Times, refers to

“European and American business models” (2004 p.1), which whilst debated in a micro economic context imply an almost cultural aspect to business models with an American laissez-faire approach on one side and a European social market on the other.

Keen and Qureshi, (2006) suggest that business models and strategy might be thought of in terms of the ‘what’ and ‘how’ of organisations. Business models define the underlying value exchange, the what, and strategy supplying the actions in terms of the external context defining markets, customers thus how the value logic will be realised. This view has some resonance with Seddon et al (2004). In addition, Makinen and Seppanen (2007) see business models as connecting business strategy and operating activities. Thus the kaleidoscope of definitions of business models continues.

This review confirms the use of the term business model to describe different business models in different way with different levels of granularity; from stories to logic and different value streams to planning tools. The term appears to continue to have an elasticity that enables it to stretched across a wide range of meaning whilst simultaneously maintaining an apparent meaningfulness

Table 2.1 below demonstrates this variety in the descriptions of business models quoting a range of definitions from the academic literature. Table, 3.2 tabulates a number of elements or components that appear in one or more of the definitions to gain a picture of not only the different usage but also some potentially common themes.

Table 2.1 Academic Definitions of Business Models

Reference	Definition
Amit Zott , 2001	A business model depicts the design of transaction content, structure, and governance so as to create value through the exploitation of business opportunities.
Chesbrough & Rosenbloom, 2000	“The business model is thus conceived as a focusing device that mediates between technology development and economic value creation.”
Hawkins, 2001	is a description of the commercial relationship between a business enterprise and the products and/or services it provides in the market. More specifically, it is a way of structuring various cost and revenue streams such that a business becomes viable, usually in the sense of being able to sustain itself based on the income it generates.
Lai et al., 2006	a business model may be defined as how businesses appropriate the maximum value of the products or services they have created
Linder & Cantrell, 2002	“the organisation’s core logic for creating value.” “highlights the distinctive activities and approaches that enable the firm to succeed—to attract customers, employees, and investors, and to deliver products and services profitably.”
Osterwalder Pigneur, 2002	“A business model is the value a company offers to one or several segments of customers, and the architecture of the firm and its network of partners, for creating, marketing and delivering, this value and relationship capital, in order to generate profitable and sustainable revenue streams.”
Magretta, 2002	“stories that explain how enterprises work”, “what is the underlying logic that explains how we deliver value to customers at an appropriate cost”, “describes as a system how the pieces of a business fit together”
Mahadevan, 2000	Value stream identifies the value proposition for the buyers, sellers and the market makers and portals in an Internet context. The revenue stream is a plan for assuring revenue generation for the business and the logistical stream addresses various issues related to the design of the supply chain for the business. The long-term viability of a business largely stems from the robustness of the value stream. Furthermore, the value stream in turn influences the revenue stream and choices with respect to the logistical stream.
Petrovicl et al. 2001	“it describes the logic of a ‘business system’ for creating value that lies behind the actual processes”
Ramierz, R., Wallin, J., 2000 (see Tate)	defines value-creation priorities in respect to the utilisation of both internal and external resources. It defines how the firm relates with stakeholders, such as actual and potential customers, employees, unions, suppliers, competitors, and other interest groups. It takes account of situations where its activities may (a) affect the business environment and its own business in ways that could create conflicting interests, or imposes risks on the firm, or (b) develop new, previously unpredicted ways of creating value.
Rappa, 2006	a business model is the method of doing business by which a company can sustain itself -- that is, generate revenue. The business model spells out how a company makes money by specifying where it is positioned in the value chain.
Seddon et al 2004	“A business model outlines the essential details of a firm’s value proposition for its various stakeholders and the activity system the firm uses to create and deliver value to its customers.”
Tikkanen et al., 2005	a system manifested in the components, related material, and cognitive aspects. Key components of the business model include the company’s network of relationships, operations embodied in the company’s business processes and resource base, and the finance and accounting concepts of the company
Timmers,1998	“architecture for the product/service/information flow’

Table 2.2 Academic Definitions of Business Models Key Elements

Author	Value Creation / Delivery	Sustainable / Commercial / Economic / Profit	Structure / System	Products / Services	Network	Resources	Total
Amit & Zott	Create value	Exploitation of business	Structure				3
Chesbrough & Rosenbloom	Value creation	Economic					2
Hawkins		Commercial Cost Revenue viable Sustain itself		Products Services	Relationships		3
Lai et al.	Maximum value	Succeed		Products Services			3
Linder & Cantrell	Creating value	Profitably		Products Services			3
Magretta	Deliver value	Appropriate cost	Describes as a system				3
Mahadevan	Value stream	Revenue generation Long term viability					2
Osterwalder & Pigneur	Value offered	Sustainable Profitable	Architecture		Network of Partners		4
Petrovic	Creating value	Business System	Actual processes				3
Ramierz & Wallin	Value creation priorities					Internal external resources	2
Rappa	Position in value chain	Sustain itself generate revenue					2
Seddon et al.	Value proposition						1
Tikkanen et al.		Finance accounting concepts	Operations, Business processes		Network of relationships	Resource base	4
Timmers			Architecture	Products Services			2
Total	11	11	6	4	3	2	37

From Tables 2.1 and 2.2 a definition of business model can be constructed using the more consistently appearing elements in academic definitions e.g.

“A sustainable, profitable system, describing the structures and processes creating and delivering value manifested in the provision of products or services.”

2.3 Business Models – An Instrumental View

Here examples of business models discussed in terms of relative performance or strategic benefit. Whilst they do not present a detailed analysis of the underlying factors contributing to improved or improving relative performance the discussions highlight the use of business models in terms of competitive advantage. Section 2.5 discusses further the possible links between business models and strategy.

In a report by the Economist Intelligence Unit on the Public sector, the term business model was defined narrowly in terms of how organisations are run. The report stated,

“A majority of executives believe that new business models will offer a greater advantage to their organisation than the addition of new services and delivery channels over the coming five years.”, (Economist Intelligence Unit, 2005a, p.3).

Fifty-Five percent of respondents to a survey thought that changes to the organisational processes would be based on technological innovation, with new working practices and partnerships with private organisations whilst the remainder believed that new services and delivery channels would be a greater source of advantage. Business models in this context refer to how an organisation does what it does. The report suggested that public sector organisations should be more willing to adopt private sector practices, how, ‘the what’ is actually done.

“In 2010, agencies and administrations must work to bottom-line objectives, whatever the processes may be. Bureaucrats are on their way out as problem-solving officials are rising to the top. Organisations must coordinate efforts not only with other public offices, but also with private-sector companies when their expertise is needed” (Economist Intelligence Unit, 2005a. p.4).

There is some similarity between this statement and the ideas contained in the New Public Management literature, which will be explored later in this thesis.

In a second report from the Economist Intelligence Unit, this time dealing with the for profit sector, (Economist Intelligence Unit, 2005b), suggested,

“Revisit your business model—regularly. Worldwide, more respondents identify new business models as a source of competitive advantage than new products and services. Products matter, of course, but as a source of lasting competitive advantage, they are vulnerable to replication. “Pure product advantage—at best—is short-term,” explains Malcolm Barnes, CIO of the heavy equipment supplier, Komatsu Australia. Rethinking—at regular intervals—how products and services are created, delivered and maintained will make the bigger difference. “You have to continually review business models,” says Derek Welch, the Netherlands based director of corporate strategy at Akzo Nobel, a global chemicals and pharmaceuticals firm. Worldwide, more respondents identify new business models as a greater source of competitive advantage than new products and services.” (Economist Intelligence Unit, 2005b. p.2).

Here business models are described in strategic terms, as a source of competitive advantage, highlighting the connection, not always clear, between business models and strategy. Products and services are easily imitated and that lasting competitive advantage was to be gained from innovation around how products, services, are created and delivered. The business model appears not to be simply the “what”, i.e. the products and services but how innovatively they are made, delivered and updated.

In a reference with direct relevance to higher education, Brown and Ternouth refer to business models in their report for Council for Industry and Higher Education on working with business, (2006, p.3),

“The UK higher education sector is already one of the most efficient in the world. It might further improve its value offering and its capabilities by adapting its business model and partnering with complementary lower-cost operations especially in Asia.”

Here value offering and capabilities are central to a business model with capabilities that could be enhanced by collaborating with lower cost providers. Value offerings appear to be value propositions and capabilities the resources and processes necessary to deliver them.

In the examples above the ability to innovate, change, or adapt products and services themselves or the ways in which they are created and delivered are both represented as business models.

2. 4 Business Models - A Practitioner's View

In this section, the researcher looks at examples of the use of business models taken from the practitioner arena to illustrate some of the ways managers and practitioners use the term.

Below are some examples of the use of the term business model used by management practitioners and journalists.

- a Zurich Insurance advertisement, (Zurich, 2007),
- Jamie Oliver's "Fifteen", restaurant in Cornwall (Caterersearch, 2006) ,
- Guardian reports on
 - the financial difficulties at Northern Rock (Wearden, 2007) and
 - a report on the purchase of Liverpool Football Club, (Donegan,2007)

The Zurich advertisement portrayed an extreme example of an organisation responding or adapting to changes in its environment as changing to its business model. The advertisement posed a question and made a statement,

"What if your business model changes every four hours?", and
"because change happenz" (Zurich, 2007).

Clearly, this is not to be taken literally, but to emphasise that as external change happens, there is a need to adapt and change the organisations business model. The advertisement shows a café on a street corner changing into a clothes boutique and then into a restaurant. Here we have the café, boutique or restaurant, the product or service, the what, as the business model.

Writing in the Guardian Unlimited on the Northern Rock financial difficulties, Graeme Wearden reported,

‘Committee member Andy Love MP for Edmonton said all aspects of Northern Rock's business model would be examined at the hearing. “We want to know whether the balance of risk was right,” he said, referring to the bank's high dependency on the wholesale markets rather than savings from its retail investors.’ (Wearden, 2007).

Here the term business model reflects the structure of the bank’s financing policy, how the bank attempted to balance its portfolio and may be seen as reflecting the management part of the business model. The business model led ultimately to poor decisions i.e. a flawed loan book, and in this context was as a heuristic device used to aid decision making. Perhaps more fundamentally the business model of funding mortgage lending from the wholesale market rather than the more traditional source, customer deposits, is the innovative core logic accepting that innovation does not always succeed.

Donegan wrote in the Guardian Unlimited in 2007,

“the billionaire Texan also confirmed for the first time that the club's profits would be used to meet the interest payments on the loan that enabled him and his partner, George Gillett, to buy the club - a business model similar to the controversial deal allowing the Glazer family to take control of Manchester United.” (Donegan, 2007)

This is a financial structure view of a business model, which in this instance is a leveraged purchase with dividends from future profits anticipated to repay the loan interest. The business model here does not articulate a value proposition merely the financing mechanism. As in the Northern Rock example above the financing mechanism might be seen as the core logic or good idea or Weill’s what we do and how we make money from it (Weill et al., 2005).

A short, ad hoc, review of the Business and Management, biography section in the York branch of Waterstones bookstore revealed of 10 books selected randomly by the researcher 3 referred explicitly to business models in either their contents or index pages.

Table 2.3 Business book Review for Business model references

Author	Book Title	Business Model Ref
Branson, R.	Business Stripped Bare	Yes
Finklestein, WS.	Why Smart Executives Fail	Yes
Gerber , M.	Awakening the Entrepreneur Within	Yes
Cann, J.	The Real Deal	No
Elnaugh, R.	Business Nightmares	No
Gerstner, L.V.,	Who Says Elephants Can't Dance	No
Hays, C.L.	Pop. Truth and Power at the Coca Cola Company	No
Liker, J.	The Toyota Way	No
Smith,G.	iwoz – Steve Woznick	No
Woods, C.	Brilliant Startup	No

The researcher found two references to business models in the Richard Branson volume. The first describes three business models considered by Virgin executives as possible organisational models. They were;

- a US equity investor model with a hands off supplier of capital such as Blackstone or Berkshire Hathaway
- a South Korean “chaebol” approach where a company, centrally controlled by family interests expands along the supply chain e.g. LG and Samsung
- a Japanese “keiretsu” model with a control structure made up of a series of cross-organisational shareholdings, covering a number of economic sectors and a run by strong and professional management. e.g. Mitsubishi.

Having used business model to describe these three distinct structural approaches to organisations the second reference describes Virgin America as a unique business model, which is flexible, offers an outstanding service level, to a particular set of customers with a requirement to fly point to point between urban centres. Interestingly the missing piece in the model is how to make it profitable. This is an example of a business model as a good idea, core logic, with a belief that money can be made from it but in a yet undetermined way. This approach may be what Porter, (2001), was referring to when he said that business models were a poor investment criteria in that a good idea was a prerequisite but not sufficient for business success.

Finklestine's reference to business model describes a static or unresponsive business model whereby an organisation fails to adapt to innovation. The emphasis on innovation does not distinguish between the what or how of the business

Gerber takes a more direct view on business models suggesting they are simply, "the way a business makes money". Using the University of Phoenix as an example Gerber suggests that the business idea is the sale of degrees and the process by which the result is achieved is the business model. Thus the two part business model is essentially what result is the business designed to deliver and how it is delivered.

These examples of the use of business models by entrepreneurs reinforce the idea that whilst the concept is used, it is used in a variety of ways although in the private sector generally linked by sustainability through profit.

2.5 Business Models Economics, Strategy, Stakeholders, Space and Time

In this section, the researcher takes the view of the business model as the enacted core logic that sustains an organisation through time. With the requirement for a business model to adapt or innovate incrementally or on a more significant scale in response to opportunities or threats, the concept of the business model is explored in light of micro-economic, strategy and stakeholder theories.

2.5.1 Business Models, Microeconomics, Strategy and more Stakeholder Analysis

How business models, business strategy and micro economic theory may overlap was prompted by a conversation about Michael Porter and strategy with Professor David Smith at the Nottingham Business School. The discussion centred on Porter's Five Forces model and value chain analysis as a restatement, albeit an important restatement, of micro economic theory, a view also expressed by Recklies, (2001). If connections can be made between business strategy and business models then an analysis of higher education strategic plans, as noted earlier as part of this research, may reveal traces of business models implied by the content or expression of those plans. Thus in addition to the financial data set, the researcher will analyse a number

of university strategic plans, for evidence of the language used in the description of business models.

The purpose in discussing micro-economics, business models and strategy together, is to better understand the context in which business models sit and hopefully tease out any relationships that may exist between these concepts and thus perhaps help explain why the term business model has such a wide range of use and if that facility is useful or merely confusing.

2.5.2 Business Models and Microeconomics

Economics can be defined as the study of the allocation of scarce resources.

J R Hicks, (1942), described economics as,

“the behaviour of human beings in business.”

(Hicks, 1942, p1.)

This definition is a timely reminder of the central role of the human players when we look at economic models, business models and business strategy.

“The study of economics can therefore take us a considerable way towards a general understanding of human society, that is, of men’s behaviour to one another.” (Hicks, 1942, p. 3).

In the researcher’s attempt to construct a conceptual framework for a business model the human players, students, staff and partners are included as key elements.

Traditionally economics is divided into two main areas microeconomics, the study of the actions and relations of components of an economy namely individuals, households and firms and, macroeconomics, the study of economies as a whole and their interactions. The area of microeconomics concerned with the production of goods and services, sometimes referred to as the theory of the firm, describes how the decisions to supply goods or services are made. The neo-classical model assumes rational behaviour on the part of the producers, usually expressed in terms of profit maximising behaviour in conditions of perfect competition. A business model as a decision making heuristic might be said to occupy a similar economic space in terms of decision making, whether and how to supply goods or services to a market. The reactions of the consumer are reflected here in the assumptions made about the shape and position of the demand curve the firm is facing.

What lies or is determined within the firm or lies or is determined without the firm or by the market is a question central to microeconomics, (Gibbons, 2004). If business models, as shown in figure 1, contain those elements of, resources and processes, accepting that these are sometimes sourced from partners, we can see what it is that lies within the firm. However if the business model reflects the core logic expressed in terms of value propositions we are also concerned with what lies without the firm in the market and thus as the term business model covers a wide range of activity it is hardly surprising that there is confusion. Put another way;

- if we accept the core logic definition of a business model, and
- that the core logic can be expressed in terms of value propositions, and
- value propositions enacted as value exchange can be expressed as classic supply and demand, then

business models are an alternative presentation of the microeconomic expression of supply and demand. In this sense, the term business model is a repackaging of an earlier concept and business model in practitioner usage becomes a short hand for the basic economic principles of supply and demand.

Linking micro-economics and strategy Porter's view of distinctiveness of offering in relation to competitors is identified with the Positioning School, (Mintzberg et al, 2005), suggesting that the number of potentially successful strategies was limited to those whose advantage could be protected from the competitive actions of rivals. This might be seen as an application or extension of work on barriers to new competition allowing more sustainable profits to be enjoyed pioneered by J.S. Bain in, *Barriers to New Competition* 1951 or at least that the ideas of Porter would be recognisable by Bain (see Kay, 1990).

2.5.3 Business Models and Strategy

Ghemawat, (2002), suggests that it was not until the growth of mass markets in the USA in the 19th century that Adam Smith's concept of the invisible hand began to be replaced by management planning and strategy in business enterprises and eventually recognised in the academic world with the foundation of the Harvard Business School in 1908. Smith's invisible hand

suggests that the pursuit of individual gain through market forces, over which individuals and individual organisations have no control, benefits society as a whole. It can be argued that the rise of corporate strategy simply allowed the more effective pursuit of individual corporate gain, not necessarily at the expense of individual gain, rendering the workings of the hand more visible to the corporate planners.

Business strategy is often described as having its genesis in the world of military strategy in the works of such authors as Clausewitz and Sun Tzu (see Mintzberg et al, 2005). Indeed the root of the term strategy is *strategia* or *strategos*, Greek for the office of general and general respectively. So is strategy what generals do? Steiner (see Nicklos, 2006) refers to strategy in terms of the important things senior managers do. Liddel-Hart considered Clausewitz's definition of strategy as too broad and merging into the arena of policy and put forward a more restricted definition,

"the art of distributing and applying military means to fulfil the ends of policy."

(see Nicklos, 2006).

Thus, policy can be seen as setting objectives and strategy supplying the means of achieving them. There will therefore be a sense of creating strategy, refining these thoughts into plans and ultimately implementing those plans through actions, realising always that plans need to be able to be modified in reaction to events.

This sense of strategy is echoed in Mintzberg's, "5 Ps of strategy", (Mintzberg, 1987). Mintzberg suggests that defining the term strategy in multiple and complementary ways, would aid managers and academics by better reflecting the use of the term to describe a range of circumstances. In a similar approach Liedtka, (1998) talks of strategic thinking in terms of five major features which were summarised in a paper on the Bilaterals.org website;

"strategic thinking has a holistic understanding of systems that create value and their contextual interdependencies (internal and external), a strategic sense of direction or destiny, an openness to new experiences (emergent strategies), a capability to connect the past with the present and link it to the future, and enough flexibility to be both analytical and intuitive at the same time" (Anon, 2005).

This multifaceted approach might be usefully applied to business models. Mintzberg (1987) referred to the definitions of strategy as, plan, ploy pattern, position and perspective, the 5 Ps. Strategy can be one or more of these “5 Ps”. Thus, an organisation may have a strategic plan but it is likely that the human players will also experience strategy as pattern as the plan is implemented and collides with events. Thus, the five Ps have a duality, being strategies and components or stages of strategy (ies) simultaneously. If we accept that the nature of strategy is unlikely to be encompassed by one definition and can thus appear unclear or its usage diverse, then if business models are abstractions from strategy (Seddon, et al, 2004) we should not be surprised if they also appear to be unclear. If we accept the proposition of strategy as having more than one definition (Mintzberg, et al, 2005), could this be the case for business models? Rather than search for a single view of business models, perhaps a series of business model definitions is more appropriate. The attempt to create a single notion of a business model may be the significant contributor to the existing confusion. In figure 2.4 below such a multi stage business model is described.

Figure 2.4: A Multi Stage Business Model - A business model spectrum

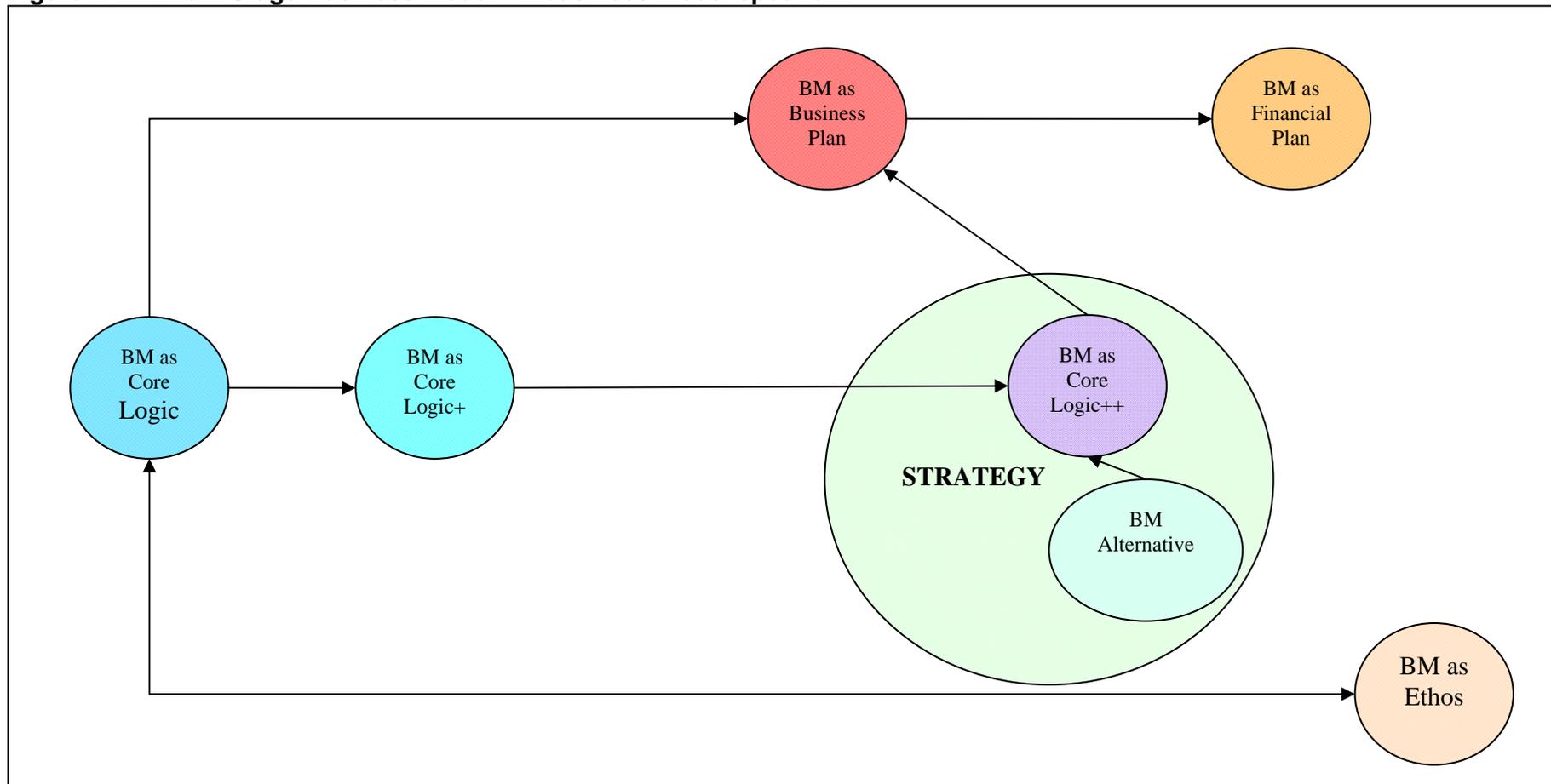


Figure 2.4 is explained as follows,

Business Models as;

- **core logic** (Magretta, 2002) a statement of a value proposition(s). As indicated by the arrows core logic is at the centre of all the business models. The distinctive relationship between the business model as ethos, the example used here is social enterprise, is shown by a two-way arrow indicating the ambiguity in social enterprise as conceptually a business model and the adoption of a core logic delivered in a social enterprise not for profit context.
- **core logic +** this adds process, resources and financial outcomes (Osterwalder & Pigneur, 2002) to the value proposition or core logic. The + here represents “how” the “what” of the core logic is successfully delivered. We begin to see a delivery model. (Baker & Close, 2007)
- **core logic ++** brings the business model and an alternative business model reflecting competing value propositions which with the introduction of competition bring in a strategic dimension.
- **business & financial plans** here the perhaps more traditional business and financial plans that may be referred to as business models
- **ethos** e.g. social enterprise. In a sense, the business model here is only different in its emphasis on the financial out turn. The financial performance moves from a profit maximisation to a facilitator of the social objective. The how and what of the business model remains, the why simply shifts.

Having looked briefly at developments in business strategy as a context for business models how can business models and strategy be reconciled in order to better understand business models and more easily identify them?

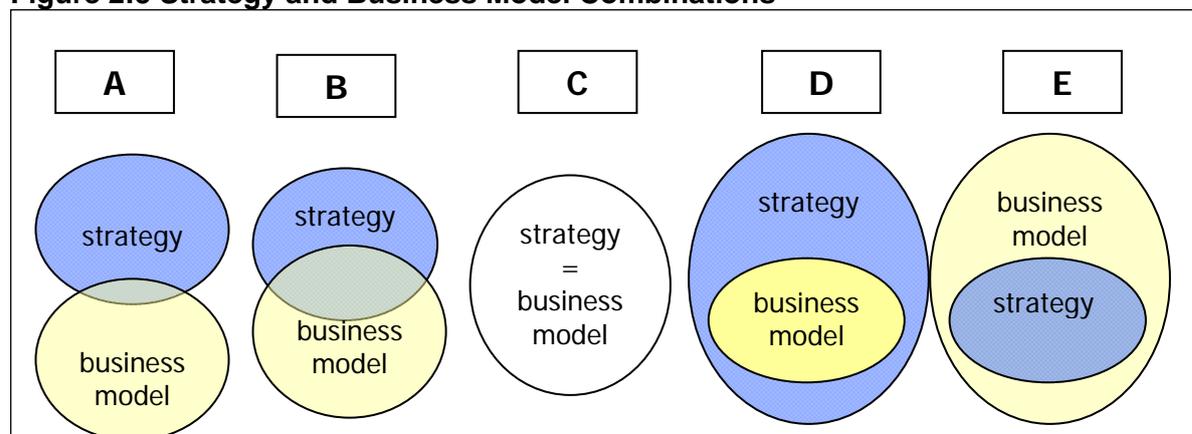
Amit and Zott, (2004), explore the potential relation between business models and product-market strategies evidencing interest in the possible interplay between strategy and business models. They conclude that business models are outward looking, focusing on the external exchanges with customers, suppliers and partners whilst the product-market strategy sets the firm's responses to competitor behaviour to maintain its competitive position. Amit

and, Zott (2004) conclude that as defined above business models and product-market strategy are “distinct constructs” which can act in complementary ways. Competition and competitive responses as a differentiator of business models and strategy is discussed in Seddon et al (2004) where business models are discussed in terms of their possible relationship to strategy.

Richardson, (2005) using Porter’s competitive view of strategy, whereby strategy consists of the creation of superior value for customers and through superior execution enables the capture more of that value than its competitors, describes the business model as the organisation of the components of that strategy and its execution. Richardson (2005) sees business models as potentially a tool to better illustrate the links between strategising and the operationalisation of a strategy.

Figure 2.5 below illustrates five possible combinations of how strategy and business models might be viewed in relation to each other. A sixth combination, where strategy and business models are completely separate, is missing. A and B are cases where the overlap between strategy and a business model is proportionately low and high respectively. C shows a case where strategy and business models are the same, D and E describe the cases where a business model is a subset of strategy, and strategy is a subset of a business model.

Figure 2:5 Strategy and Business Model Combinations



Source, Seddon et al., (2004)

Seddon et al’s conclusion came in two parts perhaps illustrating the difficulty in the clarifying relationship between strategy and business models. They

concluded from their analysis of a wide range of definitions of the term business model that there was in practice little to differentiate business models and strategy, thus C in figure 2.5 held true. However, they suggest that strategy is unique to a firm being the result of particular external competitive considerations whilst the same business model may be applied by a number of different firms. Thus, a business model is a subset or abstraction from strategy and D in figure 2.5 holds true.

Ramirez and Wallin, (see Tate, 2000) state that a business model,

“defines **value-creation priorities** in respect to the utilization of both **internal and external resources**. It defines how the firm relates with **stakeholders**, such as actual and potential customers, employees, unions, suppliers, **competitors**, and other interest groups. It takes account of situations where its activities may (a) affect the **business environment** and its own business in ways that could create conflicting interests, or imposes risks on the firm, or (b), develop new, previously unpredicted ways of creating value.”

(Bold font is the researcher’s emphasis)

This definition paints a picture of the business model in very wide reaching terms and as such moves more towards the C , strategy = business model or E where strategy is a subset of business models, in figure 3 (Seddon et al , 2004). However taking the definition of a business model as an abstraction from strategy and aligning this with Magretta’s (2002) definition of business models around value creation this suggests there is a difference between business models and strategy i.e. the competitive perspective that is present in strategy but not business models.

“The terms strategy and business model are being used by millions of people but that their definition is fuzzy”

(Seddon et al, 2004, p.17).

If business models are abstractions of strategy, a chronology might be implied where strategy is formed and business models emerge. Alternatively, business models may be viewed as an expression of how an organisation creates value preceding strategy formulation. Then strategy grows from this initial logic to protect the returns created by the implementation of a business

model. We now back at Bain's Barriers to Competition, (see Kay 1990), with business model innovation a barrier to competition creating the opportunity to earn profits. Thus, a business model isn't the same as strategy rather business model innovation is a competitive strategy, as suggested in the Economist Intelligence Unit reports, (2005b).

Setting the external environment as a constant, and defining the value proposition or exchange as internal i.e. including only the parties to that value exchange, then business models as value propositions are different from strategy with its external or competitive dimension and aligns with Seddon et al (2004). However if we view value propositions in a dynamic context,

“the dynamic perspective i.e. how business models may change over time is missing..” (Schweizer, 2005)

such that any value proposition is only one of many potentially offered or available to any party at any single point in time, then we introduce the type of complexity that competitive positioning, and thus strategy, represents. The recognition of the existence of competing value propositions allows us to move from the rather static view of business models, with value propositions treated in isolation, to a more dynamic model where value propositions exist, not in isolation, but in a space with other competing value propositions. In this scenario, any value proposition will be shaped (business model innovation) by competing value propositions or risk becoming less attractive and potentially unsustainable. From this perspective, the view of competition as a differentiator between business models and strategy no longer holds, as the differentiation is merely temporal. Hamel and Valikabgas, (2003, p1) expressed this link as

“In a turbulent age, the only dependable advantage is a superior capacity for reinventing your business model before circumstances force you to. Achieving such strategic resilience isn't easy.”

Value can be seen as relative, rather than absolute, with the value exchange underpinning a business model impacted on by alternative sources of value in terms of alternative offerings of the same, substitutes or complementary goods or services. Thus, business models and strategy may form an iterative process. This is akin to Mintzberg's evolving strategy (Mintzberg, et al, 2005) where events occur and strategy is shaped by them and emerges different

from that which was originally conceived. Alternative value propositions can thus be said to shape business models. The underlying logic then becomes dependant on external forces and competitor reactions, strategy, and thus the need to refresh, innovate, the business model.

“By definition new business models destroy old ones...”

(Hamel & Skarzynski, 2001, p.16)

Clayton uses disruptive technologies to demonstrate business model innovation.

“The nation’s business schools are being disrupted and must fundamentally rethink their business models if they hope to thrive in the future”

(Clayton, 2002, p15)

and in a Manyworlds on line publication industry evolution is described as

“the competition and cooperation of business models”

(Manyworlds 2003)

Figure 2.6 illustrates this idea. Business model one, BM1, is made up of value proposition, VP1, and the means to deliver it, Process, Resource and Partners, PRP1. If we introduce an alternative or competing value proposition, VPA, then a response might be the reformulation of BM1 into BM2 with a modified value proposition, VP1m that in turn results in a modified competing value proposition VPAm. Thus, business models may be a static view of value propositions, whilst strategy is a view of the interaction of value propositions over time. Kay put this as,

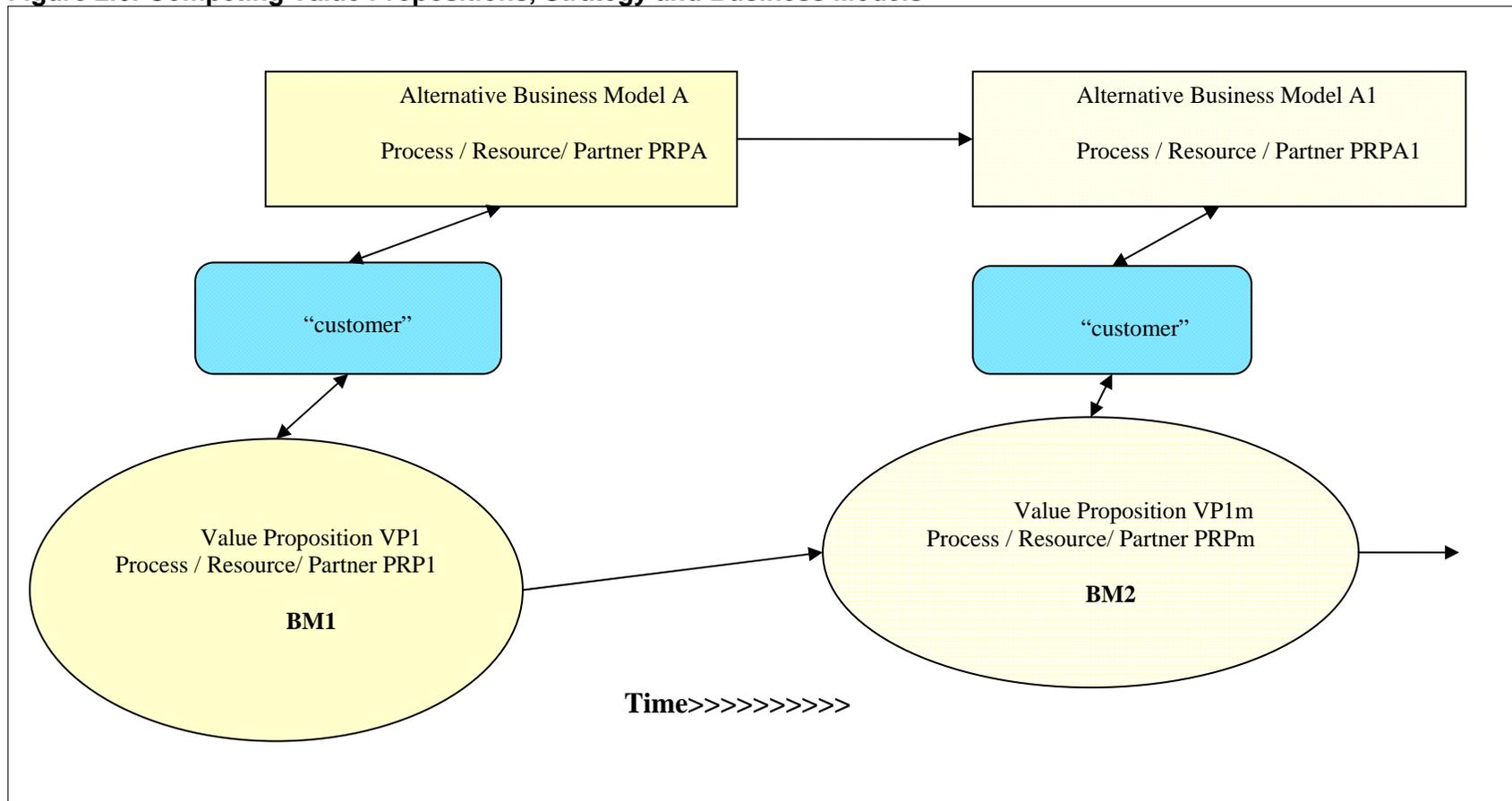
”Competition is a mechanism to promote rivalry and innovation, generating new products, new technologies and new business models.” (2002)

It is possible to express this as follows,

$$BM_1 = VP_1 + PRP_1, \text{ and } BM_2 = VP_2 + PRP_2 \dots\dots\dots BN_n = VP_n + PRP_n$$

If business models change as a result of strategic responses SR to changes in the external environment EEC then $BM_2 = BM_1 (SR_1, [EEC_1])$

Figure 2.6: Competing Value Propositions, Strategy and Business Models



Casadesus-Masanell & Ricart, (2007) analysis seems to support this view as they express the link between business models and strategy in terms of business innovation such that plans are strategic when they require changes to the existing business model whilst Afuah and Tucci (2001) suggested that business models should not be seen in isolation from competing offers. Business model change as strategy could be in the form of significant disruptive technologies, (Clayton, 2002,) or business model evolution as strategic responses viewed in terms of the concept strategic incrementalism as described by Quinn, (1980)

2.5.4 Business Models and Stakeholder Value

Patzelt et al (2007 p. 206) in defining the business model suggest that,

“..a business model differs from the overall notion of organizational strategy in that it emphasizes relationships to stakeholders”

Campbell & Argenti, (2006), suggests that stakeholder theory is fundamental to understanding how organisations make money in business. This view has resonances with the view of business models as descriptions of the basic logic of how businesses make money (Linder and Cantrell, 2000). Campbell suggests that giving a, “good deal,” to your suppliers and customers, which is expanded to,

“a good deal to all of your stakeholders”, is a key factor for success in business (Campbell & Argenti, 2006 p.1).

A good deal might be expressed in terms of value propositions attractive to the parties involved. If there isn't satisfactory value in a proposed exchange then the exchange is unlikely to take place or be repeated. If a business model is the expression of a series of value propositions both internal to and external of the organisation and the capacity to deliver the offer, it is possible to see how stakeholder theory and the view of business models as value propositions might be expressions of the same, similar or related concepts. Stakeholders might simply be the people or organisations at the other end of the value proposition to the business.

Higher Education stakeholders, their contributions and the benefits are described in the Dearing Report, (NICHE, 1997). The contribution and benefits analysis may be viewed as a series of incomplete or partial value

propositions and thus express, imply or describe part of a business model although nowhere in the report is the term used. A table from the report is reproduced below table 2.7. This representation does not directly link the parties in a value proposition or exchange rather it tries to represent the elements of the value exchange by describing the contributions and benefits of and for each party or stakeholder. The elements in table 2.7 are then successfully mapped to the conceptual framework for a university business model, in figure 2.8 below.

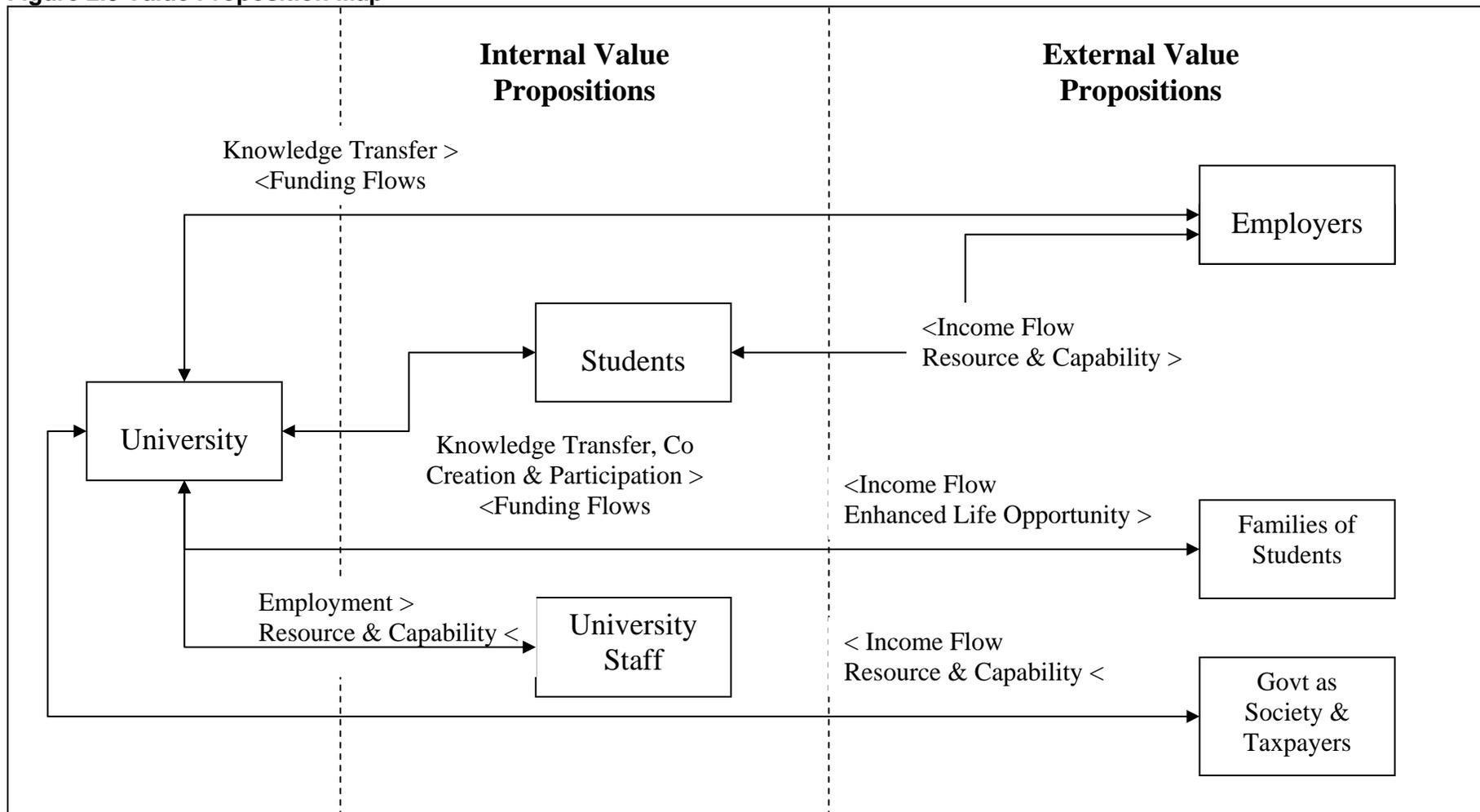
Table 2:7 Higher Education a New Compact

Stakeholder	Contribution	Benefit
Society and Taxpayers as represented by government	<ul style="list-style-type: none"> • A fair proportion of public spending and national income devoted to higher education • Greater stability in the public funding and framework for higher education 	<ul style="list-style-type: none"> • A highly skilled and adaptable workforce • Research findings to underpin a knowledge based society • Informed, flexible effective citizens • A greater share of the cost of higher education met by the beneficiaries
Students and Graduates	<ul style="list-style-type: none"> • A greater financial contribution than now to the costs of tuition and living costs especially for those from richer backgrounds • Time and effort applied to learning 	<ul style="list-style-type: none"> • More chances to participate in a larger system • Better guidance and information to inform choices • A high quality learning experience • A clear statement of learning outcomes • Rigorously assured awards which have standing across the UK and overseas • Fairer income contingent arrangements for making a contribution when in work • Better support for part time study • Larger Access funds
Institutions	<ul style="list-style-type: none"> • Collective commitment to rigorous assurance of quality and standards • New approaches to learning and teaching • Continual search for more cost effective approaches to the delivery of higher education 	<ul style="list-style-type: none"> • A new source of funding for teaching and the possibility of resumed expansion • New funding streams for research which recognise different purposes • Greater recognition from society of the importance of higher education • Greater stability in funding

Stakeholder	Contribution	Benefit
	<ul style="list-style-type: none"> • Commitment to supporting and developing staff 	
Higher Education Staff	<ul style="list-style-type: none"> • Commitment to excellence • Willingness to seek and adopt new ways of doing things 	<ul style="list-style-type: none"> • Greater recognition (financial and non-financial) of the value of all their work not just research • Proper recognition of their profession • Access to training and development opportunities. • Fair pay
Employers	<ul style="list-style-type: none"> • More investment in the training of employees • Increased contribution to the infrastructure of research • More work experience opportunities for students • Greater support for employees serving on institutions' governing bodies 	<ul style="list-style-type: none"> • More highly educated people in the workforce • Clearer understanding of what higher education is offering • More opportunities for collaborative working with higher education • Better accessibility to higher education resources for small and medium sized enterprises • Outcomes of research
The families of students	<ul style="list-style-type: none"> • Possible contribution to costs 	<ul style="list-style-type: none"> • Better higher education opportunities for their children • Better, more flexible higher education opportunities for mature students

Source NICHE 1997

Figure 2.8 Value Proposition Map



The value proposition analysis drawn from the Dearing Report (NICHE, 1997), which looked at higher education as a whole, does not therefore reference competitive positioning and as a stakeholder perspective does not include the capacity to deliver the offers, i.e. Resources, Processes and Infrastructure. However in terms of value propositions the analysis does map well to the researcher's conceptual framework for a university business model. Again, we see the business model concept as the representing or repackaging of earlier concepts or parts of concepts in a form perhaps more representative of the modern economy.

