

**DYNAMIC MANAGERIAL CAPABILITIES: THE CASE OF
INTERNATIONAL STUDENT RECRUITMENT AT THE UK
HIGHER EDUCATION INSTITUTIONS**

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**DYNAMIC MANAGERIAL CAPABILITIES: THE CASE OF
INTERNATIONAL STUDENT RECRUITMENT AT THE UK
HIGHER EDUCATION INSTITUTIONS**

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of the
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Declaration and Statement

I declare that I have not, whilst being registered for the PhD program in Manchester Metropolitan University, been a registered candidate for another award of a university.

The material in the dissertation has not been used in any other submissions for an academic award.

To my parents

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ABSTRACT

The thesis explores and examines the role of dynamic managerial capabilities as they apply to the international student recruitment efforts at The United Kingdom Higher Education Institutions (UK HEIs). Although dynamic capabilities literature has attracted a fair amount of attention, the relationship between the dynamic managerial capabilities and firm performance have been under-explored in prior research, in particular in the context of UK HEIs. This study affords an opportunity to forge a link between theory and practice.

The study takes a mixed methods research approach to data collection. First, a large panel data set was acquired from the Higher Education Statistics Agency (HESA). The dataset was refined by focusing on 100 UK HEIs with students from 100 countries studying within 15 subject disciplines. This is then substantiated with research, student employability and student satisfaction rankings data. Furthermore, a survey of middle to senior managers responsible for internationalisation from 165 UK HEIs produced a response rate of 20% ($n = 31$). Fourth, a large British university is selected for interviews and qualitative data collection. Middle to senior managers were interviewed using semi-structured interviews ($n = 10$) to assess how they sense the need for change and to determine some of the mechanisms used in opportunity recognition and capture.

While the results confirm the importance of resource-based explanations when assessing the performance of UK HEIs. In that founding history, university rankings, reputation and location are key determinants, especially for the Russell Group universities. The results indicate that dynamic managerial capabilities, as latent variables, are also important. Within-group performance differences exist despite the degree of resource parity. Evidence was mixed in respect of the effectiveness of dynamic managerial capabilities in the international function; with some respondents claiming that intervention from senior management teams is often limited in their effect.

The thesis is one of a small but growing number of empirical studies on dynamic managerial capabilities. In keeping with other studies in this emerging field, it has had to face several methodological challenges. The mixed methods approach is used as one means of meeting some of these challenges.

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1. INTRODUCTION

Dynamic capabilities perspective is an important and influential construct in strategic management research. However, this concept is often criticised for lacking conceptual clarity and empirical grounding to support and advance the theory building process (Arend and Bromiley, 2009; Easterby-Smith *et al.*, 2009; Peteraf *et al.*, 2013). Despite this, the research has advanced and, in this process, have produced a plethora of definitions and orientations. The research on dynamic capabilities is largely informed by two seminal papers; first by Teece *et al.* (1997) and second by Eisenhardt and Martin (2000). Another important research stream is organisational routines (Nelson and Winter, 1982; Zollo and Winter, 2002; Helfat and Peteraf, 2003). On a contrasting note, dynamic capabilities perspective emphasise that dynamic capabilities are “higher-level competences that determine the firm’s ability to integrate, build, and reconfigure internal and external resources/competences to address, and possibly shape, rapidly changing business environments (Teece, 2007, 2010; Teece *et al.*, 1990, 1997)”. Whereas, organisational routines literature suggests that slow and adaptive change can make organisations efficient (Cohendet and Simon, 2016) and offer certainty (Feldman *et al.*, 2016).

The intention behind this research project is to give rise to the dynamic managerial capabilities perspective as the key driver behind strategic growth of international student recruitment at the UK HEIs (Helfat and Martin, 2014). This objective is achieved by the use of a large dataset of 100 largest (by student number) higher education institutions in the United Kingdom (UK HEIs) with students from 100 countries studying for 15 subjects. This is further strengthened by research, employability and student satisfaction ranking data. This is followed by a survey data collected from mid to senior managers at 31 UK HEIs (20% response rate) followed by one fine-grained case study at a large British university. Such sampling and mixed-methods research approach will help understand and uncover true dynamics of these research streams that are put to the test before the strategic change that informs the international student recruitment trends at the UK HEIs.

This chapter starts with a critical review of extant research on dynamic capabilities with a view to give rise to the role dynamic managerial capabilities and to motivate the research process. First, dynamic managerial capabilities and dynamic capabilities research stream are briefly presented to position the research. Secondly, this research contributes to knowledge and theory in the broader field of strategic management, in particular, dynamic managerial capabilities. Third, research aims and objectives are highlighted to guide the research path. This leads to a detailed view of the research process highlighting research journey, access negotiations and data collection, data processing and data analysis. Fourth, the current state of the UK HEIs and their internationalisation activities are presented to understand what make an HEI a truly international as compared to another and this is further elaborated in the data collection and analysis chapter. Finally, thesis outline is produced that offers a logical structure to this research project. Conclusively, a thesis summary is presented that summarises key points in this chapter.

1.1 Background to the research

Primarily, the research around the concept of dynamic capabilities revolves around two main clusters (Peteraf *et al.*, 2013). First cluster of research is largely informed by and built as an extension to the resource-based view (Barney, 1991). According to resource-based view, firms are bundles of tangible and intangible resources that are heterogeneous in their nature and if applied in a sustainable fashion are immobile. Thus, firms may benefit from their heterogeneity. A further extension of this research is informed by a seminal article by Teece *et al.* (1997) in which they inform that it is not only the heterogeneity of the resource base that is useful, if firms can reconfigure the resource base in accordance with the rapidly changing environment, they can outperform competitors. This claim is centred on the belief that internal factors such as intangible, inimitable resource bundles and asymmetric configurations of routines, processes, and activities are the source of performance differences between firms rather than superior product market positions or other external influences. In a

recent debate, Teece (2007; 2010) stated that dynamic capabilities largely depend on opportunities sensing and seizing capabilities and keeping pace with rapidly changing environment rather than being focused on technology, strategy and firm performance (Teece *et al.*, 1997). While the research driven by sensing, seizing and transforming capabilities framework is interesting, this has been further strengthened the introduction of dynamic managerial capabilities extensions put forward by Helfat and Martin (2014). This research stream has also given rise to a plethora of definitions and orientations, and the framework has recently been extended in an attempt to unravel the forces that might sustain competitive advantage at the national level (Pitelis and Teece, 2016).

The second research cluster is centred on the work of Eisenhardt and Martin (2000) and their focus on organisational design and contingency theory (Davies *et al.*, 2016). The authors maintain that dynamic capabilities are dichotomous and that this duality depends on the degree of change and uncertainty in the market. In stable and moderately dynamic markets, change is frequent, however at this level firms find it easier to predict the level of change and respond accordingly. According to Davies *et al* (2016), dynamic capabilities, in such environments, are usually an output of tacit knowledge, are experiential products, and are endogenous that are consistent routines and that these qualities are built over longer periods of time. These antecedents address continuous, repetitive, ambiguous conditions. In rapidly changing markets, change is unpredictable and unforeseeable; however, the response to change is evolutionally and continuous. Inasmuch, dynamic capabilities are fragile with continuously unstable properties and depend on simple routines, structural principles, real-time learning, and improvisation to master rapidly shifting, unpredictable, and emergent situations (Eisenhardt and Martin, 2000; Eisenhardt and Sull, 2001; Danneels, 2002, 2008). Dynamic capabilities can be defined as managerial capabilities that address this rapid change.

Third, an important research cluster is organisational routines, although it has not been directly linked to the dynamic capabilities agenda, it has received deserved

attention in the literature by Helfat *et al.* (2007), Zollo and Winter (2002), Teece (2007) and Eisenhardt and Martin (2000). Feldman and Pentland (2003) and Pentland and Feldman (2005), Stene (1940) and Pentland and Feldman (2005) view organisations as routine driven entities in which they carry out given tasks in repetitive and recurring fashion and in doing so they do not deviate from mandated guidelines and standard operating procedures. To achieve this, the firms use standard operating procedures, manuals, artefacts, work logs and databases that can provide a convenient archival trace of performed tasks (Pentland and Rueter, 1994). This interpretation of routines is out dated, as the concept is no longer regarded as repetitive but as generative occurrences (Pentland *et al.*, 2012) that provide certainty across organisations (Feldman et al, 2016).

The overarching framework by Teece (2007) and Leih and Teece (2016) address how firms sense and seize opportunities and change operational routines accordingly. In the study of model changeover at Toyota, Adler *et al.* (1999) emphasised the importance of dynamic managerial capabilities. They concluded that dynamic managerial capabilities change operational routines, improve performance and discard bureaucracy that usually impedes the organisational routines on one hand and hampers the shift between efficiency and flexibility on the other hand. According to Feldman and Pentland (2003), routines are self-learning and evolutionary mechanisms, in which actors learn, iterate, and perfect processes and actions. Organisational routines help firms accomplish daily tasks and get them through day-to-day tasks. However, Feldman and Pentland (2003) have not recognised that organisational routines may turn to into inertia leading firms to freeze in time (Lewin, 1989). For firms to avoid such stagnation there has to be some level of higher-level intervention as an impetus for change, namely dynamic managerial capabilities.

At large, dynamic capabilities literature addresses the importance and relevance of processes, knowledge and assets orchestration and reconfiguration in organisations. To address such issues, scholarly debates have been concerned with the role of managers as drivers of strategic change as identified by Adner and Helfat (2003) and

underpinned by managerial cognition (Huff, 1990), managerial social capital (Burt, 2009) and managerial human capital (Becker, 1964). This highlights the importance and timely need to give rise the phenomenon of dynamic managerial capabilities as key driver for change that improves performance and enhances efficiency.

1.2 Statement of the research gaps

First, a comprehensive literature review reveals a plethora of theories and frameworks e.g. industrial organisational model (Porter, 1980), resource-based view (Barney, 1991), and game theory (Dixit, 1980) that attempt to explain how firms deal with and introduce strategic change. These theories and frameworks have fallen short to understand how firms exercise dynamic capabilities (Teece *et al.*, 1997) and change routines (Eisenhardt and Martin, 2000). Both theoretical and empirical studies confer how dynamic capabilities remain sketchy and are a subject to debate (Helfat and Martin, 2014). Second, organisational routines literature is rich and focused in empirical settings and suggest that the organisational routines are the source of stability, certainty and that the change is slow, adaptive, evolutionary and iterative process (Feldman and Pentland, 1994; Pentland and Rueter, 1994; Pentland and Feldman, 2005; Pentland *et al.*, 2012; Pentland and Hærem, 2015; Feldman et al, 2016).

To understand the development of dynamic managerial capabilities at the strategic level, it involves a thorough identification and understanding of capabilities of entire firm functions and not only of a single function. Firms engaging primarily in actions at functional level alone are likely to find it difficult to implement strategic change and to take advantage of opportunities emerging from daily activities at lower firm-levels (Miner, 1990; Feldman, 2000). However, dynamic capabilities and organisational routines literature streams have not been brought to the empirical testing as one unit where the distinct set of literature go through empirical setting. In this case, this study leverages on this research gap and offers multi-methods empirical investigation to understand the interplay between the dynamic managerial capabilities and organisational routines.

Rindova and Kotha (2001) note that the utility of dynamic capabilities is focused on functional capabilities like manufacturing and supplier relationships. Similarly, Marino (1996) notes that although many tools have been developed for identifying functional capabilities, frameworks for analysing dynamic managerial capabilities at the strategic level are few. Moreover, few studies that describe the creation of dynamic capabilities at the strategic level are largely conceptual (Teece *et al.*, 1997; Eisenhardt and Martin, 2000; Zollo and Winter, 2002; Bowman and Ambrosini, 2003; Zahra *et al.*, 2006; Zott and Amit, 2007). Furthermore, no studies exist that highlight the link dynamic managerial capabilities and organisational routines using multi-methods research approach. Such application of these conceptual theories and frameworks in supplementing extensive empirical research into the process of creating dynamic capabilities at strategic level for firm performance has been questioned. Researchers such as Mosakowski (1997); Williamson (1999) and Priem and Butler (2001) have challenged the dynamic capabilities concept as tautological, endlessly recursive, and non-operational. They argue that the concept lacks empirical grounding and insights into the mechanisms through which firms achieve competitiveness and outperform competitors.

The literature presents many inconsistencies and terminology ambiguities. Theorists have used concepts such as resources (Grant, 1996; Eisenhardt and Martin, 2000), assets (Wernerfelt, 1984; Barney, 1991; Wernerfelt, 1995), competences (Hamel *et al.*, 1989), and capabilities (Kogut and Zander, 1992) in a rather liberal manner and at times different meanings are attached to the same concept (Hamel *et al.*, 1989; Barney, 1991; Kogut and Zander, 1992). These terminological ambiguities, in part, stem from the fact that the dynamic capabilities concept is far from a coherent perspective (Easterby-Smith *et al.*, 2009). Such inconsistencies arise from the lack of adequate empirical grounding of the holistic processes through which firms develop dynamic capabilities and apply them to alter organisational routines. Largely, detailed literature review suggests that dynamic capabilities concept has been criticised as vague, tautological and has not been able to offer sound empirically grounded evidence; hence the plea for more research. This research makes a small

contribution by examining the role of dynamic managerial capabilities as the key driver of strategic change in the context of international student recruitment at the UK HEIs.

1.3 Contributions to the literature

This research makes three main contributions to knowledge: (1) it makes a contribution to theory using a sound and critical review of extant literature about dynamic managerial capabilities and organisational routines. This objective is achieved by isolating these concepts in their own right and avoid overlapping. This is achieved by identifying four key constructs, such as dynamic managerial capabilities, organisational routines, knowledge and capabilities. (2) The identified key constructs go through empirical verification using highly sophisticated and sound dataset of 100 most international UK HEIs, research, employability and student satisfaction rankings data, a survey of 31 UK HEIs (20 % response rate) and interview data from a large British university. These efforts are aimed at finding and addressing the drivers of international student recruitment growth at the UK HEIs. This is useful in two ways; first, this is a good and sound fit to bridge the research gap in the literature through empirical setting, and second, this study offers an insight into the international student recruitment at the UK HEIs for academics and practitioners. (3) This study contributes to the mainstream strategic management literature; in particular, an attempt is made to highlight the interplay between the dynamic managerial capabilities organisational routines using empirical testing. This study may be used as referral point by the mid to senior manager at the UK HEIs.

1.4 Research aim and objectives

The preceding sections discussed the background to this study, the gaps within the dynamic capabilities and organisational routines literature as they relate to this study and the proposed contributions. Drawing on the dynamic capabilities literature, this thesis seeks to add to our knowledge how dynamic managerial capabilities, as latent variables (proposed by Grant and Verona, 2015), effect the UK HEIs' international student recruitment efforts. In doing so, the overarching research aim is to examine

the intersection between dynamic managerial capabilities as continuous morphing and organisational routines as it relates to international student recruitment at the UK HEIs. To fulfil the research aim, the following objectives were formulated:

- To critically evaluate literature on dynamic capabilities and organisational routines and delineate the connections between them;
- To advance a concept of dynamic managerial capabilities;
- To advance and test a set of hypotheses about the role of dynamic managerial capabilities;
- To produce three interrelated data sets, ranging from large data set from HESA, rankings data and survey data that would constitute reliable and valid tests of the identified hypotheses and interview data;
- To reveal the distinctive function of dynamic managerial capabilities in explaining performance variations among UK HEIs concerning international student recruitment;
- To contribute to the theoretical and empirical literature on dynamic capabilities and organisational routines by introducing an intervention mechanism that is endogenous to the system of dynamic capabilities and exogenous to the system of organisational routines;
- To contribute to strategic management policy and practice in the UK HE sector in the context of international student recruitment

Based on the research aim and objectives, the following research questions are identified:

- What is the influence of dynamic managerial capabilities to improve performance?
- What is the relationship between dynamic managerial capabilities and performance in the UK HEI context (in relation to international student recruitment)?
- What are the relationships between dynamic managerial capabilities, organisational routines, and performance?
- When dynamic managerial capabilities change organisational routines, what is the mechanism that drives the change?

1.5 The research process

This study begins with the set-up of the research, which consists of introduction, the research problem and research questions. This involves preliminary literature review of carefully selected academic literature about dynamic capabilities and organisational routines. The literature focuses on the broad areas of dynamic

capabilities and organisational routines. The next stages are the selection of research philosophy, strategy, and tools for data collection and analysis. Finally, the process of how dynamic capabilities exert their influence on organisational routines is explored using a mixed-methods (quantitative and qualitative) research approach. Quantitative data is collected from 100 most international UK HEIs; this is accomplished in the form of large dataset followed by rankings data. This is followed by survey data collection from 31 UK HEIs; respondents are mid to senior managers responsible for internationalisation of their institutions.

Qualitative data is collected from mid to senior managers at a large British university. Semi-structured interviews are used for data collection, supported by documentary evidence, archival data, strategic planning reports, HESA and other publically available material on HEI's website. Ten interviews are conducted. The interviewees were the deputy vice chancellor and international director of a large British university, who champion the internationalisation agenda. In addition to this, seven Associate Deans for International are interviewed. The interviewee selection is based on theoretical sampling. The data is analysed using the constant comparative method and theoretical comparisons of joint coding and analysis, during which, the objectives of the study are delineated. During data analysis, literature about dynamic capabilities and organisational routines is reviewed and data is compared to the literature to synthesise the emerging theory. The final stages of research are to derive findings and conclusions of the study. The findings highlight that deployment of dynamic capabilities involves both internal and external development approaches that are both planned and emergent, and they rely on several key resources and activities.

1.6 The research context

The UK Higher Education Institutions have long been involved in internationalisation activities through various channels, i.e. international collaborative research (Adams and Gurney, 2016), branch campus, joint and dual degrees, articulation, franchise, validation, transnational education (TNE) and international student recruitment

(Baskerville, 2013). International student recruitment in particular is beneficial regarding economic, academic and cultural contribution it makes to the UK (Pollard *et al.*, 2014). It is estimated that the UK HEIs' benefit from an income of £8.8 billion as direct fees from international student recruitment. In addition to this, international students make an estimated contribution of £5.1 billion per year towards the economy in terms of housing and related expenses (universitiesuk.ac.uk, 2012; Conlon *et al.*, 2011). It is only recently that there is renewed interest to internationalise the UK HEIs to full extent. This is the result of internationalisation of education and curriculum, internal pressure from the Higher Education (HE) sector to explore and exploit available opportunities, a shift in the higher education funding and the UK government's calls for HEIs to do more regarding internationalisation of the HEIs. One prominent indicator of how international the UK HEIs are, is the enrolment of non-UK/EU students in the UK HEIs (Bolsmann and Miller, 2008), the focus of this study.

For panel data, this study covers the period of twelve years to understand the change in international student recruitment at 100 UK HEIs for the students studying for fifteen subjects from 100 countries. Total student recruitment at the UK HEIs have remained the same for the levels of 2006/07, whereas the international student recruitment has witnessed a rapid increase that took international student numbers up by just under 100,000 for the same period compared to the total student recruitment. Despite the rapid rise in international student recruitment, the distribution across the HEIs has been uneven with some HEIs being highly successful in attracting international students while other losing out. For example, The University of Manchester has been able to attract the highest number of the international student over the period of twelve years, whereas Manchester Metropolitan University has attracted far less international students as compares to the former (HESA, 2015).

1.7 The structure of the thesis

Following the introductory chapter, Chapter Two reviews the extant literature on dynamic capabilities and organisational routines to set out the known and to identify research gaps worthy of empirical enquiry. The first part of the chapter examines strategic change in organisations followed by an extensive literature review of organisational routines, a review of dynamic (managerial) capabilities then follows. This involves an analysis of the basic assumptions, components and limitations of both organisational routines and dynamic capabilities and how these limitations pave the way for the development of dynamic managerial capabilities, the effect they have on organisational routines yet leaving a considerable research gap with an opportunity to investigate the missing link. A presentation of dynamic capabilities concept focuses on its definition, origin, difference between variation in capabilities and dynamic capabilities, features and limitations.

Chapter Three presents theoretical framework and hypotheses development. It starts by outlining the three aspects of the presented framework. Here I postulate that UK HEIs' routines reside within the broader environment, this is followed by the argument that dynamic managerial capabilities shape and change organisational routines related to international student recruitment at the UK HEIs. This is followed by a framework that clarifies and bring up the major features of dynamic managerial capabilities in linking to organisational leadership. Chapter three further progresses by motivating hypotheses that are deployed in the analysis to assess why there are substantial and sustained performance differences in the recruitment of international students across the selected sample of the UK HEIs.

Chapter Four presents the research design. The first part of this chapter presents research philosophy, interpretive philosophy, specifically the realist philosophy. The second part of this chapter, research design, discusses the quantitative research strategy and makes a case for panel, rankings data and survey data as the necessary tool for this empirical enquiry. This is then followed by the justification of qualitative research strategy, and in doing so, I consider major concerns of qualitative methods,

different types of qualitative and quantitative methods, and why the mixed-methods approach is selected for this research. Furthermore, it discusses how to achieve the research objectives using mixed-methods approach. This chapter discusses in detail the discovery, nature and research methods used in this research and provides justification of each.

Chapter Five presents data analysis and findings. It begins with presenting substantive findings from HESA panel data; this supports the notion that there are profound differences in the international student recruitment across and within the UK HEIs. This is followed by the presentation of survey data findings. On a final note, finding from qualitative data acquired from mid to senior managers at a large British university. The quantitative data findings are discussed with an extensive theoretical discourse supported by illustrations from interviews. It explains the components of theory: the reasons why and how certain UK HEIs develop dynamic managerial capabilities, the key resources required for developing such capabilities, the development approach, strategies adopted, the main activities, and learning as an intervention mechanism for deployment of dynamic capabilities and how they affect organisational routines

Chapter Six presents the discussion of analysis and finding of HESA panel data, survey data and interview data. This chapter summarises the information collected and formulated during the research project, with particular reference to the findings from the case study at a large British university and quantitative data from the UK HEIs. At this stage, the identified research gaps are addressed followed by evaluation of the fulfilment of research aims and objectives.

Chapter Seven make a case for contributions of research and its implications for academics, practitioners and policy makers. It begins with theoretical contribution where the identified theoretical gaps are addressed. In particular, theoretical contribution to the organisational routines and dynamic capabilities are highlighted. This leads to addressing the implications of this research for mid to senior managers

across the UK HEIs with an intention to make robust contribution and recommendations for HEIs internationalisation policy. Conclusively, research limitations and future opportunities of research are highlighted.

1.8 Summary

This chapter provided a brief overview of dichotomous research about dynamic managerial capabilities and organisational routines. In this, two schools of thought are identified and selected for further investigation with a view to distinguishing that dynamic capabilities are not primarily aimed at the attainment of competitive advantage, instead, they are central to the direction and leadership of an organisation in moderate to dynamic environments. This is followed by highlighting dynamic managerial capabilities as powerful mechanism that shape and/or change organisational routines literature to debate that is acknowledged to some extent but not perceived as largely integral to dynamic capabilities debate. This study aims to address this issue and attempts to establish a relationship between dynamic managerial capabilities and organisational routine. This is followed by research background, the justification for the study, research gap, research questions, aim and objectives, research process, and thesis outline.

2. LITERATURE REVIEW

2.1 Introduction

Dynamic capabilities literature has evolved over the past 20 years, though its antecedents go back much further; it is vast and is located in different domains. The research stream has largely remained conceptual with few studies offering the empirical evidence that would reveal the dynamics and core foundations of dynamic managerial capabilities. Organisational routines, on the other hand, has been empirically tested using case studies and field observations in an attempt to unpack how organisational routines evolve (Feldman, 2003). According to (Winter, 2003), dynamic capabilities are macro routines while organisational routines reside at the micro level, in this, the former has the power to influence the latter. This study focuses on three major issues located at the centre of this research. First, how dynamic managerial capabilities change and shape routines. The second issue is related to endogenous and exogenous change. The study takes the view that routines (or actions) change and that they are not to be perceived as inert practices, instead they are endogenously dynamic actions, yet, on closer inspection, they reveal 'temporal patterns' (Feldman, 2016). Third, how routines as actions effect the environment in which they reside and are effected by the shift in that environment, particularly the industry context. This leads to the issue of change that stems from the external environment. To what extent will an endogenously changing set of actions maintain organisational fitness levels in disruptive and high-velocity environments or moderate environments? Does it take interventions that are exogenous to the process of situated actions to maintain fitness levels in dynamic environments? This chapter generates emerging arguments that the change in industry context requires input from dynamic managerial capabilities and that endogenously changing routines or action patterns by themselves are not sufficient to introduce strategic change.

The chapter begins with a brief overview of change and stability; this set the scene for the forthcoming sections of the chapter where an attempt is made to answer the long-asked question about what are dynamic capabilities? In doing so, this section provides an overview of extant literature and identifies the key contributors to dynamic capabilities debate. This then leads to a brief overview about organisational routines and set the scene about how routines are subject to change resulting from dynamic managerial capabilities. Although it is accepted that organisational routines are base-line firm level constructs important in carrying out day-to-day tasks, they take shape and change through intervention by dynamic managerial capabilities. Section 2.3 starts with a critical review of the literature on dynamic (managerial) capabilities. This then leads to section 2.3.1 where an effort is made to critically examine what is known in dynamic capabilities' domain. This is followed by section 2.3.2, here the precedence of dynamic managerial capabilities is highlighted as an important organisational mechanism having an impact on the way organisational routines are designed, executed and change.

Section 2.4 set the scene about organisational routines. In section 2.4.1 organisational routines and interdependence are put forward followed by section 2.4.2 that discusses recent controversies about organisational routines are explored at length. Here recent controversies on organisational routines literature are brought to the fore. Section 2.5 put forwards a synthesised view of dynamic managerial capabilities and organisational routines. Section 2.6 highlights the managerial intervention as key driver for change in organisational routines. Section 2.7 puts forwards the notion of reputation as a function of dynamic managerial capabilities. Finally, a summary of the chapter summarises key arguments and debates that make way for theoretical framework.

Although dynamic capabilities and organisational routines research streams have made significant contributions to the literature in their own domain, they have left open a gap. The interplay between the two research streams is not fully explored and empirically verified as one unit. In what follows, I attempt to redefine dynamic

capabilities by drawing a clear distinction between dynamic capabilities and organisational routines.

2.2 Change and stability

2.2.1 Change

Strategic management is concerned with why firms are different i.e. why durable performance differences are observed and how these differences can be sustained for some but not for the others. The latter has gained significant attention in the scholarly domain. Research on this issue has focused on firms that operate in relatively competitive environments or in hyper-competitive environments. Building on the heels of RBV (Barney, 1991), which is primarily concerned with resources immobility and heterogeneity as sources of sustained competitiveness, Teece *et al.* (1997) proposed dynamic capability view. This perspective has helped understand how firms shape, re-shape, configure and re-configure the resource base to respond to the changing operating environment (Teece *et al.*, 1997; Eisenhardt and Martin, 2000). Dynamic capability view differentiates itself from operational capabilities, routine-like behaviour (Helfat *et al.*, 2007). It focuses on the top management teams and their collective efforts and beliefs as key elements in the creation of new resources (Zahra and Nielson, 2002), altering the existing resource base (Amit and Schoemaker, 1993) and asset orchestration (Teece, 2000). This is supported by the development of dynamic capabilities, by which, the top management teams have the ability to exert influence on the firms' resource base (Rindova and Kotha, 2001). This thinking is present in other studies, which promote the firms' ability to sense the need to reconfigure its asset structure and to accomplish the internal and external transformation. Indeed, it is to do with managerial decision-making and optimal configuration of assets.

The strategic management literature (Zollo and Winter, 2002; Easterby-Smith *et al.*, 2009), see cognition (Edmondson and Moingeon, 1998) and innovation. (Teece, 2006); Jantunen *et al.* (2012) as key constructs for to achieve sustainable growth. In

particular, dynamic capability perspective outlines how firms can persistently change their resource base over time and respond to the change in the market. This line of thinking has produced overwhelming interest in the topic, which has helped the concept to evolve at a rapid pace. At the same time, this overwhelming interest has caused some confusion and resulted in a terminological flotilla in the literature (Dosi *et al.*, 2000). Google Scholar citations index reports that Teece *et al.* (1997) seminal paper has been cited by 24,180 articles and another seminal paper by Eisenhardt and Martin (2000) has been cited by 10,697. Teece (2007) presents that dynamic capabilities relate to high-level activities by the managers' ability to sense, seize and transform opportunities, navigate threats and combine and reconfigure specialised and co-specialised assets and resources to meet changing market needs.

Dynamic capabilities view approaches competition in Schumpeterian terms (Teece and Pisano, 1994). In this, firms at one level compete for product design, product quality, and process efficiency and constantly seek to renew combination of resources to address the change (Guth and Ginsberg, 1990). Firms do this by breaking away from routines (Nelson and Winter, 1982). In this light, dynamic capabilities are the subset of high-level competencies and capabilities that are aimed at adapting, integrating and reconfiguring internal and external organisational skills, resources, functions and competencies that target constant shift in the business environment (Augier and Teece, 2007). Firms cannot buy those competencies and capabilities but build them over time followed by their path and position.

Numerous peer-reviewed journals offer a broad understanding of dynamic capabilities, yet they remain conceptual with solid synthesis and elicit linguistic and philosophical boundaries (Wang and Ahmed, 2007). The role of top-management teams and how they exercise dynamic capabilities to address change is missing. In particular, empirical testing of dynamic managerial capabilities is underexplored. Since the evolution of this concept, the role of managers has rarely surfaced, hence the plea for in-depth case study to uncover the micro-foundations of dynamic capabilities and how they alter the operational capabilities (Teece, 2012). Helfat

(1997) highlighted the role of top management teams to aid the survival of firms in the 1970s oil crisis and subsequent plea for research and development in the sector. Similarly, Danneels (2011) amplified the importance of managerial intervention (capabilities) at a leading typewriter company. Some other authors brought the importance of top management team to the fore (Teece, 2007; Ambrosini *et al.*, 2009; Augier and Teece, 2009; Eisenhardt *et al.*, 2010), however, the research has remained mainly conceptual. Pandza *et al.* (2003) and Teece (2012) highlighted the need to address existing empirical gap and prescribed that a qualitative research, in particular, the case study can make a valuable contribution to the theory development.

This section provided a brief overview of the extant literature while identifying the key contributors. The remaining part of this chapter critically examines the previous literature on dynamic capabilities and organisational routines with a view to understanding the micro foundations for each and offer a synthesised view of both.

2.2.2 Stability

This section offers a brief theoretical overview of what are organisational routines and where they are stored in organisations. In their seminal work, Nelson and Winter (1982) dedicated an entire section that unpacks an important construct, knowledge. Performative routines are key repositories of knowledge in firms (Winter, 1995; Becker, 2003) that are aimed at offering workable solutions to daily tasks (Nelson and Winter, 1982; Castanias and Helfat, 1991; Grant, 1991; Teece and Pisano, 1994; Levitt *et al.*, 1999; Dosi *et al.*, 2000; Zollo and Winter, 2002; Hodgson, 2003). Routines that are stored in organisational memory have to earn their place as procedural knowledge. As such, they are accumulated over a long period; second, they are performed as recurrence to keep them abreast.

The history of routines can be traced to the 1920s, where routines are viewed as emotions and habits (Dewey, 1922; Cohen, 2007; Winter, 2013). To date, perhaps the most influential work on the concept of routines is that of Nelson and Winter

(1982). In this, the authors provided a deeper explanation of organisational behaviour; here routines are labelled as regular, recurrent and predictable firm patterns in which agents act like biological genes as heritable and selectable in given environments. Thus, routines provide the basis of the organisation's evolutionary change as opposed to selection and retention. Nelson and Winter (1982) employed individual skills to explain routines, and they suggested that routines are coordinated behaviours that function smoothly. Among many other research streams about routines, this study narrows down the research around what is known to be the most influential work by Nelson and Winter (1982) on routines. Routines can effect organisations in a number of ways such as coordination and control (Stene, 1940; Olsen and March, 1989; Gersick and Hackman, 1990; Coriat, 1995; Dosi *et al.*, 2000), *truce* (cognitive and governance (Nelson and Winter, 1982) whereby organisations elicit tight control over the behaviour of their members thus making its routine operations possible (Becker, 2004). This dichotomous approach of control and *truce* is described well by Barnard (1968) where organisations accomplish daily tasks without much intervention, i.e. the agents are under the cognitive assumption about the usual workload models and accept the orders without much questioning (Nelson and Winter, 2002).

Feldman (2000) observed (in-depth) organisational routines for four years at an housing organisation. The process started with formal but semi-structured interviews with 20 team members across different units. In the interviews, Feldman (2000) picked five key routines that were considered worthy of observation and attended every possible meeting and availed every opportunity to observe the routine activities performed by the agents involved in the processes across those units. The observed housing organisation cater for more than 10,000 single students and 4,000 families; the organisational hierarchy was simple and consisted of four tiers. The study concluded that routines do change yet stay the same. For a change in organisational routines, it was noted that there are various reasons why such complex routines would change. The reasons resulted in different outcomes. To start with, the routines change because the action taken by the agents do not always

produce intended outcomes. Second, some actions produce outcomes that lead to the new problem and new avenues of selection and retention that aim to offer solutions. Furthermore, the routines change because the performed actions sometimes result in outcomes that produce new resources, and therefore enable new opportunities. Finally, changes in routines are driven by the outcome produced as intended but the participants still see possibility for improvements that can be made. The study conclusively remarked that routines are not inert but are full of life of any other aspects of functional organisations.

This final note for introductory section unpacks and brings about clarity about whether routines are stable or changing. If routines recur without any intervention, they provide stability (Langlois, 1992; Hodgson *et al.*, 1994; Amit and Belcourt, 1999; Coombs and Metcalfe, 2002; Hodgson, 2003). This argument falls victim to the duality of routines. First, if routines can deliver satisfactory results then they are not to be changed or altered but be stable (Cyert and March, 1963). Second, change in a routinised activity comes at a price, the price is often of a monetary value or brings about new agents by replacing the existing ones, this as simple as it may sound, but it leads to delays in accomplishing daily tasks and derails the organisations until the new activities are routinised (Hodgson *et al.*, 1994). In either case, stability in organisational routines works as a baseline, against which proposed changes can be assessed for feasibility and viability. Some authors have equated routines' stability to inertia because routinised activities can still be carried out despite the feedback. Heiner's (1983) point is that routines and rule-guided behaviour being an optimum response to uncertainty is consistent with Eisenhardt and Martin's (2000) idea that highly uncertain and dynamic environments lead to 'simple rules' rather than the maximisation of flexibility. This type of flexible behaviour by the agents is preferred as opposed to the rule-like governed behaviours that may be rigid to some extent and may not be able to make substantial contributions to overall firm/organisational performance.

2.3 Dynamic capabilities

2.3.1 Dynamic capabilities – what are they?

Dynamic capabilities literature is largely traceable to the early works of Schumpeter (1934) about creative destruction and innovation-based competition, Cyert and March (1963) on behavioural theory of firms, on markets and hierarchies and asset security (Teece, 1982; Williamson, 1999), Penrosean view of firm (1959) and on the role of firm-specific asset and isolating mechanisms (Rumelt *et al.*, 1994). The dynamic capability view is usually viewed as an extension to RBV (Barney, 1986; Dierickx and Cool, 1989) core competence perspective (Hamel *et al.*, 1989) and knowledge based perspective (Grant, 1996). These theorists consider firms to be the bundle of resources that are heterogeneous in their nature and path-dependant in their processes and they address the way in which they allow firms to generate sustainable competitive advantage (Lockett and Thompson, 2004).

Teece *et al.* (1997) emphasise that dynamic capabilities are unique and path dependant processes of firms, i.e. they are built on what firms and managers already know about products, services and the operating environment. These (dynamic) capabilities are an important element in strategic management, which aim at adapting, integrating and reconfiguring internal and external resources and competencies to address change. It was reported that firms that were unable to adapt and reconfigure their resource and competency base to address the change in their operating environment were failing (Harreld *et al.*, 2007). Teece *et al.* (1997) elaborated on this concept in their earlier 1990 and 1994 papers and emerged as a breakthrough in the strategic management field. In this, they made specific claims that dynamic capabilities have the ability to address issues about how to sustain competitive advantage where the resource-based view falls short. In this, they define dynamic capabilities as the firms' ability to integrate, build and reconfigure internal and external competencies to address rapidly changing environments (Teece *et al.*, 1997).

Teece *et al.* (1997) understand that knowledge generated by routines is a prerequisite for dynamic managerial capabilities. They see firms as bundles of complex organisational routines, for example, Henderson and Clark (1990) associate these complexities with the fact that systems-level or 'architectural' innovations often require new routines to integrate and coordinate engineering tasks. Teece *et al.* (1990) working paper was the first paper to bring the concept of dynamic capabilities to the fore, this proved to be the catalyst for a research agenda in strategic management on how organisations can change their operational routines to meet the requirements of a changing environment. In this, they proposed a view of the firm that is somewhat richer than that of resource-based view. They argue that it is not only the bundle of resources that matters, but the mechanisms by which firms learn and accumulate new skills and capabilities, and the forces that limit the rate and direction of this process. Teece *et al.* (1997) contribution reignited the scholarly interest in this topic. In this, they put forward the key attributes of dynamic capabilities and associated the concept as closely linked to international firms and the firms that operate in high-velocity environments. These competencies and capabilities cannot be traded in factor markets, they are built over time and follow the path and positioning of the firm (Teece *et al.*, 1997). It has been only recently that the literature on dynamic capabilities has moved from conceptual to empirical testing and the role of top-management teams (dynamic managerial capabilities) has surfaced (Teece, 2007; Ambrosini *et al.*, 2009; Augier and Teece, 2009; Eisenhardt *et al.*, 2010).

Teece *et al.* (1997:516) define dynamic capabilities as “the firms’ ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments”. Dynamic capabilities open the door to the potential for inter-organisational learning (Doz and Shuen, 1988). The essence of a firm’s competence and dynamic capabilities is presented as being resident in the firm’s organisational processes. It is the firm’s development path (history) and assets (positions) that shape dynamic capabilities. Dynamic capabilities are often characterised as unique and idiosyncratic processes that emerge from path-dependence and histories of

firms. Contrary to Eisenhardt and Martin (2000), Teece *et al.* (1997) argue that dynamic capabilities are the key to competitive advantage. For example, if firms can acquire, build and practice dynamic capabilities they have the potential to outperform their competitors. Teece *et al.* (1997) argue that dynamic capabilities have two distinct features: first, the idea of 'dynamic' tackles the problem of renewal of competencies; and second, the idea of 'capabilities' emphasises that top-management management teams have a key role in shaping and determining the competencies of organisations. Dynamic capabilities have the ability to renew firms' competencies and improve performance, especially in dynamic and high-velocity environments. Three dimensions conceptualise dynamic capabilities: (1) positions, (2) paths, and (3) processes. Dynamic capabilities are viewed as the ultimate source of competitive advantage, helping to catapult these concepts to the forefront of strategy research.

Furthermore, Teece (2012) posit that dynamic capabilities are the product of hybrid entrepreneurship and managerial capitalism (Teece, 2009); they determine the speed of resource alignment and asset combination for positive returns (Teece, 2007). Entrepreneurial managerial capitalism would calibrate opportunities and diagnose threats and in doing so would direct resources according to policy or strategic plan of action. On the same token, it is important to note that dynamic capabilities are higher-level, strategic, critical to success, non-ordinary capabilities (Grant, 1996; Ambrosini and Bowman, 2009; Ambrosini *et al.*, 2009) that are practised by the top management teams (Williamson, 1999). They are the result of collective and time-consuming learning (Sitkin, 1990; Argote, 1999; Eisenhardt and Martin, 2000) in response to apparent shifts in the operating environment (Brown and Eisenhardt, 1997; Teece *et al.*, 1997). An important addition to this construct is that firms are not born with dynamic capabilities; they acquire them by continuously scanning the operating environment and in return make changes (Kogut and Zander, 1992; Pisano, 1994; Grant, 1996).

Dynamic capabilities are an important construct in organisational functions; they help organisations achieve given tasks (Eisenhardt and Martin, 2000; Zahra *et al.*, 2006). Once dynamic capabilities are developed, they are converted into routines (Cyert and March, 1963; Nelson and Winter, 1982; Zollo and Winter, 1999) this is where those routines become inertial (Eisenhardt and Martin, 2000) or generative (Pentland *et al.*, 2012). This depends on the actors' willingness to engage in a productive dialogue rather than to take side with the typical bureaucracy (Adler and Borys, 1996) and form the state of stagnation (Kaufman, 1977). For example, an agent involved in a given process can either spot an opportunity for routine iteration and use the feedback loop to make changes as a norm or the agent can carry out complying with standard operating procedure and manuals.

Indeed, the creation and the use of dynamic capabilities ultimately aim at introducing change (Teece *et al.*, 1997; Brown and Eisenhardt, 1998; Eisenhardt and Martin, 2000; Sull, 2005), improve productivity levels (Clark and Fujimoto, 1991), resource reconfiguration (Collis and Montgomery, 1995) and influence managerial ability to implement that change (Clark and Fujimoto, 1991; Helfat and Raubitschek, 2000). In this sense, organisational routines are driven by dynamic managerial capabilities, which have the potential and the power to reconfigure the firms' resource base by shedding idle or decaying resource to introduce virtually new substantive capabilities in new or existing markets (Sirmon and Hitt, 2009). In another argument, Eisenhardt and Martin (2000) state that dynamic capabilities, at some point in their lifecycle, become organisational routines, their evolution is triggered by knowledge management and learning processes. This exercise helps firms understand the given tasks in a detailed manner and to do it better (Argote, 1999).

There have been numerous attempts to answer, "what are dynamic capabilities", some definitions are agreed upon at great length, yet there is an outright contradiction, and the concept is riddled with inconsistencies and overlapping definitions (Salvato, 2003; Zahra *et al.*, 2006). Clearly, dynamic capabilities framework cannot be aligned to only rapidly changing technological environment as

suggested by Teece *et al.* (1997) it may as well fit environments which are not so rapidly changing (Eisenhardt and Martin, 2000). In search for sustained competitive advantage, purposeful deployment of dynamic managerial capabilities is a common research theme in strategic management, a concept that is brought to the fore in this study. The literature is clearly divided, where some authors believe that to have dynamic capabilities is simply to have a competitive advantage (Teece *et al.*, 1997), while others believe vice versa (Eisenhardt and Martin, 2000). It is apparent that if ordinary capabilities are not renewed or not pushed top-down to change or improve performance, they will decay and result in firm demise (Zollo and Winter, 2002). Perhaps the largest source of confusion is the lack of agreement about a definition of dynamic capabilities and the interplay between dynamic and operational capabilities.

Eisenhardt and Martin (2000) stress that dynamic capabilities are simple, highly experiential and fragile processes with unpredictable outcomes. They are the firm's processes that use resources—specifically the processes to integrate, reconfigure, gain and release resources—to match and even create market change. Dynamic capabilities thus are strategic processes by which firms achieve new resource configurations as markets emerge, collide, split, evolve, and die, somewhat similar analogy to that of Kogut and Zander (1992); Cockburn and Henderson (2000) and Amit and Schoemaker (1993).

Dynamic capabilities also rely on real-time information for effective and strategic decision-making (Eisenhardt, 1989; Judge and Miller, 1991; Baum and Singh, 1994), cross-functional relationships (Imai *et al.*, 1984) and intensive communication (Eisenhardt and Martin, 2000) among those involved in the process and with the external market. They are complicated (Nelson and Winter, 1982; Teece *et al.*, 1997; Simonin, 1999; Zollo and Winter, 1999), predictable (Helfat, 1997; Argote, 1999; Eisenhardt and Martin, 2000), analytic processes (Fredrickson, 1984) that rely extensively on existing knowledge and linear execution (Eisenhardt and Sull, 2001). They are simple (not complicated), experiential (not analytic), and iterative (not

linear) processes (Eisenhardt and Martin, 2000). They rely on the creation of situation-specific knowledge that is applied in the context of simple boundary and priority-setting rules.

When the change is envisioned and incorporated, dynamic capabilities are considered to be at the forefront in firms (Zahra *et al.*, 2006). It is the set of dynamic capabilities that help firms to routinise new or modify existing activities. Those activities are direct result of what has been distilled from top-management teams as they sense the need and urgency to take strategic actions to introduce change. On the contrary, if routinised activities do not hone capabilities, their value and input into the organisational functions become stable, hence negative impact on performance and the resource base. Standard or operational capabilities, such as those involved in production and distribution of existing products, reflect a firm's ability to perform basic organisational functions (Zollo and Winter, 2002; Helfat and Peteraf, 2003). In contrast, higher-level dynamic capabilities help a firm systematically and reliably adapt lower-level entities—mainly, routines and standard capabilities to dynamic environments (Teece *et al.*, 1997; Sapienza *et al.*, 2006; Helfat *et al.*, 2007).

Eisenhardt and Martin (2000) see firms as bundles of processes. However, there is some level of agreement; both consider knowledge generated by routines as an important functional element of capabilities that ultimately have the potential to confer competitive advantage. Organisational routines are considered as a core competence, collective skills, complex routines, best practices and organisational capabilities (Schreyögg and Kliesch-Eberl, 2007). Organisational competences and routines are important for organisations to make a living now (routine-like behaviour). Another level, higher-level, of routines practised by the top-management teams by contrast relate to high-level activities that link to the management's ability to sense and seize opportunities, navigate threats and combine and reconfigure specialised and co-specialised assets. Once assembled they have the ability to sense changing customer needs and to sustain and amplify evolutionary fitness to build

long-run value for investors on the one hand and sustained competitive advantage on the other. They are dynamic capabilities, higher-level routines.

To untangle the challenges such as innovation, value creation, performance and competitive advantage across micro (operational) and macro (dynamic) levels of analysis, it is necessary to break theoretical entities of routines and disintegrate those constructs into their component elements (Hoskisson and Hitt, 1990; Kozlowski and Klein, 2000; Aguinis *et al.*, 2011). Organisation studies have long neglected the fine-grained and multi-layered nature of routines to understand how they are important for firm survival and an important construct to achieve competitive advantage. Instead, they are often investigated as truncated, collective, recurrent entities, or “black boxes,” embedded in firms at micro or macro levels of analysis (Klein *et al.*, 1994; Foss *et al.*, 2008). Historically organisational routines are defined as complex analytical processes that extensively rely on existing knowledge, linear execution, and repetition to produce predictable outcomes at different organisational levels (Cohen *et al.*, 1996; Eisenhardt and Martin, 2000). To this extent, routines rely on existing knowledge; however, routines also generate tacit knowledge that goes unnoticed. This is because routines are, after all, micro entities; therefore, their contribution and emergence hardly surfaces. In line with this view, routines are the building blocks of capabilities, which are in turn viewed as being consciously developed and deployed to enable firm-level outcomes (Dosi *et al.*, 2000). Regardless of their position in the firm, routines embody organisational knowledge. This embodied knowledge is tacit and un-articulable, reducing its potential for codification and its dissemination across the organisation. This is because routines are generative (Feldman and Pentland, 1994), e.g. the agents that execute those routines produce knowledge on a regular basis. More interestingly, that knowledge is iterative, and it is continuously changing and difficult to observe and codify.

In a complementary argument, Makadok (2001) state that dynamic capabilities are managerial decision-making skills that are aimed at capability building and capability

design that improve organisational performance and productivity. According to Makadok (2001), Schumpeterian dynamic capability view highlights the importance of an alternative rent-creation mechanism—namely, capability building—that is rather different from resource picking. Others view dynamic capabilities as those capabilities that operate to extend, modify or create ordinary capabilities (Simon, 1969; Meyer and Rowan, 1977). Dynamic capabilities alone do not necessarily confer competitive advantage; they are the kind of capabilities that give management the decision-making capabilities that, upon execution, give them the option to produce significant outputs of a particular type. The possession of dynamic capabilities involves high-cost burden,

Competitors may be able to reach the same end-goal, to perform better, with heuristics and ad-hoc problem solving, yet maintaining low-cost burden and be able to switch effectively between the first and second order capabilities (Eisenhardt and Martin, 2000). On the same token Zollo and Winter (2002) view dynamic capabilities as a direct result of tacit experience, explicit knowledge codification and articulation and assert that firms with experience accumulation will notice lower investment in the acquisition of dynamic capabilities as the organisational learning takes place in a semi-automatic fashion based on individual adaptation and reaction to unsatisfactory performance. Therefore, it is fair to say that dynamic capabilities influence organisational routines, which are built by managers and deployed at the operational level through resource reconfigurations that alter the competence base (Zollo and Winter, 2002; Adner and Helfat, 2003).

A longitudinal study at Hyundai manufacturing plant revealed how managers build dynamic capabilities under pressure during crisis and then introduce new organisational (micro and macro level) routines aimed at performance improvement rather than to create or sustain a competitive advantage performance (Kim and Mahoney, 2010).

2.3.2 Dynamic managerial capabilities' effect on organisational routines

It has become common practice in the literature to distinguish between zero-order capabilities and first-order capabilities. The emergence of new ideas and product is a typical example of first-order capabilities, on the one hand, where the agents involved in processes use feedback loops to make the management teams of what works and what may require iterations. On the contrary, the management teams weigh the options for adaptation and make the suggested changes a norm and update standard operating procedures and manuals. In this, top-management teams scan the market and sense the urgency for change. This is translated into new product initiative and is rolled out in the market to estimate the perception. Upon successful completion of this phase, the products are produced in large numbers, i.e. reconfiguration and resources alignment of the assembly line and staff training (Teece, 2009). Based on this it can be concluded that first-order (dynamic capabilities) alter and reconfigure the resource base to serve the market.

In the context of dynamics and change, the term 'capability' has gained dominance, as it deals with how to gain competitive advantage and more importantly how to avoid its temporality. Capabilities are conceptualised in the context of collective organisational problem-solving capabilities (Fredrickson, 1984); a set of problem-solving activities are not capabilities unless it proves to be successful in various situations and organisations (Fredrickson, 1984; Eisenhardt, 1989; Judge and Miller, 1991). Dynamic capabilities in this sense build on different types of capabilities, and are experiential (Eisenhardt and Martin, 2000), improvisational (Prigogine and Stengers, 1984), and highly fragile processes (Nelson and Winter, 1982) of reconfiguration (Eisenhardt and Martin, 2000), integration (Graebner, 2009), and acquisition of resources (Singh and Zollo, 1998; Gulati, 1999) that lead to new processes (Eisenhardt and Martin, 2000) and new routines (Gulati, 1999). In another argument, dynamic capabilities are conceived as distinct behavioural patterns (Nelson and Winter, 1982; Zollo and Winter, 1999), which are complex in nature (Eisenhardt and Martin, 2000) involving both formal processes (Kogut and Zander, 1992; Argote, 1999) and informal processes (Eisenhardt and Martin, 2000). They

emerge incrementally from daily interaction they are often considered as 'somewhat mysterious social phenomena (Hofer and Schendel, 1978; Dosi *et al.*, 2000).

Dynamic capabilities are difficult to observe and ambiguous (Nelson and Winter, 1982; Teece *et al.*, 1997; Zollo and Winter, 1999 and Simonin, 1999), with predictable outcomes (Nelson and Winter, 1982; Helfat, 1997), analytic processes as found by Fredrickson (1984) in the less dynamic print industry, that rely extensively on existing knowledge, linear execution and slow evolution over time (Eisenhardt and Martin, 2000). Dynamic capabilities rely on the creation of situation-specific knowledge that is applied in the context of simple boundary and priority-setting rules by the managers using the strategic logic of opportunity (Lengnick-Hall and Wolff, 1999). Dynamic capabilities themselves become sustained and even inert through experience accumulation and routinisation (Eisenhardt and Martin, 2000). In high-velocity markets, dynamic capabilities are causally ambiguous because they are simple; however, this may cause a problem, as the firms, which possess those dynamic capabilities, may not be aware of their availability and timely usability. Dynamic capabilities are often combinations of simpler capabilities and related routines, some of which may be foundational to others, and so they must be learned. Capabilities rely extensively on organisational processes, whereas dynamic capabilities consist of specific strategic and organisational processes. Capabilities are learned from experience, based on this, competitive advantage comes from new configurations of resources (Teece, 2009) and operational capabilities and not from dynamic capabilities per se.

Easterby-Smith *et al* (2009) endorse the concept of dynamic capabilities as two-levels of routines, in this, they highlighted the need for firms to acquire and develop the multi-layered capabilities that are functional and beneficial for firms. These routinised activities originate from experience accumulation and often result in knowledge articulation and knowledge codification; dynamic capabilities are shaped by the co-evolution of learning mechanisms, which are dependent on the frequency in which a task is carried out, its homogeneity and its causally ambiguous traits. On

this line of thinking, dynamic capabilities may be operationalised and embedded in human resources functions, practice, marketing strategies, R&D, production knowledge management, teamwork and leadership. In addition to this IT, human resource and marketing can be seen as dynamic capabilities in their own right, as these activities have the ability to alter the resource base of firms. In many sectors, such as banking, logistics, retail, and consulting, the use of information technology has been absolutely central for enabling firms to reduce costs, gain efficiencies, thus increase competitiveness, and key characteristics of dynamic capabilities being inferred from patterns of data and other factors, such as size, longevity, ownership structure, and performance (Eisenhardt and Martin, 2000; Easterby-Smith *et al.*, 2009).

The concept of dynamic capabilities is riddled with inconsistencies, overlapping definitions, and outright contradictions (Sapienza *et al.*, 2006). The theoretical and practical importance of developing and applying dynamic capabilities to sustain competitive advantage in complex and volatile external environments has catapulted this issue to the forefront of the research agenda. The concept of dynamic capabilities has been defined as routines (Sapienza *et al.*, 2006) and substantive capabilities (Zahra and Nielson, 2002). They call substantive capabilities, as the firms' ability to execute generic tasks, such as product development and the firms' ability to alter and reconfigure these capabilities. The external operating environment that changes rapidly or unpredictably often triggers this function of dynamic capability. In this Zahra *et al.* (2006) highlighted the role of managers in reconfiguration and alteration of the firms' resource base as principal decision maker(s) and the role of dynamic managerial capability as essential for upgrading a firm's managerial skills to spot and exploit opportunities in evolving environments (Rindova and Kotha, 2001). This concept has attracted significant interest and has proven to be a strategic fit for organisations that seek to secure competitive advantage and enhanced performance. Teece *et al.* (1990) stated "our view of the firm is somewhat richer than that of standard view of the RBV, it is not only the bundle of resources that matter, but the mechanisms by which firms learn and accumulate new skills and capabilities,

and the forces that limit the rate and direction of this process". Accordingly, RBV is not able to explain how successful firms can offer timely responses, speed and flexible product innovations to address rapid change.

Although Teece *et al.* (1997) have brought the concept of dynamic capabilities to light in strategic management; its history lies in the evolutionary theory of economic change by Nelson and Winter (1982). In this, they highlighted the role of organisational routines, which have the ability to shape and constrain the ways in which firms grow and cope with environmental change. Although both approaches (Nelson and Winter (1982) and Teece *et al.* (1997) are built to strengthen firm efficiency and performance in changing environment, it was the latter approach that has attempted to link dynamic capabilities to sustained competitive advantage. Apparently, this link is bound to multinational firms and firms that operate in high-velocity environments and hypercompetitive environments. This was further explored by Eisenhardt and Martin (2000), where they took apart the first concept and emphasised that dynamic capabilities are not only routines, they are firm processes, they are homogenous, equifinal approach, fungible and sustainable than is normally assumed. Dynamic capabilities can therefore be applied to (any) firms that operate in ordinary or hypercompetitive environments and that dynamic capabilities are not necessarily the source of competitive advantage, they are the kind of capabilities that are aimed at governing and assigning the rate of change.

Eisenhardt and Martin (2000) view that dynamic capabilities can quickly reconfigure decision making (Sapienza *et al.*, 2006). In addition to this, abilities of firms are also classed as processes and routines (Barreto, 2010). According to Augier and Teece (2009), abilities involve much more than "coordination" and "adaptation," and the (strategic) manager integrate organisational abilities. In particular, coordination and adaptation do not convey very well the notions such as proactive search, selection, and subsequent implementation of particular courses of actions critical to firms' strategies. Nor do they convey the importance of asset alignment, opportunity identification, and the creation of co-specialized assets, both tangible and intangible.

These are all critical elements of management's dynamic capabilities and are important in the value creation. Following Teece *et al.* (1997), some authors have considered dynamic capabilities to be an ability or capacity (Teece, 2000; Winter, 2003; Zahra *et al.*, 2006; Helfat *et al.*, 2007; Teece, 2007). In their original proposal, Teece *et al.* (1997) justified the word capabilities to stress the key role of strategic management. The use of the term capacity was intended to refer not only to "the ability to perform a task in at least a minimally acceptable manner" (Helfat *et al.*, 2007) but also to its repeatability (to distinguish it from a onetime change).

Eisenhardt and Martin (2000) presented dynamic capabilities as specific and identifiable processes, whereas Zollo and Winter (2002) conceived dynamic capabilities as learned and stable patterns of collective activity, closely following an early definition of routines as regular and predictable behavioural patterns (Cyert and March, 1963) inside the firm (Nelson and Winter, 1982). Similarly, Helfat (1997) note that dynamic capabilities develop processes that are predictable and stable with linear steps that begin with analysis and end with implementation. In a more indirect way, Makadok (2001) takes this approach by distinguishing two rent-creating abilities, those related to resource picking, associated with the RBV, and those related to capability building, associated with the dynamic capabilities framework. More recently, two studies have added additional components to what are elsewhere considered the constituents of dynamic capabilities. Schreyögg and Kliesch-Eberl (2007) proposed the consideration of "capability monitoring," a separate organisational function removed from the operational level and intended to observe both a firm's capabilities usage and evolvment and the firm's external environment. Teece (2007) suggested that, in addition to the resource reconfiguring capability, two other "classes" of capabilities should be considered: the capability to sense and shape opportunities and threats and the capability to seize opportunities. Leih and Teece (2016) added another dimension to their earlier proposal of investigating sensing and seizing capabilities framework, transforming. They used this framework to examine two leading American Universities, how one outperforms another and how the Vice Chancellors and the leadership teams play their role in

sensing the need to change, transform the resources and seize the opportunity to claim high performance.

Dosi *et al.* (2000) noted a “terminological flotilla” in the literature about operational capabilities and organisational competences that are assumed as dynamic capabilities and as the sources of competitive advantage. Similarly, dynamic capabilities are coded as core competence, collective skills, complex routines, best practices and organisational capabilities (Schreyögg and Kliesch-Eberl, 2007). Capabilities and organisational competences are important for organisations to make a living (routine like behaviour). Dynamic capabilities are higher-level routines practised by the top-management teams, by contrast, relate to high-level activities that link to the management’s ability to sense and seize opportunities, navigate threats and combine and reconfigure specialised and co-specialised assets to meet changing customer needs and sustain and amplify evolutionary fitness. Dynamic capabilities are a subset of high-level competencies that are aimed at adapting, integrating and reconfiguring internal and external organisational skills, resources, functions and competencies that scan constant shift in business environment (Augier and Teece, 2009).

By far, Peteraf *et al.* (2013) and Di Stefano *et al.* (2014) have unpacked the concept of dynamic capabilities and discovered that two seminal papers by Teece *et al.* (1997) and Eisenhardt and Martin (2000) have actually played a key role, regardless of differences, in the paradigm (socially) construction process (Pfeffer, 1993). Although the concept has received due attention, according to Google Scholar citation index, combined citations for both seminal papers standing at 36,234 as of June 2016 and criticism (Arend and Bromiley, 2009). Peteraf *et al.* (2013) and Di Stefano *et al.* (2014) observe the absence of debate to bring together two divergent set of literature as to what dynamic capabilities are. They note that although it is normal in the paradigms development process to have opposing views in organisational studies (Pfeffer, 1993), it can also hinder the paradigm development process, an essential base

required to lay the foundations of theory development and moving on with empirical verification.

Eisenhardt and Martin (2000) make a clear line of reference to Cyert and March (1963) and Nelson and Winter (1982), who class dynamic capabilities as traditional conception of routines. In this, the top-management teams alter the resource base, shed, integrate and combine resources to generate new and value creating strategies (Pisano, 1994; Grant, 1996). These routinised activities are specific, purposeful and identifiable and upon execution; they demonstrate to be predictable (Eisenhardt and Martin, 2000). For example, in product development, managers combine diverse skills, functional background and need the expertise to create rent-generating products (Clark and Fujimoto, 1991; Helfat and Raubitschek, 2000). These types of routine activities are emerging from the market pressure and dynamism on the one hand and internal and managerial intervention on the other hand. For example, Apple has successfully streamlined new product introduction driven by dynamic managerial capabilities, where they introduce new products to the market after a certain period (Trott, 2008). On the backend of continuous introduction of new products, keeping the firm on the edge of chaos (Kauffman, 1996) there is a continuous scan of the market for changes by senior managers. This process, in return, ensures readily available resource base that is open to alteration to address the change (Pisano, 1994; Grant, 1996). The change is often triggered either by competitors, customers or complementors (Eisenhardt and Martin, 2000) or by the firms' own desire to launch innovative products; a typical example is the launch of iPhone, which changed the mobile phone industry.

The debate about dynamic capabilities centres on the relationship between resources reconfiguration, routines and capabilities: whether the focus should be on the adaptation of resources themselves (Helfat and Peteraf, 2003), on the routines that make resources operative, or upon the routines which enable other resources to be reconfigured (Zollo and Winter, 2002). Winter (2003), and previously Collis (1994), tried to address this issue by differentiating a capability hierarchy in which

operational (zero level), dynamic (first-order) and learning (second order) capabilities are linked to one another; one will malfunction without the other. Operational capabilities or routines are geared towards the operational functioning of the organisation; dynamic capabilities are dedicated to the modification of operational routines; finally, learning capabilities facilitate the creation and modification of dynamic capabilities. Winter (2003) suggest that dynamic capabilities are best defined as high-level routines performed by the senior managers. Certainly, if innovation becomes a routine activity driven by the senior managers in large firms, then the manager/entrepreneur has a modest role to play after the routines are in place. However, not to forget that it is the top-management teams/managers that relegate the given set of tasks and offer help with the emergence of routines through careful orchestration and coordination of the resource base.

2.4 Organisational routines

2.4.1 Antecedents of organisational routines

The earliest possible theoretical attribution to the concept of routines can be attributed to John Dewey (1859 - 1952). John Dewey, an American philosopher, is the founder of pragmatism, a pioneer in functional psychology and a leader of the progressive movement in education and was an education reformist in the United States (Gouinlock, 2016). He made a major contribution to early research in psychology and was the co-founder and early president of the American Psychological Association and the director of the enormously influential University of Chicago for the period of two years (1902 -1904). Dewey was keen to advance the notion of learning, something that was prominent in his various works (Dewey, 1922, 1938, 1938). His interest in routines came to the fore in his work human nature and conduct (1922), where he set out his view about how useful is the learning process that leads individual actions out of habit to collective ones habitually and advances learning in this journey. In this, he makes an important point that for routines and habitual action to occur in a recurring fashion, the environment in which they happen must remain the same. Routinised and habitual actions, “they do not fit the unusual

and novel” (Dewey, 1922). In part three of his phenomenal work, he argues that “habit forming involved the beginning of intellectual specialisation which if unchecked end in thoughtless action” (Dewey, 1922). For Dewey, routines may well be the by-product of human emotions and conduct, for routines to be long lasting, there must exist some degree of (internal) dynamism and (external) intervention that makes the processing of habitual actions and routines mindful.

Dewey’s work is further advanced by Stene (1940), who viewed routines as coordination, a continued process in contemporary organisations. He defined routines as “part of any organisation’s activities which has become habitual because of repetition and which is regularly followed without specific directions or detailed supervision by any member of the organisation”. According to Stene (1940), members’ learning of their own tasks and the tasks of the others and establishment of the relationships are pertinent for the continuation of the cooperation. It is also important that the interaction, the relative positions of workers, the individual tasks, and the sequence of operations be known to all those taking part for this cooperation to flourish. All being equal, “the organisation is coordinated much the same as the muscular movements in one's body are coordinated when one walks” (Stene, 1940). On the other hand, that person (s) involved in routine activities is aware of the fact that habitual action is only good in known situations and not to those alien to that person or group of people involved. This notion conforms to the idea set forth by Dewey (1922), that routinised activities that are performed out of habit and without intervention, and may produce ‘thoughtless’ output. To overcome this problem, Stene (1940) introduces the notion of continuous mental effort (mindfulness) and conscious consideration to minimise dependence on habit. Stene (1940) further argues that information and knowledge are central in decision-making to change existing and adopt new routines, this is essential in the efficient organisational architecture systems. This, to me, draws a clear distinction between actions that are habitual and those that are the result of mindful routine.

Nelson and Winter (1982) eloquently summed that various processes and actions such as technical capabilities, hiring and firing, inventory, stepping up or down production of items, investment, research and development, advertising, product diversification and business strategies are routinised activities across organisational domains. They went on to answer the simplest question that yields the utmost complicated answer, that is what are organisational routines, what are they good at and where do they reside in organisations. To simplify this, they assigned three distinct classifications to routines.

First, routines act as organisational memory, second, routines as a truce and third, routines as the target (control, replication and imitation). First, organisational memory is kept alive by exercising what it does on a regular basis as the behavioural pattern. To have formal records or records of how things are performed in organisations is not enough, it is the art of doing things in repetitive fashion that fulfils the qualification of organisational memory. These actions, however, stem from the internal and external environment and the changes they present. By acting in response to internal and external pressure, organisations produce knowledge that is reducible to the knowledge its members have.

On a second note, routine operations exist in organisations to monitor workload laxity, slippage, organisational rule breaking, seniority defiance and even hierarchical sabotage. Behaviours like these in organisations may violate set standards and expectations. On the downside, the employees that are subject to rule enforcement and such other motivators are usually content with what they have to do but are only content to the threshold in line with the hierarchical setup. In such organisational routines, conflicts persist, but even the conflicts largely remain on predictable paths and the agents remain within the pre-defined boundaries that are consistent with over-arching organisational routines. In short, organisational routines confer truce at every level in the hierarchy. This level of truce helps organisations accomplish the usual amount of work that gets done; concerns and praise are delivered as a matter

of routine with minimum demands for relationships modifications (Nelson and Winter, 1982).

On the third note, keeping an existing routine running smoothly is subject to difficulties. When this is the case, smoothly running routines turn into an organisational norm or target, this is where managers try to deal with actual or threatened disruptions of the routine. Thus, they try to keep the routine under control and replicate the routine where deemed plausible and necessary. On a similar note, Arrow and Hahn (1971) advocate that if two entrepreneurs install the same plant with similar production and labour force input, they would produce double of what alone would produce. On this assumption, the management is in a good position to replicate the routines that they believe would entail organisational stability and discard the ones that do not. The good set of routines can be best served as a template for new ones.

Building on this legacy (Dewey, 1922; Stene, 1940; Nelson and Winter, 1982), routines are a forward-looking logic of strategic choice (Levitt *et al.*, 1999; Tripsas and Gavetti, 2000; Gavetti *et al.*, 2007). In this regard, Gavetti and Levinthal (2000) use computer simulation to understand the roles of relationships between forward-looking (cognitive search) and backward-looking (experiential search). The study concludes so that strategic change, by combining both forward-looking and backward-looking, play a strong and adaptive role in unstable environments. March and Simon (1958); Cyert and March (1963); Nelson and Winter (1982) regard routines as the primary means by which organisations accomplish much of what they do, without routines organisations may come to a halt and they will not be able to accomplish the organisational goals. While these arguments hold weight, Cyert and March (1963) classify routines as adaptive process and Nelson and Winter (1982) have called routines as mutation and link the concept to biological evolutionary theory as being determined in part by the genetic makeup of an organism. However, organisational routines are subject to pull and push factors from the environments in which routines take place. Routines have received well-deserved scholarly input.

Routines are believed to be adaptable to the changing environment and have found the concept evident in crisis (Gersick and Hackman, 1990) and can be traced to the early stages of establishing an organisation (Narduzzo *et al.*, 2001) and surprisingly in areas of ambiguity (Miner, 1990). To sum, roughly eighty years old phenomenon beautifully, Pentland and Rueter (1994) think of routines as organisational flexibility rather than habitual and thoughtless actions and Feldman (2000) simply put routines as ultimate sources of organisational change.

2.4.1 Organizational routines and interdependences

This study strongly suggests that organisational routines exist, without routines organisations would grind to a halt. However, changes in organisational routines are subject to intervention from the top-management teams. Routines and standard operating procedures have been the corner-stone concepts of behavioural organisation theory and can be traced to the earlier work of (Stene, 1940; Cyert and March, 1963). For the most part, the studies that have attempted to understand the concept of routines but have not been able to locate where exactly routines come from and whether it is internal or external mechanisms that change routines. Nelson and Winter (1982) argue that actors' skills be the analogue of routines and routines are stored in organisational memory. This individual and organisational memory help actors act in recurrent fashion and how these individual acts can be translated as a group action, i.e. how routines are coordinated across the organisations (March and Simon, 1958).

A common understanding about routines is that they are habit-like actions (March and Simon, 1958; McAlexander *et al.*, 2009). In this sense, they are a persistent feature of an organism and determine its possible behaviour (in the environment), routines store the receipt of information, and it is then passed from one organism to another (Baum and Singh, 1994). This classification portrays organisational routines as mechanisms or abstracts, rather than collective human activities (Feldman and Pentland, 2003). In this light, routines are inertial in their qualities and the possibility

of flexibility and change is minimum unless an intervention is introduced to alter the course of the routine.

Routines are a natural spin-off from daily activities that occur in the context of organisational structures (Barley, 1986; Feldman, 1989; Orlikowski, 1992; Pentland and Rueter, 1994). In this process, some actors choose the actions that are easier to execute, adapt, and discard the ones that are not, this reflects the heterogeneity and flexibility of routines. On this token, routines are difficult to observe and hard to describe because they originate from procedural memory (linked to individual habits and actions), they arise, stabilise and change (Cohen and Bacdayan, 1994; Cohen *et al.*, 1996). Individual habitual actions confer organisational and ontological sense of security on the organisational and individual level, as they are the source of competence due to their repetitive nature. In the case of organisational overhaul or restructuring, routines can be transported to new territories to deliver similar results. In such cases, routinised activities can significantly reduce decision-making efforts and can concentrate on carrying out given tasks efficiently without disruption. Organisations without routines cannot be efficient for collective action (March and Simon, 1958; Stinchcombe, 1959). Routines can also be regarded as a double-edged sword; they provide a sense of operational security on the one hand and a source of inertia on the other.

According to Feldman and Pentland (2003), the understanding of organisational routines is difficult due to three reasons. First, routines are multi-actor, and thus harder to observe and grasp than the single-actor phenomenon. Second, characteristic of organisational routines that hinders both understanding and design is their emergent quality. There is frequently no one with the intellectual grasp or authority to self-consciously analyse or design a major routine in its entirety. Thus, organisational routines often emerge through gradual multi-actors learning and exhibit tangled histories that may frustrate both the understanding and reform. A third, and pivotal characteristic of routines, which hinders redesign, is that the underlying knowledge of the parts of routines resides with individual actors and is

often partially resistant to articulation and codification. Feldman and Pentland (2003) state that although it may seem that a manager or researcher ought to be able to understand a routine by interviewing the participants, it frequently turns out that participants simply cannot articulate the what, how and why they do what they do. These characteristics pose a great problem in understanding how routines are routinised and how they may change.

Organisational routines are actions that can be stable (Hannan and Freeman, 1984) as well as changing (Pentland *et al.*, 2012). However, the missing piece of the puzzle in much of the literature is that for routines to change or to alter they require some level of endogenous or exogenous intervention. This is where the role of dynamic managerial capabilities comes to the fore, as the senior managers look for changes in the operating environment and take appropriate actions to address the change. Endogenous intervention is what may be labelled as genotype, where routines take the shape of changing routines, i.e. they are iterative processes and have the capability to transform into generative routines whether or not the mark they leave on organisation performance is one that is negative or positive (Becker, 2003). Exogenous intervention is labelled as phenotype; in this, routines change and take shape as a direct result of what goes on in the outside environment (Becker *et al.*, 2005). This argument is closely related to the analogy that routines and dynamic capabilities should be placed in some form of hierarchy, i.e. operational routines are zero-level capabilities, which earn an organisation a living now. First order (dynamic) and second order (learning) capabilities that are closely linked to one another (Winter, 2003). As for learning to feed into the organisational change, it must be dynamic, i.e. continuous learning that helps organisations oscillate and learn. Such learning may come at a cost and deliberate investment like this may, for example, facilitate the creation and modification of dynamic capabilities for the management (Zollo and Winter, 2002) for acquisitions or alliances. Their interaction, moving collectively across organisations, leans towards introducing new and modifying existing routines. This process is observed as a performance improvement

mechanism, which aims to absorb what goes inside and around organisations (Easterby-Smith *et al.*, 2009).

2.4.2 Organizational routines – recent controversies

The previous section provided a brief historical account of the debates that encompass the concept of routine. It is evident that the thinking on routines has shifted substantially since the works of Dewey (1922) where routines are classed as habits to the views by Winter (2013) as deliberations and actions, where routines are classed as habitual actions to now where routines are no longer called routines, they are referred to as generative routines (Pentland *et al.*, 2012). In what follows, I will detail key literature in a quest to unravel the micro foundations and essential constructs of organisational routines. This exercise is important in two respects. First, a detailed review will help understand the key constructs of organisational routines. Second, this exercise will outline key findings from empirical studies that answer the long-awaited question and support current thinking as to why routines are generative (Pentland *et al.*, 2012) or inert (Langer, 1989; Weick and Sutcliffe, 2006). Either way, routines guide decision rules that shape and guide organisational behaviour. Feldman and Pentland (2003); Pentland and Feldman (2008) recently developed a related distinction between behavioural and cognitive aspects, recognising a performative dimension and an ostensive dimension to routines (Latour, 1986).

Accordingly, performative routines designate behavioural patterns of actual performance by specific people, at specific times, and in specific places, and ostensive denotes abstract patterns of a narrative description of how to do a task. Whereas, historically, routines as behavioural and cognitive regularities are seen as being inherently separate, in this approach both the ostensive and the performative are created and re-created through action (Feldman and Pentland, 2003; Pentland and Feldman, 2008). This unique view offers additional avenues for exploring relationships between routines and dynamic capabilities as to what extent do dynamic managerial capabilities have an impact on organisational routines. This is

because organisational routines are subject to intervention from the senior managers.

Becker (2008) and Cohen *et al.* (1996) assert that organisational routines are interpreted in at least two separate yet complementary ways. First, behavioural regularities, which denote recurring analytic processes embedded in firms and performed by groups of individuals (Nelson and Winter, 1964) and cognitive regularities, which denote abstract patterns or understandings that organisational agents adopt to guide and refer to specific performances of a routine (March and Simon, 1958; Cyert and March, 1963). Although these two lines of thinking in this sense are different, they offer avenues for multi-level research. Nelson and Winter (1964), Gersick and Hackman (1990) and Cohen and Bacdayan (1994) view routines as if they are recurrent interaction patterns of complex, highly automatic behaviours of groups of individuals, which function as a unit and typically involve repetitive information processing. For example, in developing a product colour from designers' drawings, a product development team performs a recurrent pattern of activities that includes attending a meeting, making a prototype, and sending a fax (Salvato, 2009; Salvato and Rerup, 2011). This gives rise to the importance and relevance of routines in organisational functions but does not justify the routines are the only moving mechanism across the organisation which can act on its own without intervention from senior managers.

This overwhelming body of research seems to have produced much confusion, perhaps not surprising given the range of disciplines and the different research agendas. In that, routines are thought of as basic components of organisational behaviour in the organisational repository (March and Simon, 1958; Cyert and March, 1963; Nelson and Winter, 1982; Becker, 2004). In contrast, routines are viewed as generative structures (Feldman, 2000) of conditional, rule-like mechanisms. As Levitt and March (1988) put it: "The generic term 'routines' includes the forms, rules, procedures, conventions, strategies, and technologies around which organisations are constructed, through which they operate." On another note,

routines are defined as potentiality or capability, not behaviour, in this, (Cohen *et al.*, 1996) regard a routine is an executable capability for recursive performance in some context that has been learned by an organisation (Nelson and Winter, 1982) in response to selective pressures. Similarly, March and Simon (1958) Nelson and Winter (1982) and Cyert and March (1963) thought of routine as the repository of organisational capabilities. An even better and stronger argument in favour of routine-based behaviour is that such behaviour does not lack intelligence and as such, routines are an important store of accumulated organisational experience (Nelson and Winter, 1982; March, 1994).

Another view of routines is that they are the end-result of processes of enforcement learning (Levitt and March, 1988), the encoding of what is resulted from learning is important regardless of whether the effort is a success or a failure, this is critical for routines to follow evolutionary processes. In case, the result falls below or rise above the expectations and contingencies, and routines are adjusted to the environment and situations in which they operate and reside (Feldman, 2000). This is contrary to earlier conceptions of routines, where routines are perceived to be something close to a habitual action (March and Simon, 1958) and indeed the inheritable genetic code of an organisation (Nelson and Winter, 1982). More recent writing has helped move thinking about routines as if they are not habitual but dynamic actions and follow evolutionary processes (Feldman and Pentland, 2003; Pentland and Feldman, 2005), this is almost a shift of paradigm regarding the quality of routines. Similarly, Padgett *et al.* (2003) suggest that for routines to follow an evolutionary process, organisations are required to mimic continuous re-enactment of success and learn from failures. This argument links well with what March (1991) stated, that when the operating “environment is dynamic or unpredictable, firms are especially challenged to revise their routines”. Such iterations in routines may alter the organisation’s culture or its identity (Trice and Beyer, 1993; Whetten and Mackey, 2002; Ravasi and Schultz, 2006). Upon alteration, routines make an addition to and form the foundation of the firm’s knowledge base.

To sum, Feldman and Pentland (2003) propose that the ostensive and performative view (Latour, 1986) of routines also opens the possibility for a deeper understanding of when and why stability (Pentland and Rueter, 1994) and change (Feldman, 2000) takes place. In doing so, this idea challenges the conventional wisdom about organisational routines as the locus of organisational inertia (Hannan and Freeman, 1984). This theory enables us to see the potential for endogenous change (Becker *et al.*, 2005) in organisational routines. The potential for endogenous change has implications for fundamental debates about organisational change and the locus of change in organisations. Endogenous change has been observed (Miner and Estler, 1985; Burgelman, 1994; Feldman, 2000) but it has been difficult to explain. Because routines have been treated as fixed, unified entities, change has been conceived of as driven by exogenous forces such as market changes or new technologies (Tushman and Romanelli, 1985; Barley, 1986; Barley, 1990; Gersick and Hackman, 1990; Orlikowski, 1992; Edmondson *et al.*, 2001). In contrast, recognising the dual nature of organisational routines provided with a way of conceptualising change that comes from within the organisational routines: change that is a result of engagement in the routine itself and is result of action takes by individuals, performative aspect (Latour, 1986).

2.5 The synthesis of dynamic capabilities and organisational routines

Ambrosini *et al.* (2009) proposed four categories of capabilities. The first are those that reflect the ability to perform the basic functional activities of the firm; they are the firm resources in a broader sense. The second category concerns dynamic improvements to the activities of firm. The third category is closely related and difficult to differentiate from the second category. It is also about dynamic improvement but specifically about being able 'to recognise the intrinsic value of other resources or to develop novel strategies (Collis, 1994). The fourth category is labelled 'higher order or meta capabilities', and it relates to learning-to-learn capabilities. Collis (1994) states that meta-capabilities can go on ad infinitum; there

is an infinite wave of capability to renew the capability that renews the capability, etc. Hence, a never-ending question of strategic renewal of capabilities. He also suggests that ultimately to outperform competitors, firms do need to deploy these meta-capabilities: 'the capability that wins tomorrow is the capability to develop the capability to develop the capability that innovates faster (or better), and so on (Collis, 1994). The set of these capabilities relates to the modification and the creation and new routines and resource base to respond to the changes in the market. On these lines, there is a level of agreement between Collis (1994) and Winter (2003), in which they set the order of capabilities as those that earn a living on a day-to-day basis and those that alter and reconfigure the former. In this, the former are clearly routine like behaviour where agents perform given tasks and conform to the command. However, it is the latter set of capabilities that have the power to alter the first order capabilities (Zollo and Winter, 2002). Here, a fair assessment would be to state that first order capabilities are at play regularly with some degree of regeneration and optimisation; however, it is the second order capabilities that bring in strategic change and in the process introduce new or modify existing routines.

Zollo and Winter (2002) believe that learning occurs at two levels in organisations, at one level the learning is of an operational nature (which they refer to as routines) and at the second level where learning is about the modification of routines. Hence, second level learning exists to modify the first set of learning. On the same note, Eisenhardt and Martin (2000) define learning as an important mechanism that guides the evolution of dynamic capabilities that pave and underlie the firms' path dependence, and later the firm's learning patterns and resources base. This learning journey helps managers analyse situations as they come up with appropriate manufacturing processes and subsequent implementation. Similarly, Argote and Epple (1990) and Sitkin (1990) see learning, iteration, new information and changing conditions as crucial to the build-up of dynamic capabilities and leading to linear decision-making. Sitkin (1990) presented literature on learning curves in manufacturing and Singh and Zollo (1998) point to the repeated practice (another name for routines) as an important component to organisational learning where the

agents execute given tasks in a repetitive fashion. In this process, they learn and keep what is important, discard what is not and iterate for performance enhancement. Eisenhardt and Sull (2001) observe effective learning and subsequent process alterations where Yahoo managers initially thought of as an advantage, only accepting a credit card from one particular financial institution had an adverse impact on the business. Learning from this mistake they were quick to withdraw from that special relationship and gave customers a greater choice for making payments. Detailing deliberate learning crisis, Kim and Mahoney (2010) concluded that learning crisis helped the agents to be more keen and willing to learn new ways to accomplish tasks. On the same note, Haleblan and Finkelstein (1999) studied 449 acquisitions using the theoretical learning framework. The findings revealed that managers with extensive experience were able to discern similarities and differences between current and previous acquisitions, and so apply their acquisition skills in a more discriminatory manner that was associated with superior performance. In such case, learning take place at a slower pace as contrast to rapid learning in high-velocity markets (Gersick and Hackman, 1990).

Teece and Pisano (1994) equate dynamic capabilities as a continuous process of firms' ability to do things; they classify this type of capability as a routinised process or a pattern of current practices and learning. Similarly, Augier and Teece (2009) explicate that sensing and seizing of opportunities should be used as effective decision-making skills. However, they include this concept within the dynamic capabilities framework. This can be contested with the argument that although sensing and seizing are part of strategic management processes, such practices can also be applied in a rather liberal fashion, in organisational domain. To stress the importance, it can be argued that sensing and seizing processes have to become the norm if they are to serve the purpose. In this process, the agents try to make sense of what works and what does not in the certain organisational tasks. By this constant repetition of these processes, firms can identify and introduce new production opportunities. Empirical evidence supports the notion that the understanding of processes, both in production and in management, is the key to process

improvement (Hayes *et al.*, 1988). Zollo and Winter (2002) offer a detailed and comprehensive review of the processes through firms codify and articulate knowledge to accumulate experience that is vital to organisational performance and success. This codification and articulation of knowledge has associated costs, more direct costs include managerial attention, time and resources to be invested (Ocasio, 1997) in the development and updating of task-specific tools, while indirect costs include a possible increase in the rate of “misfire” or inappropriate application of the routine (Cohen and Bacdayan, 1994).

While the process of knowledge codification and articulation processes seem promising, there is a lower likelihood that hyperactive teams will have the time to debrief on a regular basis and facilitate the learning process (Tyre and Orlikowski, 1994). Weber (2009) highlight that formalisation of such processes have advantage and disadvantage, and sometimes these processes are perceived as to be another way to execute bureaucratic coercion, while others see such formalisation processes as enabling rather than coercive bureaucracy (Adler and Borys, 1996). On a similar note, Zollo and Winter (2002) exemplify that knowledge codification and debriefing has been a stepping-stone in the case of Hewlett-Packard and Corning, where a final production of 400 pages binder is an important reference point to void any pitfalls in the alliances. Such processes lead relatively effective rather than simple knowledge accumulation (Singh and Zollo, 1998). Zollo and Winter (2002) suggest that such formalisation of codification and articulation of knowledge leading to experience accumulation play a constructive role and is a key ingredient in the process of evolution of dynamic capabilities. The strategic posture of a firm is determined not only by its learning processes and by the coherence of its internal and external processes and incentives, but also by its specific assets. (Teece and Pisano, 1994) By specific assets, I mean, for example, its specialised plant, equipment, knowledge and human resources. These include its difficult-to-trade knowledge assets and assets complementary to them, as well as its reputational and relational assets. Such assets determine the firms’ competitive advantage at any point in time.

Contrary to the categorisation presented by Teece and Pisano (1994), Eisenhardt and Martin (2000) view dynamic capabilities as processes that are effective product development processes and they involve routines that ensure concrete and joint experiences among team members. These processes entail working together to fix specific problems or participating in brainstorming sessions (Eisenhardt and Martin, 2000). Effective product development processes have extensive external communication that is often facilitated by strong team leaders. For example, Ancona and Caldwell (1992) found that successful product development processes were characterised by extensive communication links outside the group, particularly when project team leaders buffer the group from outside influences and garner resources. Similarly, Clark and Fujimoto (1991) found that leaders who are engaged in significant external communication and vision setting led more productive product development projects. On the same token, successful acquisition processes are characterized by pre-acquisition routines that assess cultural similarities and consistency of vision (Larsson and Finkelstein, 1999) and post-acquisition routines that pay particular attention to the speed of integration (Eisenhardt and Graebner, 2007) and the strategic redeployment of assets across the two firms (Capron *et al.*, 1998).

While the price system supposedly coordinates the economy, managers coordinate or integrate activity inside the firm (Teece *et al.*, 1997). Clark and Fujimoto (1991) highlight how managers use coordination and integration mechanisms to achieve optimum performance across various activities to have a final product. This level of coordination and integration of tangible and intangible resources have an important impact on firm performance. Teece *et al.* (1997) argue that even for organisational learning to take place and flourish, there has to be some level of search and coordination process taking place guided and directed by the senior management. An important distinction begs the attention here that how these coordination and integration processes are choreographed. Has there to be managerial intervention or can these activities evolve without outside intervention and attention (Ocasio, 1997; Weick and Sutcliffe, 2006). How efficiently and effectively internal

coordination or integration is achieved is very important (Aoki, 1990). Likewise, for external coordination, increasingly strategic advantage requires the integration of external activities and technologies. Firms follow this process to coordinate and integrate their resource base to respond to the changing market. The frequency of these processes depends on the market dynamism (Eisenhardt and Martin, 2000) and internal pressure (Teece *et al.*, 1997). This combination brings about the new avenue for the organisational learning process, Mody (1993) and Doz, and Shuen (1988) point that collaboration and partnerships are important in organisational learning processes and they may help spot strategic blind spots and recognise dysfunctional routines and introduce new organisational learning processes.

In rapidly changing and hyper-competitive environments, firms see value in their ability to sense the need to reconfigure the firm's asset structures to accomplish the necessary internal reconfiguration and external transformation (Amit and Schoemaker, 1993; Langlois, 1995). This requires constant surveillance of markets and technologies and the willingness to adopt best practices (Teece *et al.*, 1997). Mahoney (2001) and Mahoney and Pandian (1992) suggest that both resources and mental models are intertwined in firm-level learning aimed at reconfiguration and transformation. Teece *et al.* (1997) suggest that managers' ability to timely reconfigure and transform resource base ahead of competitors is an important step in organisational success and enhanced performance. Dynamic Capabilities pose considerable value as an organised process for accomplishing such ends (Camp, 1989). The capacity to reconfigure and transform is itself a learned organisational skill, however, if this skill set and experience is fast paced, it can hamper the manager's ability to transform this experience into meaningful learning (Eisenhardt and Martin, 2000). On the same note, Hayward (1999) suggests that too many acquisitions done too frequently hampers the managers' ability to absorb the lessons and turn the learned lesson into meaningful organisational knowledge. Contrary to this wisdom, Teece *et al.* (1997) believe that more frequently these skills are practised; the easier the given tasks are accomplished.

The knowledge creation, codification and articulation process is an important construct in the building up to dynamic capabilities. Although this construct has gained some criticism in the literature as time-consuming (Tyre and Orlikowski, 1994) and requires investment (Teece *et al.*, 1997). At times, this may lead to heightened levels of bureaucracy (Weber, 2009), overall it is a practice from which organisation can benefit from by turning coercive bureaucracy into enabling bureaucracy (Adler and Borys, 1996). Zollo and Winter (2002) express a clear link between knowledge codification and articulation as the building blocks of the dynamic capabilities framework. This is contrary to Teece *et al.* (1997) who see the actions to replicate competencies from one outcome to another as logistically impossible and not so useful. A common feature of successful knowledge creation processes is an explicit link between the focal firm and knowledge sources outside the firm. In the pioneering research (Allen *et al.*, 1971; Katz and Tushman, 1979; Allen, 1984; O'reilly and Tushman, 2011), these linkages were a small number of 'gatekeepers' within the firm. These individuals maintained active communication with scientists at other firms, government laboratories, and universities. Similarly, Cockburn and Henderson (2000) found that external linkages were crucial to effective knowledge creation processes in their extensive study of the pharmaceutical industry. Similarly, Powell *et al.* (1996) found that knowledge creation processes that included external linkages in the form of significant alliance relationships led to superior R&D performance within biotech firms. Therefore, if there were no structures, these processes would fly out of control and exhibit no coherence never mind the acquisition of competitive advantage.

The knowledge that is articulated because of discussions, debriefing and performance evaluation sessions has the potential to confer a kind of understanding about the issues that may push firms to change the way the things are done (Zollo and Winter, 2002). However, it may be the case that the firms can only translate and articulate a fraction of the knowledge they possess let alone in its entirety. This is because organisations differ substantially in their activities, hence the danger that they are not able to transform articulable knowledge into the articulated statements

(Kogut and Zander, 1992; Zollo and Winter, 1999). Organisations face constant thirst to acquire the required level of knowledge, more so articulate that knowledge to enhance and improve performance (Ocasio, 1997). This process involves extra costs where organisations acquire the knowledge, articulate, codify and diffuse the knowledge to achieve the required level of performance.

Kale and Singh (2007) studied the development of an organisational capability specific to the management of joint venture processes in a variety of industries. In their work, they found measures for both knowledge codification and knowledge articulation processes, together with more standard alliance experience trajectories. Results show that codification and articulation are equally important in explaining higher success rates and that experience does not affect the odds of success with comparable explanatory power (Anand and Khanna, 1998). An important point to note is that the only time the knowledge is good when it is subject to a continuum, as knowledge that is not articulated on a regular basis may become obsolete and even depleted (Romme *et al.*, 2010).

2.5 Dynamic managerial capabilities

The above highlights important features and constructs in the evolution of dynamic capabilities, an important managerial input for organisations to perform and respond to market dynamism. Before drawing upon the managerial intervention literature, it is important to offer a clear distinction between abilities and capabilities.

The difference between abilities and capabilities is subtle. For example, someone might have an ability to draw, but it does not make that person an artist. Someone might be able to read and write, ('being literate'), but is that person a capable reader or writer? Similarly, capabilities are more latent: "you are capable of something," suggests that you have what it takes, even though it might not be immediately apparent how to do it. Abilities are more readily used and evident: "you are able to do something" suggests that you can do it and that you know how to go about doing it.

Building on this distinction it can be stated that being able to do something and act upon it is an organisational capability. For an organisational action to be classed as an organisational capability, they must be executed in a reliable manner (Helfat and Peteraf, 2003). Such capabilities represent reliable (Schreyögg and Kliesch-Eberl, 2007) and systematic patterns of activities (Zollo and Winter, 2002). These patterned actions are a problem-solving architecture (Fredrickson, 1984) composed of complex actions (Teece *et al.*, 1997) and complex set of approved linkages (Eisenhardt and Martin, 2000) or combining rules (of thumb) (Helfat, 1997). In other words, problem-solving activities are not called capabilities unless they have proven 'success' across a range of situations (Helfat and Peteraf, 2003) and organisations can reproduce these actions at will. Such actions can be triggered from a single instance in an organisation, however for this temporal capability to be residual for the long-term, these actions must be performed across various situations in a reliable manner (Helfat and Peteraf, 2003). Organisational capability building processes are channelled through organisational learning (Schreyögg and Kliesch-Eberl, 2007), selection and retention and learning components with strategic orchestration of resources. Such capabilities are generally embedded in and build upon organisational design (Duncan, 1979), information channels (Boisot, 1998), communication (Ancona and Caldwell, 1992), external links (Cockburn and Henderson, 2000) micro politics (Prieto and Easterby-Smith, 2006) as well as culture (Teece *et al.*, 1997) and control regimes (Brown and Eisenhardt, 1997). Together, these salient features shape organisational capabilities (Henderson and Clark, 1990).

Organisational capabilities are concerned with the generic approach of running the day-to-day business; they are crucial, as they are required to undertake assigned tasks. On this token, capabilities are similar to routines in their performing firm-level actions, and they are largely repetitive with known outcomes (Salvato and Rerup, 2011). In this sense, they are collections of routines characterised by firm-level purpose and a clear set of instructions (Nelson and Winter, 1982; Dosi *et al.*, 2000). Organisational capabilities reflect a firm's ability to reliably perform its basic functional activities (Collis, 1994). Capabilities are similar to routines in that

performing firm-level actions reliably require organised activity and the exercise of a capability is largely repetitious. Collis (1994) proposed that organisational capabilities are multi-layered. In this, he highlighted that they are those that reflect a firm's ability to perform basic functional activities, in a broader sense they are the firms' resources. The second category is concerned with dynamic improvements of the activities of firms, i.e. moving away from routines that may seem to be incumbent but require some level of change to align towards environmental dynamism (Romme *et al.*, 2010). The third category, as he highlights, is a capability that is fine-grained and difficult to differentiate but it is of high value, as it recognises the intrinsic value of other resources and develops novel strategies before competitors. In Teece *et al.* (1997) view, Collis (1994) second and third level capabilities are dynamic capabilities as they are related to the sensing and seizing mechanisms of firms. The fourth category is labelled as a higher-order capability or meta-capability that relates to learning to learn (Hines, 1996) or double-loop learning. This level of capability could go on infinitum, and this is a kind of capability that renews the capability and beyond.

Winter (2003) proposed that there are zero-order capabilities that are operational or ordinary capabilities, these capabilities define and permit the firms to earn a living. He equates this set of capabilities to those of Collis (1994) first level, in other words, the existing resource base. Then he explains that there are first-level capabilities, which modify and change zero-level capabilities. These are dynamic capabilities. He also suggests, similar to Collis (1994), that there are higher order capabilities, which operate the zero and first level capabilities. Therefore, both Collis (1994) and Winter (2003) extend Teece *et al.* (1997)'s original formulation to distinguish between the main levels of capability modification and building process. Danneels (2002) and Zahra *et al.* (2006) also use similar typologies to assert that in every firm there are multi-layered capabilities and that ordinary capabilities are good enough for firms to make every day living, whereas they need the influence of higher-level capabilities as a revenue generating engine and prove strategic direction.

Dynamic capabilities cannot be bought; firms must build them over a long period (Teece *et al.*, 1997), if such capabilities are homogenous and can be easily sold and bought, they cannot be all that strategic (Barney, 1986). The building process for dynamic capabilities is sequential, the evolution of dynamic capabilities must follow logical progression where firms have set of capabilities that perform day-to-day activities and then there are capabilities that alter the former. One-way to see the evolution of dynamic capabilities can be referenced to the market dynamism (Romme *et al.*, 2010), internal pressure and through recursive cycle of variation, selection, replication and retention processes (Zollo and Winter, 2002). Such activities improve and enhance firm level performance to avoid competency decay. Once operationalized, although not an ultimate goal and aimed for, they may aid competitive advantage.

Typically, dynamic capabilities are built and practiced by the teams of specialists, e.g., merger and acquisition teams (Capron *et al.*, 1998; Eisenhardt and Martin, 2000), alliances (Gulati, 1999; Romme *et al.*, 2010) recruitment teams (Augier and Teece, 2007), change management teams (Brown and Eisenhardt, 1997) and teams that redefine the typical functions of firms, i.e. top management team (Zollo and Winter, 1999). A common assumption is that for dynamic capabilities to evolve, firms must incur high costs (Zollo and Winter, 2002). The cost of having dynamic capabilities becomes apparent once the department or person that possesses those capabilities decided to alter the existing resource base and change the norms of doing things. On this token, dynamic capabilities do not guarantee organisational success; they are aimed at achieving strategic advantage (Sapienza *et al.*, 2006; Zahra *et al.*, 2006).

Firms are likely to alter their goals and priorities when the environment in which they operate is volatile and subject to change (Cyert and March, 1963). These types of changes are often resulted in high technology industries (Eisenhardt and Martin, 2000); here firms continuously reconfigure substantive capabilities (Romme *et al.*, 2010) and human resources (Wernerfelt, 1984, 1995) in a repetitive fashion. In this case, the development and the use of dynamic capabilities vary with the rate of

change. This emergence and utility of dynamic capabilities become more apparent in the event of rapid technological (Teece *et al.*, 1997) and environmental shifts (Romme *et al.*, 2010) or firms' own desire (driven internally or externally) (Zollo and Winter, 2002) to introduce new products (Teece *et al.*, 1997; Helfat and Raubitschek, 2000) and services (Clark and Fujimoto, 1991; Dougherty *et al.*, 2004). Such practices transform and reconfigure substantive capabilities and the ways in which they are practised across the firm landscape. A longitudinal study of telecommunication industry revealed, contrary to the myths about inertia in large firms that even large and stable firms do transform in the face of structural change (Majumdar, 2000). On the other hand, dynamic capabilities evolve on the face of internal pressure to keep substantive capabilities that are a useful construct in the event of new product introduction. Internal pressure originates from the internal drive to change, installation of new top-management teams and drive to improve performance and efficiency ultimately aimed at doing well in the market. To sum, firms use learning (Cohen and Levinthal, 1990; Zahra and George, 2002), the behavioural theory of the firm (March and Simon, 1958) leading to evolutionary dynamic capabilities (Teece *et al.*, 1997) to be in better position to adapt and create value in ever changing world.

2.6 Dynamic managerial capabilities change organisational routines

Dynamic capabilities may be seen as intervention by the top management teams that help firms overcome inertia (Schreyögg and Kliesch-Eberl, 2007). The question remains whether or not these efforts lead to success and is ultimately determined by the level of outcome. Empirical research on routines has identified four dynamics that seem especially relevant to macro-level outcomes. They are formation, inertia (endogenous stability), endogenous change, and learning. In this section, I focus on dynamic capabilities view as a powerful system that influences routines and shape organisational landscape. It is important to understand how and why routines change. If the organisational routines are inert, absorptive capacity will be low, learning will be slow, and organisational capabilities may not be dynamic (Pentland *et al.*, 2012). Organisational routines have been recognised as an important and

essential component in daily function or organisations; they are also a well-known source of inertia (Hannan and Freeman, 1984), inflexibility (Weiss and Ilgen, 1985; Gersick and Hackman, 1990). Some authors have gone as far as to call organisational routines as mindless actions (Ashforth and Fried, 1988), a deskilling mechanism (Leidner, 1993) that could be demotivating (Weiss and Ilgen, 1985), and leading to competency traps (March, 1965).

This understanding of organisational routines is rooted in social theory (Selznick, 1949; Gouldner, 1954; Blau and Scott, 1962; Merton, 1968; Blau and Schoenherr, 1971; Weber, 2009). Although organisational rules and routines are seen as an important source of accountability (Catasús and Grönlund, 2005) and political protection (Lorenz, 2000) as well as a source of stagnation (Kaufman, 1960; Crozier, 1964; Webb, 1995). For better or worse, routines enable bureaucracies to organise expertise and exercise day-to-day tasks (Feldman and Pentland, 2003). Without this, organisations will come to a halt and their competencies will decay. While I accept that while routines can be a source of inertia (Hannan and Freeman, 1984), they can also be an important source of flexibility and change (Feldman and Pentland, 1994). Yet they are subject to a strong degree of intervention from the top-management teams. Meta routines have been theorised as a mechanism for generating dynamic capabilities (Tranfield *et al.*, 1991; Teece *et al.*, 1997), the set of capabilities that alter organisational routines.

Dynamic capabilities are essentially the drivers of significant organisational change, even if the pace of change appears to be slow or undramatic (Helfat and Winter, 2011). If the change is unpredictable and variable, dynamic capabilities and higher-order learning approaches will require an update as an ongoing set of organisational activities. Dynamic capabilities allow firms to respond to change and alter operational capabilities, an effort that requires commitment and involvement of the top-management teams (Arend and Bromiley, 2009). Here the top-management team will engage in the continuous scanning of the environment and trying to find the best fit.

The role of top-management teams is crucial for dynamic capabilities, as they have the capability to execute a given task and, second, have the power to alter and change routines (Teece and Pisano, 1994). The top-management teams use strategic signalling (Shapiro, 1989) to change the processes aimed at improving and enhancing efficiency. Such signalling is often the result of the third element of Leih and Teece (2016), where sensing and seizing capabilities are furthered by addition transformation. In transformation process, management would start the re-orchestration process of firms' assets and resources to seize opportunities.

This understanding and detection of environmental signals confers strategic advantage and highlights managerial abilities as to what they can and cannot do. This approach is consistent with a strategic view of firms in which managers potentially recognise the opportunities offered by market dynamism and internal pressure and in return make strategic moves (Cockburn and Henderson, 2000). This suggests that managerial insight into the scenarios coupled with the internal or external shocks work out better if there is a clear need for change. For example, empirical studies have documented how strong influence and the willingness to change from the top management teams in response to external change at NCR (Rosenbloom, 2000) and Polaroid (Tripsas and Gavetti, 2000). In this sense, the managers' role becomes more like of an architect who make structural changes to respond to what they believe the market requires rather than acting as a stock-picker by trying to beat the market (Makadok, 2001). In this sense, the managers would react to market changes and build capabilities best suited to address such changes rather than making minor adjustments aimed at achieving immediate objectives. Others equate dynamic managerial capabilities as a direct outcome of entrepreneurial actions (Zahra *et al.*, 2006), in which managerial capitalism comes to the fore and in return, offer required products and services (Teece, 1993). This ability demands commitment, motivation, skills, experience and willingness to embark on new horizons and implement the resulted change with a vision to have an enduring impact on firm performance (Katona, 1951; Penrose, 1959).

Routines become inert unless there is some level of intervention that renews or modifies those routines (Nelson and Winter, 1982; Becker, 2004). Recent research suggests that routines do change without intervention and take the form of an autonomous activity within the organisation (Adler *et al.*, 1999; Feldman, 2000). A key assumption of this perspective is that repetition tends to result in the elimination of search for alternatives and a tendency toward fixed sequences to keep moving (March and Simon, 1958). This view is consistent with the metaphor of routines as habits. Research on individual habits demonstrates that individuals do indeed form strong tendencies toward repetitive patterns of behaviour (Ouellette and Wood, 1998). Hence strategic guidance, input and feedback loops are important in the build up to organisational success.

2.7 Dynamic managerial capabilities and reputation

Unlike the arguments found in the organisational routines literature as to have a functional organisation and not to be influenced by dynamic managerial capabilities, the concept of “reputation” is rather appealing. The concept is not new and has been amplified for some time using different labels. As early as 1989, Shapiro used the concept to assess the nature of competitive interaction between rival firms. In this, he highlighted a number of elements that would form the basis for a thriving business strategy, aimed at outperforming competitors. He starts with investment in physical and intangible assets, strategic control of information, mergers, network competition and contracting. The basic assumption here was that employment of the components into the business strategy would confer competitive advantage as these measures are ought to enhance firm reputations. Other followed suit to assert that investment in capacity development (Dixit, 1980), corporate reputation (Carroll, 2013) and advertising campaigns would confer reputational advantage (Schmalensee, 1983). While these measures are considered smart to outperform competitors, predatory pricing and strategic signalling was added on as to achieve reputational advantage (Kreps and Wilson, 1982a, 1982b). Furthermore, Ghemawat (1991) put forward the role of commitment as an enhancing ingredient in achieving and sustaining reputation. On a similar note, Dierickx and Cool (1989) propose that reputation for

quality is built overtime rather than bought and reputation for readiness to retaliate for change is built through history of aggressive behaviour as a response to market change.

Although the above strategies are functional, intangible assets play an important role in the run up to claiming reputational advantage. Such measure, in the case of the UK HEIs, include research rankings, employability rankings and student satisfaction rankings. The achievement of higher scores in these categories is based on research output, graduate employment and student satisfactions surveys. However, the importance of having access to physical assets is important. Recent examples include 2013-14 capital expenditure of £2.5bn by UK universities, including construction and refurbishment of accommodation. Further to this spending, half a million square metres of additional land was added, the equivalent of building almost five new universities (Guardian, 2016). To amplify these levels of investments, the UK HEIs are ever more present in the global education market place to recruit international students on one hand and deliver British education abroad in purpose built campuses on the other. Together, these measure (in addition to English language, another intangible reputational advantage) play an important role as an attractor for international student recruitment to choose the UK as their study destination.

2.8 Summary

This chapter addressed research objectives 1 and 2 by reviewing the debates that have encompassed the concept of dynamic capabilities and organisational routines. The first part of the chapter (Sections 2.2.1 to 2.2.2) showed that it was useful to start with clear perspective on dynamic capabilities and organisational routines. This is a precursor to the idea that dynamic managerial capabilities drive and change the organisational routines. In doing so, this section links dynamic capabilities to organisational routines. Section 2.4 offered a broader view on organisational routines, in doing so this section elaborates on antecedents of organisational routines, justifies the routines and their interdependence while taking a detailed view on recent controversies. The discussion between dynamic capabilities and

organisational routines give rise to dynamic managerial capabilities and their function at organisational level and highlight how strategic intent have an impact on organisational routines.

This chapter considers the debate on dynamic capabilities, and the contrast between the organisational routines perspective was noted. In this, the view commonly found in the dynamic capabilities research field is that routines are learned and repetitious behaviour as put forward by Winter (2003). Hence, organisational capabilities are a collection of high-level routines (Winter, 2000), the 'zero-order' capabilities described in Collis (1994) and Winter (2000). Arguably, because the strategic management field has adopted such a rigid, less mindful interpretation of routines, dynamic capabilities have become a necessary construct for bringing about strategic change. Nevertheless, the argument cautions that routines as generative processes are insufficient in themselves in bringing about the kind of disruptive change demanded by strategic management scholars concerned with fitness levels in fast-moving environments.

This chapter considered many different views and definitions of dynamic capabilities that have emerged following the seminal papers of Teece *et al.* (1997) and Eisenhardt and Martin (2000). Dynamic capabilities are interpreted as a set of macro-level capabilities that change organisational routines, resources and other capabilities in a manner suggested by Teece *et al.* (1997) and Eisenhardt and Martin (2000), and in this sense they constitute an intervention mechanism, an exogenous force that acts on endogenous dynamic routines. An organisation's macro-level competences can be identified as a type of 'dynamic managerial capability' (Adner and Helfat, 2003). The dynamic capabilities literature in general and the dynamic managerial capability perspective, in particular, emphasize the importance of connecting routines and capabilities to industrial change and the broader macro-environment, a key element that has been underplayed in the organisational routines literature. In this chapter, it was observed that the senior management teams play a key role in seeking

organisational change is of a direction and magnitude that will maintain fitness in the face of environmental change.

3. THEORETICAL FRAMEWORK AND HYPOTHESES

3.1 Introduction

Chapter two addressed objectives one and two by reviewing the debates surrounding dynamic capabilities and organisational routines. This leads to chapter three, which proposes a unified framework, which in the rapidly changing international environment of higher education, hinges on a fundamental process, dynamic capabilities, as they relate to change in the international student recruitment function within the UK HEIs. This chapter then advances several hypotheses that are used to test key themes emerging from the dynamic capability and organisational routines debates.

First, by incorporating the organisational routines literature reviewed in Chapter Two, the study demonstrates that the universities' organisational routines are subject to change, this change often results from the top-management teams exercising their power and ability to increase/decrease international student recruitment. In this sense, organisational routines rely on dynamic managerial capabilities. Second, this chapter clarifies that dynamic managerial capabilities are latent variables, as proposed by Grant and Verona (2015) and that they facilitate and influence the process of international student recruitment, the framework becomes amenable to empirical testing. Third, this chapter brings up major features of dynamic capabilities in linking to organisational leadership with organisations. In doing so, it addresses the resource accumulation in the UK HEIs is directed not only at actions for increasing productivity and efficiency, UK HEIs develop dynamic managerial capabilities and exercise these capabilities to maintain evolutionary fitness in a rapidly changing global Higher Education market. In this way, the framework of sensing, seizing and transforming brings up some important features related to leadership and entrepreneurialism in the university sector as recently researched by Leih and Teece (2016).

The study fills a gap in the extant literature by identifying two related but largely separate fields of enquiry; organisational routines (Feldman, 2000; Feldman and Pentland, 2003; Feldman, 2016) and dynamic capabilities (Teece *et al.*, 1997; Dosi *et al.*, 2000; Eisenhardt and Martin, 2000; Winter, 2003; Peteraf *et al.*, 2013). In doing so, this study attempts to understand how dynamic capabilities maybe used as latent variables to influence and change organisational routines. By Integrating these hitherto separate literatures and in the context of the empirical investigation, the study seeks to explain the ways in which the UK HEIs deploy dynamic managerial capabilities and resources in response to increasingly challenging UK HE sector. In what follows, Section 3.2 clarifies some key concepts related to organisational routines and dynamic managerial capabilities prior to formulating and testing the hypotheses. Section 3.3 motivates the hypotheses that are deployed in the analysis section to assess why there are substantial and sustained performance differences in the recruitment of international students across UK HEIs.

Drawing from the objectives of this study, this chapter is developed to accommodate several important issues risen from Chapter two, which were related to the debate on organisational routines and dynamic capabilities in the extant organisation and management literature. In particular, this study seeks to explain how organisations respond to external markets by deploying and modifying internal resources, values and strategies, on the challenges for the UK HE sector. It demonstrates how the resource paths, towards creations of the HE leadership, may lead to improved performance. These aspects serve as the models of the framework and are essential tools for analysis. The study anchors on the evidence that either accepts or rejects the proposed hypotheses that go through empirically testing using qualitative and quantitative research methods as a combined approach.

3.2 Dynamic managerial capabilities and routines at the UK HIEs

3.2.1 Key concepts

Chapter Two put forward several definitions of dynamic capabilities and organisational routines. Cohen (2007) and Winter (2013) provided a useful way forward as to think about routines as forming a continuum of actions, varying from the 'less mindful' (Levinthal and Rerup, 2006) highly repetitive, stable, largely unchanging, semi-automatic actions at one end of the spectrum to the purposeful, deliberate, and 'mindful' actions at the other. The hypotheses in this study focus on the actions at the mindful end of the spectrum, which suggests that the highly repetitive actions or 'operating routines' (King and Tucci, 2002; Teece *et al.*, 1997; Winter, 2003) that reside at the less mindful end, generally defined as zero-order capabilities, are beyond the reach of this study.

By focusing on mindful actions, and coupled with the idea of routines as patterns created by a set of connections (Feldman and Rafaeli, 2002), this study leads to a key concept where routines have to be discerned or discovered through mindful attention to discriminative content (Weick and Sutcliffe, 2006). Such discovery is possible by discerning actors' immersion, the generation of the routine, and by making distinctions in the practices, hence patterns can evolve (Pentland *et al.*, 2012). This way of thinking parallels the notion that routines have an 'ostensive' aspect (Feldman and Pentland, 2003). In that, actions give rise to patterns, and when one set of routines, usually performed by groups of multiple individuals, is connected with another set of routines, the connections produce shared understandings of a situation that can lead those actors immersed in the routine to 'instigate change' (Feldman and Pentland, 2003). Such immersion and change can lead to and even promote creativity and novelty (Feldman, 2016).

Such adaptations may or may not lead to the retention of 'rules' that would constitute 'best practice', though as Eisenhardt and Martin (2000: 1108) stress, there could be many practices that have 'common features associated with effective processes

within firms'. Many firms end up with capabilities that are similar in their functioning, suggesting there are 'multiple paths' to capability development with outcomes that are similar in their effectiveness, the idea is that in open systems a state can be reached from many potential positions, a process described as having 'equifinality' (Eisenhardt and Martin, 2000: 1109). Thus, to distinguish between the less mindful routines, defined as zero-order capabilities, this study defines 'first-order capabilities' as mindful 'performative' and 'ostensive' actions undertaken by multiple groups of interconnected actors, they involve reflection, deliberation, and some degree of creativity and novelty.

Chapter Two argued that in moderately dynamic environments the 'first-order capabilities' may not be sufficient to maintain fitness levels that would enable an organisation to survive. This suggests that there must exist another dimension in the organisational capability and deployment, as suggested earlier, that dynamic managerial capabilities fit this purpose. Teece *et al.*, (1997: 516) defined dynamic capabilities 'as the firm's ability to build and reconfigure internal and external competences to address rapidly changing environments'. Yet, in 'rapidly changing environments' Eisenhardt and Martin (2000; 1106) argue that dynamic capabilities would face a 'boundary condition', creating a feasible range over which dynamic capabilities are effective, varying from stable environments to those that are moderately dynamic. According to Eisenhardt and Martin (2000) in high-velocity markets, dynamic capabilities are 'uncomplicated' and take the form of 'simple rules' or 'guides for action'. Such view is reminiscent of the idea that 'uncertainty generates flexibility constrained behaviour' (Heiner, 1983: 564) or in other words, 'rules that limit the repertoire of actions' (Heiner, 1983: 568).

While coming to an assessment of environmental dynamism is beyond the scope of this study, the view taken is that the UK HEIs do not resemble the description of 'high-velocity market' and therefore it is accepted that UK HEIs fall within the range over where dynamic managerial capabilities are effective (Eisenhardt and Martin, 2000). While there are several contradictions between the two seminal papers by

Eisenhardt and Martin (2000) and Teece *et al.* (1997), prompting several interpretations and perspectives on dynamic capabilities over the years, there seems to be a fair amount of agreement that dynamic capabilities, as drivers of internal change, are a valid concept in stable to moderately dynamic environments (Peteraf *et al.*, 2013).

3.2.2 Dynamic managerial capabilities as processes

For Eisenhardt and Martin (2000: 1106), 'dynamic capabilities consist of specific strategic and organisational processes such as product development, marketing, R&D, technology development, alliancing, and strategic decision making that create value for firms within dynamic markets'. Recent empirical work has put the idea of dynamic capabilities at the forefront (Danneels, 2008; Grant and Verona, 2015). For example, Danneels (2016: 2176) define marketing and R&D as second-order capabilities providing competences for 'building new competences to serve new markets or use new technologies'. According to Danneels (2016: 2177), second-order marketing capabilities bestow competences that 'involves skills in such areas as: assessing the potential of new markets, setting up new distribution and sales channels, leveraging brand/company reputation to new markets, researching new competitors and new customers, developing new advertising or promotion strategies, and developing new pricing strategies'.

This study focuses on the internationalisation of the UK HEIs. In this, first-order capabilities would include the competences of a university's international office, competences related to setting and seeking approval for the university's international strategy, seeking to fund for expanding the resource base within the international function (staff recruitment), marketing and web design as they relate to internationalisation. Furthermore, this set of first order capabilities would include reconfiguration of resources within international, identifying new overseas markets for student recruitment, appointing and releasing overseas agents, understanding international student needs and knowledge of UK Home Office regulations regarding international student visa requirements.

First-order capabilities in the international function involve knowledge, skills, know-how, stability, change, creativity and novelty. To carry out such activities, the actors immersed in the processes are knowledgeable, reflective, deliberative, and expend considerable effort in maintaining stability and instigating change (Feldman and Rafaeli, 2002; Feldman and Pentland, 2003; Pentland *et al.*, 2012; Feldman, 2016). Actions necessitate cognition in sensing and seizing change, adjusting routines. Therefore, while the routines of international process involve zero-order capabilities, to function effectively, they remain subject to intervention from top-management teams that instigate change for international processes.

Dynamic capabilities relate to adding new resources and competencies, releasing resources, building new resource configurations, and reconfiguring processes and systems (Teece *et al.*, 1997; Eisenhardt and Martin, 2000; Helfat *et al.*, 2007; Teece, 2007). In the international context of the UK HEIs, dynamic capabilities would involve shifting to higher international student growth trajectories, rebalancing on-shore and off-shore student numbers, investing in overseas campuses, forming strategic alliances with overseas universities, actions for developing or maintaining league table positions, the brand and reputation.