2.5.5 Business Models and Business Space

Kay (2008) refers to the use of the term "space," such as credit space and merger and acquisition space, as reflecting sloppy thought echoing Porter, (2001). Kay defines business space as,

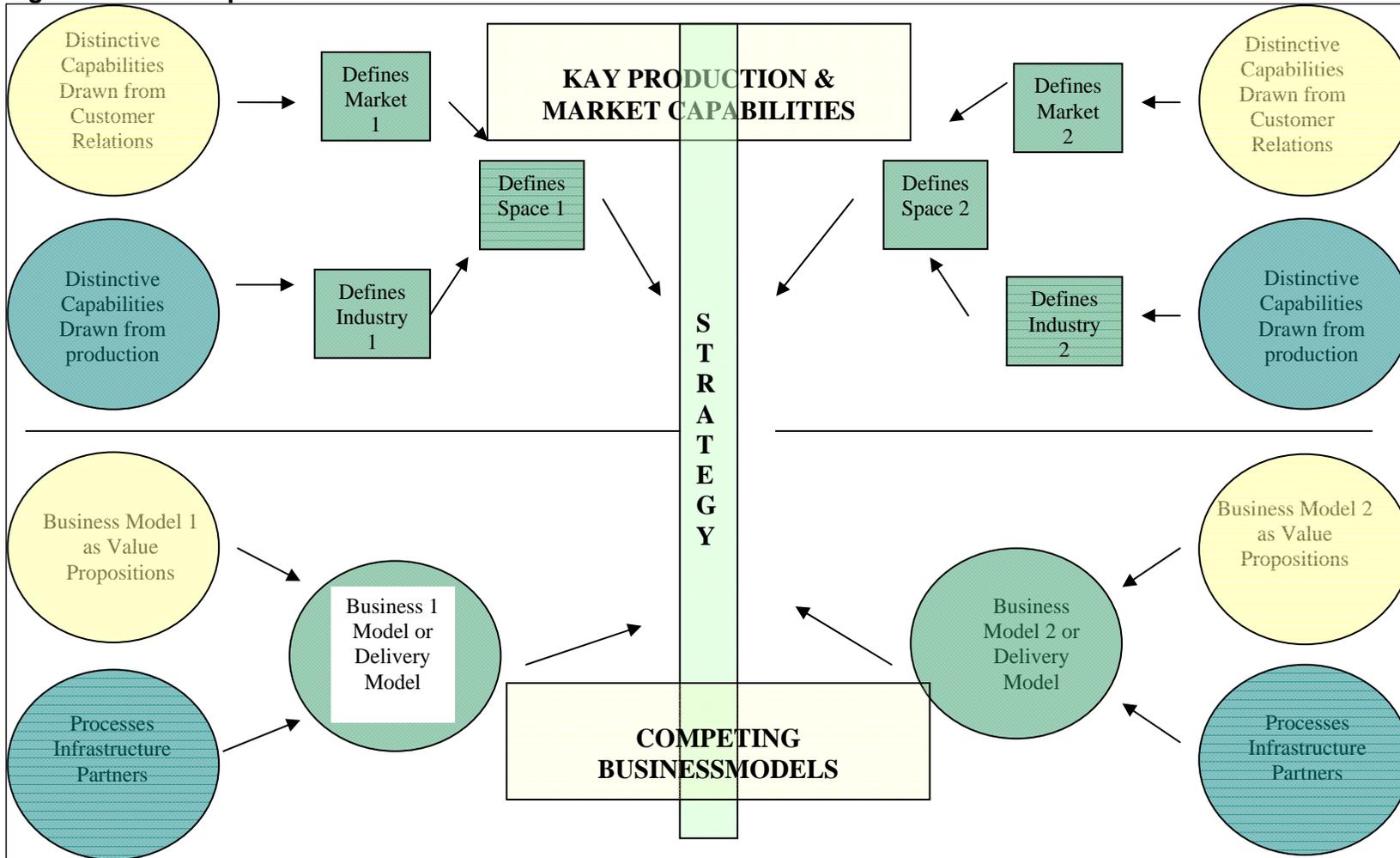
"The corporation's unique identity is defined by its distinctive capabilities. The matching of distinctive capability to market and industry is the process that defines "our space".
(Kay, 2008).

Figure 2.9 below demonstrate the similarities between the concepts of business space and business model and the link through competition, businesses occupying the same or similar business space, to the development of strategy. Figure 2.9 is composed of two distinct parts. In the top half two competing organisations compete in overlapping spaces, space 1 and 2. The spaces are defined in terms distinctive capabilities, both customer and product related defining market and industry, in which by virtue of their overlapping nature they compete through strategy. The bottom half describes a business model interpretation of the same scenario. Two business models defined by value propositions, process infrastructure and partners, compete again creating strategy.

The two approaches, business model and business space are similar; Capabilities; Customer and Production = Value Proposition + Processes + Infrastructure + Partners. Market capabilities whilst signalling processes can also be interpreted as relations with customers derived from value offered. Production capabilities are as well executed processes supported by appropriate infrastructures potentially in part supplied by partners. Business

space and models can be viewed as alternative representations of the same economic concept.

Fig 2.9 Business Space and Business Models



2. 6. Business Models in the Public Sector, New Public Management, Social Enterprises and Universities -

In this section, the researcher discusses business models in the public sector and universities in the context of the development of New Public Management (NPM) and “modern managerialism” (McLaughlin et al., 2002, p 79). The researcher will argue that University business models reflect the influence of NPM and modern managerialism, as experienced in the public sector generally and have moved from the traditional not for profit, to for profit with income generation and may ultimately move to becoming social enterprises (fig 2.13) and that whilst a normative approach to their business model analysis is appropriate an implicit managerial dimension has been adopted.

2.6.1 New Public Management

NPM, is often described in terms of the application of private sector business methods, or a business model, to public sector management

“an approach to managing public services that prioritises managerial, as opposed to professional, skills and which includes resource and performance management at its heart.”
(Osborne and Brown, 2005, p.4)

Hood (1998) challenged this view in so far as new public management being the widespread adoption of a business model. His argument has three strands. Firstly, there was no discernable business model on which to converge. Secondly, the practices adopted,

“diverged sharply from mainstream private sector practice” (Hood, 1998, p 450)

and thirdly, practices adopted in New Zealand differed significantly from those adopted in the UK. Here Hood was defining a business model largely in terms in terms of HR practices.

A traditional view of public sector management is that of bureaucracy where bureaucracy is the exercise of power, executing policy, by an office or position in a hierarchy in an essentially rules driven environment. Individual initiative was subordinate to accountability and the impartial implementation of policy through standard workflows.

Tracing the path of UK public service provision we can see a change from the 19th century view of public provision as unavoidable, to an early 20th century view. Here the legitimacy of social issues was recognised and a partnership between government and charities existed developing into the Welfare State delivering at least the minimum acceptable service. In the 1980's this was viewed as no longer sufficient and NPM developed as a set of practices to meet a more consumerist demand. (Osborne & Browne, 2002).

A framework describing NPM was articulated by Hood (1995) and consisted of seven principles,

1. hands on professional management
2. explicit standards and measures of performance
3. move away from input to output controls
4. more decentralised operating units
5. increased competition
6. private sector style management practices e.g. HR , planning
7. emphasis on efficient use of fewer resources

Osborne and Brown added an eighth element reflecting a shift to a more governance orientated role whereby the public sector managed service delivery by other actors, through networks of private sector and charity providers and public bodies an agency approach.

Assumed within the NPM model was the superiority of private sector methods of management over the existing bureaucratic approach reflected in the NPM toolbox of private sector techniques and the creation of quasi competition through marketisation. Existing public management was seen as inefficient, expensive, ineffective and supporting a too powerful workforce, with both economic and political overtones. The consequences of these conditions was expected to be increasing tax bills, a declining service level and increasing electorate dissatisfaction. The introduction of private sector methods or a business like approach was expected, through marketisation, to shift control from a bureaucratic hierarchy to contractual performance with failure to deliver to the terms resulting in the loss or reduced freedom of decision-making power. (McLaughlin et al, a 2002).

Modern managerialism differs from, and may be argued, to have grown out of NPM with collaboration displacing competition and the operational shorter-term view of NPM replaced by a longer-term perspective of the achievement of policy goals. (McLaughlin et al b, 2002). With NPM as a more business-like approach than the preceding bureaucracy, the introduction of business models into the language and practice of the public sector is not surprising. James's (2001) brings together NPM and business models and suggests a central element of NPM is the creation of business-like agencies within central government with the phrases, business model and business-like appearing interchangeably. James's (2001) definition of NPM talks of contracting out, creation of corporate units, the use of performance targets and incentives describing NPM as a different from the traditional way of organising public administration with unclear origins but influenced strongly by private sector ideas and methods.

The move towards business-like agencies developed from an Efficiency Unit report entitled, *Improving Management in Government the Next Steps* (1988). This development can be seen as part of a chain of public service management reviews and recommendations such stretching back at least as far as the 1960's with the Fulton Report on the Civil Service of 1968, recommending accountable management and hiving off. (Dowding, 1995). Accountable management consisted of identifying centres and sub centres, held responsible for the achievement of given targets or objectives and budgetary performance, a business like approach.

Hiving off was a recommendation suggesting the transfer of certain activities from government departments to autonomous entities again with responsibility for the achievement of agreed targets, beyond the short-term operational control of departments and ministers. Hiving off might be seen as a particular example of accountable management, a forerunner of the agency recommendation in *Next Steps* or *Ibbs* report of 1988 as alternatives to privatisation.

Agencies whilst not separate from their originating department carry out operational tasks with a level of autonomy. The structure of agencies tended to follow a pattern of a Chief Executive Officer and a Board to whom certain

freedoms are delegated in return for the anticipated achievement of performance targets. James (2001) describes the agency model as similar to the classic M-Form or multi divisional model of business organisation and the term business model appears to refer initially to an organisational structure. A business like approach to organisational management, NPM and new managerialism, can be described as applying a business model, in the sense of business practices and processes to the public sector. With the objective of efficiency, the application of NPM can also be seen as applying the, 'how we make (save) money' view of the business model to the public sector.

A different manifestation of a business model approach in the public sector can be found where the business model is an integrated or balanced set of measures, financial and non financial adaptable to a public sector relevant set of criteria. This view can be seen to address the measurement dimension of Hood's 1995 analysis. An example of this is Kaplan and Norton's Balanced Score Card, (see Brignall and Modell, 2000).

2.6.2 Business Models and Public Sector Bodies

A useful example of the use of the business model concept to describe and analyse a public sector body is found in a paper from the Manchester Business School, (Froud et al 2008 p 252). Here the business model focuses on two connected economic themes,

“financial viability and stakeholder credibility.”

echoing the researcher's interest in exploring connections between business models and stakeholder theory. Froud et al (2008) deal with the business model concept described as financial viability, the use of a business model approach to analyse the then crisis at the BBC and finally with the policy implications arising from the business model analysis.

Froud et al set out to investigate, why if the BBC has economic power not available to its competitors and uses it, is it in a period of crisis such that significant cuts were required to its cost base? They characterised a spectrum of analysis stretching

“from economics towards business analysis through the concept of business models”

(Froud et al, 2008, p 254)

Again, there are echoes of the researcher's interest in the replaying of existing concepts in frameworks relevant to the current context. Froud et al also comment that the literature around the concept of a business model is

“fragmentary and inconclusive,”

(Froud et al, 2008, p 254)

supporting the conclusion reached by the researcher.

To develop their analysis Froud et al identify two aspects of business models.

1. for income to at least equal or in the private sector case exceed expenditure over a period of time, whilst
2. simultaneously meeting the needs and expectations of stakeholders.

It might be argued that the first of these criteria is in no small part dependant of the achievement of the second. Thus, a business model analysis will require a review of stakeholder demands and analysis of financial constraints and performance overtime.

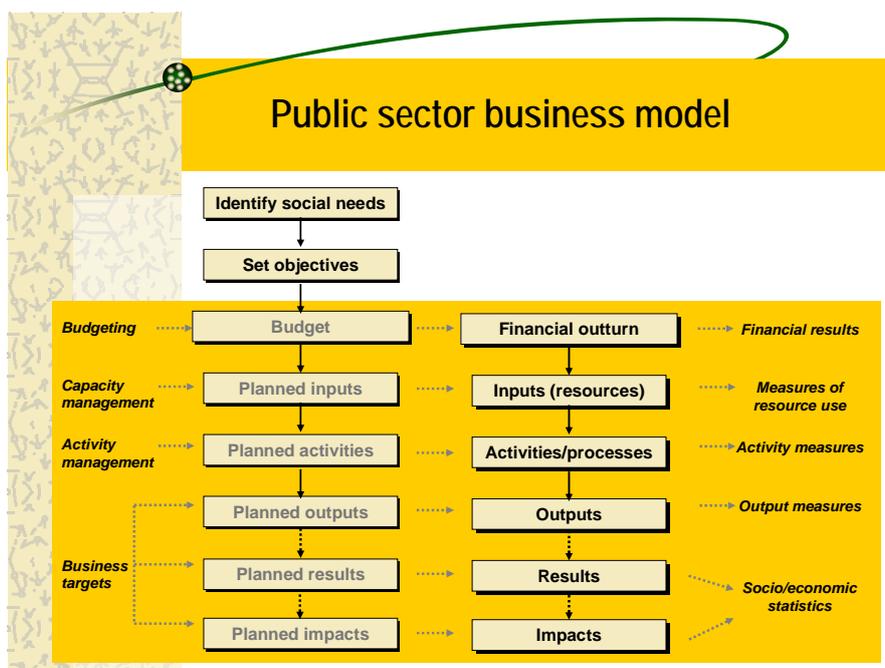
In many public sector organisations, the financial task is to manage expenditure within predetermined income levels. Profits or surpluses tend to be minimal and this balancing act can create a level of complexity often overlooked in the analysis of performance. For the year 2005/06, the NHS was forecasting a net deficit of around £500m or 0.8% of the total spend. This level of net overspend required many statements from the then minster Patricia Hewitt defending the NHS position and the accusation from the opposition of mismanagement. Thus, a business model where financial success is not the primary driver and surpluses sufficient to reinvest are required bring their own level of management complexity. Record and growing profits in the private sector are in the words of “1066 and All That”, a good thing, but in the university sector suggests mismanagement in under delivery of its core objectives.

A recent comment at a UUK conference to launch a report, Private universities and public funding: models and business plans (King, 2008) characterised universities as not for loss quite succinctly describing the

perhaps more risk averse nature of public institutions, which in the light of the NHS experience is unsurprising.

The requirement to meet stakeholder expectations of Froud et al's definition of business models needs to be addressed. As noted above whilst these two dimensions are separated for the purpose of analysis their interdependence should not be overlooked. Financial sustainability derives from meeting stakeholder demands whilst ensuring income after allowance for investment is at least equal to expenditure. A significant differentiator between the public and private sector is the interaction and role of the consumer. In the private sector, the consumer is often the purchaser and therefore has a direct link with an organisation's income. In the public sector this link is often less direct. A business model in the public sector can be seen as focussing on the financial viability on the one hand whilst delivering stakeholder value but to significantly different and politicised stakeholder groups. Thus, a business model in the public sector, whilst likely to be drawn from private sector experience, needs to reflect the different dynamics of this different context. A view of a public sector business model is presented below

Figure 2.10 A Public Sector Business Model



(McCarthy, 2007), which identifies social need as a driver and presents an financial perspective alongside inputs outputs and processes.

The Sunningdale Institute debated what business models might mean for Whitehall noting,

“the phrase business model is proving to be as loosely defined as it is popular”

(Neely and Delbridge, 2007, p.2).

However, for the purpose of the debate the Osterwalder conceptual framework provided a starting point. A significant point arising from the debate was the belief that business models in the public sector needed to reflect not only structural factors but also behavioural and political factors. In some sense this reflects the particular stakeholder map of Whitehall and whilst some the stakeholders might be different the conceptualisation is unchanged from that required in the for profit sector.

2.6.3 Business Models and Social Enterprise

The Social Enterprise Coalition sets out its vision as follows,

“Our vision is for social enterprise to be widely recognised and accepted as a successful business model, leading to a thriving and entrepreneurial social enterprise sector trading in order to fulfil social purposes)

(Social Enterprise Coalition, 2009)

The essence of this vision appears to define social enterprise as a successful business model whose activity fulfils a social purpose. With the changes to university funding streams, both realised and currently debated, largely seen as a reducing proportion of government funding changes to variable tuition fees, an emphasis on employer engagement and contribution, and an emphasis on financial self-reliance, this view of social enterprise appears to describe universities rather well.

The Advisory Council for Science and Technology in the Netherlands puts it succinctly.

“The AWT chooses to position universities as social enterprises. These are organisations that serve the public interest without being part of the public sector. Social enterprises should be autonomous for administrative purposes and must carry out their tasks without a profit motive. Nevertheless, they can and should develop market activities, at least so long as they support their core public tasks.

(Advisory Council for Science and Technology, 2003, p2)

The University of Plymouth stated

“By embracing fully its social and economic responsibilities, the University of Plymouth demonstrates how universities play a key role in leading the development of economically and socially vibrant cities.” (Chipperfield, 2009).

Whilst Chipperfield unlike AWT, does not define the university as a social enterprise, more a facilitator of social enterprise development an, “urban innovation engine”, the combination of social objectives and a decreasing proportion of direct government funding tends to suggest the university is moving more towards a social enterprise model.

In a report on the opening of a new restaurant in Cornwall, Liam Black, a director of the Fifteen Foundation, a social enterprise organisation, described their business model as,

"The business model is common to all: a top-end restaurant selling great food inspired by Jamie with, at the heart of it, a training programme every year of 20 or so disadvantaged people, giving them a unique opportunity to better their prospects and take up a real career in the industry. It's not about getting rich but being part of this very exciting brand and inspiring young people." (Caterersearch, 2006).

This description can be broken down into a series of value propositions and describes the core logic, (Magretta, 2002) of the Fifteen Foundation. The value propositions might be summarised as;

Table 2.12 Fifteen’s Value Propositions

Value Offered to	Fifteen’s External Value Propositions
Customers	<ul style="list-style-type: none"> • High quality food supported by reference to Jamie Oliver a well know chef and television personality committed to healthy food. • Opportunity to contribute to the creation of potentially life changing opportunities for less privileged young people.
	Fifteen’s Internal Value Propositions
Staff	<ul style="list-style-type: none"> • Development opportunity

Process and resource are not included in the description, although the outcomes in terms of product and service delivered are. External and internal value propositions are reflected in a situation where there is an emphasis on

the development of young people. Fifteen has been quoted as an example of a social enterprise, (Social Enterprise Coalition, 2007) and social enterprise itself as a business model by the Forth Sector publication.

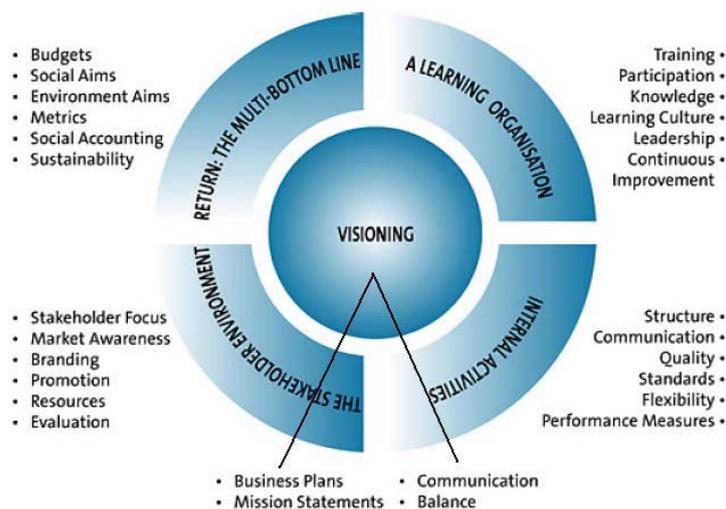
“The world is changing and the ethos of social enterprises makes them a legitimate and growing business model for the 21st century. The delivery of high quality service, with all the profit being invested back into the community, is a model that will become increasingly impossible to ignore.”

(Forth Sector, 2007 p 2)

What is distinctive about this business model is the investment of all of the profit into activity to maximise the impact the social objective. Social enterprise can be seen as a business model in a normative sense, of how organisations should be managed but also in terms of the pre eminence of reinvestment or a closed loop.

Adopting business models has been described as challenging for the social sector (Bull, 2006). The conceptual framework below, fig 2.12, was developed by Bull from Kaplan and Norton’s Balanced Scorecard and Kolb and Fry’s organisational learning cycle.

Figure 2.12 Social Sector Business Model



This conceptual framework combines the more common elements from commercial business models, resources, budgets, with the social and environmental aims.

Whilst the social responsibility of corporations can be viewed as differently as

“The Social Responsibility of Business is to Increase its Profits”
(Friedman, 1973) to

“corporations must achieve it (*corporate social responsibility*) if our society and economy are to continue and to flourish. “ (Mintzberg, 1983)

should the social enterprise model that be adopted by universities? Social objectives are well articulated in university strategic plans and the requirement to be financially sustainable is present alongside the desire to diversify income streams with an aim to reduce reliance on direct government funding. The researcher would suggest that universities are already operating a hybrid social enterprise model.

Alter (2007), fig 2.13 describes a “hybrid spectrum” demonstrating a range from traditional for profit to traditional non- profit. Universities as autonomous, not for profit organisations will tend move from left to right as government funding decreases and the enterprise dimension of income generation increases. Corporations might be characterised as moving in the opposite direction thus the trend seems to be convergence as.

“The comparison also suggests that as corporations are becoming more aware of the long-term benefits of a societal role for business entities that universities appear to be moving in the opposite direction. (Nagy and Robb, 2007)

Comments from the interviews conducted by the researcher and noted in Part 4 strongly support this notion of income diversity. This shift of funding and its likely impact on the need for increased levels of enterprise is further illustrated in Bournemouth University’s strategic plan 2006-12,

“By 2012 the underlying downward trend in our finances will have been replaced by a robust but more highly geared economy that has costs, notably staffing costs, under control and is more dependent on the market (and philanthropy) than government, for its income (Bournemouth University, 2008, p3)

The move towards provision by social enterprise is actively promoted by the British Government as indicated in a foreword by the Prime Minister, Gordon Brown to a cabinet office report , “Excellence and Fairness: Achieving world class public services.” (2008)

“I believe that over the next decade we will see a growing proportion of our services provided by independent public service providers and social enterprises.”

- the demographic shift suggest a declining proportion of 18-21 year olds in the population potentially reducing demand for university services and
- The impact on future business models of the decline in traditional markets and new competitive threats.

Here was an explicit use of the term business model in a higher education context in a debate around current, potential income flows, and the threats and opportunities the changing landscape provided.

The conference panel consisted of Sir Muir Russell, Vice Chancellor and Principal University of Glasgow, Patricia Broadfoot, VC Gloucestershire University, Alison Wild, PVC Liverpool John Moores University and Professor Roger King. When asked by the researcher in what sense were they using the term business model in the report, Professor King responded that they saw the business model as describing how an organisation achieved financial sustainability and was part of strategic and financial planning with income streams and their diversity significant factors of any university business model.

The combination of the challenge of a demographic shift new or growing competitor activity and a review of university business models is unlikely to be coincidental. The introduction of a significant threat to the previously growing market for undergraduate degrees and the rise of non-traditional competition for the remaining market could be seen as prompting a strategic response and that response requiring a change to the existing business model.

Here we have an example of the researcher's proposition that business model innovation in response to external stimuli generates strategy. The recent experience of a growing revenue stream from both home 18-21 students and an expanding overseas intake is unlikely to be sustained due to demographic shifts, overseas capacity building, and growing external competition. Thus, the current business model, what value is offered, to whom and how it is delivered needs to change to secure future success. This example links together the researcher's conceptual framework, to whom, how and financial sustainability, and the relationship between strategy and business models, - business model innovation.

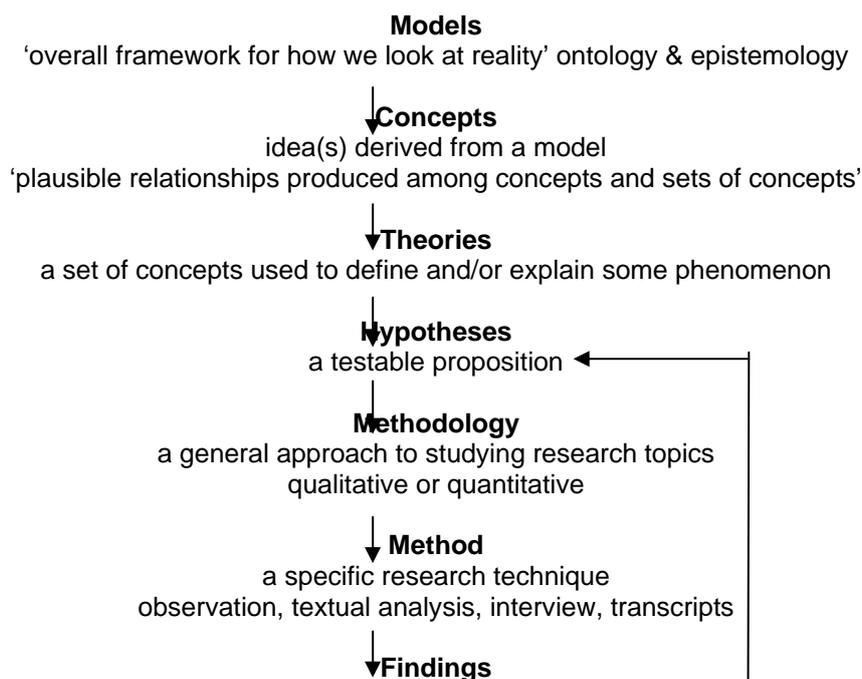
An area of current debate but which is of relevance to the business models and universities but which on it's would form the basis of a thesis or theses is that of the funding of an expanded higher education sector. The application of a normative view of a business model could aid addressing who should contribute, whilst a managerial view could guide the actions at institutional an institutional level.

Part 3: Research Proposition

3.1 Introduction

The following discussion draws on the researcher's work in document three, and the structure of the section follows the outline in figure 3.1 below, a combination of a table and a figure taken from Silverman (2005) which informed and guided the researcher's strategy for this thesis. A research strategy can be seen as the framework within which the research questions are pursued and the processes by which the research is undertaken. (Remenyi *et al.* 2002) and this echoes the methodology aspect of Silverman (2005). A number of factors, including the skills and experience of the researcher, the resources available to the researcher and nature of the research questions, will influence the choice of a research strategy. (Remenyi *et al.* 2002). In this case, the formal experience of the researcher, and the available resources were both limited. This meant that elaborate, extensive and resource intensive approaches were not practical. For example, a number of interviews were undertaken over the telephone and a detailed conversation analysis of the recorded interviews where the construction of sentences including pauses etc was not undertaken.

Figure 3.1 Research Framework Schematic



3.1.1 Models

Burrell & Morgan state,

“In order to understand alternative points of view it is important that a theorist be fully aware of the assumptions upon which his own perspective is based,”
(Burrell and Morgan, page ix, 1979),

This section of the thesis tries to surface the researcher’s assumptions and biases. Burrell & Morgan describe the philosophical debate around the nature of research in the social sciences relating views on ontology, epistemology, and methodology and the researcher explores the nature of research and knowledge as a means of better understanding his assumptions and how they might influence the research path.

Ontology may be described in terms of a theory of being, where the nature of reality is considered. Two commonly described alternative views of reality are, reality only has meaning when perceived and another, that reality exists independent of an individual’s perceptions. Epistemology or the study of the theory knowledge or, how we know, in the context of this section sets the scene in terms of two schools again posed as alternatives. These are the positivist and social constructivist or phenomenological. Table 3.2 below is taken from Easterby-Smith *et al* (2002) and is a useful summary contrasting the Positivist and Social Constructionist approaches to research.

Table 3.2 Positivist and Social Constructionism

	Positivist	Social Constructionist
The Observer	must be independent	is part of what is observed
Human interests	should be irrelevant	are the main drivers of science
Explanations	must demonstrate causality	aim to increase general understanding of the situation
Research progresses through	hypotheses and deductions	gathering rich data from which ideas are induced
Concepts	need to be operationalised so that they can be measured	should incorporate stakeholder perspective
Units of analysis	should be reduced to simplest terms	may include the complexity of ‘whole’ situations
Generalisation through	statistical probability	theoretical abstraction
Sampling requires	large numbers selected at random	small numbers of cases chosen for specific reasons

Source: Easterby-Smith, 2002

The research questions could be approached using either of the two schools of thought, positivist or social constructionist. The researcher’s earlier critical literature review in document two highlighted the confusion around and broad

use of the term business model and led this researcher to believe that the area of business models was unclear and complex suggesting that wholly positivist research strategy was less likely to be successful in reflecting this complexity than a strategy that combined aspects both positivist and social constructionist approaches.

The researcher as independent of what is observed from a positivist point has part of its logic in the aim of trying to uncover a truth or objective reality untainted by the influence of the researcher. The researcher's background in finance might suggest a tendency, inclination or bias towards such a positivist approach, looking for patterns, reducing complex reality(s) via simplified models in order to discover primary drivers or a truth. Initially, the researcher did have a more positivist approach .However on reading more about research philosophy, strategy and design (Burrell et al, 1979), (Collis and Hussey, 2008), (Easterby et al, 2002), (Fisher,2004), (Silverman, 2005) this initial empathy was informed by a better understanding of the phenomenological and social constructionist views. The researcher's ambivalence created by an inclination to a positivist stance whilst appreciating the social constructionist perspective was rendered less problematic by the view put forward by Easterby et al, (2002) that the two approaches need not be mutually exclusive but care needed to be taken to combine them.

This researcher is influenced by the social constructionist view that reality is subjective rather than an absolute independent of its perception. The language used in framing the questions will influence the interviewees' responses and the analysis of their responses will be influenced by the researcher's cumulative experience. However, in practice and reflecting on the researcher's lived experience conducting sixteen interviews, in contrast to the previous interviews undertaken, the research approach adopted was indeed essentially positivist with a structured interview approach more consistent with the positivist approach noted in table 3.1 above.

This leaves the researcher in a position of having positivist ambitions searching for patterns and mechanisms behind events, whilst simultaneously understanding and recognising the value laden and subjective nature of

research in social science. This position is possibly best described as realist. Quinn, (2002 p. 93) expressed it as follows,

“Thus if you are a researcher or evaluator operating from a reality orientated stance you worry about validity, reliability and objectivity...You realise that a completely value free inquiry is impossible but you worry about how your values and preconceptions may affect what you see and hear and record...”

Whilst Miles and Huberman (1994 p.5) described the realist position,

“We think that social phenomena exist not only in the mind but also in the objective world – and that some lawful and reasonably stable relationships are to be found between them. The lawfulness comes from the regularities and sequences that link together phenomena. From these patterns we can derive constructs that underlie individual and social life.... The fact that most of these constructs are invisible to the human eye does not make them invalid. After all we are surrounded by lawful physical mechanisms of which at most we are remotely aware.”

The realist approach will often include qualitative methods of collection and apply quantitative analysis to the data, perhaps a mixed method research (Burke-Johnson and Onwuegbuzie, 2004), and as a realist the researcher adopts a scientific approach whilst accepting that the findings will not completely reflect the research subject but allowing the researcher to reconcile at least in part,

“The tension between qualitative and quantitative research”,
(Whittemore et al, 2001, p 523).

3.1.2 Concepts and Theories

The concepts, group of ideas, or the conceptual framework developed by the researcher in this thesis was described in Part 1 figure 2 containing the elements; Co Producers Staff and Students, Internal Value Propositions, Resources, Partners Processes and External Value Proposition, the business model building blocks. The theory is the group of related concepts, which are expressed as a business model, used to represent how an organisation sustains itself.

3.1.3 Hypothesis

The underlying hypothesis or testable proposition, addressed by the four research questions, encapsulated in question three, is essentially whether universities employ different business models and consequently achieve

different levels of success. In order to address this hypothesis the nature and use of business models is clarified.

3.1.4 Methods

Methods will be used to refer to the means used to collect and or analyse data and the methodological approach adopted will influence the methods used. The researcher used a combination of primary data collected by interview and public domain data sets; strategic plans, financial databases and league tables. The use of financial league table data and the word count analysis of both strategic plan and interview data highlight the researcher's essentially positivist approach.

From the analysis of the interview, numeric and text data the researcher attempted to better understand the use of the term business model in higher education and the relationship of this use or absence of use to other measures of success.

3.2 Research Methods Adopted

3.2.1 Interview

The interview as a research method was prescribed, a requirement of an earlier viva voce. Alternative evidence collection methods such as observation, questionnaire, and critical incident technique could otherwise have been considered. Whilst a particular choice of method may suggest a qualitative or quantitative strategy, the choice of method should not drive the research strategy. Rather the method of data collection should be selected on its perceived appropriateness to aiding the answering of the research questions.

The interview as a research tool has a number of advantages and disadvantages which the new researcher needs to be aware of. A significant advantage was the ability to deal with unclear issues particularly relevant as the literature indicated ambiguity in the use of the term business model. The interview allows the interviewee and interviewer to develop through the conversation areas of interest or ambiguity.

3.2.2. Selecting Institutions for Interview

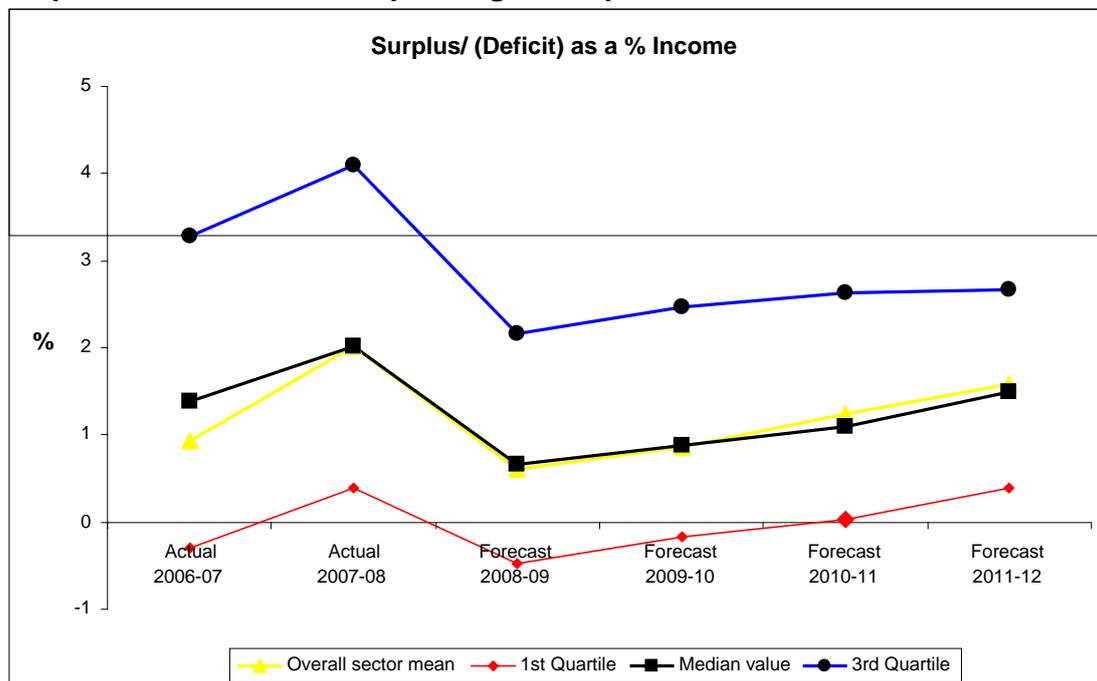
Prior to selection institutions were sorted into three bands reflecting relative success. This was done using the following criteria;

- Surplus as a % of Income
- Income growth value (£) & %
- NSS rankings over three years & change in ranking
- Sunday Times League Table position
- THES League Table position

3.2.2.1 Surplus as a % of Income

Using data from the HEIDI database institutional surpluses before tax and minority interests were noted for the years 2000-01 to 2006-07. The total surplus for each university for the period was calculated and this data was ranked for both the value of the surplus and its % of total income. The % of surplus to income was used in the overall ranking. As shown below in graph 3.4, universities as a whole tend to spend the funds available to them and institutions have a surplus range of only -0.5% to +2.3% as a % of income forecast for 2008-09. The surplus criterion is therefore complemented by the use of income and income growth rankings as two of the other criteria.

Graph 3.3 Sector Operating Surplus as a % of income



Source: Hefce Financial Forecast Summary Statistics -2008

3.2.2.2 Income

Income by institution for the period 1994-95 to 2006-07 was taken from two data sources. These were a database of financial information purchased from Caritas data for the period 1994-95 to 2003-04 and HEIDI, a new database

using Higher Education Statistical Agency returns for the period 2004-05 to 2006-07.

Income was collected each year by type, Funding Council Grants, Tuition Fees, Research, Other and Investment & Endowment.

As the providers of education which can be seen as a social good it seems reasonable to suggest that universities are more likely to adopt policies that maximise their outputs whilst securing financial sustainability rather than maximising overall financial performance and this is reflected in what are commonly seen as acceptable margins of between 3% and 5% by HEFCE. Thus income growth both % and £ was calculated to reflect stable, improving or declining performance rather than simply surplus. It should also be noted that under the TRAC ¹ methodology surpluses of 5 or 6% are believed to be required for sustainability and that the sector as a whole is only generating surpluses of around 1%.

3.2.2.3 National Student Survey (NSS) results

Data from the NSS surveys 2006, 2007 and 2008 was used.

There were 124 records in 2006, 143 in 2007 and 148 in 2008.

For each year the results were ranked by institutional score.

The rankings for the three years were analysed by;

- Average rank for each institution for the records available
- The movement in the ranking over the period data was available.
- Average rank for period and movement.

3.2.2.4 League Tables

The ranking from the Sunday Times League table was used calculating a simple average from the data available for the years 2004, 2006 and 2008 Data from league tables reported in the THES for the years 1996 to 2006 were collected and the rankings in each of the criteria for each year were tabulated. An average ranking for the period was calculated to reflect performance over the time frame.

Out of a possible 121 occurrences of rankings only institutions which had an occurrence rate of 60 or more were included in the final ranking. Whilst 60 is

¹ TRAC TRansparent Approach to Costing. Hefce

an arbitrary cut-off it is used to avoid including results for poorly represented institutions which could be more heavily affected by non typical results.

3.2.2.5 Combining the Measures

The results for each criterion were summarised in a table and an average of the sum of the rankings available was calculated. This average was adjusted to exclude the highest and lowest ranking place, to reduce the impact of outlying results, and the institutions ranked according to the adjusted average. If the unadjusted average had been used only nine institutions would have changed position and only three were ultimately interviewed and none of those would have changed group.

This table was then filtered through a series of criteria to arrive at a selection of universities, and a number of reserve institutions, to which requests for interview would be made.

The criteria for filtering were;

- of the possible seven criteria the university must be represented in at least five. When this was expanded to include institutions with a score of four or more only three additional institutions met this expanded criteria. Thus a cut-off point of five appears robust.
- only those institutions with a rank spread of eighty or less were included. This was to again the reduce impact of outlying results.
- Welsh, Scottish and Northern Irish institutions were excluded because of their different funding regimes which would have affected the consistency of the financial analysis.

The result of these criteria or filters was to reduce the list of one hundred and fifty four institutions to a more manageable thirty two institutions. This number was divided into two groups of ten and one group of twelve and from this selection candidate institutions would be approached for interview.

3.2.3 Collection and Analysis of Interview Data

3.2.3.1 Interview Structure

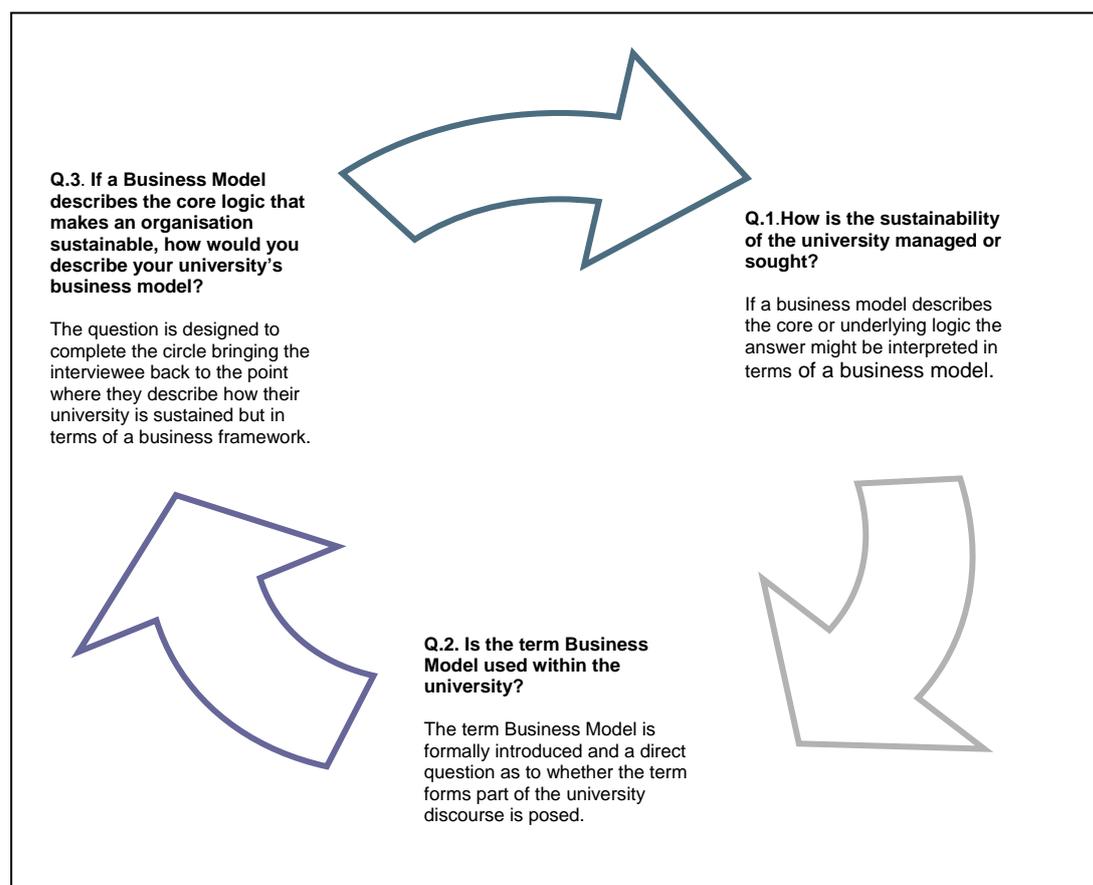
The interview structure was standardised in that each interview consisted of the same three questions asked in the same order rather than an informal conversational approach. The use of this structured or standardised approach was influenced by the number of interviews, sixteen, to be conducted and the

requirement to generate comparable responses within a limited resource and the opportunity to complement the researcher's earlier experience, for document three, of three semi structured interviews. The interview questions were however a mix of open and closed questions. Open questions allow an opportunity for the interviewee or the interviewer to expand or develop a line of thought or question although on one occasion the researcher allowed the interview to become too much of a conversation and needed to bring the discussion back to the subject in hand. The interviews where recorded would be transcribed. Notes were taken at all of the interviews whether recorded or not and the recordings once transcribed were held for a limited time given the capacity of the Sony recorder used and the need to record further interviews.