In comparison with first-order capabilities, dynamic capabilities are likely to require external as well as internal boundary spanning capabilities in working with a wide range of stakeholders both within and outside the UK HEIs. Externally, these may include local and regional government agencies, industrialists, and local communities. Internally, they involve senior management teams from across the university, admissions, central marketing, legal and finance, academic faculties, research centres, and academic departments. Unlike first-order capabilities, which often focus on productivity improvements and efficiency, effective dynamic capabilities in the university sector are more likely to be directed towards meeting the challenges posed by increasingly competitive national and international markets for students, retaining well-qualified faculty and professional staff, assessing the impact of change on key stakeholders, both regionally and nationally (Leih and Teece,

2016). Second-order capabilities directed at international student recruitment would reflect how good the university is at attracting international students in a highly competitive international market and how the HEIs respond to the market need and either exploit or explore opportunities.

3.2.3 The measurement problem

The study assesses first-order and second-order capabilities in UK HEIs' capacity for international student recruitment. The international function at universities provides a distinct, identifiable, and specific set of processes with measurable outcomes – international student numbers – a standard metric universities use to assess the performance of a major source of income, the recruitment of international students.

This study is consistent with other empirical studies in using observable indicators or proxies for the underlying capability (Grant and Verona, 2015). In this study, international student recruitment is used as an observable proxy for the underlying capabilities about how the UK HEIs' internationalisation functions or processes work. Grant and Verona (2015) provide several examples of empirical tests for organisational capabilities. Examples include outcome measures such as patent counts as a proxy for innovation capability, the frequency of new product introductions as a proxy for 'market pioneering and market responding capabilities' (Franco *et al*, 2009; 1843). Helfat *et al*. (2007) used input measures as proxies and R&D expenditures as an indicator of technological capability using senior managers to measure managerial and functional capabilities, or measuring project management capability by using error frequency time and labour over-runs (Ethiraj *et al.*, 2005; Grant and Verona, 2015).

Although a measure worthy as it is, it gives rise to a content validity problem as Grant and Verona (2015) argue. They identify two issues. First, any observable proxy for organisational capabilities needs to correspond closely to the underlying capability, an issue concerned with how well the indicator variable captures the capability construct. In the context of this study, the measurement instrument is the number

of international students enrolled for on-campus education at the UK HIEs; a proxy that reflects a specific domain of content, the capabilities associated with a university's international function and the respective internationalisation processes. Second, the proxy ought to be independent of determining variables other than the underlying capability. It might be argued that 'international student numbers' is a single variable proxy that conflates several determinants other than the underlying capability, such as the HEIs' league table position, its history and reputation, and location. To address this problem, the study anchors on linear regression to discern the impact of several possible determinant variables on the indicator variable.

The study also makes use of widely accepted strategic groups such as The Russell Group, The Alliance Group, The Million+, The Cathedral Group and 50 other HEIs that are not part of any group but still represent high international student numbers. Exploiting group structures make it possible to discern differences in between-group variances and within-group variances. Large between group variances relative to within-group variances indicates that other factors such as league table rankings (research, employability and student satisfaction), history, and reputation substantially affect international student recruitment and therefore the UK HEIs' capabilities influence strategies as latent variables. On the other hand, large within-group variances relative to between-group variances indicate that factors beyond the underlying capabilities have less influence on the indicator variable so that a greater proportion of the variance in the proxy variables is determined by capabilities that reside within the university's international function.

The study uses four sources of data of differing degrees of granularity (see Chapter four, data collection model). First, the primary source of data for the quantitative analysis is the dataset from the Higher Education Statistics Agency (HESA), a large data set of 100 universities. Second, research, employability and student satisfaction ranking data is acquired from the complete university guide, HESA and HEFCE. Third, survey data, a set of analysed questionnaires that attempts to reveal the strategic intent in the international student recruitment at 31 UK HEIs. Fourth, interview data

comprises of 10 senior managers at a large British university. In this way, the study combines coarse-grained data and the more fine-grained information from the interviews in coming to an assessment of why there are substantial performance differences among UK universities in their recruitment of international students. In line with the dynamic capabilities research agenda, the study attributes the differences in performance, at least in part, to differences in the way senior management teams responded to international recruitment, which in turn can be attributed to differences in dynamic capabilities across the sector, and in particular, dynamic managerial capabilities.

3.3 Hypotheses development

3.3.1 Total student recruitment is dependent on international student recruitment

This study used the construct 'Environment-Value-Resources (E-V-R) (Thompson, 1999), as a proxy to measure performance where E refers to the UK HEIs environment (international student demand, country of origin, student preferences for disciplines and UK HEIs' location), V includes university rankings, value, reputation and strategic group membership (i.e. The Russell Group, The Alliance Group, The cathedrals group and The Million+ Group), R includes resources, i.e. university location, programmes. Accordingly, fitness as defined by Helfat et al (2007) as internal and external fit is measured, where dynamic managerial capabilities deal with various uncertainties such as adapting to a changing environment to avoid deteriorating performance in the face of competition, uncertainties over demand for courses and so on. A university that separates value from environment and resources may create a less mindful organisation (Levinthal and Rerup, 2006), yet it may be competent at creating a more mindful or conscious organisation. In either case, conscious or 'mindful' organisations (Levinthal and Rerup, 2006; Weick and Sutcliffe, 2006) embed their organisational routines into managing environment-value by taking account of environmental change. As such, responding to the environment updates, organisational routines by providing an evolved set of routines and capabilities. The

environment, value and resources framework clarifies that organisational routines cannot be separated from change but are subject to it.

The environment, value and resources and its separation into two sets of factors; internal factors and external factors clarifies that the UK HEIs manage scarce resources differently, so that differences in managerial approaches to value-resources with respect to environment could shed some light on why organisational performance differ. If this postulate is correct, then the environment, value and resources framework can help to explain the relationship between organisational routines and dynamic managerial capabilities. Either way, it could lead to a maladaptive organisation in a changing environment. Environment, value and resources on the other hand rest on fitness enhancing organisational routines that in turn are driven by internal factors and the external factors encapsulated as described above. Dynamic managerial capabilities influence international student recruitment as a measure of performance that also acts as a proxy for the underlying capabilities associated with universities' international processes. Improvements in performance are therefore an indicator of the strength of a university's first-order capabilities and change in performance, especially a sharp improvement in international student recruitment infers the presence of dynamic managerial capabilities. In contrast, rise or fall in international student recruitment indicates either absence of dynamic capabilities or that the dynamic capabilities of the university have been effective in bringing about improvements in performance. The approach to capability measurement is consistent with Godfrey and Hill's (1995) proposal for empirically testing 'unobservable' and has been widely used in testing the resource-based view of the firm (see Grant and Verona, 2015).

On this note, the more the organisation can demonstrate routines with stable yet labile tendencies, the more likely the organisation is to restructure value and resources towards a relationship with the environment. Accordingly, the more the organisation has demonstrable improvements in performance, the more the

organisation can strengthen the relationship between dynamic managerial capabilities and organisational routines.

The hypothesised relationship can be measured by a set of correlated values with the total student numbers as the dependent variable and international student numbers as independent variables. The dependent variable is then a measure of the performance of a university's internationalisation strategy, that is, the university's 'strategic growth'. Using such an approach, organisational routines can firstly be specified as either 'value-driven' or 'resources-driven', or both. The assumptions enable alternative tests. Where, strategic performance becomes the probabilistic distribution function for organisational routines the outcome depends on the local context or 'local causality', such that value is presented by change. This change will be related to student market growth, and the studies UK HEIs sense the need for change and what measures they take to implement and embed that changed in their organisations.

As above, dynamic managerial capabilities are 'latent variables' that effect the organisational reputation and performance. Correspondingly, external variables can be explained by the 'university's location', market characteristics (cultures and social norms), and consumer (student) characteristics (e.g. their preferences). The reputation, values and resources can be explained by available data such as 'ranking'. This then produces an alternative set of hypothesized assumptions. If routines are largely inert or slow, the university's competences may deteriorate, leading to 'routine drift'. In this context, the following hypotheses apply.

Hypothesis 1a: The Russell Group HEIs' total student recruitment growth is dependent on international student recruitment.

Hypothesis 1b: The Alliance Group HEIs' total student recruitment growth is dependent on international student recruitment.

Hypothesis 1c: The Cathedral Group HEIs' total student recruitment growth is dependent on international student recruitment.

Hypothesis 1d: The Million+ Group HEIs' total student recruitment growth is dependent on international student recruitment.

Hypothesis 1e: The non-aligned Group HEIs' total student recruitment growth is dependent on international student recruitment.

3.3.2 Total and international student recruitment at the UK HEIs is path dependent

In the previous section, it was noted that organisational routines are subject to change by the top-management teams. In the context of international student recruitment and growth, I continue to demonstrate that routines are subject to intervention from dynamic managerial capabilities. In the context of international student recruitment process, changes in environment, in part, are presented by internationalisation strategies and its consequences. In this, organisational routines remain subject to change as they move through the processes of international student recruitment. An organisation with organisational routines gain advantages through history and path dependence. History and path dependence of value-resources enable resource exploitation and exploration, where dynamic capabilities embedded in organisational routines enact greater utilisation of resources and value creation (Teece *et al*, 1997). On this footing, routines accumulate and are actioned to create resilience and feasibility, enduring properties of high-level and consistent competencies. Upon intervention from the top-management teams, organisational routines remain subjects to change which in turn provide organisational stability, the longer the routines remain in action, the better they become at performing daily tasks.

This is consistent with studies by Augier and Teece (2009), who proposed that internal organisational skills, resources, functions and competencies scan constant shift in business environment. Therein, the organisation's ability to benefit from such activities is related to value and resources. This demonstrates dynamic capabilities by internationalising, where internalisation of value and resources is driven by organisational routines, and that demonstrate dynamic capabilities are underpinning the process. Then a gradual, evolutionary path to internationalisation is strategy orientation, and organisations' organisational routines are directed to exploit

existing knowledge and capabilities and explore necessary future knowledge through diffusion and adaptation.

In the context of international student recruitment, it is presented that organisations' dynamic capabilities, which influence organisational routines and enable organisations to approach to a path-dependent position in the international markets (Helfat and Peteraf, 2009) leading to where the organisation wants to be (Teece *et al*, 1997). Where, an organisation with dynamic capabilities relates to high-level activities that link to the management's ability to sense and seize opportunities, navigate threats and combine and reconfigure specialised and co-specialised assets to meet changing customer needs and sustain and amplify evolutionary capabilities and organisational routines. This argument finds support in prior studies (Teece *et al*, 1997; Zollo and Winter, 1999 and Teece, 2007). In those studies, path dependency is put forward as key construct where the firm is today and where it wants to be in the future (Teece, 1998). As Teece *et al* (1997) argue, bygones are rarely bygone and therefore firm find it useful to build their future on their past (Leonard-Barton, 1992). On this note, organisational routines are executed at two distinct levels, one operational level where operational staff learn from the tasks and convert this learning into routinised activity. These practices are partly path-dependent, where firms do these things as they learn from their history. It is demonstrated that the process of internationalisation via international student recruitment as an important indicator as whether or not an organisation is sustainable in its efforts to remain competitive and how these activities play an important role in effecting the HEIs' reputation. This gives rise to the following hypotheses.

Hypothesis 2a: The UK HEIs' total student recruitment is dependent on the international student recruitment

Hypothesis 2b: The UK HEIs' international student growth is path dependent

Hypothesis 2c: The UK HEIs' subject growth trend is path dependent

3.3.3 The UK HEIs' location and ranking scores lead to increase in international student recruitment

Following from the above, organisational routines in international student recruitment are affected by value and resources. This benefit from the effects of value and resources is the modality of dynamic managerial capabilities (as latent variables) and mobility of organisational routines (driven by the former) (Augier and Teece, 2009) by which value-resources advantages may be realised. Organisational routines driven by dynamic capabilities, by linking to international student recruitment activities, program developments and maintenances, enable the organisation to approach competitiveness. Where the extent pattern to an activity represents a shift (Augier and Teece, 2009) with an element of trajectories of organisational routines, towards the internationalisation. Each trajectory itself is set by the continuous (Augier and Teece, 2009) and iterative interaction embedded in the process of internationalisation wherein organisational routines evolve with value and resources with the evolution of environment (external parameters).

Measurements of organisational routines can use the mean of coefficients of parameter vector variables, which can use either panel (HESA and ranking) data or survey data can be reflected by historical length of the university in HE, managerial experience, stability and change (ratio or change rates) in program features, numbers in the discipline areas, prior and exiting strategies for internalisation (e.g. in relation to managing value-resources). Then growth variables, such as strategic growth or faculty size, in the relationship are the dependent variables. While dynamic managerial capabilities modify organisational routines and reorder structures, organisational routines evolve with time and strengthen organisational performance, yet they remain subject to a certain degree of influence by the top-management teams. I further take into account the strategic approach to performance, where parameter variables of strategies are related to resource exploitation and exploration such as, through joint operation, off-shoring, staff training, capacity and capability development. Which in turn, change value such as ranking, perceived customer values, research and publications of the university, and routine such as

sufficient, effective, and resources of not just staff, but also up-to-date programs, and IT with other infrastructures and facilities.

As international student recruitment routines become stable, over time, the implications of internal processes in response to external change influences structures of strategy change. In this sense, strategic response is one of the endogenous variables, which affects organisational routines trajectory or configuration (mainly by its impact on value and resources values and sustainable advantages). This assumption finds support in prior studies in which strategies of mergers, alliances and acquisitions routines are driven by dynamic capabilities (Capron et al., 1998; Gulati, 1999; Lane and Lubatkin, 1998; Powell et al., 1996; Ranft and Zeithaml, 1998; Singh and Zollo, 1998).

Both strategy of organisations and other advantages such as internalisation enable some value-added activities associated with such as a product change, strategic target changes, (e.g. as product moves through its cycle). Thus, dynamic capabilities and organisational routines by influencing strategy influence strategic growth and the rise and fall (e.g. ranking) of the UK HEIs. Organisational routines' configuration changes are also influenced by the changes in exogenous variables (e.g. demand by students, employers, creditors), consequently, endogenous variables S (e.g. the presence or absence of different programs) accommodate consequential upon these eventualities.

The above predict that additional combination of latent mechanisms (organisational routines and dynamic managerial capabilities) drive strategic growth that can be subtracted from a linear benefit function (e.g. organisational routines). This is consistent with prior studies (Haans et al., 2015). The distribution curve shape depends on the moderator: for each value of exogenous change, a unique turning point exists. The value in independent variables increase as exogenous change and other factor value increases, such that the curve turning point moves to the right or shift up, as there is no interaction between observed variables and exogenous

change, the curvature of the observed relationship does not change, thus the performance mechanism is neither strengthened nor weakened.

Hitherto, I demonstrate that dynamic managerial capabilities centre on the relationship between value and resources. The dramatic changes in international student recruitment have wider variations in performance among the UK HEIs. Internationalisation of education and curriculum, internal pressure from the HE sector to explore and exploit available opportunities. I propose a framework that enables the exploration of answers for the questions about positions and turning points associated with strengths of organisational routines and competitive performance of an organisation. In particular, four groups are tested (Russell, Alliance, Million +, Cathedrals, and the group of non-aligned universities), their similarities/differences, and the reasons behind. It is conjectured that dynamic capabilities in relation to organisational routines were directed to explaining strategy regarding sustaining and promoting specific advantages in a world of uncertainty. Organisations investing in those elements will create greater growth opportunities, while essentially, the organisations accumulated experience of organisational routines upgrade their existing core competencies and activity of all that as path dependent.

Where dynamic capabilities are based on the conceptions of prior studies that the organisations' focus should be on the adaptation of resources of their own (Helfat and Peteraf, 2003), organisational routines can make resources operative or organisational routines which enable other resources to be reconfigured (Winter, 2003). Hence I raise the international student recruitment to address the external challenges through internal capability hierarchy linked to one another. Where, the importance of asset and resource alignment, opportunity identification, and the creation of critical co-specialized assets, both tangible and intangible and reputation. In this form, the organisations' resources (locations) and reputations (ranking scores) lead to improvement in performance by the way of international student recruitment.

Hypothesis 3a: The UK HEIs' location is positively related to increased international student recruitment

Hypothesis 3b: The UK HEIs' research rankings will increase international student recruitment.

Hypothesis 3c: The UK HEIs' employability rankings will increase international student recruitment

Hypothesis 3d: The UK HEIs' student satisfaction scores increase international student recruitment

3.3.4 The UK HEIs' ranking scores are path dependent

Organisational routines are organisational structures, habitations, rules, and mechanisms in managing and acting on international student recruitment Whereas dynamic capabilities enact organisational routines to respond to exogenous factors and changing job market, customer (student) demand, which, in turn, influence configurations and modification of organisational routines. During this process, it is proposed that dynamic capabilities change organisational routines and path dependence modifies strategies and responses to environment by managing value-resources and in turn, influence mechanisms and configurations of organisational routines (Augier and Teece, 2009).

This relationship, with respect to organisational routines and path dependence, can be written with respect to a reconfiguration in organisational routines from t_1 and t_2 . Where any change in parameters of organisational routines are driven by, or associated with dynamic managerial capabilities (such that produce responses of the organisation towards the changing parameters in environment). Here, the parameters of dynamic capabilities enact organisational routines modification and configuration and I extend the observations to a continued period (or state) of time, where dynamic managerial capabilities determine the path of the movement from t_1 (2002/03) to t_2 (2013/14), where value changes will influence changes in strategies, which influence a value change (in ranking and programmes).

Now strategy is introduced into international student recruitment in which a strategic response is one of the endogenous (latent) variable in which strategy employed by the top-management teams effect organisational routines trajectory.

In the predicted relationship, any element of strategy in the trajectory of organisational routines are effected by history and path dependence, i.e. organisational routines become matured actions. With the instant of time moving forwards, strategy by internalisation (such that enacts changes in value-resources) develops its profiles and strengths. The outcomes take into account of changes in strategies in past, present and future, so that any change in strategy and responses is expressed as associated with organisational routines. Then I extend the observations to a continued period (or state) of time where strategy at each end of scale determine the path of movement from t1 to t2 and strategic changes will influence a value change (in value or resources). Strategies emerge from organisational routines' configurations that support sustainable advantages and organisational innovations such as changes in the composition of senior management, new productivity techniques, alliances, mergers and acquisitions.

Nevertheless, what drive organisational routines and path dependence are also exogenous variables such as changes in economic structures, job markets, tuition fees, currency exchange rates, national government policies, actions taken by external agents and location advantage of the university. Further, location advantage such as UK universities in London may gain more popularity or students preferences than those in other cities. The nature of the interaction between the value of most exogenous and endogenous variables are likely to affect international student recruitment.

Through path dependence, organisational routines, crucially, resources acquisition, reconfiguration and modifications occur more effectively as strategy approaches to international student recruitment accommodate and moderate the impact of environment on value-resources or a growth trend (a product life cycle, such as a program or student market maturity). As organisational routines evolve from the processes with internationalisation and through strategies, a shift occurs for the organisations' environment, e.g. presented by exogenous change, the organisations' performance may not change its shape. That is, when the moderator may affect the

mechanisms in organisational routines in such a way that the observed relationship changes position (e.g. a probability distribution function, the shape of the curve of organisation growth may remain though it may not be a linear distribution). On this note, it is proposed that the UK HEIs' ranking scores are path dependent.

Hypothesis 4a: The UK HEIs' research rankings are path dependent

Hypothesis 4b: The UK HEIs' employability rankings are path dependent

Hypothesis 4c: The UK HEIs' student satisfaction rankings are path dependent

3.4 Survey data hypotheses development

3.4.1 The role of top-management teams in international student recruitment

The UK HEIs' international student recruitment is driven by several factors, operating at different levels. At the broader macro-level, economic, social, and political conditions in the students' home country, sharp movements in exchange rates, changes in the UK government's policy towards international student visas, immigration control, and competition from universities in other countries are just some of the factors that might influence universities' international student recruitment strategies. These external factors have a differential and profound impact on the capacity and capability of the UK HEIs to respond to change. Some of the UK HEIs are more affected by external forces than others are. As Lei and Teece (2015) argue, the impact is felt in terms of differences in resource endowments, changes in organisational routines and capabilities such as the university's capacity for increasing productivity growth in the core activities of teaching and research, responding to national and international competition, developing 'state-of-the-art' student management systems, improving league table positions, developing the campus environment, the local and regional economy - a set of internal factors that pose a challenge for the strategic management of the UK HEIs.

These factors form stimuli, as well as, constraints due to resources and other limits (e.g. qualified faculty, experience), challenges (e.g. conventional thinking) and

approach to the internationalisation process and changing strategies, national policies directed towards HE, leading to alternative consequences. For example, based on HESA data, the University of Manchester, within the Russell Group, has remained, by far, the largest recruiter of total and international student recruitment with total student numbers close to 450,000 for 12 years (the combination of Home/EU and International) with over 100,000 international students recruited over the same period. Universities across the UK face a similar challenging environment for international student recruitment. The challenges develop interests of research. This study focuses on the UK HEIs and uses the HESA database such as international student recruitment, trends change in disciplines, and changes in country of origin and so forth in coming to an assessment of why some universities have seen a dramatic increase in international student numbers while for others, they have been more gradual, and in some cases, declined. Consistent with the RBV view and the dynamic capabilities literature, the underlying assumption is that the source of these differences can be accounted for by asymmetries in universities' resource stocks including reputational assets (i.e. rankings), capabilities and routines, knowledge, and senior managerial competences in effecting change (Barney, 1986; Dierickx and Cool, 1989; Teece et al 1997; Eisenhardt and Martin, 2000; Helfat et al., 2007). The challenges bring up the need for empirical testing into the dynamic capabilities and organisational routines of the selected sample.

It is acknowledged that international student recruitment at the UK HEIs has proved to be beneficial regarding economic, academic and cultural contribution (Pollard *et al.*, 2014). To sustain the advantages, dynamic managerial capabilities drive the organisational functions. Previously it was argued that growth for universities imply embedding dynamic capabilities in organisational routines, and organisational routines develop and support the leadership position. This section continues to reveal the growth functions that lay in the distinctive characteristics of dynamic managerial capabilities as latent variable (as proposed by Grant and Verona, 2015) and relate these to the entrepreneurial function of top-management teams as a further explanation for performance differences between the UK HEIs. This was

demonstrated in the prior section by the trajectory of organisational routines as a set of continuous and iterative interactions between environmental states and internal processes through time, where internalisation of routines over successive times leads to adjustments to the university's strategy, which then influence the organisation's routine configurations.

To this end, crucially, organisational routines are subject to influence by the top management teams. While dynamic managerial capabilities may present a relationship, the conjecture is that the outcome, e.g. increased productivity or growth, should mostly present a positive shift. Arguing for dynamic managerial capabilities as catalyst and the driver the growth function, an idea that builds on Eisenhardt and Martin's (2000) argument that dynamic capabilities are not just routines, they are organisational processes, or connections of 'shared understandings'. Dynamic capabilities also have some degree of equifinal, organisations "can gain similar capabilities from many paths" (Eisenhardt and Martin, 2000: 1110), and in this sense, senior management teams have some discretion over how they develop processes and routines. From this perspective, dynamic capabilities can be orientated towards sustaining organisational performance across different environmental states through developing resilient processes that can adapt to particular ecosystems.

While dynamic managerial capabilities effect organisational routines to sustain the growth function. Building on Eisenhardt and Martin (2000: 1110), dynamic capabilities are not only routines, but they are also organisation processes; they are homogenous, equifinal approach, fungible and sustainable than is normally assumed. In this form, it is presumed that, with dynamic capabilities, an organisation sustains its performance as if ecosystem's resilience in good time and a down turn. This is because dynamic capabilities can be applied to any organisations' situation while they are the kind of capabilities that are aimed at governing and assigning the rate of change. Capabilities and organisational competences are important for organisations to make a living.

Through repeated interactions with the external environment, if a state of the internal environment activates a change, the impact on the state (either value and resources or both) environment should become visible such that a state of environment. Instead of responding to the local causality market, ranking and programmes value-resources would influence distribution that could be an orthogonal distribution, so that the concurrence with value ranking and programmes or resources becomes zero, leading to the declined distribution, raising challenges for UK HEIs to change organisational routines about international student recruitment. For instance, with a substantial change in the state of the external environment (e.g. environmental conditions changed), the ranking and programmes value-resources values (such as staff skills, programs) would be effected, causing either increases or decreases in the organisations' reputation.

Teece *et al* (1997) refer to repeated interactions with the environment as learning that puts an organisation's capabilities to the test. For example, change in the international student recruitment patterned activity comes at a price. Such change in the international student recruitment would require new resources or modification of existing resource base. For example, reconfiguration and transformation, as described by Teece *et al* (1997) is important practice where the firms are expected to seek opportunities to reconfigure and transform the resource-base. Therefore, it is reasonable to believe that if the changes are triggered by the way of dynamic managerial capabilities, the resource allocation and modification would be subject to change by the top-management teams who can trigger the change which would result in swift decision-making and resource allocation and modifications. The postulate finds theoretical support from Helfat (1997) where the research and development initiative was started to tackle the uncertainty.

Overall, the UK HEIs are faced with multiple external challenges for international student recruitment process, performance, and market growth. This would suggest that dynamic managerial capabilities would be subjected to the organisations' strategic targets, interests, capacity and prioritized tasks with respect to external

environmental conditions. Crucially, dynamic managerial capabilities exert their influence on routines have the potential of adaptive capabilities that are subject to change. Thus, although routines are not entirely innate, but are rather open to change introduced by the top-management teams. This means dynamic managerial capabilities enable outcomes that are coherent with respect to environment-value-resources. While it is accepted that organisational routines are important in accomplishing daily tasks in international student recruitment, they remain subject to intervention by the top-management teams.

Hypothesis 5a: The surveyed UK HEI's total student recruitments depends on international student recruitment

Hypothesis 5b: The surveyed UK HEIs' founding age is positively related to increased international student recruitment

Hypothesis 5c: The surveyed UK HEIs' strategic renewal is related to increase in international student recruitment

Hypothesis 5d: The top-management teams' changes at the surveyed UK HEIs' are related to increase in international student recruitment

3.5 Dynamic capabilities as entrepreneurial function

Now consideration is given to available endogenous variables, and all observed exogenous variables and essentially, assume that organisational leadership in dynamic capabilities is resilient. From prior demonstration, the parameter variables affect growth are also the mechanisms of performance. By letting dynamic managerial capabilities driving the function of growth, it is expected that the overall shape of the observed relationship changes though the turning point of the relationship between dynamic capabilities and organisational routines.

The above assumptions predict that an additive combination of latent mechanisms (dynamic managerial capabilities) drive a convex curve strategic growth that can be subtracted from a linear benefit function (e.g. organisational routines), resulting in an inverted U-shape or curvilinear distribution function of strategic growth. This assumption is consistent with prior studies (see, e.g. Haans *et al*, 2015). It may be assumed that growth function is subject to organisational input. This gives rise to an

organisation with dynamic capabilities and organisational routines living in organisations' leadership disposition. s

The previous section put forward the idea that top-management teams sense changes in external environment while directing and responding to environmental change, as measured by changes in routines and dynamic capabilities and their effect on organisational performance. Leadership value increases to tackle the influence of external environment, the set of dynamic capabilities and the agents in position are shaped as such that the leadership value increases. This, in turn, has an impact on the curvilinear distribution. To the contrary, if the external market witness dramatic changes that are deemed out of control and influence of leadership. In such case, the value or organisational leadership decreases.

3.6 Summary

This chapter captured dynamic managerial capabilities acting as latent variables and guiding the organisational. This study draws on dynamic capabilities and organisational routines literature, an important debate that acknowledges the role of dynamic managerial capabilities in influencing organisational routines in bringing about change. In contrast, this chapter asserts that although organisational routines are important organisational functions, they are influenced by the top-management teams. The relationship is explored in the context of international student recruitment at the UK HEIs. Although the UK HEIs have experienced significant aftershocks following the financial crises in the last decade, when it comes to total student recruitment, the overall growth rate for total student recruitment has been positive with some universities experiencing significant growth rates. The overarching research aim is to examine the intersection between dynamic capabilities and organisational routines as it relates to international student recruitment over a period in which the environment for UK HEI has changed dramatically. This thesis gives precedence to dynamic capabilities over organisational routines and provides an appropriate set of tools for examining the relationships between the universities' internal dynamics and a changing external environment.

Table 3.1 Summary of hypotheses

Hypothesis	Predictor variable
H1a	The Russell Group HEIs' total student recruitment growth is dependent on international student recruitment.
H1b	The Alliance Group HEIs' total student recruitment growth is dependent on international student recruitment.
H1c	The Cathedral Group HEIs' total student recruitment growth is dependent on international student recruitment.
H1d	The Million+ Group HEIs' total student recruitment growth is dependent on international student recruitment.
H1e	The non-aligned Group HEIs' total student recruitment growth is dependent on international student recruitment.
H2a	The UK HEIs' total student recruitment is dependent on the international student recruitment
H2b	The UK HEIs' international student growth is path dependent
H2c	The UK HEIs' subject growth trend is path dependent
H3a	The UK HEIs' location is positively related to increased international student recruitment
H3b	The UK HEIs' research rankings will increase international student recruitment.
H3c	The UK HEIs' employability rankings will increase international student recruitment
H3d	The UK HEIs' student satisfaction scores increase international student recruitment
H4a	The UK HEI's research rankings are path dependent
H4b	The UK HEI's employability rankings are path dependent
H4c	The UK HEI's student satisfaction rankings are path dependent
H5a	The surveyed UK HEIs' total student recruitments depends on international student recruitment
H5b	The surveyed UK HEIs' founding age is positively related to increased international student recruitment
H5c	The surveyed UK HEIs' strategic renewal is related to increase in international student recruitment
H5d	The top-management teams' changes at the surveyed UK HEIs' are related to increase in international student recruitment

4. METHODOLOGY

4.1 Introduction

The preceding chapters identified gaps in the literature, presented a theoretical framework and identified several testable hypotheses. The purpose of this chapter is to put forward an appropriate methodology and justify the research design. While empirical testing of dynamic capabilities has lagged behind theoretical and conceptual developments (Arend and Bromiley, 2009), with now a growing body of empirical research emerging. The purpose of this chapter is to propose a methodology that would provide empirical verification of constructs and relationships associated with higher-level competencies such as dynamic capabilities and organisational routines.

The chapter is structured as follows: Section 4.2 provides an overview of research on dynamic capabilities and organisational routines. Section 4.3 deals with philosophical underpinning for this research. Section 4.4 discusses the research philosophy Section 4.5 outlines the knowledge about the proposed intervention mechanism. Section 4.6 bring forward the research design followed by research methodology and justifies the multi-methods research approach and the research methods used for this research are explained. Section 4.7 presents and elaborates on the selection of panel data, survey data and qualitative data and provides justification of sample size for each. This section provides an overview of analytical tools and techniques and reliability and validity of data that leads to the hypothesis for the panel and the survey data. Finally, a summary of the chapter is produced to summarise key points.

4.2 Empirical research on dynamic capabilities and organisational routines

Grant and Verona (2015) propose that quantitative and qualitative research attempts have problems of their own when it comes to exploring the impact of capabilities on organisational performance. For quantitative approach, the common issue is that

organisational capabilities are difficult to observe, they are hidden and concealed, and that organisational capabilities are inherently unobservable. On the same token, qualitative research, for example, case study research has its own problems. While the limitations of case-based research regarding external validity—the ability to generalise findings to other samples and settings—are well recognised, less attention has been given to the problems of how capabilities can be identified.

In a study to understand the building process of first order (dynamic) capabilities, the competence to build new competencies in marketing and research & development, Danneels (2008) studied manufacturing firms headquartered in the United States. The data were collected at two different time intervals, T1 and T2 to understand performance differences at two distinct time interval. They used seven-point Likert scale questionnaire aimed at carefully selected individuals at the respondent businesses; the questionnaire was aided with the archival data (an approach similar to this is employed for this research). Building on the Eisenhardt and Martin (2000), Schreiner *et al.* (2009) used the dynamic capabilities construct with a different label as higher-order capabilities as a learning instrument to replicate success from one alliance to another. The study relied on the key informants within the identified firms based in Germany and Switzerland, who were service partners to the three leading vendors, IBM, Microsoft and SAP. The questionnaire was devised on a four-point Likert scale with a specific measure in place to measure the informants' knowledge and involvement in the alliancing processes. Kale and Singh (2007) conducted similar research to understand the impact of dynamic capabilities as an important learning instrument in building of dynamic capabilities through learning about alliancing success. The sample was selected after setting up the threshold of sales more than \$ 100 million at the time of study and the firms that are considered to be benefiting from alliancing. The study concludes with highlighting the role of learning as an important mechanism in overall alliance success. On a similar note, this research canters around two different time scales aimed at identifying performance differences at the UK HEIs in term of international student recruitment. In doing so, this research applied the concept of dynamic capabilities perspective and

organisational routines to understand why there are performance differences and how these differences are addresses.

Døving and Gooderham (2008) studied the heterogeneity of human capital and internal routines development using the dynamic capabilities perspective as strategic choice to investigate the product diversification across 254 Norwegian small accountancy practices. The firms, in addition to traditional accountancy services, offer advisory services to their clients. The study used the logic of strategic choice as an instrument to find out the firms' willingness and the ability to diversify their service-base based on clients' needs. The study followed positivist approach to understanding the dynamics and the needs of the firms' willingness to engage in such practices. The study concluded that the surveyed firms found the additional, advisory services, to be more lucrative than the traditional accountancy services. In a more contrasting fashion, Galunic and Eisenhardt (2001) used a field study of ten divisions a Fortune 100 company based in the United States following the charter changes. They used three-tiered criteria for the section of the divisions, the divisions were subject to recent changes, they were distinct strategic divisions and each division was matched with the last one to fit comparison. In a similar fashion to the above, they used dynamic capabilities perspective as a remapping tool within the business units to look out for architectural innovation at a corporate level.

Gilbert (2006) studied a newspaper organisation as a single case study to discover the impact of dynamic capabilities exercised by the senior teams at discontinues change and residual fit in the even to shift from print to digital publication. The study lasted for 18 months; the data collection was designed with triangulation in mind to compare multiple comparison groups to pick potential inconsistencies. The data collection comprised of 21 open-ended interviews, access to archival documents, and collection of business plans, internal company memos, strategy documents and observations. On a larger scale, Helfat (1997), explored the implications of dynamic capabilities perspective in the event of oil prices rise in the United States, an important contribution to the economic movement. The findings suggested that the

majority of coal gasification/liquefaction firms in the United States were not engaged in the research and development activities. However, when the oil prices rose markedly during 1976 to 1981, the firms engaged in increased research and development practices.

King and Tucci (2002) explored the role of organisational inertia and dynamic capabilities with a view to untangle the complexities of advancing into new products and services. In this, they emphasised on the role of experience, both pre-existing and newly acquired, as an important construct in the building up to dynamic capabilities. Their study benefited for a mixture of archival and panel data analysis on the disk drive industry; a similar approach adapted for this study. However, as a downfall of the study, they suggest that studies of such large databases may not fully reveal the internal rich process inside firms; to tackle the argument I have to devise the study to include panel data, survey data and interview data that overcomes such criticism. The study concludes with the notion that there is a clear link between with prior knowledge and acquired knowledge and dynamic capabilities. On the contrary, Feldman and Pentland (2003) argue that organisational inertia is not the product of organisational routines but rather the product of organisations' unwilling behaviour to change. Building on the well-known work of Cyert and March (1963), they simply do not refer to meta-routines, routine to change routines (dynamic capabilities), but they refer to more basic organisational routines as an important mechanism to bring change. Such change is a slow and adaptive process with the element of learning deeply embedded as an important support mechanism to bring incremental change. However, Kor and Mahoney (2005) analysed the archival data from 60 technology based entrepreneurial firms to address firm-level economic performance using the development of resources and dynamic capabilities. The sample consisted of 60 firms that completed a public offering in the medical, surgical and dental instruments industries. The findings suggest that research & development investments are better managed if they are subject to strategic management and that the management devising those strategies possess significant firm-specific knowledge of resources and dynamic capabilities.

4.3 Philosophical underpinning of this research

Studies emerging from the field of the resource-based view have usually relied on a positivist perspective. This can be explained by the fact that the main emphasis of the field has been in quantitative studies. Despite recent calls for qualitative research, in particular, case study approach to understand and untangle the nature and the interplay of dynamic capabilities (Teece, 2012), it is only recently that such efforts are made (Leih and Teece, 2016). In this, the role of leadership team is studied using case study approach to understand their input in the performance improvement at two leading US universities. This study is conducted from the viewpoint that it is not possible to achieve the absolute truth of the real world and, therefore, the ontological assumptions of the study fall into the realist approach. The realism approach, overlapping with post-positivism, interpretative or phenomenological approaches, understands reality as holistic, and socially constructed rather than objectively determined (as positivism does) (Amaratunga and Baldry, 2001).

There are different views concerning classifications of science. For example, Peter and Olson (1983) suggest that different approaches to science can be divided into two categories: positivist/empiricist and relativist/constructionist. However, Guba and Lincoln (1994), for example, have also named competing paradigms, such as positivism, post-positivism, critical theory and constructivism. Regarding the proposals of Guba and Lincoln (1994), this study is most closely aligned with positivist approach, which represents realism as it assumes that reality is apprehended only imperfectly. When observed from the epistemological perspective, positivism assumes that research is objectivistic and the findings are probably true. Positivism or realism also prefers to use multiple methods, including quantitative and qualitative methods as approach used for this research.

In addition to being the dominant paradigm in dynamic capabilities studies, the positivist approach has also been strong in case studies. This can be explained by the fact that the scholars in the field have emphasised positivism in their studies

Eisenhardt (1989). However, during the last 15 years, realism has also become increasingly popular in case studies (Welch *et al.*, 2011) and it has even been stated that realism is appropriate epistemological guide for case-study research (Perry, 1998). Supporters of realism have, in particular, questioned the assumptions related to causality which are inherent in the positivistic ideal of theorising (Ragin and Becker, 1992; Ragin, 1997; George and Bennett, 2004; Mahoney and Goertz, 2006; Welch *et al.*, 2011) and they strongly suggest that to be meaningful, explanations have to take contextual factors into account. In other words, explanations are local and historical rather than law-like (Piekkari *et al.*, 2008).

In this study, dynamic managerial capabilities are studied in the context of international student recruitment at the UK HEIs. The context influences the result of the study. For example, some of the UK HEIs certainly seek to grow in international markets. Besides, from the perspective of dynamic capabilities, it is suggested that what is a dynamic or an operational capability depends on the context (Kay, 2010). Literature often presents subjectivist and objectivist approaches as opposite ends of a continuum where one end represents an objective view of the world and the other one a subjective view of the world. However, it is good to keep in mind that these two approaches are only two extremes on the continuum, not the only possible alternatives for an enquiry. Therefore, it is more useful to see these two approaches as complementary rather than as two opposite extremes (Remenyi *et al.*, 1998).

4.3.1 Ontological assumptions

Scholars have different views regarding whether dynamic capabilities, organisational routines, and their relevant concepts, such as process, learning and knowledge are objective realities and they exist out there independent of observer. Objectivity turns out to be a matter of degree, and ontological assumptions can be conceptualised on a continuum that ranges from objective to subjective (Burrell and Morgan, 1979). On one end of the continuum regarding the existence of dynamic capabilities and routines, some scholars view these appealing concepts as the totality of social construction influenced by particular social situations. For example, Pinho (2011)

treat dynamic capabilities as social capital and Blyler and Coff (2003) point to the routines alike. Such social contexts at different times, places as well as, for example, different roles, social identities and careers. On the other end of the continuum, scholars regard dynamic capabilities and organisational routines as objective that can be empirically observed free from the theory-laden effect of sensory experience (Benton and Craib, 2001). For example, Wang and Ahmed (2007) insist that researchers should emphasise the empirical observations of dynamic capabilities and inductively arrive at theories. A broad spectrum of middle ground theories are positioned between these two extremes of the continuum. For example, (Teece, 2012) proposed to develop a unifying methodological direction by integrating positivist with interpretivist methodologies to address important research gaps and ontological assumptions. As such, the ontological stance regarding dynamic capabilities is pluralized, allowing realism, constructivism, positivism as well as interpretivism, like the case in most of other fields of inquiry in social science.

4.3.2 Debate on the intervention mechanism

This research is undertaken to discover intervention mechanisms between the dynamic managerial capabilities and organisational routines, aimed at generating strategic change. In this, the intervention mechanism is assumed as a reality out there waiting to be discovered. However, studies offer arguments that are open to variance and are concerned with the existence of organisational structures and intervention mechanisms that determine a starting point in the process of generating strategic change. Schreyögg and Kliesch-Eberl (2007) view the nexus of dynamic capabilities and routines as a duality in which each cannot be understood as being separate and distinct from the other, and one is equally as important as the other is. To date, dynamic capabilities and organisational routines are viewed as distinct constructs.

Methodological individualists may argue that “without individual people and their activities, there could be no structure, structures do not exist independently of activities of people, but, on the contrary, are nothing but regularities in the aggregate

patterning of those activities” (Benton and Craib, 2001: 132). Accordingly, Regnér (2008) citing Giddens (1984) view structure as virtual and held in the minds of agents until instantiated in the action of agents involved in the orchestration and co-creation of dynamic capabilities and organisational routines. They believe that structures result from the present actions of agents, and the subsequent change is often attributed to the actions of these agents. In this case, people are regarded as both products and conditions of possible social structures. On the contrary, if structures and agents are assumed to hold a dualistic existence, this assumption enables the explanation of the structures that have to be in place in the first place for strategic change to take the centre stage.

it is only through the activity of social agents that social structures are kept in being (reproduced as actions), but individuals or collective agents may also modify or transform social structures owing to the duality (Schreyögg and Kliesch-Eberl, 2007). Archer (2003) developed this idea and took it as axiomatic that structures are objective, with independent causal powers, that constrain and enable the actions of agents, and agents have causal power, they also have ultimate concerns that they try, fallibly, to put into repetitive practice. Following this line of logic, one can argue effectively against methodological individualist and empiricist tendencies to dismiss the reality of social structures and intervention mechanisms.

4.3.3 The philosophical position of this research

Although there exist various logical combinations of ontological and epistemological assumptions, no one combination can claim to be correct. Some might appear more coherent than others; it is at its best the result of the faith of the researcher in a particular worldview. Attention should be given to the sense of logic and not to the superiority of any single research philosophy or a combination over the other. This research supports the epistemological views that the social structures, in which organisational routines and dynamic managerial capabilities reside interact and are ontologically real. The contradictions like structure described in the last paragraph are based on different ontological and epistemological foundations. On this token, it

is important to note that the researchers should shift their attention from being judgmental about which philosophical assumptions are superior to whether the philosophical assumptions chosen are compatible with the research methodologies. Which philosophical positions a researcher should take is a matter of free choice and what fits best with the nature of the enquiry. Considering the aim of this research, if organisational structures and intervention mechanisms are not viewed as ontologically real, then it is not necessary to look into the present topic. Therefore, this research takes a more realist position. However, it is necessary to make clear the logic of structures and intervention mechanisms as the agents in each are driven by the external realities.

This research presumes the existence of structure and agency, hence the research alignment towards realism. Accordingly, Blaikie (2007) argues for the nature of knowledge in realism as a scientific theory that is description of structures and mechanisms, which causally generate the observable phenomena, a description of which enables us to explain them. The question remains as to how this knowledge can come to being to explain the structures and intervention mechanisms. This begs a question that is worthy of examination through careful consideration of epistemologies that make claims about which scientific procedures produce reliable social scientific knowledge (Blaikie, 2007). Furthermore, Blaikie (2007) define a clear relationship between researchers and the things of which they wish to have knowledge. However, these things can be regarded as either real in their nature or ideal in perception. On this note, different ontological assumptions may be combined with different epistemological assumptions, but these different combinations should make logical sense to derive workable solutions.

4.4 Research philosophy

The literature review highlighted a number of significant areas worthy of investigation. To state, organisational routines are seen as generative, i.e. the organisations have the ability to function without intervention from the top-management teams (Feldman, 2003). Whereas, dynamic managerial capabilities

view holds that organisational routines are subject to intervention from the top-management teams and that the top-management teams can exercise their ability to sense and seize the change in operating environment (Teece *et al*, 1997). This requires research approach that develops an understanding by acquiring knowledge through survey and qualitative data collection (Gill and Johnson, 2010). A range of differing approaches exists for research regarding the methodologies and methods employed to carry out the research. However, it is important that the selection of research methodology and research methods be justified. On an important note, this justification is not only required to explain why the methodologies and methods have been used but it also involves consideration of the researcher's assumptions about reality and theoretical perspectives.

A research methodology draws influence from ontology and epistemology, which turn into the choices and selection made for the research design and the instruments used. According to realist ontology, the reality exists and that this is independent of any cognitive process (Duberley *et al.*, 2012). Although there are number of things to be discovered, the realist ontology informs this study. Rorty's (1989) work in the late 1970's and early 1980's limited realism so that only by measuring and observing can be confirmed as being real and this has become to be known as empirical realism (Duberley *et al.*, 2012).

According to Sullivan and Daniels (2005), reality and how we behave and think is acknowledged and is influenced by discourse, known as realism. A central issue in realism is the active role of the human agents, but this is concerning their interaction with an independent external reality that can constrain or facilitate human action (Duberley *et al.*, 2012). I follow pragmatist philosophical orientation, although this can be interpreted in a variety of ways, it entails common characteristics; the results can be applied, and this philosophical orientation uses methods that are results driven (Crotty, 1998). Pragmatism is known as an American philosophy credited by the early works of Charles Sanders Pierce, William James and John Dewey (Hjørland *et al.*, 2005). A pragmatist's view of the world is positive and optimistic, and a

pragmatist believes that the world exists to make the most of what is out there and begs exploration (Crotty, 1998). There exist numerous methods and techniques to conduct research; however, it requires a careful approach that is relevant appropriate to avoid potential problems of an 'anything goes' attitude (Hjørland *et al.*, 2005).

4.5 The knowledge about the intervention mechanisms

Regardless of the confirmation of the existence of intervention mechanisms, they are often unobservable, and the produced body of knowledge cannot be acquired through experimental closure. The question arises, how the researcher would come to know these mechanisms. In this regard, the philosophy of knowledge may be used regarding how the researcher understands the forms of investigation and reasoning that enable the acquisition of knowledge. There are many research paradigms that propose very different methods regarding how to produce knowledge (Benton and Craib, 2001; Blaikie, 2007), they are subject to flaws. The epistemology of empiricism accepts both the existence of an external world and the idea that humans have the capacity to observe this world directly and objectively (Chalmers, 2013). The knowledge is thus produced as a result of observing the world around us by human sense, and knowledge is a matter of accurate representation. However, such observations are theory driven (Benton and Craib, 2001). Even if such investigations are theory driven, some might not align with such philosophy, in such cases; things may exist out there as realities to be discovered with limited or no access (Russell, 1912). In this sense, realist researchers would use appropriate concepts and ideas using positivist approach to understand the work as it is (Blaikie, 2007). Knowledge is regarded in this situation as an epistemic gain rather than the final word. As such, realism concurs with empiricism that there is an external reality that is open to discovery using an appropriate ontological lens.

4.5.1 Tentative knowledge of intervention mechanisms

According to Popper (1934, 1972) and Chalmers (2013), realism and falsification can be combined to form a logically coherent theory; such combination may lead to

knowledge generating process in which the generated knowledge is tentative and not absolute. "This is due to the fact that observations and measurements are always theory-dependent; we cannot eliminate the effects of language and culture, preconceptions and expectations, and scientific perspective and theories, on the way we both see and interpret the world around us" (Blaikie, 2007: 24). This combinative approach to, although tentative, knowledge generation has attracted some critique as to realism has a relative epistemology (Contu and Willmott, 2005). Such accusations have given rise to the false sense of appropriation and has artificially enlarged the inconsistency between realist ontology and epistemology.

Following realism, the real objects of scientific study and explanation are the generative mechanisms or structures that exist and act independently of the patterns of event that they generate (Reed, 2005). Despite this, realism has fallen short to offer a strict set of rules about knowing these intervention mechanisms or structures. Therefore, it would be fair to suggest that there is no discovery logic in realism; instead, the hypothesised mechanisms or structures should be constructed in respect of which local, institutional and historical context are conducive to the actions of the mechanisms (Blaikie, 2007: 87). When viewed from the surface, it seems that realism adopts a relativist epistemology, which forms a major point of criticism by scholars taking other philosophical positions. For example, Contu and Willmott (2005) argue that realism has a realist ontology, relativist epistemology and clear-cut methodology, implying the contradictions and incompatibility between realism's ontological and epistemological assumptions. From a close examination of the alleged "relativism" of realist epistemology, it can be argued that this relativism is totally different from the relativism that epistemologically characterises constructivism or interpretivism. Based on this, it can be argued that because realism proposes that one hypothesised mechanism is better than the other is, and researchers can examine truth more closely. To the contrary, constructivism and interpretivism insist on a singularity of truths, argue that truth is local, and cannot be compared universally (Benton and Craib, 2001). Relativist theories of knowledge

insulate themselves from the possibility of being rejected by doing away with the idea of a knowable independent reality.

4.6 Research design

The four primary data phases and the relationship between them require detailed explanation and consideration; therefore, they are presented sequentially so that the data and the results from one section informs and allows the development of the following. This line of research development is informed by pragmatist philosophy, which uses processes and systems that are functional and useful for the researcher. This research approach produced a mix of qualitative and quantitative, narrative and numeric data that reinforced the pragmatist philosophy. In addition to the sequential approach, there was a parallel approach in relation to the literature review and its relationship to the primary data gathering with this feeding into all stages in a two-way process. At times, the sequential process is not followed, and there are some items that are identified from the earlier phases of the research, which are fed-forward to one of the later stages or direct to the final analysis. This is witnessed in particular between phases two and three that demonstrated more questions but is reduced to focused questions for the interview. This shows the sequential phases that lead to the final analysis but also offers the opportunity for data transfer to other stages. The analysis of each phase is also illustrated and how this then feeds back into the sequential or non-sequential phases.

4.6.1 Mixed methods

Researchers' choice and selection of the philosophical perspectives and orientation guide the methodological considerations, such as data collection methods and statistical packages (Creswell, 2003). A researcher can choose to conduct a quantitative research using questionnaire survey as the method to gather information (Hair *et al.*, 2010). From a discourse perspective, a researcher can use an array of qualitative methods to make sense of large data avenues (Giorgi, 2009). By combing the two methods, the researcher can use mixed/multi-methods approach

to make greater sense of a variety of data sets from a variety of sources (Johnson and Onwuegbuzie, 2004).

Tashakkori and Teddlie (2010) note a close relationship between pragmatism and mixed methods, which is defined as “a deconstructive paradigm that debunks concepts as “truth” and “reality” and focuses instead on “what works” as the truth regarding the research questions under investigation. Pragmatism rejects either choices associated with the paradigm wars, advocates the use of mixed methods in research, and acknowledges that the values of the researcher play a role in the interpretation of results” (Tashakkori and Teddlie, 2010). Mixed methods research is viewed as “third research paradigm” (Johnson and Onwuegbuzie, 2004), the third methodological movement (Gorard and Taylor, 2004) and the third research community (Teddlie and Tashakkori, 2009). The first and second alternatives (Tashakkori and Teddlie, 2010) being quantitative and qualitative research. Since most of the social science research is dominated by quantitative and qualitative paradigms, mixed methods research is less well known and has emerged over the last 20 years as an alternative to the other two traditions. Mixed methods research is defined as; “a type of research design in which qualitative and quantitative approaches are used in the types of questions, research methods, data collection and analysis procedures, and/or inferences” (Tashakkori and Teddlie, 2010). It is also known as a type of “research in which the investigator collects and analyses data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study or program of inquiry” (Creswell and Tashakkori, 2007).

As compared to the quantitative and qualitative, the significant strength of mixed methods is that it allows the research to be complete and comprehensive and is not potentially confined in comparison to a single method (Newman *et al.*, 2003). Adaptation of this research approach helps eliminate potential bias. It can address confirmatory and exploratory questions simultaneously using both qualitative and quantitative approaches (Teddlie and Tashakkori, 2009). An example of a

confirmatory question in the questionnaire phase of the primary research is “what is the frequency of internationalisation strategy review?” and “what is the proportion of international students in total student recruitment?” The response is confirming the relevant period and can be analysed quantitatively. At the end of the survey, the respondent is given the opportunity to freely express their personal and institutional views about internationalisation, and this could reveal a great deal of qualitative data that could not be acquired otherwise.

Johnson and Onwuegbuzie (2004) argue that the mixed methods research approach allows for a more comprehensive analysis techniques and can get more out of the data than quantitative or qualitative analysis alone. According to Denzin (1970), a significant aspect of this is “triangulation”, which describes the combination of data sources within a study of the same phenomenon. On the same token, Greene and Hall (2010) view triangulation as a useful mixed methods investigation “as congruent results from more than one method afford greater confidence in the inferences to be made”. This ‘methodological triangulation’ helps bridge the gap between the two research approaches and helps eliminate the bias associated with the use of a single method investigation on the basis that any inherent weakness will be compensated by the methodological strengths inherent in multiple method enquiries (Gill and Johnson, 2010). A classic utilisation of this triangulation is in the corroboration or convergence of differing methods results (Nastasi *et al.*, 2010) and that is the case in this study where detailed, in-depth qualitative interviews were carried out following a quantitative survey, this being a common approach in mixed methods investigations (Bryman, 2012).

The design and carrying out mixed methods research has an influence on the entire process and therefore is an area worthy of further consideration in its own right. The major share of existing research design approaches are typological and offer classifications of research methods, although being helpful to select some broad based decisions, which approach will dominate, whether they are self-contained or integrated, the selected approach has limitations (Maxwell and Loomis, 2003). The

use of typology restricts full range and versatility of mixed methods research and does not consider a series of important issues i.e. the purpose of the research, how is validity addressed and what conceptual framework is used or whether there are multiple frameworks Maxwell and Loomis (2003). Therefore, they propose an interactive model, which considers the actual components of study and ways in which they are linked.

First, initial literature review and secondary data (HESA datasets and publically available reports from a large British university's website) identified numerous factors that are influential in the internationalisation strategies across the UK HEIs. Some of the UK HEIs were far ahead than others regarding international student recruitment, an important indicator of the extent of internationalisation. This began to raise questions over why there are stark differences in the performance of UK HEIs on international student recruitment. Second, a survey was designed and deployed to the top-management teams at every UK HEI, which seeks to develop a good understanding of why the HEIs international and what are the core reasons behind their increased or decreased intent. As research progressed, some issues arose that indicated internal barriers to internationalisation for many of the under-performing UK HEIs. The analysis of the data produced from first two research phases coupled with literature review brings to the fore an obvious gap in the literature that is now confirmed from the data collected from the UK HEIs, and this proved that the research topic is worthy of research.

Studies in the field of dynamic capability are predominantly quantitative (Wang and Ahmed, 2007), whereas organisational routines are researched through case studies and field observation (Feldman and Pentland, 2003). Despite this empirical division in the literature, the studies are largely aligned to and still struggle to come to terms with the theory building process. The empirical studies seldom discuss explicitly their epistemological assumptions. However, as the methodology is closely tied to epistemology, the latter can be inferred from the methodologies that these studies use. Quantitative methodologies that draw upon survey research and large data sets

usually assume what are characterized as more objective epistemologies as opposed to the subjectivity of qualitative studies (Creswell and Tashakkori, 2007).

On a separate note, Grant and Verona (2015) highlighted the problems of measurement to research organisational capabilities and classed organisational capabilities as “latent constructs that are inherently unobservable”. To research dynamic capabilities, it is important to note that the dynamic capabilities are only observable when they are actioned with an outcome. Even though organisational capabilities are latent constructs, one of two approaches in quantitative studies (Grant and Verona, 2015) often researches them. The first is observable proxies for the underlying variable. Proxies are observable indicators such as patent count that can be used to measure innovation capabilities (see Section 3.2.3). The second is survey methods, which rely on questionnaires completed by key informants. Surveys have the limitation that they are often distributed to a select sample in the organisation, and the person completing the questionnaire may not be in a position to make accurate judgements about the deployment of organisational capabilities. For example, Sirmon *et al.* (2010) used single-ordinal assessment of organisational capabilities and Zhou and Wu (2010) used multiple itemised questionnaire to elicit a single capability. Such practices can produce study results and outcomes that are inconsistent or inaccurate and thus self-reported accounts of performance and capabilities may not produce meaningful results. This could arise for some reasons, such as lack of motivation, deliberate misreporting, perceptual and cognitive distortions, and lack of information (Huber and Power, 1985). In addition to this, problems with questionnaires arise when the response is only required from a single respondent whereas, the responsibility and function of capabilities are spread through the organisation (Danneels, 2008; Gruber *et al.*, 2010). The judgement is only produced when the actions of the key informants are translated into success or failure.

To overcome the identified problem in designing and conducting survey studies, this research anchors on the recommendations put forward by Grant and Verona (2015)

to collect data at two different times using the panel data. First, the data was outsourced from HESA for the period twelve years. This was further refined, screened for errors and filtered for one hundred HEIs, limited to incoming student from on hundred 100 countries and fifteen subjects. This information was then used to collect HEI specific information that would act as warm lead when the questionnaire is sent to the respondent. At this stage, the contact attempt would have factual information by presenting performance indicators, and the information is readily observable by managers who are involved in the processes and activities that underline the capabilities being measured. For example, Weigelt (2009) questioned the information from those who were directly involved in the process of use of information technology to launch online banking platform. Hansen and Løvås (2004) targeted to project managers with the questionnaire to enquire about the state of knowledge movement within subsidiaries and sought factual information concerning hardware, software and technical know-how, similarly. King and Zeithaml (2003) presented questions as to measure the perceptions of the value-added knowledge and to the respondents' organisations. Such data collection practice is important to ensure that the respondent is aware of the questions and possible answer and this is underpinned by their involvement in the process. Furthermore, it is important that the respondent is in a position to observe the result of execution of her/his capabilities (Morgan *et al.*, 2009).

Based on the realist ontology and epistemology, this research acknowledges the existence of bidirectional intervention mechanisms that drive firm performance, and proposes tentative theories about these mechanisms by retroductive reference and theoretical reflection and abstraction. Given the fact that these tentative theories lead to hypotheses, they require tests through recourse to empirical investigation using a systematic approach. Accordingly, these tentative theories might be verified, perhaps amended or even significantly developed to take account of research findings (Bryman and Cramer, 2009). Such significant revisions in theory, in turn, it is subsequently tested through further research. Through this quantitative research process, the research can infer from the research findings the real mechanisms that

determine, on occasions, why some intervention mechanisms work while others do not. The quantitative methodology can facilitate this process of theory development, testing, and comparison, so as to explain what exists in the actual domain. Therefore, this research can look into the overlapping and stratified empirical, actual, and real domains of the intervention mechanisms between dynamic capabilities and organisational routines by employing a mixed-methods research approach. According to Creswell (2003) and (Blaikie, 2007), the philosophical foundation of a research approach determines its choice of lower-level methodological considerations, so, the compatibility between critical realism and the nature of quantitative and qualitative methodology supports the validity of the research design for this present research.