In drafting the interview questions a number of points needed to be considered. The primary consideration was to ensure that the structure and content of the interview questions was such that the answers and comments made would provide sufficient evidence to allow the research questions to be answered. Linked to this was the important consideration of ensuring that the context in which the questions were asked and the structure of those questions ensured that they would be answered fully and openly. Interviewees might not be willing to discuss some details of their business model approach if it overlapped with areas of confidentiality in terms of strategy and competition.

The three questions asked form a complementary suite (diagram 3.4 below) and as the sequence of the questions asked could impact on the validity of the responses they were asked in the same order at each interview.

Diagram 3.4 Interview questions -The underling logic or framework



The first question asks how sustainability is sought or managed. Taking the view of business models as how organisations sustain themselves the question might be seen as asking what the mechanisms or components of your business model are. The responses should be capable of being structured as a business model. The second question is more direct and asks if the term business model is used within the institution. Behind the more obvious answer yes or no is the opportunity to answer no but we do use this language or yes in these discussions.

The last question then defines a business model and asks the interviewees to describe their university's business model in light of the definition. Thus we have two questions, the first and last, which look at the sustainability of the university one describing how sustainability is managed and the second viewing the university's sustainability through the lens of the business model as core logic. This dual approach might allow similarities and contrasts to be seen and potentially aid triangulation of responses. Thus the questions are

aimed at eliciting a series of responses which rather than separate from each other build up a complementary picture of the place and use, explicit and implicit, of business models in the universities.

The researcher believes the interview questions posed are clear, unambiguous and in two instances refer directly to business models. Thus the research method and approach appear valid. However given the wide range of the use of the term business model there may be a low level of consistency between the interviewee's responses. So although the research method is valid I am not claiming construct validity for 'business models' since the purpose was to explore the variety of meanings given to it and not to impose a definitive definition. Marshall and Rossman (1995) argue that non-standardised research is not necessarily intended to be repeatable as it paints a picture at a particular point in time.

The researcher found that the combination of a few clear simple questions and the selection of appropriate interviewees generally resulted in free flowing relevant responses. There were however some exceptions as indicated by the range of interview word count. The lowest count was 182 from a telephone interview with the finance director of University in group 3 to the highest 5,450 from a face to face interview with the director of finance at a University in group 2, with an average of 1,124.

The choice of the interview method with relatively few questions requires careful consideration of the issues of reliability and validity. Hammersley in Silverman (2005) describes validity as

"I mean truth: interpreted as the extent with which an account accurately represents the social phenomena to which it refers..."

In the context of the structured interview the question of correspondence validity (see Krippendorff in Weber, 1990), or do the questions posed and thus the answers obtained have a correspondence or link with the concept being researched.

Reliability is described in Hammersley in Silverman (2005) as;

"the degrees of consistency with which instances are assigned to the same category by different observers or by the same observer on different occasions."

Given the exploratory nature of this piece of research and the method of data collection, the researcher accepts that it would not be easily repeatable and thus not be wholly reliable. The notes taken during the telephone interviews are necessarily taken by and filtered through the researcher and whilst care would be taken to record the breadth as well as key words and phrases these items would be identified by the researcher. Another interviewer might, make notes, assuming different expression to be key, a different emphasis driven by their experience or academic position and arrive at a different data set. However the researcher is aware of these factors and given the qualitative nature of the research the richness of the data is sought at the expense of some reliability.

3.2.3.2 Interview Requests

Requests for an interview were sent to the finance directors or their personal assistants at twenty two of the thirty two selected institutions outlining the context of the DBA, the researcher's role at York St John University and the questions that would form the basis of the interview.

The interview questions formed part of the interview request to try, by being open, to allay any concerns the interviewee might over the nature of the information they would be asked or might reveal. This approach is open to criticism in that potentially the answers and comments made would be biased by the content of the request. However the researcher felt that the benefit of being open with the interviewees from the beginning of the process was more ethical and would help create a favourable response to the interview request and more open responses in the interview. A copy of a request is reproduced in figure 3.5 below

Arranging the interviews was a relatively simple, if a time consuming, process with initial requests sent by email. Where responses were received these were followed up with discussions around dates and times. When a meeting had been requested the possible locations were discussed but in all cases the meeting took place at the interviewee's institution. Where there was no response to the initial request no follow up was undertaken. The researcher planned to exhaust the pool of selected institutions before contacting apparently reluctant interviewees. Although only fifteen institutions were

required for the sample delays to finalising agreements to an interview resulted in sixteen interviews being conducted without the need to re-contact any reluctant potential interviewees.

Figure 3.5 Example of a request for a meeting or telephone interview

Dear X,
My name is John Gallacher, Finance Director at York St John University.
I am currently undertaking a piece of research into business models and universities as part of a DBA programme at Nottingham Trent University and hoped that you would agree to a short meeting, 30 minutes, at your office, or alternatively a telephone conversation, to discuss the following questions.

- **How is the sustainability of the university managed or sought?**
This is more to do with the process and language rather the detail of particular strategies although some discussion of the broad strategies would be useful.
- **Is the term business model used within the university?**
A positive response would lead to two supplementary questions
 - How is the term business model used?
 - Why is the term Business model used?A negative response would lead to two other supplementary questions
 - What do you understand by the term business model?
 - Why do you think the term business model is not used? and finally
 -
- **If a business model describes the core logic that makes an organisation sustainable, how would you describe your university's business model?**

I hope you will be able to agree to this meeting and if you could respond to this email I will arrange a suitable date and time with your personal assistant.
Regards
John

The analysis of interview responses requires a discussion of content analysis, reliability, validity and the reasons for the researcher's approach at this point.

Weber states

“Content analysis is a research method that uses a set of procedures to make valid inferences about text.” (Weber, 1990, p 9)

Weber further states, that a central idea in context analysis is the collection or classification of a larger number of words into a smaller number of categories.

Thus different words or phrases are placed in the same category with the researcher then attributing the same or similar meanings. Validity and reliability were defined by Hammersley (1990) in Silverman (2005, p.210)

above. The analysis of the interview data was in two parts. A word count,

based on a selection of words which by inspection had a high occurrence in

the interview responses and those which reflected the researcher's business model conceptual framework. The validity of the former was drawn from their frequency in response to the interview questions and the later from their relation to the researcher's business model conceptual framework.

In the second part the researcher began to categorise aspects of the interview responses developing the categories from a review of an institution and applying these to the rest of the data set. However it soon became apparent that many responses could be placed in any one of a number of categories and that coding consistency and thus reliability would be difficult to maintain. The researcher constructed a more limited series of categories after summarising the interview responses in table, 4.2.7 and then drawing out recurrent themes, noted in tables 4.2.10,-11 4.2.15, 4.2.18-24. This reduced the addressed in part issues of reliability, although the identification of themes or subjects was subjective and thus not wholly reliable but sufficient the researcher felt for a realist.

In addition to correspondence validity Weber (1990), describes research validity as generalisable validity, referring to the ability to apply the results of the research beyond the specific research data set. Here the researcher believes that within the higher education sector the interview analysis is applicable beyond the sample of sixteen universities but given the nature of the sector less so beyond it.

3.2.4 Analysis of University Strategic Plans and Corporate Planning Statements

3.2.4.1 Sample Selection

To collect eighty-nine university strategic plans and corporate planning statements, listed in appendix 1, the researcher used a web search, repeated a number of times, on the Google search engine, "university strategic plan" limited to the UK with a hit rate of about 212,000. Web sites of universities not sourced from this search were visited individually and searched for their plans. Formats varied but included PDF, Word and html. Where html pages were found these were copied into word, Microsoft word, for analysis.

A number of key words, or categories, were selected, informed by the view of business models represented in the conceptual framework described in Part 1. In addition more general business like words were selected using the

experience of the researcher. Finally a set of phrases were selected to represent the key strategic aims of HEFCE, the English Funding Council, a major funder of higher education in England. The purpose of this last group of words and phrases was to aid the researcher to view to what extent the HEFCE narrative, as told by the key strategic aims, was played back through the university strategic aims indicating the use of strategic plans as marketing or stakeholder management tools. The validity (Weber, 1990) of this selection draws from the researcher's experience and the links to the business model conceptual framework and Hefce as a key funder. The reliability is based on a repeatable word count but is less reliable in terms of the phrases whose meaning can be expressed in a number of ways.

3.2.4.2 Method of Content Analysis

The texts were searched for the occurrence of the selected words using the word search facilities of Adobe or Microsoft Word depending on whether the document was stored in as a PDF or Word document for any occurrence of a particular word or phrase. Within a category there would be only one word or phrase and thus there was no judgement by the researcher as to which category a word or phrase would be recorded in. Further no meaning was ascribed to the words their occurrence simply being noted, ensuring that the coding would be stable, reproducible and accurate thus reliable.

This approach, recording whether or not a word or phrase occurred in a document combined with a category being a single word or phrase from within a strategic plan narrative reflects the researcher's realist approach to the research process. The researcher's intent was to simply detect the occurrence of certain words or phrases and infer from those occurrences a possible use of a business model. This is a binary approach with the only possibilities being an occurrence or non occurrence, the equivalent of 0 and 1 or on or off in a computing sense. The analysis is not deep or rich in an interpretive sense but the researcher believes appropriate for a review to identify the use of a concept that is clouded in confusion. The approach also simplifies some of the issues around reliability with no aggregation of occurrences into categories and thus better stability and reproducibility. Given the breadth and apparent confusion in the use of the term business model an

early, unambiguous approach is appropriate which might later, in a further piece of research, be complemented by a more interpretive analysis based on perhaps a smaller sample. Using this approach the researcher was able to compile a ranking based on the occurrence of the words and phrases. No weighting was attributed to occurrence of the words or phrases and a simple summation of the scores 1, for an occurrence and 0 for a non occurrence provide the scores by which the institutions were ranked. This method allowed the creation of a numeric data set, from a series of texts, which could then be further manipulated.

3.2.5 Analysis of University Financial data 1994/5 – 2002/3

The research approach for this part of the analysis is similar to that of the text analysis, in that pre existing data was used. The data sets used were sets of financial accounts over a 10 year period 1994-95 to 2002-03 for over 100 institutions. The researcher's institution subscribes to the Higher Education Financial Yearbook, published by Caritas Ltd and for a small additional fee an electronic version of the data set was purchased. This saved the researcher a significant amount of time by eliminating the need to enter data from the published documents into an electronic database. The data asset consisted of income, expenditure and balance sheet information. Combining income and expense data surplus amounts were able to be calculated and income and surplus data was analysed using simple descriptive statistical tools such as correlation and standard deviation and presented in both tabular and graphical forms using Microsoft Excel spreadsheets.

As more financial data has become available in electronic form with the advent of the Heidi project the researcher took the opportunity to expand some of the financial analysis to 2006-07.

Given the role of finance as an input to, rather than an output of the higher education process the validity of finance as a measure of success is weakened. The researcher sought to overcome this weakness by using more than one measure of success both from within the financial data set and by complementing this data with league table data noted below.

3.2.6 Analysis of League Table Data 1994 - 2006

The purpose of this element of the research was not to investigate the use of league tables or the methods by which they were compiled but simply to manipulate a set of league table data, accepting that there might be inherent flaws in it, to determine if the performance of institutions measured using league table data correlated to other performance measures noted earlier in the document based on expressions in their strategic documents and their financial performance as measured by surplus. If there were any level of consistency in the outcomes of these manipulations then this may aid further investigations into and allow inferences to be made about possible business models or use of the business model concept at these institutions.

The data set used was taken from the THES web site during August and September 2007. The period covered tables from 1996 to 2006 and each year the league tables consist of a number of performance measures. Of the range of measures used the % permanent staff, % staff with a main function of Teaching, and Research, and Income from Research and Grants were not used in the compilation of published league tables 2001-06 but was included in the first stages of this analysis.

For each performance measure and year it was not possible to simply export the data to Microsoft Excel and so the more laborious approach of cutting and pasting had to be employed. For each year the individual performances were separately cut and pasted into worksheet within a workbook until each measure in each year was included. The data consisted of the name of the institution, the performance measure, the score and rank. The data was then sorted alphabetically to aid comparison across the measures. This process was repeated for each year. When all the years had successfully been copied the names of the institutions were made consistent to allow comparison across years using the "vlookup" function in Microsoft Excel. Over time institutions had changed their names or merged and in some cases the naming conventions were inconsistent. Thus Ripon & York St John College became York St John University College which in turn became York St John University. Goldsmith's College was sometimes Goldsmiths College or Goldsmith's College London.

The data set now cleansed was in a form that could be successfully manipulated. There were changes in the measures used in the data set so that not all measures occur in all years. The data was summarised by year across the page and performance measure with a row for each institution showing the rank or place of each for each measure within a year. Sums of the ranks were used to ensure that the data summarised from the subsidiary sheets was complete and some minor errors in the data set were noted. Of the total sum of rankings of almost 717,000 the errors amounted to 290 (0.04%) and were mainly confined to 1996. In addition to the rank by year, by performance measure and institution, the occurrence of an entry in each year and performance measure was recorded using the count function in Microsoft Excel so that some weight could be given in the final ranking to the completeness of the data by institution. The maximum number of entries for a single institution was 121 and institutions with a data set of less than 60 were excluded.

Part 4 Analysis of Research Findings

4.1 Introduction

This section describes and analyses the five areas of research undertaken by the researcher in order to address the research questions posed in Part 1.

The five areas are,

1. Interviews with sixteen university finance directors/treasurers from three groups of universities grouped by relative success.
2. An analysis of eighty-nine university Strategic or Corporate Planning documents.
3. An analysis of university income and surpluses as an indicator of the application of business models and relative success.
4. An analysis of university league table position as a further measure of relative success.
5. A correlation analysis of the measures of success.

4.2 Interviews

4.2.1 Introduction

This section explores the extent to which the first three research questions are answered by the responses to the three interview questions put to the finance directors of the sixteen universities interviewed for this paper. Diagram 4.2.1 below sets out the research questions.

The first research question,

“Is the term business model used within universities in describing their activities and, if they do, in what sense or form do they use it?”

is reflected directly in the interview process by the second interview question.

“Do universities use the term business model to describe the university?”

The responses to this question will be analysed in terms of;

- a positive or negative response,
- a word count analysis reflecting the raw count data i.e. the number of occurrences of a word and in terms of the occurrence or non occurrence of a particular word. The score for one or more occurrence would be 1 and 0 for no occurrence. This approach is to adjust for possible bias in

the analysis resulting from the difference in the total word count of each interview as the raw word count might be greater in one interview than another simply because of the length of the interview.

- a review of the response beyond a simple yes or no. A number of interviewees when asked about the use of the term business model said “No we don’t use the term business model but...” The qualification or expansion will be investigated to determine if this a reference to a business model, a particular part, element or subset of a business model or something completely unrelated to a business model.

The answers to the second research question,

“Does the business model shape managerial behaviour? Do managers use a business model approach as a tool for decision making?”

have a more complex relationship with the interview questions than the first, and an analysis of the responses to all three interview questions will be relevant to this particular research question.

If the term business model is used, then it is likely to shape and be shaped by managerial actions and experience and thus how it might influence or form part of the decision making process can be investigated. If the term business model is not used explicitly then the researcher will investigate whether the approach is implicit in the university’s approach to decision making. Here analysis of the “No we don’t but...” will be relevant and the researcher will be reviewing the interview responses to try to identify the existence of one or more business models.

In relation to the third research question,

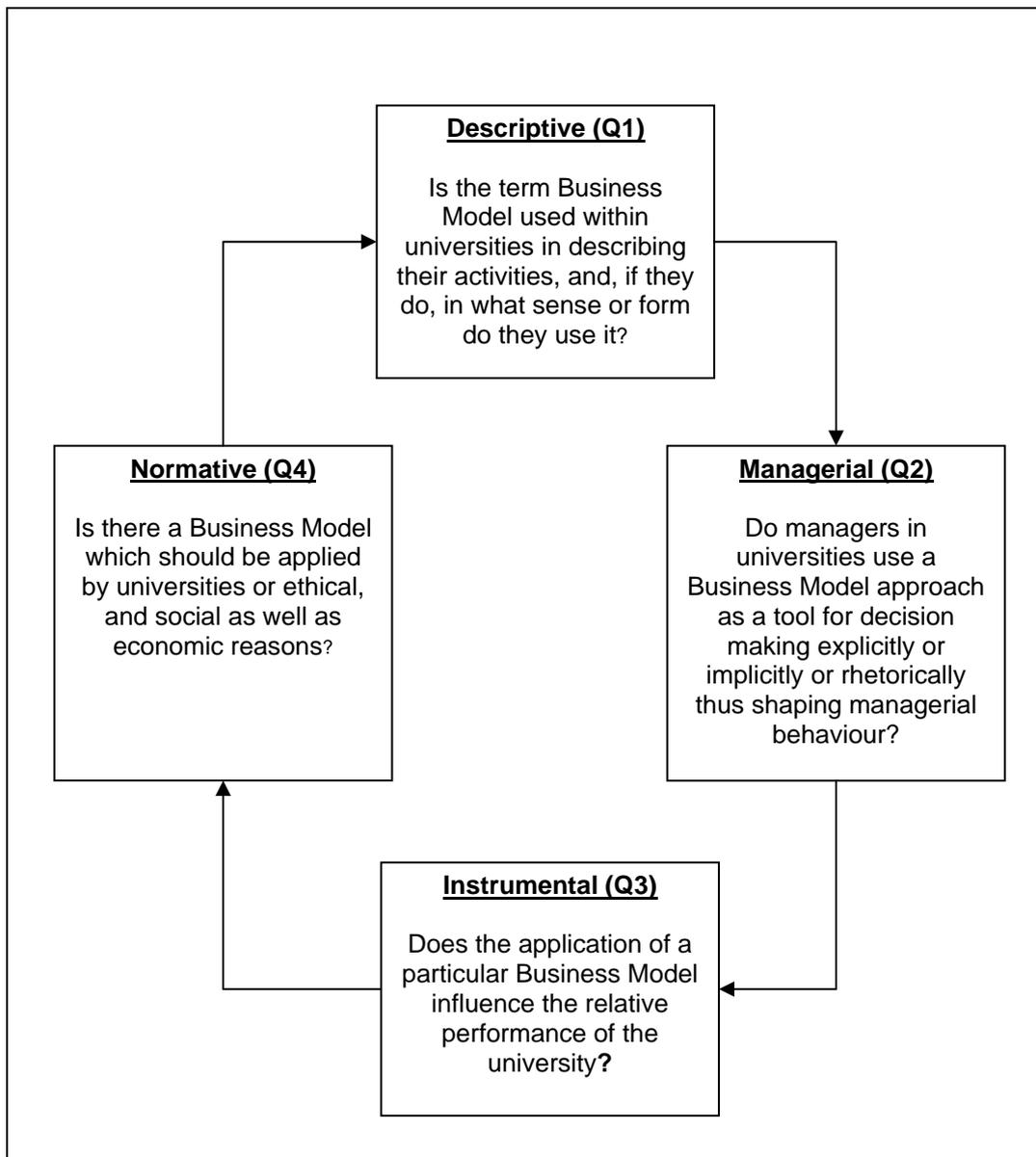
“Does the application of a particular business model influence the performance of the university?”

the potential influence of business models on performance will be tested in two parts. The first will be an analysis of the answers given for evidence of business model use through the use of business-like language and objectives, how income was generated and the approach to financial sustainability and thus whether different business model approaches are used. The second part will be

through an examination of the answers given by the three groups relative to each other. The groups were selected to represent a range of success with group one being the most successful and group three the least. Thus do the answers given by the pairs 1&2 and 2&3 have a higher correlation than those of the pairing 1&3? The hypothesis to be tested is that groups with more similar levels of success should have a more similar pattern of responses to questions about their business model than those with more dissimilar levels of success. In the relatively highly regulated higher education economy it seems plausible that universities with similar levels of success will have adopted more similar business models than those with the least similar level of success.

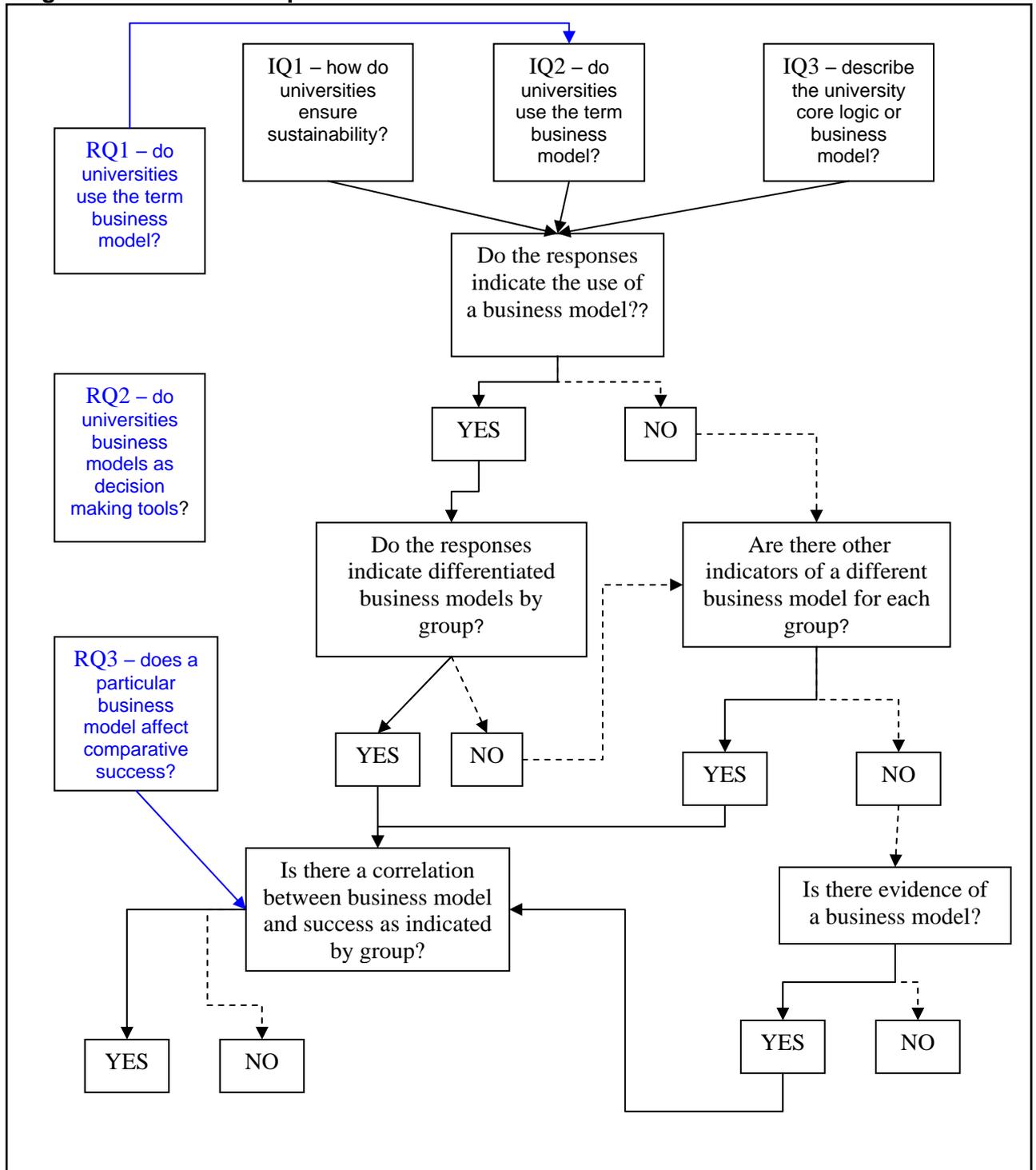
The fourth question was not covered in the interview process and will be dealt with separately with reference to stakeholder theory and social enterprise.

Diagram 4.2.1 Research Questions



The main flow of the research is the identification of one or more business models differentiated by group and tested for a relationship with success. Diagram 4.2.2 below summarises the flow of enquiry and how the research questions were addressed by the interview questions.

Diagram 4.2.2 Relationship of Research and Interview Questions



RQ1 = Research Question 1, IQ1 = Interview Question 1

4.2.2 University Selection

Table 4.2.3 in appendix 1 shows the criteria used by the researcher in selecting institutions to approach for interview. The interviews were conducted either face to face at the interviewees' institution or by telephone. The results were noted or transcribed from recordings and analysed first using a word

count exercise with words drawn from the researcher's conceptual framework and financial terms which on inspection appeared in a number of the interviews. The word counts were tested by pairs of groups for their correlation coefficient against a hypothesis that the results for pairs 1&2, and 2&3 should be more closely correlated than pair 1&3.

As noted in Part 3 the university selection criteria were combined and filtered to produce a pool for selection noted in table 4.2.3 in appendix 1.

In Group one the finance directors of two institutions were not approached for an interview. The University of Oxford was excluded because it has a much more devolved structure than most institutions making it unlikely to be representative and an outlier institution within this group. The University of York was excluded because this was one of the three institutions who's finance director the researcher had interviewed as part of document three, a qualitative piece of research. Only the finance director at the University of Southampton failed to reply to the request for an interview. This relatively high response suggests perhaps a willingness to discuss the subject of business models perhaps a confidence borne of success. The geographic spread whilst having a northern bias with three of the seven institutions located in the North East and Yorkshire & Humberside is largely balanced with two in the West Midlands, and one each in East England and South East England. The South of England may be said to be underrepresented in this selection but overall the researcher believes the selection is valid for the purpose of this research.

In Group two the finance directors of five institutions out of a possible ten were asked for an interview with a 100% success rate. Northumbria University was excluded because, like The University of York, a member of its executive, in this case the Deputy Vice Chancellor - Resources, had been interviewed as part of document 3. As with group one there appeared to be a willingness to discuss the subject in this group. Geographically there was a good spread with three institutions from the South East and one each from the West of England and Yorkshire & Humber.

In Group three, of the nine interview requests, five did not reply leaving only four interview candidates in this group. The reasons for this relatively poor response rate were not pursued by the researcher in terms of follow-up calls. A

response analysis is shown below in table 4.2.6 and it is worth noting that the group, whose performance was judged least successful, group three, was the group with the highest interview request no-response rate.

To test the robustness of the combination of criteria and determine if a particular criterion had a disproportionate impact, the selection process was repeated excluding certain criteria. Firstly the NSS movement, then NSS movement and Surplus % and finally NSS movement Surplus % and Income Growth. The results are shown in table 4.2.4 in appendix 1. The light yellow boxes indicate group one, the light green group two and light blue group three. The institutions in a bold font indicate an addition to the original selection list.

Of the 32 institutions originally selected 20 remained out of a total of 22, (20+2 additional institutions Imperial and Liverpool) when the criterion, NSS movement, was removed and the range of acceptable spread of results reduced to 70. The spread range was reduced to reflect the reduced number of variables and thus a requirement for a tighter grouping of results.

When the criteria, NSS movement and Surplus % were removed and the range spread reduced to a maximum of 60, 19 originally selected institutions remained out of a total of 28, (19+9 new institutions). When the criteria, NSS movement, Surplus % and Income growth were removed 22 of the original institutions selected remained.

At no point did the adjusted group make up include fewer institutions from the original selection than the required sample size of fifteen although there were four occasions when an institution moved between groups.

Table 4.2.5 Summary of Interview Requests and Responses

	<u>Potential Requests</u>	<u>Requests Made</u>	<u>No Request Made</u>	<u>Acceptances</u>	<u>No Response</u>	<u>Requests Made to Potential</u>	<u>Acceptances to Requests</u>	<u>No Response to Request</u>	<u>Acceptances of Total</u>
Group 1	10	8	2	7	1	80%	88%	13%	44%
Group 2	10	5	5	5	0	50%	100%	0%	31%
Group 3	12	9	3	4	5	75%	44%	56%	25%
Total	32	22	10	16	6	69%	73%	60%	100%

Group three had the highest percentage of actual to potential requests, 75%, driven by a poor acceptance rate of 44%. This apparent reluctance of group

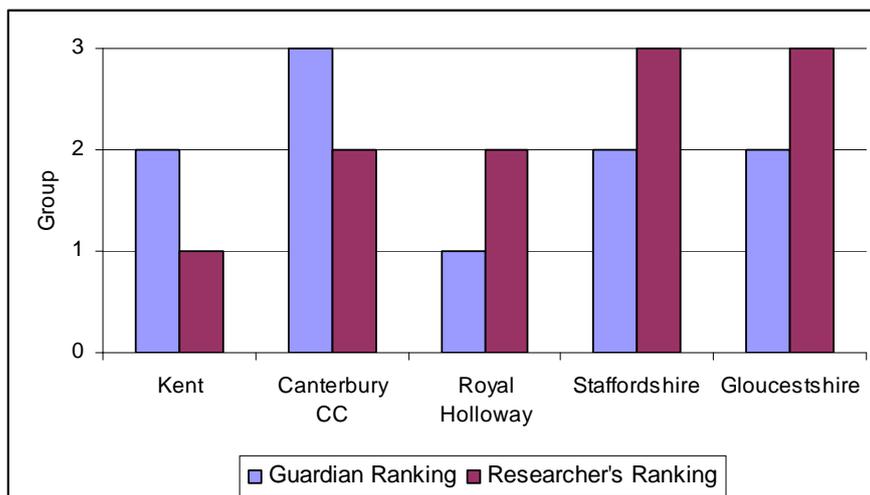
three to engage with the process might be due to the researcher's home institution, York St John University, being perceived to be in direct competition with group three institutions but not those in groups 1 or 2 and thus the discussions might be seen as more sensitive. However, only one, a group 3 University, referred during the interviews to York St John as a direct competitor.

Group one had a high percentage of actual to potential requests, 80%, largely as a result of a slow rather than low response rate. The researcher assumed a no response and thus approached two other institution only to find that the no response was in fact a slow response and was ultimately successful thus increasing the number of institutions agreeing to be interviewed. Group 2 appeared willing to engage with the research and their quick response rate converted five requests to five acceptances.

The spread acceptances between groups at 44%, 31% and 25% for groups one, two and three respectively, whilst not equal allows a reasonable representation of the three groups for the purpose of this research with no group below 25% of the total.

The Guardian recently reported a league table (2010), of 117 institutions which when adjusted for Scottish, Irish and Welsh institutions fell to 95. This remaining ranking was divided into 3 sections and the categorisation only differed from that used by the researcher in 5 instances out of a total of 32 shown in graph 5.2.6 below. Kent and Canterbury Christ Church both moved down a group whilst Royal Holloway, Gloucestershire and Staffordshire moved up.

Graph 4. 2. 6 Movement between Group Ranking by Researcher's Combined Measure and The Guardian League Table 2010



Given the relatively small movements generated when flexing the selection criteria and in comparison to a league table not used by the researcher, and the spread of acceptances the researcher would submit that the selection method appears robust.

4.2.3 Summary of Interview Responses by Group, Institution and Interview Question

Table 4.2.7 Summary of Interview Responses, noted in Appendix 1, is a summary of key points and phrases from the interview notes taken by the researcher by group and interview question.

The table is a distillation of the key points from almost 18,000 words of interview notes both transcripts of recorded interviews and notes taken during telephone interview. The process of distilling this data was a series of attempts to extract key themes. The first attempt involved noting the significant themes in the response by one institution and using these as a trigger for words and phrases in subsequent interview notes. However the researcher found coding consistency difficult to maintain as words and phrases could equally be placed in more than one category when viewed in their context. This process was not wasted however as the researcher's familiarity with the content and richness of the interview responses was enhanced.

The process that led to table 4.2.7 Summary of Interview Responses, (see appendix 1), involved reading and re reading the texts of the interviews and extracting those phrases that appeared to the researcher to contain the essence of the main points being made without assigning a code or category. This might be the types of income, the need for surpluses for reinvestment or references to strategy, finances and planning. Selecting phrases rather than words allowed more of the sense of the comments to be captured and no attempt was made at this stage to create categories of response.

4.2.4. Word Count Analysis

As noted above the researcher recorded the count of a number of words drawn from the researcher's conceptual framework and those which from inspection had a high frequency of occurrence in the interview notes. The word count was tabulated using both a raw word count data where the number of occurrences

was noted table 4.2.11), and the “occurrence / non-occurrence” noting 1 for an occurrence and blank for a non occurrence (table 4.2.10) in an attempt to adjust for bias resulting from the different length or word count of each interview.

From table 4.2.10 in appendix 1, noting the occurrence rather than the raw word count the highest scoring words for the three groups together were; Income 16, Strategy 14, Invest Cost Surplus12 and Cash 9. In a number of the conversations Cash, Surplus and Investment were linked together.

“Bottom line surplus cash for capital replacement and investment”
(University 1G).

“Surplus required for investment to remain sustainable” “ensure enough cash to run the business,”
(University 1A)

“creating cash for investment”
(University 1F)

“Surplus to generate cash for capital investment”
(University 2A)

“Use operating surplus profits not a problem and is used to re-invest”
(University 3B)

The emphasis on, “surplus for reinvestment” supports the idea of a “closed loop” funds flow within universities where surplus generation is reinvested in enhancing service delivery, displaying similarities with a social enterprise model and unlike the corporate model with flows to investors in the form of dividends. The closed loop flows have some “leakage,” primarily in the flows to lenders, capital and interest which occur both in the public and private sectors.

The two highest word counts were strategy and income in response to questions about business models and sustainability. This might be seen as an indication of a closeness or relationship in the view of the interviewees between strategy, and business models as discussed by the researcher in part 3. If a business model is how an organisation makes money then viewed in the constrained, not for profit economy of universities, they might be seen as how universities generate income or an income profile, rather than profit or surplus. Income profile or need for income diversity was referred to by most interviewees across each group.

- “Need to be diverse in subject and income”
(University 1A)
- “We need a lot of commercial activity to subsidise the core academic base lots of income generation” “Growth requires more sources of income”
(University 1G)
- “Income streams”
(University 1D)
- “Reduce dependence on Hefce”
(University 1F)
- “Double international recruitment grow Post Graduate”
(University 2E)
- “Grow income research and KT” “main grant funding insufficient income diversification required”
(University 2B)
- Research and Knowledge Transfer are at an early stage want to grow presence, reputation and invest
(University 2C)
- “Income is key to everything” “Need to look at increasing income”
(University 3A)
- “Main income home fees and Hefce, and some Other income International important and want to grow it and research income”
“Good RAE” “ Commercially contract research and other income”
(University 3C)
- “Trying to grow overseas income”
(University 3B)

The most commonly used terms were traditional business references, likely to be in due in part to the roles in finance of the interviewees. However the prevalence of business-like references, supported by the correlation analysis, suggest that a business like approach evidenced by the language noted in the interview is used in universities across the range of success levels as measured by the three groups. This business-like approach could be said to indicate an underlying business model approach. It should be noted however that the term strategy was referred to by the researcher when requesting interviews and may have influenced the pattern of response.

For the raw word count summary and the occurrence/non occurrence data, correlation coefficients of the responses to all the interview questions by group were calculated shown in table 4.2.8 and 9 below.

Table 4.2.8 Correlation of Word Occurrence Non Occurrence

	Group 1	Group 2
Group 2	0.73	
Group 3	0.68	0.85

The results show a strong positive correlation for each pairing with stronger relationship between pairs 1&2 and 2&3 than 1&3, although the differences are relatively small. This outcome suggests that taken as a whole the interview questions prompted similar answers from each group and that those groups closer together in terms of success, indicated by their group, had more similar answers. In so far as the answers to the interview questions indicate an underlying business model approach the business models for groups 1&2 and 2&3 may be said to be more similar than groups 1&3, supporting the hypothesis being tested.

Repeating the exercise for the raw word count gives the result shown in table 4.2.9 below.

Table 4.2.9 Correlation Total Raw Word Count

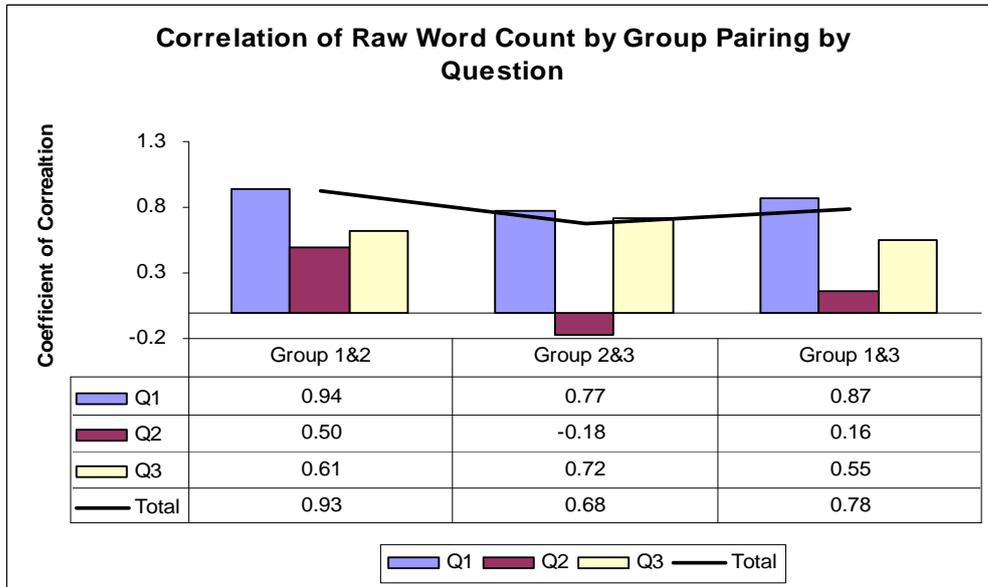
	Group 1	Group 2
Group 2	0.93	
Group 3	0.78	0.68

Using this data the pattern of the results is changed in part. The pairings are still strongly correlated but the relationship between groups 2 & 3 is not as strong as 1 & 3 thus the impact of the relative success levels is not maintained.

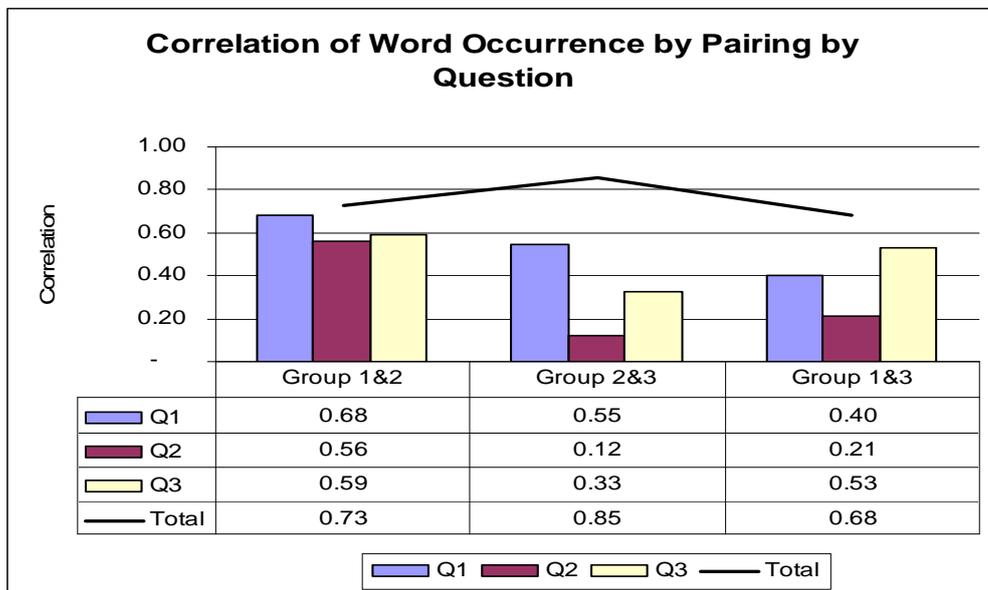
These two results tend to suggest that there are strong similarities between the responses to the interview questions by each of the three groups of universities. This business like language suggests that any underlying business models are more similar than different. Taken together, the results from the occurrence and raw word count data, the most significant factor appears to be the level of similarity of the responses from the three groups rather than the levels of difference.

The comparative analysis above, by group, was undertaken for the response patterns for all questions together. However if the questions are analysed separately different patterns emerge as shown in the graphs 4.2.12 and 13 below.

Graph 4.2.12



Graph 4.2.13



Graph 4.2.12 demonstrates the level of similarity in the responses to the three interview questions measured by the correlation of the pattern of response in the raw word count. As noted above the correlation of the total raw word count

is particularly significant for the pairing groups 1 & 2, 0.93, but is also relatively significant, greater than 0.5, for the pairings 2 & 3, 0.68 and 1&3 0.78.

The pattern that emerges from the two graphs is that the correlation between the responses for the pair 1 & 2 is the strongest for questions one and two using the raw data analysis and 1, 2 and 3 using the occurrence data.