4.7 Data and measures

The data are collected in four phases as follows:

Phase 1: HESA panel data

Phase 2: Research, employability and student satisfaction rankings data (panel data)

Phase 3: Managerial survey data (survey data)

Phase 4: Interview data (qualitative data)

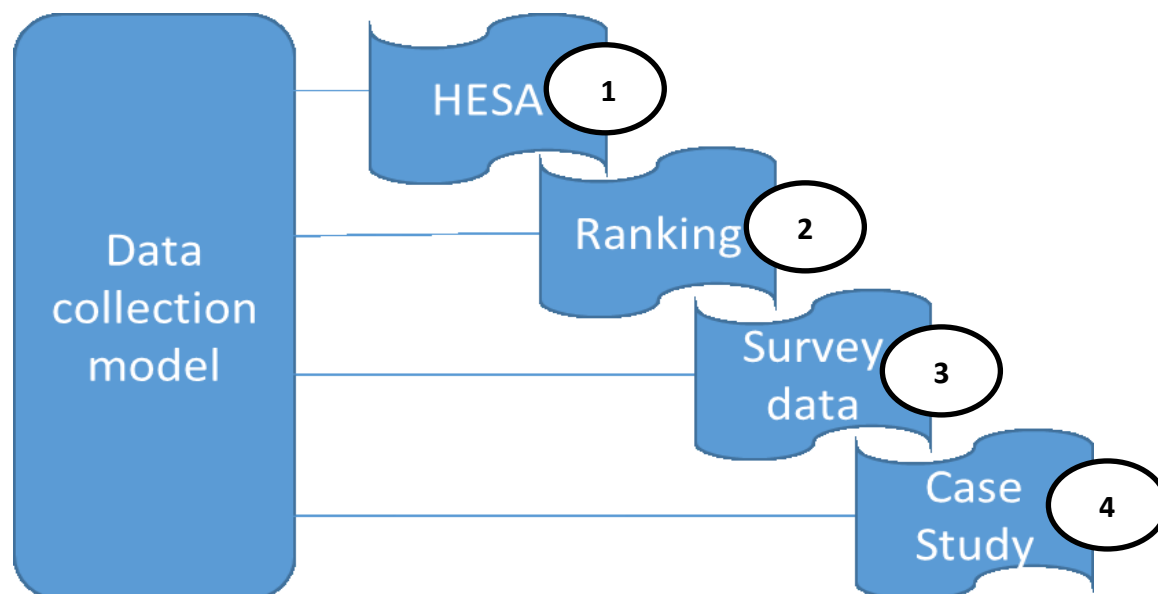


FIGURE 4-1 DATA COLLECTION MODEL

4.7.1 Data collection phase 1, panel data

Phase one covers extensive examination and processing of 12 years HESA data. Upon obtaining this dataset, it was noticed that there are 164 UK HEIs that attract students from 233 countries (including the Cook Islands and Niue, dependent territories, dependent areas, Dependencies and Areas of Special Sovereignty and other countries recognised by the United Nations as not being self-governing). Students from these countries study for 164 distinct principle subjects at undergraduate and postgraduate levels. Although the sourced dataset is comprehensive, it presented numerous problems, such that not all HEIs offer same principle subjects as others at same levels. A large number of HEIs in the UK have undergone restructuring with some going through mergers and others gaining HEI status by moving away from Polytechnic to the university status (pre and post 1992, “new” and “old” HEIs).

Additionally, the HEIs in the UK are clustered in four distinct strategic Groups, The Russell Group, Alliance Universities, Million + and The Cathedrals Group. The only HEIs retained for data analysis are 100, the most attractive for incoming international students. The data was restructured, and the analysis was limited to top 100 universities in the UK. The restructuration of data highlighted the top 100 universities in the UK was also in the top 100 for international student recruitment. The dataset was further aligned taking into account international student recruitment limited to those students from 100 countries outside the European Economic Area (EEA/EU). To further simplify the dataset and make it manageable, principle subjects included in the analysis were limited to 15; this was decided by taking into account the contributory factor to the international student recruitment.

TABLE 4.1 PANEL DATA (100 UK HEIS)

Strategic Group	Formation	Total UK HEIs	Included in this research
The Russell Group	1997	24	24
The Alliance Group	2006	18	15
The Cathedrals Group	-	16	7
The Million+ Group	1997	19	4
The non-aligned UK HEIs	various	87	50
TOTAL		164	100

TABLE 4.2 PANEL DATA (100 COUNTRIES)

Continent	Total countries	Included in this research
Asia	53	36
Africa	59	27
Non-EU Europe	34	16
South America	16	11
North America	45	8
Australasia	26	2
TOTAL	233	100

Data nature: The data collection consists of fifteen subjects with minimum intake of 400 international students per year from one hundred countries to one hundred UK HEIs.

Data sources: The data is outsourced (by the way of licencing for this research) from a reliable source, The Higher Education Statistics Agency (HESA). HESA is the official

data collection agency that collects and disseminates quantitative data about the UK HEIs

Data authenticity and validity: The UK HEIs have a statutory requirement to report accurate data to HESA in their returns. Data is subject to audit by The Higher Education Funding Council for England (HEFCE). Incorrect data return may lead to imposition of fines. The league table compilers, such as, The Complete University Guide, also use the data. Incorrect data return could reduce the overall scores the University receives, which could significantly affect their ability to recruit students in a highly competitive HE sector.

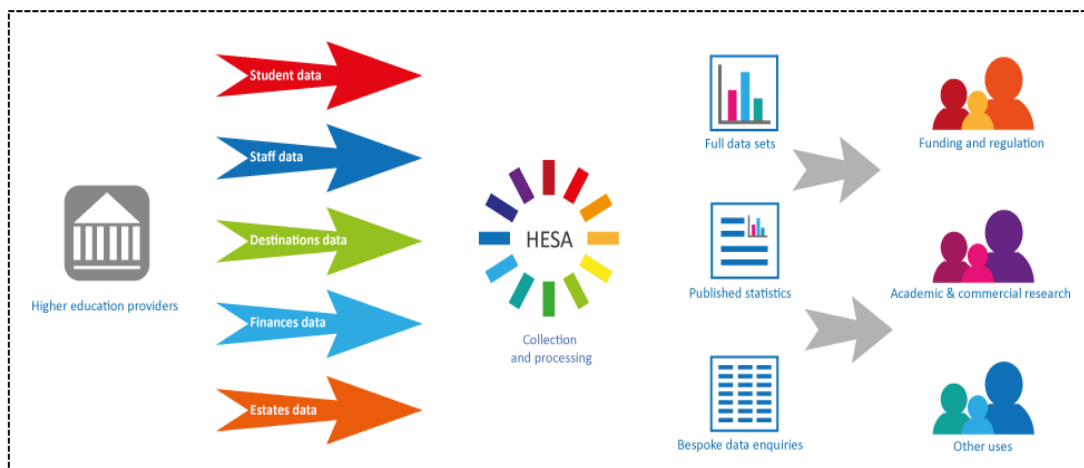


FIGURE 4-2 HESA DATA COLLECTION APPROACH

4.7.1.1 The overview of panel data

The panel data was outsourced from the Higher Education Statistics Agency (HESA), a charitable company that is funded by the subscriptions of the HE providers from whom it collects data, and it provides information for the procurement of expertise, analysis and bespoke information (HESA, 2016). The data collected by HESA comprised of five distinct strands, bespoke data with student records strand was acquired. The data was particularly requested to contain international and total student recruitment, principle subjects, domicile country of incoming students and academic year. In line with the changes across the higher education spectrum, HESA

updates the subject codes on a regular basis. To tackle the confusion about subject code changes dating back to more than 12 years, some limitations were applied. The data was sourced for the period of 12 years starting from the year 2002/2003 (*t1*) and 2013/2014 (*t2*). Upon receipt, the data was further screened and limited to 15 subjects that acted as a major attractor for international. This limitation included 100 most international UK HEIs and student from 100 most international students' sender countries. There are various ways to compute large datasets, and paying attention only to some may present significant reliability challenges (Bell, 2015). As advised by HESA licence, the student number were rounded to the nearest five.

4.7.1.2 The current state of the UK HEIs international student recruitment

The overall growth rate for international students across 100 UK HEIs for fifteen subjects from 100 countries has risen by 88.17% between 2002/2003 (*t1*) and 2013/2014 (*t2*), this is up from 163,549 at *t1* to 307,745 at *t2* (see Figure 4.4). Amongst fifteen subjects, business studies and in particular business school are the biggest attractors to the international student recruitment.

TABLE 4.3 TOTAL AND INTERNATIONAL STUDENTS, DESCRIPTIVE STATISTICS: 12 YEAR TOTALS

	N	Minimum	Maximum	Mean	Std. Deviation
Total students	100	11515.00	452475.00	207261.1500	100473.91514
International students	100	1449.00	101183.00	34677.0800	22622.91028

TABLE 4.4 MEAN AND STANDARD DEVIATION FOR 15 SUBJECTS

Subject	Mean	Std. Dev	N	Subject	Mean	Std. Dev	N
Clinical medicine	42.54	96.989	100	Business studies	277.52	959.575	100
Civil engineering	42.25	107.832	100	Management studies	165.11	541.872	100
Mechanical engineering	51.23	138.39	100	Finance	110.89	565.19	100
Architecture	27.37	70.525	100	Accounting	73.77	355.716	100
Economics	91.88	355.691	100	Marketing	56.6	218.605	100
Politics	48.47	116.536	100	English studies	63.81	277.408	100
Law by area	53.68	102.689	100	Design studies	59.14	168.569	100
Law by topic	62.99	116.989	100				

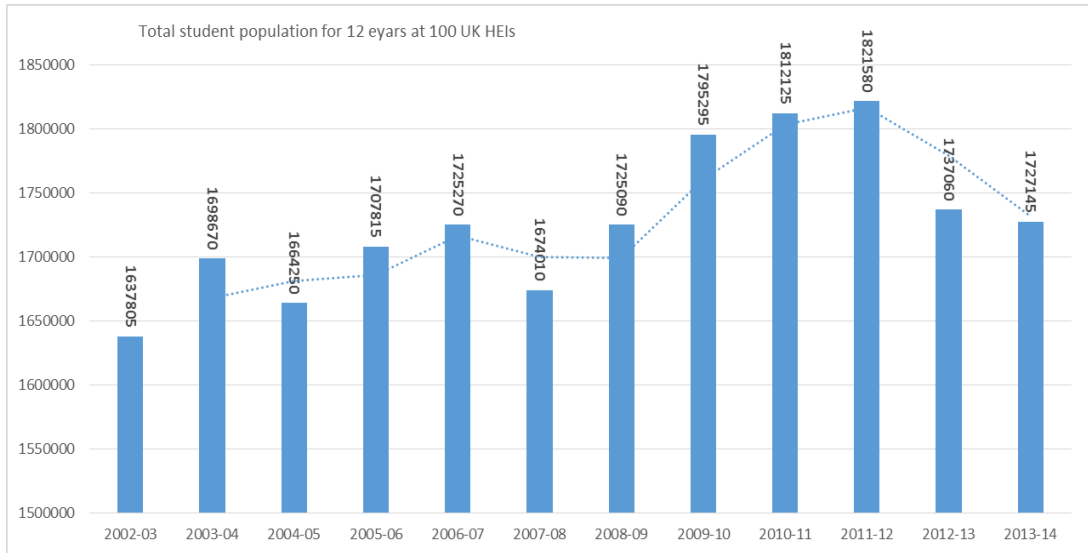


FIGURE 4-3 TOTAL STUDENT POPULATION RECRUITMENTS FOR 12 YEARS

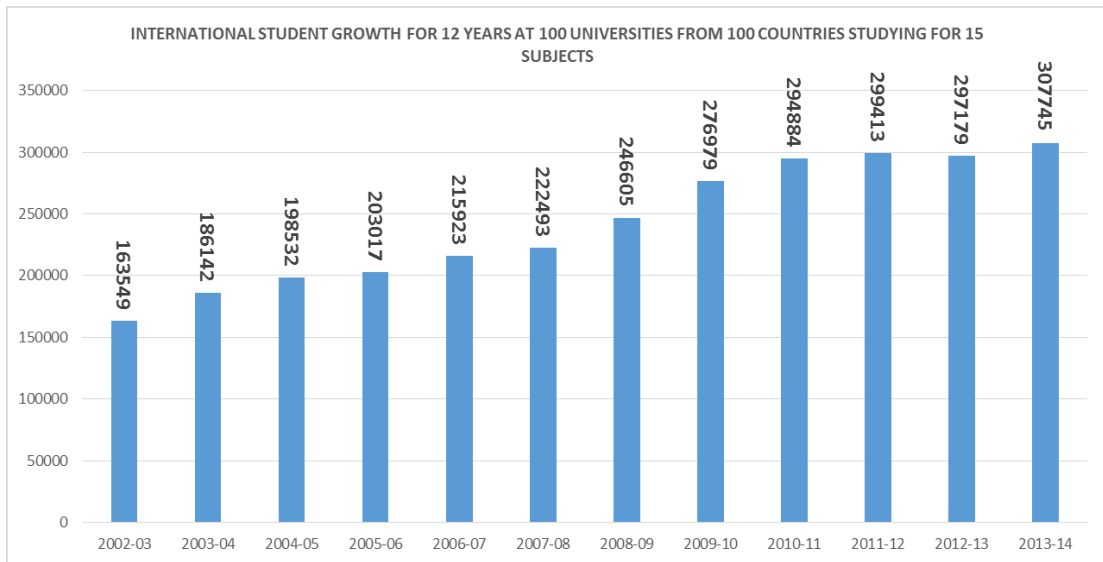


FIGURE 4-4 INTERNATIONAL STUDENT RECRUITMENT GROWTH FOR 12 YEARS

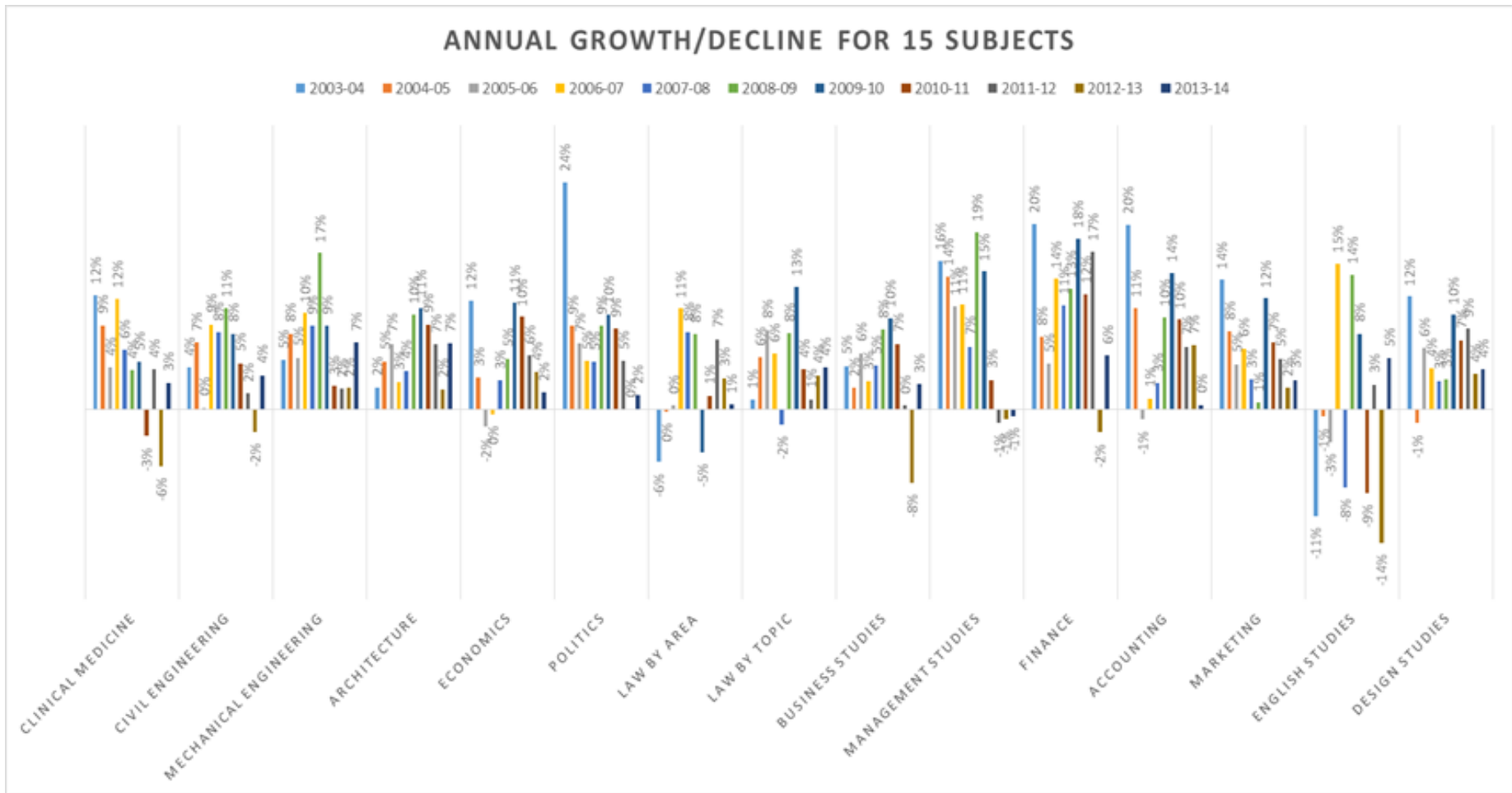


Figure 4-5 15 subjects annual growth/decline for 12 years

It is evident from the table 4.6 that Asian countries are the largest contributors of the international student recruitment at the UK HEIs. This is followed by the African countries. In the light of recent events leading to the British public's will to detach from the European Union may change this, since there are a large number of students from the EU countries that, for this study, cannot be accounted for as international but they home/EU students.

TABLE 4.5 TOTAL STUDENT INTAKE 2002/03-2013/14

Categories	Sample	<i>n</i>
Students from Africa	27	257,492
Students from Europe (Non-EU)	16	144,905
Students from Asia	36	1,351,204
Students from North America	8	230,082
Students from South America	11	38,221
Students from Australasia	2	20,129
Total	100	2,042,033

4.7.1.3 *The current state of The Russell Group*

For The Russell Group, The University of Manchester has remained, by far, the biggest recruiter for total and international student recruitment with total student numbers close to 450,000 for 12 years combined and international student recruitment over 100,000 between *t1* and *t2*. However, percentage wise, The University of Glasgow's international student recruitment has been increased by just over 70 % from *t1* to *t2* compared to the University of Leeds whose international student recruitment increased by just over 10 % for the same period.

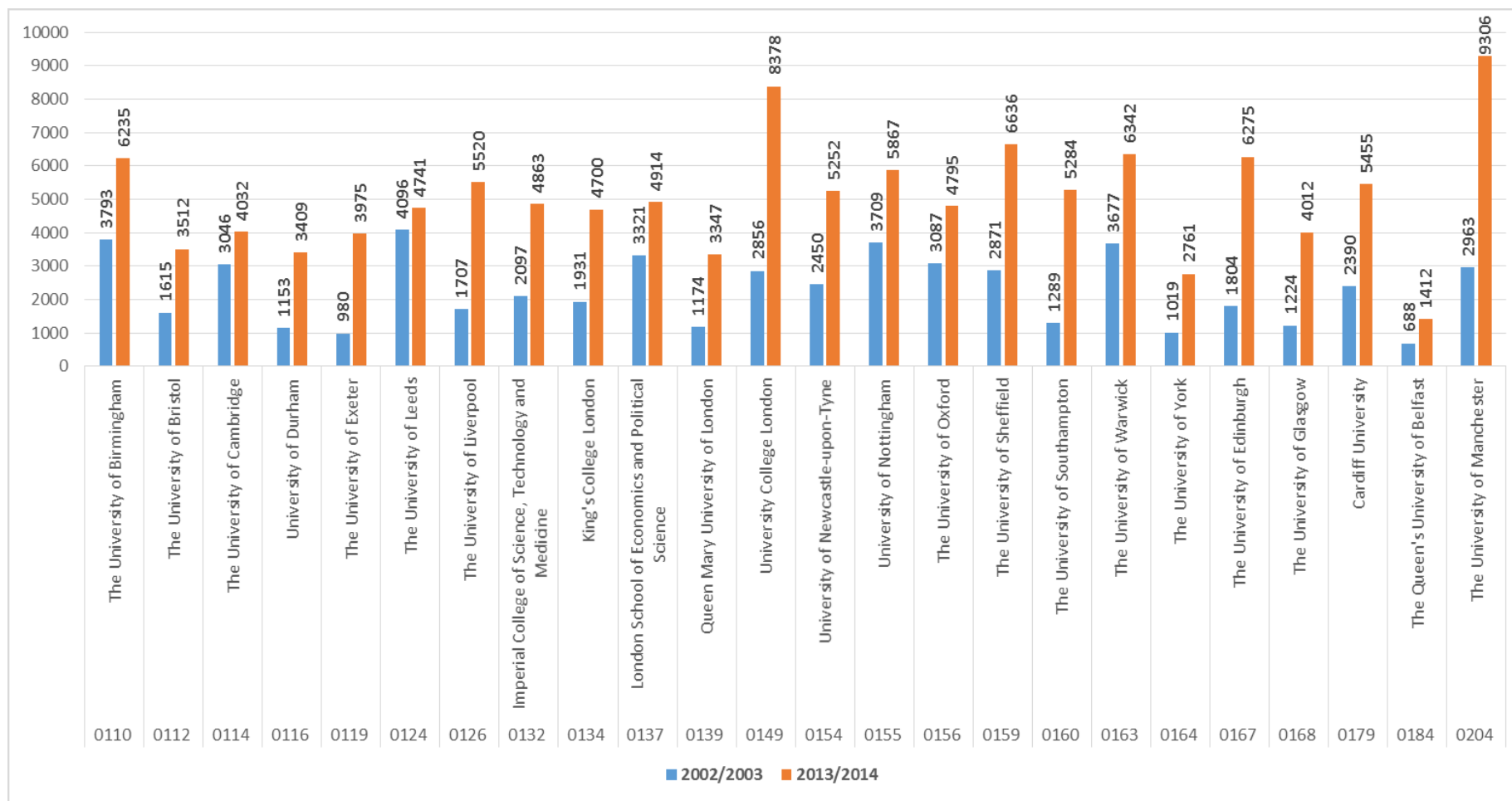


FIGURE 4-6 INTERNATIONAL STUDENT INTAKE AT THE RUSSELL GROUP HEIS AT T1 AND T2

4.7.1.4 *The current state of The Alliance Group*

For The Alliance Group, Manchester Metropolitan University has remained, by far, the biggest recruiter for a total student recruitment with student numbers close to 400,000 for 12 years combined between t1 and t2. However, when it comes to international student recruitment, Manchester Metropolitan University ranked 8th in the group with Coventry University taking the lead with an international student recruitment of just shy of 55,000 combined for 12 years between t1 to t2. However, percentage wise, Cardiff Metropolitan University has almost doubled its international student recruitment between t1 and t2 with the University of Lincoln at the far end of the scale with a decline in international student recruitment by – 66 % between t1 and t2.

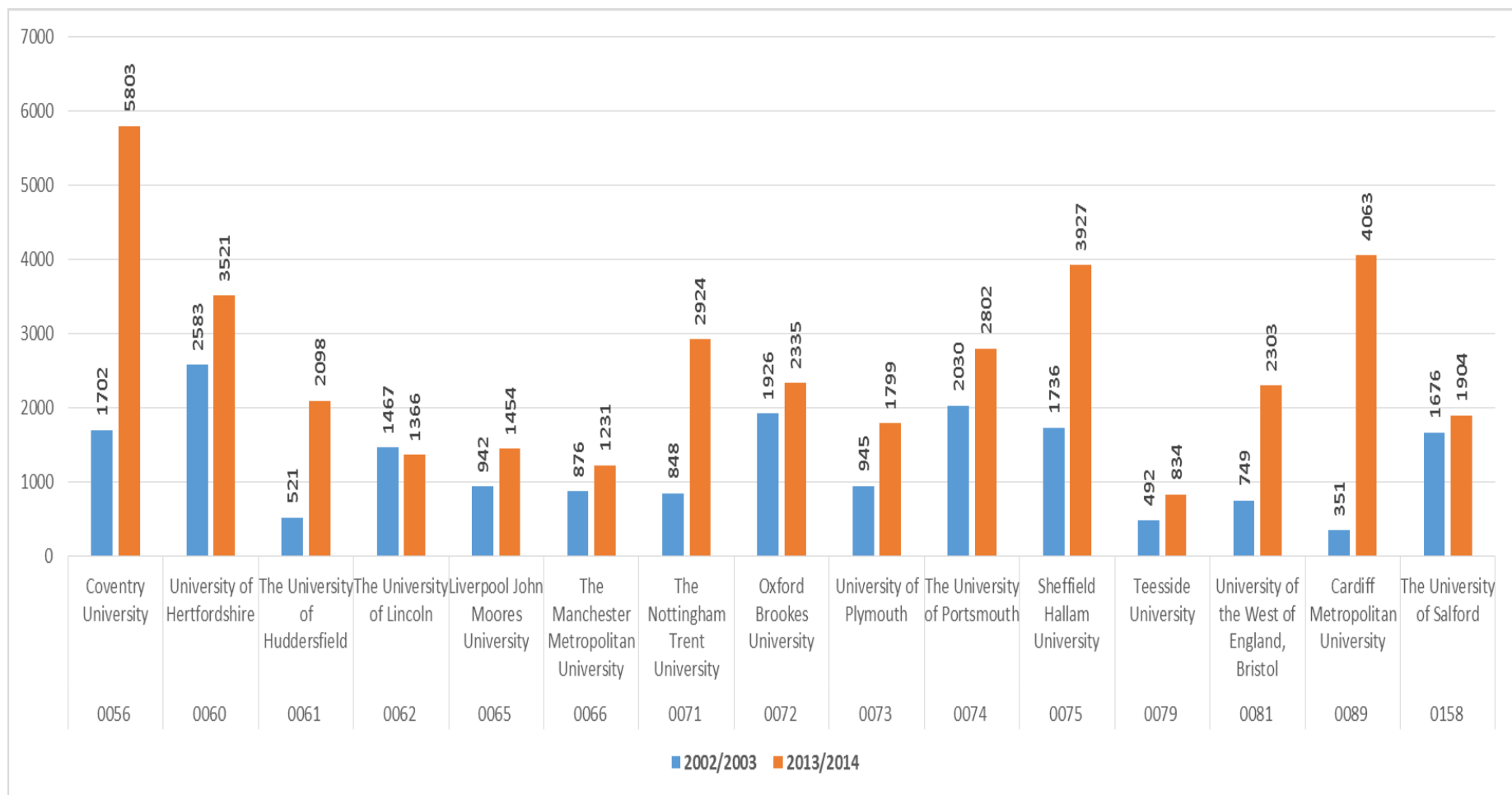


FIGURE 4-7 INTERNATIONAL STUDENT INTAKE AT THE ALLIANCE GROUP HEIS AT T1 AND T2

4.7.1.5 The current state of The Cathedrals Group

For The Cathedrals Group, University of Gloucestershire has remained, by far, the biggest recruiter for a total student recruitment with student numbers just over 350,000 for 12 years combined between t1 and t2. However, when it comes to international student recruitment, the University of Roehampton takes over the position by recruiting just under 11,000 international students between t1 and t2, whereas the University of Chichester managed to attract 3,000 international students between t1 and t2. However, percentage wise, University of Chester raised its international student recruitment by 80 % between t1 and t2 with Liverpool Hope University being quite the opposite and took a nosedive by reducing its international student numbers down by - 137 % between t1 and t2 form.

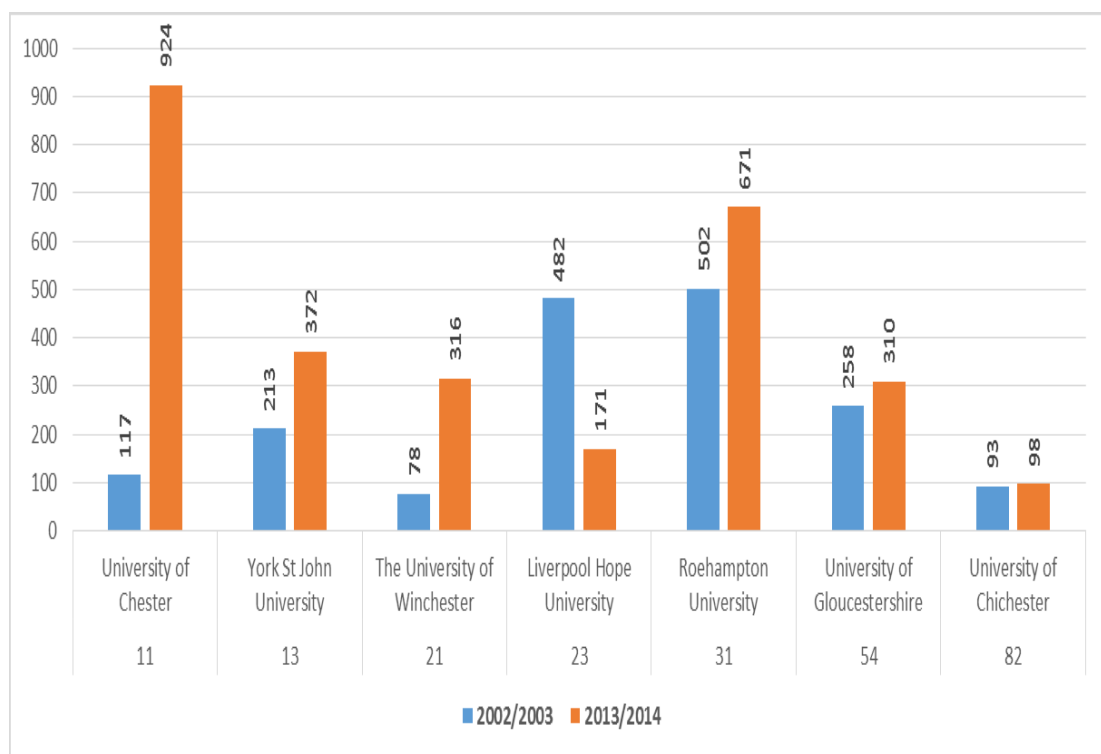


FIGURE 4-8 INTERNATIONAL STUDENT INTAKE AT THE CATHEDRALS GROUP HEIS AT T1 AND T2

4.7.1.6 The current state of The Million+ Group

For The Million+ Group, Middlesex University has remained, by far, the biggest recruiter for a total student recruitment with total student numbers just over 270,000 for 12 years combined between t1 and t2. When it comes to international student recruitment, Middlesex University maintained its position by recruiting just under 65,000 international students between t1 and t2, whereas Bath Spa University managed to attract 3,000 international students between t1 and t2. However, percentage wise Bath Spa University raised its international student recruitment by over 55 % between t1 and t2 with Middlesex University maintaining its international student numbers to the same levels as of t1.

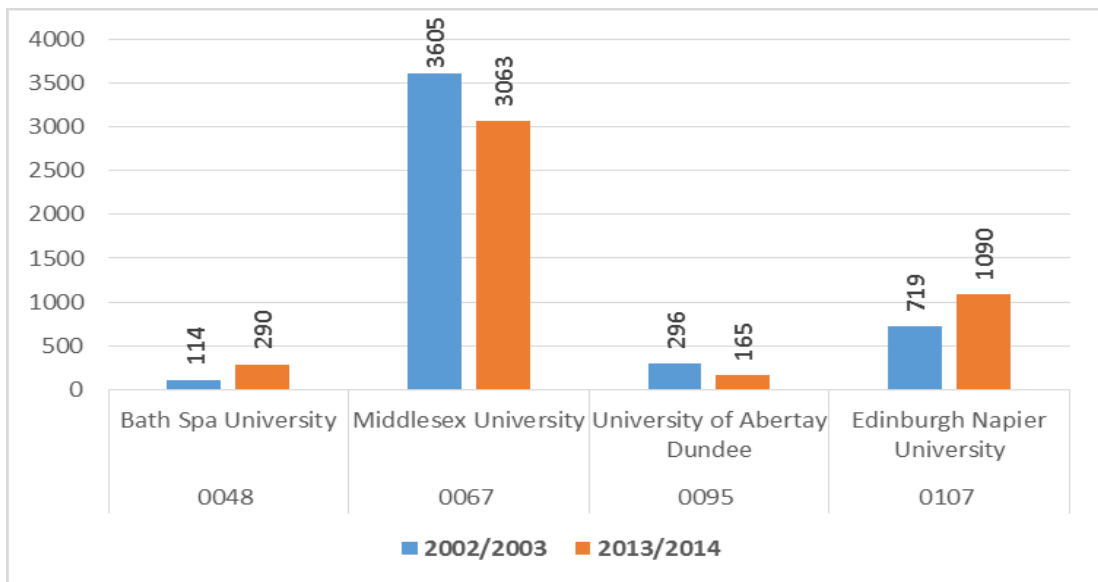


FIGURE 4-9 INTERNATIONAL STUDENT INTAKE AT THE MILLION+ GROUP HEIS AT T1 AND T2

4.7.1.7 The current state of fifty HEIs in the non-aligned Group

As stated earlier, the panel data (selected for analysis) comprises of 100 UK HEIs. The Russell Group has 24 HEIs, all of which form part of the top 100. The Alliance Group has 19 HEIs, 15 of which form part of the top 100. The Cathedrals Group has 13 HEIs, out of which 7 form part of the top 100. The Million+ Group has 18 HEIs, out of which 4 form part of the top 100 HEIs. In addition to these HEIs in the Groups, there are fifty other HEIs that form part of the top 100 HEIs in the UK, but they do not belong to a group. For this cluster of HEIs, the University of Central Lancashire has remained, by far, the biggest recruiter for a total student recruitment with student numbers just

over 350,000 for 12 years combined between t1 and t2. However, when it comes to international student recruitment, University of the Arts London takes over the position by recruiting just over 67,000 international students between t1 and t2, whereas the Royal Agricultural University managed to attract just below 1,500 international students between t1 and t2. However, percentage wise, Aston University raised its international student recruitment by 274 % (from 8,70 to 3,310) between t1 and t2 with the University of Bradford University introducing no change, and the University of Central Lancashire decreased international student recruitment by 8% (from 3,205 to 2,940) between t1 and t2 form.

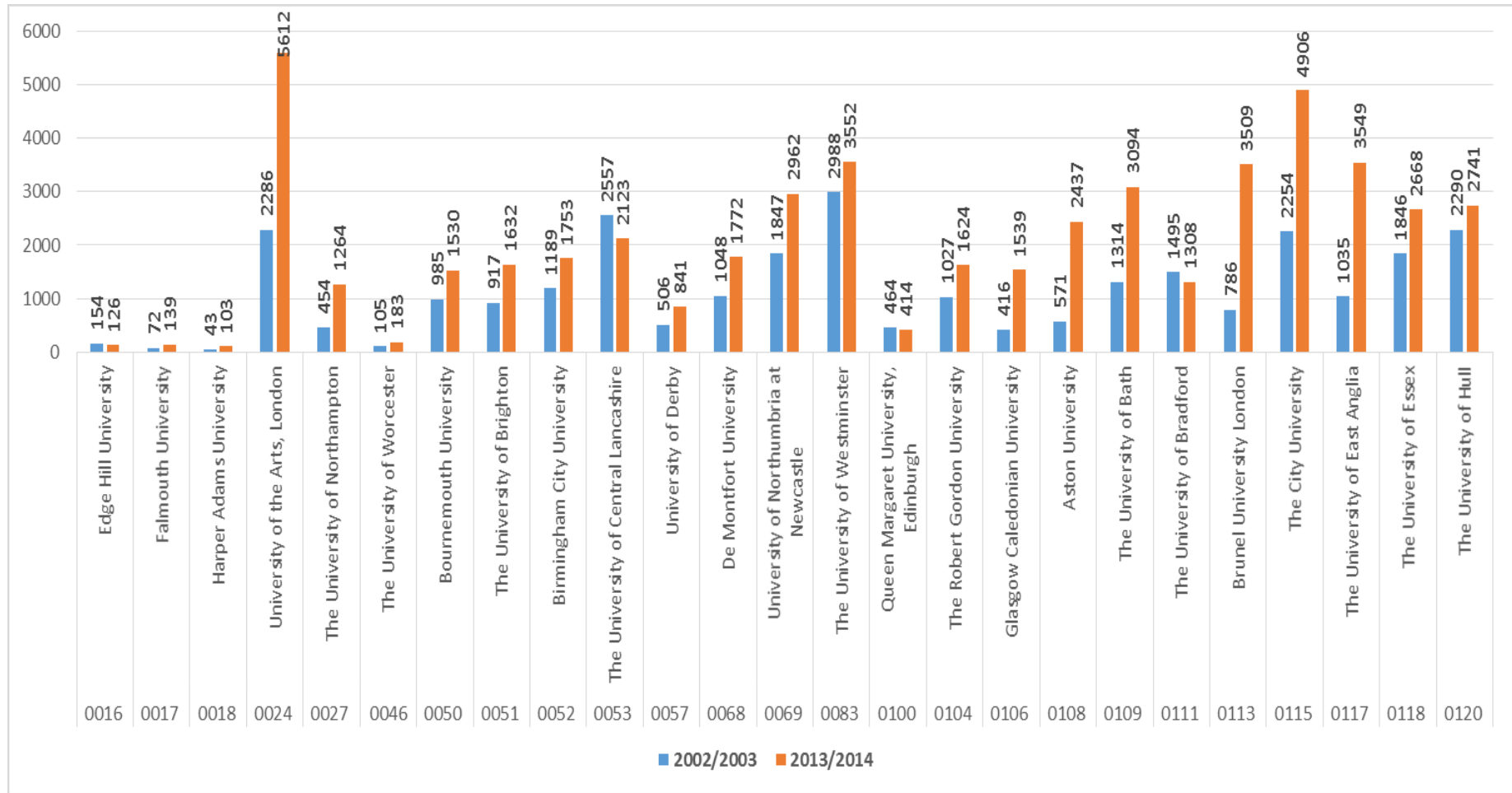


FIGURE 4-10 INTERNATIONAL STUDENT INTAKE AT NON-ALIGNED HEIS AT T1 AND T2

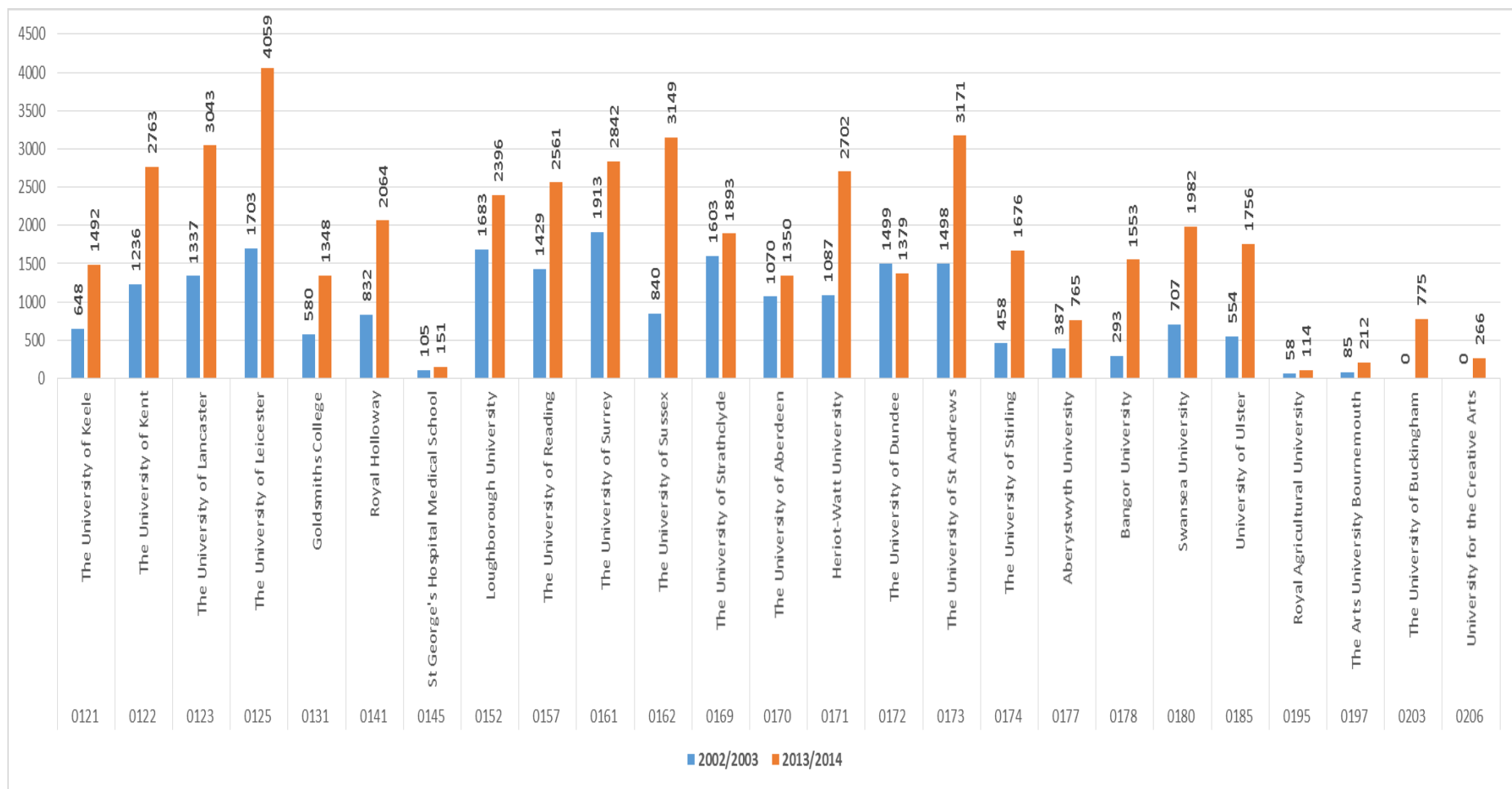
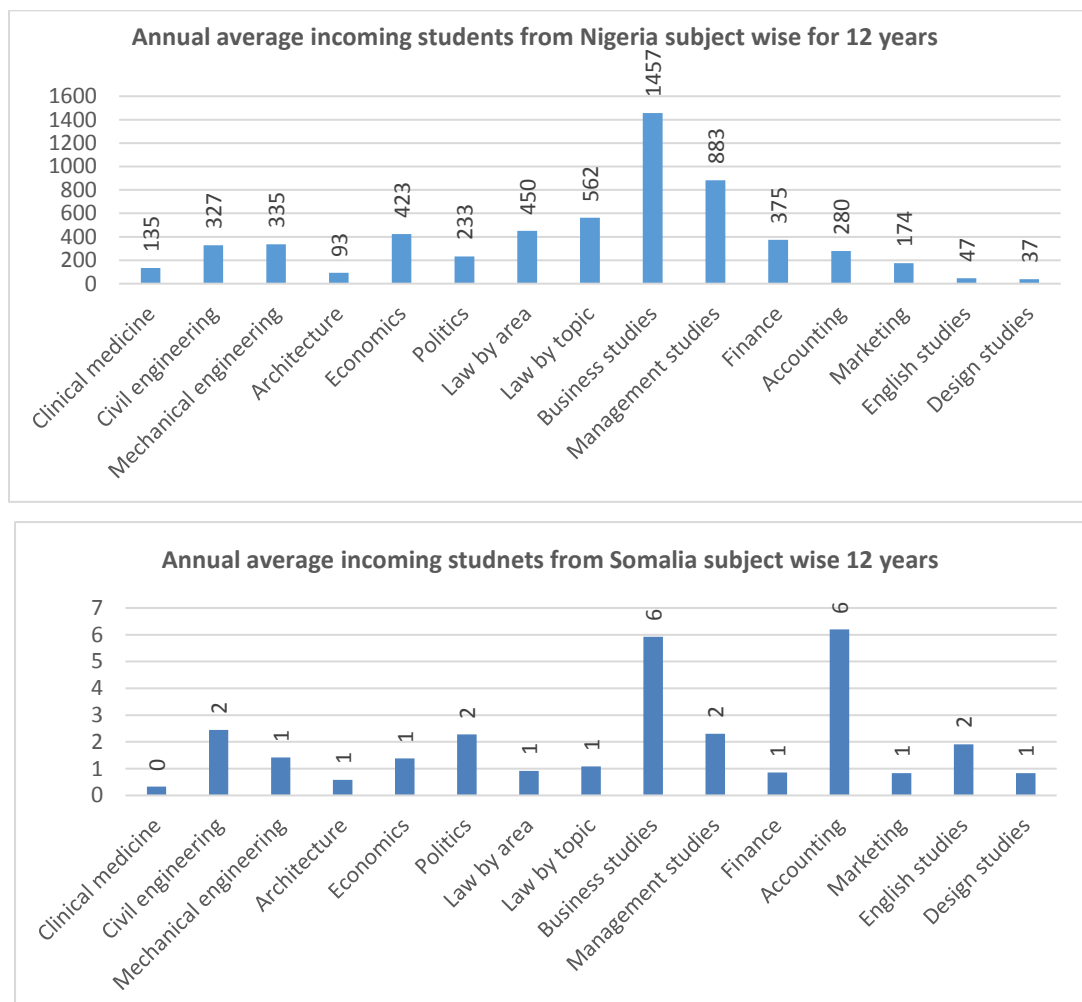


FIGURE 4-11 INTERNATIONAL STUDENT INTAKE AT THE NON-ALIGNED HEIS AT T1 AND T2

4.7.1.7 Annual student recruitment from Africa for 12 years

For Africa, Nigeria has remained, by far, the biggest source of students to the UK HEIs. According to World Bank GDP tracker, Nigeria has enjoyed significant economic growth for the past 12 years, whereas Zimbabwe is just beginning to recover from economic deprivation yet the sanctions continue to mount. The data reveals that the majority of students are choosing the business management subjects as destinations. This has led to 312 % increase (from 4,370 at *t1* to 18,020 at *t2*) whereas Zimbabwe has suffered the worst decline by – 66% (from 2,872 at *t1* to 970 at *t2*). The table below shows two extreme cases of incoming international student from Africa.

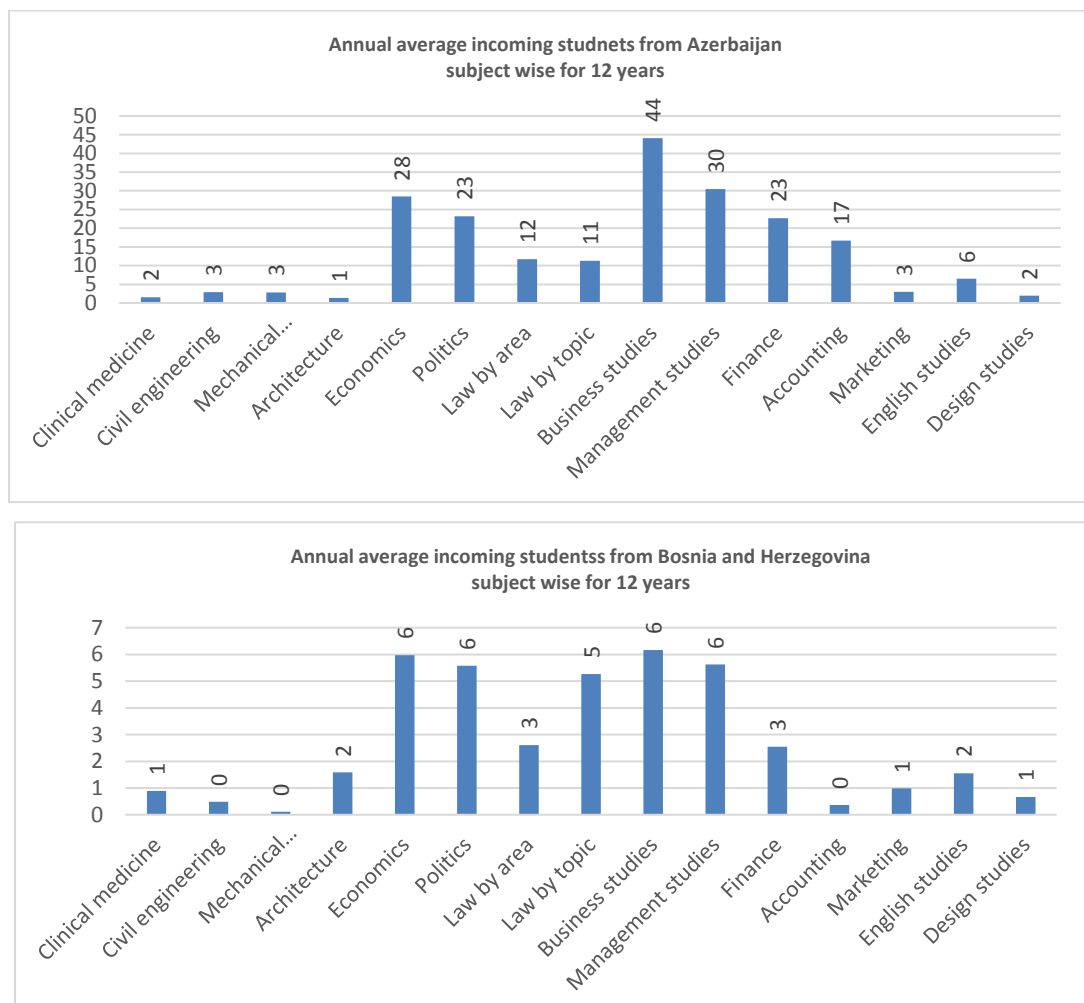
TABLE 4.6 BIGGEST AND SMALLEST CONTRIBUTORS FROM AFRICA



4.7.1.8 Annual student recruitment from Europe (Non EU) for 12 years

For Europe (Non-EU countries as defined by Gov.Uk (2016) not being part of the European Union). Norway has remained, by far, the largest source of students to the UK HEIs. According to World Bank GDP tracker, in early 2000, Azerbaijan has enjoyed significant economic growth as compared to Bosnia and Herzegovina, which has enjoyed relative slow economic growth. The majority of students chose business management subjects. This has led to 1024 % increase (from 70 at *t1* to 787 at *t2*) whereas Bosnia and Herzegovina have suffered a decline of – 66 % (from 109 at *t1* to 60 at *t2*). The table below shows two extreme cases of incoming international student from Europe (Non-EU countries).

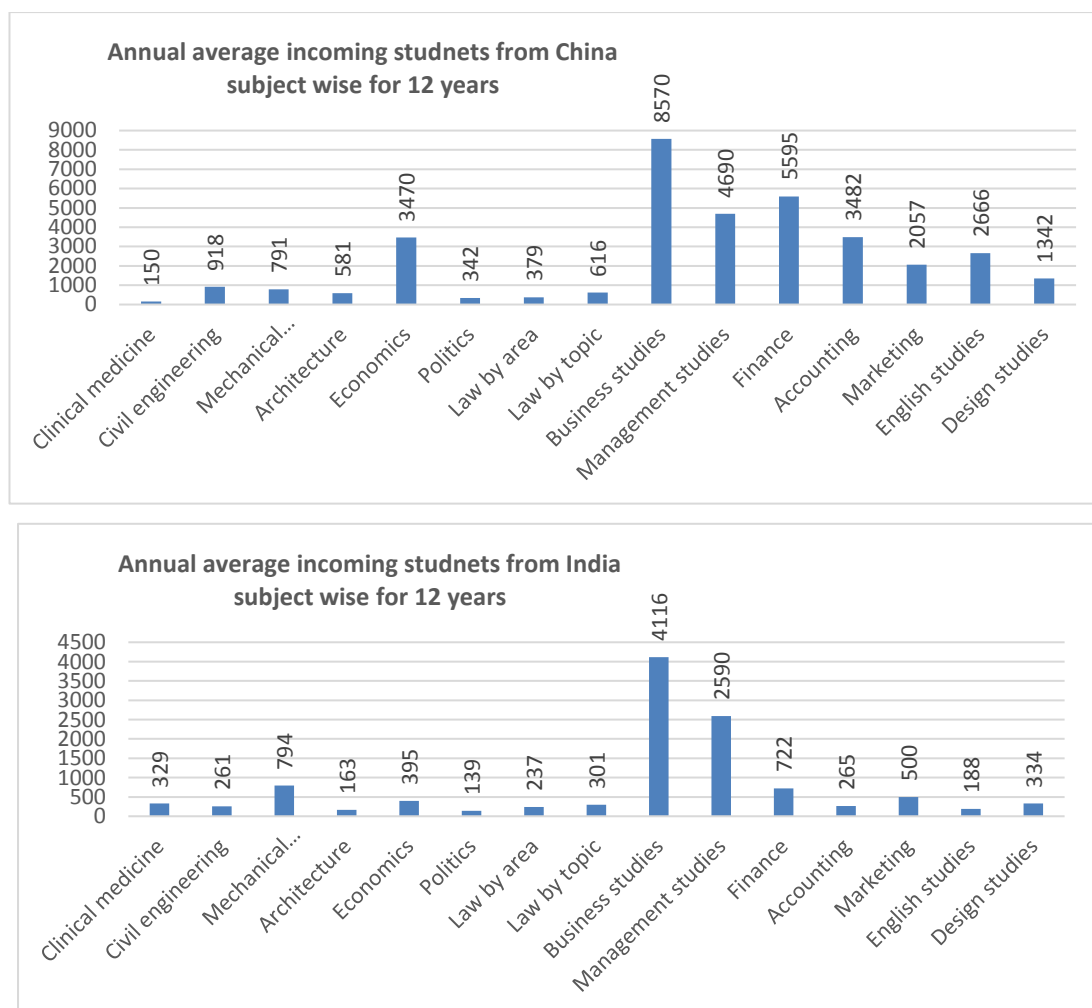
TABLE 4.7 BIGGEST AND SMALLEST CONTRIBUTORS FROM (NON-EU) EUROPE



4.7.1.9 Annual student recruitment from Asia for 12 years

For Asia, China and India annually dispatch (on average) 57,000 and 24,000 students respectively, making these countries the biggest single contributors to the UK HEIs international student recruitment. According to World Bank GDP tracker, in early 2000, China has enjoyed significant economic growth as compared to India, which has enjoyed relative slow economic growth. The majority of students are choosing the business management subjects.

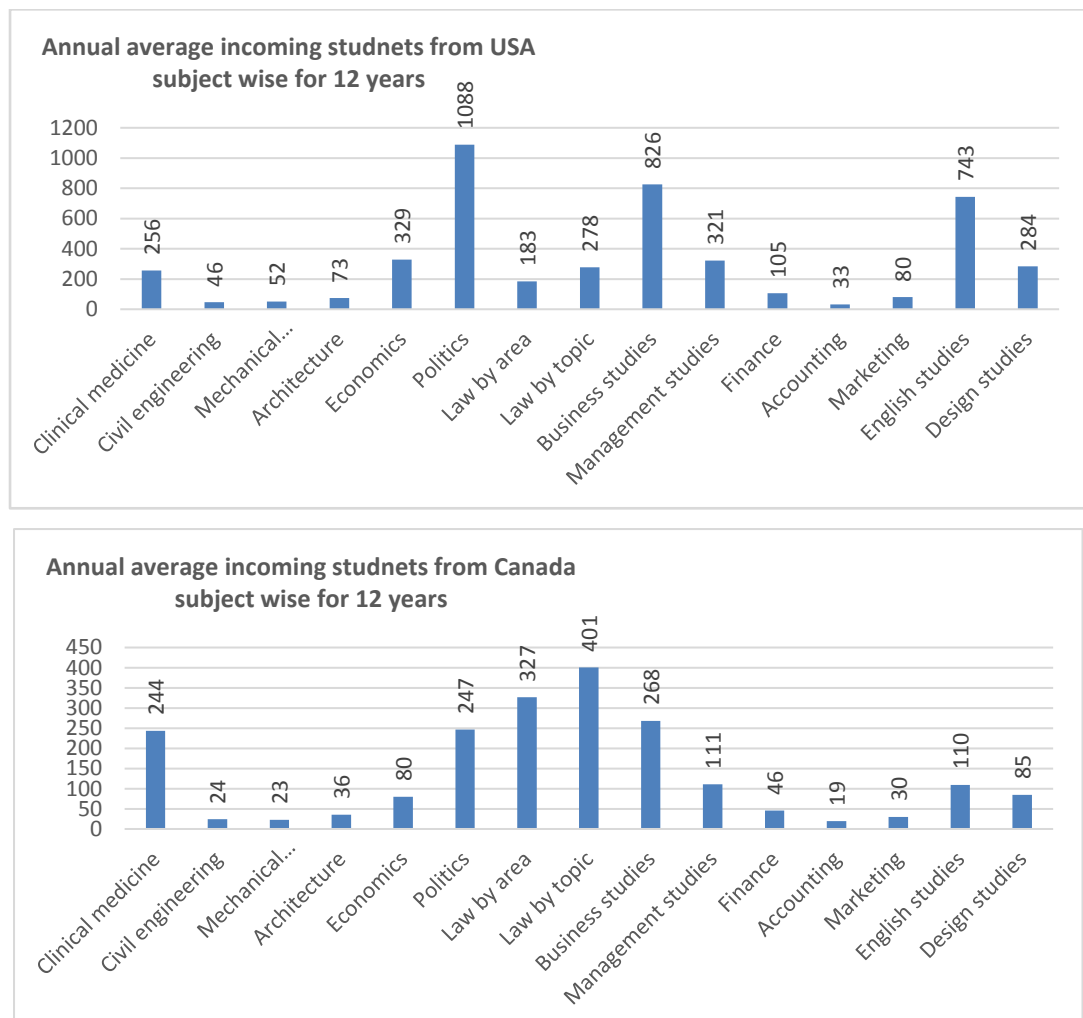
TABLE 4.8 BIGGEST AND SMALLEST CONTRIBUTORS FROM ASIA



4.7.1.10 Annual student recruitment from North America for 12 years

For North America, The United States of America has remained, by far, the biggest dispatcher of students to the UK HEIS by percentage. According to World Bank GDP tracker, USA has witnessed unprecedented GDP fluctuation, such that in 2002 its GDP growth rate close to 4 %, which plummeted to -3 % due to the recession. However, the GDP growth rate is steady at 2 % for the last 4 years. Similarly, Canada has followed suit and its GDP growth and decline rates are very close to that of the US. These two extreme case also confirm the case that although the business schools are likely attractors for international students, they are not always the first choice.