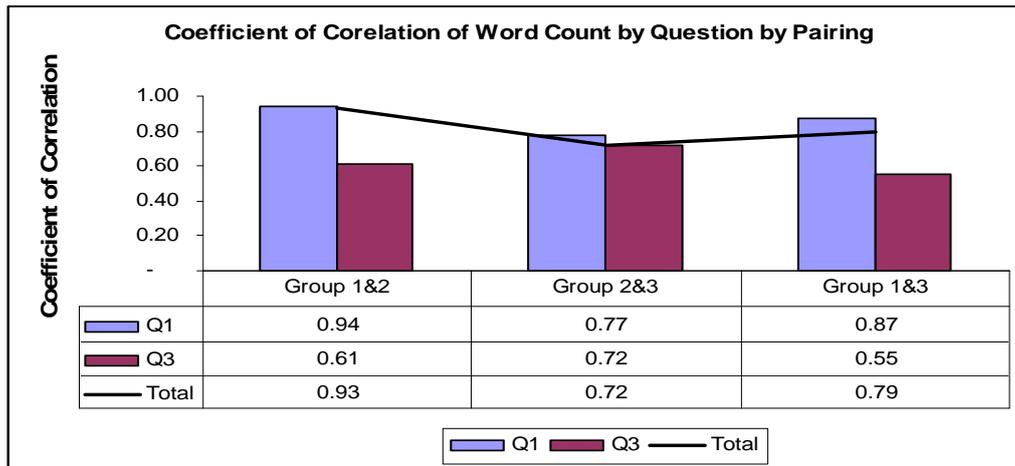
Pairing 2 & 3 is the weakest using the raw data for questions 1 and 2 but paradoxically strongest for question 3. Using the occurrence data pair 2 & 3 is weakest for questions 2 and 3. Pair 1 & 3 is the weakest on the raw data for question 3 and the weakest on the occurrence data for question 1.

Thus the pairing 1 & 2 seems to be the most positively correlated and 2 & 3 the weakest. Pair 1 & 3, the most distant in success rating and thus potentially having the weakest correlation has the weakest in answer to one question, albeit a different question for the raw and occurrence data sets. Thus the pattern does not suggest that each group has a different business model or that contiguous groups have more similar responses and underlying business models. It appears that groups 1 & 2 have strong correlation in answers across all three questions but that this reduces for the other two pairings.

As noted above, these results tend to suggest that there are strong similarities between the responses to the interview questions by the three groups of universities. These responses were in relation to questions about business models and sustainability, and might reasonably be taken to reflect underlying views and experience of business models or a business-like approach and seem to suggest similar rather than different business models are being applied or sought. Taken together the most significant factor appears to be the level of similarity of the overall response from the three groups rather than the levels of difference.

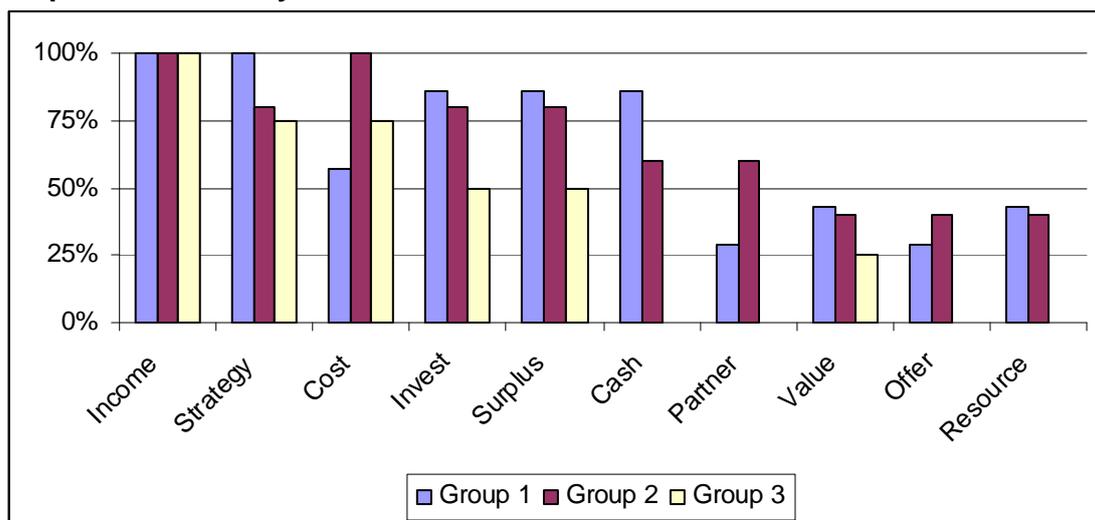
The correlations for question two are consistently the lowest for the three questions with the references expanding on the, "No we don't use the term business model but..." the least consistent. Re performing the raw word count calculation but excluding interview question two gives responses similar to the earlier calculations indicating that whilst question two responses have a different response pattern they do not distort the overall result.

Graph 4.2.14



Approaching the responses from a simple word count analysis the graph 4.2.15 was created

Graph 4.2.15 Rank by Occurrence - Non Occurrence data



The data in graph 4.2.15 ranking the most common words with a group also highlight similarities more than difference. Income is the highest ranked term with all the universities using the term. Strategy is referred to by all members of group one and over 75% for groups two and three. Income and particularly income diversity was commented on a number of times in the interviews as noted above and is analysed later in the paper. If business-like language indicates an underlying business model then the similarity of language might indicate a similarity of model and the difference in success could not be attributable to the application of different business models by a the universities and difference in success perhaps lies more in the quality of execution or

perhaps the difference between aspirations and reality. The responses to the questions might equally refer to an existing we used business model reflected in patterns of behaviour and achieved outcomes, in say group one or planned outcomes aspired to but yet to be fully realised or achieved in say group three.

4.2.5 Research Questions

4.2.5.1 Research Question 1 – Is the term business model use within universities in describing their activities, and, if they do, in what sense or from do they use it?

Only the finance director at the University 3A indicated that the term was used. This statement was immediately qualified when he indicated that the term was used by only himself and the Vice Chancellor and that the term was, “not widely accepted” and that “universities were not a business”. The last reference was contradicted in the interview with the finance director of University 1A who stated that “universities are a business” but then commented, somewhat ambiguously, “I wouldn’t use it widely.”, whilst the finance director at the University 1F recalled that his vice chancellor didn’t think universities were business but needed to be more business-like.

The finance director at University 1D indicated that the term wasn’t used but the vice chancellor was looking at a business model for the university. The finance director at University 3C reported as did most finance directors that the term business model was not used. University 3C has been a leading university in the adoption of the EFQM Excellence Model, which was described in a presentation (Brown and Evans), under the title “The Excellence Model Challenge” as ‘perceived ‘as a business model, suggesting that this perception was something to be overcome or dispelled before it could be successfully implemented. From these comments it appears the term is not in general use in the universities and where used is limited to a few senior managers.

It is noticeable that groups one and two both had significantly higher rates of comments suggesting the inappropriateness of the use of the term business model than group three. This might suggest that a business model approach

is more implicit in groups one and two and more acceptable and explicit in group three.

There was thus one positive answer to interview question one, one ambiguous answer and fourteen negative answers out of the sixteen interviews conducted noted in table 4.2.16 below. The ambiguous answer from University 1A has been treated as a positive answer.

It is clear that the term was not used routinely in this sample of universities. The lack of use is high in all three groups, group one 86%, group two 100% and group three 75% shown in table 4.2.17, suggesting that the lack of use cannot be used to explain differences in relative success of these institutions. A number of the interviewees indicated that the term business model would be unacceptable to their colleagues in the university. These comments are also noted in table 4.2.17 below. Groups 1 and 2 have a similar “unacceptability ratings”, whilst in group 3 only one interviewee, the finance director at University 3B, expressed these concerns. It could be posited, but not evidenced from the data collected in this piece of research, that the term business model is more acceptable or less unacceptable in the universities in group three because of their newer university status and closeness to their vocational origins.

**Table 4.2.16 Summary of Responses to Interview Question 2
Is the term Business Model used within the University?**

University	Summary of Responses
Group 1	
1A	I wouldn't use it widely , Universities are a business but a lot of academics are unhappy with this description. Business Principles are gaining more ground We use terms like Business Plan, Business Model too emotive. Prefer sustainability to business or economic model
1B	No It is paraphrased and put into terms acceptable to the academic community. We talk about revenue streams, contribution, costs avoid more commercial terms. We wouldn't think of a university BM, Distinctiveness is used
1C	No . Corporate Plan Financial Plan Resource Model and Financial terms I&E, Balance Sheet Cash flow are used
1D	No Management jargon, too managerial. Do use financial scenario and will use other business terms. VC looking at a BM for the university
1E	No but we do talk about financial sustainability all the time.
1F	Not used explicitly but there is an implicit BM. BM = Increase research contribution, Growing research, increase overseas students, understand control staff costs particularly pensions the net is the BM VC believes we're not a business but need to be more business like The university is here for academic excellence. But need to be solvent. The term would not go down well. Don't need to use the term as long as the need for financial sustainability is recognised Unconstrained medium term forecast effectively a business model
1G	No There is strategy and BM adapts. BM looks like finance is taking over the academic model
Group 2	
2A	No Likely to jar with academics. Do use service, planning, budget centre planning more common
2B	No the term BM is not used at university level but is used interchangeably when detailed proposals are discussed. A discussion of new partnerships was just being discussed and BM was used. BM sensible for commercial proposals but not for academic ones Some but not all academics comfortable with business language
2C	No Business term avoided seen as possibly problematic
2D	Do not use BM term Use business like language, market, market penetration, turnover, and margin in exec. Ok SMT Have talked about BM and operating models. Marketing talk about consumers. Exec members from business and use business language
2E	No Do use corporate business model. Used by FD and Planning Director
Group 3	
3A	BM is not used Internal allocation Model is seen as more meaningful Staff understand the need to meet the budget. VC and Deans use budget not BM
3B	Yes used by VC and FD Not accepted widely Not a business a university But we are autonomous and have to stand on our own two feet
3C	Not used but would be understood Do use business plan and we run a business as well as a university
3D	No do not use the term business model

Table 4.2.17 Summary of the use of the term Business Model

	Group 1	Group 2	Group 3	Total
Business Model Term Not Used	6	5	3	14
% of Group	86%	100%	75%	88%
Not an Acceptable term	5	3	1	9
Total in Group	7	5	4	16
% of Group	71%	60%	25%	56%

Does the statement that we don't use the term business model suggest that a business model approach is not used within the university? In answering the question, "Is the term business model used in your university?" nine of the fourteen who did not use the phrase indicated that an alternative was used. No but we do use...." These alternatives were financial and financial planning references such as Corporate Plan, Business Plan and Resource Model. It may be the relative newness or possible harshness of the term business model with overtones of managerialism that makes it more unacceptable than these more established business terms. Becher and Trowler suggest that,

"Managerialism's three key aims are economy, efficiency and effectiveness, defined in particularly loaded ways. The pursuit of these has had a substantial, often painful, impact on academic communities." (2001 p 13)

Thus the term business model might be perceived as overtly placing business objectives such as financial performance ahead of more traditional academic objectives. This suggestion was supported by the comments,

"Business model looks like finance is taking over the academic model" (University 1G,)

"too managerial", (University 1D).

"paraphrased and put into terms acceptable to the academic community", (University, 1B).

From the responses received to the direct question, "Is the term Business Model used in your university?" the overwhelming response was no, but that

corporate, planning and financial language similar to that which might be found in interviews with finance directors in the private sector was common. Whilst the term business model was not used explicitly, in most cases related business-like language was used and practices and the processes described support the proposition that whilst the term business model was not used explicitly, there is an implicit use of business models. Which leads on to research question 2 below.

4.2.5.2 Research Question 2. - Do managers in universities use a business model approach as a tool for decision making explicitly or implicitly or rhetorically?

Given the indication above that the term business model is not used in this sample of universities the corollary seems to be that the explicit use of business models as decision making tools is unlikely. However the use of business-like language points to the possibility of implicit use of business models. During an interview the finance director of University 1 F, made the comment in response to the use of the term business model,

“Certainly not explicitly....Implicitly yes I think there is.”

and whilst this was the only clear expression of the implied use a business model further analysis of the interview responses might uncover further evidence of implicit use of business.

From an analysis of the responses to interview question two summarised in graph 4.2.18 below and recorded in table 4.2.19 in appendix 1, a number of common threads or references can be teased out,

- Corporate / Financial Plan and
- Commercial / Financial and Business terms

The use of these terms suggests a business-like or a corporate approach in university management. If an organisation operates in a business-like manner can it be said to operating a business model? The researcher would suggest yes. Whilst the researcher is aware of a possible bias in that the interviewees were, usually finance directors, and are more likely to use business-like language than some of their other colleagues, as evidenced by the comments

of the unacceptability of the term business model, the widespread adoption of the language of business suggests that there is an underlying business practice expressed through this language in the management of universities. If an organisation adopts business like approaches and practices, with an implied business model, do the processes described or implied by this language and practice indicate whether the business model is a decision or analytical tool? Again the researcher would suggest yes. Whilst the universities visited by the researcher did not use the term business model they employed business language as part of their processes to determine which objectives they pursued and how they were to be measured; the corporate and financial strategies and actions necessary to generate surpluses for investment to maintain sustainability; and surplus and staff costs as a % of income. This use of language, objectives and processes implies use within the institution of corporate and financial planning which are at the heart of decision making and thus business-like approaches inform decision making and in so far as business-like approaches imply a business model approach then business models may be said to form part of the decision making processes within these universities.

Thirteen institutions referred to strategic plans with four, referencing academic strategies and ten referred to surplus and cash for investment. Eleven universities referred to income growth or diversification. The references linking income growth, surplus and cash generation with a view to investment answers clearly the question of ensuring institutional sustainability and describes the business model adopted.

At a more detailed level how that income growth as surpluses and cash is achieved can also be seen as a business model Hefce in a recent publication, circular letter number 07/2009 referred to

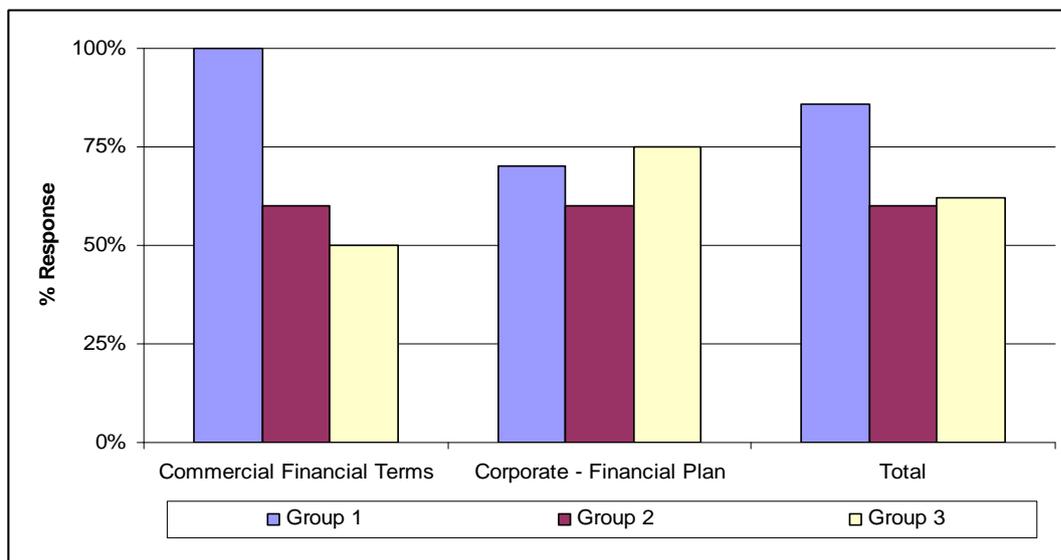
“New business models – the how.”

Here HEFCE describe the business model as the

“internal focus – the mechanism by which the HEI achieves the goals outlined in its distinctiveness Strategy.”

The alternative to a business model was largely described in terms of a corporate or financial plan, and commercial or financial terms and is summarised in table 4.2.6.18 below.

Graph 4.2.18 % by group using Commercial/Financial or Corporate terms in response to Interview Question 2



From the analysis it seems where an alternative description to a business model was offered, and group one was the most prolific, the themes of commercial or financial terms was the most popular followed by corporate or financial plan, noted in table 4.2.19. This suggests that whilst the term business model is not used (research question 1) the interviewees largely recognised that they used alternative expressions of a business-like nature. These alternative descriptions suggest a business-like framework to decision making using corporate and financial plans and business or financial terms such as

“revenue streams, contribution and costs “

(University 1B)

“started to get that business market approach back into faculties”

(University, 2D)

“Income is key to everything... Need to look at increasing income”

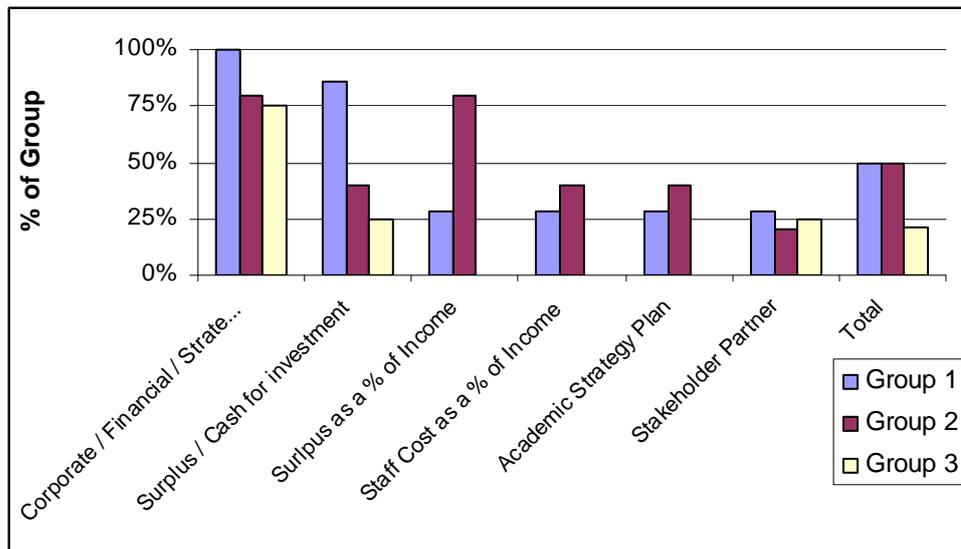
(University 3A)

The nature of these alternatives was consistent across the groups suggesting that a business-like approach, which the researcher suggest implies or is indicative of an underlying business model is used by universities as a decision making tool. Interestingly the consistency across the three groups again

suggests that from the interview data the groups are more similar in their business -like approach, business model, than they are different.

Interview question one asked how sustainability in the university was managed or sought and was derived from Magretta's definition of a business model as how an organisation sustains itself into the future, (Magretta, 2002). Thus the answers to this question may reveal how business models are used in decision making.

Table 4.2.20. - % by Group using identified terms in responses to Interview Question 1. How is the sustainability of the university managed or sought?



Analysing the responses to interview question one the results of which are summarised in graph 4.2.20 above and recorded in table 4.2.21 in appendix 1 indicates again a degree of similarity in response by key phrase. As in question two, Corporate and Financial Plan along with surplus cash for investment were the most frequent references. The spread between the groups was surprising to the researcher who had expected the highest % of financial references from group three being perhaps more vocationally orientated.

Given the language noted in the graphs and tables 4.2.18 -21 universities do appear to be using a business model approach to decision making in that there is a business-like approach in the language and processes described. A corporate plan provides a reference framework; a financial plan expresses this in monetary terms. Target levels of surplus are set for investment in future provision, are sought by income diversification and growth, finally controlling

staff and other costs. Thus a business model, as an approach to ensuring sustainability through income generation and diversity, with modest surpluses for re-investment, guides the decisions of the university.

4.2.5.3 Research Question 3. - Does the application of a particular business model influence the performance of the university?

The three groups of institutions were selected to represent three levels of success with group one representing the most successful, group three the least and group two somewhere in between.

The approach taken by the researcher to answer this research question was,

- having determined that universities, whilst not using explicit business models i.e. the term business model was not used,
- can be said to use an underlying business model approach, with regard to decision making, evidenced by the business-like language used in the interviews, the business practices demonstrated by the generation of corporate and financial plans and the financial objectives set in terms of income, surplus and investment,
- but which were not differentiated in relation to relative success as recorded in the word count analysis, in section 4.2.4 above,

was to then review the responses to interview question three, where the interviewees were asked to describe their university's business model, in more detail. On inspection references to income, margins, cash, surplus and investment were frequent and noted in table 4.2.23 appendix 1. Again the similarity of references between groups rather than their difference was noticeable.

These responses were not dissimilar to those noted for the previous two questions and thus the responses for all interview questions were further analysed for references to income growth in order to determine if the income strategies or aims differed between the groups. The results were noted; table 4.2.24, in appendix 1

All three groups made references to growth.

“if we want to grow we need more sources of income”

(University 1G)

“experienced rapid growth”

(University 1D)

University 1G referred to growth and diversification having previously identified four main income areas, research, international, teaching and income generation, income generation normally referring to commercial activities.

University 1 F was the most explicit and direct in group one describing objectives for growth in research international and postgraduate markets. The universities in group 2, with the exception of the nil responses from the University 2A, described similar target areas for growth, research, international, knowledge transfer, post graduate, consultancy.

Universities 2B 2E, and 2D and saw the undergraduate market having limited growth potential and diversification of income was necessary for growth.

Group 3 also looked for growth in research, post graduate international and commercial income streams although international income growth was the most frequently cited ,three of four institutions, research two of four and postgraduate only one of four.

Institutions in groups two and three appear to emphasise growth more consistently outside their traditional home undergraduate market, into the areas of post graduate, international and research activity. Whilst the responses are similar, groups two and three appear more aspirational, in that they describe or refer to areas of activity they want to develop or move into.

“trying to grow research CPD overseas knowledge transfer, post graduate...”

(University 2E)

“so I guess international is the area where we might be looking”

“we still want to grow our post graduate market”

(University 2D)

“Research and Knowledge Transfer infancy enter market and grow presence...”

(University 2C)

“we want to grow international students and work overseas”

(University 3B)

Group 1's phrases are less specific almost more confident operating from a position of strength or advantage.

"we are well served by the majority of the overseas market" "A bit of hard work on the overseas fees a bit more risky, very risky, but that piece you could work out"

(University 1F)

"a research intensive organisation attracts excellent research funding..."

University 1A)

During the interview with the finance director of Leeds University no direct reference was made to growth or growing particular markets. However in the Leeds University Strategic Plan 2006 there are eight references to growth of which six refer to research income growth and two to diversification of income streams.

"Another key objective in our financial strategy is to ensure that we aggressively grow research income to enable the development of our research."

"The financial strategy is set within the context of a changing financial landscape, where we will gradually reduce our dependence upon HEFCE. Our strategic aims are dependent upon growth and diversification of income streams. We have identified growing additional sources of profitable income to invest in our future as a key financial objective." (Leeds, 2006, p.28)

Whilst the interview didn't pick this up the aims of research income growth and diversification of income are echoed in most of the interview analysis.

There may however be a sub division hidden within the comments. Use of the phrases research-led or research intensive and teaching-led is relatively common in the HE sector but the use of the latter does not imply no research rather applied research directed at learning. This distinction did not emerge from the analysis of the interview data and was only referred to directly by the finance director at University 1A. Perhaps with a different set of interview questions the perspective might well have been different with a discussion of the academic model helping to define an underlying business model.

Taking the findings of similar language used by each group when describing how sustainability was to be ensured, how they describe their business model and the alternatives to the term business model along side the growth objectives expressed it seems plausible to suggest that this might be explained by the existence of a single or similar business model(s) largely achieved by group one and aspired to by groups two and three.

Universities tend to work within a constrained environment, responding to as well as shaping government policies such as, widening participation, employer engagement, research assessment exercises and learning and teaching goals. Within that framework universities express aims to grow their income both in volume and diversity, often referred to as income streams, and to create the potential for surpluses for reinvestment to better deliver their missions. Whilst universities appear to have similar business models, different universities might be said to be at different points in realising the elements of those business models or model. This is discussed further in section 4.4 by analysing the components of income as % of university total income by institution and group.

4.3. Analysis of University Strategic Plans for the use of the term Business Model and related business-like language.

4.3.1 Introduction

This section of the paper deals with a review of eight-nine publicly available university Strategic Plans and Corporate Planning Statements to answer the three main research questions noted in diagram 4.2.1

1. Is the term business model used within universities?
2. Do managers in universities use a business model approach as a tool for decision making explicitly or implicitly?
3. Does the application of a particular business model influence the relative performance of the university?

The researcher is aware that the plans released into the public arena may not reflect the full extent of institutions' strategic planning or may have been written in part with an eye to external end users, particularly, funding bodies. Thus the plans may be incomplete or shaped to a greater or lesser degree by

marketing or public relation concerns. However as the research also includes the use of interview, league table and financial data the researcher believes the use of this data is acceptable. The number of plans available at eighty-nine represents 56% of the total of 160 possible institutions used in the income analysis or 75% of the 119 institutions reflected in the University League Table 2006 reported in the THES.

The words and phrases chosen to represent the language of business models, Hefce Key Strategic Aims and business-like language are shown in tables 4.3.1, 4.3.2 and 4.3.3 below. The words and phrases were searched for using the search function in Microsoft Word and Adobe Reader 8. Searching for specific words or phrases suffers from the limitation that there are potentially a number of alternative words or expressions that may have the same or similar meanings and in this sense the analysis was not content rich. For example, in the City University's Strategic Plan there was no match for, "excellence in research", but there was a statement in the Vice Chancellor's forward under a research heading,

"our performance showed a 25 per cent increase in the number of staff in categories rated as being of national or international excellence."
(City University, 2004).

Thus the non occurrence of an expression does not necessarily imply that the sense of that expression is not reflected in a different way in a given document. However the purpose of the analysis was not to describe or categorise the nature of the use of the terms or phrases but simply to record if they occurred, thus with a limited resource the researcher recognises limitations inherent in the approach.

Table 4.3.1 below demonstrates the concentration of references to those terms which might be characterised as traditional business references and the non adoption of business model language as defined by the researcher. Table 4.3.2 shows that, at least in part the play back of strategic Hefce's objectives. The low scores may be attributed to the specific nature of the word combinations searched against. Table 4.3.3 reveals an emphasis on well established terms, partnership, stakeholders and governance in the university view of strategic planning.

Most notably in table 4.3.1, the term business model appears in only 3 plans and none of the strategic plans examined contained the phrases, value creation or value statement, whilst eighty-five used the more general term value. There are single references to value proposition, business proposition and value chain. In a cumulative count the three (three of thirteen or 23%), most common references account for 70% of the total references and the five (five of thirteen 38%), most common references account for 91% of all references. There is thus a concentration of references (highlighted in grey) and this concentration appears to be those business model references which are more similar to business like references than those least referred to such as value proposition and value creation suggesting that universities when using business terms tend to use well established business terms. Thus evidence of the use of business models is perhaps more likely to be found not by searching for references to business models but perhaps an interpretation of more common business like language. The remaining references occur less than would be expected if each had an equal likelihood of occurring thus the difference column tends towards nil% from this point.

Table 4.3.1: Number of Institutions with references to business model related terms in their strategic plan

“Business model” words and phrases	No of Institutions in which the phrase occurred	Cumulative No of Institutions in which the phrase occurred	Cumulative %	Cumulative % by term only	Difference
Value	85	85	30%	8%	22%
Market	75	160	56%	15%	40%
Customer	43	203	70%	23%	47%
Revenue	31	234	81%	31%	50%
Business Plan	27	261	91%	38%	52%
Niche	17	278	97%	46%	50%
Value Added	4	282	98%	54%	44%
Business model	3	285	99%	62%	37%
Value Chain	1	286	99%	69%	30%
Value Proposition	1	287	100%	77%	23%
Business Proposition	1	288	100%	85%	15%
Value Creation	0	288	100%	92%	8%
Value Statement	0	288	100%	100%	0%
Total	288				

Table 4.3.2: Number of Institutions with references to Hefce Key Strategic Phrases in their strategic plans

Hefce Key Strategic Words	No of Institutions in which the phrase occurred	Cumulative No of Institutions in which the phrase occurred	Cumulative %	Cumulative % by term only	Difference
Widening participation	63	63	32%	14%	18%
Sustainability	53	116	59%	29%	31%
Excellence in teaching	41	157	80%	43%	37%
Excellence in research	22	179	91%	57%	34%
Contribution to society	9	188	96%	71%	24%
Contribution to the economy	5	193	98%	86%	13%
Employer Engagement	3	196	100%	100%	0%
Total	196				

Table 4.3.2 indicates, perhaps given the funding relationship not unsurprisingly, that the strategic themes of HEFCE are quite well rehearsed in the strategic plans of universities. The occurrence of teaching references was two thirds of what would be expected if the instances occurred equally and research one third. This is surprising result given the centrality of the aims and the researcher suspects that the phrases searched for might be represented differently. As in the results in table 4.3.2 there is a concentration of results such that the three, (43% of references) most common references account for

80% of the total. These references were widening participation, sustainability and excellence in teaching. The two aims of Contribution to Society and the Economy represented only 7% of occurrences despite these being referred to by HEFCE through out the current century.

“Higher education generates the research, knowledge and skills that underpin innovation and change in the economy and wider society”
(Blunkett, 2000).

The results in Table 4.3.3 below also show a tendency to what might be seen as less managerial business terms reflecting the nature of the sector with partnership, stakeholder and governance achieving much higher scores than USP and critical success factors. This tendency is also reflected in the comments noted during the interviews conducted as part of this researcher where interviewees stated that the use of the term business model would not be acceptable to a number of their colleagues. Thus business language and business models are tempered by the social dimension of universities and can in this way be compared to social enterprise models or business models with a strong social aspect.

Table 4.3.3: Number of Institutions with references to General Business References in their strategic plans

General Business References	No of Institutions in which the phrase occurred	Cumulative No of Institutions in which the phrase occurred	Cumulative %	Cumulative % by term only	Difference
Partnership	82	82	34%	14%	20%
Stakeholders	55	137	57%	29%	28%
Governance	54	191	79%	43%	36%
Key Performance Indicator	25	216	90%	57%	33%
Financial Sustainability	14	230	95%	71%	24%
USP	7	237	98%	86%	12%
Critical Success Factors	4	241	100%	100%	100%
Total	241				

Business model words or phrases have an actual usage of 288. If an occurrence of each word had been found in each strategic plan the score would have been $13 \times 89 = 1,157$. The actual result at 288 was 25%. The breakdown by category of phrase is shown below in table 4.3.4.

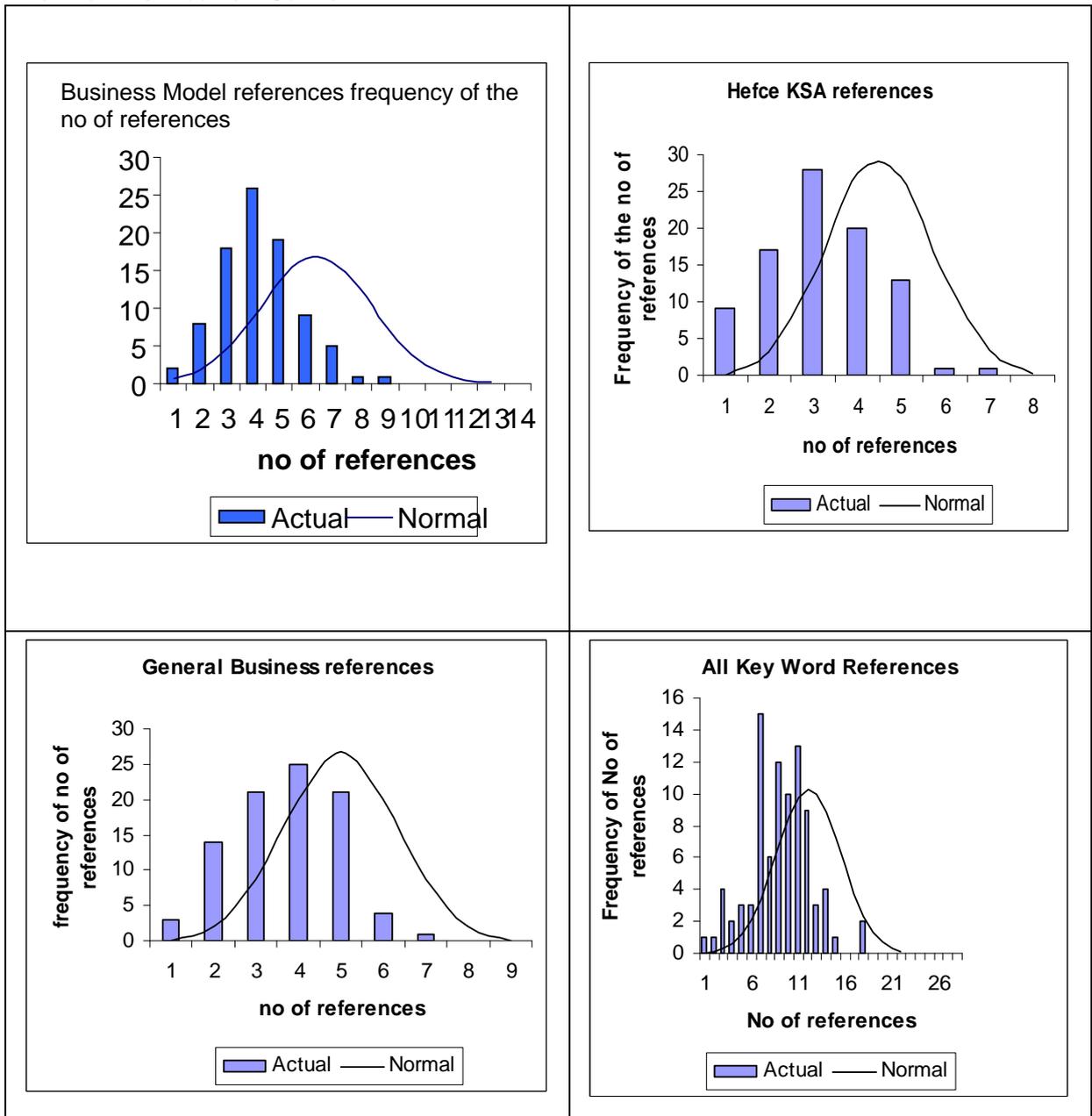
Table 4.3.4 - Actual Count of Occurrence as a % of Theoretical Maximum

	Business Model Words	Hefce KSA Words	General Business Terms	Total
Theoretical Maximum	1,157	623	623	2,403
Actual Occurrence Noted	288	196	241	725
% Actual of Theoretical	25%	31%	39%	30%

Here we can see the use of more general business like terms occur proportionately more frequently than business model terms or Hefce KSA. The frequency of the scores was calculated and the results plotted in graph 4.3.5 below. This shows the skewed nature of the results with most of the results on the left indicating a positive skew. The actual results are plotted as a histogram whilst an estimated normal distribution is shown as a line graph. The normal curve was estimated using the same average result as the actual result and manipulating the standard deviation to ensure the average was 3 standard deviations from zero. The skewness demonstrates the preponderance of low value results for the use of business model like language.

The results indicate that the usage of business model language, Hefce strategic aims and general business like terms are not significant in university strategic documents, but that business model, language, is less frequently used than the other two indicators, Hefce KSAs and general business terms. The relative lack of use of specific business model language does not preclude the existence and use of business models in universities. The results from the interviews conducted suggest that whilst not using the term business model s other business like phrases are used. Business model might be seen as a relatively new term perhaps too managerial and thus unacceptable, supported by comments noted during the interviews with finance directors, when compared to more established concepts such as strategy.

Graph 4.3.5 Frequency Plot of Strategic Plan Analysis and an Estimated Normal Distribution Curve



Taking the count by institution by the three word groups and applying a correlation calculation the results were as shown below in table 4.3.6. The correlation coefficients range from 0.40 to 0.52 indicating a positive correlation but not a strong one. This suggests that universities using business terms tend also to use business model like language. However the business model language terms the use tend to be more established business like language, value, market, customer rather than the specific business model terms such as value creation, or value proposition. Thus the tendency seems to be to use

business like rather than business model language. However the use of business like language might be seen as indicating the use of an implicit rather than explicit business model approach.

Table 4.3.6 Correlation for All institutions and Word Group

	No Business Model Words	No Hefce KSA Words
No Hefce KSA Words	0.43	
No Business terms	0.52	0.40

4.3.2 Use of Business Model Language

Table 4.3.7 below shows institutions with a total word occurrence score greater than 10 ranked using the word search results in descending order. Ten was selected as an arbitrary cut off.

Newcastle and TVU both scored 17 or 63% out of a possible score of 27. The average for the top 10 was 50% and for the complete data set 30%. This suggests that the terms searched for are not found in a significant number of institutions in the data set.

Table 4.3.7: Institutions with a Total Score >10 ranked by references Business Models Terms

University	No Business Model Words	No Hefce KSA Words	No Business Terms	Total
Newcastle	8	4	5	17
Thames Valley	7	3	7	17
Glasgow	5	6	3	14
Nottingham Trent	5	3	5	13
Gloucestershire	6	3	4	13
Northampton	5	4	4	13
Paisley	5	4	4	13
Surrey	6	2	4	12
Buckinghamshire	6	3	3	12
City	6	3	3	12
SOAS	4	3	4	11
Aberdeen	4	4	3	11
Bangor	4	5	2	11
Glasgow school of Art	5	2	4	11
Heriot-Watt	5	3	3	11
King's College London	4	3	4	11
Newi	4	2	5	11
Robert Gordon	6	2	3	11
Staffordshire	3	4	4	11
Winchester	3	4	3	10
Bristol	4	3	3	10
Brunel	2	4	4	10
Durham	3	4	3	10
Edinburgh	5	1	4	10
Exeter	4	2	4	10
Glasgow Caledonian	4	1	5	10
UHI	3	3	4	10
Keele	4	2	4	10
London South Bank	4	2	4	10
Manchester	4	4	2	10
Queen Mary	4	3	3	10
Swansea	4	2	4	10

Taking the top ten institutions from table 4.3.7 it is possible to analyse the references by the category of reference as shown in table 4.3.8, within the three main groups. The results of this analysis show a high level of consistency of pattern of reference for business model phrases but lower levels for Hefce KSA and general business like terms.

The results for business model terms reflects the consistently low use of the terms; Value Added, Business Model, Value Chain, Value Proposition, Business Proposition, Value Creation and Value Statement and the more frequent use of Value, Market, Customer, Revenue, Business Plan, and

Niche. Thus measure of business model language is skewed towards business-like language.

The pattern use of Hefce KSAs is notable for the frequent occurrence of low correlation results and thus not useful in identifying consistent business model use.

The pattern of use of business like language is interesting in that if the table is viewed without the TVU and Paisley results the correlation results are positive, i.e. with only five scores below 0.5. Thus again the use of similar business-like references or language across the three groups as noted from the interviews data is apparent. The groups are more similar than different.

Table 4.3.8 Correlation Coefficients of Response by top 10 highest scoring institutions.

	Newcastle	TVU	Glasgow	NTU	Glouc	Northampton	Paisley	Surrey	Bucks
Business Model References									
TVU		0.5							
Glasgow	0.6	0.7							
NTU	0.6	0.7	1.0						
Glouc	0.4	0.5	0.5	0.5					
Northampton	0.6	0.7	0.7	0.7	0.5				
Paisley	0.6	0.7	0.7	0.7	0.9	0.7			
Surrey	0.7	0.9	0.9	0.9	0.7	0.9	0.9		
Bucks	0.7	0.9	0.9	0.9	0.7	0.9	0.9	1.0	
City	0.7	0.9	0.9	0.9	0.7	0.9	0.9	1.0	1.0
Hefce Ksa References									
TVU		0.8							
Glasgow	0.5	0.4							
NTU	0.8	0.4	0.4						
Glouc	0.2	0.2	0.4	0.4					
Northampton	1.0	0.8	0.5	0.8	0.2				
Paisley	0.4	0.8	0.5	0.2	0.4	0.4			
Surrey	0.5	0.1	0.3	0.7	0.7	0.5	0.1		
Bucks	0.8	0.4	0.4	1.0	0.4	0.8	0.2	0.7	1.0
City	0.8	0.4	0.4	0.4	0.2	0.8	0.2	0.1	0.4
Business Like References									
TVU		0.5							
Glasgow	0.6	0.3							
NTU	1.0	0.5	0.6						
Glouc	0.8	0.4	0.3	0.8					
Northampton	0.8	0.4	0.8	0.8	0.5				
Paisley	0.3	0.4	0.3	0.3	0.5	0.5			
Surrey	0.3	0.4	0.8	0.3	-	0.5	-		
Bucks	0.6	0.3	0.5	0.6	0.8	0.8	0.8	0.3	
City	0.8	0.4	0.7	0.8	0.4	1.0	0.4	0.4	0.7

4.3.3 Key Users of Business Model Language

Having identified those institutions that use business model terms as defined by the researcher a closer analysis of that usage to better understand their use of business models is required.

Value Proposition was referred to in the Thames Valley University Strategic Plan 2004 and beyond. The phrase was located prominently in the document in Part A Values and Objectives in a section entitled Value Propositions. A series of value propositions were seen to;

“locate the University, encapsulate its aspirations, and reveal the parameters within which these aspirations will be realised.”
(TVU, 2004, p7)

In terms of a value proposition, “locate the university” may be seen as using the university offering to set the university in the higher education context or market for the benefit of existing and prospective students and other stakeholders. “Encapsulate its aspirations” seems to imply a simple, perhaps accessible expression of the university’s aims and “Reveal the parameters within which these aspirations will be achieved”, might be seen in terms of the fifth value proposition a motivational budget. The university’s five value propositions were described as;

1. “We are a university”
2. “Growth through full participation”
3. “Curricula and qualifications in support of full participation”
4. “Full participation for staff as well as students”
5. “Releasing potential through budgetary processes”

(TVU, 2004, p 7-9)

The elements of the researcher’s conceptual framework can be identified in the TVU five value propositions. The relationships weren’t simply one to one in all cases requiring a combining from the conceptual framework of resources and processes into one category and revenue, cost and profit into another. Table 4.3.9 below shows the elements of the conceptual framework in the left hand column and extracts from the five TVU value propositions noted by number. All five of the TVU value propositions were mapped to one or more of the researcher’s conceptual framework.

Internal value propositions for staff and students were clearly articulated in terms of benefits delivered to staff and students. The co production element is less clearly represented but can be seen in the development of staff capability to facilitate, guide and deliver to the changing demands from a diverse student body. Resources and processes are represented in terms of development in curricula and operational efficiencies. Partners are referred to specifically in terms of business partners but also in the sense of location and commitment to the region in which the university sits. The external value proposition overlaps with the partner element but can also be demonstrated in terms of the knowledge transfer, a transfer of value, to the world outside the university including but not restricted to business, and the public sector. References to the budget system guiding and informing decisions and the financial stability of the university complete the mapping process.

The successful mapping the five value propositions to the business model conceptual framework developed by the researcher suggest that whilst phrase business model was not used in the TVU strategic plan the five value propositions can be presented in the form of a business model. Interestingly in terms of performance the financial statements for TVU 2007-08 included the statement

“Step change in financial performance, with a return to operating surplus before exceptional items and redundancy costs for the first time since 2003/4, a turnaround of £5.1m from the previous year.” (TVU annual Report and Financial statements 2007-08, p5)

This can be taken to highlight previous poor performance thus more business like language not reflected in financial results or more or a more business like approach contributing to improving performance. To determine which is true or if both are true at different times would require further research into the history of TVU.

Table 4.3.9 Mapping the Business Model Conceptual Framework to the TVU Value Propositions described in the TVU Strategic Plan 2004 and Beyond.