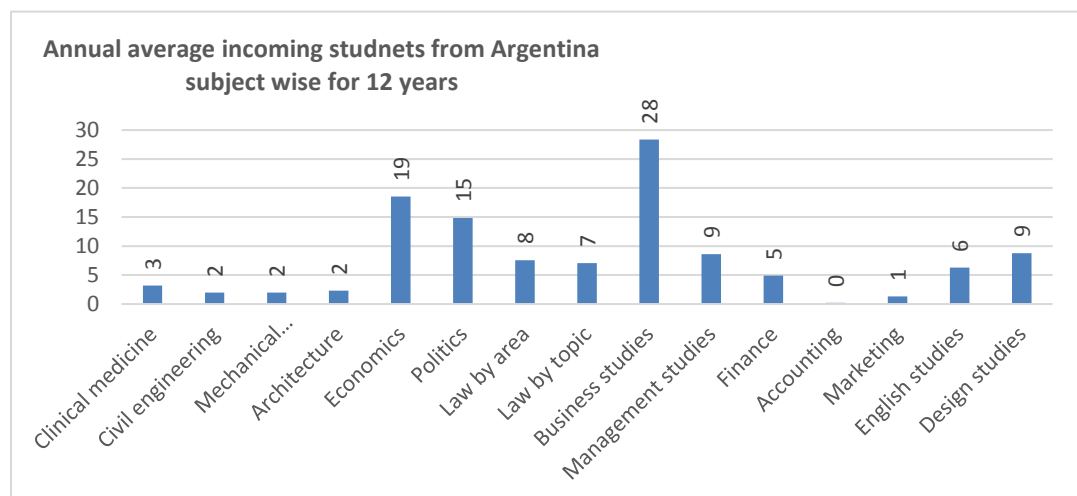
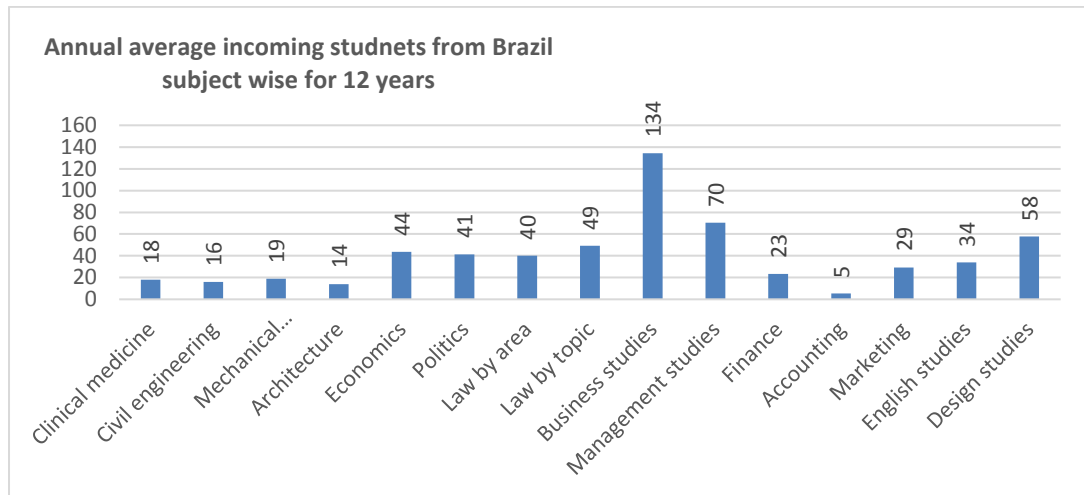
TABLE 4.9 BIGGEST AND SMALLEST CONTRIBUTORS FROM NORTH AMERICA



4.7.1.11 Annual student recruitment from South America for 12 years

For South America, Brazil has remained, by far, the biggest dispatcher of students to the UK HEIS by percentage. According to World Bank GDP tracker, Brazil is among those countries that witnessed recession but was able to emerge out of recession. In contrast, Argentina is going through flat rate of 0 % GDP growth for past seven years.

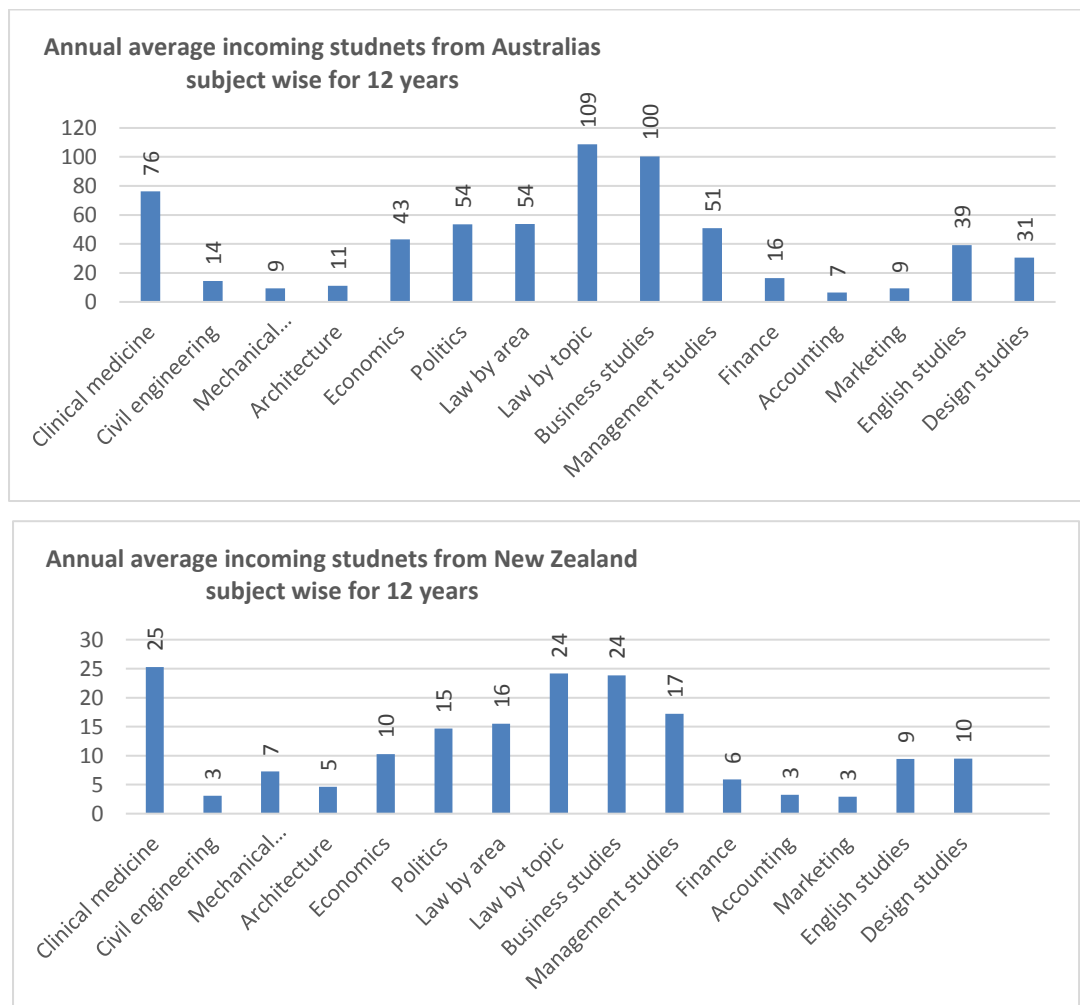
TABLE 4.10 BIGGEST AND SMALLEST CONTRIBUTORS FROM SOUTH AMERICA



4.7.1.12 Annual student recruitment from Australasia for 12 years

For Australasia, Australia has remained, by far, the biggest dispatcher of students to the UK HEIS by percentage. According to World Bank GDP tracker, Australia is among those countries that were least affected by the global recession and continued to enjoy GDP growth in the region of 3%. In contrast, New Zealand was hit by the recession and is on the road to recovery with steady GDP growth rate in the region of 2%.

TABLE 4.11 BIGGEST AND SMALLEST CONTRIBUTORS FROM AUSTRALASIA



4.7.1.13 Annual growth/decline rate for 15 subjects

When comparing the percentage difference between $t1$ and $t2$, it emerged that finance is the biggest mover across the spectrum. The international student recruitment for finance related subjects have increased from 5862 at $t1$ to 21,450 at $t2$. However, a closer examination of data highlights that business studies are the biggest single contributor to the international student growth rate, this subject alone has contributed by close to half a million students. This trend seems to have peaked post-recession and has witnessed slight decline due to the UK Border Agency's visa restrictions which is underlined by a historical string of promises by preceding and current government to bring the immigration down to tens of thousands. This subject is followed by management studies, which also have contributed by close to quarter of a million international students during past twelve years. The trend further continues by finance, accounting, marketing and economics. These are the subjects taught at the business schools. The six subjects taught at the business schools put together outperform the other nine subjects. To put this into context, subjects taught at the business schools contribute by 49 % of the international student recruitment at 100 most international UK HEIs for the past twelve years.

4.7.1.14 Panel data summary

This section covered exploratory results from panel data. The data suggests that there is a great level of heterogeneity between the selected UK HEIs. First, there is some degree of difference for the total student number at the UK HEIs; second, there is a great degree of difference for international student number between and within groups. The findings suggest that the greater number of students coming to the UK HEIs are from those countries that have enjoyed economic upswing. On the same token, not all the UK HEIs are benefiting from an increase in international student numbers, out of five identified groups, only three are doing better than the remaining segment. Finally, the findings indicate that out of many, fifteen subjects in particular make a significant contribution to the international student growth at the UK HEIs.

Out of fifteen, subjects at the business schools are the biggest pull factor for international student recruitment.

4.7.2 Data collection phase 2, rankings data

For data collection phase two, rankings data is acquired from The Complete University Guide (TCUG) website, The Research Excellence Framework (REF), Higher Education Statistics Agency and The Higher Education Funding Council for England (HEFCE). The data collection phase 2 used the following sub-themes when collecting and analysing the data.

Research Quality, a measure of the quality of the research undertaken in the UK HEIs. The data is derived from The Research Excellence Framework (REF) undertaken by the funding councils in the United Kingdom. For The Research Excellence Framework (2014), submissions were made in 36 units of assessment. An expert sub-panel for each unit of assessment assessed each submission, working under the leadership and guidance of four main panels. Each university department entered in the assessment exercise achieved a quality profile which gave the proportion of research in each of four categories from 4* to 1*. For the research assessment measure, the categories 4* to 1* were given a numerical value of 4 to 1 which allowed a grade point average to be calculated. The UK HEIs decide who they wanted to return for The Research Excellence Framework (REF). The latest results published about The Research Excellence Framework were on 18th December 2014. The next REF is planned to take place 2020/2021.

4 *	Quality that is world leading in terms of originality, significance and rigour.
3 *	Quality that is internationally excellent in terms of originality, significance
3 *	Quality that is recognised internationally in terms of originality, significance
1 *	Quality that is recognised nationally in terms of originality, significance and

Source: REF (2017)

A glance at the research quality at the UK HEIs (2014)

HEIs	154
Submissions	1911
Staff	52,061
Research outputs	191,150
Impact case studies	6,975
4 *	30%
3 *	46%
3 *	20%
1 *	3%

Source: REF (2017)

Employability ranking, a measure of the employability of a university's first degree graduates. The data is gathered from The Higher Education Statistics Agency (HESA). The number of graduates who take up employment or further study divides by the total number of graduates with a known destination expressed as a percentage. Only employment in an area that normally recruits graduates are included. The results are adjusted to take account of the subject mix at the UK HEIs. A relatively low score on this measure does not mean that many graduates were unemployed. It may be that some had low-level jobs such as shop assistants, which do not normally recruit graduates. Some universities recruit a high proportion of local students and so if they are located in an area where graduate jobs are hard to come by this can depress the outcome.

Nature of work	2002/03	2004/05	2006/07	2008/09	2010/11	2012/13
Full-time paid work	73.70%	76.10%	72.20%	71.80%	73.10%	73.60%
Part-time paid work	6.40%	6.10%	7.90%	8.20%	7.90%	7.40%
Voluntary/unpaid work	0.40%	0.30%	0.50%	0.60%	0.60%	0.50%
Employed mode unknown		0.40%	0.20%	0.80%	0.80%	0.20%
Total work	80.50%	82.80%	80.80%	81.40%	82.40%	81.70%
Work and further study	8.80%	6.70%	5.30%	5.30%	5.10%	5.40%
Further study	5.10%	5.70%	6.80%	7.00%	6.40%	6.20%
Creating a portfolio			0.40%	0.80%	1.00%	1.10%
Assumed to be unemployed	2.30%	2.60%	3.60%	3.40%	2.70%	2.30%
Not available for	2.80%	2.00%	3.00%	2.00%	2.20%	3.10%
Other	0.50%	0.20%	0.20%	0.20%	0.20%	0.20%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: HESA (2017)

Student Satisfaction, a measure of students' views of the teaching quality at the university. The data is derived from the National Student Survey (NSS), a survey of final-year undergraduate in the given years. The National Student Survey asked the student about learning resources. The survey is a measure of student opinion, not a direct measure of quality so it may be influenced by a variety of biases, such as the effect of prior expectations. A top-notch university expected to deliver really excellent teaching could score lower than a less good university which, while offering lower quality teaching, nonetheless does better than students expect from it.

Theme/question	Level of student satisfaction
The teaching on my course	85%
Learning opportunities	84%
Assessment and feedback	73%
Academic support	80%
Organisation and management	76%
Learning community	85%
Learning resources	77%
Student voice	73%
Student unions	57%
Overall satisfaction	77%

Source: HEFCE (2017)

4.7.3 Data collection phase 3, survey data

This section offers brief description of data collection phase three, the survey data. The tables below present descriptions, mainly describing data nature, sample size, scales and scope, and measures.

4.7.3.1 Survey data

Questionnaires are the most frequently used method in survey research for collecting quantitative data. Despite the critical account of questionnaire and surveys posed by Robson (2002), questionnaire surveys can provide a relatively simple and straightforward approach to the study of attitudes, values, beliefs and motives, and they may be adapted to collect generalisable information. Built on the heels of such advantages, the researcher can obtain the required information deemed sufficient to execute data analysis.

The survey data set was acquired using Qualtrics (2015). The link to the survey was sent via email to all the UK HEIs and emails were addressed to predefined recipients whose contact information was obtained from respective HEIs' websites. The survey participants were contacted on two different occasions. First, initial contact with potential respondents provided information on the purpose of the study and sought general consent to survey participation. Second, upon agreeing to take part in the study, the participants were sent a further email with a link to the survey, a data collection strategy used by Lee and Rha (2016). The main idea behind this two-layered strategy was that the participants would complete the survey online. This would ensure the absence of researcher's involvement in the data collection. Although bias cannot be entirely overcome simply by reducing contact, questionnaire survey help maintains a distance between this researcher and the respondents so that bias and "contamination" by this researcher is kept to a minimum. Besides, the survey conducted by this research is highly structured and have high amounts of standardisation and therefore reliability and validity can be tested (Robson, 2002).

The survey was sent to the population identified as the key drivers of strategic change by the contacted UK HEIs. The respondent choice is deliberate as it conforms to the literature about how the top-management teams change internationalisation routines and it conforms to the strategy as practice where the top-management teams play a vital role in the implementation of internationalisation strategies. According to Leask (2012), the use of an unrepresentative but informed sample is suitable and relevant for research of this nature. The primary purpose of the questionnaire was to establish the nature of work that is taking place at the UK HEIs. The questions sought to understand the past, present and future of the internationalisation process at UK HEIs (Cooper and Schindler, 2008). The name and email addresses of respondents were acquired from all UK HEIs. The respondents were selected by their overall responsibility towards internationalisation and who were in a position to introduce change in internationalisation routines. The ethical measure is taken into account, and the respondents are ensured that the data collected is in according to data protection act (1998) (Bryman and Bell, 2007). Some

questions are presented as “not applicable”, and at the end, the respondents are given the opportunity to express their personal view on internationalisation and how the process faces challenges and opportunities (Cooper and Schindler, 2008).

The questionnaire is intended to represent a probable sample, where the “sample is planned to select a large number of cases that are collectively representative of the population of interest” (Teddlie and Tashakkori, 2009). The respondents were contacted by email to introduce the research topic. A group email was sent using Qualtrics’ built in the email system to respondents at 164 UK HEIs. The immediate response rate was slow, this was later improved with phone calls and reminder emails with 20 years’ data for each HEI indicating international student population trends for the last 20 years, this approach increased survey response.

The questionnaire consists of 20 questions that used 5-point Likert scale, while other sought categorisation, i.e. “what is the percentage of an international student at your university”. For each with five-point Likert scale, the respondent is given the option to select “not applicable” or add further detail to the question and then use the five-point Likert scale. For example, if an HEI is engaged in international activities in a country/geographical location that is not listed in the questionnaire, the respondent can add that location followed by the response. The use of 5-point Likert data scale is capable of producing results that are more accurate and reliable (Cooper and Schindler, 2008). The questionnaire design aimed at simplification while obtaining an informed appraisal by respondents. Along with the advantage of a 5-point Likert scale, some disadvantages are collateral, where the respondents may understand whether the question is to be negative or respondent do not agree with the questions. In some of the responses, it is observed that some respondents have left the question blank, which has associated problems when processing raw data in SPSS. Research suggests that 10% respondents make that error of judgement (Schmitt and Stults, 1985). Secondly, as the scale is bipolar, respondents who feel something is good will need to disagree with a statement that is phrased negatively

(Easterby-Smith *et al.*, 2008). The questions were therefore developed and worded as to avoid these issues.

The initial phase of the questionnaire was derived from analysis of strategy document, and reports from the selected HEIs. The final version of the questionnaire is the result of a series of drafts and revisions. Before the launch, the questionnaire was piloted and tested to check for functionality. At this stage, some observations were made and errors corrected before it was distributed to the respondents. The main changes comprised of questions grouping, which offers respondents smooth and seamless experience with the ease of navigation through the questionnaire and offers them the provision of free-text to provide qualitative comments, which are a good fit for the qualitative section. Teddlie and Tashakkori (2009) confirm that a major indicator of mixed methods research is a combination of both types of data and this is the method most commonly associated with a pragmatist approach. Universities from all four countries in the UK are included in the study to eliminate possible sample and geographical bias.

The strategy document is an important method that highlights the organisations' strategic plans and acts as a stepping stone in the organisational functions design (Kabanoff *et al.*, 1995). Content analysis strategy is a common approach as to serve an objective due to its transparency about the process of coding and sampling (Bell and Bryman, 2007). To the contrary, content analysis has its disadvantages as a method, as the authenticity of the information is heavily reliant on the quality of the documentation, and therefore credibility and representativeness are major considerations. In summary, the main purpose of the analysis of the strategy documents is to identify issues and enablers common to the process across the institutions used as the first stage of a sequential, longitudinal process and not to undertake any research into strategy formulation and/or the relative success of strategy regarding international student recruitment. The information is used to create a questionnaire aimed at the top-management teams which exert their influence on international student recruitment routines. Strategy documents and

reports from each university are analysed, this helped maintain focus and not to lose sight of research questions (Knight, 2003; Middlehurst and Woodfield, 2007). The themes identified in the literature are used to group data into a series of more manageable measures and to group the information together to allow a meaningful analysis.

The primary purpose of this phase is to identify items that are worthy of addition to the survey. The study and understanding of strategy documents and reports and their systematic analysis are integral parts of the questionnaire design. Without this, much of the survey would have been built on the heels of conceptual literature; that would deviate questionnaire from research design and have a literal bias. At early stages of this research, the survey design; content analysis and literature ran in parallel as they were informed by literature. For example, internationalisation of the curriculum is coded in the strategy documents, which is aimed at offering students the possibility to become global citizens. A strategy document from a university denotes that “synergies will be sought between individual/group research collaborations with overseas institutions and international student recruitment” this is considered to be relevant to the research question about how the top-management operationalises this agenda. Therefore, the phrase is coded in that sub-area, and this could then continue to be utilised for the remainder of the analysis.

The survey comprises closed questions with an option to opt for “other” in nature, but they do not always have to be. Examples of exploratory questions are within the interviews in the third and final data collection phase.

4.7.3.2 Measures

The survey starts with the name of the respondent’s HEI, number of total and international student recruitment and the number of degree programmes and strategic focus of the respondent’s HEI. The main body of the questionnaire is divided into five sections, with each section leading to sub-sections and questions; they are as follows.

4.7.3.3 *Strategic drivers for international student recruitment*

The questions are developed from international strategy documents content analysis coupled with a priori knowledge derived from literature. This facilitated the synthesis of derived analysis to shape the statements and sections followed by integrating issues identified. The sections below provide a brief description of the questionnaire sections. The last section seeks respondents' qualitative views, where they can express major issues challenges and obstacles related to international student recruitment, this is seen as an opportunity for respondents to present their views on strategic change at present and for future.

This is considered as the most important area of investigation, as it highlights why the UK HEIs engage in international student recruitment. This section investigates issues such as strategic shift to increase international student recruitment, the appointment of new VC of DVC, appointment of international directors, who exercise their power to influence international student recruitment strategies. Such drive is purposeful in two ways. First the HEIs intend to attract global talent, second, they are driven by increased local and global competition. The section is intended at enquiring the rationale behind the move to internationalise or increase or decrease international student numbers. This is followed a brief information about the person in charge of internationalisation and to see whether there have been any signs of inertia within the organisation.

TABLE 4.12 INTERNATIONAL STUDENT RECRUITMENT STRATEGY IS DRIVEN BY...

Category	Dependent	Independent variables
Strategy	International student recruitment	Shift from Home/EU to International
		The university's history and experience
		Increased local competition
		Attract the best international students and staff
		Government calls
		New international strategy
		Appointment of new VC / DVC / International Director
		Complement the Home/EU student recruitment
		Links with business and industry

4.7.3.4 *Internal challenges*

This section explores the challenges faced by the respondent UK HEIs in their international student recruitment efforts, such as organisational culture, student and staff mobility, internal communication and communication with different partners, due diligence, intellectual property rights and inertia. In addition to this, the UK HEIs face challenges in terms for repatriation of funds from TNE activities; managing tax liability, change in internal processes, systems and conformant to Quality Assurance Agency (QAA) requirements.

TABLE 4.13 INCREASE IN INTERNATIONAL STUDENT RECRUITMENT IS CHALLENGED BY...

Category	Dependent	Independent variables
Challenges	International student recruitment	Cultural change
		Faculty mobility
		Student mobility
		Communication with partners
		Coordination
		Government intervention
		Immigration
		Due diligence
		IPR
		Resistance to change
		Policies
		QAA requirements

4.7.3.5 *Strategy achievement*

This section highlights the objectives the respondent UK HEIs aim to achieve through international student recruitment strategy. This section comprises of questions related to competitive advantage, improve innovative teaching and learning, diversity, improving research profile, ranking, research collaboration and to spread financial risks. produces a multitude of results, where the respondent universities apply internationalisation strategy with an aim to achieve a single or various outcomes.

TABLE 4.14 INCREASED INTERNATIONAL STUDENT RECRUITMENT IS AIMED AT...

Category	Dependent	Independent variables
Aims	International student recruitment	Sustainable growth
		Competitive advantage
		Diversify student profile
		Students experience
		Enhance international profile
		Research clusters
		Attract international partners
		Ranking and reputation
		Leverage strengths
		Spread financial risk
		Policies
		International graduates

4.7.3.6 Reliability and validity

The research’s ontological and epistemological assumptions are a good starting point for the justification and validity of research design. Such research validity design guides the choice of qualitative or quantitative methodology or a combination of the two. Such measure may include a selection of survey and (or) interviews to measure the constructs (Creswell, 2003). This section summarises the justifications presented in the various parts of this chapter for the validity of research design.

For research validity, the research must be built on solid philosophical foundations. The journey for this research started with underlying research philosophy concerning ontological and epistemological assumptions that prior studies have addressed. Such philosophical orientation use retroductive methods to access knowledge about these three domains. There exist bidirectional mechanisms between the dynamic capabilities and organisational routines, where the former influences the latter. To assess the link between the two, the researcher can combine inductive and deductive strategy to achieve such knowledge. Upon this determination and awareness of philosophical foundations, the research must now examine whether the choices of methodological issues at various levels conform to the ontological and epistemological stance.

For quantitative research approach, the absence researcher's involvement in data collection helps to keep bias and contamination to a minimum. On this note, the survey conducted for this research is structured and standardised to ensure reliability and validity. Such measures ensure that the sample is precise and accurate. Issues such as significance level, effect size, and power, and the methods used in data analysis improve the precision of an estimate and randomise the sample thus improving validity. Consequently, the survey chooses stratified sampling methods, and at each stratum, simple random sampling techniques and a table of random numbers are employed. For the research design to be valid, the reliability and validity of the measures must also be strictly scrutinised. This exercise ensures that the right question is asked that would make significant contribution to analysis. Large dataset from HESA required careful handling, orchestration and readiness. It was important that dataset is manageable, workable, is screened for errors and some limitations are applied to ensure the results reveal key information about the HEIs and their internationalisation outlook. Second, the survey data was screened for anomalies, missing values and errors and some limitation were applied where the data did not reach threshold of 0.7 Cronbach's alpha on the reliability scale.

4.7.3.7 *Justifications of data and tests*

For the exploratory study, the panel data is used that offer in-depth information about 100 UK HEIs, their international student intake from 100 countries for 15 subject areas for 12 years ($t1$ 2003/2003 – $t2$ 2013/2014). The large dataset enabled a clear picture of the UK HEIs, the sample is carefully orchestrated and is insightful. Yet, the limitations of such data sets existing. limited variables, fewer reflections of insights and a lack of underlying reasoning to changes and growth. Second, research, employability and student satisfaction rankings data is collected as to investigate these being the key drivers for increase/decrease in international student recruitment. As such, I developed phase two, survey data, phase three for rankings data and phase four for in-depth interviews with mid to senior managers at an English university. Phase two was accomplished using multi-variance and multi-scale

questionnaire sent to the top-management teams at the UK HEIs, i.e. deputy vice chancellor international, international directors and the international office. The questionnaire returned just over 20 % response rate. For the interviews, I developed focal data collection method, by setting a focus on highly experienced personals that are be regarded as strategic drivers for international student recruitment. This was further strengthened by the statistical information and data from different universities online sources and data banks of institutions available online in order to complement data interpretations and understanding. Although both survey and interview data sets are relatively small, I address the limitations by the continued, coherent, and consistent investigations, which strengthen the data reliabilities.

In order to find positive or negative relationship, linear regression statistical method was used. Linear regression analysis is primarily used to describe the strength and direction of linear relationship between two or multiple continuous variables. Positive correlation translates into strong relationship between two variables, whereas negative correlations demonstrates the fact that if one variable is increased the other variable is decreased (Pallant, 2007).

4.7.4 Data collection phase 4, qualitative (interviews) data

One large university in England is selected for interviews and qualitative data collection phase. The selection is such that represents new internationalisation initiatives followed by the appointment of a new Deputy Vice Chancellor. This perspective concentrates very much on a solution that is useful, practical and workable, considers actions more important than doctrine and considers experience to have priority over fixed principles (Thayer, 1973). On this note, it is clear why this approach is adapted. This research anchors on the adaptation of pragmatist philosophy, which focuses on heuristics for investigation (Tashakkori and Teddlie, 2010). Pragmatists are known to make decisions on what they will study based on their own personal values and “they then study that topic in a way which is congruent with their value system, including units of analysis and variables that they feel are most likely to yield interesting responses” (Teddlie and Tashakkori, 2009).

The above components are similar to those identified in research design (Huberman and Miles, 2002 and Robson, 1993), the way they link together, influence and interact with other components is innovative and moves away from a linear sequence (Maxwell and Loomis, 2003). In this sense, the research question is at the centre as it links most directly to the other components but is not necessarily the starting point, it informs and is responsive to these other components (Maxwell and Loomis, 2003). In addition to this, there exist other factors that influence the design of the study i.e. resources, researcher's abilities and preferences, intellectual or practical, methods validity issues, ethics, participants' responses and concerns, data etc. but these should be considered as the environment the research takes place in or as a product of the research (Maxwell, 1992).

The international director, the Vice Chancellor and Deputy Vice Chancellor champion and review internationalisation strategies. The international strategy document guides strategic aims and objectives and mission statements and are used as marketing tools to increase international student recruitment. The reviewed strategies are robust organisational documents that provide an accurate description of how international student recruitment is progressed, how and why they think internationalisation can help them attract potential new partners and how it is devised and executed as a strategy.

According to Warwick and Moogan (2013) and McRoy and Gibbs (2009), internationalisation is an issue where the top-management teams and leadership play a pivotal role. The study of strategic documents and reports confirm this. These documents present a direct link between the literature on dynamic capabilities and organisational routine where the top-management teams introduce new or amend existing routines. For international student recruitment, the key staff is consulted; strategies are formulated and are given operational shape to become functional. The strategy documents clearly reveal that the top-management teams have key role in in the international student recruitment and the examined university weave this into organisational culture as a necessary measure to success (McRoy and Gibbs, 2009).

On an important note, the data produced from strategy documents was both quantitative and qualitative. In addition to quantitative data, qualitative data is observed from opening statements by the top-management teams that put forward a convincing case about how important it is for a university to engage in international activities. The remaining parts of the strategy documents largely deal with success stories, testimonies where a university has been able to sense and seize the opportunity in the international market. This closely conforms to the literature on sensing and seizing capabilities (Leih and Teece, 2016; Teece *et al.*, 1997).

4.7.4.1 Interview data

To substantiate this study, a series of interviews were conducted at a large University in England. The interviewees were the top-management, Deputy Vice Chancellor, who is responsible for and champions the internationalisation agenda. This was followed by the Associate Deans (international) at eight faculties. Seven associate dean international agreed to take part in the interview. In addition to this, Director for International was interviewed, who is considered the key driving force in the internationalisation process. This was followed by one senior international manager who is responsible for convening the internationalisation agenda within the University and play the role as the “hot link” between the university and international partners. (Kvale and Brinkmann, 2009) suggest that there are seven stages to an interview enquiry as follows;

1. Thematising - formulation of the purpose and theme of the investigation prior to interviewing
2. Designing – planning the design with consideration of obtaining the required knowledge from the interviews
3. Interviewing – undertaking the interviews based on a “guide” and being reflective to the knowledge being sought
4. Transcribing – preparation of the interviews for analysis
5. Analysing – utilising the most appropriate method of analysis based on the interview material produced and the purpose of the investigation
6. Verifying – ascertaining validity, reliability and generalisability of the findings
7. Reporting – communication of the methodology, results and ethical considerations of the study

TABLE 4.15 THE SCHEDULE FOR SEMI-STRUCTURED INTERVIEWS

Titles	Date	Place	Minutes
Deputy Vice Chancellor	06 th May 2014	DVC's office	56
Associate Dean International Faculty 1	12 th May 2014	ADI's office	45
Associate Dean International Faculty 2	13 th May 2014	ADI's office	52
Associate Dean International Faculty 3	24 th May 2014	ADI's office	37
Associate Dean International Faculty 4	12 th June 2014	ADI's office	46
Associate Dean International Faculty 5	14 th June 2014	ADI's office	44
Associate Dean International Faculty 6	20 th June 2014	ADI's office	38
Associate Dean International Faculty 7	24 th July 2014	Business	42
Associate Dean International Faculty 8	No access	No access	No access
International Director	07 th August 2014	ID's office	41
Senior International Manager	19 th August 2014	SIM's office	36
Total interview minutes			437

4.7.4.2 Sample size

This study takes guidance from Galunic and Eisenhardt (2001) and Gilbert (2006) and propose that interviews yield important information which might be unobservable otherwise. The use of ten interviews is an example of purposive sampling where it is typically designed to pick a small number of cases that will yield the most information about a particular phenomenon (Teddlie and Tashakkori, 2009). The purposive sampling provides in-depth information from these specifically selected participants. This provides mixed sampling associated with a pragmatist investigation. For qualitative research, interviews are integral part and method of data collection (Knox and Burkard, 2009) as they describe the research undertaken as a conversation that has a structure and a purpose determined by one party – the interviewer. It is a professional interaction, which goes beyond the spontaneous exchange of views, and becomes a careful questioning and listening approach with the purpose of obtaining thoroughly tested knowledge (Kvale, 2008).

4.7.4.3 Sampling procedures and approach

The interviews were conducted as semi-structured, this approach enabled the researcher to have more flexibility to vary the order of the questions and latitude to further probe any significant response (Bryman and Bell, 2007). These interviews have also been described as “the most important way of conducting a research interview because of its flexibility balanced by structure, and the quality of data so obtained” (Gillham, 2005). In this case semi-structured means that;

- Similar questions asked of number of interviewees
- The questions have a focus on the topic
- The respondents are probed to gain equal level of analysis from the entire sample
- The interview length/time allowed is approximately equivalent (Gillham, 2005)

The above mentioned components of the interview process are the structured part of the process while the less-structured elements are that are not to be pre-determined and are the open questions. In such case, if the interviewer feels more information is obtainable, interviewer can further “probe”. For this research, a series of questions are produced using a priori knowledge from the literature review and in consideration of data from the initial internationalisation strategies analysis. Each interview is conducted face to face and lasted for 36-56 minutes. The interview started with the deputy vice chancellor who is later approached to help conduct more interviews in the hierarchy. Interviews were recorded using a Dictaphone and a smart phone was used as a backup device. The interviewees were presented with a letter of consent. The interviewees were asked if they would require copy of the interview transcript and whether they would like to be kept informed. All interviews were undertaken at their respective workplaces. The interviews were analysed using QSR’s NVivo software. The completed transcriptions are reviewed to remove interviewees’ names and other factual information to conceal the interviewees’ identity.

In the process of coding, there are instances when multiple allocations are considered to be related to more than one code. For example, is the staff reputation, which according to literature review is identified as having relevance to both the academic and competitive rationales. Within the strategy for an HEI, it is mentioned that internationalisation helps the staff to be more reputable. This is coded under two different categories, main academic up skilling and competitive rationales. The NVivo software has the functionality that brings such themes to the fore and the researcher can choose the presentation style using colour scheme. For quality assurance, the coding is done twice with an intention to ensure that none of the important points and notes in the strategy documents are missed, this resulted in

some additional codes and themes, which were applied to all strategy documents that produced some additional results. To surprise, strategy documents generally covered the strategy in detail and, but left open a gap about how to operationalise it. This is understandable; as a strategy document available in the public domain is supposed to act more like a marketing tool.

As the strategic documents and reports are available electronically and free for public to access, this allows files to be download and processed in QSR NVivo. NVivo is qualitative software that enables rapid classification, sorting, coding and arranging of information as compared to using word processor. This software offers built in tools that allow detailed and complex analysis across a series of themes and codes. The method used for the investigation of the strategies does however need further consideration and a classical definition of content analysis is “a research technique for the objective, systematic and quantitative description of the manifest content of communication” (Berelson, 1952).

As the research progressed, it is felt that further coding is required to entertain any emerging theme. In terms of disruption of routines, it was important to note that as the strategy documents, reports are generally positive, and they would not highlight negative themes associated with internationalisation. A closer inspection of the strategy documents however makes it clear that although there were items in the strategy documents that were clearly barriers, they were not overtly identified as such. An example of this is resources, which had already been identified as a relevant and significant barrier (Altbach and Teichler, 2001; Knight, 2003; Egron-Polak *et al.*, 2010; Hudzik, 2011). The strategy documents did no implicitly mentioned the disruption in routines; however, they came apparent in some case as being used with different labels as resources. Therefore, it is important that any keywords that denote important codes not be missed hence the recoding of the strategy documents.

According to Stake (1994), there are two types of case studies, first being intrinsic case study and the other being instrumental case study. The research in the thesis consists of instrumental case study because the aim of this study is to answer the questions of how a conceptual understanding of dynamic managerial capabilities influencing the organisational routines in the context of the UK HEIs in their efforts to increase international student recruitment.

The key characteristic of this case study and an important element that distinguishes it from ethnography is that it is purposively theory driven and the study is designed to elaborate on the actions taken by the top-management teams (interviewees) that influence organisational routines. Yin (1981) provides a thorough and systematic accounts of the case study method emphasising the theory driven nature of the case study. Such view is supported by Eckstein (1975), Stake (1995) and Merriam (1988) who contribute to the development of case study methodology.

This case study is theory driven and is informed by existing secondary sources, Interview data and online sources and the need to develop theoretical propositions where few currently exist. This case study uses the transition that the UK HE sector is witnessing as a laboratory to generate potential novel or new concepts. These events and the transition can be helpful in building an analytical framework that facilitate the theorising of these instances, the scenarios and the boundary work through which dynamic managerial capabilities influence organisational routines.

For this case study multiple methods of data collection are used to acquire knowledge and understanding. In the context in which they are used here they are distinct from ethnography and other methodological approaches because they may attempt some approximation to testing prior theories or hypotheses and follow a distinct logic of discovery similar to those procedures typically found in the experimental method (Yin, 1993, p46). Such preliminary propositions, hypothesis or formulated question are to be tested in advance of collecting data and evidence. As Eckstein (1975) claims, the use of a heuristic-case can help the emergence of

theoretical propositions and information that may contribute to the theory building process.

4.8 Summary

The chapter has highlighted the importance and relevance of two distinct research methods and carefully orchestrated the case for the selection of the combination of the two as an appropriate research approach for this study. The extent literature presents a mixture of methods that range from quantitative, case studies, field studies, archival and simulations studies to sound the ideas of dynamic capabilities. For organisational routines, the literature has largely focused on the qualitative approach to untangling and understand the complexities that surround the role of agency in evolutionary organisational performance. There exist no studies that have examined the role of dynamic capabilities and organisational routines in the setting of HEIs, in particular, the internationalisation of the UK HEIs using international student recruitment as an indicator. To address issues of such importance, this research leans toward critical realism regarding ontological and epistemological assumptions. In doing so, it assumes that the bidirectional intervention mechanisms between dynamic capabilities and organisational routines exist in the “real” domain.

To address this, the research adopts the realist approach to developing knowledge about the intervention mechanisms between dynamic capabilities and organisational routines. To assume that these mechanisms exist out there as reality is a matter of ontological preference and I regard science as an attempt to approximate such mechanisms that have causal efficacies on the one hand and causal explanation on the other. The knowledge produced by the retroductive process is tentative but not relative. For example, there existed no theory building process about both constructs using an empirical approach; hence, the infancy and theoretical conundrum largely produced conceptual scholarly work with scattered definitions. To address this, it is important to acknowledge that it is the case for relativists to insist the plurality of truth and argue that truth is local and cannot be compared universally. Relativist

theories of knowledge are immune from being rejected on the basis that they reject the idea of a knowable independent reality or quite the opposite.

To avoid such refutations, this research is designed using two methodological approaches, each at the far end of philosophical seesaw as an attempt to make sense of the HEIs' internationalisation using international student recruitment as an indicator. To start with, the data was sourced from HESA, a reliable source responsible for data collection across the UK HEIs. This is further strengthened by data about research, employability and student satisfaction rankings data. This was followed by email invitation to the top-management at 164 at the UK HEIs to take part in the survey. Nine emails bounced back as either the email addresses were wrong or the email addresses contained an error. In total, 153 participants received the email, out of which 31 (20 % response rate) replied with workable data. Following this, a university in England is used as a qualitative sample. The dataset from HESA was screened for errors and limited to 100 most international HEIs by international student recruitment. Their survey response reached 20%. To cover the qualitative section of this research, a total number of interviews conducted is 10. The interview ranges between 36-56 minutes. For qualitative research, snowball-sampling methods were used

5. DATA ANALYSIS

5.1 Introduction

Chapter four discussed the data sources, research philosophy, methodology, methods and research design. This chapter presents the results of the four-phased data analysis. Based on three stages of analyses: panel data, survey data, and interviews, the study provides both depth and breadth by drawing from the HESA dataset, rankings data, survey data and interviews. The presentation of the results is chronological and starts with the results of the panel data analysis in Section 5.2. For example, in the tables below, relationships between the founding year, location, total students, international students, ranking, incoming international students from Asia, Europe (non-EU), North America, South-America and Africa were investigated using linear regression analysis. In what follows, the survey data analysis provides results, which are presented in the second section. recruitment while survey questionnaire was distributed to 162 universities, the response rate was 20%). The analysis lead to hypotheses tests. Finally, the interview results are provided.

5.2 Panel data analysis

This section presents results based on panel data from HESA for twelve years (2002/2003 - 2013/2014), consists of panel data, capturing one hundred of the most international universities. The analysis is directed at the testing of several hypotheses, the predicted dominant relationship of dynamic managerial capabilities onto organisational routines, dynamic capabilities and performance regarding the UK HEIs' international student recruitment growth. The presented data is acquired from HESA and the complete university guide and includes university rankings, student numbers, age that could suggest accumulated experience, subject disciplines rankings, student satisfaction, research output and employability. The tests in this section used dynamic managerial capabilities influencing organisational routines as 'latent variables', which are reflected by variances in university performance (e.g.

international student recruitment and growth in recruitment) and related variables (e.g. location, history, age, research, employability and student satisfaction).

Table 5.1 shows the correlations among key variables such as founding year, location, total student numbers, international students, ranking and source countries. The findings indicate that the students from Asia make a significant contribution to the total student recruitment and international student number across 100 UK HEIs. The findings also present strong correlation amongst university ranking and increase in international student numbers. Hereafter, location is significant variable, where the HEIs in the most popular city or area (e.g. 1 = London, comparing with less popular areas e.g. 3 = Sheffield, and least popular cities = 7), take the largest growth in terms of international student number. This popularity (or attraction) is especially applicable for the Asian student market, whereas it is less significant for the American student market and is insignificant for the EU student market.

TABLE 5.1 CORRELATING INTERNATIONAL STUDENT RECRUITMENT

	Correlations for international students										
	Founding year	Location	Total students	International students	Year	Ranking	Asia	Europe (non-	North- America	South- America	Africa
Founding year	1										
Location	.207**	1									
Total students	-.120**	-.063*	1								
International students	-.146**	-.359**	.598**	1							
Year	.000	.000	.048	.282**	1						
Ranking	.221**	.350**	.092*	-.338**	.121**	1					
Asia	-.147**	-.327**	.597**	1.000**	.284**	-.336**	1				
North- America	.118**	.185**	.058*	-.059*	.611**	1.000**	.020	-.048	1		
South- America	.b	.b	.b	.b	.b	.b	.b	.b	.b	1	
Africa	.b	.b	.b	.b	.b	.b	.b	.b	.b	.b	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

b. Cannot be computed because at least one of the variables is constant.

Table 5.2 shows correlating values among a set of variables, in relation strong growth numbers by international students choosing the subjects taught at the business schools. In this, there is a stronger correlation amongst the subjects at the business

school across the sample and number of international students choosing this as a preferred option.

TABLE 5.2 CORRELATIONS FOR SUBJECT CHOICE BY INTERNATIONAL STUDENTS

Correlations for subject choice by international students								
Most popular subjects in international market	Arts & Humanities	Business management	Education	Social Sciences and Law	Science	Medicine	Engineering architecture	Maths computing
Arts & Humanities	1							
Business management	-.256	1						
Education	.216	.434*	1					
Social Sciences and Law	.592**	.287	.134	1				
Science	.312	.215	.232	.390	1			
Medicine	.326	.081	.361	.326	-.082	1		
Engineering architecture	.352	.496*	.016	.324	.040	.259	1	
Maths computing	.252	.033	.339	.076	.216	.217	.075	1

** . Correlation is significant at the 0.01 level (2-tailed).

Figure 5.1 Figure 5.2 report the correlations for overall UK HEIs' international student market growth using Founding Age and Ranking. Figure 5.1 reveals a linear relationship between founding year and international student numbers. International student numbers are positively related to founding age, where the earlier the founding year, the more likely that international student numbers will increase. In Figure 5.1 higher ranking (ranking ≥ 1) universities (y-scale) are associated with higher growth in international student numbers.

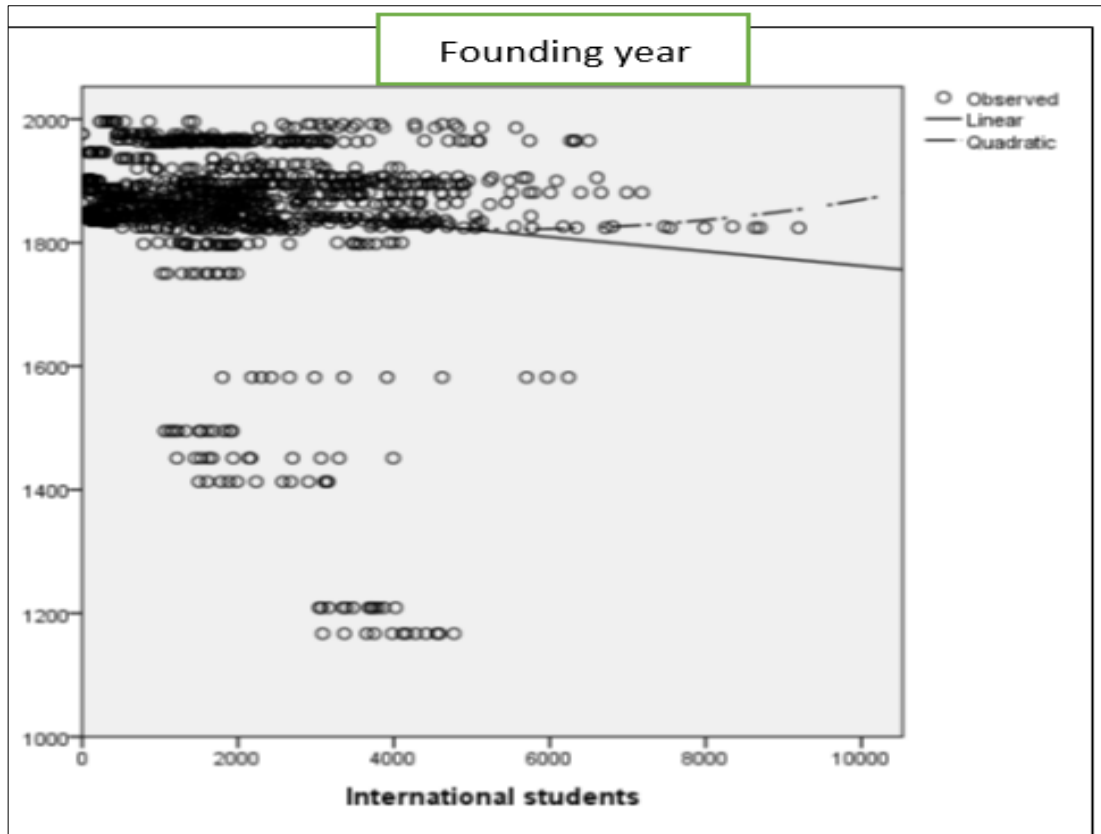


FIGURE 5-1 CHANGE IN INTERNATIONAL STUDENT RECRUITMENT WITH FOUNDING AGE OF THE HEI

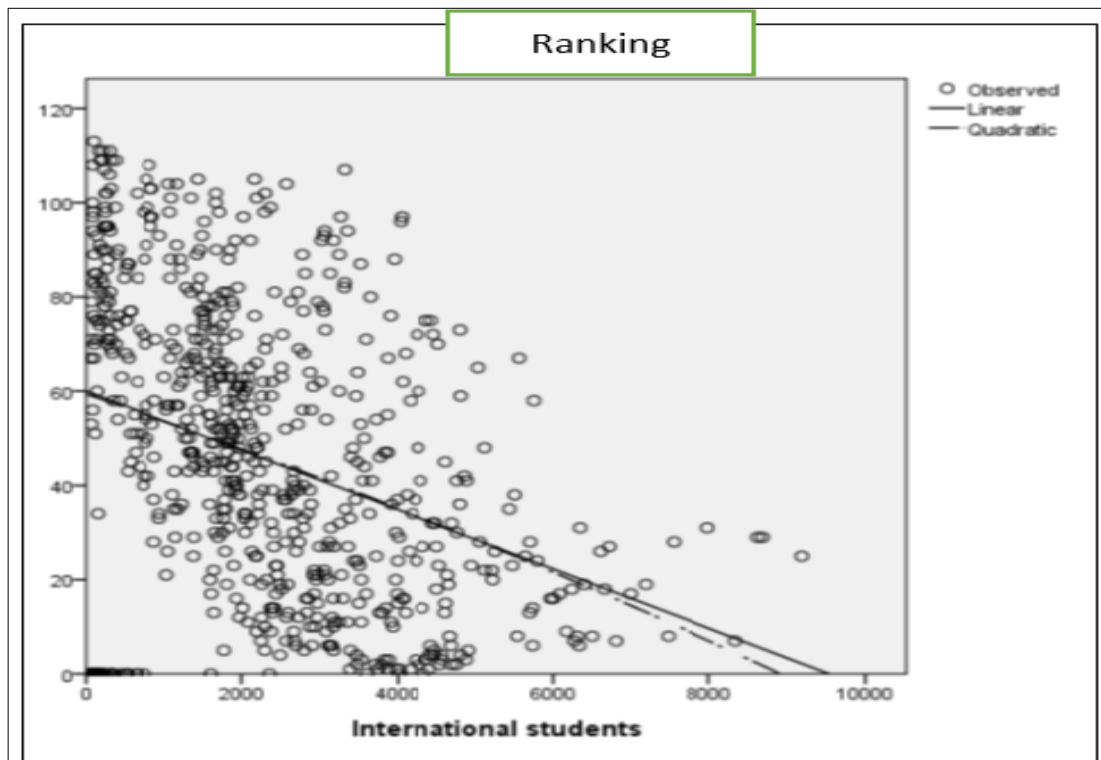


FIGURE 5-2 CHANGE IN INTERNATIONAL STUDENT RECRUITMENT WITH RANKING

Linear regression analyses were conducted to examine the relationship between international students' choice of the UK HEIs' based on its founding age and ranking. Table 5.3 summarizes the results. As can be seen that founding age and ranking are positively and significantly correlated. The linear regression model with all predictors produced R^2 0.149 and 0.338 with F values 16.116 and 91.327 respectively. According to Stevens (1996: 72) 'for social science research, about 15 participants per predictor are needed for a reliable equation'. Whereas, Tabachnick and Fidell (2007: 123) suggest a formula for calculating sample size requirements, taking into account the number of independent variables used, i.e. $N > 50 + 8m$ (where m = number of independent variables).

TABLE 5.3 FOUNDING AGE AND RANKINGS

		Sum of Squares	df	Mean Square	F	R	Adj.R ²
Founding age	Regression	275410.775	1	275410.775	16.116	0.149	0.149*
	Residual	12133112.28	710	17088.891			
	Total	12408523.06	711				
Ranking	Regression	79988.589	1	79988.589	91.327	0.338	0.113*
	Residual	621852.511	710	875.849			
	Total	701841.1	711				

Where R-square values with the symbol * indicate model significances at the level of 0.01 and the small R values are because the immediate distributions are based on one (or fewer) independent set of data variables.

Similarly, table 5.4 presents that the effect of founding age and ranking is -0.012 and -0.006 respectively, meaning that international students yield this much extra to founding age and ranking. The constant is now 1879.197 for founding age and 60.053 for ranking, meaning that this is the value when both founding age and ranking are zero. The effect of international student recruitment is that if there is more recruitment, -0.012 will be multiplied by 1, and hence added to the student recruitment. Beta values in the table are standardized values for B's, making it possible to compare their effects on y . The findings reveal that founding age is stronger than ranking, having almost twice as big an effect as ranking. T-tests at the right end of the table show whether the predictors are statistically significant in the model.

TABLE 5.4 REGRESSION COEFFICIENTS FOR FOUNDING AGE AND RANKING

		Unstandardized		Standardized	t	Sig.
		B	Std. Error	Beta		
Founding age	International students	-0.012	0.003	-0.149	-4.015	0
	(Constant)	1879.197	8.175		229.878	0
Ranking	International students	-0.006	0.001	-0.338	-9.557	0
	(Constant)	60.053	1.851		32.449	0

Figure 5.3 and 5.4 depict the results of overall UK HEIs' international student recruitment growth with the variables of Location and Year. In Figure 5.2, it can be observed that both linear distribution (a procedure in which the calculations are performed using a least square regression approach to describe the statistical relationship between one or more predictors and a continuous variable) and quadratic distributions. In figure 5.4, it can be seen that the market growth is picked up more rapidly and significantly since 2011, and after that UK HEIs' experience significant growth, based on 12 years' data of annual growth numbers of international students.

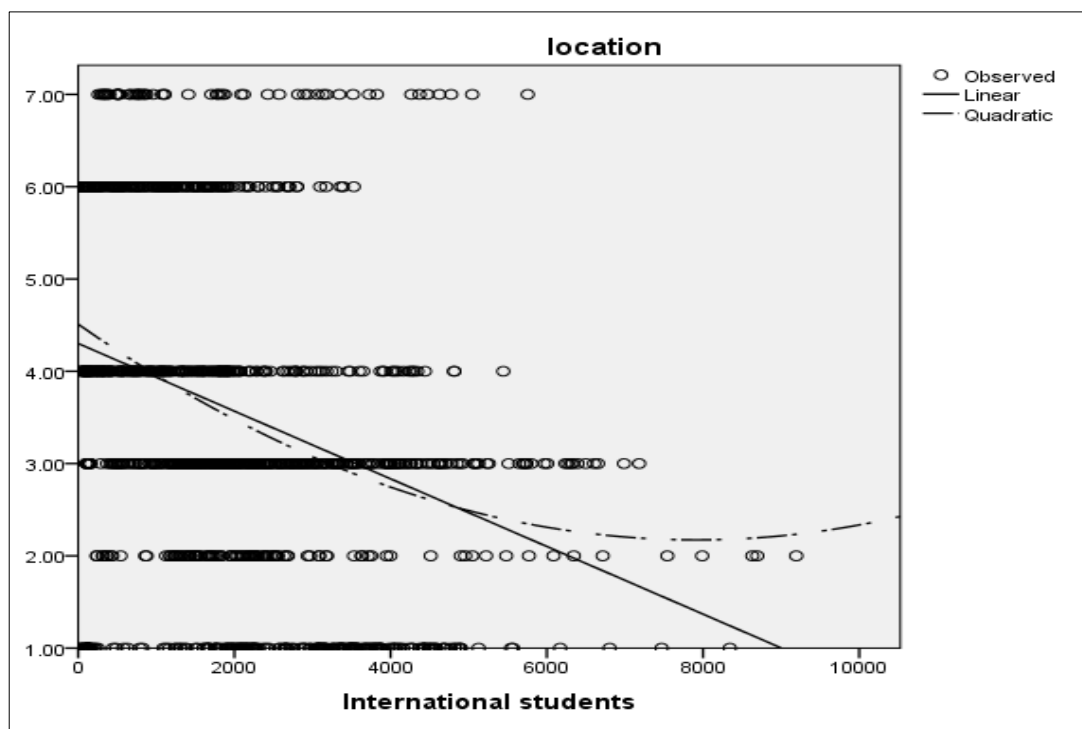


FIGURE 5-3 CHANGE IN INTERNATIONAL STUDENT NUMBERS WITH THE LOCATION

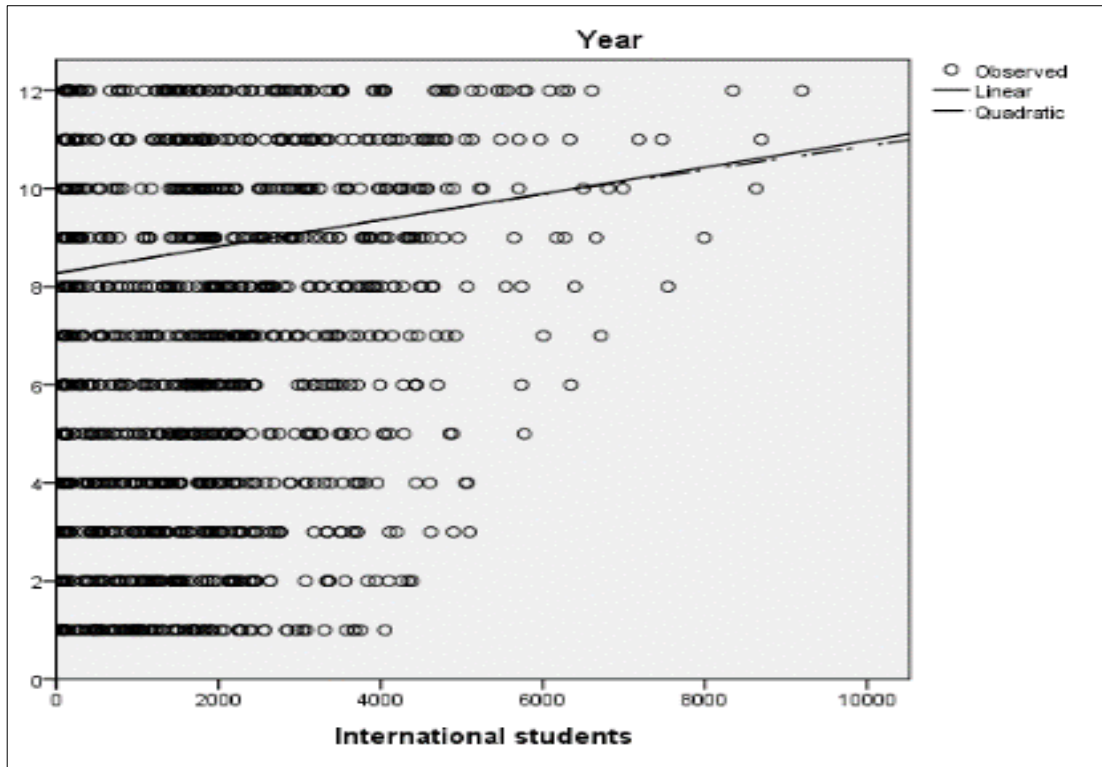


FIGURE 5-4 CHANGE IN INTERNATIONAL STUDENT NUMBERS WITH THE YEAR

Accordingly, the detailed results in Tables 5.5 and 5.6 provide further explanations of results of Figure 5.3 and Figure 5.4 and both model summary and linear coefficients suggest that the expected values are supported.

Correspondingly, this study provides more detailed results in Tables 5.5 - 5.6, which are supplement results to the analyses of Figure 5.1 and Figure 5.2. The significant R values and stronger coefficients lend support to the expectation values of this study, which suggest that they are coherent with the predicted values in above figures. For instance, the UK HEIs' ranking attracts a larger recruitment of international students in a similar fashion with the HEIs' founding year. The highly ranked HEIs attract large international student numbers as opposed to those with the lower ranking. These findings are significant and make an important contribution to our understanding of international student market expectations.