Business Model Conceptual Framework	Thames Valley University Five Value Propositions
Internal Value Proposition to students and staff	<ul style="list-style-type: none"> • (1)“widening the horizons of its students and raising their own confidence to achieve their full potential” • (2)“Our students deserve to be empowered in a world of ideas” • (4)“staff can enhance their own capabilities” • (4)“Staff will be supported in their research aspirations”
Co Producer Staff / Student	<ul style="list-style-type: none"> • (4)“Full participation at a student level clearly requires the simultaneous development of staff to take advantage of new demands from the growing and changing student body”
Resources & Processes	<ul style="list-style-type: none"> • (5)“The creative potential of the academic and support staff to develop new programmes, new curricular mixes, new pedagogical mixes and more efficient methods of operation are all encouraged by a motivational budget as well as being informed by a clear indication of their financial implications” • (5) “Budget design is critical to the release of the creative potential that resides within the University. The current financial stability of the University enables it to develop further its budgetary system so that it rewards success and provides guidance for increased efficiency in the achievement of its core aspirations”.
Partners	<ul style="list-style-type: none"> • (1)“The title of the University underscores our commitment to the region within which its campuses are located” • (3)“The changing nature of the workplace and vocational drivers requires that we constantly monitor opportunities for creative developments, within and across subject areas, within and across further/higher education boundaries, within and across undergraduate/postgraduate boundaries, and within and across our regional business partners”
External Value Proposition	<ul style="list-style-type: none"> • (5)“Knowledge is transferred from the education sector into the wider world through the skills and experience gained by its graduates” • (5)“It is also transferred through funded and unfunded research, through consultancy, through interactions with business and the public services, and through work with schools and the community”

Business Model Conceptual Framework	Thames Valley University Five Value Propositions
Revenue, Cost & Profit	<ul style="list-style-type: none"> • (5)“The current financial stability of the University enables it to develop further its budgetary system so that it rewards success and provides guidance for increased efficiency in the achievement of its core aspirations” • (5)“encouraged by a motivational budget as well as being informed by a clear indication of their financial implications”

Business Proposition is referred to twice in the Staffordshire University, University Plan 2003/04 to 2007. The first use is in an expression stating that the university is willing to enter collaborations,

“wherever they support the effective delivery of our vision and business proposition”
(Staffordshire University, 2003)

The second use

“To develop effective financial models, which ensure the cost efficient delivery of our business proposition”
(Staffordshire University, 2003, p9)

appears in the resources section of the plan where financial frameworks are to be developed to ensure the delivery of the university’s business proposition. Whilst there is no definition of business proposition in the document an indication of its importance might be drawn from its placement alongside the university vision. The university mission statement includes the following sentence,

“Our business is to support learning and facilitate the transfer and acquisition of skills”
(Staffordshire University, 2003, p2)

A definition of, “our business”, could be interpreted as part of a business model i.e. what is offered, if we add to this the second reference to business proposition which includes, “effective financial models”, we include a financial sustainability aspect. Thus whilst business models are not referred to directly elements of them are evident in the strategic plan.

Staffordshire University was used as a case study demonstrating good management (Baker and Close, 2007) with a well articulated strategic plan

and business plan linked to goals with measurable outcomes. Against this background it would seem consistent that the use of a business model term, such as business proposition, was found and this is emphasised in Staffordshire University's latest plan 2007-2012 (Staffordshire University, 2007) with a section in the strategic intent document dedicated to business goals.

Value Chain was referred to in the Northampton University Strategic Plan 2005/10 Volume 2 - The Corporate Plan, as a way of describing the journey of a student through higher education in a widening participation framework;

“The University of Northampton is committed to a value chain from aspiration raising, through access, partnership, progression and success for every individual, irrespective of their educational, geographical and community backgrounds.”
(Northampton, 2005, p. 6)

This appears to be an adaptation or application of Porter's value chain analysis, (Porter, 1985) a now traditional or well accepted theory. Again the use of well known business terms seems acceptable particularly in the context of a strategic plan. In this case the value chain describes the educational rather than financial dimension of the value chain. Given the iterative and co-productive nature of higher education, Stabells and Fjeldstad, (1998) value shop may have been a more appropriate tool or analogy.

Focussing on the use of the term business model it is noted that only three universities used the term, Newcastle University, Bath and Cumbria. Bath and Cumbria will be discussed separately as, despite referring to business models, they scored relatively poorly overall at 63rd and 67th respectively, on the use one or more times, of the selected terms in their plans, whilst Newcastle University came 1st. The strategic plans were available separately for Cumbria and University College St Martins and both were used but as separate records.

The term business model was used in two places in the Newcastle University Plan 2006/7 to 2010/11. The first as an assumption in the strategic objectives section and the second in a much narrower reference relating to business models for academic publishing as part of the Information - Library Strategy in the Support Service Strategies section of the plan.

The first reference to a business model is early in the 73 page document, on page 5, in a section entitled, Assumptions, following a description of the university mission and strategic objectives. This position, early in the paper and following statements on mission and strategic objectives suggests that the business model is seen as important in terms of this plan. The section, assumptions, also refers to the Academic Model and Newcastle Science City. To separate the academic model from the business model would appear to indicate a limited view of the nature of the business model, in as much that the academic offering is a central element of any likely value proposition put forward by the university. This separation may reflect the concerns of the finance director at the University of Warwick who suggested that the use of the term business model might be seen as finance taking an unjustified pre-eminent role above the academic model. Newcastle University avoids this by clearly referring to both. The evolution of Science City is referred to in the introduction to the strategic plan alongside the 2008-08 RAE an indication of its importance, might be seen as a strategy, in terms of a course of action to achieve certain goals, or as a way of engaging the university in the wider world of science and alternative funding streams, thus a particular business model a plan to generate income; a business model or strategy or faulty thinking? (Porter, 2001).

The academic model describes the need for excellence in teaching and learning and research at an internationally recognised level, linked to the external world by a translational capacity or ability to cross the traditional boundaries to impact on that wider world. In addition the ability to respond to changing patterns of demand in terms of the mix of offering forms the other part of this model. Here we have in the first part a description of the university's value proposition, an offer of high quality research and teaching and a statement of internal capability. The university describes its business model as being an independent and self determining institution whilst at the same time collaborating with other institutions and for profit organisations. Can a business model be defined in terms of autonomy and partnership? It seems that whilst an element of the business model conceptual framework described by the researcher, partners, is referred to it is mixed up with desires

such as autonomy. Within the narrative there is a business model not separate from but with the academic offer at its heart.

There is a strong reference to Science City as a new model bringing together a number of agencies and organisations linking research and industry with financial benefits to both the university and the region. Within this description is an implicit value proposition with partners bringing resource and expertise to create, in this case, financial benefit to the university and the achievement of growth and development objectives of the other partners.

The desire to increase student recruitment, both home and overseas, is articulated and internationalisation in a broad sense of partnering with overseas institutions is introduced as a means of developing the university's overseas profile. The effective use of the university's physical assets is also referred to. Finally reference is made to the Hefce funding backcloth in terms of inflationary and funding assumptions.

If we accept the description of a business model as the core logic of how the business maintains itself into the future (Magretta, 2002) and that the core logic is a bundle of value propositions linked with the capacity to deliver them, then this use of the term business model again demonstrates how elastic the term can be. Is a self determining and collaborative institution part of a vision statement? This is what we aspire to be. The creation of a Science City as a vehicle for the exploitation of research would seem to be a strategy as would the increasing student numbers. The effective use of resources seems merely good management. This collection of vision, strategy and management would seem to support Porter's view of business models in practice as an excuse for muddled thinking. The term business model here seems to be being used as a convenient label. Can Newcastle University's business model be successfully mapped to the researcher's business model conceptual framework?

Table 4.3.10: Mapping Business Model Conceptual Framework to the Newcastle University reference to Business Model in its Strategic Plan 2006/7 to 2010/11

Business Model Conceptual Framework	Newcastle University Business Model Elements		
Internal Value Proposition			
Co Producer Staff / Student	Growth in home and international students and sustained commitment to widening participation		
Resources	Manage physical assets estates and IS		
Processes	managed development of estate and information systems		
Partners	collaboration with universities and companies	partners, RDA, Newcastle City Council, local health trusts to create a science city framework	collaborative activity overseas provision
External Value Proposition	economic benefit for the university and region	widening participation	
Revenue	student number growth	Hefce revenue and capital funding assumptions	
Cost	macro and micro economic assumptions, inflationary pressure 3% accepting additional salary pressures		
Profit	university remaining autonomous suggests financial independence based in part on surplus generation		

The mapping of the Newcastle University business model to the elements of the generic model can be said to be successful at least in part. Only two elements of conceptual framework appeared to be wholly missing from the Newcastle University business model. These were the internal value proposition and the expression of staff and students as co-producers, although students were mentioned in terms of growth in numbers and a commitment to widening participation. Both of the missing elements can be said to have an internal perspective suggesting that the Newcastle university expression of its business model was perhaps more externally focussed.

In his introduction to the strategic plan the university vice chancellor referred to the low uptake of higher education in the North East and the region's relatively high dependence on public expenditure. Against this background economic as well as social purpose was expressed in the phrase "excellence with a purpose" and a desire to lead in the enhancement of the regions GDP. Thus the use of the phrase business model becomes less unexpected as it fits into this overall economic and business engagement context.

The University of Cumbria's 2007-2012 Strategic Plan refers to a sustainable business model built on a base of financial principles which chimes with the idea of business propositions and financial frameworks put forward by Staffordshire University (Stafford, 2003). Whilst the financial principles are not clearly articulated in the plan, it is interesting to note that the business model is seen to depend on this framework thus the narrative might be read as implying that the correct financial principles are a prerequisite of a sustainable business model or perhaps more likely, given the later reference to financial plans, they are the expression of a business model. Looking more closely at the narrative may help determine what those principles are. The reference to the business model occurs in the last of five core themes, supporting the three strategic goals,

"Effective and empowering leadership, governance and management"
(University of Cumbria Strategic Plan 2007-2012, p46).

Financial planning along with a better resource allocation model is described as key to the achievement of the university's strategic plan with better financial information facilitating the development of a devolved but accountable budgetary framework. Striving for financial autonomy for operational areas, whilst maintaining financial control and direction through accountability is an aim of many universities (as evidenced in the analysis of the interview responses) and may be seen as a business-like approach. The sentence that includes the reference to the university's business model ends with,

"a sustainable business model that will allow it (*the university*) to increasingly shape its own destiny"
(University of Cumbria, 2007, p47).

This reference might be seen as the business model generating free funds or headroom for discretionary investment, which is similar to part of the view expressed in the Newcastle University Strategic Plan expressed in terms of institutional autonomy, noted above, but does not distinguish whether it is simply a set of financial criteria or targets or a description of the underlying logic of the university offering.. However the use of the term business model here is still unclear. However in an attempt to clarify this model it is possible to analyse the University of Cumbria's strategic plan using the researcher's conceptual framework.

In its Strategic Plan 2007-12 the university declares five operating principles which are designed to create the sustainable environment which allows the academic priorities to be delivered.. The first is its commitment to students and clients the later expressed as

“employers public sector agencies schools or others “
(University of Cumbria, 2007, p10)

Here we have a statement essentially putting forward an external value proposition; whilst staff will be given opportunities to develop their potential or an internal value proposition.

Process resources and finance are dealt with in terms of IT innovation, efficiency and effectiveness of governance and management. Indeed in addition to the operating principles are number of core themes of which the fifth relates to effective governance and management Partnership is presented as a single principle emphasising the networked or distributed approach adopted by the university by virtue of its location in Cumbria. Thus the conceptual framework can be drawn from the narrative which forms the strategic plan. Whilst not having completed this exercise for all university strategic plans the researcher suggests the tendency this exercise would be able to be repeated for most university strategic plans given the constraints of their operating environment.

Table 4.3.11: Mapping Business Model Conceptual Framework to the Cumbria University Strategic Plan 2007 - 12

Business Model Conceptual Framework	Cumbria University Business Model Elements
Internal Value Proposition	“The University will ensure that it provides opportunities for developing the potential of all who engage with it, and especially its students and staff, ”
Co Producer Staff / Student	Therefore, in line with its mission and in consultation with stakeholders the University is developing a broad range of demand-led courses at FE and HE levels.
Resources & Processes	<ul style="list-style-type: none"> ○ “To create leadership governance and management structures systems and processes .“ ● The University’s academic regulations have been designed to support the extension of the range of courses that use flexible learning approaches. ● The University will rapidly expand the infrastructure and staff base needed to underpin such an approach. ● The internal reporting and accountability cycle is designed to meet externally determined reporting requirements and integrate them
Partners	<ul style="list-style-type: none"> ● “The University of Cumbria recognises that, if it is to transform lives and support enterprise by bringing education to all those who can benefit, it has to develop and commit itself to sustainable partnerships across the public, private and not-for-profit sectors. ● Through the use of its campus and FE partnership networks, it will identify and assist appropriate initiatives being led by other agencies and organisations, including charities, faith communities, and local and regional government”
External Value Proposition	<ul style="list-style-type: none"> ● “The University aims to provide a supportive learning environment in which its students can acquire and develop new skills and knowledge, to equip them for success and fulfilment throughout their lives, wherever they live and whatever they do.” ● “The prime focus of the University of Cumbria is on those—students, employers, public sector agencies, schools or others—who use or wish to use its services. The University gives a clear commitment that it aims to meet their needs, exceed their expectations and leave them feeling valued, supported and respected.”
Revenue, Cost & Profit	<ul style="list-style-type: none"> ● “In pursuing its strategic goals, the University understands that its foremost function is to act as an academic institution. To do this it must develop, maintain and deliver academic excellence in a businesslike manner,” ● To develop a holistic view of financial objectives and processes so that each one is supportive of the rest, in the pursuit of wider objectives ● “The University has evolved a set of overarching financial principles on which it can base a sustainable business model that will allow it increasingly to shape its own destiny”

The University of Bath uses the term business model in the strategic plan section, Enterprise and Innovation. This section deals with the university’s social and economic impact. Reference is made to the need for a new business model.

“develop a new business model for the university’s Research and Innovation Service to reflect the anticipated level of HEIF formula funding”

(University of Bath Corporate Plan 2005-06 to 2007-08, 2006 p 11).

The reference is specific in terms of the area of activity of the university and whilst the level of HEIF funding may increase or decrease on a formulaic basis it appears that this reference uses the term business model to reflect a different operational approach as a result of a change to the funding model. This might, in its simplest form, be a reactive approach to income distribution, a simple income allocation model. There has been a reduction/increase in income therefore our activities have to be amended to match available funds. Alternatively the scenario might be that our funding is reduced therefore we need to develop new value propositions to generate funds to replace the lost funds to enable to continue the Research and Innovation Service. Again the nature of the use of the term is unclear and could fit equally well into either scenario.

Table 4.3.12: Mapping Business Model Conceptual Framework to the University of Bath’s Corporate Plan 2007/08

Business Model Conceptual Framework	University of Bath Corporate Plan 2007/08
Internal Value Proposition to students and staff	<ul style="list-style-type: none"> • “The University of Bath is an internationally recognised research University offering high quality teaching in an innovative learning environment and attracting eminent scholars and outstanding students from a global recruitment market.” • attract and retain high quality staff through appropriate recognition, development and promotion opportunities and effective leadership
Co Producer Staff / Student	<ul style="list-style-type: none"> • develop existing research-based teaching model through greater emphasis on student-based enquiry and evidence gathering • To deliver flexible, high quality teaching and professional education that is student-centred and accessible, offering equality of opportunity to anyone with the ability to benefit
Resources & Processes	<ul style="list-style-type: none"> • “the ongoing development and enhancement of its physical estate and its specialist equipment base to increase its capacity, sustainability and quality

Business Model Conceptual Framework	University of Bath Corporate Plan 2007/08
Partners	<ul style="list-style-type: none"> • maximise the economic and social development impact of the University's knowledge and expertise for the benefit of the University and its partners locally, regionally and internationally; • develop strategic partnerships within the South West region, including the SW Regional Development Agency, local authorities (B&NES, SBC, WCC), business and industry, Health Trusts and the Lifelong Learning Network that will help foster economic growth and vibrant communities;
External Value Proposition	<p>To maximise the economic and social development impact of the University's knowledge and expertise for the benefit of the University and its partners locally, regionally and internationally</p> <ul style="list-style-type: none"> • optimize the return to the University, the region and the UK from the commercialization of intellectual property owned by the University; • grow the application of expertise and use of facilities via consultancy and Knowledge Transfer Partnerships; • enhance the acquisition of knowledge and skills by individuals, private and public sector organizations via professional and personal development programmes; • enhance the development of enterprise and an entrepreneurial culture within the University and the region
Revenue, Cost & Profit	<ul style="list-style-type: none"> • the achievement of financial security through income diversification and rigorous control of expenditure.

The University of Bath's mission statement contains a clear concise statement of a value proposition for students and staff which is essentially a high quality research and teaching environment.

The concept of staff and students as co producers is articulated through the emphasis on developing a research based teaching model using student enquiry and evidence gathering.

Resources and processes are subsumed in a series of activities necessary to achieve the plans aims. Resource requirements focus largely on staff and estate necessary to support various developments and expansion along with

the development of a high technology learning environment supporting flexible modes of study.

Partners are referred to clearly local, national and international.

External value propositions as with earlier mappings overlap with partners. Indeed there might be a case for viewing partners as a subset or type of external value proposition.

Revenue cost and profit are included in the overarching aim of financial security or sustainability to be achieved through income diversification and expenditure control.

The successful mapping of three university strategic or corporate plans to the researcher's business model conceptual framework reinforces the view gathered from interview data that whilst the term business model is used infrequently in university documentation their strategic plans can be viewed successfully through a business model conceptual framework; university decision making and planning frameworks can be described in business model terms; and if strategic plans can be viewed through a business model framework relative success does not appear to depend on the use of a business model approach.

4.4 Income Analysis

4.4.1 Introduction

As discussed in section 4.2, the income profile of a university may be an indicator of its business model in so far as it reflects where the university funds originate and thus to whom value is offered. The range of business models might be expressed in terms of the relative importance of each or combinations of these income streams.

4.4.2 Analysis of % of Income by income type by Group

Graph 4.4.1 plots the % of total income for 2006-07, represented by Grants, Fees, Research, Other and Endowment income for the universities selected for interview in ascending order of total income within each group.

Graph 4.4.1 Income Diversity by Group

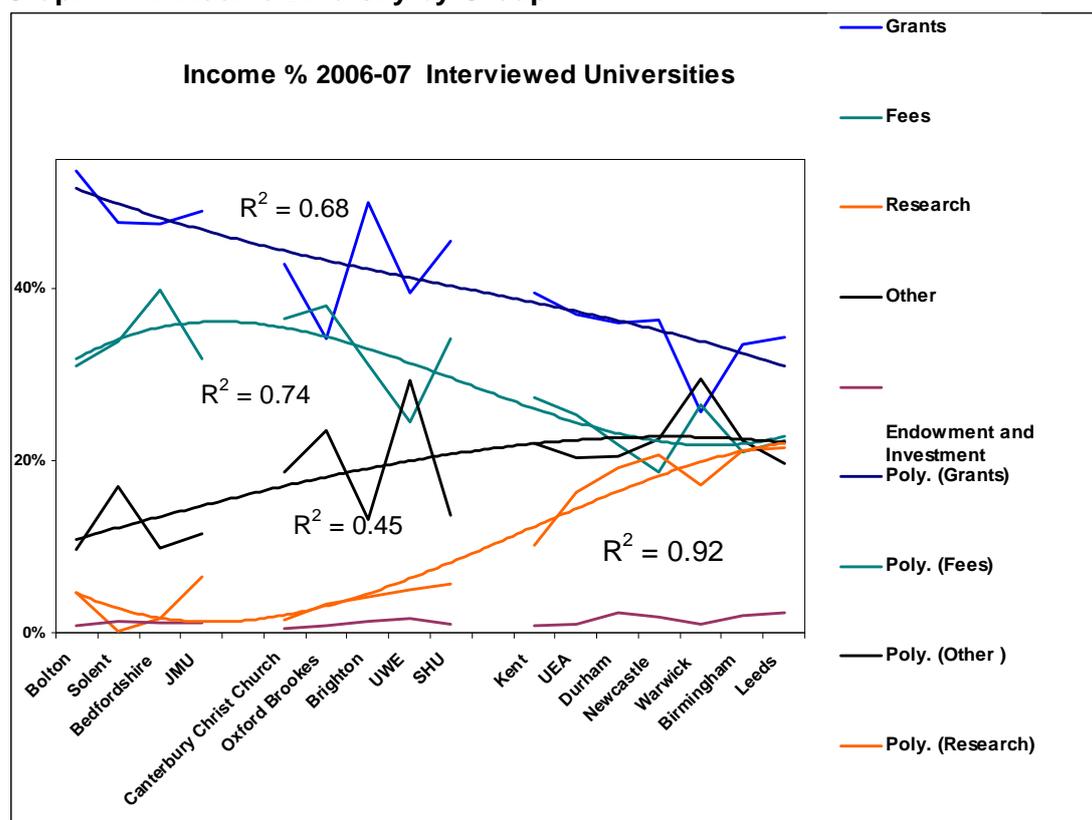


Table 4.4.2 % Income Split by Source for Universities selected for interview.

	Grants	Fees	Research	Other	Endowment and Investment
Group 3	49%	34%	4%	12%	1%
Group 2	42%	32%	4%	20%	1%
Group 1	34%	23%	19%	23%	2%

Table 4.4.3 Correlation of income split by group

	Group 3	Group 2
Group 2	0.98	
Group 1	0.80	0.85

Graph 4.4.1 shows that as the level of success measured by group increases dependence on grant and fee income diminishes and the proportion of research and other income increases. The strength of the relationships, measured by the R^2 factor, is strong for three types of income; grants, fees and research and less strong for other income. Other Income scored 0.45, but because by definition it is a mixed source, less constrained or controlled it is likely to be more variable.

Table 4.4.2 shows the average income by type as a % of total income for each group. Most notable is the significantly larger proportion of research income in group one, almost five times the proportion for groups two and three.

The correlation results in table 4.4.3 shows that the pattern of income spread between the three groups is very similar, with grants and fees more than 50% of income for all groups. However more important is the relative strength of that similarity. Groups two and three are the most similar followed by groups one and two with one and three the last similar so the most successful and least successful as measured by group position are also the least similar in income profile. With business models defined as how an organisation makes money this could suggest different business models but as discussed earlier the language used to express their business model and their decisions in terms of income growth are similar so again is the difference the actual and aspired to business model. Do groups two and three aspire to the business model achieved by group one. The similarity of objectives expressed in the answers to the interview questions and the differences in income profile suggest yes.

Thus success appears to correlate strongly with a certain income profile; namely a higher proportion of research and other income and lower proportion of grant and fee income. This income profiles might be said to reflect a business model at a point in time and the interview responses suggest that those institutions with lower proportions of research and other income aspire to higher levels. In addition the development of a postgraduate market presence is also seen as an area to grow income.

This analysis looks at income at the level of Grants, Fees, Research, Other and Endowment. Within each of these is a subset of categories, thirty in total. The researcher plotted these sub sets on the Y axis and the interviewed institutions on the X axis. In total there is a correlation such that the more successful an institution the greater is its income with an R^2 factor of 0.89. Further plots were made but with the % of the subset income of total income used rather than the simple value to offset this underlying correlation.

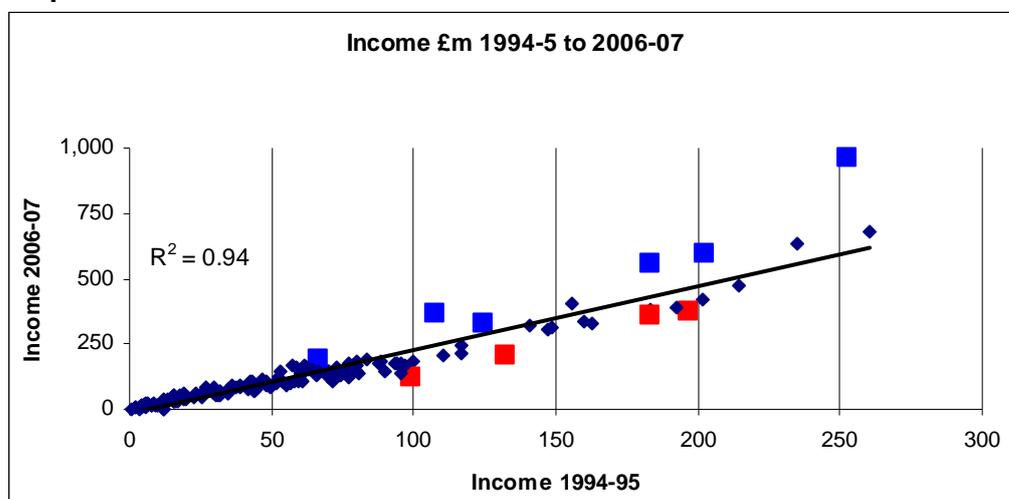
Of the sub categories fees and education contracts and Teaching grant were negative correlated to success 0.68 and 0.83 respectively. Research grant, DIUS research, UK charity research (open), Govt and health research UK and UK Commercial were all positively correlated, 0.86, 0.82, 0.75, 0.58 and 0.61 respectively. Residential and catering income as a percentage of total income at 0.06 was not correlated to success. This further analysis supports the earlier higher level income profile analysis but is helpful in highlighting the dominance across the research categories of the more successful institution. The only area of research funding with a low correlation with success as measured by group, were funds from UK charities other than those in bid for open competitive. A number of categories were too small in percentage terms to include in the analysis. One of these was Intellectual Property Rights income which surprisingly had a low correlation 0.2 when the raw values were used. The sample would need to be expanded before any conclusions could be drawn.

4.4.3 Income Growth

The question then arises if universities are pursuing essentially the same or a similar business model in terms of income growth is there any evidence of success by one institution relative to others? This success could be expressed as faster than trend income growth.

Taking income at two points 1994-95 and 2006-07 and plotting this data on a simple graph (4.4.4) we get the following result.

Graph 4.4.4



There is a high correlation, $R^2 = 0.94$ between an institution's level of income in 1994-95 and that in 2006-07 indicated by the trend line, although there appears to be more variation around the trend line above £100m.

Highlighted in blue, above trend line, are the University of York £67m to £187m, Cardiff University £108m to £367m, University of Warwick, £125m to £331m, Imperial College £183m to £556m, University college London £203 to £597m and the University of Cambridge £253m to £958m, increasing income by a factor of around three.

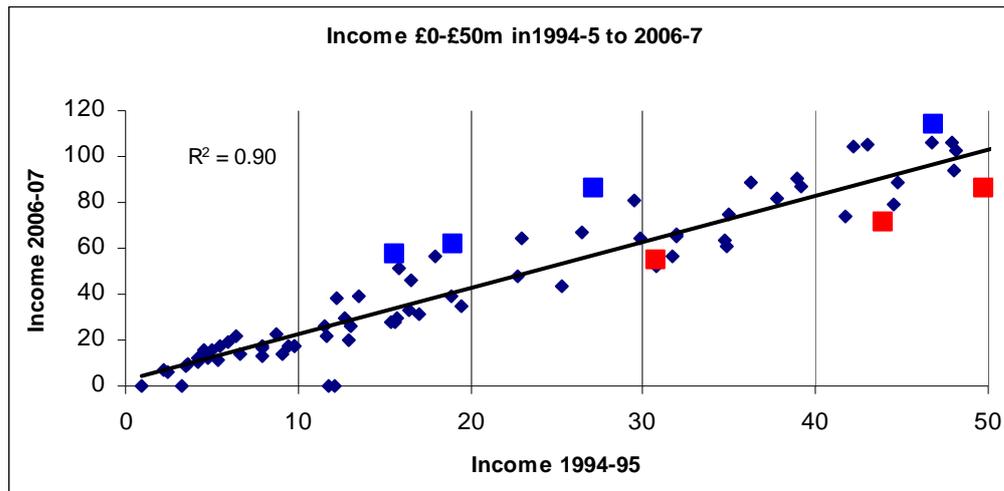
Highlighted in red, below the trend line, are De Montfort University £99m to £126m, University of Strathclyde £133m to £204m, University of Glasgow £186m to £362m and £196m to £376m Open University.

Taking the ranking from the Sunday Times 2006-08 and dividing into three groups, the six above trend universities are in the top group with an average rank of 7th. The Scottish universities may have performed less well as a result of the more favourable variable fee regime in England and the Open University did not have a Sunday Times score. DMU was ranked just below mid table at 82nd. If we assume a high league table position to reflect a successful business model it is not surprising that above trend

Thus those universities that have performed significantly above trend appear to have higher league table rankings. However, more generally, the correlation appears to suggest a relatively rigid or stratified sector which might restrict or impede the impact of differentiated business models. Thus difference in relative performance resulting from the application of different business models would not be detectable. However the researcher is inclined to believe this correlation reflects the application of essentially of similar business models aspired to or realised evidenced by the similarity of the interview responses, strategic plans and a highly regulated HE economy.

To investigate whether there are differential results hidden in the data the researcher split the sector into three income groups; income up to £50m, income between £50m and £100m and income above £100m. Repeating the plot yielded the following results.

Graph 4.4.5



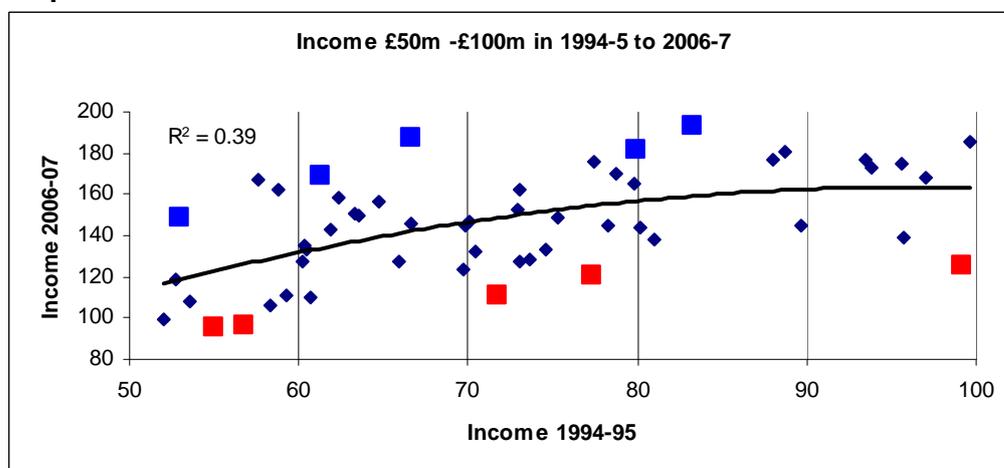
For this income group the correlation is high at 0.90 thus relative income in 1994-95 is a good predictor of relative income in 2006-07. By inspection a smaller number of institutions out performed the trend than underperformed against it.

Highlighted in blue; University of Cumbria £16m to £57m, Edge Hill University £19m to £62m, £27m to £86m London Business School and £47 to £114 University of Glamorgan.

Highlighted in red; Roehampton University £31m £55m, University of Lincoln £44m to £72m and Aberystwyth University £50m to £86m.

The average Sunday Times 2006-08 rank for those institutions noted above trend was 84th, for those noted below trend was 91st suggesting no significant relationship for this group.

Graph 4.4.6



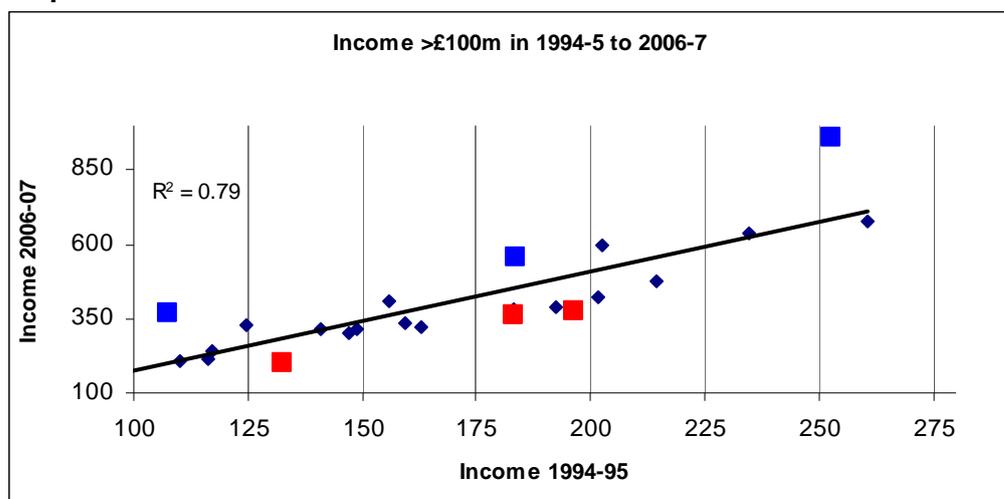
The middle income group was most volatile or inconsistent with an R^2 factor of only 0.39. (4.4.6)

Highlighted in blue; City University £53m to £148m, London School of Economics £61m to £169m, University of York £67m to £187m, University of Surrey £80m to £182m and Durham University £83m to 194m.

Highlighted in red; Staffordshire University £58m to £95m, University of Sunderland £57m to £96m, University of London £73m to £111m, London South Bank University £77m to 120m, and £99m to £120m De Montfort University.

This volatility could be the result of the application of different businesses models although the interview data does not support this. Those institutions in this income group performing above trend had an average Sunday Times league table score of 38th. Those scoring below trend excluding the University of London, for which no rank was recorded, had an average Sunday Times League Table score of 84th. Thus the more successful institutions in income growth terms were also the more successful when viewed through the Sunday Times League table. Whilst there was no indication in the interview sample of different business models in this group the application of similar income objectives such as increased diversity and less dependence on government sources appears to have been more successfully executed by some universities than others.

Graph 4.4.7



The top income group had an R^2 measure of 0.79, indicating a strong correlation between income in 1994-95 and 2006-07.

Highlighted in blue; Cardiff University £108m to £367m, Imperial College £183m £556m and the University of Cambridge £253m to £958m.

Highlighted in red; the University of Strathclyde £133m to £204m, Open University £196m to £376m, University of Glasgow £183m to £362m.

These institutions are largely covered in the earlier section on total income.

Across the sector the rankings by income appear to be relatively consistent so that an institution's position in income terms in 1994-95 is a good indicator of its position in 2006-07. Thus if there were different business models being applied then their impact is not readily detectable at the sector level. However this does not preclude instances of individual success but suggests growth relatively evenly distributed

The middle income group, £50m to £100m, show a less stable relationship or more volatility although even here institutions that performed above trend seemed to have better league table positions suggesting some consistency other than income growth

Summarising the results in table 4.4.8 below, the institutions in the above trend columns with the exclusion of those with less than £50m income could be characterised as having a high reputational standing. Thus above trend income growth seems linked to league table position and an income base greater than £50m in 1994-5 although the analysis would need to be extended rather than rely on a small sample. It might be indicative that even those with high income growth but coming from a low base, Cumbria, Edge Hill are not high performers in terms of league tables.

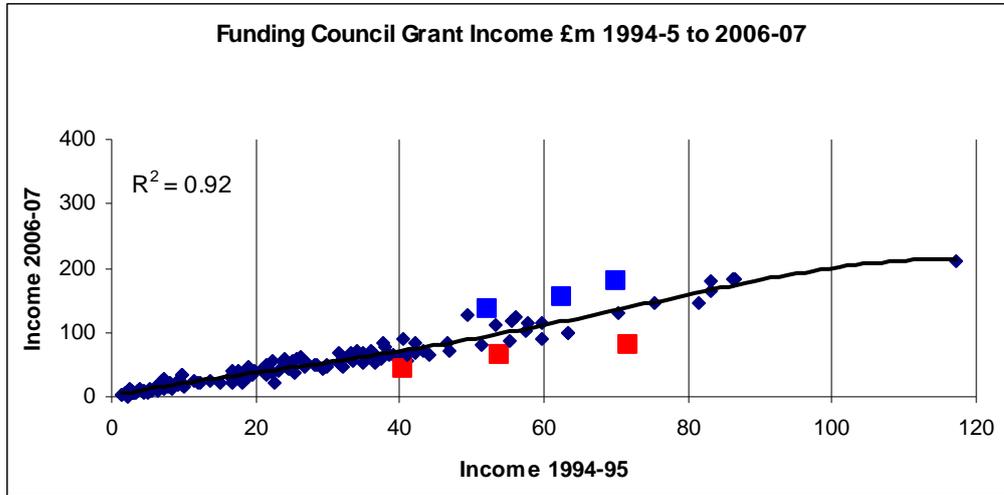
Table 4.4.8 Summary of Selected above and below trend line institutions

Total Income		Income £0m to £50m		Income £50m to £100m		Income >£100m	
Above Trend	Below Trend	Above Trend	Below Trend	Above Trend	Below Trend	Above Trend	Below Trend
York	DMU	Cumbria	Roehampton	City	Staffordshire	Cardiff	Strathclyde
Cardiff	Strathclyde	Edge Hill	Lincoln	LSE	Sunderland	Imperial	OU
Warwick	Glasgow	LBS	Aberystwyth	York	Uni of London	Cambridge	Glasgow
Imperial	OU	Glamorgan		Surrey	South Bank		
UCL				Durham	DMU		
Cambridge							

If business models are how institutions make money then after investigating the changes in income between the two years by total income the other main

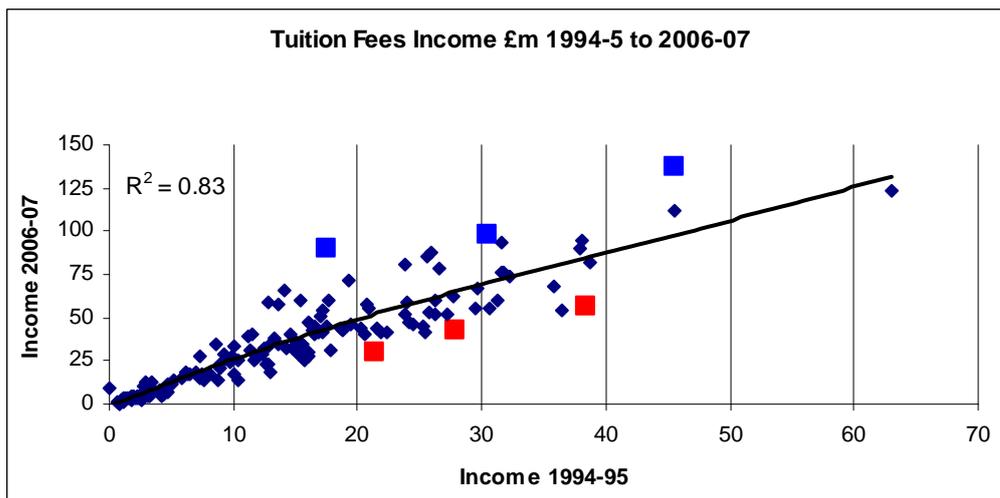
area for analysis is by income type to investigate whether income streams have changed and do they shed any light onto institutional business models.

Graph 4.4.9



The changes in funding council grant show a high correlation at $R^2=0.92$
 Highlighted in blue Kings College £52m to £138m, Imperial College £63m to £155m, University College London £70m to £179m
 Highlighted in red London South Bank University £41m to £45m, DMU £54m to £64m and London MU £63 £155

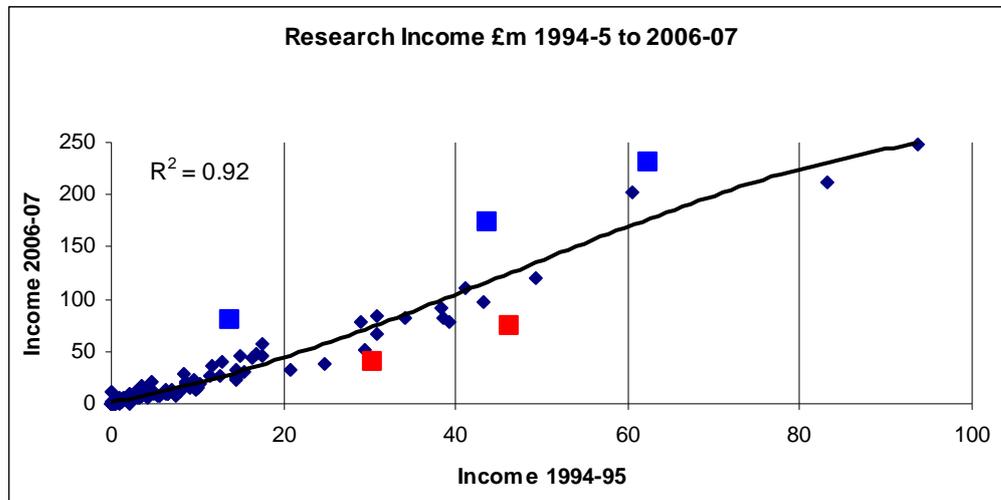
Graph 4.4.10



Again there is a high correlation between income levels. $R^2 = 0.83$
 Highlighted in blue City University £18m to £90m, University College London £30m to 398m and Manchester University £46m to £138m

Highlighted in red Ulster £21m to 330m, De Montfort University £28m to £43m and London Metropolitan University £38m to 57m

Graph 4.4.11

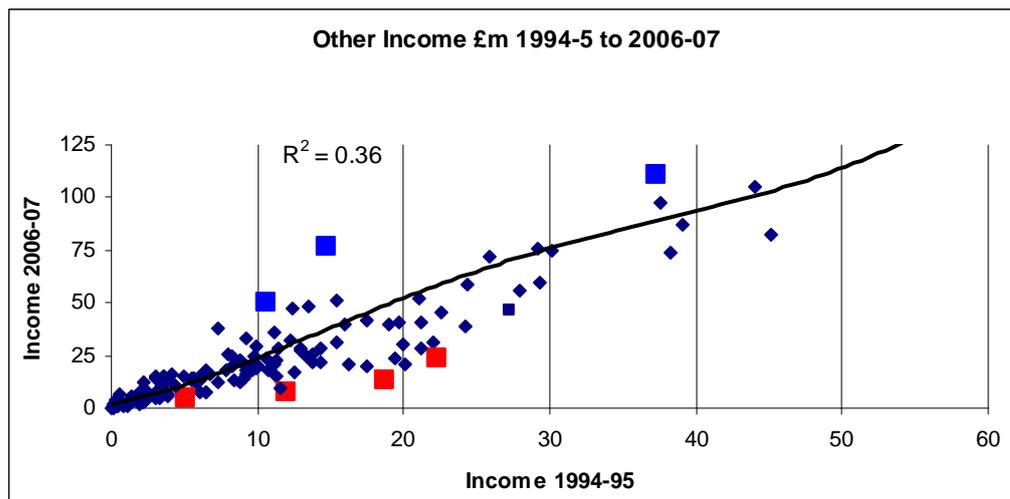


Again a high correlation result at 0.92.

Highlighted in blue Cardiff University £14m to £80m, Manchester University £44m to £174m and Imperial College £62m to £230m

Highlighted in red are Southampton University £46m to £74m and Cranfield £30m to £41m. It should be noted that the information included for Southampton University was for 1995-96 as 1994-95 was not available.

Graph 4.4.12



Other Income has a low correlation between the two points in time which as noted above is unsurprising given its mixed nature.

Highlighted in blue are University of the West of England £11m to £50m, Cardiff University £15m to £77m and University College England £37m to £111m. Note Cambridge University growth was outside the limit of the Y axis. Highlighted in red Roehampton £5m to £5m, De Montfort University £12m to £8m, Scottish Agricultural College £19m to £13m and University of Aberdeen £22m to £24m

Summarising the above and below performance in table 4.4.13, it is noticeable that of a possible twelve above trend results four institutions had two or more places and in total represented nine places or 75%. Of the eleven below trend results only two institutions had more than one place with De Montfort occupying three below trend positions. Those institutions performing above trend appear to do so in more than one category suggesting they are doing or have done something or things consistently well. For the sector as a whole performance in terms of income growth is however relatively uniform. Thus as a whole the relative performance of institutions remains stable in terms of relative income generation suggesting little differential effect of business models adopted or the adoption of similar business models. As commented earlier the similarity in the interview language and strategic plans combined with the regulated nature of the sector still largely dependant on government funding suggests that institutions applying similar business models.

Table 4.4.13 Summary of Graph Analysis

Funding Council Grant		Tuition Fees		Research		Other	
Above Trend	Below Trend	Above Trend	Below Trend	Above Trend	Below Trend	Above Trend	Below Trend
Kings	South Bank	City	Ulster	Cardiff	Southampton	Cardiff	Roehampton
Imperial	DMU	UCL	DMU	Manchester Uni	Cranfield	UCL	DMU
UCL	London MU	Manchester Uni	London MU	Imperial		Cambridge	SAC Aberdeen

4.4.4 Interviewed Institutions

Analysing income growth for the institutions selected for interview reveals a similar pattern noted in table.4.14 below, Overall group one marginally outperformed the average growth with 224% against an average of 217%. Group two performed at the average and group three below supporting the level of success criteria underlying the group selection. However the

differences are small as noted in the Descriptive Statistics table 4.4.15 below with the mean and median a similar figure and the standard error is low.

Table 4.4.14 Selected Institutions Income Movement 1994-95 to 2006-07

Institution	Total Income £M	Total 1994-95	Total 06-07	Funding Councils	Tuition Fees	Research	Other	Endow Inv	Total
Group 1 Total	866	1,942	100%	157%	136%	131%	74%	224%	
Group 2 Total	323	698	86%	125%	214%	198%	12%	217%	
Group 3 Total	185	343	76%	88%	287%	86%	115%	185%	
Sector Total	1,373	2,983	92%	135%	143%	139%	61%	217%	

4.4.15 Descriptive Statistics Total % Income Movement for Interviewed Institutions by group and total

Measure	Total	Group 1	Group 2	Group 3
Mean	2.17	2.29	2.25	1.86
Standard Error	0.08	0.09	0.14	0.10
Median	2.16	2.25	2.23	1.78
Standard Deviation	0.30	0.25	0.31	0.20
Sample Variance	0.09	0.06	0.09	0.04
Kurtosis	-	0.39	1.32	2.39
Skewness	0.38	0.60	1.02	1.90
Range	1.01	0.63	0.85	0.42
Minimum	1.73	2.02	1.90	1.73
Maximum	2.75	2.65	2.75	2.15
Confidence Level(95.0%)	0.16	0.23	0.38	0.31

Calculating the 95% confidence interval for each group using 2 times the standard error, gives the following results

Group one 2.11 to 2.48

Group two 1.97 to 2.53

Group three 1.66 to 2.06

The results overlap for groups one and two, and two and three suggesting that we cannot be confident that the population means of these groups are different. The results for groups 1 and 3 do not overlap suggesting that there is a difference in these populations. However the results point to similarity rather than difference or distinctiveness.

Analysing the results by income type shows

- group one performs above the average for all income types except research. This group starts from a higher absolute research base and we might expect a lower % growth than average. In addition the aim of groups one and two to increase their proportion of research income seems to have been partially successful.
- group two performing below average for all income types except research and other.
- group three performing below average for all income types except endowment and investment income.

Whilst some differentiation by group is visible in terms of income growth % the results are not consistent across income type and institutions and relative positions remain largely unchanged. However the income growth aims, reflecting the business model articulated by the interviewed institutions around income growth in research, international, postgraduate seems successful for research income for groups two and three and other income for group two. Tuition fees have grown under the impact of variable fees which mask any other changes in this data set. The similarity of aims and outcomes derived from the analysis of interviews, strategic plan and income data supported by the similarity in income growth patterns suggest that there is a common business model in terms of income aims with institutions at different points in the development and implementation of this essentially similar model.

4.4.5 University Income and Surplus 1994-95 to 2003-04

Table 4.4.16 brings together university surpluses over time, 1994-95 to 2003-04. For each year institutions were listed indicating income, expenses and surplus or deficit. From these lists a table showing each institution's rank by surplus for each year was created with the years rolled out as columns. The average place by surplus for the years in which the institutions were in the top twenty five was calculated. This result divided by the number of years the institution appeared in the list to give some weight to those years that an institution did not appear in the list. A more satisfactory approach might be to complete the table so that the results for all years for all institutions appearing

at least once in the top twenty five were included but the researcher recognises and accepts the approximation.

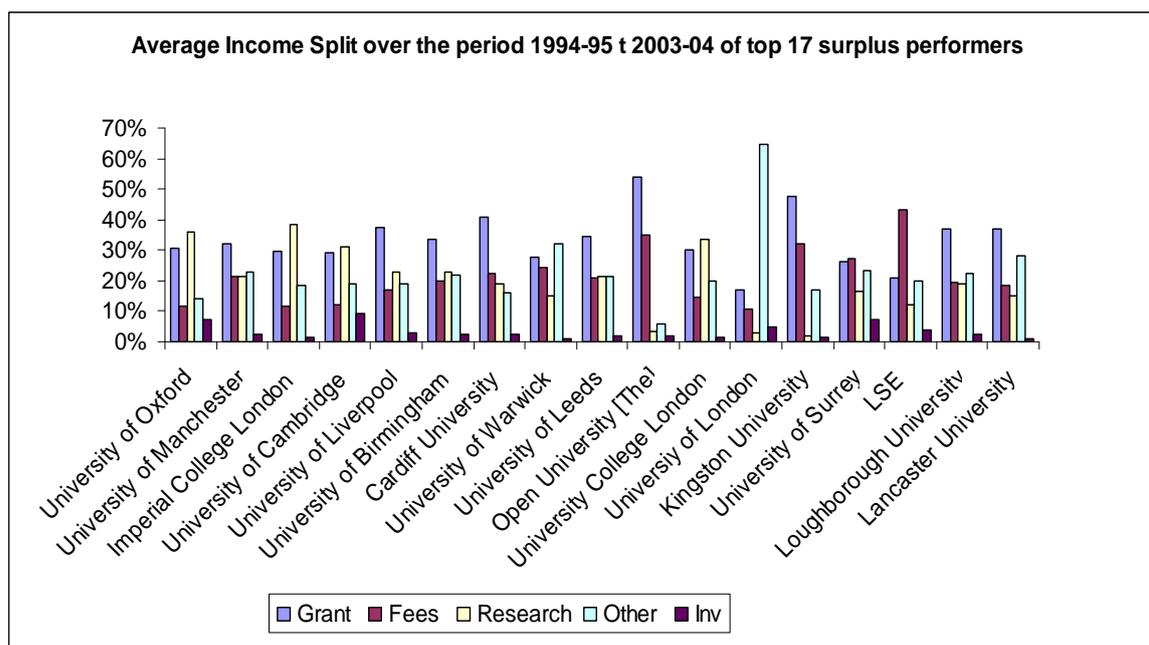
Only three universities appeared in the top twenty five each year and thus the list of those institutions appearing in such a list is significantly more than twenty five. To shorten the list of institutions to review the researcher took a, somewhat arbitrary, cut-off point where of average place / number of occurrences in the table was 2. Thus an institution with a place in all 10 years would have to be placed 20th or above to be included. An institution with only 5 entries in the top twenty five would need to have achieved an average of 10th place. This method whilst crude does make it less likely that an institution will be included in the list the more times it was placed outside the top twenty five. The range of results for this table is 0.2 for Oxford University to 25 for Canterbury Christchurch. Using this method the researcher was left with seventeen institutions which might warrant a closer inspection.

Table 4.4.16: Institutions Ranked in Top 25 by Surplus, by Year, in Ascending Order by Average Position in the Top 25 / Number of Years in the Top 25 <=2

Position in top 25 by Surplus	2003/4	2002/3	2001/2	2000/1	1999/0	1998/9	1997/8	1996/7	1995/6	1994/5	Count	Average	Avg / Count
University of Oxford		3	1	1	1	1	2	2	2	2	9	1.7	0.2
University of Manchester	2	1	5	2	4	4	1	4		15	9	4.2	0.5
Imperial College London			2		3	6	5	6	3	3	7	4.0	0.6
University of Cambridge			13		2	8	8	1	1	1	7	4.9	0.7
University of Liverpool	5	2	3	3	8	7	7	15		9	9	6.6	0.7
University of Birmingham	1	4				2	4	8	15	7	7	5.9	0.8
Cardiff University	19	6	17	4	11	22	9	10	14	10	10	12.2	1.2
University of Warwick	24	16	7	6	7	13	13	14	9	14	10	12.3	1.2
University of Leeds	8	8	6	16			12	16		13	7	11.3	1.6
Open University	25				6	3	3			4	5	8.2	1.6
University College London	22					5	6	3	4	21	6	10.2	1.7
University of London				13	5	10	16	18	8	17	7	12.4	1.8
Kingston University					13	12	11	17	6	6	6	10.8	1.8
University of Surrey		11	15				20	7	7	8	6	11.3	1.9
London School of Economics	6	5			18	19	15	5		25	7	13.3	1.9
Loughborough University	7	17	25	7					11	5	6	12.0	2.0
Lancaster University	16	10	9	8	14	16					6	12.2	2.0

Having identified 17 institutions the researcher looked for common factors that might assist in explaining why these particular institutions were in this group and will use these institutions to compare to lists created from other success criteria.

Graph 4.4.17



Graph 4.4.17 above shows the average income split by type as a percentage of the institutions' total income for the top seventeen surplus performers for the period 1994/5 to 2003/4 but in isolation does not reveal very much. To better analyse the difference in income profile table 4.4.18 below shows the difference in proportion of income from the average profile of all institutions in the data.

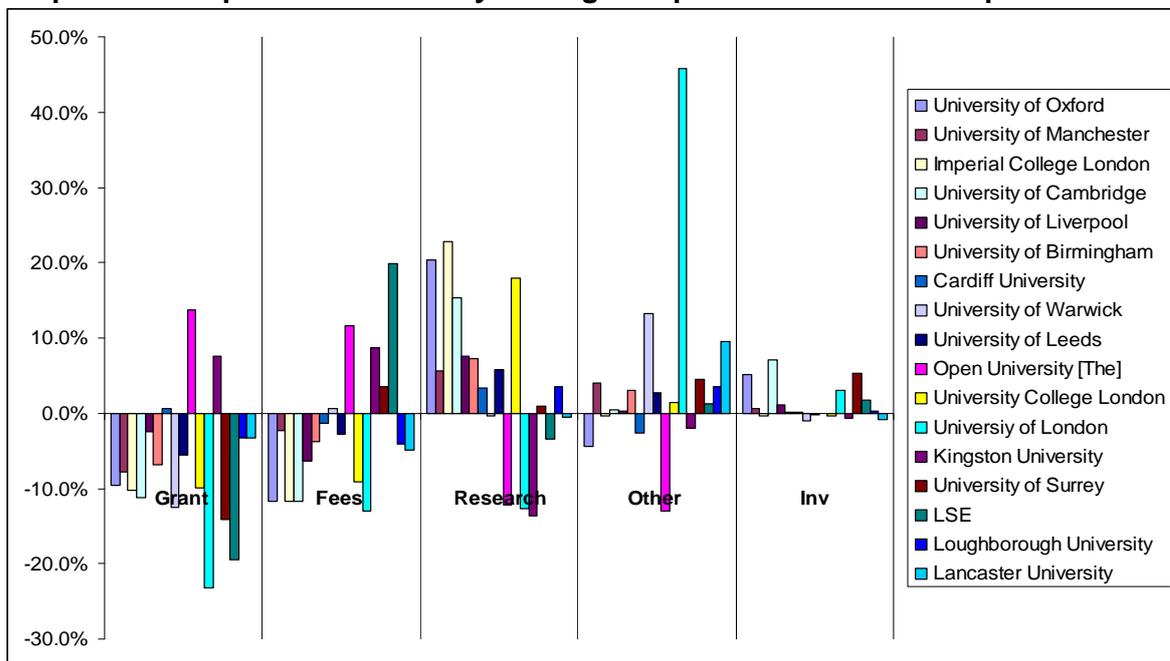
Table 4.4.18: Difference in the Average Income Profile over the period for the Institutions ranked in Top 25 by Surplus, by Year, Ranked in Ascending Order by Average Position in the Top 25 / Number of Years <=2

	Grant	Fees	Research	Other	Inv
University of Oxford	-9.5%	-11.7%	20.4%	-4.4%	5.2%
University of Manchester	-7.9%	-2.4%	5.7%	4.0%	0.6%
Imperial College London	-10.3%	-11.7%	22.7%	-0.3%	-0.4%
University of Cambridge	-11.2%	-11.6%	15.3%	0.4%	7.1%
University of Liverpool	-2.5%	-6.4%	7.5%	0.2%	1.1%
University of Birmingham	-6.8%	-3.7%	7.2%	3.1%	0.2%
Cardiff University	0.6%	-1.3%	3.3%	-2.7%	0.2%
University of Warwick	-12.4%	0.7%	-0.4%	13.2%	-1.1%
University of Leeds	-5.6%	-2.8%	5.9%	2.7%	-0.2%
Open University [The]	13.6%	11.7%	-12.2%	-13.1%	0.0%
University College London	-9.9%	-9.0%	18.0%	1.4%	-0.4%
University of London	-23.2%	-13.0%	-12.6%	45.8%	3.0%
Kingston University	7.5%	8.7%	-13.6%	-2.0%	-0.7%
University of Surrey	-14.1%	3.5%	0.9%	4.4%	5.3%
LSE	-19.4%	19.9%	-3.5%	1.3%	1.8%
Loughborough University	-3.3%	-4.0%	3.5%	3.5%	0.3%
Lancaster University	-3.4%	-4.8%	-0.5%	9.5%	-0.9%

	Grant	Fees	Research	Other	Inv
University of Southampton	-6.7%	-3.9%	12.1%	-0.4%	-1.1%
Cranfield University	-23.1%	17.1%	14.8%	-7.5%	-1.2%
Queen's University Belfast	5.0%	-4.9%	0.6%	-0.4%	-0.4%
Brunel University	4.1%	2.5%	-5.3%	-0.6%	-0.7%
Napier University	10.3%	-3.7%	-11.0%	5.4%	-1.2%
University of Strathclyde	4.0%	2.4%	-2.0%	-3.6%	-0.8%
University of Wolverhampton	9.2%	4.1%	-13.7%	0.1%	0.3%
University Bristol	-2.9%	-7.2%	10.0%	0.7%	-0.5%
All universities	0.0%	0.0%	0.0%	0.0%	0.0%

Plotting the top 17 institutions results in graph 4.4.19.

Graph 4.4.19 Top 17 Institutions by Average Surplus/Occurrence in Top 17



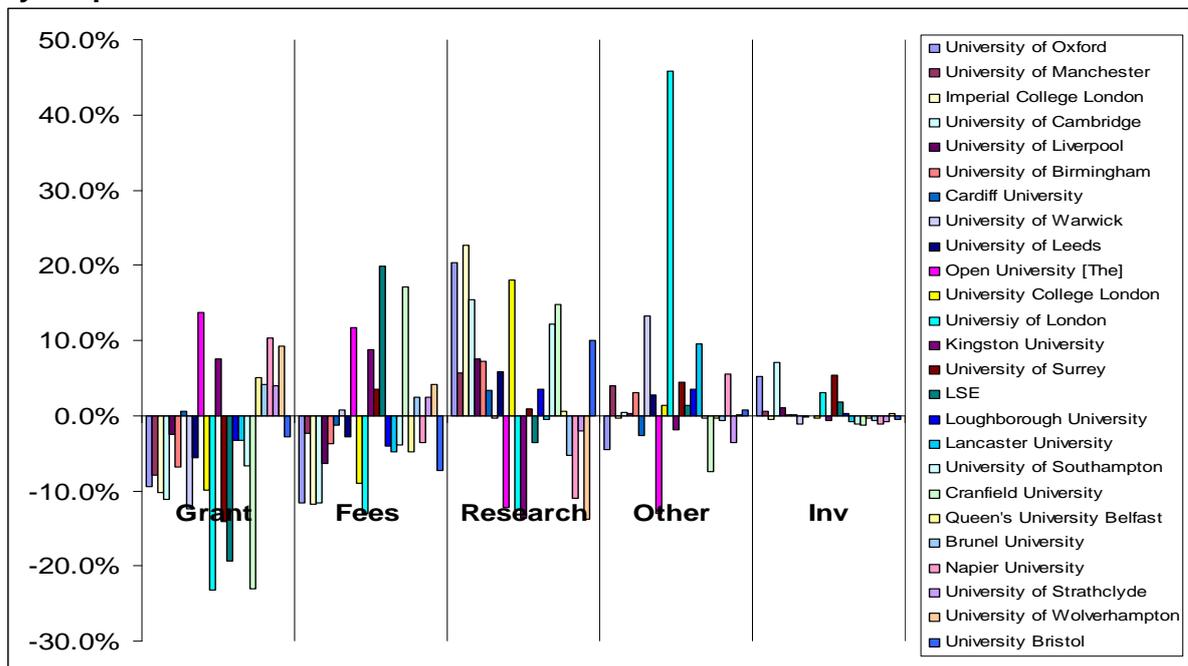
The graph shows that those universities with a better record of surpluses have a lower than average proportion of income in the form of grants and fees, a higher than average proportion of income in research, other and to a lesser extent investment income. The exceptions are the Open University, Kingston University and Cardiff University for Grant Income. For Fees the Open University, Kingston University, University of Surrey, London School of Economics and Warwick. Cardiff and Warwick are only marginally different from the average %.

What are the implications for business models in higher education? If we use the term business model loosely as a description of how income is earned then a business model which generates research, other and investment

income appears to be more successful in generating surpluses than one which focuses on grant and fees. .(There is however a caveat to this analysis in that the data has only been collected to 2003/4 and thus does not reflect the increase in variable tuition fees brought about for 2006/7. The increase in fees offset to a degree by the requirement for a proportion, around 30%, of the increase in tuition fees to be returned to the students in the form of bursaries whilst potentially creating a source of surplus would not necessarily impact on the relativity of the results; a case perhaps of a rising tide lifting all boats equally?). This pattern is repeated when we look at the analysis of income generation for the interviewed universities

Having investigated a group of 17 would an expansion of the data set give a different result? Having used the arbitrary notion of a top 25 earlier in this piece of research this group was expanded to include the top 25 institutions by surplus generation and the pattern was largely repeated

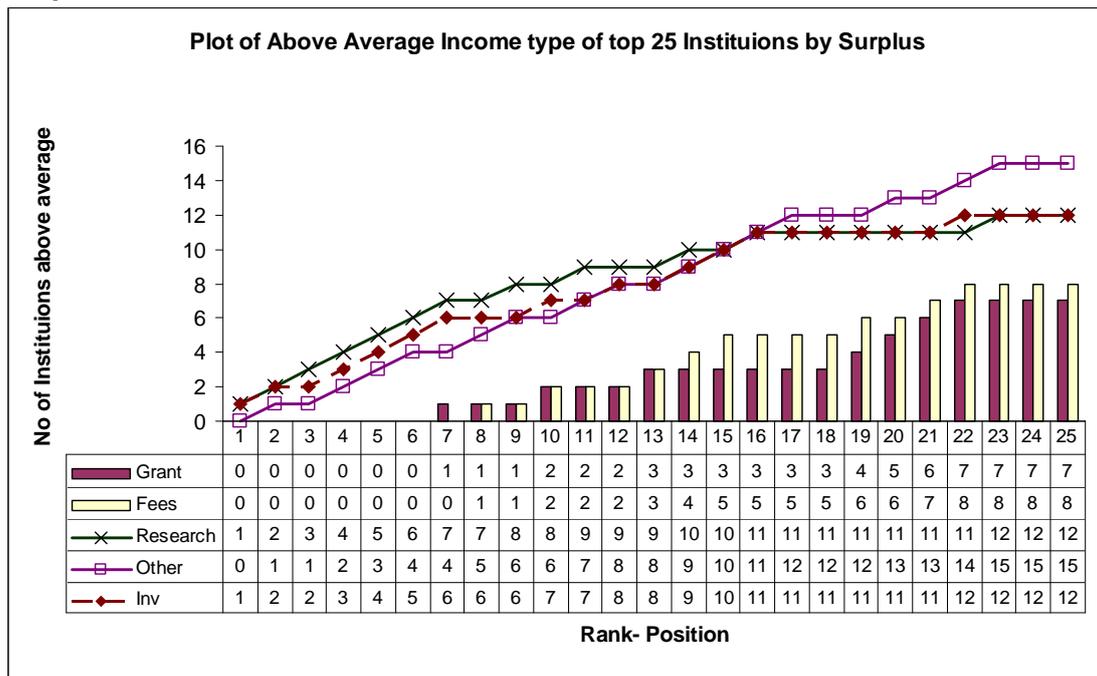
Graph.4.20 Difference of Income split from Average of the Top 25 performers by Surplus



There are some notable exceptions with Cranfield, a wholly postgraduate institution, showing a 23 % below average proportion of grant income and a 17% and 15% above average proportion of fee and research income.

Converting the results to 0s and 1s representing below and above % of income in the five categories and plotting a cumulative score summed in order of the institutional position, determined by its placing by surplus, over the review period creates graph 4.4.20. Here we see grant and fees starting at position 7 and 8 indicating that the highest ranked institutions only begin to have above average grant and fees relatively late in the ranking. Conversely the importance of Research and Other Income begins from the start of the ranking but reduces in importance shown by the decreasing gradient of the plots. This shows visually as we move along the x axis, down the scale of, “success”, grant and fees become proportionately more significant where as for research and other income we can see an earlier start and a flatter profile as we move along the x axis. Thus it seems that the most successful business model has a higher proportion of research and other income than average.

Graph 4.4.21



If surplus has only a weak relation to total income but a stronger one when income is broken down by type, are there other factors that might show a relation to surplus generation and hence some indication as to successful business models?

4.4.6 Surplus by Value and Surplus by % to Income as an indicator of success to be measured against League table and Strategic Plan Data.

The researcher summed for each institution available, over 140 per year, the income and surpluses for the years 1994/95 to 2003/04 and ranked the results by surplus value and surplus % against income. These rankings could then be compared to the rankings created for League Table and Strategic Plan results in section 4.8. Interestingly the correlation between the rankings of the two surplus sorts was 0.85 and between the value of surplus and % of income was 0.60. Thus value of surplus and resulting % of income tend to move in the same direction as do the rankings based on these results.

4.5 Business Models on the Web

The researcher investigated the occurrence of references to business model(s) and higher education on the web reflecting the frequency of references to business models on the web noted by the researcher in addition to references by Rappa, (2007) and Jensen et al (2007) to business models, the web and internet.

The hit rate on 11th May 2008 on Google for the exact phrase, “business model” was 11.7 million, on 29th July 2009 18.0 million and on 18th August 2009 19.7 million. Combining business model and higher education reduced this rate to 119,000, May 11th 2008, 182,000 29th July 2009 and 166,000 on 18th August 2009 using the exact phrases in separate inverted commas. Both searches show growth over the period May 2008 to August 2009.

As well as searching the web, using traditional search engines, You Tube a video website, was also used to access the images rather than text based sections of the web, given the visual nature of the medium a different perspective on the discussions about business models might be surfaced. The search on You Tube had a much lower hit rate with a maximum of around 1,200 hits.

No hits were found for business models in higher education, suggesting that You Tube is not yet attracting discussion in that area. The search results came up with wide variety of the use of the words business and model not all of them relevant to this research. However, one humorous hit can be used to illustrate a serious point, that of the lack of clarity surrounding the term

business model. This hit was listed fifth by relevance and comes in the unlikely form of a South Park storyline.

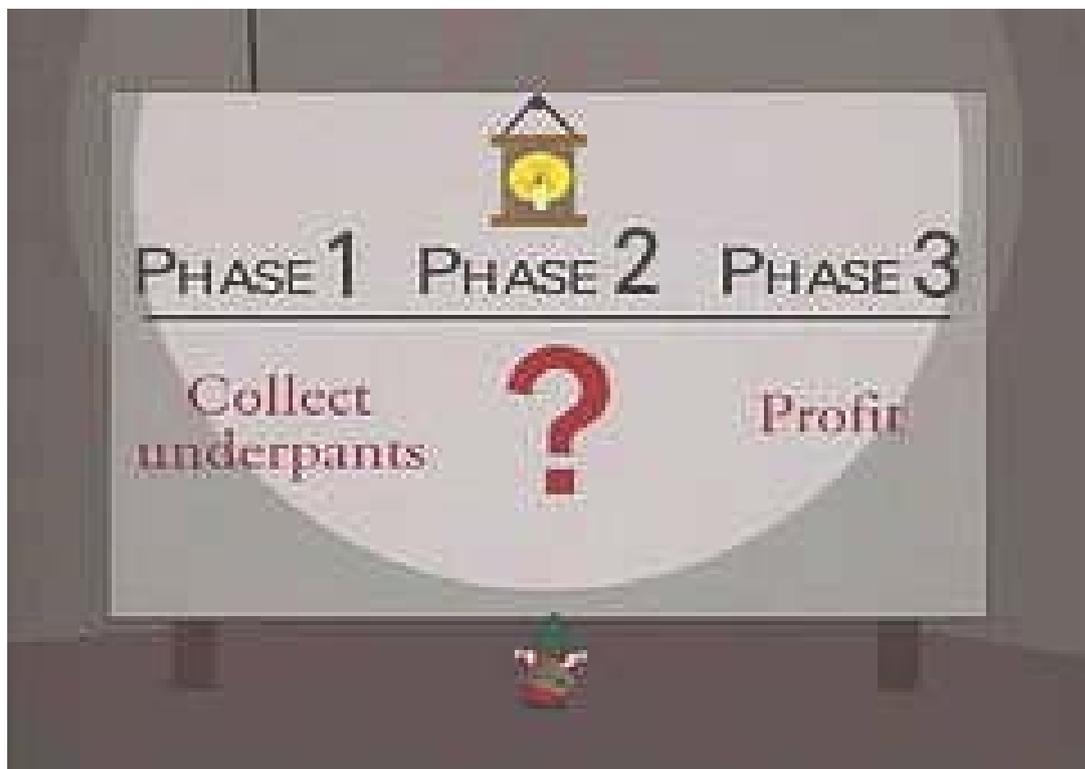
The video tag describes the video as

“The underpants gnomes explain their business model”

(South Park, 2009).

The South Park Gnomes’ business model has three phases. Phase 1 is collect underpants and Phase 3 is profit. The humour revolves around the implied existence of a Phase 2, and the gnomes not knowing what it is. This is expressed in the narrative in terms of discussions between the gnomes and in a chart, reproduced below, that they use to “explain” or rather not explain their model.

Figure 4.5.1: South Park Gnomes’ Business Model



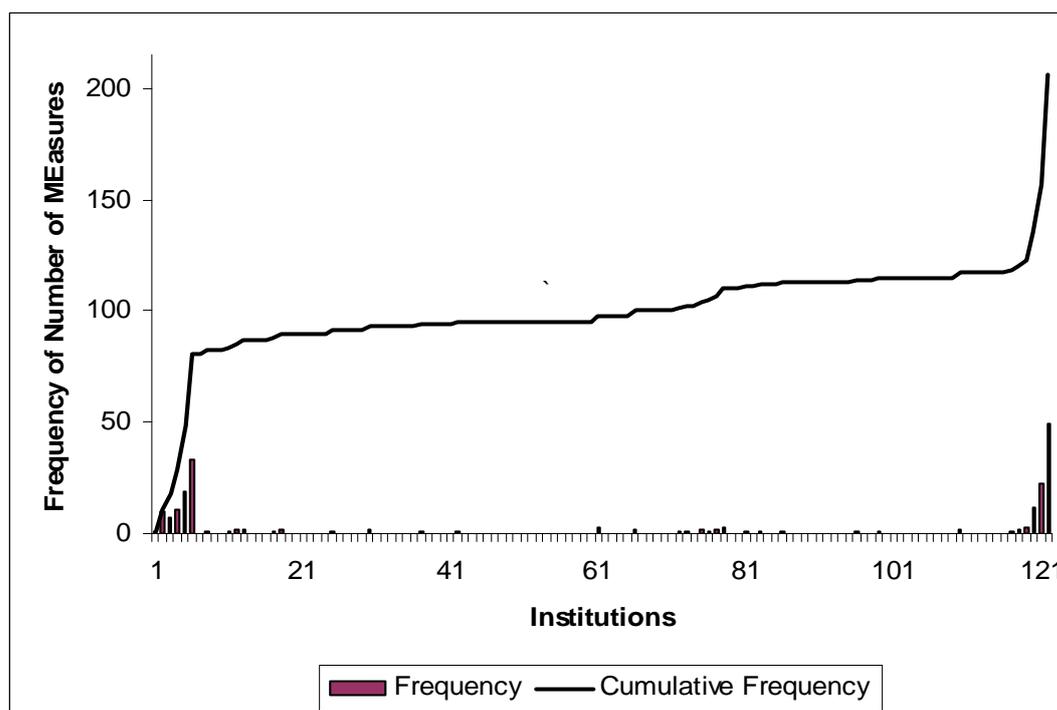
Phase 2 or the not knowing, , indicated by the question mark “?”, illustrates the way in which the use of the term business model can be a way of inferring a logic or framework without necessarily having defined it, an example of the business model as a rhetorical device.

It is the wide, loose and perhaps misuse of the term business model that makes it a credible point of humour in a cartoon.

4.6 League Table Performance 1994 - 2006

The occurrence of all performance measure indicators for an institution was noted and the frequency of each result was plotted in graph 4.6.1 below.

Graph 4.6.1 Spread of Performance Measure Elements Individual Institutions and Cumulative



Graph 4.6.1 shows a population of 206 institutions and a maximum score of 121 occurrences of performance measures for any institution and a cumulative score. 49 (24%) institutions scored the maximum. At the other end of the scale 80 (39%) institutions scored 5 or less with a cluster of 33 institutions with a score of 5. Table 4.6.2 below shows the quartile splits.

Table 4.6.2 Quartile distribution

Quartile	Range	Frequency	Cum Frequency
1	0-30	93 (45%)	93 (45%)
2	31-60	5 (2.5%)	98 (47.5%)
3	61-90	15 (7.5%)	113 (55%)
4	91-121	93 (45%)	206 (100%)

The data shows 90% of the institutions evenly split between the upper and lower quartiles. Whilst this piece of research focuses on the higher scoring

institutions it is possible that the lower scoring institutions exhibit some correlation with other measures of success but this has not been tested. The data set was aggregated by institution, year and performance measure. Using the nineteen performance measures the average rank achieved by each institution over the period 1996-2006 for each performance measure was calculated and sorted in ascending order by the average rank they achieved by performance measure.

The top twenty five institutions were selected for each performance measure and combined in a simple table. The number of performance measures used in the data gathering section and initial ranking was as noted above nineteen and these are shown in Table 4.6.3 Performance Measures. Of these only 10 were used to rank the final selection. Those not used had largely limited representation across the time period. On reflection the decision not to use the earlier measures of Library and Computer spend in conjunction with the later combined measure seems arbitrary. The decision not to use % Academic staff on Permanent Contracts and Main Function Teaching was based on the assumption that the influence of these measures would be reflected in the scores from teaching quality.

A more simple approach might have been to take a number of league tables over a period of time aggregate the by league table and perform the correlation calculations separately for each league table.

Table 4.6.3: Performance Measures

	Performance Measure		Years in which measure used
1	Entry Score	Used	1996-2006
2	Facilities Spend	Used	1998-2006
3	Library & Computing Spend	Used	2000-2006
4	Student Staff Ratio	Used	1996-2006
5	RAE Score	Used	1997-2006
6	% 1 st class and 2:1 degrees	Used	1996-2006
7	Teaching Quality (NSS 2006)	Used	1996-2006
8	Completion	Used	2000-2001, 2003-2006
9	Graduate Destination	Used	1996-2001, 2003-2006
10	Research Grant/Contract Income	Used	2000-2006
11	% Students Accommodation provided by the University	Not Used	1996 - 1997
12	Library Spend	Not Used	1996-1999
13	Computing Spend	Not Used	1998- 1999
14	% of Academic Staff on Permanent Contracts	Not Used	2001-2006
15	% Academics with Main Function Teaching	Not Used	2000- 2006
16	% non UK and non EU students	Not Used	1996
17	% Proportion successfully completing degrees	Not Used	1996
18	% unemployed after 6 months	Not Used	1996
19	% going on to research and further study	Not Used	1996

For each of the ten selected performance measures the top twenty five institutions were brought into a single table. Clearly as not all the institutions for each performance measure were the same the list was greater than twenty five institutions long. In fact the total was ninety one giving some indication of the spread of results.

There are a number of ways of selecting the top twenty five institutions from this list of ninety one. Perhaps the simplest was to rank the institutions by their average rank but the frequency with which the institution is represented in the total data set and the top 25 data set needed to be taken into account to avoid situations where one good result might skew the result. The method used to weight the results to allow for institutions with only a few but good results was to take, the total count of occurrences in the total data set multiplied by the count of occurrences for the measures used to select the top 25 divided by the average rank of the institution within the top 25. This is shown in table

4.6.5 below. However this still meant that some institutions with one good result i.e. in the top 25 for a particular category appeared in the overall top 25.

To check the robustness of the ranking the researcher took the data for all the institutions with a ranking of 1 -25 in a selected category and input all the results for those institutions for those selected categories irrespective of whether the result was in the top 25. At the same time the researcher expanded the categories to include the previously separately recorded Library and Computer spend (As was previously noted the researcher felt it was incorrect to exclude them). The results are shown in table 4.6.6 below. Within the two tables there were some changes in the relative positions of institutions and four in table 4.6.5 did not appear in table 4.6.6. These institutions are shown in table 4.6.4 below.

Table 4.6.4: Movement of Institutions created by alternative ranking methods

Institutions	Position Table 4.6.5	Position Table 4.6.6
Robert Gordon	17	51
Harper Adams	18	53
Essex	24	35
Surrey	25	26
Southampton	27	17
Leicester	41	21
Leeds	31	22
Royal Holloway	33	24

The relatively small number of changes suggests that the selection processes are sufficiently robust and that the rankings can be used in conjunction with the results from the reviews of institutions' surplus and strategic plan word analysis. Having created listings for the full league table data set the researcher had the option of using this as well or instead of the top 25 data set.

4.7 University Rankings by Strategic Plan Word Count, League Table, Surplus value and Surplus as a % of Income

4.7.1 Ranking Summary

The research process has now produced rankings of institutions by three measures.

- Specific occurrence or no occurrence of selected word and phrases from eighty nine university strategic plans and corporate planning statements
- A measure of surplus performance over the period 1994/5 to 2003/4 by both surplus amount or value and % of Income
- Average position over the period 1996 To 2006 determined by major reported criteria in the THES

The researcher attempted to create a table combining the ranking of these three indicators but found that the difference in the number of institutions in each data set created gaps that, at best, could only be partially overcome by weighting the measures in the data. Thus how do you rank university A with two high ranking positions but no Strategic Plan data with University B CL with three data points?

After many attempts manipulation the data the researcher felt that although a neat and thus satisfying tying up of the data sets would be ideal in fact such a combination wasn't necessary for the completion of the analysis. The relation between the data could be measured by using correlation between pairs of the three data sets. Thus the question became, "Is there a correlation between any of the ranked data sets. The results are shown in table 4.7.1

Table 4.7.1: Coefficient of Correlation for three sets of rankings – Strategic Plan (SP), League Table (LT) and Financial Performance (Fin%, FinVal)

All data		Pairs only	
	LT Rank		LT Rank
SP Rank	-0.042	SP Rank	-0.042
	SP Rank		SP Rank
FinVal Rank	-0.155	FinVal Rank	-0.155
	FinVal Rank		FinVal Rank
LT Rank	0.242	LT Rank	0.247
	LT Rank		LT Rank
Fin% Rank	0.000	Fin% Rank	-0.005
	Fin% Rank		Fin% Rank
SP Rank	-0.092	SP Rank	-0.092

Table 4.7.1, indicates that there is no significant correlation between the ranking position determined by any of the rank measures. The researcher used all the data and only pairs in order to confirm that where only a single data point existed the result did not skew the result. The closeness of the results seemed to confirm this.

The results in table 4.7.1 suggest that the factors that determine an institution's position within the types of rankings move independently of each other. Strategic Plan 'business likeness' does not seem to coincide either financial or league table success.

Part 5: Reflections on the Research Outcomes

5.1 Introduction

This section draws together the results of the analysis of the data created from interviews, strategic plans, league table and financial reports and discusses them in the context of the research questions posed.

The research questions set at the beginning of this thesis were;

1. Is the term business model used within universities in describing their activities, and, if they do, in what sense or form do they use it?
2. Do managers in universities use a business model approach as a tool for decision making explicitly or implicitly or rhetorically?
3. Does the application of a particular business model influence the performance of a university?
4. Is there a business model which should be applied for ethical and social as well as economic reasons?

5.2 What does the term Business Model mean?

In order to answer the research questions the researcher had to first understand what was meant by the term business model when used by practitioners, commentators and when discussed in the academic literature. The ease with which the term business model has been used in a wide range of contexts reflects a generally loose definition, (Porter, 2001), inviting misunderstanding (Rappa, 2007), (Linder & Cantrell, 2000), (Osterwalder & Pigneur, 2002) and thus potentially becomes a confusing shorthand for a variety of business, and business-like activities.

Kay, (2008) refers to the use of the term “space,” credit space and merger and acquisition space, as reflecting sloppy thought, echoing Porter’s (2001) views on business models. A reference to a business model allows the illusion of what Magretta (2000) calls the core logic, without necessarily demonstrating it; the business model as rhetoric; hence Porter’s description of business models as “murky”, “a loose conception” and “an invitation for faulty thinking and self delusion.” (Porter, 2001, p.73).

In an article entitled “Sloppy talk means executives are lost in space.” Kay, (2008) goes further and suggests that,

“the term business has no specific meaning”

and thus questions about core business can be answered in almost any terms the executive chooses. Thus business, space and business model are all capable of confusing use. This sometimes lazy use of language was described by Kay as follows,

“To talk about what a company is doing “in the space” avoids precision about the implications of these changes or the rationale of the business strategies”
(Kay, 2008)

The researcher would argue that as Kay suggests that the term space can include almost anything the speaker wants the same principle can apply to business model. Business space is described as distinctive market and production capabilities, similar in fact to a business model with value propositions, processes, and infrastructure. Along with delivery models (Baker & Close, 2007), business models might be seen as a reworking of old ideas or economic theory and may be superseded by newer re-workings, such as business space. This is not to say that business models are not useful, but perhaps they reflect the need overtime for the representations of underlying relationships or interactions to be repackaged in a form relevant to the current context. Thus business models may be seen as a construct of their time, re creations of the e-boom, (Magretta, 2002), reflecting the language and ideas of the e-or systems oriented people and organisations,

“...it always gets tossed into conversations about new economy business”. (Schweizer, 2005, p37).

But why is the term business model so popular? The researcher suggests that there appears to be a powerful synergy in the conjunction of the terms business, implying efficiency and effectiveness, a ‘can do approach’, and model, implying the thoughtful distillation of a complex reality into a hitherto unrecognised logic. This powerful synergy, promoting a business dimension, may in part be the reason for its lack of explicit use in the universities studied, referred to in 5.3.1 below.

When used to describe the organisation’s core logic through well articulated value propositions, a business model can become a powerful rhetorical and enlightening tool, or if applied in reverse, analytical tool allowing the essence

of a business organisation to be uncovered and better understood. In a perhaps more comprehensive view where value propositions are defined and delivery mechanisms are made clear, a business model describes and analyses business propositions, (Johnson et al, 2008). This can be taken further when by using alternative scenarios a business model framework can be used as a decision making heuristic. The wide range usage of the term, in both popular and academic literature as described in this research, is simultaneously a strength and weakness of the concept of the business model but used appropriately it can be a useful tool for managers and academics. Unfortunately this researcher believes this potential has largely been overlooked in practice where its use seems to be largely as shorthand as shown by the examples of 'loose' usage by practitioners and used in a rhetorical sense to persuade stakeholders or potential stakeholders of the virtues of an as yet only partially defined business proposition.

The relationship between business models and strategy has been a matter of some debate, (Seddon et al, 2004). (Zott and Amit, 2004), (Magretta, 2002) and clarity around definition is key to avoiding confusion. Bringing together the value proposition at the core of a business model, Magretta, (2002), with competition at the core of strategy, (Porter, 1985) and the interaction between business models and strategy, (Seddon et al, 2004), the researcher suggests a framework whereby competition is viewed as the interplay between alternative value propositions. Viewing business models as bundles of value propositions and strategy as dynamic responses, (Schweizer, 2005), through changes to existing or the creation of new business models, to alternative value propositions may help differentiate the one from the other. If we expand the notion of value propositions existing not simply statically between a supplier and a consumer but allow for dynamic interchange, through competing offers of value, competition, then strategy might be seen as the process or environment of business model change and re-alignment. Without a clear definition, this tightly knit relationship between business models and strategy leads to confusion. However business models as value propositions, and strategy as the interplay between competing business models, brings some clarity to the concepts. This reworking of pre existing economic and

business concepts does not diminish their potential usefulness but the lazy use of the term as simple rhetoric by practitioners suggests more work by academics and the translators of academic concepts into useful practitioner tools is required.

5.3 Research findings in relation to the research questions posed.

5.3.1 Research question 1

Is the term business model used within universities in describing their activities, and, if they do, in what sense or form do they use it?

The findings from sixteen interviews conducted by the researcher indicated that the term business model was only used at one University, Group 3, and that usage was limited to the vice chancellor and finance director. However, whilst not using the term business model all the interviewees used business-like language.

The term business model was regarded by a number of the interviewees as a phrase that would be unacceptable to a number of their colleagues. The comment of unacceptability was more prevalent in the two more successful groups, groups 1 & 2, than the least successful group, group 3. The finance director in University 1 B suggested that the term,

“Business model looks like finance is taking over the academic model”.

This suggested pre eminence of a business over an academic imperative might explain the very limited explicit use of the term alongside the concurrent use of business-like practices which point to an implied adoption of a business model.

The term business model was only found in three of the eighty-nine university strategic plans reviewed by the researcher although business like language was found in all the plans reviewed. This supports the results from interview analysis with low explicit use but strong evidence of business-like language and practices

The researcher is faced with apparently contradictory indicators or at least an uncomfortable juxtaposition; a reluctance to use the term business model, evidenced by the interviewees’ responses and the descriptions of universities as business facing, business engaging and enterprise universities. This

apparent contradiction may be reconciled by looking the potential audiences to which the statements are made. The external audience, largely funding and government bodies see positive responses to their aims of the academy more effectively engaging with the economy and being more business like, whilst internally a less strident rhetoric is used as the educational and social aims and impacts of higher education are emphasised with the business model or business like aspects relegated to back office activity. Additionally the use of the term business model and business like language may be more acceptable and useful when used by managerial and financial staff but counterproductive in discourse with academic staff. The reluctance to use the term business model in discussions with academic colleagues appears consistent with the view expressed by Parker (2002, p615) describing the increasing influence of commercial values and practices in universities.