Regression analyses were conducted to examine the relationship between international students' choice of the UK HEIs' based on its location and year. Table

5.5 summarises the results. As can be seen location and year positively and significantly correlated with the criterion. The linear regression model with all predictors produced R 0.363 and 0.21 with F values 108.064 and 32.677 respectively. According to Stevens (1996: 72) ‘for social science research, about 15 participants per predictor are needed for a reliable equation’. Whereas, Tabachnick and Fidell (2007: 123) suggest a formula for calculating sample size requirements, taking into account the number of independent variables used, i.e. $N > 50 + 8m$ (where $m =$ number of independent variables).

TABLE 5.5 LINEAR MODEL SUMMARY FOR INTERNATIONAL STUDENTS WITH LOCATION AND YEAR

		Sum of Squares	Df	Mean Square	F	R	Adj.R ²
Location	Regression	271.273	1	271.273	108.064	0.363	0.113
	Residual	1782.321	710	2.51			
	Total	2053.594	711				
Year	Regression	146.891	1	146.891	32.677	0.21	0.043
	Residual	3191.665	710	4.495			
	Total	3338.556	711				

Similarly, table 5.6 presents that the effect of location and year -10.395 and 5.716 respectively, meaning that international students yield this much extra to location and year. The constant is now 4.301 for location and 8.278 for year, meaning that this is the value when both location and year are zero. The effect of international student recruitment is that if there is more recruitment, 4.301 will be multiplied by 1, and hence added to the student recruitment. Beta values in the table are standardized values for B’s, making it possible to compare their effects on y. It seems to be that year is stronger than location, having almost twice as big an effect as location. T-tests at the right end of the table show whether the predictors are statistically significant in the model.

TABLE 5.6 LINEAR COEFFICIENTS FOR INTERNATIONAL STUDENTS WITH LOCATIONS AND YEAR

		Unstandardized		Standardized	t	Sig.
		B	Std. Error	Beta		
Location	International students	0	0	-0.363	-10.395	0
	(Constant)	4.301	0.099		43.406	0
Year	International students	0	0	0.21	5.716	0
	(Constant)	8.278	0.133		62.436	0

As depicted in Figure 5.6 and Figure 5, the location (i.e. South of England) is an important pull factor for the total students. However, it is important to note that only in recent years the total student recruitment has risen in significant numbers, supplemented by the rise in international student recruitment. With the passage of time, despite the global economic turmoil and recent visa restrictions imposed by the UK Border Agency (UKBA), the UK HEIs have almost doubled their international student intake.

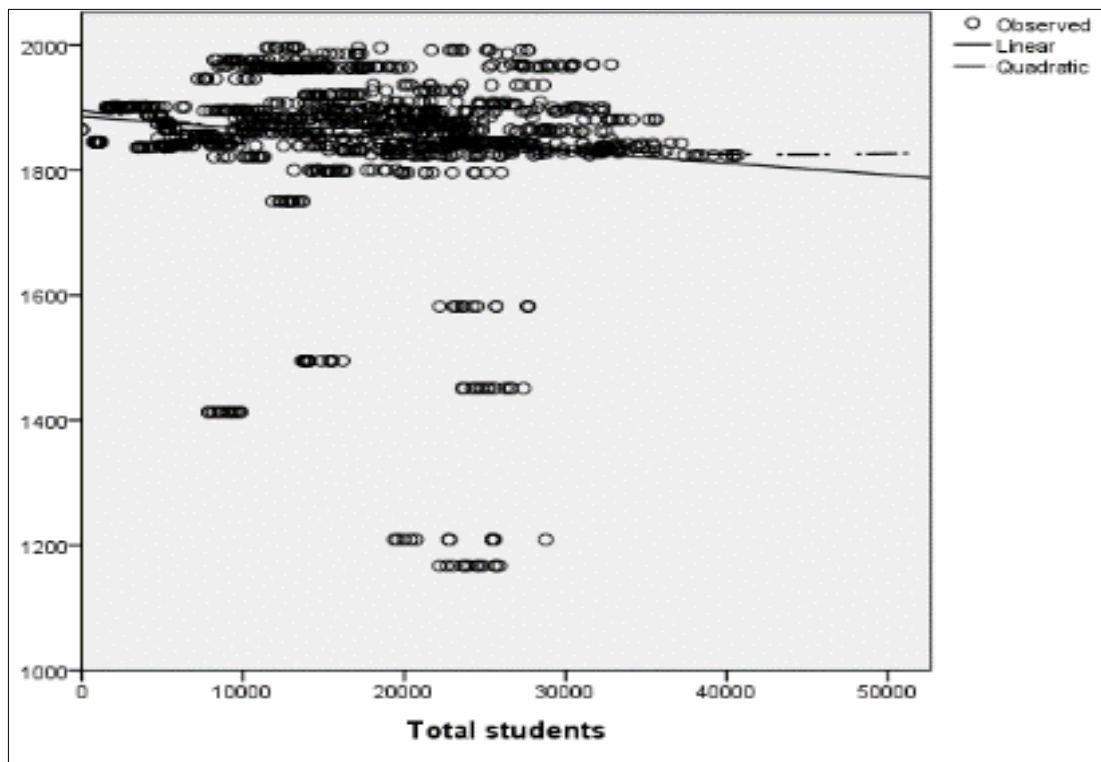


Figure 5-5 Change in total student recruitment with founding age

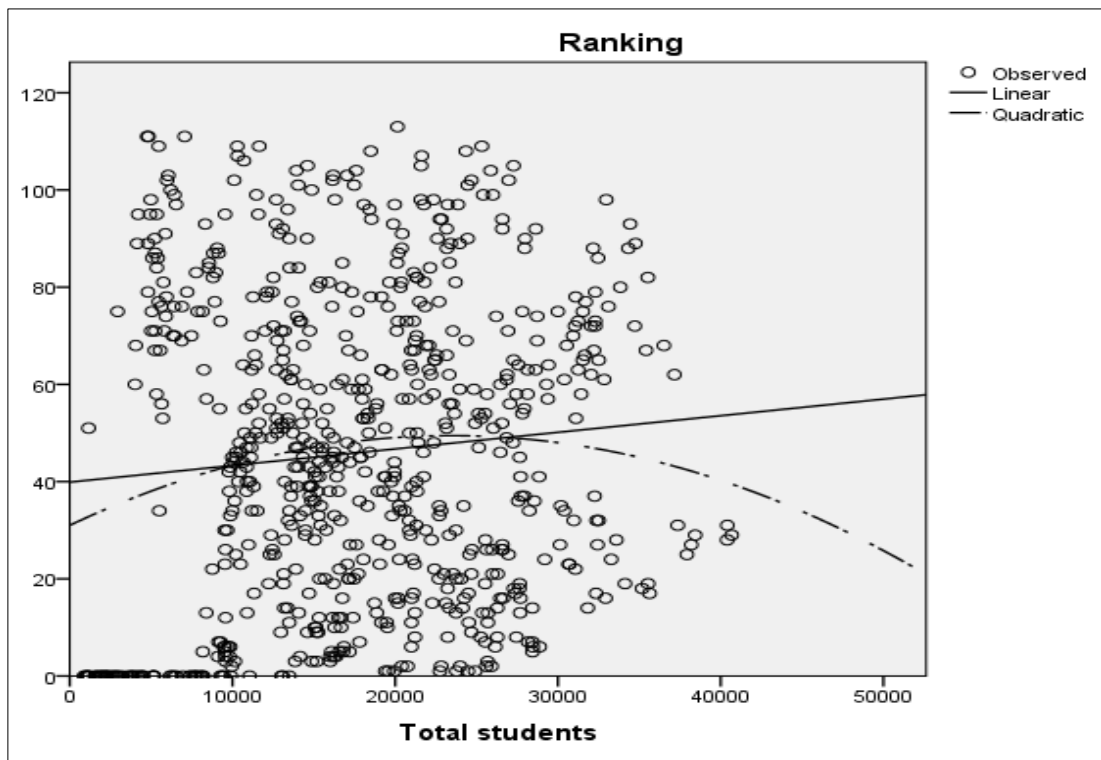


Figure 5-6 Change in total student with ranking

Figures 5.7 and Figure 5.8 depict results based on the analysis of the total number of students from 100 UK HEIs. As can be seen, there are several differences in both linear distribution (a procedure in which the calculations are performed using a least square regression approach to describe the statistical relationship between one or more predictors and a continuous variable) and quadratic distributions (with second and no higher power of an unknown quantity or variable), with the variables of Founding Age and Ranking, compared with Figure 5.1 and Figure 2. Although the Founding Age is still a significant variable with the number of students the distribution is rather flat.

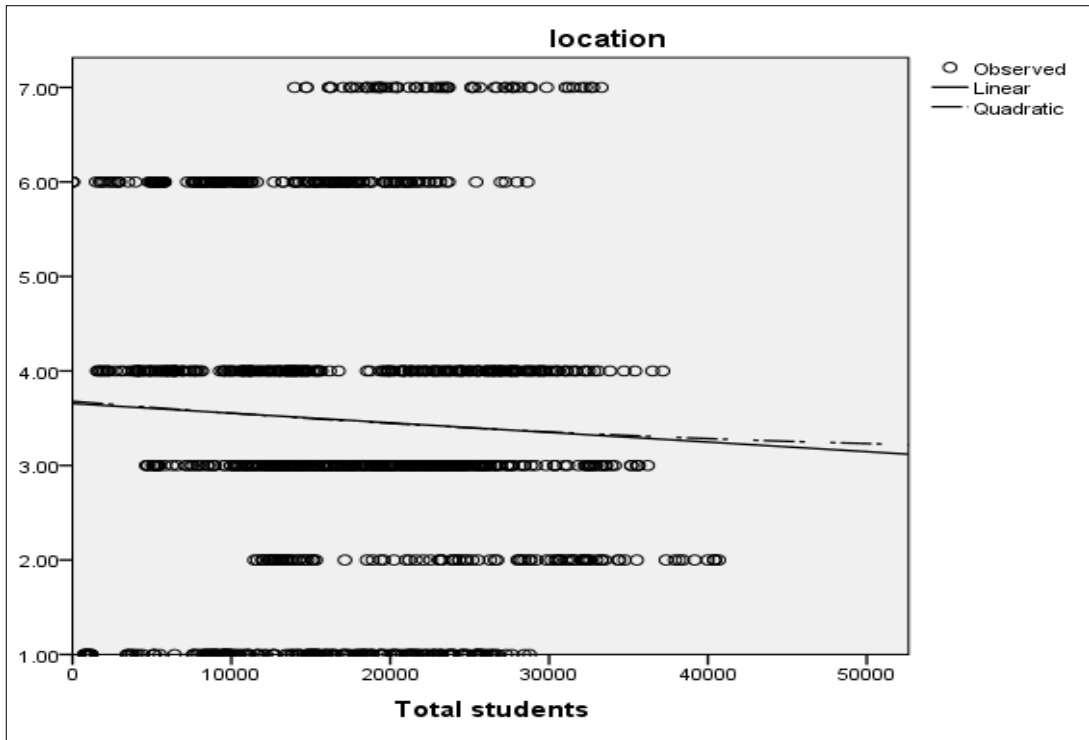


FIGURE 5-7 CHANGE IN TOTAL STUDENT NUMBERS WITH LOCATION

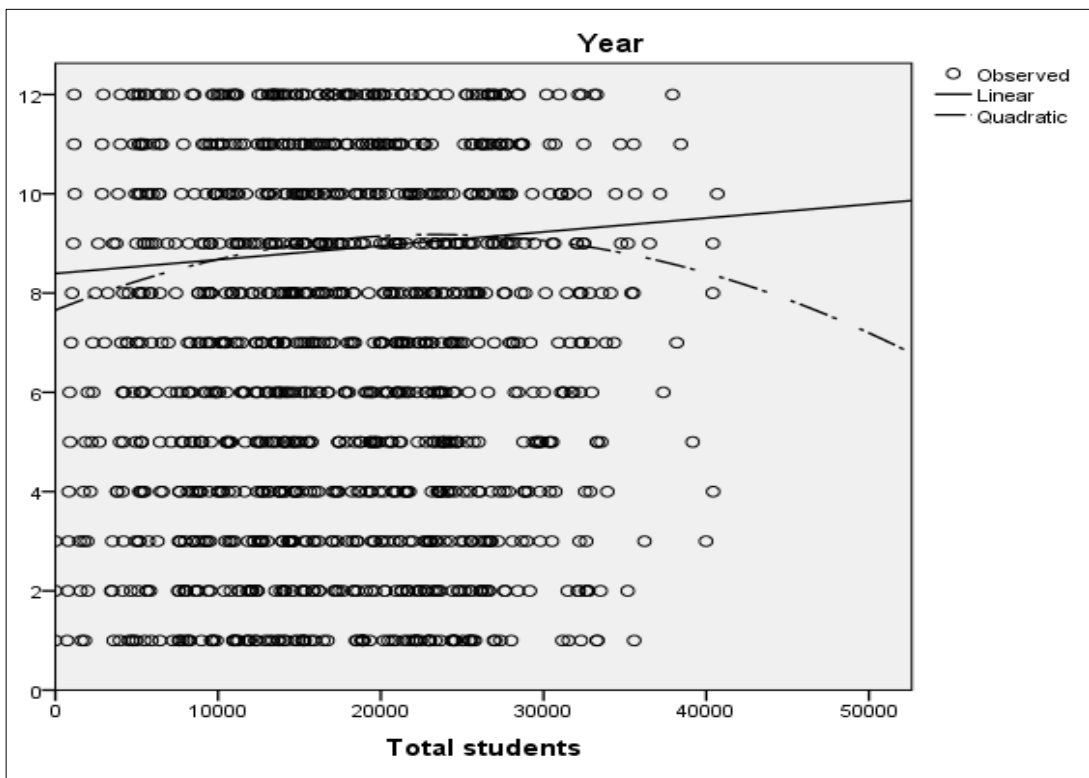


FIGURE 5-8 CHANGE IN TOTAL STUDENTS WITH YEAR

The quadratic distribution (effectively with only two parameters) suggests that although the university's ranking is a significant variable, it does not necessarily convert into larger growth in total student numbers. Indeed, some relatively lower

ranking universities have experienced larger growth in student numbers when compared with overall growth in total student numbers. Overall, the results suggest that history and ranking are less important for Home/EU students compared with international students. The analyses draw a similar conclusion to earlier observations, based on data observations, capturing 12 years of UK universities' annual growth rates.

Similarly, table 5.7 presents that the effect of location and year, meaning that international students yield this much extra to location and year. The constant is now 1892.389, 59.363, 4.51 and 8.265 for founding age, ranking, location and year, meaning that this is the value when both location and year are zero. The effect of international student recruitment is that if a there is more recruitment, 4.301 will be multiplied by 1, and hence added to the student recruitment. Beta values in the table are standardized values for B's, making it possible to compare their effects on y. It is apparent that year is stronger than location, having almost twice as big an effect as location. T-tests at the right end of the table show whether the predictors are statistically significant in the model.

TABLE 5.7 NONLINEAR COEFFICIENTS FOR INTERNATIONAL STUDENTS WITH AGE, RANKINGS, LOCATION AND YEAR

		Unstandardized		Standardized	t	Sig.
		B	Std. Error	Beta		
Age	International students	-0.026	0.008	-0.329	-3.3	0.001
	International students **	2.35E-06	0	0.194	1.945	0.052
	(Constant)	1892.389	10.609		178.36	0
Ranking	International students	-0.006	0.002	-0.298	-3.132	0.002
	International students **	-1.23E-07	0	-0.043	-0.448	0.654
	(Constant)	59.363	2.408		24.653	0
Location	International students	-0.001	0	-0.586	-6.245	0
	International students **	3.73E-08	0	0.239	2.552	0.011
	(Constant)	4.51	0.128		35.14	0
Year	International students	0	0	0.221	2.232	0.026
	International students **	-2.34E-09	0	-0.012	-0.119	0.905
	(Constant)	8.265	0.173		47.905	0

The results support the contention that ranking is significant factor for international students where the distribution trends suggest that international student market

growth is driven largely by ranking. The table 5.8 below points significance between the total number of international students and UK HEIs' ranking data.

TABLE 5.8 INTERNATIONAL STUDENTS RECRUITMENT EFFECTED BY RANKING

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.617 ^a	.381	.374	17593.26625		
a. Predictors: (Constant), Average_ranking_for_12_years						
ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.676E+10	1	1.676E+10	54.161	.000 ^b
	Residual	2.724E+10	88	309523017.4		
	Total	4.400E+10	89			
a. Dependent Variable: International_student_for_12_years						
b. Predictors: (Constant), Average_ranking_for_12_years						
Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	60132.848	3640.746		16.517	.000
	Average_ranking_for_12_years	-470.131	63.881	-.617	-7.359	.000
a. Dependent Variable: International_student_for_12_years						

Although there are some differences in choices and attractions, given the results, the significant values of R and stronger coefficients, in general, provide support for the predictions in which both international students and HEIs' ranking.

A simple linear regression was calculated to predict international student recruitment rise or decline based on the research ranking score of the UK HEIs. A significant regression equation was found ($F(1,88) = 54.161$, $p < .000$), with an R^2 of .381. Participants' predicted international student recruitment is equal to $60132.848 + -470.1315.43$ (research ranking) [international student recruitment] when research ranking is measured. The UK HEIs' average international student recruitment decreases by -470.131 for each year of intake.

TABLE 5.9 MODEL SUMMARY FOR TOTAL STUDENT RECRUITMENTS WITH AGE, RANKING, LOCATION AND YEAR

		Sum of Squares	df	Mean Square	F	Sig.
Founding	Regression	176113.653	1	176113.653	10.222	0.001***
	Residual	12232409.4	710	17228.746		
	Total	12408523.06	711			
Ranking	Regression	5950.777	1	5950.777	6.071	0.014**
	Residual	695890.323	710	980.127		
	Total	701841.1	711			
Location	Regression	5.289	1	5.289	1.833	0.176
	Residual	2048.305	710	2.885		
	Total	2053.594	711			
Year	Regression	39.734	1	39.734	8.552	0.004***
	Residual	3298.822	710	4.646		
	Total	3338.556	711			

Similarly, table 5.10 presents that the effect of founding year, ranking and location and year -1.436, 2.986, 0.473 and 14.843, meaning that international students yield this much extra to location and year. The constant is now 1895.148, 31.008, 3.68 and 7.655 for year, meaning that this is the value when both location and year are zero. The effect of international student recruitment is that if a there is more recruitment, 1895.148 will be multiplied by 1, and hence added to the student recruitment. Beta values in the table are standardized values for B's, making it possible to compare their effects on y. It seems to be that year is stronger than location, having almost twice as big an effect as location. T-tests at the right end of the table show whether the predictors are statistically significant in the model.

TABLE 5.10 LINEAR COEFFICIENTS FOR TOTAL STUDENTS WITH AGE, RANKING, LOCATION AND YEAR

		Unstandardize		Standardized	t	Sig.
		B	Std. Error	Beta		
Founding	Total students	-0.003	0.002	-0.204	-1.436	0.151
Year	Total students **	3.61E-08	0	0.088	0.619	0.536
	(Constant)	1895.148	19.152		98.954	0
Ranking	Total students	0.002	0.001	0.424	2.986	0.003
	Total students **	-3.36E-08	0	-0.344	-2.423	0.016
	(Constant)	31.008	4.55		6.814	0
Location	Total students	-1.36E-05	0	-0.068	-0.473	0.636
	Total students **	9.24E-11	0	0.018	.	.
	(Constant)	3.68	0.248		14.843	0
Year	Total students	0	0	0.51	3.603	0
	Total students **	-2.79E-09	0	-0.415	.	.
	(Constant)	7.655	0.313		24.48	0

In what follows, this study provides results from analyses of subject disciplines. Table 5.13 show results based on the analysis of fifteen subject disciplines where subjects taught at the business schools are in the lead whereas medicine and engineering subjects seem less attractive to international students

TABLE 5.11 15 SUBJECT DISCIPLINES

	N	Minimum	Maximum	Mean	Std. Deviation
Clinical medicine	12	3994.00	7047.00	5981.3333	1039.66379
Civil Engineering	12	4810.00	8578.00	6828.2500	1460.62049
Mechanical Engineerina	12	4438.00	9991.00	7160.7500	2011.72007
Architecture	12	3426.00	6886.00	4868.2500	1229.15153
Economics	12	9376.00	16426.00	12583.3333	2468.13324
Politics	12	4775.00	11752.00	8863.2500	2329.36695
Law Bv Area	12	6469.00	9390.00	7873.3333	1124.78776
Law Bv Topic	12	6441.00	11281.00	8695.5833	1743.26316
Business	12	29206.00	47015.00	38335.9167	6635.20913
Manaagement	12	10411.00	28927.00	21383.9167	7028.57887
Finance	12	5862.00	21450.00	13082.2500	5670.79050
Accountina	12	5141.00	12191.00	8685.7500	2379.31541
Marketina	12	5029.00	10103.00	7725.1667	1649.94418
Enalish	12	7523.00	10419.00	8843.8333	903.09124
Desian	12	6582.00	12495.00	9258.0000	1963.31482

To sum up, the results as presented above, in the light of the theory underlying this research, dynamic managerial capabilities are latent variables in the panel data

analysis. In the analysis, the dynamic managerial capabilities are reflected by parameter vectors of university academic ranking and accumulated experience i.e. 'founding age, HEIs' location, programs, research rankings, employability prospects and student satisfaction. Furthermore the findings below present the UK HEIs research rankings, employability prospects ranking and student satisfaction rankings.

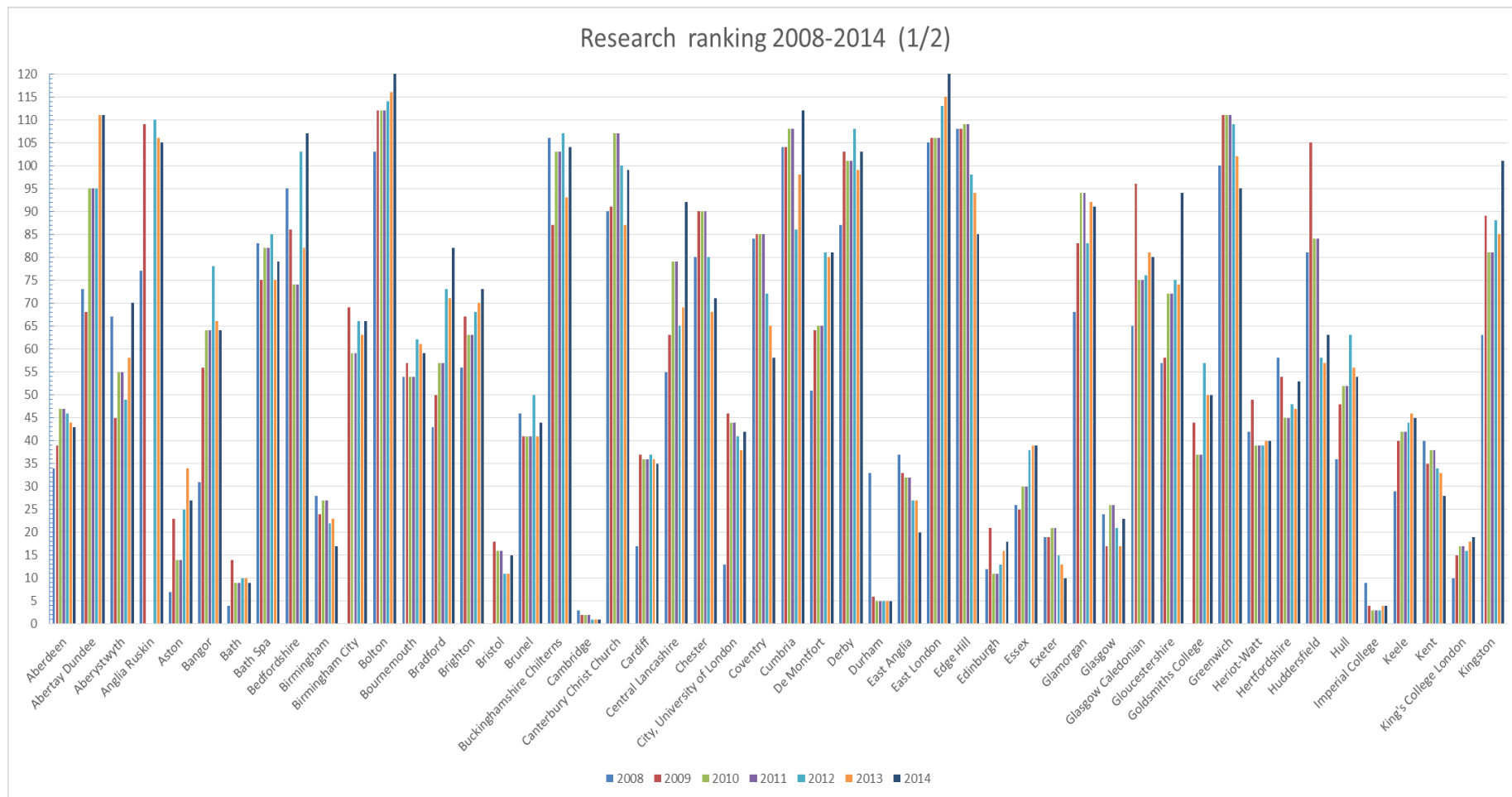


FIGURE 5-9 RESEARCH RANKINGS

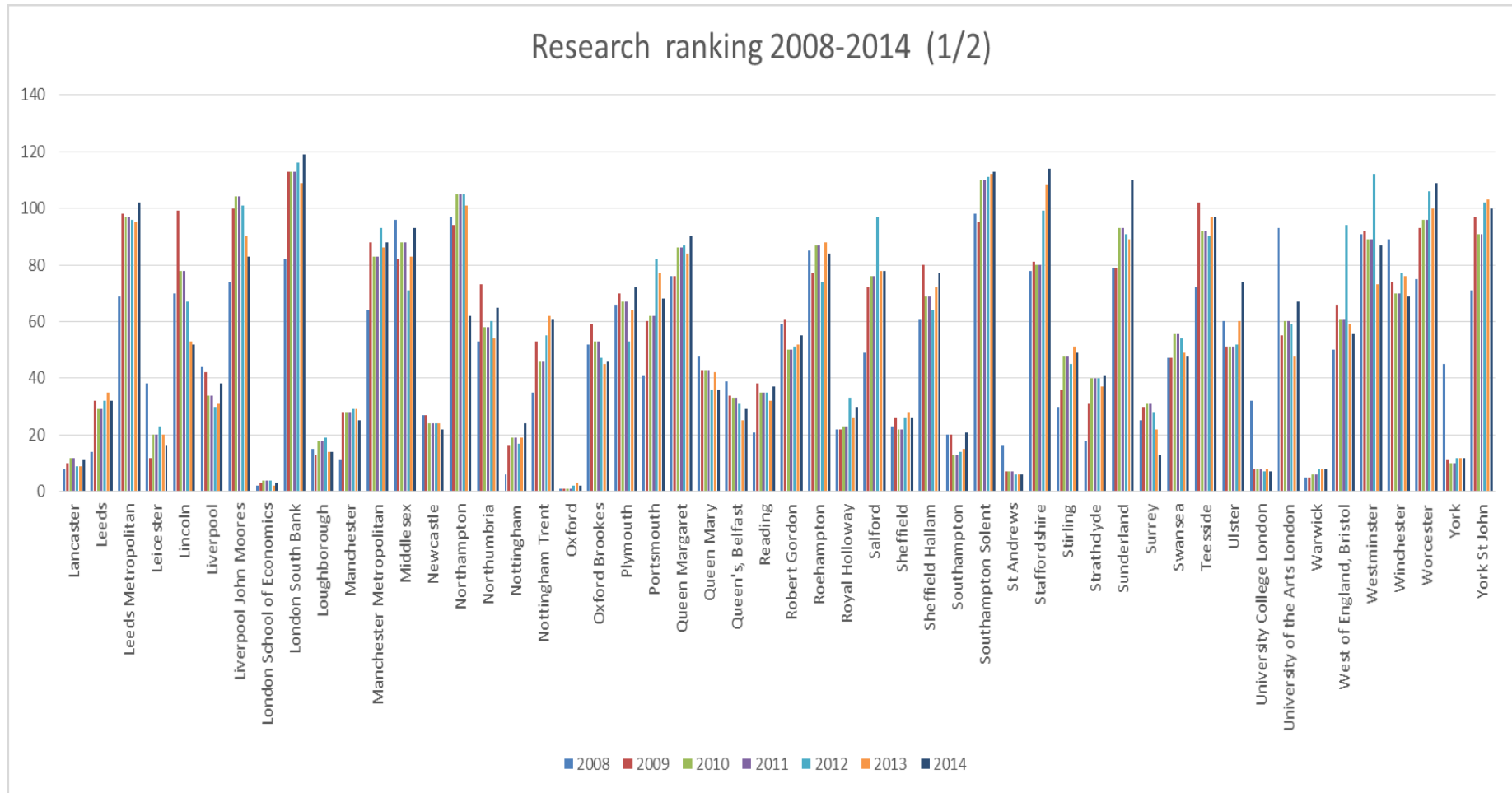


FIGURE 5-10 RESEARCH RANKINGS

TABLE 5.12 THE UK HEIS' RESEARCH RANKING IS PATH DEPENDENT

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.837 ^a	.700	.697	19.23017	

a. Predictors: (Constant), t1

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	86217.076	1	86217.076	233.146	.000 ^b
	Residual	36979.944	100	369.799		
	Total	123197.020	101			

a. Dependent Variable: t2
b. Predictors: (Constant), t1

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.868	3.603		3.017	.003
	t1	.942	.062	.837	15.269	.000

a. Dependent Variable: t2

A simple linear regression was calculated to predict path dependence in rise or decline based on the research ranking score of the UK HEIs. A significant regression equation was found ($F(1,101) = 233.146, p < .000$), with an R^2 of .700. Participants' predicted research ranking path dependency is equal to $10.868 + .942$ (research ranking at t1) [research ranking at t2] when research ranking is measured. The UK HEIs' research ranking at t2 increased .942 for each year.

Employability Ranking 2008-2014 (1/2)

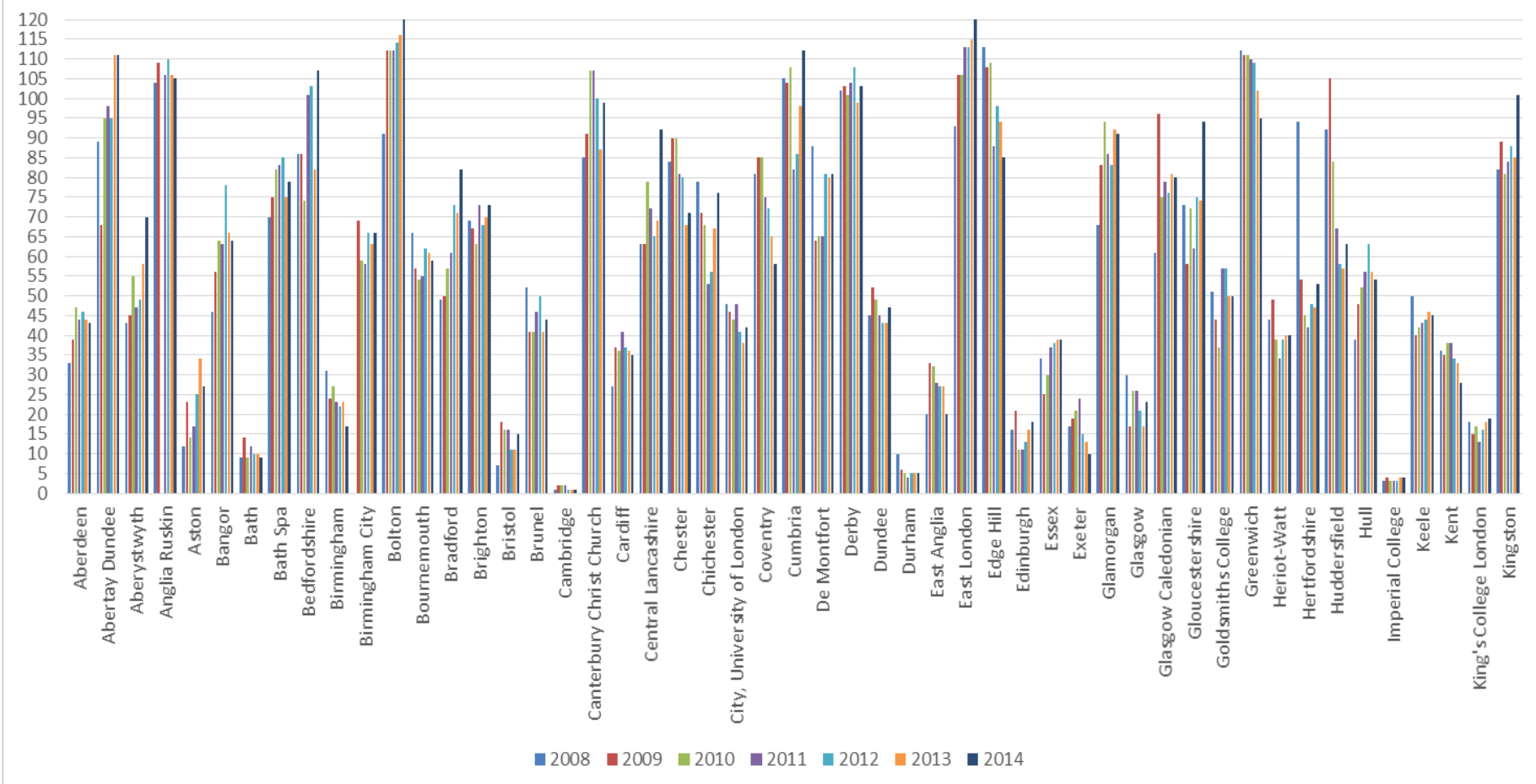


FIGURE 5-11 EMPLOYABILITY RANKINGS

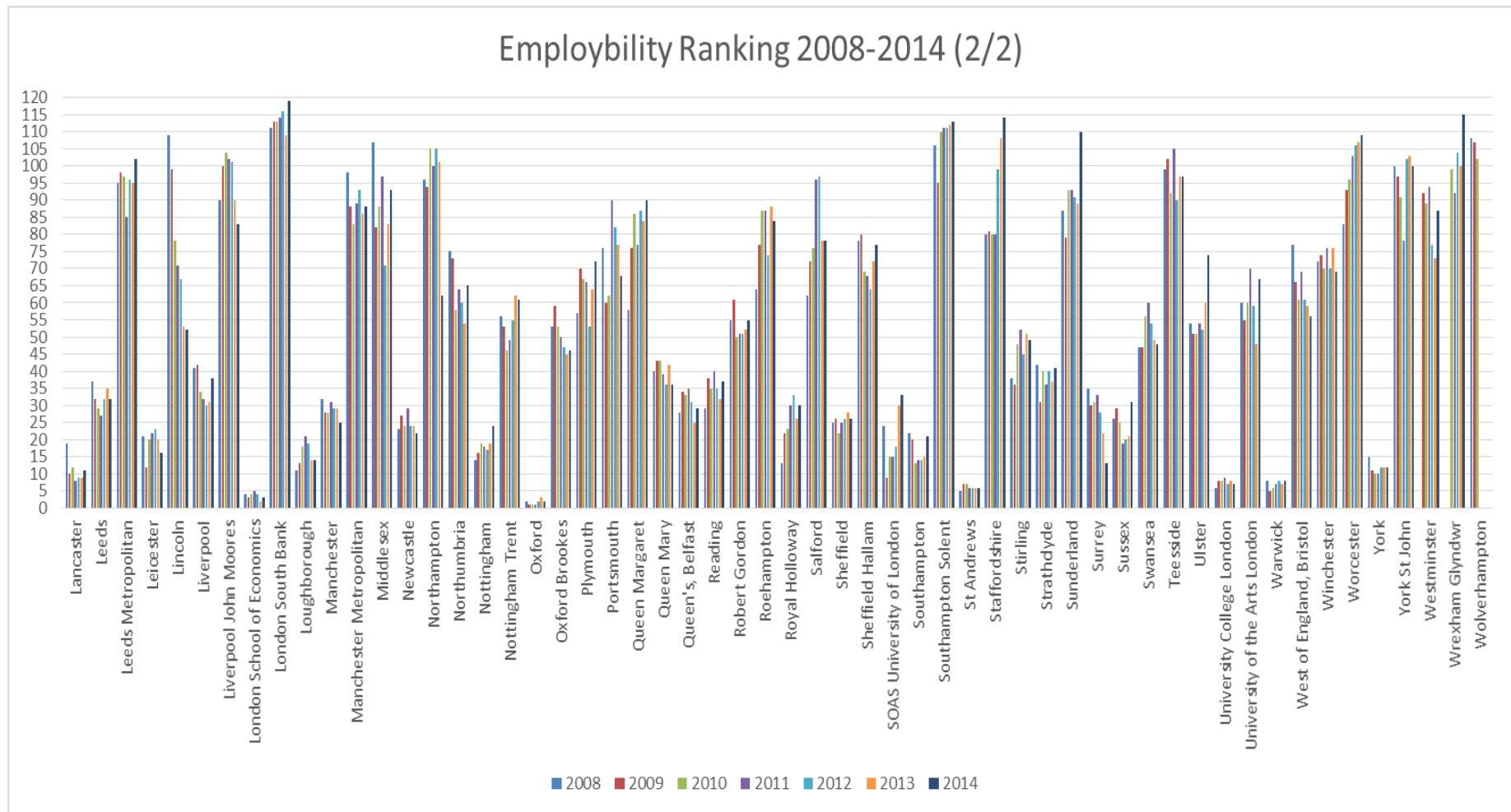


FIGURE 5-12 EMPLOYABILITY RANKINGS

TABLE 5.13 THE UK HEIS' EMPLOYABILITY RANKING IS PATH DEPENDENT

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.997 ^a	.994	.994	15.56230	

a. Predictors: (Constant), t1

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3892624.664	1	3892624.664	16072.936	.000 ^b
	Residual	24702.874	102	242.185		
	Total	3917327.538	103			

a. Dependent Variable: t2
b. Predictors: (Constant), t1

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.093	1.631		1.283	.202
	t1	1.001	.008	.997	126.779	.000

a. Dependent Variable: t2

A simple linear regression was calculated to predict path dependence in rise or decline based on the employability ranking scores of the UK HEIs. A significant regression equation was found ($F(1,102)= 16072.936, p <.000$), with an R^2 of .994. Participants' predicted employability ranking scores path dependency is equal to $2.093 + .1.001$ (employability ranking at t1) [employability ranking at t2] when employability ranking is measured. The UK HEIs' employability ranking at t2 increased 1.001 for each year.

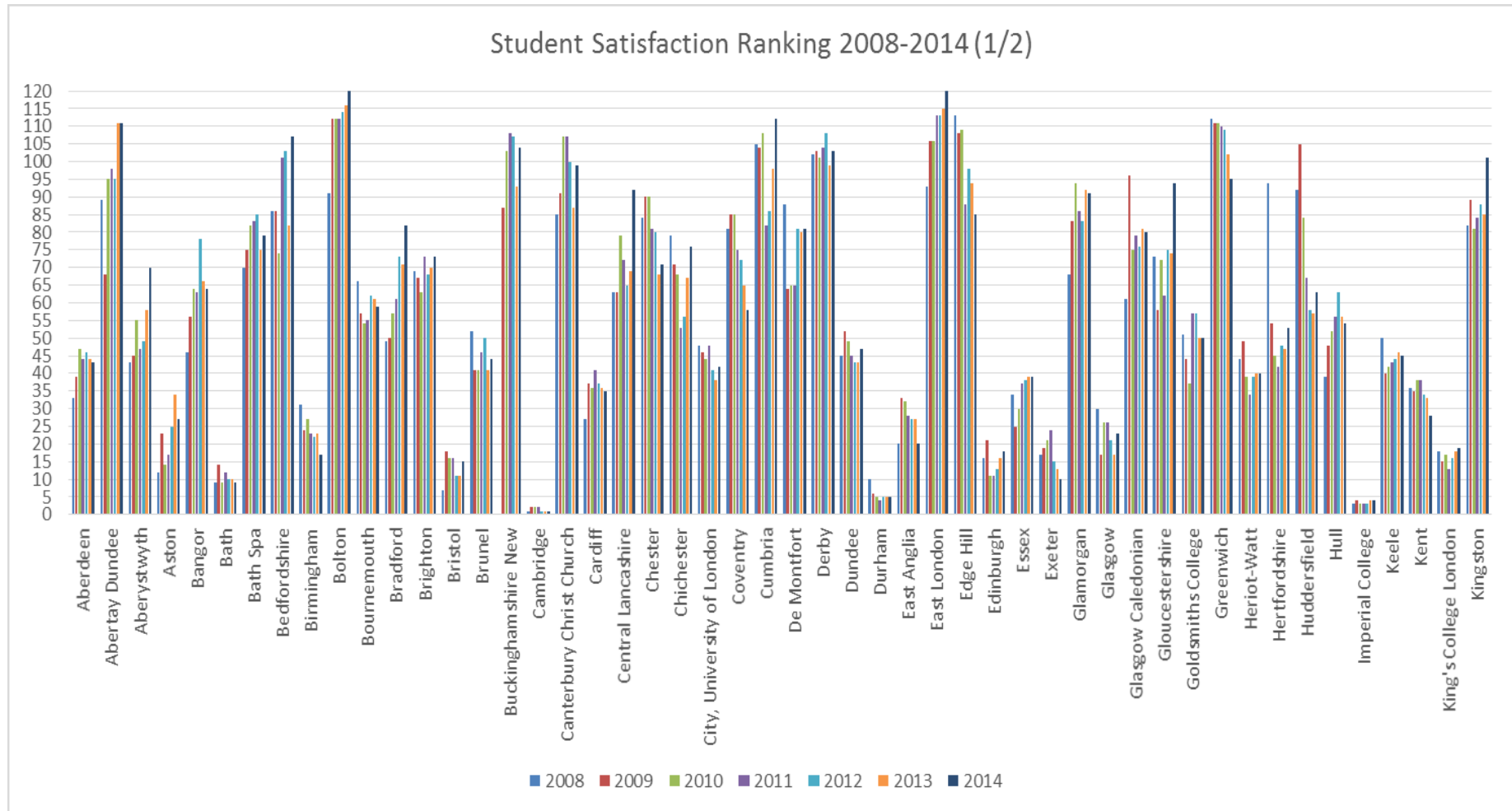


FIGURE 5-13 STUDENT SATISFACTION RANKING

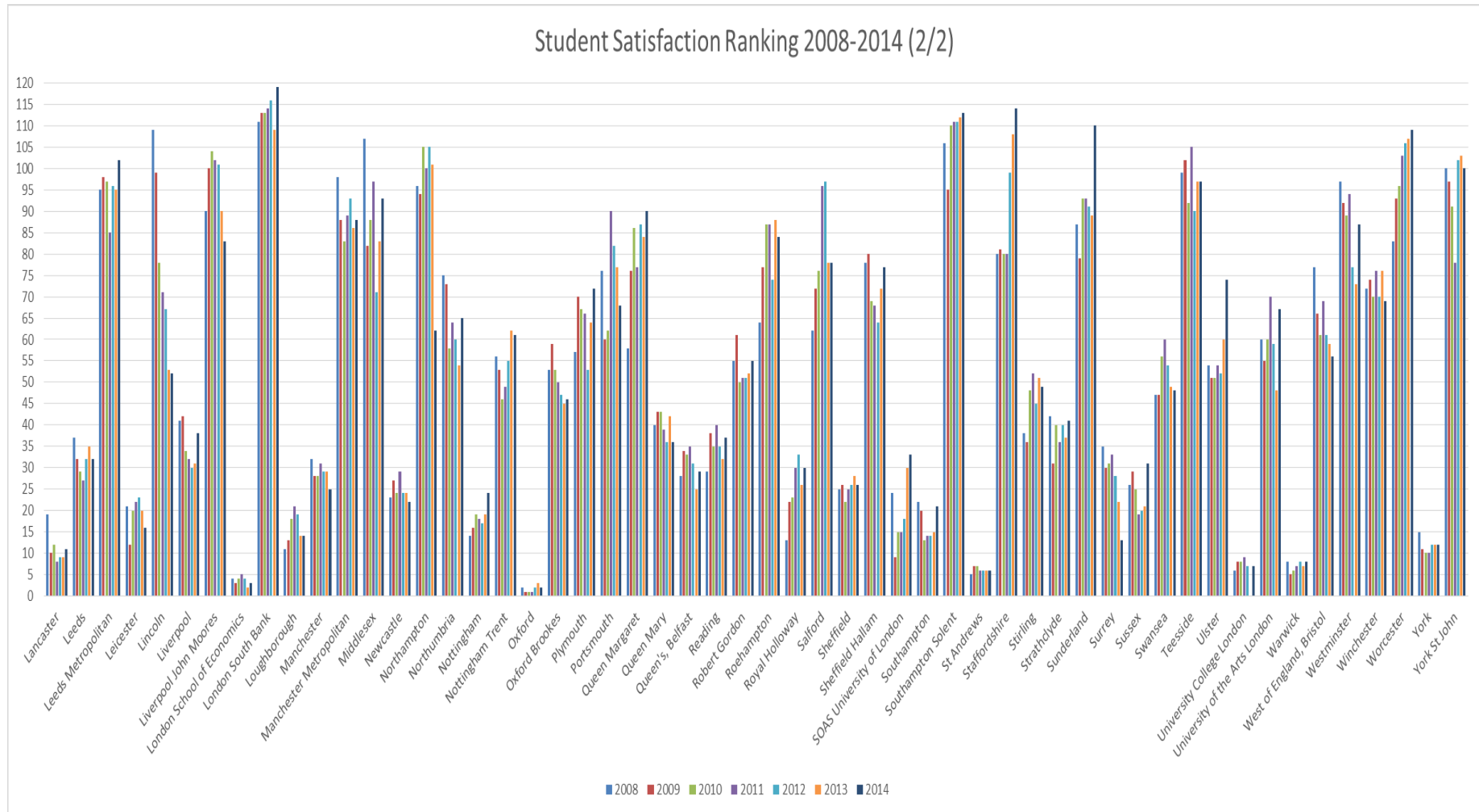


Figure 5-14 Student Satisfaction Ranking

TABLE 5.14 THE UK HEIS' STUDENT SATISFACTION RANKING SCORES ARE PATH DEPENDENT

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.892 ^a	.796	.794	15.58013	

a. Predictors: (Constant), t1

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	95758.725	1	95758.725	394.490	.000 ^b
	Residual	24516.790	101	242.740		
	Total	120275.515	102			

a. Dependent Variable: t2
b. Predictors: (Constant), t1

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.934	3.001		1.644	.103
	t1	.946	.048	.892	19.862	.000

a. Dependent Variable: t2

A simple linear regression was calculated to predict path dependence in rise or decline based on the student satisfaction ranking scores of the UK HEIs. A significant regression equation was found ($F(1,101) = 394.490, p < .000$), with an R^2 of .794. Participants' predicted student satisfaction ranking scores path dependency is equal to $4.934 + .946$ (student satisfaction ranking at t1) [student satisfaction ranking at t2] when student satisfaction ranking is measured. The UK HEIs' employability ranking at t2 increased by .946 for each year.

In line with the findings derived from Table 5.11, Table 5.12 and Table 5.13, it is evident that the research ranking scores, employability rankings scores and students satisfaction ranking scores are driven by the HEIs' path and history and that there is less significant difference in the ranking scores at t1 and t2.

The study finds that the results, in general, provide evidence to suggest that the UK HEIs' history and experience matter and that they are path dependent. The positive relationships among these variables, shown in the Tables 5.11, Table 5.12, Table 5.13 and Figure 5.1, Figure 5.2, Figure 5.3 and Figure 5.4 above, demonstrated by linear regression reveal that the HEIs' history and experience and rankings are important, where higher values suggest that these variables have a greater impact (or the more sensitive variables) on international student numbers compared with Home/EU student numbers. The relationships between the HEIs' ranking scores and international student recruitment lend support to the first set of hypotheses.

On one hand, the findings suggest that HEIs with longer histories can attract a greater proportion of the international student recruitment. Total student recruitment the other hand, the group of newer HEIs represent a much higher proportion of the sample size, and they are attract a larger international student recruitment. Although, as the findings show, there are significant variances in performance among younger universities, where there are several successful universities in terms of international student recruitment. Furthermore, some alliances demonstrate strong growth during the period of the study (t1 and t2).

TABLE 5.15 TOTAL STUDENT RECRUITMENT IS DEPENDENT ON INTERNATIONAL STUDENT RECRUITMENT

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.804 ^a	.646	.610	36126.98763		
a. Predictors: (Constant), international_12_years						
ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.378E+10	1	2.378E+10	18.223	.002 ^b
	Residual	1.305E+10	10	1305159235		
	Total	3.684E+10	11			
a. Dependent Variable: Total_12_years						
b. Predictors: (Constant), international_12_years						
Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1505239.719	53025.855		28.387	.000
	international_12_years	.914	.214	.804	4.269	.002
a. Dependent Variable: Total_12_years						

A simple linear regression was calculated to predict total student recruitment dependent on international student recruitment, rise or decline based on international student recruitment across the UK HEIs. A significant regression equation was found ($F(1,10) = 18.223, p < .000$), with an R^2 of .610. Participants predicted total student recruitment dependency on international student recruitment is equal to $1505239.719 + .914$ when total student recruitment is measured.

TABLE 5.16 THE UK HEIS' INTERNATIONAL STUDENT GROWTH IS PATH DEPENDENT

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.958 ^a	.918	.917	2708.69925	

a. Predictors: (Constant), t1

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8043641895	1	8043641895	1096.304	.000 ^b
	Residual	719031059.7	98	7337051.630		
	Total	8762672955	99			

a. Dependent Variable: t2
b. Predictors: (Constant), t1

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-629.248	293.092		-2.147	.034
	t1	2.266	.068	.958	33.110	.000

a. Dependent Variable: t2

A simple linear regression was calculated to predict international student recruitment path dependency, rise or decline based on international student recruitment across the UK HEIs. A significant regression equation was found ($F(1,98) = 1096.304, p < .000$), with an R^2 of .917. Participants predicted international student recruitment being path dependent and is equal to $-629.248 + 2.266$ when international student recruitment is measured.

TABLE 5.17 TOTAL STUDENT RECRUITMENT AT THE RUSSELL GROUP IS DEPENDENT ON INTERNATIONAL STUDENT RECRUITMENT

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.539 ^a	.290	.258	70644.93579		
a. Predictors: (Constant), international_student_population						
ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.489E+10	1	4.489E+10	8.994	.007 ^b
	Residual	1.098E+11	22	4990706953		
	Total	1.547E+11	23			
a. Dependent Variable: Total_student_population						
b. Predictors: (Constant), international_student_population						
Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	143172.199	46428.251		3.084	.005
	international_student_population	2.211	.737	.539	2.999	.007
a. Dependent Variable: Total_student_population						

A simple linear regression for The Russell Group HEIs was calculated to predict total student recruitment dependent on international student recruitment, rise or decline based on international student recruitment across The Russell Group HEIs. A significant regression equation was found ($F(1,22) = 8.994, p < .007$), with an R^2 of .258. The Russell Group HEIs predicted that the total student recruitment dependency on international student recruitment is equal to $143172.199 + 2.211$ when total student recruitment dependency on international student recruitment is measured.

Table 5.18 International student recruitment at The Russell group is path dependent

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.587 ^a	.344	.314	1418.27199

a. Predictors: (Constant), t1

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23211361.94	1	23211361.94	11.539	.003 ^b
	Residual	44252899.68	22	2011495.440		
	Total	67464261.62	23			

a. Dependent Variable: t2
b. Predictors: (Constant), t1

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2821.105	715.187		3.945	.001
	t1	.970	.286	.587	3.397	.003

a. Dependent Variable: t2

A simple linear regression for The Russell group HEIs was calculated to predict international student recruitment path dependency, rise or decline based on international student recruitment across The Russell group HEIs. A significant regression equation was found ($F(1,22) = 11.539, p < .003$), with an R^2 of .314. Participants predicted international student recruitment at The Russell group HEIs being path dependent and is equal to $2821.105 + .970$ when international student recruitment is measured.

TABLE 5.19 TOTAL STUDENT RECRUITMENT AT THE ALLIANCE GROUP IS DEPENDENT ON INTERNATIONAL STUDENT RECRUITMENT

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.209 ^a	.044	-.030	76212.53189		
a. Predictors: (Constant), international_student_population						
ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3463376914	1	3463376914	.596	.454 ^b
	Residual	7.551E+10	13	5808350017		
	Total	7.897E+10	14			
a. Dependent Variable: Total_student_population						
b. Predictors: (Constant), international_student_population						
Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	233681.287	62282.979		3.752	.002
	international_student_population	1.388	1.798	.209	.772	.454
a. Dependent Variable: Total_student_population						

A simple linear regression for The Alliance Group HEIs was calculated to predict total student recruitment dependent on international student recruitment, rise or decline based on international student recruitment across The Alliance Group HEIs. A significant regression equation was found ($F(1,13) = .596, p < .454$), with an R^2 of .030. The Alliance Group HEIs predicted that the total student recruitment dependency on international student recruitment is equal to $233681.28 + 1.3888$ when total student recruitment dependency on international student recruitment is measured.

TABLE 5.20 INTERNATIONAL STUDENT RECRUITMENT AT THE ALLIANCE GROUP IS PATH DEPENDENT

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.346 ^a	.120	.052	1287.67754	

a. Predictors: (Constant), t1

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2937530.877	1	2937530.877	1.772	.206 ^b
	Residual	21555474.72	13	1658113.440		
	Total	24493005.60	14			

a. Dependent Variable: t2
b. Predictors: (Constant), t1

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1690.448	731.428		2.311	.038
	t1	.690	.519	.346	1.331	.206

a. Dependent Variable: t2

A simple linear regression for The Alliance group HEIs was calculated to predict international student recruitment path dependency, rise or decline based on international student recruitment across The Alliance group HEIs. A significant regression equation was found ($F(1,13) = 1.772, p < .206$), with an R^2 of .052. Participants predicted international student recruitment at The Alliance group HEIs being path dependent and is equal to $1690.448 + .690$ when international student recruitment is measured.

TABLE 5.21 TOTAL STUDENT RECRUITMENT AT THE CATHEDRALS GROUP IS DEPENDENT ON INTERNATIONAL STUDENT RECRUITMENT

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.234 ^a	.055	-.134	110467.6200		
a. Predictors: (Constant), international_student_population						
ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3525556306	1	3525556306	.289	.614 ^b
	Residual	6.102E+10	5	1.220E+10		
	Total	6.454E+10	6			
a. Dependent Variable: Total_student_population						
b. Predictors: (Constant), international_student_population						
Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	101940.315	90717.124		1.124	.312
	international_student_population	7.809	14.528	.234	.538	.614
a. Dependent Variable: Total_student_population						

A simple linear regression for The Cathedrals Group HEIs was calculated to predict total student recruitment dependent on international student recruitment, rise or decline based on international student recruitment across The Cathedrals Group HEIs. A significant regression equation was found ($F(1,5) = .289, p < .614$), with an R^2 of $-.134$. The cathedrals Group HEIs predicted that the total student recruitment dependency on international student recruitment is equal to $101940.315 + 7.809$ when total student recruitment dependency on international student recruitment is measured.

TABLE 5.22 INTERNATIONAL STUDENT RECRUITMENT AT THE CATHEDRALS GROUP IS PATH DEPENDENT

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.025 ^a	.001	-.199	318.35230

a. Predictors: (Constant), t1

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	311.916	1	311.916	.003	.958 ^b
	Residual	506740.941	5	101348.188		
	Total	507052.857	6			

a. Dependent Variable: t2
b. Predictors: (Constant), t1

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	398.786	217.791		1.831	.127
	t1	.040	.729	.025	.055	.958

a. Dependent Variable: t2

A simple linear regression for The Cathedrals group HEIs was calculated to predict international student recruitment path dependency, rise or decline based on international student recruitment across The Cathedrals group HEIs. A significant regression equation was found ($F(1,5) = .003, p < .958$), with an R^2 of $-.199$. Participants predicted international student recruitment at The Cathedrals group HEIs being path dependent and is equal to $398.786 + .040$ when international student recruitment is measured.

TABLE 5.23 TOTAL STUDENT RECRUITMENT AT THE MILLION+ GROUP IS DEPENDENT ON INTERNATIONAL STUDENT RECRUITMENT

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.970 ^a	.940	.910	29186.46912		
a. Predictors: (Constant), international_student_population						
ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.680E+10	1	2.680E+10	31.462	.030 ^b
	Residual	1703699960	2	851849979.9		
	Total	2.850E+10	3			
a. Dependent Variable: Total_student_population						
b. Predictors: (Constant), international_student_population						
Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	50171.419	22291.036		2.251	.153
	international_student_population	3.451	.615	.970	5.609	.030
a. Dependent Variable: Total_student_population						

A simple linear regression for The Million+ Group HEIs was calculated to predict total student recruitment dependent on international student recruitment, rise or decline based on international student recruitment across The Million+ Group HEIs. A significant regression equation was found ($F(1,2) = 31.462, p < .030$), with an R^2 of .910. The cathedrals Group HEIs predicted that the total student recruitment dependency on international student recruitment is equal to $50171.419 + 3.451$ when total student recruitment dependency on international student recruitment is measured.

TABLE 5.24 INTERNATIONAL STUDENT RECRUITMENT AT THE MILLION+ GROUP IS PATH DEPENDENT

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.984 ^a	.968	.952	294.15211	

a. Predictors: (Constant), t1

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5199927.072	1	5199927.072	60.097	.016 ^b
	Residual	173050.928	2	86525.464		
	Total	5372978.000	3			

a. Dependent Variable: t2
b. Predictors: (Constant), t1

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	198.488	191.729		1.035	.409
	t1	.806	.104	.984	7.752	.016

a. Dependent Variable: t2

A simple linear regression for The Million+ group HEIs was calculated to predict international student recruitment path dependency, rise or decline based on international student recruitment across The Million+ group HEIs. A significant regression equation was found ($F(1, 2) = 60.097, p < .016$), with an R^2 of .952. Participants predicted international student recruitment at The Cathedrals group HEIs being path dependent and is equal to $198.488 + .806$ when international student recruitment is measured.