“The impacts have flowed through to the discursive schemes that constitute the university lifeworld, colonizing it with commercial values. The reversals of relationships have in some cases been dramatic. The administrative class that formerly supported academic decision-makers, has been transformed into a professional management class that has appropriated strategic decision-making authority and relegated academics to secondary functional service roles. Knowledge based values formerly comprising the lifeworld have been supplanted by commercial values that now exploit subservient knowledge values for their commercial contribution.”

An approach using the language of social enterprise may be useful in reconciling the differing views in order to gain the potential benefits that a business model approach might present

5.3.2 Research Question 2

Do managers in universities use a business model approach as a tool for decision making explicitly or implicitly or rhetorically?

The finance director at a group 1 University suggested that whilst the term business model was not used, the view that the university had to be come more business like was being promoted by the new vice-chancellor and that the university operated with an implied business model by virtue of the actions it took. These practices could be described as a business model.

“It looks a bit like a business model but will I present it that way, almost certainly not.” (University 1F)

The evidence from the interviews conducted and the analysis of the strategic plan documentation highlights the use of business-like language and practice suggesting that a business model approach is being adopted in universities for decision making purposes through financial and strategic analysis. That is not to say that only business like considerations are reflected in decision making processes but that they play a part. However there was a strong response from the interviews with nine of the interviewees saying that the term business model would be unacceptable to a number of their academic colleagues. Thus the language used is tailored to the audience to which it is delivered.

This is perhaps changing with enterprise and business becoming more widely used. Plymouth University has chosen to describe itself as, “The Enterprise University, defined as

“truly business-engaging" and delivering outstanding economic, social and cultural benefits from our intellectual capital. Pivotal in a city acknowledged as the enterprise capital of the south west” (Plymouth University, 2009) and

“Our commitment to enterprise means a commitment to collaboration and engagement - with individuals, with private sector businesses and public sector organisations, and with our community as a whole (Purcell, 2009)

Perhaps the most explicit example of business model or business like approach occurs in the University of Hertfordshire’s Strategic Plan 2007-12. This plan was not available when the initial strategic plan analysis was completed and the previous plan, 2004-07 was included. The term business model is used twice in the 2007-12 plan but more importantly the first two paragraphs of the statement of Strategic Aims highlight a business-like approach as well as the development of strong links to business.

“The University is ‘business-facing and business-like, deploying relevant and efficient business skills and techniques in the leadership, management and educational activities of the University. This systematic approach to business and to employer engagement gives the University its distinctive edge in an ever-changing Higher Education environment.

Throughout the planning period the University’s core activities will be filtered through the ‘business lens’. We define ‘business’ as the

external economic environment – it includes employers in the public and private sectors and those in self-employment.”
(University of Hertfordshire, 2007, p3)

References to business-facing, business-like, business skills and techniques and business lens all emphasise the business approach.

Business facing is a phrase that has entered some universities' vocabulary with the researcher able to identify ten universities using the phrase by a short web search. It enables universities to engage with the commercial or external world but on its own terms not necessarily adopting the business practices and ethos of business as the term business model might.

Thus the University of Hertfordshire places a great emphasis on its business likeness. If we examine the university mission statement the key factors are; develop students, contribute to the regional economy, invest and develop staff, undertake and exploit research, encourage an international perspective. These aims are identifiable in a significant number if not all institutions. The difference here seems to be the overt embracing of the business approach or model alongside these more established aims.

5.3.3 Research Question 3

Does the application of a particular business model influence the performance of the university?

The three groups of institutions selected for interview represented different levels of relative success, group one the most successful, group three the least and group two in between. The relative levels of success were determined by a combination of factors; income, income growth, surplus, surplus as a percentage of income and league table position.

Having shown that business models were not used explicitly, but that other business like language and practices such as financial and strategic planning were used in conjunction with financial objectives, suggesting the implicit use of business models; the analysis of the interview responses did not indicate any significant differences between the groups which might have indicated different business model approaches. Thus no indication of the application of different business models was apparent.

The analysis of the words and phrases used in the responses to the interview questions rather than suggesting difference suggested similarity. The aims of income growth with research, post graduate and overseas income were common targets, and surplus generation in line with the perceived HEFCE target of 3% were not differentiated by group. However differences may perhaps be discerned in terms of achievement or targets aspired to. Whilst the expression of these aims was similar they appear to have been largely achieved by group one who were targeting extensions of this achievement whilst groups two and three aspired to develop these income streams.

“A bit of hard work on the overseas fees a bit more risky, very risky, but that piece you could work out”

(University 1F)

“a research intensive organisation attracts excellent research funding...”

(University 1A.)

Taking the university rankings by strategic plan word count, league table position surplus and surplus as a percentage of income no correlation between these data sets was found. The primary key was the ranking by strategic word count which indicated the level of business likeness. The research question set as a hypothesis - The level of success as measured by the rankings by three indicators, league table position, surplus and surplus as a % of income varies positively with the ranking by strategic word count was found to be false.

Taking the interview groups the researcher looked for other factors that might correlate positively with the rankings as shown by the groups. A key point in both the language of the strategic plans and particularly the interview responses were references to income growth. Again similarity rather than difference was noted in terms of the comments but groups 2 and 3 appeared to be aiming for the income mix demonstrated by the universities in group 1. The University of Warwick was a notable exception with higher, Other and lower Grant and Research income percentages than its peer institutions perhaps reflecting its

“uncommon outreach to industry”

(Clark 1998 p.35)

This unusual income profile was referred to by the finance director as was the drive towards a stronger research profile supported by comments in the university's strategic plan, Vision 2015: A Strategy for Warwick, (University of Warwick, 2007) whilst at the same time maintaining its links with industry and growing its relations with potential donors. Having followed a distinctive path is Warwick moving back towards a more traditional, mature research led profile?

Despite the inclusion of the University of Warwick there was a pattern showing the more successful a university i.e. in group 1, the greater a percentage of income would come from research and other activities, particularly research (Table 4.4.2). This distribution appears to be the target for groups two and three.

This pattern of income source was also found when the income mix of the top 17 and 25 universities by surplus generation over the period 1994-95 to 2003-04 was analysed, (Graph 5.4.18). From this we might infer that a business model that seeks income diversification away from grants and fees to research and other income has in the past been more successful in terms of surplus generation. Thus the objectives of the universities indicated in the response to the interview questions and disclosed in the strategic plans seem borne of this experience.

Turning to income growth as a measure of success we might avoid the problem posed by surplus as a measure. Surpluses in a university context demonstrate sustainability and fund investment in service delivery and are therefore not maximised rather 'satisfied', hence the wide acceptance of the HEFCE target of 3-5% surplus of income.

Individual institution relative income growth was found to be largely static. Over the period 1994-95 to 2006-07 the correlation between rank by income at the beginning of the periods and rank at the end of the period was 0.94 indicating that a university's position by virtue of its income in 1994-95 was a good indicator of its position in 2006-07. There was variation in the measure with medium sized universities, turnover £50-£100m, much less strongly

correlated at 0.39. Income growth appears to have been relatively consistent for the sector as a whole with some movement in middle income institutions suggesting that significantly different business models are not being applied or if they are applied there is little impact on relative performance when viewed as income growth. Income growth for the groups selected for interview whilst showing a higher rate for group one than two or three and group two higher than group 3 (Table 4.4.12) the differences were not statistically significant when the confidence interval at 95% were calculated.

5.3.4 Research Question 4

Is there a business model which should be applied by universities for ethical and social as well as economic reasons?

This last research question naturally falls in to two halves which, might but in the researcher's view, do not result in conflicting answers.

The discussion in part three, where the university is described in terms of a social or social-like enterprise, attempts to address the moral or ethical dimension of this question. When universities describe in their strategic plans or key priorities they invariably include a social dimension. One of the ways Aberystwyth University expresses this in relation the Welsh government's access strategy.

“To contribute to the achievement of the Welsh Assembly Government's Reaching Higher Strategy in ways which are appropriate to its mission, including meeting the specific targets contained in the Reaching Higher template,”
(Aberystwyth University, 2006,)

The University of Brighton emphasises accessibility and its wider impact in its region,

“be an accessible, dynamic and responsive community of higher education, enhancing lives, communities, disciplines and professions
“and
“the participation of the University in the cultural, economic and social life of its region”
(University of Brighton, 2002)

The University of Bristol emphasises its social contribution in its mission statement.

“The University of Bristol is a world-class institution that contributes to society by advancing knowledge and developing creative graduates

and through its cultural, social, economic and environmental activities.
(University of Bristol, 2007)

Statements such as these are replayed in university mission statements or key objectives firmly locating universities in the social wing of a social enterprise business model with financial sustainability, implying surpluses sufficient to allow investment to sustain and improve the delivery of core academic and social objectives.

In the “Financial Memorandum with Institutions”, HEFCE emphasises the need for financial sustainability whereby universities are required to stay solvent and not incur deficits, subject to some technical requirements. Thus any university business model would clearly need to address this financial dimension. HEFCE usefully describe in, “Effective financial management in higher education. A guide for governors heads of institution and senior managers” (1998), the balance between delivery of the academic mission and financial probity.

“However, higher education institutions should seek a balance between the pursuit of their academic mission and the effective management of all their resources.

Higher education institutions are independent bodies, attracting funds from a variety of public and private sources. As they have grown in size and range, placing ever increasing pressure on resources, there is a greater need for effective financial management.”

(HEFCE, 1998)

Thus universities can be demonstrated to have both social and economic imperatives and objectives suggesting a social enterprise or social like enterprise business model is most appropriate for at least partially publicly funded universities.

During the course of this thesis the researcher has noted more similarity than difference in the use of business like language and the strategic plans of the universities studied. Economically those universities that rely less on government grants and fees and generate higher levels of research and other income appear to perform better in terms of league table position. However this does not indicate a causal link. An investigation into the distribution of

income one level below simply grants, fees research and other that suggest that the more successful universities received higher percentages of income from both government and non government research sources. The aims and objectives described in university strategic plans were more similar than different although the extent to which they had been achieved varied significantly as represented by the diversity of income profile.

Growth in both volume and income diversity were core objectives of the universities studied. Diversity was mainly expressed in terms of growth in the proportions of research, employer engagement, and international and postgraduate student numbers in relation to government grants.

5.4 Comparative Quantitative Analysis

Quantitative analysis was conducted in 5 parts;

- **Strategic Plan Analysis** - An analysis of the occurrence or non occurrence of selected words and phrases in University Strategic Plans.
- **Financial Analysis** - Analysis of Institutional financial data consisting of income, expenses and surpluses for the period 1994/5 to 2003/4
- **League Table Analysis** - An analysis of league table data published in the THES for the period 1996 - 2006.
- **Correlation** between the Institutions identified in the Strategic Plan, Financial and League Table analyses.

5.4.1 Strategic Plan Analysis

The analysis of eighty nine university strategic plans or corporate planning statements was undertaken to create an institutional ranking based on the use of words or phrases in three areas, which could then be compared to other institutional rankings. The three areas were;

- business model terminology as expressed in the conceptual framework described in figure 1
- the use of business like terms in university strategic plans and corporate planning statements

- the use of Hefce's description of its key strategic aims played back through the medium of the institutions' strategic plans

A reference to business models occurred in only three university strategic plans, The Universities of Bath, Cumbria and Newcastle, indicating that the term had no wide currency as part of strategic plans. The three strategic plans were successfully mapped to the researcher's business model conceptual framework described in figure 1 reflecting the potential use of the business model framework as a descriptive and analytical tool. Thames Valley University was the only institution to use the term value proposition to describe what the university was and aimed to do and in this sense described in part its business model without using the phrase.

Whilst the conceptual framework was able to be mapped to three university strategic plans, the widespread use of business models by universities was not detected by this analysis. From the interview data the researcher would suggest that the term business model is not yet seen as a useful term within higher education. Perhaps the development of the delivery model (Baker & Close, 2007) will have more success.

5.4.2 Financial Analysis

The financial data used was sourced from Caritasdata Ltd for the period 1994/5 to 2003/4 and income data from HEIDI for the period 2000-07. The Caritas data base does not include the period in which variable tuition fees were introduced and clearly this will have a significant impact on the financial dynamics of the higher education sector. However it is beyond the scope of this piece of research to investigate this.

The financial data consisted of income and expenditure information by institution by year and a ranking of institutional performance over the period based on average surplus was produced. From this analysis it was possible to analyse the income for the top 25 institutions revealing, a perhaps not unexpected trend of, generally higher surpluses where research, other and investment income were a higher proportion of total income than the average for the sector.

5.4.3 League Table Analysis

The THES website was used to access league data for the period 1995 to 2006. The data was manipulated to generate a ranking of institutions which could be compared to ranking achieved by other measures.

5.4.4 Correlation of Rankings by Strategic Plan Relevant Word Count, Financial Success and League Table Position.

The rankings for each of the three different sets of criteria were brought together in table 4.3 and tested for correlation using the Microsoft Excel Descriptive Statistic tool. The results indicated little or no correlation between the three sets of rankings. Whilst correlation does not indicate any causal linkage, the results suggest that the narrative told in terms of business models, or more business like language in strategic plans is not reflected in either financial or league table performance.

5.5 Finally

The use of the term business model can be divided into two parts. The first is the academic discourse and the second that taking place in the practitioner or management arena with business schools well placed to facilitate a transfer of ideas between the two. In part, the structure of this thesis follows that division with discussions of the academic literature and the relationship of business models to basic micro-economic theory, strategy and stakeholder theory contrasting this with the perhaps more, “popular,” usage of the term by managers, the press and in other parts of the media. Part 4 focuses on the use of the term in the management of universities.

The flexibility of the use of business models as noted earlier is a reflection of the range of the possible boundaries of the term from simply the core logic, (Magretta, 2002, to a more complex structured framework reflecting customer relationships, product, infrastructure management and financials (Osterwalder & Pigneur, 2002). Academics, Weill et al (2004), describe more than the logic of the good idea. They categorise different models and create schematics depicting resources, product and customers. But how does this shape the discourse of practitioners and commentators who from the research above appear to use the term in a less defined way?

The researcher believes, albeit without specific evidence, that the phrase business model has an intuitive appeal, as discussed above, and thus the term enters the business practitioner vocabulary as a simple high level largely undefined descriptive term. Further academic analysis aided by consultants may result in a refining of the use in the practitioner sphere.

Whilst not formally addressed in this research the question of, 'where next', for business models inevitably arises. If they are useful beyond simply rhetorical device then we might expect practitioners to begin to use the richer business model language from the academic literature rather than simply the term itself. However if the take-up of the term is sufficiently slow in higher education, which exhibits an antipathy towards the term business when applied to universities, demonstrated in the interview responses, where the use of the term was seen as unacceptable, we might expect higher education to skip the term business model and move onto the next new or recycled management term. Alternatively the evidence of somewhat limited use of the term may grow.

A term in some ways similar to business model that has appeared recently in relation to higher education is the delivery model, presented in a short publication "A new world order for higher education", (Baker and Close, 2007). This particular model has three key elements namely, people, processes and infrastructure which have a resonance with Osterwalder and Pigneur's business model framework, (2002) customer, product, infrastructure and financials. A delivery model might be seen as a business model with an implied rather than explicit link to sustainability through financials and without this explicit link and no reference to business might be more attractive in a higher education environment.

In conclusion the researcher suggests that a business model approach, whilst not introducing new concepts, could be a useful descriptive and analytical tool for both practitioners and academics. However the breadth of interpretations requires the particular usage to be carefully defined to avoid confusion. In a discursive sense the term can act as a useful short hand whilst as a framework for value propositions it can aid the development of the underlying economic reality of business activity. Furthermore, business models when

seen in the context of competing value propositions and changing or evolving business models provide a link to and an aid for, the development of strategy. However no substantial evidence of usage of the term business model was found in university strategic plans and no evidence of any correlation between the use of business models, business like terms or reference to Hefce strategic aims and financial or league table success was noted.

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Appendices

Appendix 1 Tables

Table 4.2.3 – Summary of HEIs – Interview Selection and Request

Institution	Interview request	Interview Agreed / Completed	Region	Criteria Count	Avg	Adj Avg	Adj Avg – Avg	Spread
Group 1								
Warwick	Yes	Yes	WM	7	24	21	-3	55
Oxford	No		SE	7	29	27	-1	61
Birmingham	Yes	Yes	WM	7	35	28	-7	78
York	No		YH	7	33	30	-4	70
Newcastle	Yes	Yes	NE	7	34	32	-2	53
Durham	Yes	Yes	NE	7	35	33	-2	67
Leeds	Yes	Yes	YH	7	38	36	-2	65
UEA	Yes	Yes	EE	7	39	37	-2	67
Kent	Yes	Yes	SE	5	39	38	-1	37
Southampton	Yes	No	SE	7	46	42	-3	77
Group 2								
Essex	No		SE	7	48	48	0	39
Royal Holloway	No		LON	7	53	51	-2	79
Oxford Brookes	Yes	Yes	SE	7	61	56	-5	46
Kingston	No		LON	7	59	57	-2	60
SHU	Yes	Yes	YH	7	64	61	-3	71
UWE	Yes	Yes	WE	7	58	63	4	64
Northumbria	No		NE	7	62	63	1	67
Teesside	No		NE	7	68	69	1	69
Brighton	Yes	Yes	SE	7	72	70	-3	64
Canterbury CC	Yes	Yes	SE	7	72	74	2	79
Group 3								
JMU	Yes	Yes	NW	7	78	75	-3	62
Bedfordshire	Yes	Yes	EM	6	86	82	-4	53
Huddersfield	No		YH	7	94	91	-3	70
Staffordshire	Yes	No	WM	7	99	95	-4	69
Anglia Ruskin	No		EE	7	102	103	1	73
Northampton	Yes	No	EM	7	116	112	-4	65
Gloucestershire	Yes	No	SW	7	111	112	1	46
Solent	Yes	Yes	SE	6	115	112	-3	36
TASC	Yes	No	YH	6	115	114	-2	49
London South Bank	Yes	No	LON	6	117	118	1	57
Bolton	Yes	Yes	NW	7	124	121	-3	58
Bucks New	No		SE	7	121	122	0	50

Table 4.2.4 Adjusting the University Selection Criteria to determine the Impact on the Selection Profile

Rank	Rank all criteria, spread <80	Rank ex NSS movement, spread <70	Rank ex surplus% & NSS movement, spread <60	Rank ex surplus% & NSS movement, income growth % spread <60
1	Warwick*	<i>Imperial</i>	<i>Imperial</i>	<i>Imperial</i>
2	Oxford	Warwick	<i>UCL</i>	<i>UCL</i>
3	Birmingham*	Oxford	Oxford	Warwick
4	York	Durham	Warwick	Oxford
5	Newcastle*	UEA	Durham	<i>Sheffield</i>
6	Durham*	Newcastle	York	York
7	Leeds*	<i>Liverpool</i>	<i>Sheffield</i>	<i>Bath</i>
8	UEA*	Leeds	UEA	Newcastle
9	Kent*	Essex	Newcastle	Durham
10	Southampton**	Oxford Brookes	<i>Bath</i>	Leeds
11	Essex	Kingston	<i>Aston</i>	UEA
12	Royal Holloway	Brighton	Royal Holloway	<i>Liverpool</i>
13	Oxford Brookes*	Teesside	Essex	<i>Aston</i>
14	Kingston	Northumbria	Oxford Brookes	Essex
15	SHU*	UWE	<i>Plymouth</i>	Royal Holloway
16	UWE*	JMU	Kingston	Oxford Brookes
17	Northumbria	Huddersfield	<i>Goldsmiths</i>	Kingston
18	Teesside*	Staffordshire	UWE	SHU
19	Brighton*	Northampton	Northumbria	UWE
20	Canterbury CC*	Gloucestershire	Huddersfield	Northumbria
21	JMU*	Bolton	JMU	Brighton
22	Bedfordshire*	Buckinghamshire New	Staffordshire	<i>Plymouth</i>
23	Huddersfield		<i>Roehampton</i>	JMU
24	Staffordshire		Northampton	<i>Goldsmiths</i>
25	Anglia Ruskin		<i>Lincoln</i>	<i>Lincoln</i>
26	Northampton**		Gloucestershire	<i>East London</i>
27	Gloucestershire**		Bolton	Huddersfield
28	Southampton Solent*		Buckinghamshire New	Staffordshire
29	TASC**			<i>Wolverhampton</i>
30	London South Bank			<i>Roehampton</i>
31	Bolton*			Northampton
32	Buckinghamshire New			Gloucestershire
33				Bolton
34				Buckinghamshire New

* Interview requested and agreed

** Interview requested no response

Table 4.2.7 Summary of Interview Responses

University 1 C	University 1 G	University 1 D	University 1A
Group 1: Q.1. How is the sustainability of the university managed or sought?			
<p>Corporate Strategy is being revisited by relatively new VC</p> <p>Financial Plan is the Business model</p> <p>Resource Allocation Model (RAM) was not consistent with the accounting structures. This was changed radically and we moved to a more conventional 5 Year Plan</p> <p>Sustainability 5 Year Plan with Surplus on I&E, Strong Balance Sheet, focus on Cash balances</p> <p>Corporate Plan Mission, Key Values, key aspects, 5 year plan</p>	<p>Financial sustainability surplus 3% - 5% indicated by Hefce crude summary TRAC adjustments too hard to incorporate</p> <p>Corporate Plan sets targets</p> <p>Focussed on cash fit for the future</p> <p>Bottom line surplus cash for capital replacement and investment</p> <p>Invest in equipment to sustain activity</p> <p>Staff cost % of income</p> <p>Growth requires more sources of income</p>	<p>Corporate plan refers to sustainability</p> <p>Long Term Financial Strategy and framework</p> <p>Long term PI – Reserves, cash balance rather than surplus</p> <p>Non financial measures bream</p> <p>Strategic challenge, activity online, blended learning new products</p> <p>Hefce forecast capital and cash</p>	<p>Academic strategy is developed and the budget follows</p> <p>Capital investment to support academic strategy</p> <p>Academic Plan is constrained by the financial framework</p> <p>Surplus required for investment to remain sustainable</p> <p>Capital investment is what sustains the university</p> <p>Ensure enough cash to rum the business</p> <p>Borrow to add income a sustainable business model without borrowing</p> <p>Academic business which generates a cash surplus</p>
Group 1: Q.2. Is the term business model used within the university?			
<p>No.</p> <p>We use Corporate Plan, Financial Plan, Resource Model and Financial terms Income & Expenditure, Balance Sheet and Cash flow</p>	<p>No, not used regularly</p> <p>There is Strategy and BM adapts BM looks like finance is taking over the academic model</p> <p>Previous model was to grow</p>	<p>No</p> <p>Do not use Management jargon,</p> <p>Do use may use other business terms.</p> <p>VC looking at a BM for the university</p>	<p>I wouldn't use it widely</p> <p>Universities are a business</p> <p>A lot of academics are unhappy with this description.</p>

University 1 C	University 1 G	University 1 D	University 1A
	<p>other income and not worry about research now looking to excellent research</p> <p>The drive now is to do excellent research but the question is now how do you fund it?</p> <p>We need a lot of commercial activity to subsidise the core academic base lots of income generation</p>	<p>Do use Resource Allocation Model (RAM)</p>	<p>Business Principles are gaining more ground</p> <p>We use terms like Business Plan</p> <p>Business Model too emotive</p>
<p>Group 1: Q.3. If a business model describes the core logic that makes an organisation sustainable, how would you describe your university's business model?</p>			
<p>Core teaching, research and 3rd stream income</p> <p>Universities not commercial</p>	<p>Core logic is Research, International Teaching income generation i.e. income streams as well as activities</p> <p>Will not do low quality activity simply to make money needs to be excellent moved into brand protection</p> <p><i>University 1G</i> income split is different from other universities</p> <p>BM is generate growth and surpluses</p>	<p>BM too managerial</p> <p>Have seen rapid growth in student numbers faster than competitors</p> <p>Income streams</p> <p>Teaching funded</p> <p>Overseas non-funded</p> <p>Residences student & conference income</p> <p>BM links all the bits together to generate cash for investment in revenue and capital</p> <p>Preferred view of BM as component rather than</p>	<p>Russell Group Brand, research intensive, attracting excellent research funds from external sources and QSR, Hefce</p> <p>No simple answer to the question What is University 1A know for?</p> <p>Broad base, Excellent teaching informed by research and researchers teach as well. Able to balance subjects in terms of growth and decline but made Finance not a driver but an enabler</p> <p>Universities are businesses Size does matter enables overheads to be spread and a broader offer to be made</p> <p>Business principles</p>

University 1 C	University 1 G	University 1 D	University 1A
		value creation BM can be used in terms of structures Invest in core activities	<ul style="list-style-type: none"> • Need to be diverse in subject and income • Need to be innovative • Manage not eliminate risk • Investment appraisal • Prepared to stop doing some things. <p>Prefer sustainability to business or economic model</p>

University 1F	University 1B	University 1E
Group 1: Q.1. How is the sustainability of the university managed or sought?		
<p>We are just doing a strategic refresh which will come up with clear strategic objectives.</p> <p>IT led transformation of non academic processes</p> <p>Have been growing income faster than it could be spent. This is not viable going forward not sure how much research income will grow</p> <p>Staff cost 55% of total expenditure sector average 58% that's why we are making surpluses.</p> <p>Reduce dependence on Hefce.</p> <p>Increase research income and research contribution not all research income is good</p> <p>Surplus 2%, cash rich gives financial health</p> <p>Financial strategy for sustainability 2% historic cost surplus Strong balance sheet and grow income faster than peers address overseas market and non academic cost base to be reviewed</p>	<p>From strategic development exercise sustainability is the delivery of academic excellence into the long-term</p> <p>Need resources to keep investing and delivering to that agenda</p> <p>Understand the market and our strengths and where we compete</p> <p>Say what we deliver and be able to deliver it</p> <p>Position ourselves in terms of our branding</p> <p>Develop the confidence of our stakeholders</p> <p>Broad strategy is research led L&T strategy delivery of conventional student experience</p> <p>USP? Position <i>university 1B</i> for premium pricing</p>	<p>Managing the institution starts from the strategy map</p> <p>Outlines Vision Purpose Values</p> <p>Three years old doing a refresh not a new strategy but to refine and focus is more a priority</p> <p>Key themes</p> <ul style="list-style-type: none"> • Research • Students T&L • PKT • International <p>Strategic enablers identified as Effectiveness and Financial sustainability.</p> <p>We have identified stakeholders and partners</p> <p>Financial sustainability is clearer faculties and school can generate surpluses for investment</p>
Group 1: Q.2. Is the term business model used within the university?		
<p>Not used explicitly</p> <p>but there is an implicit BM.</p> <p>VC believes we're not a business but need to be more business like</p>	<p>No</p> <p>It is paraphrased and put into terms acceptable to the academic community.</p> <p>We talk about revenue streams, contribution, costs avoid more commercial terms</p>	<p>No</p> <p>We do talk about financial sustainability all the time</p> <p>Sustainability is in terms of faculties and schools creating surpluses for reinvestment</p>

University 1F	University 1B	University 1E
<p>The term would not go down well. Don't need to use the term as long as the need for financial sustainability is recognised</p> <p>The university is here for academic excellence. But need to be solvent.</p> <p>BM = Increase research contribution, Growing research, increase overseas students, understand control staff costs particularly pensions the net is the BM</p> <p>Understand strategic side plan around them = BM</p> <p>I wouldn't have left my business job if I was wedded to the business model</p> <p>We will be saying here are our aspirations on the various student numbers, income streams this is where we can expect contribution here are the enablers that are going to make it happen because they may involve investment where I practically understand the term business model. It looks a bit like a business model but will I present it that way almost certainly not</p>	<p>We wouldn't think of a university BM</p> <p>Distinctiveness is used</p> <p>More relaxed about talking in relation to the more commercial style revenue streams like merchandising or residential</p> <p>We could probably getaway with talking about a business model though its not necessarily a term we use very much</p>	<p>We feel one of our points of difference is that gives us a competitive edge is the strength of our integration between research and learning and teaching</p> <p>Everybody knows that financial sustainability is what we're trying to achieve</p> <p>We will review the academic strategy that (<i>faculties departments schools</i>) they are putting in place, where is that going to take them financially effective over the five years</p> <p>Use Hefce five year planning process. Common to discuss things in terms of financial sustainability</p>
<p>Group 1: Q.3. If a business model describes the core logic that makes an organisation sustainable, how would you describe your university's business model?</p>		
<p>Profitable teaching activity</p> <p>Well served by fees and overseas</p> <p>Costs controlled</p> <p>Volatile research income with a fixed cost base.</p>	<p>Core business model what pays for the bread and butter and probably jam is providing higher education to the conventional school leaver high achiever</p> <p>Sense of academic community</p> <p>College allegiance College first university second</p>	<p>I think it is the research the integration between research and learning and Teaching</p> <p>I think that plays to many strengths it also improves our funnel of students a better flow through coming through</p>

University 1F	University 1B	University 1E
<p>Difficult to grow public funded research</p> <p>Peripheral – Consultancy, CPD and conferencing creating cash for investment</p> <p>Discussing how do we stop the income generation from getting in the way of core academic function?</p> <p>In summary BM 3 areas</p> <ul style="list-style-type: none"> • Teaching model under control • Research model volatile and scares us to death • Raising money to fund activity 	<p>A student experience that will set them up throughout their career</p> <p>VC wants to grow turnover but we need to avoid low margin activity</p> <p>Most income from students from Funding bodies, some research councils (little growth small scale), county councils, Commercial income holiday lets</p> <p>Efficient teaching model high completion rates</p> <p>Want to be a small rich university</p>	<p>undergraduate, post graduate and moving on to research</p> <p>Research intensive, Knowledge Transfer, commercial opportunity for spinoff</p> <p>Very good student experience</p>

University 2 E	2 D
Group 2: Q.1. How is the sustainability of the university managed or sought?	
<p>Site rationalisation now a clear strategy</p> <p>Cost base tends to grow faster than income</p> <p>Did target 0% surplus now 3%</p> <p>Cut costs to increase surplus</p> <p>Have high capital thresholds so small surpluses were hiding good cash generation</p> <p>Cash management strategy</p> <p>Cash gives us headroom</p> <p>Strategy for sustainability summarised as</p> <p>Grow income control costs</p> <p>Site rationalisation</p> <p>Manage cash and loans</p> <p>Improve student recruitment, retention and quality</p>	<p>New Vice Chancellor worked up new Corporate Plan Strategic Reviews</p> <p>New VC introduced a more business focussed approach</p> <p>Strategic objectives, Strategic Corporate framework</p> <p>Corporate Plan>Strategic drivers>Mission >people and estate> estates strategy 25 year master plan</p> <p>Have been good at developing strategy but not at implementation</p> <p>Drill corporate plan > budget > division > subject group open and transparent</p> <p>Long-term financial forecast not simply a plan</p> <p>Explicit targets</p> <p>60% staff cost, 45% academic to non academic costs, NSS scores</p> <p>Contribution targets for faculties</p> <p>Academic and finance strategies can't exist in isolation (implies successfully)</p> <p>Looking for 4-5% financial performance (implies surplus)</p> <p>Investment dominated by IT</p> <p>Planning sustainability student numbers, staff numbers and research portfolio</p>
Group 2: Q.2. Is the term business model used within the university?	
No.	Do not use the term BM

University 2 E	2 D
<p>Do use corporate business model</p> <p>Used by FD and Planning Director</p> <p>The income and expenditure account is summarised to explain the general strategy</p>	<p>We've talked about business models in the past and talked about operating models and you know words mean different things to different people. I think what I've sort of described bearing in mind that we have quarterly business reviews where once a quarter we have a thing that looks like a balanced scorecard and that reports to the executive and it covers not only financial measures but it also covers measures against each of our strategic priorities and we will have a different scorecard based on the new corporate plan and it will be you know a page of A4 with the key indicators and we know the sort of things we're trying to get at.</p> <p>They were that type of individual I think they working with the Deans and the Deans have Assistant Deans Planning and Resources, that sort of 3 way working has started to get that business market approach back into faculties.</p> <p>Use business like talk, market, market penetration, turnover, and margin in exec</p> <p>is your strategic development plan academically or financially driven? If she had to choose she'd have to say financially or business driven.</p>
<p>Group 2: Q.3. If a business model describes the core logic that makes an organisation sustainable, how would you describe your university's business model?</p>	
<p>A teaching organisation student numbers very important</p> <p>Scope for growth limited Cut cost base</p> <p>Double international recruitment grow Post Graduate</p> <p>Strategy for partnership and progression</p> <p>Large metropolitan university, wide course portfolio, NHS contract, large business school</p>	<p>Previous VC drove research agenda</p> <p>New VC emphasis on teaching with pockets of research excellence</p> <p>More collaboration with Sheffield university not really competing</p> <p>Better market intelligence offer what customers want to buy</p> <p>Close to our market, New products</p> <p>Re-engineer cost base</p>

University 2 E	2 D
<p>Our business model is maintaining what we have, but refreshing without losing market share</p>	<p>Attract students through teaching and taught by experienced staff not PGs WP and engagement with schools,</p> <p>50% of students are local area Good WP raising aspirations</p> <p>Compete with Trent, LMU not Sheffield</p> <p>Compete with alternatives to university</p> <p>Compete with overseas provision e.g. china's growing capacity</p> <p>focus on the stakeholder and student experience (e.g. IT investment)</p> <p>Teaching main income stream now and into the future Some research and consultancy</p> <p>Could derive more value out of the research base working more locally</p> <p>Improve international income from 6.5% to around 10%</p> <p>Improve PG income and have recreated a business school</p>

University 2 C	University 2 A	University 2 B
Group 2: Q.1. How is the sustainability of the university managed or sought?		
<p>Strategic approach includes a Financial Strategy</p> <p>Manage through KPI and 8 SMART Objectives 7th is to be financially self sustaining reduce reliance on others</p> <p>Aims similar to other institutions, Learning & Teaching, Regional Partnerships, Research & Knowledge Transfer</p> <p>Used to spend left over funds on Estate but largely broke even and underinvested, Now Sustainability defined as financial performance necessary to sustain the infrastructure investment plan managed through KPIs and cash</p>	<p>Surplus 3% in line with Hefce guidelines 3-5%</p> <p>Hefce infrastructure guidelines</p> <p>Hefce grant letter built into budget</p> <p>Surplus to generate cash for capital investment</p>	<p>Submitted a sustainability strategy to Hefce includes, Finance, HR and Infrastructure in a single document</p> <p>Financial underpinning of Estates, and HR strategies which underpin the academic strategy</p> <p>Strategy for each campus to have its own identity</p> <p>We have a strategic plan and an academic strategy links to the distinctiveness of our 5 campuses. Whilst universities generally have been reducing campuses we have been increasing ours. We need to avoid competing with ourselves</p> <p>Grow income research and KT</p> <p>Main financial KPI is to move to Surplus 3%, Staff costs at 58% about sector median.</p>
Group 2: Q.2. Is the term business model used within the university?		
<p>No</p> <p>Business term avoided seen as possibly problematic</p>	<p>No</p> <p>Likely to jar with academics.</p> <p>Do use service, planning, budget centre planning</p>	<p>No</p> <p>the term BM is not used at university level but is used interchangeably when detailed proposals are discussed</p> <p>A discussion of new partnerships was just being discussed and BM was used</p> <p>BM sensible for commercial proposals but not for academic ones</p> <p>Some academics are more comfortable with business language but not all</p>

University 2 C	University 2 A	University 2 B
		main grant funding insufficient income diversification required
Group 2: Q.3. If a business model describes the core logic that makes an organisation sustainable, how would you describe your university's business model?		
<p>The university BM is teaching</p> <p>UK UG is a mature market price controlled</p> <p>Research and Knowledge Transfer are at an early stage want to grow presence, reputation and invest</p> <p>International activity is mature with high demand and price</p> <p>Subsidise home students with international fees</p> <p>PG in a transition state going for growth Pricing the same as UK not volume driven Oxford is reassuringly expensive</p>	<p>The Corporate plan leads to a budget and we work closely with the corporate plan</p> <p>The corporate plan has specific targets and we work to those</p> <p>BM seen as too narrow</p> <p>Money there to support the university mission</p>	<p>A teaching led university</p> <p>TDA, NHS Hefce 60% of income</p> <p>Low research profile not international</p> <p>Developing PG and commercial courses Public sector contract important CPD consultancy</p> <p>The contribution to overheads is important</p> <p>Efficient in delivery of teaching group size, retention and proportion if staff time</p> <p>Sustainability founded on teaching quality and links to public sector schools NHS and local government</p> <p>Commercial Margins 20-50% TRAC suggest 50%+</p> <p>A number of institutions in our area and we compete with Kent, UCA, Greenwich</p> <p>The trick is how to make 5 campuses work and distinctive</p>

University 3D	University 3 C	University 3A	University 3B
Group 3: Q.1. How is the sustainability of the university managed or sought?			
<p>Strategic Plan then Strategic action</p> <p>Financial forecast predicts the outcomes of the Strategic Plan</p> <p>We are a recruiting university and student numbers are number 1 on the risk register</p> <p>We depend almost totally on student numbers. Last year our research income was only £13k (Improved 2008-09) Unclear as to Hefce's direction</p>	<p>Clear Strategic Plan Shows what how and measures</p> <p>The Financial Strategy is drawn from the Strategic Plan and underpins it ensuring financial sustainability</p> <p>The budget ensures underpins financial sustainability</p> <p>The budget is key and we budget strategically</p> <p>The budget is driven by core income</p> <p>more balanced as a university now</p> <p>We use facts to drive our business and try to behave in a financially sustainable way</p>	<p>Best people for the job (a Collins ref)</p> <p>Best leadership</p> <p>Management must meet objectives of stakeholders and maintain their confidence Students, staff, community, governors, auditors, funding councils, partner colleges UCEA</p> <p>Communicate vision and mission to staff and students to motivate and engage</p> <p>Student recruitment and retention, cost control staff control</p> <p>KPIs used to manage the day to day running</p>	<p>Strategic plan sets overall themes and lead the financial strategy</p> <p>In practice the financial plan does not change</p> <p>Tight margins make the financial plan more pragmatic than strategic plan</p> <p>Large estate requiring a lot of upkeep Invest in new build and refurbishment to ensure fit for purpose</p>
Group 3: Q.2. Is the term business model used within the university?			
<p>No do not use the term business model</p> <p>Core is to grow income by 2% above inflation Income mainly from undergraduates</p> <p>Long history vocational background</p>	<p>Not used</p> <p>But would be understood</p> <p>Do use business plan and we run a business as well as a university</p> <p>May be confusion between business model and EFQM</p>	<p>VC and Deans use budget not BM</p> <p>Business model is not used income allocation model is used budget is more meaningful</p> <p>Income is key to everything Need to look at increasing income and give rewards for above target income</p>	<p>Used by VC and FD</p> <p>If used generally I would be shot at dawn</p> <p>Not a business a university</p> <p>But we are autonomous and have to stand on our own two feet</p>

University 3D	University 3 C	University 3A	University 3B
			<p>Use operating surplus profit is not a problem and is used to re-invest. We have a large estate with a lot of land and buildings requiring a lot of upkeep</p> <p>We are in competition for places.</p> <p>Some universities are selecting universities but most are recruiting universities and therefore need their estate to be fit for purpose</p> <p>To borrow from the banks we would need to show surpluses</p>
<p>Group 3.Q.3. If a business model describes the core logic that makes an organisation sustainable, how would you describe your university's business model?</p>			
<p>20% of income from maritime academy funded by shipping companies 35% of students from Hampshire, 65% Hampshire + m3/4 corridor 15% international</p> <p>Strong relations with local employers at vocational end</p> <p>Competitors Bournemouth YSJ</p> <p>Long history in vocational work</p>	<p>Graduate employability</p> <p>UG attracted by employability emphasis</p> <p>Integrated employability into validation process</p> <p>Main income home fees and Hefce, and some Other income</p> <p>International important and want to grow it and research income</p> <p>Good RAE</p>	<p>Main income streams teaching research and international</p> <p>Target levels set</p> <p>IAM emphasises income Want to increase research PG and commercial income but margins need careful management</p> <p>Looking to grow income with a margin and make a financial contribution</p> <p>Need growth to be sustainable</p>	<p>Most universities get income from teaching, Hefce and o'seas, some research and other income from student residences</p> <p>Trying to grow overseas income</p> <p>funding councils £39m of £46m</p> <p>little research not a Cambridge, Manchester Liverpool</p>

University 3D	University 3 C	University 3A	University 3B
<p>Key points are Employer Engagement, WP, Curriculum refresh</p> <p>creating an strategic operational scorecard to reflect the BM</p> <p>Finance plan a bit behind</p> <p>VC,PVC SMT determined the Strategic Plan SMT developed Strategic Action Plan</p>	<p>Commercially contract research and other income</p> <p>Teaching to become more focussed will cut back to improve quality</p>	<p>Reduce dependency on government funding</p> <p>Create a breadth of income streams to ensure sustainability</p> <p>Developing transnational income through overseas campuses</p>	<p>Students tend to be local</p> <p>Compete with MMU, Manchester, Liverpool, JMU Uclan</p> <p>Born of a engineering college Difficult to differentiate perhaps less impersonal than bigger institutions Concern over demographics and cost base</p> <p>Surpluses low at 1%</p>

Table 4.2.10 Word Occurrence - No Occurrence Summary All Interview Questions

Group 1	Strategy	Stakeholder	Partner	Value	Offer	Resource	Invest	Cash	Income	Cost	Surplus	Total	Possible	%
1C	1					1		1	1		1	5	12	
1G	1						1	1	1	1	1	6	12	
1Dt	1					1	1	1	1		1	6	12	
1A	1			1	1		1	1	1	1	1	8	12	
1F	1			1			1	1	1	1	1	7	12	
1B	1	1	1			1	1		1	1		7	12	
1E	1	1	1	1	1		1	1	1		1	9	12	
Total	7	2	2	3	2	3	6	6	7	4	6	48	84	57%
Group 2														
2E	1		1		1		1	1	1	1	1	8	12	
2D	1	1	1	1	1	1	1		1	1		9	12	
2C	1	1	1	1			1	1	1	1	1	9	12	
2A							1	1	1	1	1	5	12	
2B	1					1			1	1	1	5	12	
Total	4	2	3	2	2	2	4	3	5	5	4	36	60	60%
Group 3														
3D	1			1					1			3	12	
3C	1								1	1		3	12	
3A		1					1		1	1	1	5	12	
3B	1						1		1	1	1	5	12	
Total	3	1	0	1	0	0	2	0	4	3	2	16	48	33%
Total	14	5	5	6	4	5	12	9	16	12	12	100	192	

Table 4.2.11 Raw Word Count Summary All Interview Questions

Group 1	Strategy	Stakeholder	Partner	Value	Offer	Resource	Invest	Cash	Income	Cost	Surplus	Total
1C	1	0	0	0	0	1	0	2	3	0	1	8
1G	2	0	0	0	0	0	2	3	7	4	5	23
1Dt	3	0	0	0	0	1	4	4	2	0	1	15
1A	3	0	0	1	1	0	11	4	2	1	2	25
1F	14	0	0	2	0	0	3	2	17	10	4	52
1B	5	1	1	0	0	3	1	0	4	1	0	16
1E	17	1	1	2	3	0	3	1	0	0	2	30
Total	45	2	2	5	4	5	24	16	35	16	15	169
Group 2												
2E	7	0	1	0	1	0	4	13	12	8	4	50
2D	32	2	1	2	4	3	2	0	8	9	0	63
2C	2	2	2	1	0	0	4	1	1	2	1	16
2A	0	0	0	0	0	0	3	1	2	2	1	9
2B	6	0	0	0	0	2	0	0	4	1	1	14
Total	47	4	4	3	5	5	13	15	27	22	7	152
Group 3												
3D	5	0	0	1	0	0	0	0	4	0	0	10
3C	8	0	0	0	0	0	0	0	10	3	0	21
3A	0	2	0	0	0	0	1	0	15	2	1	21
3B	4	0	0	0	0	0	4	0	6	2	8	24
Total	17	2	0	1	0	0	5	0	35	7	9	76
Total	109	8	6	9	9	10	42	31	97	45	31	397

Table 4.2.19 Interview Question 2 No we don't use the term Business Model but

University	Corporate / Financial Plan	Commercial / Financial Business terms	Other
Group 1			
1C	Corporate Plan, Financial Plan	Financial terms Income & Expenditure, Balance Sheet and Cash flow	Resource Model
1G	There is Strategy and BM adapts Previous model was to grow other income and not worry about research now looking to excellent research	To subsidise the core academic base We need a lot of commercial activity income generation	
1D		Do use may use other business terms	Do use Resource Allocation Model
1A	We use terms like Business Plan	Universities are a business Business Principles are gaining more ground	
1F	Understand strategic side plan around them = BM. We will be saying here are our aspirations on the various student numbers, income streams this is where we can expect contribution here are the enablers that are going to make it happen because they may involve investment where I practically understand the term business model	VC believes we're not a business but need to be more business like need for financial sustainability is recognised need to be solvent	There is an implicit BM. BM = Increase research contribution, Growing research, increase overseas students, understand control staff costs particularly pensions the net is the BM
1B		revenue streams, contribution, costs avoid more commercial terms More relaxed about talking in relation to the more commercial style revenue streams like merchandising or residential	
1Es	We do talks about financial sustainability all the time Everybody knows that financial sustainability is what we're trying to	Sustainability is in terms of faculties and schools creating	

University	Corporate / Financial Plan	Commercial / Financial Business terms	Other
	achieve	surpluses for reinvestment	
Group 2			
2E	corporate business model	The income and expenditure account is summarised to explain the general strategy	
2D	we have a thing that looks like a balanced scorecard and that reports to the executive and it covers not only financial measures but it also covers measures against each of our strategic priorities and we will have a different scorecard based on the new corporate plan	Use business like talk, market, market penetration, turnover, and margin in exec Is your strategic development plan academically or financially driven? Would have to say financially or business driven. started to get that business market approach back into faculties	We've talked about business models in the past and talked about operating models
2C			
2A	planning, budget centre planning		
2B		Some academics are more comfortable with business language but not all main grant funding insufficient income diversification required	Business model is used interchangeably when detailed proposals are discussed At a discussion of new partnerships was just being discussed and BM was used
Group 3			
3D	Core is to grow income by 2% above inflation Income mainly from undergraduates		
3C	Do use business plan and we run a business as well as a university May be confusion between business model and EFQM		
3Ae	VC and Deans use budget not BM	Income is key to everything	

University	Corporate / Financial Plan	Commercial / Financial Business terms	Other
		Need to look at increasing income and give rewards for above target income	
3B		Not a business a university Use operating surplus profit is not a problem and is used to re-invest. We are in competition for places to borrow from the banks we would need to show surpluses	Used by VC and FD

Table 4.2.21. - Key Responses to Interview Question 1. How is the sustainability of the university managed or sought?

University	Corporate Financial Strategy Plan	Academic Strategy Plan	Stakeholder / Partner	Surplus / Cash for Investment	Staff cost % Income	Surplus % Income
Group 1						
1C	Financial Plan is the business model			Focus on cash		
1G	Corporate plan sets targets growth requires more sources of income			Focussed on cash surplus cash for capital investment	Yes	Yes 3-5%
1D	Corporate Plan Long Term Financial Strategy Strategic challenge new products			Cash rather than surplus		
1A	Borrow only to add income a sustainable business model	Academic plan constrained by financial framework		Investment to support academic strategy Surplus required for investment		
1F	Clear strategic objectives Grow income faster than peers			Surplus 2% cash rich financial health	Yes 55%	Yes 2%
1B	Strategic development exercise	Delivery of academic excellence Learning & Teaching Strategy	Develop stakeholder confidence			
1E	Strategy map refresh strategy		Stakeholders & partners	Surplus for investment		
Group 2						
2E	Strategy grow income, control costs manage cash and loans improve retention recruitment and quality			Cash management strategy headroom	Yes 60%	Yes 3%
2D	Strategic Corporate framework Academic and Financial Strategies not in isolation business focus					Yes
2C	Financial strategy	Learning & Teaching, Research KT	Regional Partners	Manage cash		
2A				Generate cash for capital		Yes 3%
2B	Strategic plan financial underpinning grow income	Academic strategy			58%	Yes move to 3%

University	Corporate Financial Strategy Plan	Academic Strategy Plan	Stakeholder / Partner	Surplus / Cash for Investment	Staff cost % Income	Surplus % Income
	research and KT					
Group 3						
3D	Strategic plan and action Financial forecast a recruiting university rely on student numbers					
3C	Clear Strategic Plan, financial Plan drawn from strategic plan					
3A			Maintain stakeholder confidence			
3B	Strategic plan leads financial strategy			Tight margins, invest in estate		

Table 4.2.23 Summary of Responses to Interview Question 3

University	Income Teaching	Income Research	Income International	Income Other	Margin Cash Surplus Invest
Group 1					
1C	X	X		X	
1G	X	X	X	X	X
1Dt	X		X	X	X
1A	X	X		X	X
1F	X	X	X	X	X
1B	X	X	X	X	X
1E	X	X		X	
Group 2					
2E	X	X	X		X
2D	X	X	X	X	X
2C	X	X	X	X	X
2A					X
2B	X	X	X	X	X
Group 3					
3Dt	X		X	X	
3C	X	X	X	X	
3A	X	X	X	X	X
3B					

Table 4.2.24 References to growth and diversification						
Grow Income	Grow the business Grow diversity	Grow Research	Grow Knowledge Transfer	Grow Post grad	Grow International	Grow Commercial Income
Group 1						
1C	<i>Core teaching, research, 3rd stream income, Universities are all looking at all the same issues</i>					
1G	Core logic – teaching	research			Core logic international income generation	
	Business model to generate growth and surpluses If we want to grow we need more sources of income					
1D	experienced rapid growth in student numbers Faster growth than competitors				Teaching funded overseas students non Hefce students	Residential university student provision leads to conference and student income
1A	Need to be diverse in subject and income Being a broad based university each subject has its cycle a sin curve and we are able to balance the subjects. A less broadly based university could face a	research intensive organisation attract excellent research funding from external sources and through the QR and Hefce				

Table 4.2.24 References to growth and diversification						
Grow Income	Grow the business Grow diversity	Grow Research	Grow Knowledge Transfer	Grow Post grad	Grow International	Grow Commercial Income
	situation where a number of subjects are on the same cycle and that becomes harder to manage Size does matter and a larger university can offer more things and greater variety of funding sources					
1Fe	We want to grow income faster than our peers We've managed to grow income faster than anybody out there can spend it But then we did secondary measures around income growth quality of income and on a lot of those we are struggling We will be saying here are our aspirations on the various student numbers, income streams				The instinctive answer number 1 go out there and recruit loads more overseas post grad students we are well served by the majority of our overseas markets A bit of hard work on the overseas fees a bit more risky, very risky, but that piece you could work out a way forward. And if we can do overseas properly then it should be reasonably secure that we can find a	

Table 4.2.24 References to growth and diversification						
Grow Income	Grow the business Grow diversity	Grow Research	Grow Knowledge Transfer	Grow Post grad	Grow International	Grow Commercial Income
					medium term future for it	
1B	VC wants to grow income					
1E	it also improves our funnel of students a better flow through coming through undergraduate, post graduate and moving on to research		Knowledge Transfer we're emphasising Knowledge Transfer largely driven by our research activity		International work is important from a recruitment perspective but also from a reputational perspective	
Group 2						
2E	Our strategy can be summarised as growing income controlling costs On the student side we need to improve recruitment, retention undergraduates are our main source of income With flat numbers the scope for growing is very limited	Trying to grow in research, CPD, overseas knowledge transfer. Trying to increase Post Graduate We are trying to double international income currently at 4% or 5%				

Table 4.2.24 References to growth and diversification						
Grow Income	Grow the business Grow diversity	Grow Research	Grow Knowledge Transfer	Grow Post grad	Grow International	Grow Commercial Income
	Specific strategy around partnerships and progression some 3+0 and 2+1 franchise					
2D	We don't see an awful lot of growth in our undergraduate Hefce funded business to be honest business. can I suppose in terms of where we are we see our business being driven from, the heart of it is teaching undergraduate and the	there's been a interesting increase in our RAE this year which we certainly weren't expecting we expect to drive some long term improvements and that's about further reengagement with business its about ... exploiting our IP you know but we aren't going to lots of high end blue skies research we're not going to do we believe out of the research base we've got we could drive more value and particularly given where the economy is now particularly where and then research but in those specified areas		This year Post graduate isn't looking that bright for us 25% of our business is currently about postgraduate so we still want to continue to grow our Post Graduate market.	. So I guess international is the area where we might be looking. I mentioned earlier we're about 6.5% of our income is international and we can see scope for growing our international I suppose we see international until fairly recently anyway as a way of substituting Hefce grant or tuition fee income so its been a financially driven thing now a broader approach international I guess is a separate stream	that but there is a possibility also exploiting grants that are available more than we have done there is this Hefce is now we need to work with local businesses and businesses in the region and actually work with the University of Sheffield. We are much closer to the University of Sheffield than we were before. Consultancy is a key strand

Table 4.2.24 References to growth and diversification						
Grow Income	Grow the business Grow diversity	Grow Research	Grow Knowledge Transfer	Grow Post grad	Grow International	Grow Commercial Income
2C		Research and Knowledge Transfer infancy enter market grow presence		PG in a transition state going for growth	International Pricing the same as UK not volume driven Oxford is reassuringly expensive	
2A						
2B	Looking at income diversification A pretty bleak picture going forward the growth that was there 2 years ago has gone ELQ lost us 300 students	We aim to grow income both research and knowledge transfer		Mainstream course developments are postgraduate		Mainstream course developments are commercial work Public sector contracts are important CPD and consultancy
Group 3						
3Dt	The core is to grow income 2% above inflation Capping numbers has made it difficult					
3A	The objective is to grow the business we need growth to be sustainable More income streams with a return creating a	We are looking to increase research income		We are looking to increase Postgraduate income	We are looking to grow international income We are developing transnational income streams through	We are looking to increase commercial income

Table 4.2.24 References to growth and diversification						
Grow Income	Grow the business Grow diversity	Grow Research	Grow Knowledge Transfer	Grow Post grad	Grow International	Grow Commercial Income
	surplus Some income goes up whilst others go down so we need a breadth of income to ensure sustainability Many or all universities are trying to reduce their reliance on government funding by growing other sources				overseas campuses	
3B	Many post 92s are trying to increase research income to get less dependency on the funding councils				Want to grow international students and work overseas	
3C		We are looking to grow research income we had some good RAE results			We are looking to grow international income	

Table 4.6.5: Top 25 Institutional Ranking based on (Total Count in Total Data set (a) X Count in 10 selected performance measures (b)) / Average Rank (c)

Institution	Total count		A level score	Library & Computing spend/fte	Facilities Spend	SSR	1st & 2:1s	TQA / NSS	RAE	Completion	Destination	Research grant and contract income	Avg 'c'	(a*b)/c	Rank
	'a'	'b'													
Cambridge	119	9	1	3		10	1	4	1	15	2	4	5	235	1
Imperial	121	9	4	5	1	3	17	5	4		4	1	5	223	2
Oxford	120	9	2	1		15	3	11	2	7	5	3	5	198	3
UCL	121	8	16	7		4	13	8	6	23		2	10	98	4
Bristol	121	10	5	17	6	22	5	18	13	19	8	12	13	97	5
Warwick	121	7	7	13			12	9	5	4	13		9	94	6
LSE	121	6	3	4			22	12	3	5			8	89	7
Nottingham	121	8	6	12	21		9	16		12	6	15	12	80	8
Bath	121	6	9	19	2				10	6	9		9	79	9
Edinburgh	121	7	10	8	17		10	20	9			7	12	73	10
Durham	121	6	8	16	11			7	12	8			10	70	11
St Andrews	121	7	11	25			7	10	16	21	15		15	56	12
York	121	6	13				25	1	7	10		25	14	54	13
Kings	118	10	18	14	58	11	32	27	22	23	24	5	23	50	14
Manchester	121	5	17	10					11		25	8	14	43	15
Birmingham	121	6	14				23	21		14	21	11	17	42	16
Robert Gordon	120	1									3		3	40	17
Harper Adams	76	1						2					2	38	18
Glasgow	121	5	20	22			15	17				9	17	36	19
Newcastle	121	5	21	9	12			25				16	17	36	20
Sheffield	121	4	12					6	22			14	14	36	21
Loughborough	121	4		23	9			13			14		15	33	22
Lancaster	121	4			13			14	8	25			15	32	23
Essex	121	4		18	8			19	15				15	32	24
Surrey	121	2			15						1		8	30	25

Table 4.6.6 Top 25 Institutional Ranking including all selected results for an institution with a Top 25 result

Institution	Total count	A level score	Library & Computing		Facilities			1st & 2:1s	TQA / NSS	RAE	Completion	Destinations	Research grant and contract	
			spend/fte	Library	Computer	Spend	SSR						income	Avg
Imperial	121	4	5	6	4	1	3	17	5	4	32	4	1	7.2
Oxford	120	2	1	1	12	40	15	3	11	2	7	5	3	8.5
Cambridge	119	1	3	3	20	53	9	1	4	1	15	2	4	9.7
Bristol	121	5	17	16	22	6	21	5	18	13	19	7	13	13.5
UCL	121	15	7	12	7	41	4	13	8	6	22	36	2	14.4
Edinburgh	121	10	8	10	5	17	26	10	20	9	39	33	6	16.1
Nottingham	121	6	11	17	25	21	33	9	16	27	12	6	14	16.4
Warwick	121	7	12	15	15	38	51	12	9	5	4	12	25	17.1
LSE	121	3	4	4	3	56	36	22	12	3	5	26	39	17.8
Bath	121	9	19	19	1	2	44	29	49	10	6	8	33	19.1
Manchester	121	16	10	20	6	35	28	31	27	11	38	25	7	21.2
St Andrews	121	11	25	22	41	32	30	7	10	16	20	14	36	22.0
Durham	121	8	16	48	17	11	57	33	7	12	8	31	28	23.0
York	121	13	32	28	19	44	32	25	1	7	10	45	24	23.3
Newcastle	121	20	9	7	14	12	31	36	24	31	46	37	15	23.5
Birmingham	121	14	30	27	72	27	37	23	21	26	14	20	10	26.8
Southampton	121	22	20	13	27	36	41	47	36	17	29	39	9	28.0
Lancaster	121	25	26	21	18	13	81	39	14	8	25	72	37	31.6
Sheffield	121	12	50	40	70	39	49	27	6	22	36	32	12	32.9
Glasgow	121	19	22	11	67	50	35	15	17	36	86	44	8	34.2
Leicester	121	33	51	26	33	26	47	52	28	32	16	47	21	34.3
Leeds	121	17	29	18	36	67	56	28	48	24	31	49	11	34.5
Loughborough	121	31	23	68	46	9	84	41	13	33	34	13	27	35.2
Royal Holloway	121	29	38	43	49	4	48	38	37	21	30	46	53	36.3
Kings	118	18	14	103	103	58	11	32	26	23	23	24	5	36.7

Business Models and Higher Education Institutions

Looking for business models in the higher education landscape.

by

John Gallacher

[Document Six - submitted in partial fulfilment of the Nottingham Trent University requirements for the degree of Doctor of Business Administration.]

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Part 1: Introduction

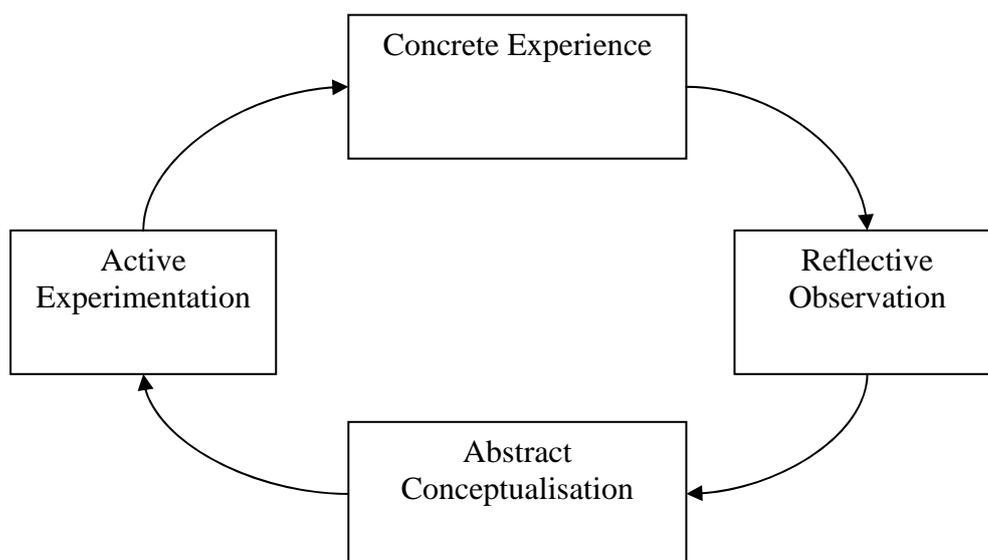
1.1 Understanding Reflective Practice

Reflective practice as a part of the learning process was referred to in 1985 by Boud et al, where reflection on experience was described as an aid to new and better understanding and that the active teaching of reflective techniques such as the use of reflective diaries and structured discussion could enhance the impact of reflection. The researcher did not keep a regular, formal, reflective diary but the reflections in this document are informed by notes taken as each of the preceding documents was written. Jarvis (1992) saw reflective practice as “something more than thoughtful practice. It is that form of practice which seeks to problematise many situations of professional performance so that they can become potential learning situations and so the practitioners can continue to learn, grow and develop through practice.”

Schon, (1983), suggested that reflection can take place during or post an event and the reflection by the researcher in this document is the latter.

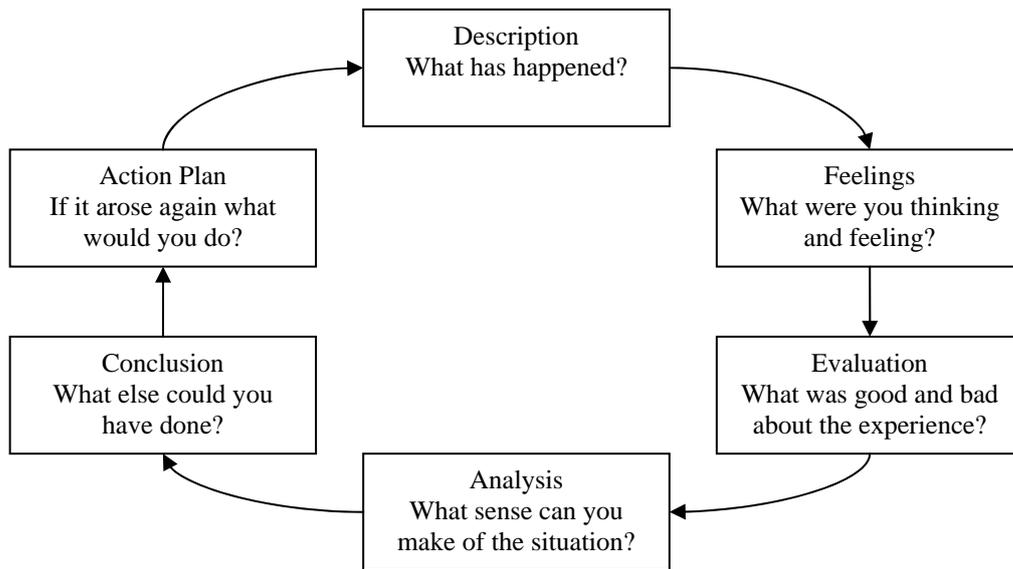
Kolb (1984) described a four stage reflective cycle drawing on the works of Lewin Dewey and Piaget, reproduced in a simplified form in figure 1 below.

Figure 1: Kolb’s Experiential Learning Cycle (1984)



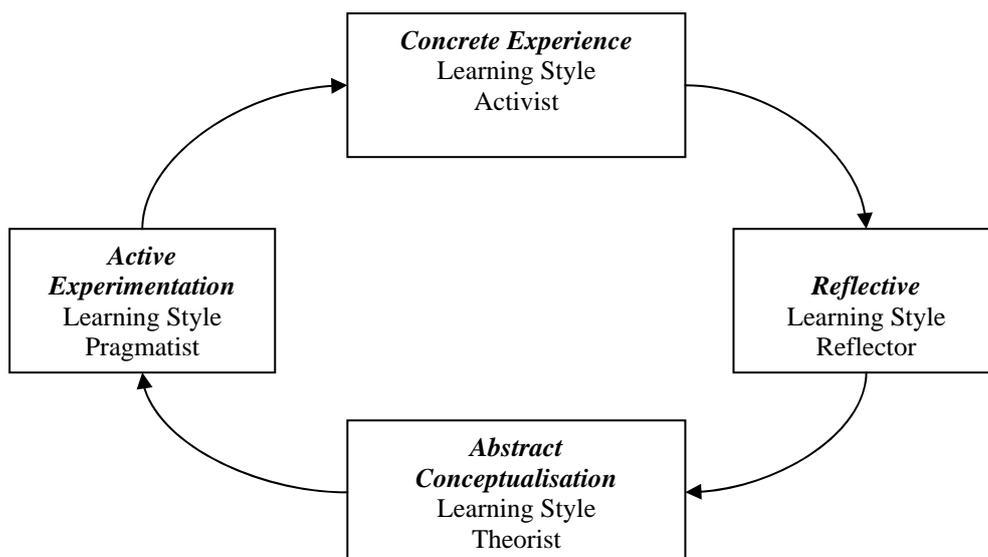
Gibbs (1998) developed another model based on a six stage reflection cycle with an almost practical approach to reflection which might explain in part the scale of its use.

Figure 2: Gibbs Reflective Cycle (1998)



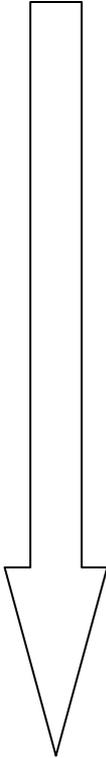
Tate and Sills (2004) later enhanced Kolb’s learning cycle by combining it with Honey and Mumford’s (1986) learning styles to give the Experiential Learning Cycle shown below as figure 3.

Figure 3: The Experiential Learning Cycle (Tate and Sills)



Having considered these models and approaches the researcher used the Gibbs (1988) simple reflective model in conjunction with Johns' (2004) structured reflective model to reflect on the DBA experience. Johns produced a useful typology of reflective practice (2004), reproduced in Table 1 below, which also aided the development of researchers reflective practice.

Table 1 The span of reflective practice (Johns, 2004)

Layers of Reflection	Key Theorists	
<p>Reflection on experience</p> <p>Reflecting on a situation or experience after the event with the intention of drawing insights that may inform my future practice in positive ways</p>	<p>Mezirow, (1981) Schon, (1983,1987) Boyd & Fayles, (1983) Boud et al. (1985) Johns, (2004)</p>	<p>Doing Reflection</p>
<p>Reflection in action</p> <p>Pausing within a particular situation or experience in order to make sense and reframe the situation so as to be able to proceed towards desired outcomes</p>	<p>Schon, (1983,1987) Freshwater & Rolfe, (2001)</p>	
<p>The internal supervisor</p> <p>Dialoguing with self whilst in conversation with another in order to make sense</p>	<p>Casement, (1985) Rolfe et al., (2001)</p>	
<p>Reflection within the moment</p> <p>Being aware of the way I am thinking, feeling and responding within the unfolding moment and dialoguing with self to ensure I am interpreting and responding congruently to whatever is unfolding. It is having some space in your mind to change your ideas rather than being fixed on certain ideas.</p>	<p>Johns, (2004)</p>	
<p>Mindful practice</p> <p>Being aware of self within the unfolding moment with the intention of realising desirable practice (however desirable is known)</p>	<p>Freshwater, (2002) Johns, (2004)</p>	

This typology presents a view of the development of reflection from a post hoc exercise reflecting back on an event, through reflection as an exercise during an experience but separate to it to reflection as an integral part of the experience. Jay, (1999) refers to a similar typology with most developed reflection as 'Zen like mindfulness'. The researcher, being new to formal reflection, is still at the early stage of reflective practice i.e. reflecting post hoc on the experience.

Table 2 Johns Model for structured reflection – 14th edition (Johns, 2004)

Reflective Cue	Way of Knowing	Ref
Bring the mind home		1
Focus on a description of an experience that seems significant in some way	Aesthetics	2
What particular issues seem significant enough to demand attention?	Aesthetics	3
How were others feeling and what made them feel that way?	Aesthetics	4
How was I feeling and what made me feel that way?	Personal	5
What was I trying to achieve and did I respond effectively?	Aesthetics	6
What were the consequences of my actions on the patient others and myself?	Aesthetics	7
What factors influenced the way I was feeling thinking or responding?	Personal	8
What knowledge informed or might have informed me?	Empirics	9
To what extent did I act for the best and in tune with my values?	Ethics	10
How does this situation connect with previous experiences?	Reflexivity	11
How might I respond more effectively given this situation again?	Reflexivity	12
What would be the consequences of alternative actions for the patient others and myself?	Reflexivity	13
How do I NOW feel about this experience?	Reflexivity	14
Am I more able to support myself and others as a consequence?	Reflexivity	15
Am I more able to realise desirable practice monitored using appropriate frameworks such as framing perspectives, Carper's fundamental ways of knowing other maps?	Reflexivity	16

Part 2 : Reflection

2.1 Introduction

The researcher's brief review of reflective writing, outlined in the introduction to this document, has led to the adoption of an adapted Johns' model. Johns structured approach, whilst drawn from the reflection on events largely from the medical arena, (hence the reference to the patient in the model in table 2 above), can be adapted for a reflective process more attuned for effective reflection of the processes and events of a non medical nature over the longer period of time represented by the engagement with the DBA. The link between reflective practice and medicine is explored by Brockbank and McGill (1998) when referring to Schon's (1987) work with the so called 'deviant' approaches to learning of the medical schools. The deviant nature appears to be the combination of learning by being told, enhanced by learning as doing and further enhanced by learning as reflecting on whether the doing was satisfactory doing.

2.2.1 Adapting Johns' Structured Model for use as a reflective tool for the DBA.

The model brings together earlier work by Johns, indicated by the reference to the 14th edition, and how reflective questions or cues can be linked to ways of knowing as described by Carper, (1978). In this reflective paper I will not refer further to Carper's ways of knowing as I believe it is not necessary for the type of reflection I will undertake. In addition, for the purpose of this reflection, Johns' structured model sixteen reflective cues have been grouped into four main sections and within those sections the cues and questions posed have been simplified and aggregated. The researcher prefers the approach of the reduction of a more comprehensive approach of reflection into a tailored tool rather than expanding on a perhaps more simple model, as this should allow an opportunity to retain some of the subtleties of the more comprehensive approach. However, on reflection, in practice the amendments seem to result in the adapted model resembling the Gibbs (1988) reflective cycle model.

The first section Johns describes as "bringing the mind home." I have used the preparation for and the writing of this paper as a means to focus my mind on both the process of reflection and the practical application of reflection on the DBA

experience. The second section includes cues 2 and 3 and might be characterised as describing the DBA experience and highlights some of the important events of that experience. The third section is the reflection activity and includes the cues 4 to 10. The fifth section is comprised of cues 11 to 13 and here the researcher considers the DBA experience in light of previous similar experiences and alternative imagined scenarios. The sixth and last section cues 14 to 16 deals with the learning drawn from engaging with the preceding sections.

2.2 Reflective Cue 1 Bringing the mind home

The researcher attempted to, “bring the mind home”, by reviewing and engaging with, albeit in a limited way, the literature around reflective practice. This brief introduction led the researcher to focus on Johns (2004) model for structured reflection, a comprehensive framework, but as noted above, requiring adaptation to meet the requirements of reflection of the DBA. Whilst ‘bringing the mind home’ is placed at the start of the process and appears to be a single event the researcher believes that this activity should occur throughout the reflective process with each reflection further focussing the researcher’s thoughts and enhancing the learning achieved in all parts of the DBA experience. The selection of a structured approach to this reflective piece possibly displays the researcher’s bias or inclination to structure such that when offered the choice of a freeform narrative, “tell us a story,” (NBS, 2004) the researcher chose this more structured format. This desire to build structure is further reflected in the documents as typology, tables and the desire to discover patterns in data.

2.3 Reflective Cues 2 and 3 Describing the Experience

The structure of the DBA, consisting of 6 documents of varying length, the use of work focussed research questions, along with the early taught elements succeeded, at least for this student, in making the programme more accessible, allowing non-academic professionals to discover and develop a pathway into academic style, substance, discussion and issues. The structure, a proposal, critical literature review, qualitative and quantitative pieces plus a thesis and a reflective piece might be described as making something inherently indigestible digestible, a little less daunting and thus more attractive to its professional, practitioner market. The process is made

visible to the student hence the scale of the enterprise is more recognisable and manageable. The different documents posed different problems to the researcher and conversely presented different learning opportunities and the chance to develop new skills and gain new understandings. With the submission of each document the learning experience of writing it complemented the learning from the theoretical content of the taught session(s) and that learning was further enhanced by, including reflection on, the supervisory sessions and subsequent feedback on the submissions. This process with each learning event informing the next developed a virtuous circle of learning, reinforcing and enhancing that learning. This structured reinforcing was not consciously apparent to the researcher until this reflection.

Whilst it might be expected that the qualitative parts of the programme would be more in tune with the researcher's preferences, the nature of my finance role is a little more complex than that and within my role information has to be created, made sense of, communicated and decisions reached using a combination of numerical, literary and oral skills to audiences of academic and non academic colleagues with varying levels of understanding and interest. Thus the breadth of the documents was able to inform my practice both at NBS and York St John.

The DBA programme has a notional length of 4 years, according the front cover of the programme booklet, "Module 1 2002-2005 Introduction to the DBA." However for this student and, no doubt others, life contrives to intervene and this document is being written in my 6th year. In April 2006 I was preparing document 4, a piece of quantitative research and made some observations whilst reading Byrne (2002) *Interpreting Quantitative Data*, referring to a phrase I came across that chimed with what I was trying to achieve, but not always succeeding in doing. The phrase referred to not measuring variables but tracing changes and this felt like permission to play with and look for patterns and clusters in the data rather than simply applying statistical techniques. Having said that I still felt a need and an expectation to apply standard statistical techniques and used SPSS and Microsoft Office software to apply such techniques but I did not want to accept them as the whole or only picture. On the 30th June 2006 I noted, "Handed in Doc 4...Great relief...Not sure sufficient references...Going to take a couple of weeks off!" However on 1st July I was

reflecting on documents 1, 2 and 3, and in a perhaps contradictory way expressing a preference for the qualitative research but indicating that I needed more structure.

2.4 Reflective Cues 4 to 10 Reflections on the DBA Experience

As part of adapting Johns' model the cues will not be presented sequentially and will be addressed largely in groups rather than separately.

Reflective Cues 6 and 7

Objectives, achievements and impacts on myself and others

Objectives

Working as the Director of Finance & Resources at the Nottingham Business School, a newly created post and my first experience of university since graduating in 1976, I was aware of the existence of the Doctorate of Business Administration programme. My choice of finance as a career was driven not by a love of numbers and all things numeric but by the belief that a professional qualification in this area might allow me access to a wide range of, and areas within, organisations and perhaps afford me influence on decisions taken whilst potentially facilitating some international experience. The DBA in this sense offered to complement my financial experience and qualifications in away that particularly suited the academic sector I had joined and reflected my wider interest in organisations. My relatively new role also influenced the selection of the research topic which was refined during reflections in the form of supervisory sessions. The initial topic, performance of business schools, was refined in discussion with the Dean of the business school to include business models and later amended to look at universities as a whole, rather than a particular element of a university. The DBA offered an academic process which engaging with would enhance my knowledge both in terms of directly professional relevant learning and perhaps more tangential but non the less important learning to better equip me in the context of the higher education sector. Thus the DBA programme offered an opportunity to improve my knowledge of the sector and gain a better understanding of the environment I had chosen to work in, the possibility of a career enhancing qualification and an opportunity to engage in academic debate.

Achievements

Have I achieved what I set out to achieve is a question posed by Johns? In one sense the fact that am writing this final document indicates, that at least in part, I have achieved some of what I set out to achieve. I have benefited from the process and engagement with the DBA; I have extended my knowledge of strategy and business models and hopefully will be ultimately successful in achieving the award of DBA from Nottingham Trent University.

Impact on myself and others

I have ignored the reference to patient in Johns' original model as noted earlier that view is not relevant for this reflective exercise. The consequences for others should consider family, friends and colleagues. The consequences for my colleagues, I hope, has been the opportunity to work with a more informed colleague better able to appreciate the academic context and thus better able to contribute to better informed decisions and implement better solutions to institutional problems.

The consequences for my family are less easy to define although the list of outstanding 'DIY' tasks has grown considerably. A key factor in my progressing this far with the DBA programme has been the active support of my family and my institutions. My family have created space for me to pursue this area of study and research by giving up time with me and in my partner's case putting on hold a number of developments she wished to follow. Whilst appreciating the value of the DBA my family I am sure will be glad when I will be free to devote more time to them and support them more in their pursuits.

Why did I act the way I did?

Reflecting on my approach to the DBA I believe I initially underestimated the level of time commitment that would be required from both myself and my family. Although the process had been broken down into defined documents I still found myself running into deadlines and this was reflected in a tendency to tail off towards the end of a document. My enthusiasm for my subject grew to such a point that I became more interested, for a time and probably still am, in the nature of business models and what was meant by that term or phrase, than in their direct relation to performance. I found myself noting instances of the use of the term business model in situations as

different as radio broadcasts, newspaper articles, advertisements and even conversations in the street and trying to discern how the term was being used in a particular context. The conversation in the street was particularly frustrating as I heard the reference to business models as a fragment of a conversation between two people walking past me but in the opposite direction; I resisted the temptation to follow them. On reflection, had I not resisted I would almost certainly, I expect, have breached the research ethics guidelines.

2.6 Reflective Cues 4, 5, 8 - 13 Feelings, Mine and Others

How were I and others feeling and what made me and them feel that way?

The others might include colleagues, family and friends. In Johns' terms this would also include the client or patient. Within the business school academic undertaking is an integral part of life and the further development of academic engagement with the world of work was part of the Dean's vision. Thus whilst in perhaps more traditional academic cloisters my presence on a doctoral programme might have "raised a few eyebrows" I was not aware of anything but support for my endeavour. This support has been carried through to my current institution.

The call on my time have been most keenly felt by my partner and son. My daughters who were and have graduated or are still at university were impacted less as their own lives developed more independently. I have on occasion felt guilty about the time taken from my partner and son because of the need to devote time to completing the DBA and the length of time it has taken to get this far. They have both been very supportive but we will all be relieved when the demands of the DBA are finally lifted.

At the start or even perhaps before the start of the DBA programme I was excited by the prospect of an intellectually challenging and demanding engagement with areas of learning that I was unfamiliar with, re-engaging with areas I had experienced in the past, wrapped up in a professionally relevant and thus slightly less frightening programme. This excitement was tinged with some apprehension. I was about to take on, and in my eyes very publically, an unfamiliar role of researcher which would undoubtedly stretch and perhaps be beyond, my abilities. Whilst it can be argued that the main benefit from engaging with the DBA programme is the learning derived

from the research process, the award as a visible outward sign of the achievement was, and still is, important. Thus the risk of the unknown and of failure formed part of the background of how I felt both before and during the process.

What factors influenced the way I was feeling thinking or responding?

During the process the nature of the document I was working on had an impact on my feelings towards the programme. The exploratory nature of determining the research topic and the consequent critical literature review were possibly less pressured and more enjoyable. During the course of the critical literature review my interest in the nature and use of the term business model grew and gaining a better understanding of business models, their use and possible location in the management landscape was the most exciting part of the programme and an area which I would like to continue researching. In addition, the directness of the relationship or relevance of the document to my role as finance director also impacted on how I felt at points in the process and the feeling of success or failure when a problem was encountered and resolved.

What knowledge informed or might have informed me?

An example of where I underestimated the value of part of the structure of the DBA lies in the creation at a very early stage of support groups. Although geography construed to make some meetings difficult I believe that I missed a genuine opportunity through using the knowledge, not in the sense of answers to my particular questions but perhaps more debate, encouragement by and the peer pressure of, my fellow students. This aspect whilst difficult to nurture does have a powerful supportive and energising potential. Translating this into the workplace will be equally rewarding and challenging.

Prior to starting the DBA, as noted in the objectives section above, my previous learning helped shape not only my desire to undertake the DBA but also shaped my responses to the elements I experienced whilst undertaking it. During the process the reinforcing nature of the programme meant that not only was my “pre DBA learning” aiding my progress but was supplemented by my “previous in DBA learning.”

To what extent did I act for the best and in tune with my values?

Until this reflection I hadn't really considered how my values impacted on the way I approached the DBA. I tried throughout the process to engage with the research with honesty and integrity. I feel that a conflict or ethical dilemma would be more likely if I were dealing with data of a more personal nature or creating primary data and felt that ethically there were no significant dilemmas in this piece of research.

How does this situation connect with previous experiences and how might I respond more effectively given this situation again?

I have referred earlier to how the DBA programme complemented my role in higher education for which the earlier elements of my development might be seen as preparing me to be able to attempt the DBA and might facilitate my further development of and in my role. Thus the DBA can be seen as part of an overall journey of development complementing earlier experiences and creating possibilities for new ones.

What would be the consequences of alternative actions for others and myself?

Alternative actions might be different approaches to undertaking research or doing something completely different. Imagining what I might have done differently in relation to the DBA and the possible outcomes of those different actions I am reminded of the film 'The Butterfly Effect' (2004) where a small change in one event leads to significantly different, and importantly unpredictable outcomes. Had I devoted more time to the DBA I might have been able to complete the programme within the suggested time frame but would I still be married? Perhaps a more disciplined and organised approach would have been helpful but would that style have led me to ask the same questions I did and follow the same path? I think not.

Implied I believe in the question is what would I now have done differently to improve the process or the outcomes. One thing I would consider doing differently would be to engage more with the group we were assigned to at the beginning of the programme. Whilst we met a number of times to encourage each other I think it would have been much more helpful if we discussed some aspects our research in more depth. For my part in the early stages I feel a lack of confidence in what I was doing, particularly with two of the group being part of the business school faculty,

made me a little reticent to share the details of my work. Later I had left the business school and moved to York St John University, another member had moved to North East Scotland effectively bringing the group to an end.

2.6 Reflective cues 14 -16 Learning

How do I feel now about this experience?

The DBA experience has been something of a roller-coaster. The initial excitement of having applied for, been accepted onto and defining my research area contrasts with the trepidation when confronted by an academic style and a vocabulary that might have been Greek. Typically as I began each document there was an initial excitement coming from the anticipation of the new. Searching for articles and gathering data was very enjoyable. At times considerable effort was required to stop reading a little bit more or stop searching for another article that might just contain that inspirational sentence that opened up a difficult concept or sparked a new thought. The process of synthesis and creation was patchier. The struggle to make connections between disparate data was difficult and sometimes disheartening but was more than offset when even the faintest glimmer of possible new sense in the data was felt. Most of the time the initial high was tempered as the newness of the new sense became visible as more a different way of viewing an already known known and thus eventually not a new sense at all.

Am I more able to support myself and others as a consequence?

The DBA has allowed me to engage, not only with the academic process, but also the academic and literature in areas both directly relevant and less so, to my role as a finance director. I have spent time reading, thinking and writing about areas which I hope have enhanced my ability to contribute to the success of my institution and found the engagement with the business model literature to be the most enjoyable part of the research. The slow recognition of business models as an important tool, but ultimately a reworking or repackaging of existing concepts and developing a relationship with strategy, was very satisfying and has helped me better discuss and inform the creation of our institutional plans. The recognition of the validity of the use of different language i.e. 'business model', as appropriate to the context, born from

the e-boom, was important as was the idea of dynamic, changing or evolving business models as an idea to express the link between business models and strategy.

I found developing a conceptual framework for a business model and relating it to strategy was useful in that it made me think more about the use and usefulness of strategic planning in higher education. The strategy map produced by Leeds University (Leeds, 2006) has or refers to a number of the elements of a business model such as value propositions with stakeholders, including staff, students and research sponsors. This overlapping and intertwining has helped me to better understand the role of mechanisms or tools such as strategy maps and business models as means of expressing simple, but difficult to successfully manage, underlying relationships. The language of the tools is reinvented, the structures represented in new formats, and the perspective sometimes alters but the nature of the underlying issues seem to remain constant. This combined with a view that focussing on outputs, whilst inherently more difficult to measure than inputs in the social sector, might lead us to experiment and do rather than polish increasingly more intricate plans.

Having looked at a large number strategic plans and discussions of business models I feel I have a better sense of the responses of institutions to external stimuli. This has allowed me to be more focussed and attempt to refine my own institution's plans, at least for my self, and create a more coherent articulation of them. This might also be an instance of a glimmer of a new sense which isn't. Whilst my current institution had a clear and widely understood objective to achieve university status, subsequent to the achievement of this a new articulation the institution's strategic aims needs to be created. Working on the DBA programme has meant I have been able to better able to consider this and contribute to discussion within the institution. My sense is that the university having consolidated onto and invested significantly on one site now needs to consider options other than simply continuing the investment in infrastructure and look at institutional positioning both in academic offering and institutional networks both of which can be considered in terms of value propositions and . Whilst this may be accepted or rejected in whole or in part I believe my participation in the DBA programme has better placed me to both develop and articulate these views.

Aside from the content aspects of the DBA process my engagement with the process has given me a view of the academic world from a different perspective and thus I hope informs in a positive sense my interaction with academics at my own and other institutions allowing for more productive relationships.

Am I more able to realise desirable practice monitored using appropriate frameworks such as framing perspectives, Carper's fundamental ways of knowing other maps?

I have not engaged with Carper's ways of knowing and therefore will not be discussing this part of the question.

Reflection as a frame analysis was discussed in Jay (1999) as part of a spectrum of reflection: as problem solving; as a frame analysis; as a bridge between theory and practice; and lastly as a way of being. Reflection as a frame analysis sets the reflection in the context of the assumptions that positions the reflector and views those reflections against that background. Thus the reflection becomes more than a reflection on the experience but also reflects on the assumptions through which the experience is viewed and felt. The researcher at the early stages of reflection has not actively engaged in reflection as frame analysis for this piece of reflection.

At the end of this the last document in what has been a journey both for me and my family I feel that the experience has been extraordinary, exhausting and increased my admiration for all students struggling to learn whoever and wherever they are, for the teachers who guide them and the families, (mine in particular) who support them.

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