TABLE 5.25 TOTAL STUDENT RECRUITMENT AT NON-ALIGNED HEIS IS DEPENDENT ON INTERNATIONAL STUDENT RECRUITMENT

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.274 ^a	.075	.056	80722.68577		
a. Predictors: (Constant), international_student_population						
ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.546E+10	1	2.546E+10	3.907	.054 ^b
	Residual	3.128E+11	48	6516151998		
	Total	3.382E+11	49			
a. Dependent Variable: Total_student_population						
b. Predictors: (Constant), international_student_population						
Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	129845.339	22373.867		5.803	.000
	international_student_population	1.368	.692	.274	1.977	.054
a. Dependent Variable: Total_student_population						

A simple linear regression for non-aligned UK HEIs was calculated to predict total student recruitment dependent on international student recruitment, rise or decline based on international student recruitment across non-aligned UK HEIs. A significant regression equation was found ($F(1, 48) = 3.907, p < .054$), with an R^2 of .056. The non-aligned UK HEIs predicted that the total student recruitment dependency on international student recruitment is equal to $129845.339 + 1.3$ when total student recruitment dependency on international student recruitment is measured.

TABLE 5.26 INTERNATIONAL STUDENT RECRUITMENT AT THE NON-ALIGNED HEIS IS PATH DEPENDENT

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.762 ^a	.580	.572	834.46649	

a. Predictors: (Constant), t1

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46205706.66	1	46205706.66	66.356	.000 ^b
	Residual	33424047.36	48	696334.320		
	Total	79629754.02	49			

a. Dependent Variable: t2
b. Predictors: (Constant), t1

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	625.387	199.617		3.133	.003
	t1	1.305	.160	.762	8.146	.000

a. Dependent Variable: t2

A simple linear regression for the non-aligned UK HEIs was calculated to predict international student recruitment path dependency, rise or decline based on international student recruitment across the non-aligned UK HEIs. A significant regression equation was found ($F(1, 48) = 66.356, p < .000$), with an R^2 of .572. Participants predicted international student recruitment at the non-aligned UK HEIs being path dependent and is equal to $625.387 + 1.305$ when international student recruitment is measured.

Together, the results suggest that dynamic managerial capabilities, as latent variables, along with the UK HEIs' age, history and experience and rankings are important attractors for international student growth. Clearly, performance and growth depend on a university's strategy and its implementation. Furthermore, changes in recruitment are also reflected by variances in performance on other (endogenous and exogenous) variables, where some are beyond the HEIs' control as they have little influence over the changes that take place in the market. Then they explain environment, by following the framework that considers the characteristics of customer markets, student demand and preferences matter. They would lend some challenges for organisational routines to function on their own therefore organisational routines are subject to influence and direction from dynamic managerial capabilities.

5.3 Survey data analysis

The survey was sent to 162 UK HEIs. Nine emails were rejected as either the email address was incorrect, the email addresses contained an error or the person listed in the HEIs website was no longer employed by the HEIs. In total, 153 participants received the email, out of which 31 replied with data that could be used for further analysis (20% response rate). All returned responses were valid. It highlighted that respondents offered a good spread of data concerning the HEIs' age and internationalisation activities. This is insightful because it suggests that HEIs' path and history in internationalisation plays an important role in the overall internationalisation success or failure rate.

TABLE 5.27 TOTAL STUDENT RECRUITMENT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under 10000	5	16.1	17.9	17.9
	10001-20000	11	35.5	39.3	57.1
	20001-30000	7	22.6	25.0	82.1
	20001-30000	5	16.1	17.9	100.0
	Total	28	90.3	100.0	
Missing		3	9.7		
Total		31	100.0		

TABLE 5.28 NON-UK/EU STUDENTS EXPRESSED AS PERCENTAGE OF TOTAL STUDENT RECRUITMENT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under 10 %	6	19.4	21.4	21.4
	11-20%	8	25.8	28.6	50.0
	21-30%	10	32.3	35.7	85.7
	31-40%	4	12.9	14.3	100.0
	Total	28	90.3	100.0	
Missing		3	9.7		
Total		31	100.0		

TABLE 5.29 TOTAL STUDENT RECRUITMENT AT THE SURVEYED UK HEIS DEPEND ON INTERNATIONAL STUDENT RECRUITMENT

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.367 ^a	.135	.101	.945	

a. Predictors: (Constant), Non-UK/EU students expressed as percentage of total student population

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.618	1	3.618	4.048	.055 ^b
	Residual	23.239	26	.894		
	Total	26.857	27			

a. Dependent Variable: Total student population at my university is (please click one tab to make selection)

b. Predictors: (Constant), Non-UK/EU students expressed as percentage of total student population

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.537	.478		3.218	.003
	Non-UK/EU students expressed as percentage of total student population	.367	.182	.367	2.012	.055

a. Dependent Variable: Total student population at my university is (please click one tab to make selection)

A simple linear regression for the surveyed UK HEIs was calculated to predict total student recruitment dependent on international student recruitment, rise or decline based on international student recruitment across non-aligned UK HEIs. A significant regression equation was found ($F(1, 26) = 4.048, p < .055$), with an R^2 of .101. The non-aligned UK HEIs predicted that the total student recruitment dependency on international student recruitment is equal to $1.537 + .367$ when total student recruitment dependency on international student recruitment is measured.

TABLE 5.30 INTERNATIONAL STUDENT RECRUITMENT AT THE SURVEYED UK HEIS DEPEND ON THE FOUNDING YEAR

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.122 ^a	.015	-.023	70.551		

a. Predictors: (Constant), Non-UK/EU students expressed as percentage of total student population

ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1967.235	1	1967.235	.395	.535 ^b
	Residual	129414.622	26	4977.485		
	Total	131381.857	27			

a. Dependent Variable: Approximate year the university was founded
 b. Predictors: (Constant), Non-UK/EU students expressed as percentage of total student population

Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1942.856	35.649		54.500	.000
	Non-UK/EU students expressed as percentage of total student population	-8.559	13.614	-.122	-.629	.535

a. Dependent Variable: Approximate year the university was founded

A simple linear regression for the surveyed UK HEIs was calculated to predict international student recruitment being dependent on the founding year of the HEIs, rise or decline based on international student recruitment across the surveyed UK HEIs. A significant regression equation was found ($F(1, 26) = .395, p < .0535$), with an R^2 of $-.023$. The surveyed UK HEIs predicted that the international student recruitment dependency on the founding year is equal to $1942.856 + -8.559$ when international student recruitment dependency on the founding year is measured.

TABLE 5.31 INTERNATIONAL STUDENT RECRUITMENT AT THE SURVEYED UK HEIS DEPEND ON STRATEGIC RENEWAL

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.319 ^a	.102	.067	.963		
a. Predictors: (Constant), My university's international strategy is subject to review/renewal every (Please click one tab to make selection) - Selected Choice						
ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.738	1	2.738	2.951	.098 ^b
	Residual	24.119	26	.928		
	Total	26.857	27			
a. Dependent Variable: Non-UK/EU students expressed as percentage of total student population						
b. Predictors: (Constant), My university's international strategy is subject to review/renewal every (Please click one tab to make selection) - Selected Choice						
Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.089	.425		7.263	.000
	My university's international strategy is subject to review/renewal every (Please click one tab to make selection) - Selected Choice	-.225	.131	-.319	-1.718	.098
a. Dependent Variable: Non-UK/EU students expressed as percentage of total student population						

A simple linear regression for the surveyed UK HEIs was calculated to predict international student recruitment being dependent on the strategic renewal across the HEIs, rise or decline based on international student recruitment across the surveyed UK HEIs. A significant regression equation was found ($F(1, 26) = 2.951, p < .098$), with an R² of .067. The surveyed UK HEIs predicted that the international student recruitment dependency on strategic renewal is equal to $3.089 + -.225$ when international student recruitment dependency on strategic renewal is measured.

TABLE 5.32 INTERNATIONAL STUDENTS DEPEND ON HOW LONG THE PERSON HAS BEEN IN CHARGE

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.412 ^a	.170	.138	.926		
a. Predictors: (Constant), How long has the person mentioned above been in post for international strategy						
ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.561	1	4.561	5.318	.029 ^b
	Residual	22.297	26	.858		
	Total	26.857	27			
a. Dependent Variable: Non-UK/EU students expressed as percentage of total student population						
b. Predictors: (Constant), How long has the person mentioned above been in post for international strategy						
Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.684	.207		12.963	.000
	How long has the person mentioned above been in post for international strategy	-.015	.007	-.412	-2.306	.029
a. Dependent Variable: Non-UK/EU students expressed as percentage of total student population						

A simple linear regression for the surveyed UK HEIs was calculated to predict international student recruitment being dependent on the length of time the senior manager has been on duty across the HEIs, rise or decline based on international student recruitment across the surveyed UK HEIs. A significant regression equation was found ($F(1, 26) = 24.561, p < .029$), with an R^2 of .138. The surveyed UK HEIs predicted that the international student recruitment depends on the length of time the senior manager has been on duty across the HEIs is equal to $2.684 + -.15$ when international student recruitment dependency on the length of time the senior manager has been on duty across the HEIs is measured.

TABLE 5.33 APPROXIMATE YEAR THE RESPONDENT'S HEIS WAS FOUND

		Approximate year the university was founded			
Founding year		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1796	1	3.2	3.2	3.2
	1821	1	3.2	3.2	6.5
	1830	1	3.2	3.2	9.7
	1835	1	3.2	3.2	12.9
	1843	1	3.2	3.2	16.1
	1844	1	3.2	3.2	19.4
	1852	1	3.2	3.2	22.6
	1855	1	3.2	3.2	25.8
	1858	1	3.2	3.2	29.0
	1876	1	3.2	3.2	32.3
	1892	1	3.2	3.2	35.5
	1894	1	3.2	3.2	38.7
	1895	1	3.2	3.2	41.9
	1900	1	3.2	3.2	45.2
	1901	1	3.2	3.2	48.4
	1903	1	3.2	3.2	51.6
	1906	1	3.2	3.2	54.8
	1963	2	6.5	6.5	61.3
	1964	1	3.2	3.2	64.5
	1966	2	6.5	6.5	71.0
	1968	1	3.2	3.2	74.2
	1975	1	3.2	3.2	77.4
	2003	1	3.2	3.2	80.6
	2004	1	3.2	3.2	83.9
	2007	2	6.5	6.5	90.3
	2012	1	3.2	3.2	93.5
	2013	2	6.5	6.5	100.0
	Total	31	100.0	100.0	

Table 5.31 presents the approximate founding year of the respondent HEI. It offers a good mix of the Old and Newly established HEIs. In order to maintain the data anonymity, the founding year for the respondents' HEI is changed.

25 respondents out of 31 asserted that the appointment of new top-management teams is an important factor in implementing international student recruitment

agenda. These views confirm that the role of top-management is an important input in the advancement of the international student recruitment agenda. The majority of the remaining sub-variables present similar views. This is attributable to the UK government's decision to shift the funding from the government to HEIs and subsequently HEIs' willingness to spread the financial risk by increasing or sustaining international student recruitment.

Table 5.32 highlights the strategic intent behind the surveyed HEIs drive to increase international student recruitment. The survey instrument employed a five-point Likert scale with 1 being least important and five being most important. The results present a mean value close to four on nine variables presented in the survey with one exception. The respondents view the state interventions as the least important factor in their HEIs' drive to increase international student recruitment. From the remaining variables, international student recruitment is reported to be underpinned by devising of new university-wide strategies and appointment of new DVCs or international directors. This then follows a shift in strategic plan. The question about international student recruitment as to complement home/EU student recruitment carried a mean value of 3.75.

TABLE 5.34 STRATEGIC DRIVERS

Category	N			Mean	Median	Minimum	Maximum
	Valid	Missing	Total				
Shift from Home/EU to International	28	3	31	3.6786	4.0000	2.00	5.00
Links with business and industry	28	3	31	3.2857	3.0000	2.00	5.00
Complement the Home/EU student recruitment	28	3	31	3.7500	4.0000	2.00	5.00
Appointment of new VC / DVC / International Director	25	6	31	3.6800	4.0000	1.00	5.00
New international strategy	29	2	31	3.8966	4.0000	2.00	5.00
Government calls	24	7	31	2.7917	3.0000	2.00	5.00
Attract the best international students and staff	29	2	31	3.3793	3.0000	1.00	5.00
Increased local competition	26	5	31	3.4615	4.0000	2.00	5.00
The university's history and experience	27	4	31	3.1481	3.0000	1.00	5.00

Table 5.33 presents strategic aims that the surveyed HEIs seek to achieve through increased international student recruitment. The survey instrument employed a five-point Likert scale with 1 being least important and five being most important. The results present a mean value above four on eleven variables presented in the survey with few exceptions. Majority of respondents expressed that increase in international student recruitment is aimed at sustainable growth followed by efforts to improve student experience. This is then followed by the aim to achieve competitive advantage, this confirms the notion they surveyed sample view increase in international student recruitment as a mean to outperform competitors in a sector that is subject to increased local and global competition. A good majority of respondents with a mean value 3.66 expressed that the increase in international student recruitment is aimed at diversifying and spreading the financial risk.

TABLE 5.35 STRATEGIC AIMS

Category	N			Mean	Median	Minimum	Maximum
	Valid	Missing	Total				
International student recruitment sustainable growth	28	3	31	4.2143	4.0000	2.00	5.00
Competitive advantage	29	2	31	3.8966	4.0000	1.00	5.00
Innovative teaching and learning	29	2	31	3.6897	4.0000	3.00	5.00
Collaborative research	29	2	31	3.7931	4.0000	1.00	5.00
Diversify student profile	28	3	31	3.5714	4.0000	2.00	5.00
Improve students' experience through international exchange	28	3	31	4.0000	4.0000	3.00	5.00
Improve / enhance management practices	28	3	31	3.0357	3.0000	2.00	5.00
Enhance faculty's international profile	29	2	31	3.6897	4.0000	2.00	5.00
Improve research impact / research clusters	28	3	31	3.5357	4.0000	2.00	5.00
Attract international university partners	28	3	31	3.7500	4.0000	2.00	5.00
Learning from international universities	27	4	31	3.4444	3.0000	2.00	5.00
Leverage international ranking and reputation	26	5	31	3.7692	4.0000	2.00	5.00
Leverage institutional strengths	27	4	31	3.2222	3.0000	2.00	5.00
Diversify funding sources and spread financial risk	27	4	31	3.6667	4.0000	2.00	5.00
Develop collaborative research groups	25	6	31	3.5600	4.0000	2.00	5.00
International work-ready graduates	28	3	31	3.7143	4.0000	2.00	5.00

Table 5.34 presents the challenges faced the surveyed HEIs in their international student recruitment efforts. The survey instrument employed five-point Likert scale with 1 being least important and five being most important. The results present a mean value between 3.5 to just below 4 with few exceptions. Although the overwhelming picture that emerges from the panel data is that The Russell Group HEIs are in a dominant position for both home and international student recruitment. For example, the University of Manchester (member of the Russell Group) equally attracts home and international student numbers. Whereas Manchester Metropolitan University (member of The Alliance Group), the third largest university by student numbers and the largest in the group (by student numbers), ranked 57th in the UK and 8th in the Group when it comes to international students. The survey attempts to uncover the internal challenges faced by the HEIs, shedding some light on performance differences among the surveyed UK HEIs. The highest scored items are the visa number restriction imposed by the UKBA and their ability to offer student mobility as having a negative impact on performance, posing a serious internal challenge in the process of international student recruitment.

In addition to the internal challenges, there are challenges facing the HEIs beyond the control of universities and that universities have little or no power to influence change at the national level. For example, the visa and immigration restrictions reported by the Gov.UK (2016) in the UK may have hampered the HEI sector's ability as a whole to increase international student recruitment.

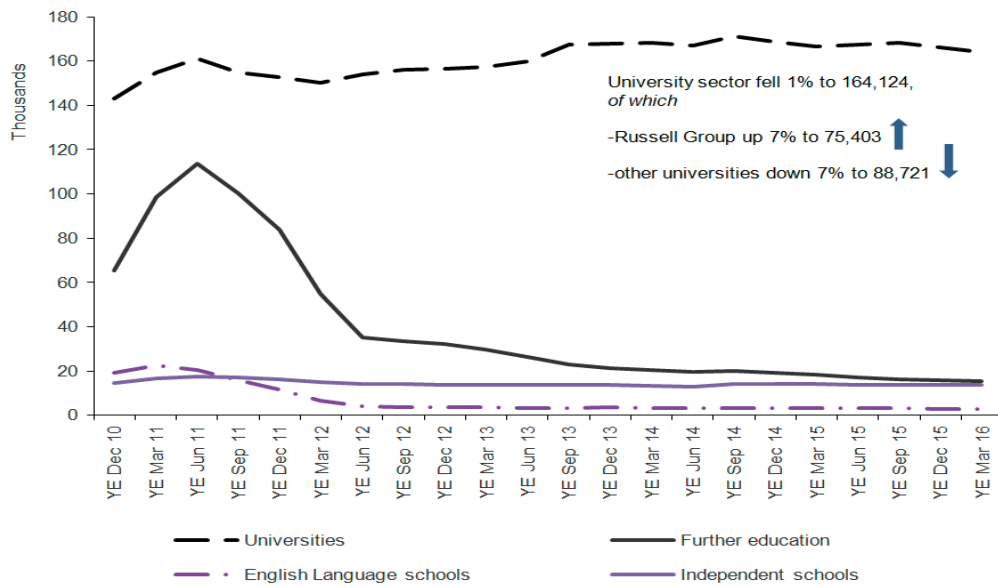


FIGURE 5-15 UK STUDENT VISA NUMBER REPORTED BY THE UK GOVERNMENT (GOV.UK, 2017)

Similarly, 29 out of 31 respondents believe that in the wake of the globalisation of HEIs, it is becoming more difficult to attract and recruit international students. This is especially true when the largest share of international students come from Asia and the Middle East; students from these areas tend to prefer, in addition to the UK, USA or Australia because of English language as a medium of instruction.

Table 5.36 Challenging Areas

Category	N			Mean	Median	Minimum	Maximum
	Valid	Missing	Total				
Cultural change	29	2	31	3.4138	4.0000	2.00	5.00
Faculty mobility	30	1	31	3.3333	3.0000	2.00	5.00
Student mobility	30	1	31	3.5000	3.5000	1.00	5.00
Communication with partner institutions	28	3	31	3.1786	3.0000	2.00	5.00
Coordination across and within faculties	29	2	31	3.4483	3.0000	2.00	5.00
Government intervention, regulatory and legal environment	28	3	31	3.3214	4.0000	2.00	4.00
Immigration and student visa policy	27	4	31	4.2593	4.0000	2.00	5.00
Due diligence	29	2	31	3.1379	3.0000	2.00	5.00
Protection of intellectual property rights	27	4	31	3.0741	3.0000	2.00	4.00
Internal resistance to change	30	1	31	3.2333	3.0000	2.00	5.00
Repatriation of funds from TNE activity	26	5	31	3.1923	3.5000	1.00	4.00
Overseas Ministry of Education approval	27	4	31	3.0000	3.0000	2.00	5.00
Managing tax liability	25	6	31	3.0800	3.0000	1.00	4.00
Internal policies and procedures	27	4	31	3.1852	3.0000	2.00	5.00
QAA requirements	27	4	31	3.1481	3.0000	2.00	5.00

Unlike international student recruitment across the UK HEIs, the total student recruitment is unstable. See Figure 4.3 and Figure 4.4 (in chapter 4) for a comparison between rise and decline in local and international student recruitment trend. For example, local student recruitment fell as the recession was unfolding. Where international student recruitment has gone up by significant numbers. In 2007, local student recruitment fell by more than 4% compared to the previous year. On the contrary, international student recruitment has enjoyed continuous growth. This growth can be attributed to the rise in students from India, China and Nigeria which have experienced unparalleled economic growth, unlike domestic students. In particular, The Business Schools have made significant contribution to the increase in international student recruitment across the HE sector as a whole (see Figure 4.5 and Figure 4.6 in chapter 4). From the panel data, it can be confirmed that the UK HEIs' business schools have close to 1.3 million international alumni around the globe for the period of past 12 years alone. The survey data confirms similar findings where business and management studies are popular in international markets followed by engineering and technology related subjects.

5.3.1 Validity tests for instrument measurements

Variable string	Cronbach's alpha	Kept/removed
International strategy driven by	.745	Kept
Strategic aims of international strategy	.802	Kept
Challenges for internationalisation process	.769	Kept
Challenges for internationalisation strategy	-.344	removed

According to Pallant (2013), the Cronbach's alpha over .7 is considered a good fit, this survey data results conform to these recommendations and ensure there is a good spread of responses.

It is noted that mean values in 41 distinct variables is between 3-4 with few exceptions where two variables exceeded 4 on a five-point Likert scale. One can see that most of the values of the standard deviation are less than one. Although these measures are valid judgement point, they (means and standard deviations) do not

provide enough information about the distribution of the data. To provide a further check on the shape of the distribution, the values for skewness and kurtosis were converted to z-scores to see how likely the values of skew and kurtosis are to occur. The method of accomplishing the z-score comes by dividing the value of skewness by skewness standard error (Field, 2013). On the same note, Kurtosis is converted to Z-score by dividing the value of kurtosis by kurtosis standard error. The z-score of the skewness and kurtosis for all the 41 sub-items were computed according to data presented in the Tables above.

TABLE 5.37 CORRELATIONS FOR DRIVERS OF INTERNATIONAL STRATEGY

Driven by	Shift in strategic plan	International links	Complement student recruitment	New international strategy	Government intervention	To attract the international students and staff	Local competition	History and experience in internationalisation
Shift in strategic plan	1							
International links	.218	1						
Complement student recruitment	.541**	.307	1					
New international strategy	.533**	.147		1				
Government intervention	-.026	-.338	.289	-.120	1			
To attract the international students and staff	.398*	.382*	.570**	.555**	.238	1		
Local competition	.657**	.354	.644**	.582**	.109	.487*	1	
History and experience in internationalisation	.486*	-.002	.371	.303	.072	.044	.272	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

5.3.2 Regression models and results

As mentioned in the earlier sections, this study aims at understanding the international student recruitment at the UK HEIs and the underlying strategic factors. For this purpose, as shown in Table 5.37 (on the next page) 20 models are analysed.

TABLE 5.38 OVERVIEW OF REGRESSION MODELS

Predictor variables	Model #	Category	Sample	Statistical method
International student recruitment	1	Overall ranking leads to increase in international student recruitment	88	LR
	2	Research ranking scores are path dependent	100	LR
	3	Employability ranking scores are path dependent	102	LR
	4	Student satisfaction scores are path dependent	101	LR
	5	Overall student recruitment is dependent on international student recruitment (12 y combined)	10	LR
	6	The UK HEIs' international student growth is path dependent	98	LR
	7	The Russell Group student recruitment is dependent on international student recruitment	22	LR
	8	International student recruitment at The Russell group is path dependent	22	LR
	9	The Alliance Group student recruitment is dependent on international student recruitment	13	LR
	10	International student recruitment at The Alliance group is path dependent	13	LR
	11	The Cathedrals Group student recruitment is dependent on international student recruitment	5	LR
	12	International student recruitment at The Cathedral group is path dependent	5	LR
	13	The Million+ Group student recruitment is dependent on international student recruitment	2	LR
	14	International student recruitment at The Million+ group is path dependent	2	LR
	15	The non-aligned HEIs' student recruitment is dependent on international student recruitment	48	LR
	16	International student recruitment at the non-aligned HEIs is path dependent	48	LR
	17	Total student recruitment at the surveyed UK HEIs dependent on international student recruitment	26	LR
	18	International student recruitment at the surveyed UK HEIs depend on the founding year	26	LR
	19	International student recruitment at the surveyed UK HEIs depend on strategic renewal	26	LR
	20	international student recruitment depend on how long the person has been in charge	26	LR

TABLE 5.39 SUMMARY OF REGRESSION MODELS

Predictor	Model	Sum of Squares			df			Mean Square		F	Sig.
		Regression	Residual		Regression	Residual		Regression			
International student recruitment	1	1.676	2.724	4.400	1	88	89	1.676	30955230127.14	66.356	.000
	2	86217.076	36979.944	123197.020	1	100	101	86217.076	369.799	233.146	.000
	3	3892624.664	24702.874	3917327.538	1	102	103	3892624.664	242.185	16072.936	.000
	4	95758.725	24516.790	120275.515	1	101	102	95758.725	242.740	394.490	.000
	5	2.378	1.305	3.684	1	10	11	2.378	1305159235	18.22	.002
	6	8043641.895	719031059.7	8762672955	1	98	99	8043641.895	7337051.630	1096.304	.000
	7	4.489	1.098	1.547	1	22	23	4.489	4990706953	8.994	.007
	8	23211361.94	4425289.68	67464261.62	1	22	23	23211361.94	2011494.440	11.539	.003
	9	3463376914	7.551	7.897	1	13	14	34633769.14	58083500.17	.596	.454
	10	2937530.877	21555474.72	24493005.60	1	13	14	2937530.877	1658113.440	1.772	.206
	11	3525556.306	6.102	6.454	1	5	6	3525556.306	1.220	.289	.614
	12	311.916	506740.941	507052.857	1	5	6	311.916	101348.188	.003	.958
	13	2.680	1703699.960	2.850	1	2	3	2.680	851849979.9	31.462	.030
	14	5199927.072	173050.928	5372978.000	1	2	3	5199927.072	86525.464	60.097	.016
	15	2.546	3.128	3.82	1	48	49	2.546	6516151.998	3.907	.054
	16	46205706.66	33424047.36	79629754.02	1	48	49	46205706.66	696334.320	66.356	.000
	17	3.618	23.239	26.857	1	26	27	3.618	.894	4.048	.055
	18	1967.235	129414.622	131381.857	1	26	27	1967.235	4977.485	.395	.535
	19	2.738	24.119	26.857	1	26	27	2.738	.928	2.951	.098
	20	4.561	22.297	26.857	1	26	27	4.561	.858	5.318	.029

TABLE 5.40 SUMMARISED RESULTS OF MODEL FIT

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.617	.381	.374	17953.26625
2	.837	.700	.697	19.23017
3	.997	.994	.994	15.56230
4	.892	.796	.794	15.58013
5	.804	.646	.610	36126.98763
6	.958	.918	.917	2708.69925
7	.539	.290	.258	70644.93579
8	.587	.344	.314	1418.27199
9	.209	.044	-0.030	76212.53189
10	.346	.120	.052	1287.67754
11	.234	.055	-.134	110467.6200
12	.025	.001	-.199	318.35230
13	.970	.940	.910	29186.46912
14	.984	.968	.952	294.15211
15	.274	.075	.056	80722.68577
16	.762	.580	.572	834.46649
17	.367	.135	.101	.945
18	.122	.15	-.023	70.551
19	.319	.102	.067	.963
20	.412	.170	.138	.926

5.3.3 Models statistics

TABLE 5.41 STATISTICAL MODELS SIGNIFICANCE LEVELS (.005)

Model	Category	Sig.	Accept	Reject
1	Overall ranking leads to increase in international student recruitment	.000	√	
2	Research ranking scores are path dependent	.000	√	
3	Employability ranking scores are path dependent	.000	√	
4	Student satisfaction scores are path dependent	.000	√	
5	Overall student recruitment is dependent on international student recruitment (12 y combined)	.002	√	
6	The UK HEIs' international student growth is path dependent	.000	√	
7	The Russell Group student recruitment is dependent on international student recruitment	.007		√
8	International student recruitment at The Russell group is path dependent	.003	√	
9	The Alliance Group student recruitment is dependent on international student recruitment	.454		√
10	International student recruitment at The Alliance group is path dependent	.206		√
11	The Cathedrals Group student recruitment is dependent on international student recruitment	.614		√
12	International student recruitment at The Cathedral group is path dependent	.958		√
13	The Million+ Group student recruitment is dependent on international student recruitment	.030		√
14	International student recruitment at The Million+ group is path dependent	.016		√
15	The non-aligned HEIs' student recruitment is dependent on international student recruitment	.054		√
16	International student recruitment at the non-aligned HEIs is path dependent	.000	√	
17	Total student recruitment at the surveyed UK HEIs dependent on international student	.055		√
18	International student recruitment at the surveyed UK HEIs depend on the founding year	.535		√
19	International student recruitment at the surveyed UK HEIs depend on strategic renewal	.098		√
20	international student recruitment depend on how long the person has been in charge	.029		√

The confidence level for the statistical tests was set 95%. Out of twenty proposed models, eight models offer statistically high significance to the inference. The significance level for the proposed model one confirms that the international student recruitment is determined by the overall ranking score across the UK HEIs.

Furthermore, the significance levels for the proposed model two, three and four confirm that the research ranking scores, employability rankings scores and student satisfaction ranking scores follow path dependency. For example, the ranking scores for these categories are improved or sustained at the same levels by, what I propose (following Grant and Verona, 2015) at are the latent variables, i.e. dynamic managerial capabilities.

Model five strengthens the descriptive statistics presented in Figure 4.3 and Figure 4.4 that the total student recruitment at the UK HEIs is significantly dependent on the international student recruitment. Furthermore, it is inferred from the statistical analysis that the increase in international student recruitment at the UK HEIs is driven by the HEIs' path and history in having robust mechanisms in place to increase or maintain the international student recruitment activities.

Similarly, the data acquired from the Gov.UK (Figure 5.17) is confirmed and strengthened by model seven that The Russell Group HEIs (see figure 4.7) make impressive contribution towards the total and international student recruitment. The findings are statistically highly significant. Furthermore, model eight confirms that The Russell Group HEIs increase or sustain international student recruitment by the way of their path and history.

Contradicting with the findings about The Russell Group, for non-aligned UK HEIs (50 included in this study, see Table 4.1), the total student recruitment does not depend on international student recruitment. However, the international student recruitment itself follows its own path and history. Some of the UK HEIs that are not aligned to any strategic Group (unlike The Russell, Alliance, Cathedral and Million+)

are consistent in their international student recruitment efforts. For example, Edgehill University's international student recruitment has actually dropped from 154 international students for the year 2002/03 to 126 in the year 2013/14, whereas The University of Leicester has significantly increased its international student base from 1703 in the year 2002/03 to 4059 in the year 2013/14.

Model eight confirms is concerned with The Alliance Group HIEs (Figure 4.8 in chapter 4). The model presents significant variation in the way the international student recruitment activities are executed. The findings indicate significant differences, take for example The University of Lincoln whose international student recruitment in the year 2002/03 was 1467 and has since increased to 1366 in the year 2013/14. Whereas, Coventry university has seen dramatic increase in the international student intake from 1702 in the year 2002/03 to 5803 in the year 2013/14. This then gives rise to the findings from model which confirms that, The Alliance Group's international student recruitment as a whole, do not follow path and history. In the case of Coventry University, it is clear that the HEI have shifted away from their path and history and are making significant and dramatic changes to increase international student intake.

Model eleven represents The Cathedral Group. Following the examples above, there are some within group differences. For example, (see figure 4.9) The University of Chichester recruited only 93 international students in the year 2002/03 rising to 98 in the year 2013/14. Whereas, The University of Chester has witnessed some change in their international student recruitment pattern from 117 in the year 2002/03 to 924 international students in the year 2013/14. Furthermore, model twelve presents that The Cathedrals Group HEIS' total student recruitment is not dependent on international student recruitment. Similarity, international student recruitment for this Group, as a whole, is not path dependent i.e. in the case of The University of Chester, increase in international student recruitment is dependent on strategic change and not on its path and history.

Model thirteen presents The Million+ Group. In this, there are significant difference in which the international student recruitment is received by the Group member HEIs. Take for example (see figure 4.10), Abertay University, whose international student recruitment dropped from 296 in the year 2002/03 to 165 in the year 2013/14 as compared to another member HEI in the group, Edinburgh Napier University increased international student presence from 719 in the year 2002/03 to 1090 in the year 2013/14. Furthermore, as findings presented by model 14, the Million+ Group member HEIs, do not follow their path and history in their efforts to increase international student recruitment as in the case of Edinburgh Napier University.

Model 17-20 presents findings from the survey data. Model seventeen refer to the findings that the surveyed HEIs' total student recruitment is dependent on international student recruitment (see table 5.29). Furthermore, the findings suggest (see table 5.30) suggest that the HEIs' founding year do not act as an attractor for international students. Table 5.31, as responded by the surveyed HEIs, suggest that international student is effected by strategic renewal. Similarly, table 5.31 presents that the top-management teams' employment duration has an effect on the international student recruitment.

Organisational routines are affected by dynamic managerial capabilities on one hand and exogenous variables such as changes in economic structures, graduate job markets, tuition fees, currency exchange rates, and national government policies, actions taken by external (other universities) agents, and locational advantages of the university on the other. Furthermore, location advantages such as UK HEIs in London may gain more popularity or students preferences, in general, than those in the other cities. The nature of the interaction between the value of most exogenous and endogenous variables likely to affect international (student) production of organisations' parameter variables of strategies related to resource exploitation and exploration through joint operations and off-shore operations, R&D, staff straining.

Which in turn, change reputation such as ranking, perceived customer value, research output, employability prospects and student satisfaction,

This gives rise to the organisation leadership disposition, where an organisations use combinative approach by taking dynamic managerial capabilities and organisational routines as living things within the organisations. On this note, it is conjectured that dynamic managerial capabilities reside in the organisational routines live in organisational leadership and they create, modify and change organisational routines are inter-woven organisational functions. Although dynamic capabilities in an instance of time may present a nonlinear (or curvilinear) shape, the outcome such as productivity or the growth functions of organisation should mostly present a positive linear shift. Where, the nonlinear or curvilinear function may relate to the learning process of organisational routines such that research has pointed to that is also constrained by humans' evolved cognitive apparatus in processing sensory information based on adaptive capabilities (Cordes, 2008).

The findings from the survey data suggest that internationalisation and international student recruitment in particular is driven by several factors. The top-management teams play an important role in designing not only the international student recruitment strategies but also paying close attention to reputation, an important organisational function. alone are not the single key driver of strategic change in the internationalisation strategy of universities. The survey findings support the arguments that they are one among several factors that are important in the process of international student recruitment. Top-management teams influence strategy design and its implementation and work cooperatively with other actors/agents in the organisation. The process of internationalisation and international student recruitment is subject to numerous internal and external challenges that affect internationalisation processes. International student recruitment is only one indicator of how international an HEI might be, however, internationalisation itself subjects HEIs to adapt to various ways in which they can display their internationalisation capabilities.

5.4 Case study

According to Bryman (2016) hypotheses-driven or hypotheses directed questions are questions based on theoretical presuppositions, which also serve the purpose of making the interviewees' implicit knowledge more explicit, making the way for insightful qualitative enquiry (Miles *et al*, 2014). Therefore, open questions and hypotheses-driven questions were directed to the interviewees. In brief, face-to-face semi-structured interviews are the method used to collect data for this part of the study.

5.4.1 Interview data analysis

Table 4.15 gives a brief account of the total number of interviewees, their position in the HEI, the place and length of interviews. Appendices 16-23 offer detailed view of qualitative data analysis and screen shots from qualitative data analysis software, NVivo. The appendices highlight the number of interviewees, the word count in the transcribed document and the number of paragraphs. This is followed by number of nodes coded in the transcribed document, percentage and the number of text references extracted for further analysis.

The qualitative data collection strategy comprised of semi-structured interviews, which allowed members of the top-management team to offer a narrative of their position in the hierarchy. First, the interviews were helpful in highlighting the sensing and seizing capabilities, an important component of dynamic managerial capabilities (Teece, 2011). Second, interview data highlighted numerous avenues through which the top-management interventions influence international student recruitment routines. In doing so, they were able to amplify their personal stories as to why international student recruitment is important and how this is approached. This approach is important, and it enabled the researcher to gain a rich insight of the top-management teams' narratives highlighting a coherent sense of continuity, discontinuity and change, i.e. "considerable improvements" (Verona and Ravasi, 2003).

Following Glaser and Strauss (1967), Eisenhardt (1989) emphasise the importance of data collection, coding and analysis and the overlap, although rare case, may occur. Coding hierarchy set out to guide the analysis section of the interview data (Harding, 2013). The interview data highlighted that the approach to international student recruitment activities is primarily driven by the top-management team who are guided by strategic plan. Such guiding mechanisms ensure that dynamic capabilities are exercised and they influence organisational routines. Once established, the international student recruitment is driven by endogenous or exogenous pressure, and the analysis further focuses on what exactly drive the international student recruitment process. Such level of analysis required the top-management teams' interviews to gain insight into international student recruitment process and to understand the mechanics of complex systems and procedures. The interviewer sought to maintain natural conversation style while ensuring that these key themes were addressed. Following (Hansen, 2007), interviews lasted approximately 36–56 minutes. The interviews were recoded, transcribed and entered into NVivo (qualitative data analysis software) (Gibbs, 2002).

5.4.2 Dynamic managerial capabilities drive the international student recruitment process

The first component from the interview data worthy of investigation is dynamic capabilities, i.e. the top-management teams as the drivers of the international student recruitment. In doing so, the top-management teams continuously oscillate around the spectrum and use sensing and seizing capabilities to seek opportunities (Collis, 1994; Leih and Teece, 2016).

The set of sensing, seizing and transforming capabilities, as proposed by Teece (2011), are driven by a known problem and worked on by the management with a vision and recognition of “latent” demand as described by one Associate Dean International (ADI)

“We have had dips in international student recruitment over the past couple of years, which we really do want to address, especially the decline in undergraduate level where we have been seeing more dips”

Another ADI highlighted that the international office works closely with Deputy Vice Chancellor to develop strategic strands that are then communicated across the Faculty. As the quote from the ADI suggests, it is the involvement of the top-management teams that drive the international student recruitment,

“The international office said to develop partnerships in China; at first we could not see opportunities. Recently the DVC went to China to a prestigious institute, and we are now developing relationships with them.”

On this token, it is noticed that, organisational routines require input, direction and institutional support from the top-management teams and their direct involvement in devising strategic intent (Hamel and Prahalad, 2005) and strategy execution (Teece *et al*, 1997: 528; Martin, 2016). Such teams exercise sensing and seizing capabilities and influential power to bring change and highlight the opportunities for transformations (Teece, 2011)

Owing to Ricardian nature of rents, Teece *et al* (1997) point that resources acquisition, deployment and reconfiguration are important constructs in firm-level strategy. In building their view on this, they have traced this school of thought back to early work of Penrose, Selznick, Christensen and Andrews on whose heels the theoretical perspective are drawn by Rumelt (1984), Chandler (1966), Wernerfelt (1984) and Teece (1980, 1982). The concept of resource acquisition, deployment and reconfiguration is parked as endogenous activity, stemming from within the firm to address the market dynamism.

On a similar note, another ADI acknowledges that

“We have to make use of central resources to support internationalisation ambitions. For example, we have identified key markets where we can work in terms of particularly student recruitment in China, India and Malaysia and we are actively working in those markets with local offices. This will support us in terms of recruitment but our objective is to create much richer links.

The International Director stated that although the international student recruitment agenda has attracted significant support at the Board of Governors, there are financial limitations as how far the budget can stretch. To assert the importance and limitations of budgetary constraints, Teece *et al* (1997: 521) point that “a firm's cash position and degree of leverage may have strategic implications” yet the balance sheet can be raised from external market and therefore the financial constraints should not hold back the strategic intent. The International Director claims otherwise (such limitations may turn to be instrumental in holding back the strategic growth initiatives) *“The resources are limited, we cannot support every single international development in international activities, and therefore we need to work within strategic points”*.

To address budgetary constraints issues of such nature yet advancing the internationalisation agenda, it is important the resources are geared and aligned towards international in strategic fashion and foster those relationships

“we will develop strong relationships with those institutions that have rather stable student numbers coming in. What that will mean is that our support systems here for international students will be geared up

for those transitions and the experiences will be achievable and self-sustaining process”

The application of dynamic capabilities is the likes of resources picking (Makadok, 2001), selection, and retention (Tripsas and Gavetti, 2000). firms use strategic logic and only select and retain the case that are of greater value, as stated by the International Director

“So I would hope that we have sustainable relations with them and again some might drop off and some might develop new partnership based on research priorities. I think, again there might be some relationships which are dropping off and other will be added which will similar proportion”.

Teece *et al.* (1997) propose that dynamic capabilities can be built, bought and developed and the main purpose of in the building of dynamic capabilities is to introduce structures in place. This is confirmed by one ADI as

“In our strategic plan, we have been granted four principle lecturers to support me. In their roles, they develop and promote international activities. Each principle lecturer is assigned for each of the academic school. That is something fairly new introduced and the idea will be that each principle lecturer will have a role that supports international student recruitment in their subject discipline and will also have ownership of one or two of the strategic strand to look after”.

According to Teece (2007) and Augier and Teece (2009), the traditional conception of dynamic capabilities and the role of the top-management teams is similar to that of managerial entrepreneurship. In this, the top-management teams use sensing and

seizing capabilities as an opportunist (Leih and Teece, 2016). Although the role of dynamic capabilities is such that they sense the need to introduce change, they also offer some level of freedom to organisational routines. According to one ADI, dynamic capabilities is not all that having a top-down approach,

“We are following obviously the university’s’ strategic strand that exists at the moment. We are following the KPIs along those strategies, our vision at the moment is to try and fulfil key bits of that strategy where there is alignment with different things that we are working with. Therefore, it is very important for us to align our resources with the university’s strategies, so it is about alignment; it is about strategic vision how we can marry that with the university provision as a whole”.

Although the respective institution has undergone strategic change in term of internationalisation, there is *“some inertia and resistance to change from staff”* as one ADI suggests, despite this, increase in international student has moved on and there are cases

“Where the government makes it harder and brings in immigration controls, it is something that is fundamentally impacting the attractiveness of the UK and of UK universities to be able to attract international students”.

Internally, the DVC, states that although the HEI is the in the top 10 in the UK in terms of total student recruitment, the international student recruitment is far behind the sector average. To address this, it is stated that

“The UK visa has set very negative image of the UK, which actually is not true. If we recruit many students, where are we going to put them? Now we are not in position to do anything, it is a nice problem to have;

we are not currently in the position to solve this. We do send people from the international office; it is expensive and time consuming, staff time that requires cover. The biggest cost is the time off for the teaching staff; their teaching commitments require cover from someone to deliver their teaching.

On an important note, the International Director, although in the top-management team, conforms (implicitly) to the theoretical argument by Teece *et al* (1997: 520) that the if the individuals “have relatively high-powered incentives that reward individual performance, then it (the organisations) must build organizational processes that channel individual behaviour”

“It depends on how you perceive work in those allocation models and how you actually perceive ... Well, no, how you perceive international. It is this idea of, “Well, is it anything different or is this just core activity that we should be doing?” and around saying, “Well, if it is research, then the research strategy, as a university to get to the top 50, it is not an internationalization strategy, we need to be doing ref-able papers.” It does not matter whether that ref-able paper is actually here or whether it is in Japan or China. Yes, there is a slightly different ... It may be more complicated to do it in China, but it is then saying, “Well, it is not making it ...” We did the strategy in order to give it head room and to make a clear focus, etc. Because of its changing its funding away from universities it is opening up a much broader market because of its funding policies. UK universities can no longer rely on UK government funding in the way that it could so it needs to broaden out”.

Market dynamism acts a powerful system that changes the international student recruitment strategies on one hand routines on the other (Cockburn and Henderson, 2000; Eisenhardt and Martin, 2000; Nelson and Winter, 1982; Romme *et al.*, 2010). Upon examining the interview data, it becomes apparent that although international student recruitment is subject to influence of top-management teams, the process itself can act as change agent in reverse direction. There are variety of factors that lead to impact the top-management teams and organisational routines. Amongst others, one of the interviewed ADI stated that,

“More importantly we internationalise because of our industry that we serve at our faculty, in return we are required to recruit staff that can serve the needs that arise from internationalisation and change the routines. There is a huge demand for our students and graduates, but they will no longer be working in the UK, they may work here but will be working cross-culturally in global companies for most part. Even if they are in a small business in the UK, it is more than likely their suppliers will be in Pakistan, in Bangladesh, in China, Turkey, Morocco, or other destinations. Therefore, we are required to change internationalisation routines to better serve the demand.

Building on the arguments by Amit and Schoemaker (1993) and Langlois (1994), Teece *et al* (1997) propose that constant market surveillance followed by willingness to change and (industry) benchmarking can potentially offer considerable value. The notion of benchmarking the industry practice is noted be on ADI

“I think a good modern university in higher education in the top of the game will have highest proportion, something, about 15 % is seen quality attribute among high performing universities. The attraction of international students raises the quality of work done and I think for our own students it presents what we would expect from higher education experience”.

On a similar note, dynamic capabilities and organisational routines are driven and modified by market and competitive forces (Teece, 1984). In this, it is important to note that although entry barriers to the UK HE sector are high, there is still relatively high competition between and with the Groups to attract sufficient local and international student numbers. The total number of the UK HEIs that used to be Polytechnics gained University status post 1992 stands at 35 (HESA, 2015). Furthermore, there are 654 awarding bodies in the UK (Gov.UK, 2017) that have the potential to pose serious challenges to the Higher Education sector in their drive to increase international student recruitment. One particular example of intensified competition for English Studies at the UK HEIs which have witnessed rapid declined form international student enrolment (see figure 4.6 in chapter 4). Similar concerns are echoed by one ADI

“It is impossible to be a top 50 UK university if we don't internationalize. We have a moral obligation to our students around that if we are training them to be graduates as world-class professionals, then how can you do that if you are not an internationalized university. Regardless of that, that if we're training people to be ready for a work force, whether that be the labour market in private or public sector, or indeed academia, if there is not an international dimension for that, then we are doing our students a huge disservice. The market demand internationalisation and this requires to change. We cannot expect [our] environment not to change for that long, we will have to take into account changes to meet the reality of particular time.”

5.5 Summary

The panel data from HESA highlighted significant differences between and within HIEs' approach towards international student recruitment. In particular, there are

less significant different between the HEIs from The Russell Group while major differences are apparent within The Alliance Group, The Cathedrals, the Million Plus Group and fifty non-aligned HEIs. Within these groups, there are significant variations, something that demanded data triangulation to uncover the hidden realities. Furthermore, data from the complete university guide, HEFCE and HESA enlightens research, employability and student satisfaction rankings. The survey data reveals similar trends where significant difference are surfaced. The qualitative data suggests rather a mixed view of international student recruitment and where the strategic input hinges on. The interview results demonstrate that the growth function of international student recruitment require input from senior manager. In the light of exploration of large panel data sets, survey data and interview data, inferences can be drawn that the international student recruitment at the UK HEIs primarily rely on mid to senior management's strategic input and that the organisational routines remain subject to greater degree of control and influence from the top-management teams.

6. DISCUSSION

6.1 Introduction

This chapter discusses the empirical findings presented in Chapter Five. The discussion of results is structured as follows.

First, the framework containing the organisational reputation and resources is discussed together with this relationship within these parameters. In particular, organisational history and present environment are brought to light. Second, reputation and resource are substantiated by proposed hypothesis with relevant discussion of the results. While some HEIs outperform others, this could be attributed to location advantages that are not fully within the control of HEIs. Third, discussion centres around proposed sets of hypotheses in an attempt to explicate the differences between and within Groups. Furthermore, I draw on the interviews to support the tested hypotheses.

6.2 Organizational reputation, history and path dependence

Hypothesis 1a: The Russell Group HEIs' total student recruitment growth is dependent on international student recruitment.

Hypothesis 1b: The Alliance Group HEIs' total student recruitment growth is dependent on international student recruitment.

Hypothesis 1c: The Cathedral Group HEIs' total student recruitment growth is dependent on international student recruitment.

Hypothesis 1d: The Million+ Group HEIs' total student recruitment growth is dependent on international student recruitment.

Hypothesis 1e: The non-aligned Group HEIs' total student recruitment growth is dependent on international student recruitment.

Regression analysis presented in table 5.17 support Hypothesis 1a, where the total student recruitment (for The Russell Group HEIs) is dependent on international student recruitment. Take for example, The University of Manchester whose international student recruitment account for a quarter of its total student

recruitment. This places The University of Manchester as the leading HEI in The Russell Group by student numbers. However, when working out percentage wise, London School of Economics and Political Science's international student recruitment account for 64% of its total student recruitment for the same period. This strongly suggests that the total student recruitment at The Russell Group HEIs is dependent on international student recruitment.

Regression analysis presented in table 5.19 rejects Hypothesis 1b, where the total student recruitment (for The Alliance Group HEIs) is not dependent on international student recruitment. Take for example, The Manchester Metropolitan University whose international student recruitment account for a 7 % of its total student recruitment (international 29900, total 400505) over this period. This places The Manchester Metropolitan University as largest recruiter of total students but when analysing international student recruitment, it lacks significantly behind the Group equivalent of less populated HEIs. When working out percentage wise, Cardiff Metropolitan University takes the lead by recruiting 23% of its total population from international market placing the former at the bottom of the list. On an interesting note, The Manchester Metropolitan University and Cardiff Metropolitan University are on the opposite ends of the scale in terms of total student recruitment, but when it comes to international student recruitment, the latter leads the former.

Regression analysis presented in table 5.21 rejects Hypothesis 1b, where the total student recruitment (for The Cathedrals Group HEIs) is not dependent on international student recruitment. Take for example, The University of Gloucestershire whose international student recruitment account for a 2 % of its total student recruitment (international 7100, total 361865). This places The University of Gloucestershire as largest recruiter of total students but when analysing international student recruitment, it lacks significantly behind the Group equivalent of less populated HEIs. When working out percentage wise, The University of Roehampton takes the lead by recruiting 11% of its total population from international market placing the former at the bottom of the list. On an interesting

note, The University of Gloucestershire and The University of Roehampton are on the opposite ends of the scale in term total student recruitment, but when it comes to the international student recruitment, the latter leads the former.

Regression analysis presented in table 5.23 rejects Hypothesis 1d, where the total student recruitment (for The Millions+ Group HEIs) is not dependent on international student recruitment. Take for example, The Middlesex University whose international student recruitment account for a 23 % of its total student recruitment (international 63435 total 272755). This place The Middlesex University as largest recruiter of both total and international students. When working out percentage wise, The Middlesex University takes the lead by recruiting 23% of its total population from international market compares to The Bath Spa University whose international student intake is 3% of its total student population.

Regression analysis presented in table 5.25 supports Hypothesis 1e, where the total student recruitment (for the non-aligned HEIs) is dependent on international student recruitment. Take for example, University of the Arts London whose international student recruitment account for a 32 % of its total student recruitment (international 67780 total 209550). Whereas the largest recruiter of total students, The University of Central Lancashire, recruited 10% from the international market (international 34575 total 361415). When working out percentage wise, The University of St Andrews takes the lead by recruiting 38% of its total population from international market compared to The Harper Adams University whose international student intake is 4.5% of its total student population.

Hypothesis 2a: The UK HEIs' total student recruitment is dependent on the international student recruitment

Hypothesis 2b: The UK HEIs' international student growth is path dependent

Hypothesis 2c: The UK HEIs' subject growth trend is path dependent

Regression analysis presented in Table 5.15 support the Hypothesis 2a, total student recruitment the UK HEIs is dependent on international student recruitment. For

example, see Figure 4.3 where the total student recruitment at the UK HEIs has witnessed a swing as opposed to the international student recruitment which has been on the rise steadily (see Figure 4.4). In particular, the years 2002/03, 204/05, 2007/08, 2012/13 and the year 2013/14 have witnessed decline as compared to the previous years. The year 2009/2012 have seen steady increase in the total student recruitment leading to rapid decline in the following years. On the contrary, see Figure 4.4, where international student recruitment across the UK HEIs is rising steadily with growth rate between t1 and t2 being 88%.

Regression analysis presented in table 5.16 do not support Hypothesis 2b that the international student recruitment is path dependent. Building on the arguments in the earlier sections, it is evident that UK HEIs are *breaking away* from the path dependency and organisational history in their drive for international student recruitment. Such statement infers that for organisation to increase their performance or key performance indicators, they have to move away from their history on one hand on build on it on the other hand. By this, I mean that for the UK HEIs to increase international student recruitment, they have to look for new opportunities and build on the existing expertise to transform those opportunities it meaningful strategies.

Hypothesis 3a: The UK HEIs' location is positively related to increased international student recruitment

Hypothesis 3b: The UK HEIs' research ranking scores will increase international student recruitment.

Hypothesis 3c: The UK HEIs' employability ranking scores will increase international student recruitment

Hypothesis 3d: The UK HEIs' student satisfaction ranking scores increase international student recruitment

Building on the proposed hypothesis, it can be argued that for HEIs that possess and demonstrate a reputational advantage, a favourable ranking and respond to market dynamism may enjoy higher growth. This can be confirmed by the results from HEIs that are part of The Russell Group; such synthesis is also covered by other studies which show that the prestigious HEIs attract large numbers of international students

(Altbach and Knight, 2007). Take for example The London School of Economics and Political Science and University of Chester. The former's research, employability and research ranking are in the top ten with 63% international student population. The latter's research, employability and research ranking are close 90 and international student population standing at 3% of its total student population (see figure 5.9 to figure 5.14, p. 180 - 187). Furthermore, the HEIs' research, employability and student satisfaction rankings offer similar findings. Take for example the Russell Group HEIs, where some HEIs in the Group enjoy above average growth rates while others do not. See Appendix 9 p.309 where The University of Manchester recruited in excess of one hundred thousand international for twelve years combined as compared The Queen's University of Belfast in Appendix 11 p. 305. In this case the HEIs are part of the same strategic Group with drastic difference in their international student approach.

Such differences and similarities may be attributed to group cognition and framing practices plan, as they plan a positive and important role to ensure that continuous growth is pursued (Pandza, 2011). For example, The Russell Group HEIs, with some within Group differences present significantly high international student recruitment as compared to the other Groups and the HEIs within those Groups. Citing Amin and Roberts (2008) and Brown and Duguid (1991), Pandza (2011) further argue that a group representing stable community (which I refer to here as the strategic HEI Groups) of individuals (which I refer here to as the individual HEIs) "share expert knowledge and participate in similar practices" (international student recruitment in this study).

In addition to this, HEIs' age, history and path dependence play an important role in growth. This is evident in the least performing groups, which present wider (within) group differences. For example, in The Alliance Group, Coventry University is taking the lead in international student recruitment by enrolling in excess of 5800 students in the year 2013/2014 raising this from 1700 in the year 2002/03. On the other end of the continuum, Teesside University only managed to recruit just over 800

international students in the year 2013/14 raising this from 500 in the year 2002/03. This can be explained in two distinct ways. First, Coventry University is in close proximity to Birmingham (the second largest student city, Guardian, 2017) with a campus branch opened in London in 2017, now accepting applications (Coventry.ac.uk, 2017) as opposed to Teesside University, the only university in that area in the North-East of England. The former may enjoy location advantage (Ahluwalia *et al*, 2001) as compared to the latter. To the contrary, location advantage does not seem to have an impact on the growth rate for the HEIs located in the North of the country. In this case, there are 11 HEIs that are equally or more distanced from the South, yet they have been able to enjoy continuous international student recruitment growth. Therefore, it could be argued that location advantage acting alone does not account for (sustainable) growth rate, rather, there are other factors at work, reputation and resources that matter. See for example Appendix 9 (p. 303), where the total international student recruitment for University of Edinburgh and The London School of Economics and Political Science. In this case, one being in London and the other being in the the North of the UK. This can be further substantiated by further example of two HEIs in Leicester, one being the University of Leicester and the other De Montfort University. These two HEIs are located in the same city, neither belong to a specific group, yet the former has been able to increase its international student recruitment from 1705 at 2002/03 to 4060 at 2013/14 and the latter has been able to increase the international student recruitment from 1050 at 2002/03 to 1775 at 2013/14.

The first set of hypotheses reveals a close relationship between organisational reputation and international student recruitment growth. The findings of the panel data suggest that international student recruitment is integral to the growth model of the UK HEIs. The data analysis offers strong grounds for predicting such a relationship, which is clearly observable for the HEIs at the top of the league table as well as increases in the combined student recruitment across the sample (see Figures 4.7 - 4.10 for a detailed view). It is important to note that the results of data analysis (chapter 5, tables 5.38, 5.39 and table 5.41) support the significant relationship

between international student growth/decline and ranking, history and path dependence and the role of top-management as an architect, where the top-management team use the hierarchical intervention as a measure to redress the issues at hand (Jacobides, 2006; Døving and Gooderham, 2008 and Makadok, 2001) t, and, group cognition. Such sustainable growth depends on other factors too, such as, the favourable economic conditions that of China, India and Brazil.

Teece *et al* (1997: 521) propose that “Firms, like individuals, have reputations” and that they rely on summarised information about the firms and that information is used by the customers for selection (in this case, international student recruitment). On this note, if organisation lack reputation or achieve (a latent variables of dynamic managerial capabilities) they may attract higher or lower growth leading to positive or negative distribution. Furthermore, Teece *et al* (1997: 521) refer to this as “*reputational assets*” hence, the lower the ranking (reputational assets) the lower the international student intake. However, the international student recruitment does not always seem to be effected by reputational assets. Take for example Liverpool John Moores University, whose international student recruitment moved from 950 in the year 2002/03 to 1450 in the year 2013/14 (see figure 4.8). Whereas, the University of Bradford recruited 1495 international student in the year 2002/03 falling to 1308 in the year 2013/14 (see figure 4.11). It is important to note that difference, ever more importantly, note the ranking of the two cases presented. The former’s overall ranking is 75 and latter’s ranking is 58. Therefore, the reputational (as proposed by Teece *et al*, 1997: 521) do not make a difference for international student recruitment across the two presented cases. The lower the ranking the lower the growth ratio leading to negative distribution. Conversely, the greater correlations demonstrate that increase in the resources-base supplements strategic growth ratio for international student recruitment. This rather reflect changes in strategies and that demonstrate in levels of organisational dynamism and capabilities.

Hypothesis 4a: The UK HEI's research rankings are path dependent

Hypothesis 4b: The UK HEI's employability rankings are path dependent

Hypothesis 4c: The UK HEI's student satisfaction rankings are path dependent

Teece *et al* (1997: 522) presented path dependency as “Where a firm can go is a function of its current position and the paths ahead”. Taking heed from this statement, the findings, as presented by the way of research ranking scores graphs in figure 5.10, figure 5.11 and regression analysis results presented in table 5.12, research ranking scores and regression analysis across the sample (UK HEIs) support this statement. The results are for the entire sample. However, looking closely at the individual cases, the figures 5.11 and 5.12 present major and slight variations. Take for example, Queen's University Belfast, whose research ranking scores have witnessed consistent improvement (see figure 5.11). Similarly, University of East Anglia's research ranking scores have improved year by year (see figure 5.10). On the opposite, Abertay University's research ranking scores have declined year by year with improvement (see figure 5.9). Similar to this The University of Bradford's research ranking score have declined year by year with no improvement (see figure 5.9). for better or worse, path dependency plays a role in the strategic direction of an organisation.

As Teece *et al* (1997: 523) propose that “bygones are rarely bygones” and the actions taken by the firms are constrained by it history, investments and repertoire of routines. This is reflected in the employability ranking scores. Take for example the University of Bolton who has witnessed constant decline employability ranking score year by year (see figure 5.12). On a different case, the similar trend is present at the University of Worcester whose employability ranking score have seen year by year drop (see figure 5.13). On the contrary, the University of Manchester and the University of Exeter has seen gradual improvement in their employability ranking scores (see figure 5.12). On an interesting note, the four cases (presenting decline and improvement in employability ranking scores) indicate that they HEIs are not following their path and history, for better or worse, they are actually moving away from their ranking scores in the earlier years.

Further, in the seminal article on dynamic capabilities, Teece *et al* (1997: 527), direct the concept of path dependency to *Schumpeterian* nature of rents and class this activity endogenous firm function with low capacity to strategic reorientation with the focal concern being attached to asset accumulation, replicability and inimitability. Furthermore, they view path dependency and related movement as incremental. They point towards path dependency as an important building block of strategy building that “involves choosing and combining long-term path or trajectories for competence development” (Teece *et al* (1997: 529). This is demonstrated by the University of East London (see figure 5.14) and the University of Worcester (see figure 5.15) whose employability ranking scores have been on the decline year by year. On the contrary, the University of Kent (see figure 5.14) the University of the West of England (see figure 5.15), their employability ranking scores improved as a regular occurrence year by year.

Figure 4.5 presents total number of international students enrolled across fifteen subjects on annual basis. Take for example business studies had close to half million international student enrolment for twelve year combined (from 2002/03 -2013/14). This is followed by just over quarter million international student enrolment for management studies. The similar trend then continues with the subjects taught at the Business Schools, for example, finance, economics, accounting and marketing. The data derived from figure 4.5 presents interesting findings that six subjects taught at the Business School accounted for 51% of international student population at the UK HEIs as compared to nine subject taught at other Faculties that account for 49% of international student population. In total, from the year 2002/03 - 2013/14 there were 2042033 international students enrolled at 100 UK HEIs studying for fifteen subjects, those enrolled at the Business Schools were 1,221561 as compared to 8,20472 enrolled at other Faculties. Furthermore, figure 4.6 presents international student recruitment percentage increase or decline across fifteen subjects. For example, looking at figure 4.6 it is apparent that all subject has seen, with some year in exception, cumulative increase in international student recruitment. In general, English Studies have been steadily decreasing international student recruitment.

Design, Architect, Politics and Marketing subjects have been immune from international student recruitment decrease throughout the entire period for by Civil Engineering where the decrease is present for the year 2012/13 only. Appendix 8 present total international student in last twelve years at the UK HEIs.

Hypothesis 5a: The surveyed UK HEI's total student recruitment is dependent on international student recruitment

Hypothesis 5b: The surveyed UK HEIs' founding age is positively related to increased international student recruitment

Hypothesis 5c: The surveyed UK HEIs' strategic renewal is related to increase in international student recruitment

Hypothesis 5d: The top-management teams' changes at the surveyed UK HEIs' are related to increase in international student recruitment

As presented by regression analysis in table 5.29, the surveyed HEIs do not view the total student recruitment either being dependent or effected by the international student recruitment. Similarly, the respondents view founding year of the HEIs as having no significance in the destination choices made by the international student (as presented by regression analysis in table 5.30). Furthermore, table 5.31 presents regression analysis that confirms that respondent HEIs do not view international student recruitment increase or decrease as resulting from strategic renewal at their HEIs. Similar to the above, table 5.32 presents regression analysis that increase or decrease in international student recruitment is not strongly dependent on the fact that how long the top-management teams have been in their post.

6.3 Managing specific resources and creating value

This section focuses on reputation and resources. In doing so, it explores the cause of high or low performance. There are large number of cases in strategic Groups with high degree of variation within the Groups. Some members of Strategic Groups outperform others; this suggests some HEIs are better than others are at managing specific resources and enhancing their ranking and reputation at home and in the international student recruitment market. While location is not totally within the

control of a university, universities can influence students' destination choices by promoting location advantages or increasing budgetary efforts in relation to the commission fees paid to overseas student recruitment agents. According to the Times Higher Education (2016), a particular UK HEI paid in excess of £ 1,700 in fees to the overseas agents in order to recruit international students (Havergal, 2015). This is largely due to increased global competition for international student and supplemented by the UK HEIs' ability to cater the demand.

Take for example two Universities base in the same geographical area in the UK, Manchester. One is bases in Manchester and The Edge Hill University is about 40 miles from Manchester. Despite being in the same geographical area, the former is not only the largest recruiter in the county for total but also for international student. The former recruited, on average for 12 years, 8500 international students per year as compared to the latter recruited, on average for 12 years, 275 international students per year. Further exploration of the data draws attention to two HEIs that are yards away from one another, The University of Manchester and The Manchester Metropolitan University. The former, on average for 12 years, recruited a total of 37000 students per year as competed to the latter which recruited 33500 total students for the same period. When it comes to the international student recruitment, significant differences arise, the former recruiting 8500 international student per year compare to the latter that recruited 2500 per year.

Although location, to which Nelson (1994) refers to as institutional assets are out of control of the HEIs, budget is within the remit of top-management teams (exerciser of dynamic capabilities). From the above paragraph, it is also observable that while some UK HEIs are in the lead in recruiting international students, while others are not, yet they are subject to same period and same economic conditions and visa policies and institutional assets and share the same geographical locations, some have been less attractive. This can be attributed to HEIs' ability to attract large numbers of international students based on their history in international student recruitment (The University of Manchester recruiting in excess of 4500 students in

the year 202/03 compared with The Edge Hill University who recruited only 154 in the same year). furthermore, as Leih and Teece (2016) present, the age, experience and the top-management teams' willingness to sense and seize opportunities matters.

As stated above, increase or decrease in international student recruitment could be attributed to number of factors, such as, HEIs' location, age, history and experience in international student recruitment and Group alignment. The panel data findings suggest that without the network and the group support, the HEIs may not be able to attract desired number of international students. Take for example, The Russell Group, HEIs in this group are the largest attractors for international students with some variations within the group. In the top twenty (largest international student recruitment HEIs), fifteen are the member of The Russell Group. Whereas there are three HEIs from non-aligned group, one from The Alliance Group (Coventry) and one from the Million+ Group (Middlesex). The Russell Group member HEIs that have continuously increased their international student numbers and have sustained that growth, while others have not been able to benefit as much from the group membership. To this end, it can be argued the Group does not effectively negate capabilities but rather nurture them, the onus then lies on the member HEIs to follow suit.

Therefore, it is important to note that it is not the function of organisational routines or dynamic managerial capabilities alone that international students are drawn into a particular HEI; it is rather a multitude of factors, such as research, employability and student satisfaction ranking scores, location, path dependency and organisational history (and breaking away from it) that influence such increase and continuous growth. As proposed by Walsh (1995) and Pandza (2011), (meta-level) group cognition and framing practices offer a positive and important role to ensure that continuous growth is pursued. In addition to this, history and path dependence play an equally important role in HEIs ability to increase international student recruitment. This is clearly evident in the case of The Russell Group HEIs who, as a

Group, building on their history, are highly successful in recruiting more international students than the other Group and their members.

A report by the international wing at the Universities UK (2016) informs that there are number of successful HEIs with history in international student recruitment. This history and experience of international student recruitment gives them an advantage and boost their rankings to engage in international market even more. This continuous expansion to international markets conforms to the notion of routines, where action(s) are performed each time and when they are repeated, they improve performance (Becker *et al.*, 2005). If an action is repeated number of times, this may produce a string of feedback loop that can help organisations improve learning, which in turn given them more confident to expand into international markets and increase international student recruitment. The case of The Russell Group HEIs and other HEIs that have continuously sustained and increased their international student recruitment exhibit these qualities. However, it is important to note that organisational routines are good at routinising excellence, but for the incremental excellence, the presence of top-management (exerciser of dynamic managerial capabilities) is important and instrumental.

6.4 Dynamic managerial capabilities and organisational routines

This section sets out the relationships and their effects on international student recruitment. In particular, the role of dynamic managerial capabilities is highlighted as a pre-requisite for performance improvements. In addition, the role of exogenous and endogenous variables is explored to identify how they have an impact on the UK HEIs' performance.

International student recruitment involves multiple stakeholders. As such, this process requires strategic intent, where Group membership, location (dis)advantage, reputation and ranking scores are outside the direct control of the international student recruitment function. Furthermore, this activity is spread across various

organisational domains, such as the International Office, Marketing, Strategic Planning and Estates. Hence, it is a challenging task for the organisations to routinise such complex network of activities and offer a true reflection of a strategic planning. Therefore, the role of dynamic managerial capabilities becomes apparent as guiding mechanism having “material effects on the survival and success of the business enterprise” that introduces and progresses the international student recruitment strategy (Teece *et al*, 1997: 528)

The survey results indicate that those who took part in the survey had direct involvement in the strategic planning process and are in position to develop and implement such strategy. As suggested by Helfat and Peteraf (2003) managers may reconfigure the resources in order to initiate change, or replicate a success story from one part of the firm to another to ensure firms’ assets position and to be sustainable (Dierickx and Cool, 1989). This confirms the argument that the senior managers introduce or improve existing routines in relation to international student recruitment. To this end, dynamic managerial capabilities directly effect and orchestrate organisational routines (Barrales-Molina *et al*, 2013). Following this line of thinking, the pull and push between the organisational routine and dynamic capabilities (as exhibited by panel, survey and interview data) can be explained as if dynamic managerial capabilities precede organisational routines and function and implement the required level of change. This is demonstrated by the extensive panel data sets, survey data and interview data.

Prior empirical studies on dynamic capabilities perspective have not acknowledged precedence of dynamic managerial capabilities on organisational routines leading to improvement or decline in organisational performance by demonstrating a connection between dynamic managerial capabilities and organisational routines (Tripsas, 1997). The studies have extensively covered the quantitative and qualitative terrain. For example, Helfat (1997) considered the role of know-how and how it links to research and development capabilities and Newbert (2005) investigated the new firm formation process using the dynamic capabilities perspective. Such studies have,

only recently, considered the role of dynamic capabilities and have paid little attention to the fact how organisational routines change as result of dynamic managerial capabilities. Studies on organisational routines have largely underestimated the role of the top-management teams as facilitator and the driver of change. The studies often consider the concept of dynamic capabilities as something of an abstract out there, this endangers the bridge building attempt to bring the two distinct yet related concept together yet they exercise their actions in their own domains.

It is only recently that such bridge building efforts are being made (Pentland, 2003) The International Director confirms that the presence of the top-management teams is certainly an important factor in ensuring that internationalisation strategies are functional. Such strategies, as he suggests, are devised, communicated and implemented by the top-management teams and embedded in the workload model for the staff. This is similar to to what is proposed by Teece *et al.* (1997) that dynamic capabilities exercised by the top-management teams who improve organisational performance. On this note, it is important to note that the top-management's input is important in designing routines. Without the guidance and direction from the top-management teams, organisational routines may function to some extent but may not able to sense (the opportunities), seize (capture value) and transform (addressing the new and radical opportunities) the organisations (Teece, 2011).

On this footing, the relationship between dynamic managerial capabilities (as latent variables) and organisational routines are consistent with the existing studies that supported such relationship in advancing firm performance (Helfat, 1997). Such approach in the extent literature actually motivated the researcher to explore possibilities of such important yet underestimated relationships in the organisational domain. To realise the bridge-building process leading to establishing such relationships, sophisticated measurement techniques and methods are used for this study, such as the panel data sets (100 UK HEIs, see table 4.1 and table 4.2 in chapter 4), survey data (see section 5.3) and interview data (see section 4.7.4). Therefore, the

mixed-methods approach is adapted for this study to maximise the result that are useful in drawing the debate on the co-existing relationships to close.

6.5 Dynamic capabilities and resilience

The qualitative and quantitative data findings suggest that the internationalisation of the UK HEIs is aligned to, both, dynamic capabilities perspective and organisational routines. Chapters two and three made the case for such a relationship. In this regard, the top-management teams act as a catalyst for change and act as modifier of the existing routines to better fit strategic planning and execution. The endogenous and exogenous change is imminent and how it may be implemented and embedded into the organisational routines is a matter of enquiry that stands out, to which this study attempts to address.

The theoretical conundrum of dynamic capabilities and organisational routines is explained in various ways. First, being the role of dynamic managerial capabilities in shaping organisational structure and performance, second, the role of organisational routines as guidance-taking organisational phenomenon. These two concepts are well researched in their own right. In this, it is noted that as the external environment changes, the leadership engages in actions to make sense of the change and introduce appropriate changes to ensure firm survival, growth and fitness (Sapienza *et al*, 2006). Take for example the location advantage, Coventry University which plan to London Campus in 2017, The University of Birmingham to open Campus in Dubai citing opportunities at the international education hub where 25 HEIs operate from different countries. Furthermore, a report published by the Quality Assurance Agency for Higher Education (QAA) confirms that there are 13 UK HEIs (as of December 2014) with London Campus with in excess of 8000 students. The interview data suggests that the endogenous changes effect the organisational leadership (Nadler and Tushman, 1990) To the contrary, if the leadership is inert in the event of change in operating environment (Robertson and Langlois, 1994), this may lead to

declined performance and ranking. Such findings are presented in interview data findings in section 5.4.

6.6 Summary

Overall, the results presented in chapter five suggest the relationship and co-existence of organisational routines and dynamic managerial capabilities has a direct impact on international student recruitment. In this, dynamic managerial capabilities take precedence over organisational routines (see for example the results section, table 5.41). This relationship is positively related with international student recruitment. Although the set of hypotheses presented in chapter three derive less support from the literature, this study acts as a bridge to close the widening gap through empirical findings. One proposition is that the least performing HEIs can learn from HEIs that are performing well or above average, although complete imitation is not possible. On this note, this proposition is open to a multitude of factors that are beyond the control of any, high and low performing, HEIs, where the UK HEIs cannot influence the visa policy and destination choices made by the student based on selection of HEIs and their research, employability and student satisfaction ranking scores

The present results indicate that such success stories can be replicated across the sector. According to one (interviewee) senior manager, the efforts to increase international student recruitment is to complement the region rather than envisioning competition with local universities. The interviewee further suggests that the organisational drive to excel in international student recruitment is to complement the region and not to engage in competition. This is in line with the theoretical argument by Eisenhardt and Martin (2000; 1110) that “dynamic capabilities per se are not likely to be sources of sustained competitive advantage”. The execution of dynamic managerial capabilities is not aimed at achieving competitive advantage but firm performance.

So far, it is widely accepted that the prior research on organisational routines and dynamic capabilities was at two extreme ends of the scale, it is only recently that the conversation has started to take place in the scholarly domain (Pentland *et al.*, 2012). The concept of dynamic managerial capabilities is introduced in widely accepted literature on organisational routines (Pentland and Feldman, 2012). On the other hand, the literature on dynamic capabilities still class organisational routines as if they are administrative, basic governance tasks, operational capabilities that only execute pre-defined and pre-programmed tasks (Lessard *et al.*, 2016). On this end, organisational routines are viewed as slow to change and subject to be overridden by the top- management teams who act entrepreneurially (Teece *et al.*, 2016).

The findings of this research show that dynamic managerial capabilities preceded organisational routines in organisational functions, where the latter is subject to influence and orchestration by the former. Organisational routines are needed to execute daily functions in organisations whereas dynamic managerial capabilities are needed to sense, seize the changes and transform the organisations and the resource base in the face of market dynamism. Without embedding strategic change into organisational routines, one might find it difficult to imagine that organisations can accomplish daily tasks and generate slow and evolutionary change. At the other end of continuum, organisations without dynamic capabilities, routines might be able to bring about the ideas and slow change; they will require strategic cover to perform such actions.

In summary, although the present findings are clearly indicative of significant relationship between organisational routines and dynamic managerial capabilities, such conclusion may be premature. In fact, two points highlight that the relationship between organisational routines and dynamic managerial capabilities is more complex than it is assumed and suggested by this study. First, organisational routines alone do not increase international student numbers as single-unit organisational function. For example, increase in international student recruitment might be the consequence and not the cause. This suggestion can be countered with longitudinal,

in-depth study of one UK HEI to identify and differentiate the causality and consequential functions. Second, if the top-management teams do not use sensing and seizing capabilities in a routinised fashion, they may become inert and rigid.

7. CONCLUSION

7.1 Introduction

This chapter starts with an evaluation of research, aims, objectives and research questions and assess their achievement. This leads to an account of contribution to knowledge using dynamic managerial capabilities as a construct. This is followed by managerial implications of this study in the context of the UK HEIs. This study may be used as reference point in the strategic planning process of international student recruitment in the UK HEIs. Finally, the limitations of the study are presented together with avenues for further research.

The purpose of this research has been to explore the impact of dynamic managerial capabilities on international student recruitment at one hundred UK HEIs. Dynamic managerial capabilities framework was used as an integrated conceptual framework as a basis for an empirical study of the growth of international student recruitment in the UK HE sector. This study highlighted that several HEIs experience growth and decline in international student recruitment. In this regard, the thesis makes an important contribution, since a study of the growth decline in international student recruitment has not been attempted before, especially one that draws on a large public data set, survey data and interview data. Specifically, to the best of my knowledge, this is the first study in the UK that has analysed such a large dataset as a basis for drawing inferences on dynamic managerial capabilities and used survey data to advance the understanding of the key drivers in the international student recruitment process. Moreover, the study provides interview data as a means for understanding the thought and decision-making processes of senior management teams responsible for internationalisation initiatives.

First, this study found that some UK HEIs achieve above average international student recruitment growth through being more entrepreneurial in 'sensing and

seizing opportunities', acquiring resources, and reconfiguring the resource base more frequently than average or under-performers. In particular, dynamic managerial capabilities, as latent variable, is evident in the studied UK HEIs where performance difference exists within and between the Groups. Take for example the University of Westminster and Falmouth University, two UK HEIs that are not part of a strategic Group, present significant different approach in their international student recruitment. Similarly, difference exist in the UK HEIs' approach to international student recruitment within the Russell Group HEIs. For example, The University of Manchester recruited as many as four times more international students as compared to the Queen's University Belfast. On the same note, for the Alliance Group, Coventry University has a different approach as compared to Teesside University where the former recruited three times more than the latter. For the Million Plus Group, Middlesex University recruited six times more than the Abertay University. The similar trend continues across The Cathedrals Group where Roehampton University outperformed York St John University by recruiting three times more students (see Appendices 9-12 for detailed overview).

In practice, the identification and description of critical events was achieved through the integration of data gathered from primary and secondary sources. In particular, the study focused on the top-management teams with a view to understand the mechanisms through which they modify existing and introduce new routines. According to (Helfat *et al.*, 2007) and as highlighted by Leih and Teece (2016) this dimension plays a significant role in organisational (in this case, university) performance. It is evident that those involved in strategic planning can either hinder or promote organisational change and so their involvement should be considered when analysing the development of dynamic managerial capabilities having impact on organisational routines.

Second, this study examines these factors in such a fashion that the empirical part of this research is multi-fold and is built on the heels of mixed-methods research philosophy, insomuch that the quantitative section of research had to use three-

layered approach to acquire and make sense of the data. First from large dataset from HESA, second rankings data and third from the survey data. The qualitative section is geared towards interviews with mid to senior managers coupled with publically available and accessible strategy documents and online reports. Access to such strategy documents helped formulated semi-structured interview questions. Access to such material helps identify the information such as complete website translation to a foreign language that demonstrates the willingness of the HEI to truly engage with potential students. Hence, in addition to interpretations derived from secondary sources, the narratives of the top-management teams have clearly affected the orchestration of case descriptions introduced in the empirical part of the study in Chapter Five. The interview data, panel data and the survey data provided answers to several research questions worthy of investigation.

Third, this study touched on the internationalisation across the UK HEIs with a particular focus on international student recruitment. Not one but many factors and stakeholders surround the complexity of the topic are identified. In particular, the data analysis suggest that senior management teams are the key drivers for increase or decline in the international student recruitment process. To understand such complexity and the given response, dynamic managerial capabilities theory is given particular credence. To-date, the majority of studies on dynamic capabilities and organisational routines come in the form of, either, quantitative or qualitative research. Such research stream has helped the concepts to gain due attention in the scholarly domain. Furthermore, the likes of this study that apply dynamic capabilities approach to study the internationalisation of the HE sector are lacking in mainstream strategy literature. Hence, the purpose of the study was to investigate UK HEI growth using international student recruitment as an important indicator of the UK HEIs' capabilities in responding to change in moderately dynamic environments. These research objectives are achieved.

In the light of chapter two and chapter five, it can be stated that the following aim of research have been achieved.

To critically evaluate literature on dynamic capabilities and organisational routines and delineate the connections between them;	✓
To advance a concept of dynamic managerial capabilities;	✓
To advance and test a set of hypotheses about the role of dynamic managerial capabilities;	✓
To produce three interrelated data sets, ranging from large data set from HESA and survey data that would constitute reliable and valid tests of the identified hypotheses and interview data;	✓
To reveal the distinctive function of dynamic managerial capabilities in explaining performance variations among UK HEIs concerning international student recruitment;	✓
To contribute to the theoretical and empirical literature on dynamic capabilities and organisational routines by introducing an intervention mechanism that is endogenous to the system of dynamic capabilities and exogenous to the system of organisational routines;	✓
To contribute to strategic management policy and practice in the UK HE sector in the context of international student recruitment	✓

Overall, the factors behind the variable growth in the UK HEI were identified as dynamic managerial capabilities and described in detail and analysed using mixed-methods research approach. The analysis phase of the study revealed several factors that advance the development of dynamic capabilities and the interplay between dynamic managerial capabilities and organisational routines that help the UK HEIs to improve performance. Such deployment and the interplay between the two constructs highlighted the role of dynamic managerial capabilities, as latent variables, that drive the international student recruitment process reflecting a high degree of path dependency. Third, specific examples of dynamic managerial capabilities identified from the international student recruitment growth were presented demonstrating how certain organisational routines were modified to better match market dynamism. The interview data helped develop classification of the overarching framework by highlighting the role of the senior management teams as the drivers of performance.

On the same token, there are four key constructs identified that are integral components of dynamic capabilities. In other words, as the literature guided, dynamic capabilities consist of four key constructs. First, learning is an integral part

of dynamic capabilities perspective. In this, the organisations and the agents involved in dynamic capabilities construction and deployment continuously learn from internal and external environment. Second, organisational routines remain subject to influence from dynamic managerial capabilities. In this, the top-management teams exercise dynamic capabilities to introduce new or change existing routines. This is important for two reasons, (1) top-management teams' willingness to exercise dynamic capabilities to change organisational routines ensures that firms are kept in fluid state and that they do not become inertial (2) such exercise ensures timely capture of market opportunities. Third, dynamic managerial capabilities revolve around knowledge. For dynamic capabilities to be operational, the agents involved in international student recruitment must acquire and exercise relevant knowledge as and when required. Fourth, dynamic capabilities are essentially processes. For dynamic capabilities to be functional there has to be some level and degree of processes in place.

7.2 Contributions to knowledge

The study contributes to organisational routines literature. First, organisational routines literature will benefit from a detailed literature review and takes away the notion that organisations can function on semi-automatic fashion. This study has shown how organisational routines remains subject to influence from the dynamic managerial capabilities. Although prior studies have examined organisational routines as a means to generate change, none has attempted to study the UK HEIs' international student recruitment. Furthermore, no studies exist that linked dynamic managerial capabilities to organisational routines literature by using the four-phased data collection approach. This research includes dynamic managerial capabilities perspective as an effort to bridge the research gap. To date, research integrating dynamic capabilities and organisational routines investigating the internationalisation of the UK HEIs are rare. On this note, this study starts with a certain novelty in its setting and ends with reinforcing it by empirical testing.

This study also contributes to the theoretical discussion of dynamic capabilities and gives rise to dynamic managerial capabilities by providing examples of above average and under-achiever UK HEIs. Based on the panel, rankings and survey data, it can be stated that dynamic capabilities present similarities and differences across the sector. This is not unexpected, as Eisenhardt and Martin (2000) propose that dynamic capabilities exhibit commonalities across different firms. Such commonalities are presented and exhibited through panel data where HEIs in one Group outperform HEIs in other Groups, while certain performance differences within Groups persist. Such differences explain the emergence of commonalities by suggesting that they are a consequence of multiple and similar efforts and that there are various routes to achieving the same goal.

Furthermore, Ambrosini and Bowman (2009: 44) state that “for dynamic capabilities to be a useful construct it must be feasible to identify discrete processes inside the firms that can be linked to resource creation”. The kind of discrete processes that Ambrosini and Bowman (2009) are referring to are introduced, analysed and discussed in chapter four and chapter five.

The findings of this study challenge the conventional wisdom about dynamic capabilities that they are stable and industry specific (Teece *et al.*, 1997) and support the view that there are some common features amongst all dynamic capabilities across different organisations. While there may be some dimensions of dynamic capabilities that are specific to a firm or industry, it seems clear that there are also dimensions of these capabilities that are found in any industry (Barreto, 2010). To sum, the suggestion can be two-phased (1) organisational routines are generative to some extent inasmuch that they reach boundary condition (2) dynamic managerial capabilities are powerful organisational functions that introduce new and modify existing routines resulting from market dynamism. Such findings make a useful addition to the existing studies that cover the concept of dynamic capabilities that is largely conceptual (Macher and Mowery, 2009; Barreto, 2010).

7.3 Managerial implications

This study draws on the distinction between UK HEIs' international student recruitment. As a norm, student recruitment growth is researched in its own domain, i.e. internationalisation studies and growth (Jones, 2001; Nummela *et al.*, 2014). However, this study differentiates the international dimension from the domestic one. On this note, this study makes a novel contribution by focusing on international student recruitment. Second, this study challenges the traditional approach to studying internationalisation, where studies have focused on orientations and attitudes towards international growth while disregarding the importance of dynamic managerial capabilities as the driving force effecting organisational routines (Dichtl *et al.*, 1984; Nummela *et al.*, 2014).

More importantly, this study not only takes above average performing HEIs into account but also examines those that are either not doing well or have witnessed a substantial decline in international student recruitment. Hence, the study provides a detailed overview of within Groups and between Groups variations. Therefore, it is fair to claim that this study provides robust and unmatched knowledge about 100 UK HEIs' international student recruitment levels in great detail. Furthermore, this is substantiated by research, employability and student satisfaction. Each HEI's international student recruitment faces trajectories that it cannot overcome and barriers that are beyond its control. To act as a fix, Penrosian view suggests that the primary reason for these types of problems can be attributed to managerial capabilities and proposed that recruitment of new managers and the establishment of top-management teams may be fruitful to address the performance gaps.

Based on the factual data presented and analysed in chapter four and chapter five, it is possible to suggest that this study is useful for the top-management teams responsible for international student recruitment at the UK HEIs. In particular, this study is of interest to international directors, international managers, associate dean International and international office. The study is useful for those seeking growth

opportunities from international student recruitment, the presented data sets may be used as a reference point. The study may also assist the UK HEIs to consider which countries and subject disciplines they should particularly pay attention to in their growth journey. The data may also be used to draw inferences that international student recruitment growth/decline that have significant impact on the UK HEIs' overall growth model hence performance is a necessity rather than a choice.

First, the study provided information about incoming international students 100 countries from Asia, Africa, Non-EU Europe, South America, North America and Australasia (see Table 4.2 and Table 4.5). In particular, Appendices 1 - 6 offers a rich insight into the international student data from 100 countries and change in trend for the period of 2002/03-2013/14. It is evident that the most international students come from Nigeria, Norway, China, USA, Brazil and Australia. It is important to note that the students from Asia make an impressive contribution of 48.87% to the total international student recruitment (see Table 4.5). Such level of detailed information is useful for those involved in the strategic planning process as to which geographical area to target as a market. This offers a clear understanding of potential target market for the international office and senior management teams who drive the international student recruitment function.

Second, total and international student numbers are provided in Figure 4.3 and Figure 4.4. It is clear that international student recruitment has offered stability to the total student recruitment at the UK HEIs. The international student recruitment has risen by 88.17% from 2002/2003-2013/2014 whereas the total student population from the same period rose by 5.45%. Based on this evidence, for the overall sample, it could be suggested that the international student recruitment is vital for the sustainable student recruitment and growth model at the UK HEIs (see Figure 5.4 and Table 5.15).

Third, a detailed overview of fifteen subject disciplines is presented in Figure 4.5 and Figure 4.6. It is evident that 49% of international students are enrolled for six subjects

taught at the business school as opposed to 51% international students enrolled for other subjects. Unlike other subject disciplines, English Studies have witnessed declined whereas Finance, Business Studies and Management Studies are on the rise for the overall sample (100 UK HEIs). Such insights from the panel data suggest that although other subject disciplines are attractive for international student, the business school have been of particular interest and therefore attracted major share of the international student population.

Fourth, Figure 4.7 to Figure 4.12 maybe useful for the senior management teams and the international office. These figures present a clear view about the levels of increment, stability or decline in the international student population across the sample (100 UK HEIs). Two columns are presented with the data. First columns present the number of international student from the year 2002/03 and the second column present the number of international students for the year 2013/14. The data is clustered according the UK HEIs' alignment to the strategic Groups (50 HEIs in four Groups and 50 HEIs that are not part of any strategic Groups). The data maybe useful for the senior management teams and the international office interested in finding the differences and similarities for between Groups and with Groups. Take for example the University of Manchester and Queen's University Belfast for within Group difference. The former increased its international student intake drastically as opposed to the latter (see Figure 4.7). Such differences in strategic approach to international student recruitment are evident for other Groups and the HEIs that do not belong to strategic Groups. Although imitating the above-average performing HEIs maybe not be an option or possibility but the findings from the data is are useful in strategic planning process for the international student recruitment by the senior management teams.

Fifth, the founding year of the HEI and ranking scores data (Figure 5.1 and Figure 5.2) suggest that the international student population is evenly distributed, with some exceptions, across the sample (100 HEIs). For the founding year, the major share of international students are attracted towards the HEIs found for late 1800s to late

1900s. The oldest HEIs in the sample are the University of Oxford and The University of Cambridge. These HEIs may be attractive to a wider international student community but their international student recruitment demonstrates stability compared to other HEIs in the same strategic Group or the HEIs in other Groups. Furthermore, findings from Table 5.8 indicate that ranking score of the UK HEIs have significant impact on the choices made by the international student as to where they want to study. Such findings are useful for the senior management involved in the international student recruitment function. In particular, Figure 5.9 to Figure 5.14 are useful in drawing a clear picture for competitor analysis and gauging the research, employability and student satisfaction ranking scores.

Moving on from the panel data, survey data suggest similar results ($n=31$). The survey data was collected from senior management teams exclusively responsible for the international student recruitment function. Table 5.29 to Table 5.32 present that international student recruitment is important for sustainable (total student) growth across the sample HEIs and that the international student recruitment is driven by the frequency of strategic renewal, i.e. how often the international strategy is reviewed. Table 5.34 offers a brief overview of key driver of such strategic change where the respondents highlighted that international student recruitment is mainly driven by appointment of new senior management teams that devise new international strategies. This is then followed by the need to complement and shift the focus from recruiting mainly home/EU student to recruit students from international market. Amongst other challenges (presented in Table 5.36), student visa policy is perceived as the biggest challenge by the surveyed respondents. Similar discussion about opportunities and challenges is presented in the interview data where the interviewees suggest that the international student recruitment is important strategic strand in the overarching internationalisation strategy. The senior management teams at the UK HEIs may find the survey data analysis of particular interest as the responses have come from the people with direct involvement in the strategic planning and implementation function at the surveyed HEIs. For the interview data, the interviewees are the direct drivers of international

function at the selected HEI. Although the respondents' HEIs are anonymised, the findings present interesting results and provide a rich insight why the international student function is important, what are the strategic aims that drive this function and the challenges that are faced when implementing international student recruitment strategy.

7.4 The limitations of this study

The results and conclusion of this study should be read in the light of conventional research limitations. First, the panel data is collected and analysed for 100 UK HEIs for international students from 100 countries studying for 15 subjects. Whereas, there are 165 HEIs registered in the UK that attract students from 246 countries studying for 18 subject disciplines and 164 sub-disciplines (HESA, 2016). For the data acquisition period (12 years), the HESA datasets underwent significant subject and discipline code changes for three times together with addition of new HEIs. Although out of scope of this research for budget and administration reasons, the inclusion of full HESA dataset would be useful, as it would cover the entire UK HE sector. Such disparity in data selection may give rise to limitation and generalisability across the sector. However, it is important to note that the current study has taken into account substantially above-average achievers and underperformers UK HEIs from all four constituent countries in the United Kingdom (England, Scotland, Wales and Northern Ireland). In addition to this, the sourced data covers (50) HEIs from all four strategic Groups and those HEIs (50) that not part of any Group. Furthermore, the dataset covers twelve years (2002/03-2013/14), a substantially long period of time to make sense of the changes taken place in regards to the international student recruitment. Such measures ensured that data covered the period of economic up and down turn with the economic conditions and shifts in the countries where the students are coming from (see Sections 4.7.1.7 to 4.7.1.12). For example, the highest contributors to the UK HEIs are from six world regions, they are China, Nigeria, Norway, USA, Australia and Brazil (see p.290-293 for a detailed countrywide view of international student recruitment and changing trend for 12 years).

Second, the survey data may give rise to limitations for this research as the response rate is just over 20% ($n = 31$). According to Pallant (2013), the sample size should ideally contain responses in excess of 150. However, given the total sample size being 165, the respondents' position in the HEIs, the level of knowledge they have about strategic planning and the level of exercised authority in contacted HEIs, the response rate is reasonable. In addition, this study draws support from Helfat (1997) and Helfat and Peteraf (2003) for the sample size and aims to draw inferences from survey data achieved in conjunction with and support from panel data from HESA, research, employability and student satisfaction ranking data and interview data. The respondents for the survey included directors of international partnerships, international managers, a pro-vice-chancellor, heads of internationalisation, international office managers, a special advisor to the director for overseas partnerships and heads of international affairs. Such sampling ensured that while the response rate is low, the respondents had the experience and knowledge that would enable them to provide reliable and valid responses to the survey. In addition, the interview data yields insights into the decision-making by the senior managers at a large British university that is undergoing strategic change. Senior management teams at the UK HEIs may find the interview data of particular interest and use. The interview data yields powerful insight into the strategic intent behind the increased interest in the international student recruitment function.

7.5 Future research opportunities

In order to overcome potential shortcoming of this study, drawing support from Leih and Teece (2016), Pisano (2000) and Tripsas (1997), a case study as a method for obtaining information on the interplay between dynamic capabilities and organisational routines as drivers of international student recruitment is proposed. Such case study may include, first, a longitudinal case study where the researcher is present at top-management team meetings and observes, understand and interpret the strategic decision making process about sensing and seizing and transforming mechanisms and how they are implemented. Second, drawing further support from

Leih and Teece's (2016) article about *"campus leadership and entrepreneurial university: a dynamic capabilities perspective"* I propose replica study where the two UK HEIs would be selected and their international student recruitment function. The HEIs would then be studied using in-depth data analysis, and documentary evidence available in the public domain and acquiring data from reliable source, such as used in this study, HESA. The data set would be further strengthened by inclusion of strategy documents on the selected HEIs' website. Such study would estimate the two HEIs' efforts to increase international student recruitment. In doing so, the researcher attracts insights from the top-management teams about strategic growth plans.

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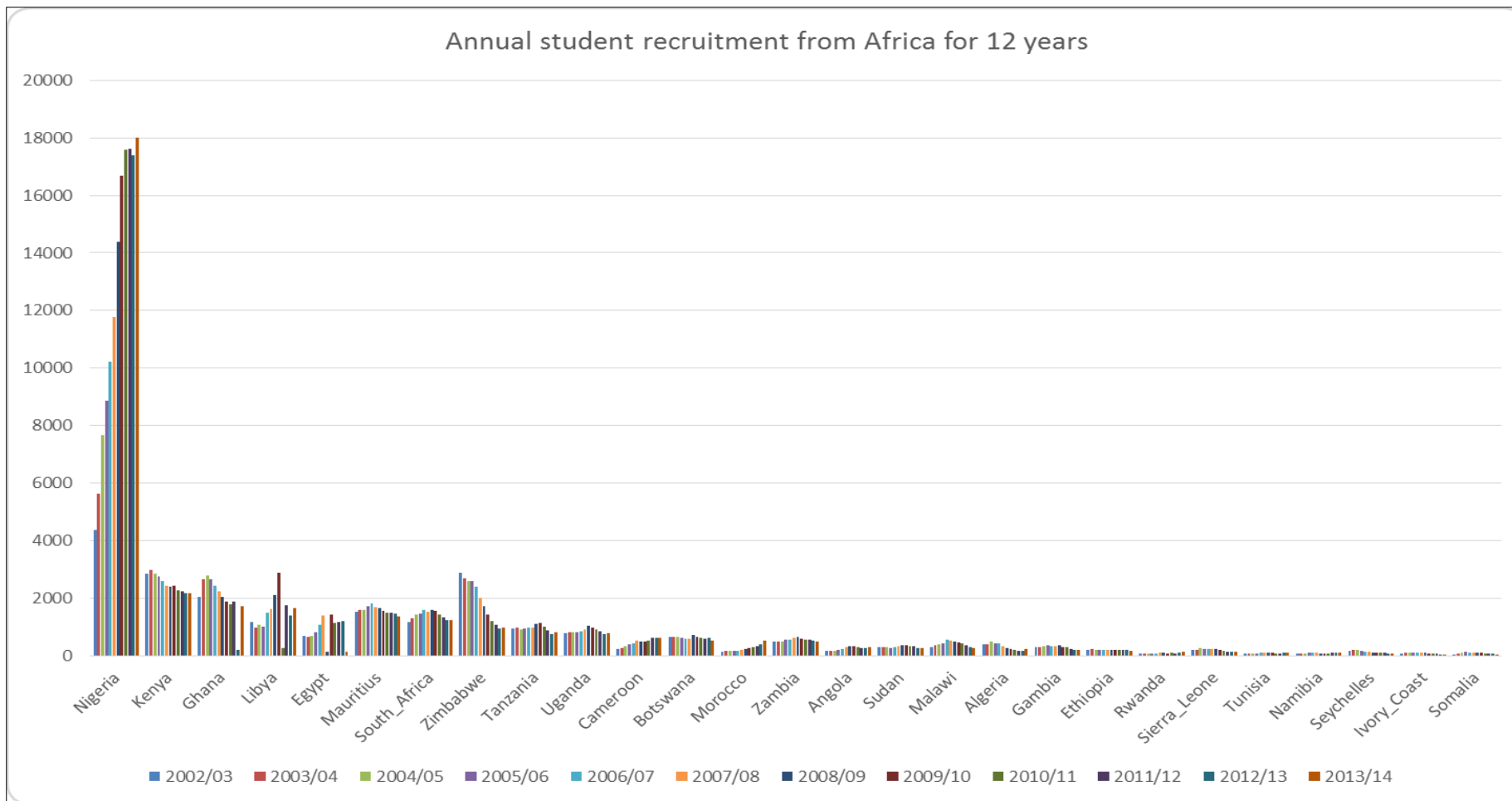
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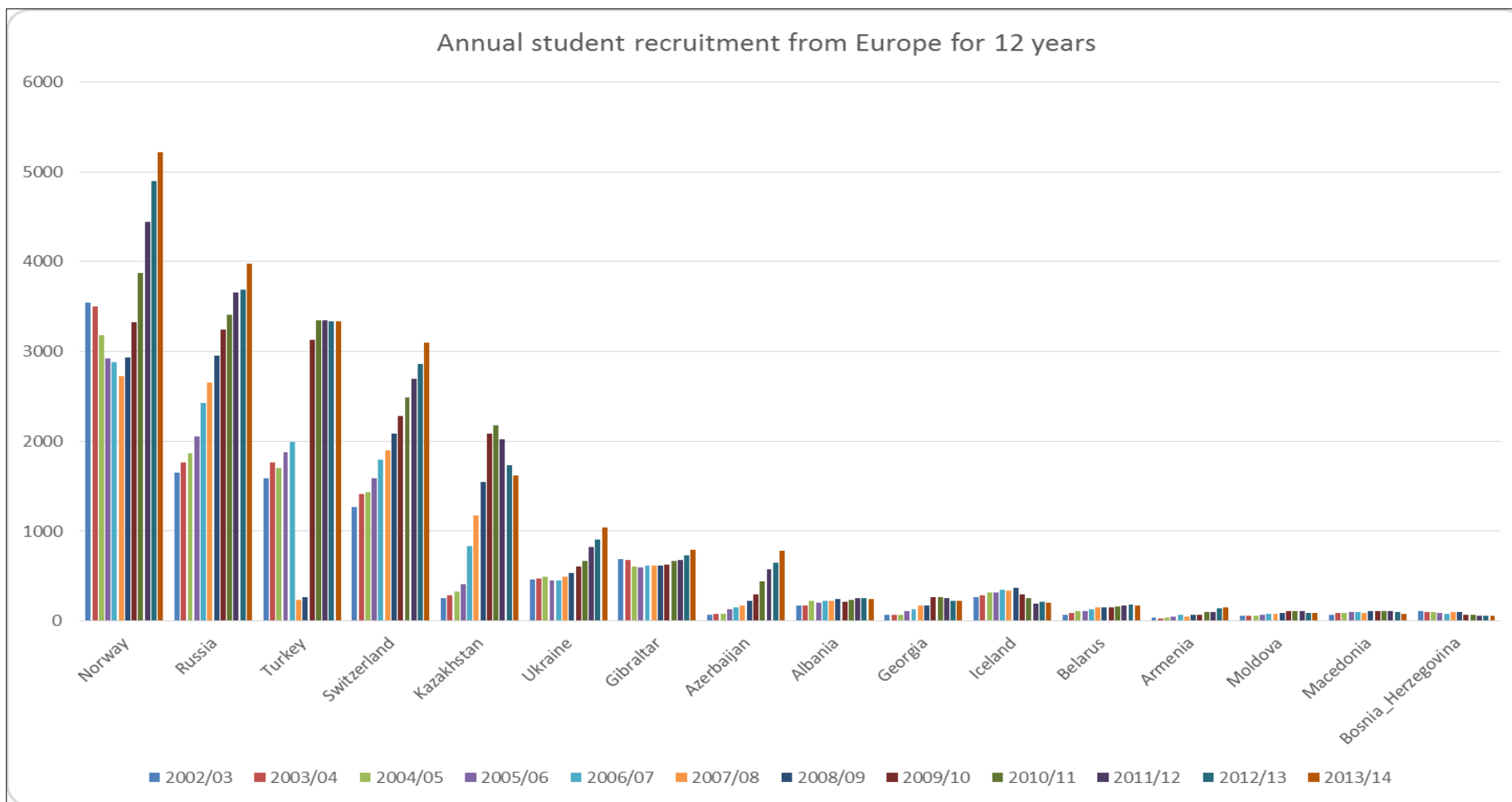
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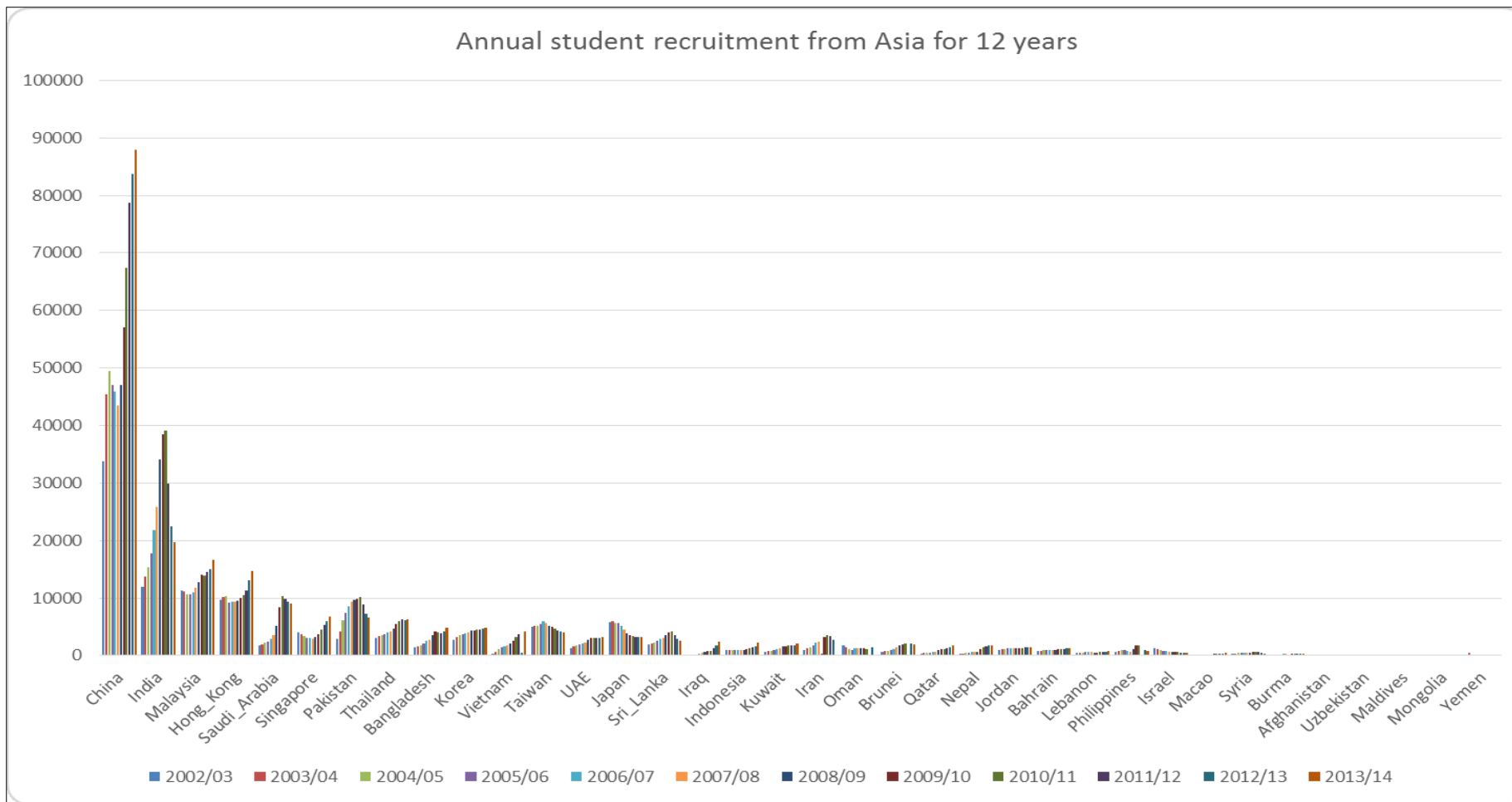
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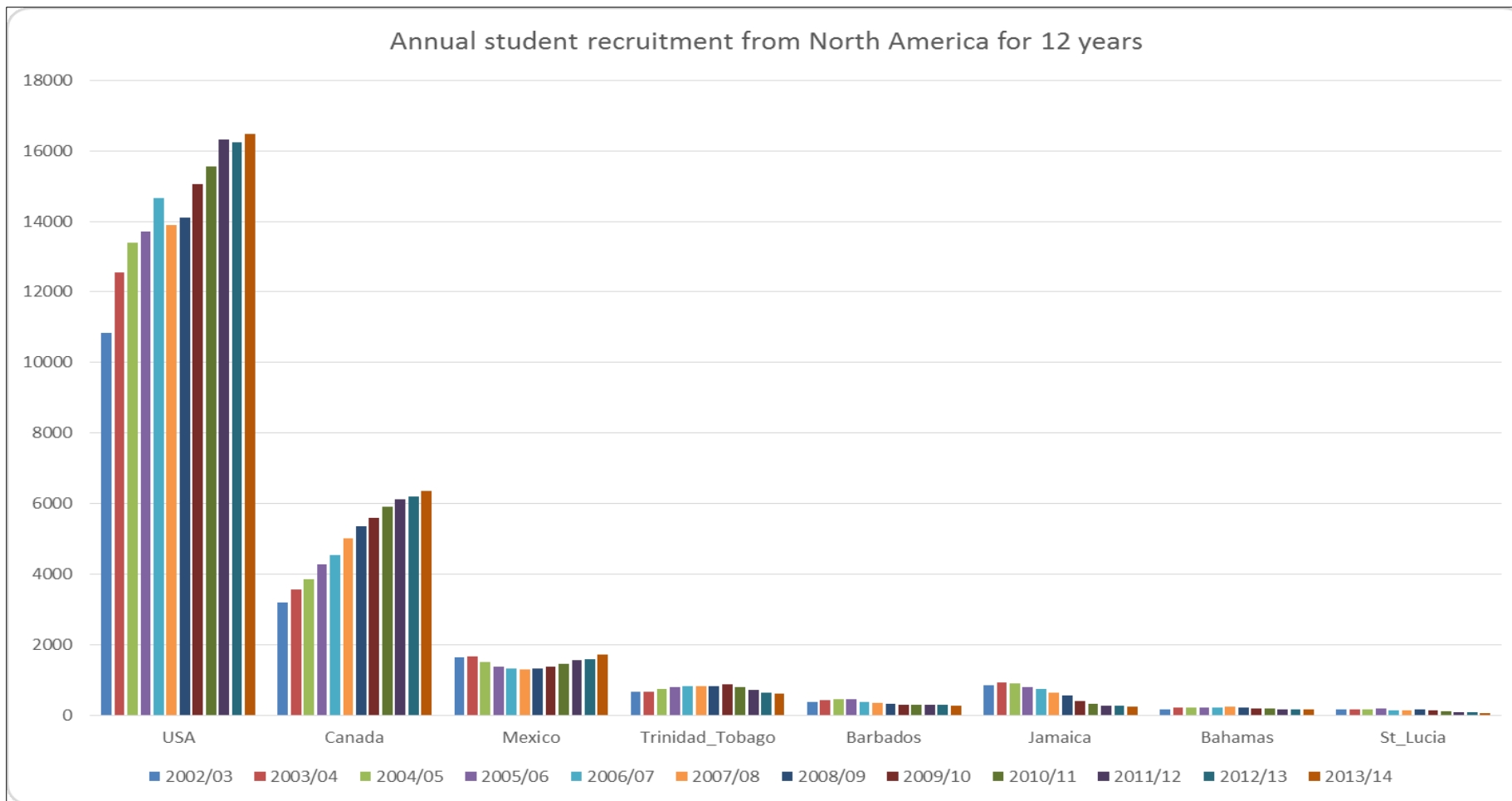
APPENDIX 1 ANNUAL STUDENT RECRUITMENT FROM AFRICA FOR 12 YEARS



APPENDIX 2 ANNUAL STUDENT RECRUITMENT FROM EUROPE FOR 12 YEARS



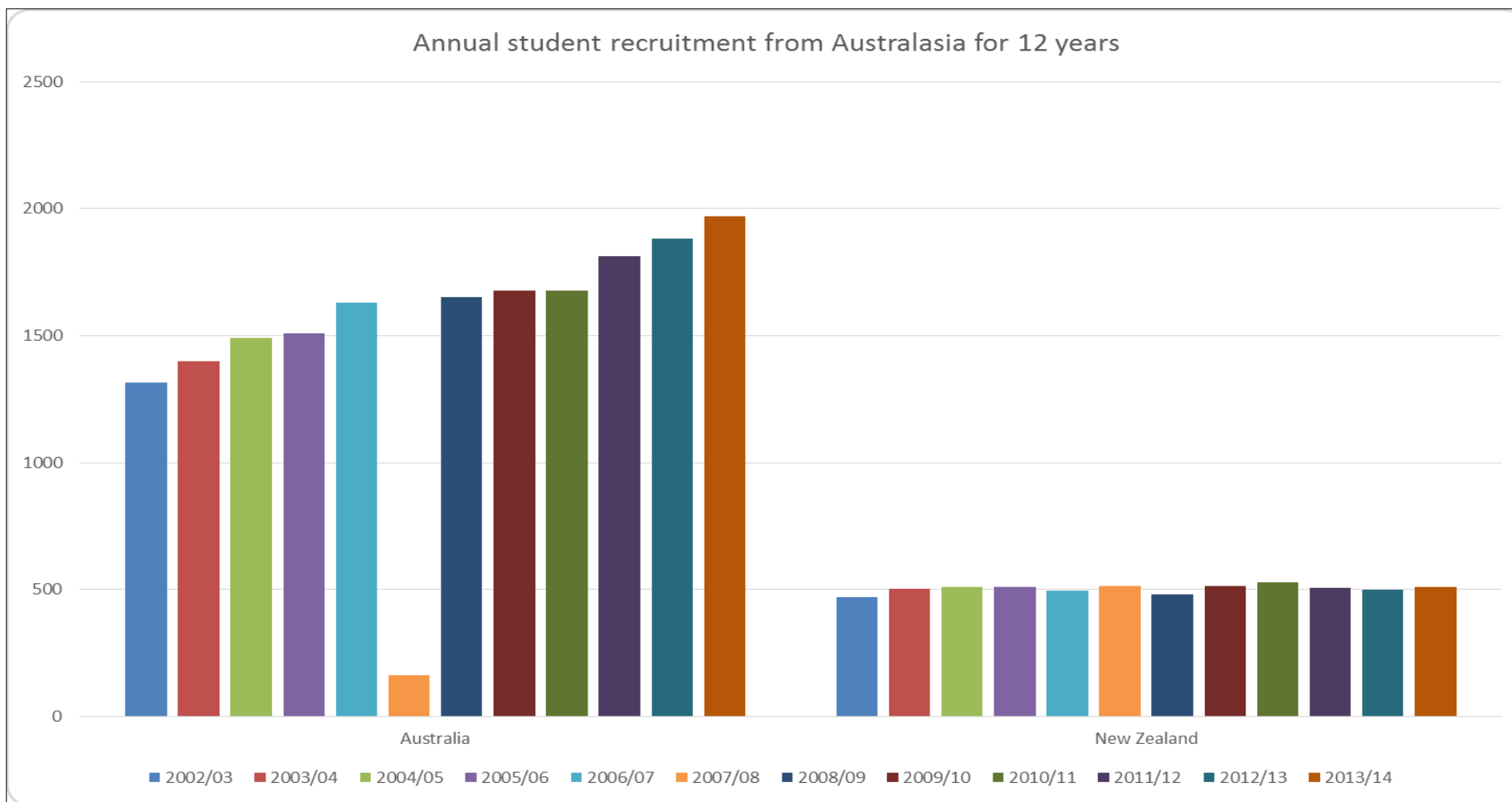
APPENDIX 3 ANNUAL STUDENT RECRUITMENT FROM ASIA FOR 12 YEARS



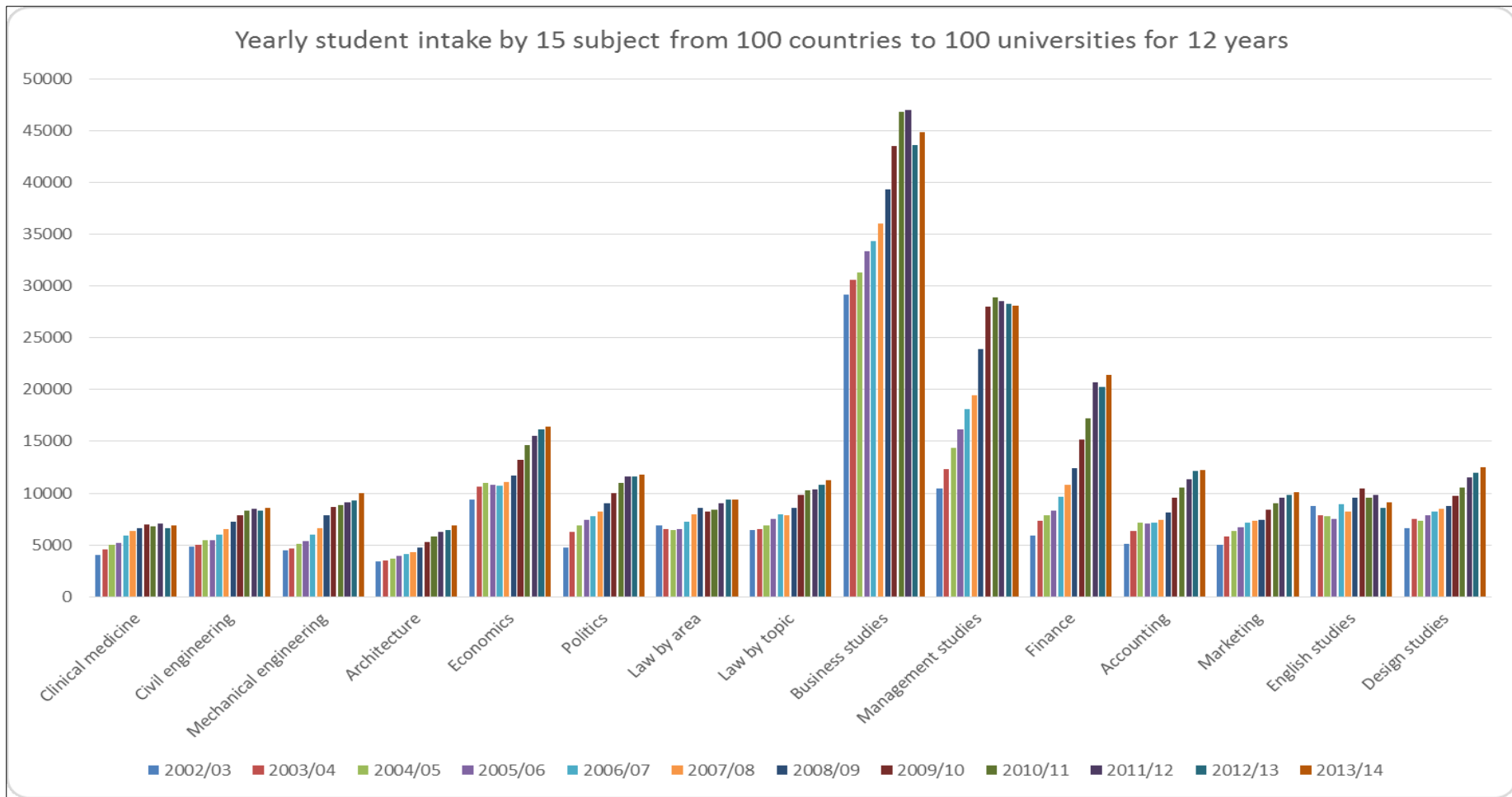
APPENDIX 4 ANNUAL STUDENT RECRUITMENT FROM NORTH AMERICA FOR 12 YEARS



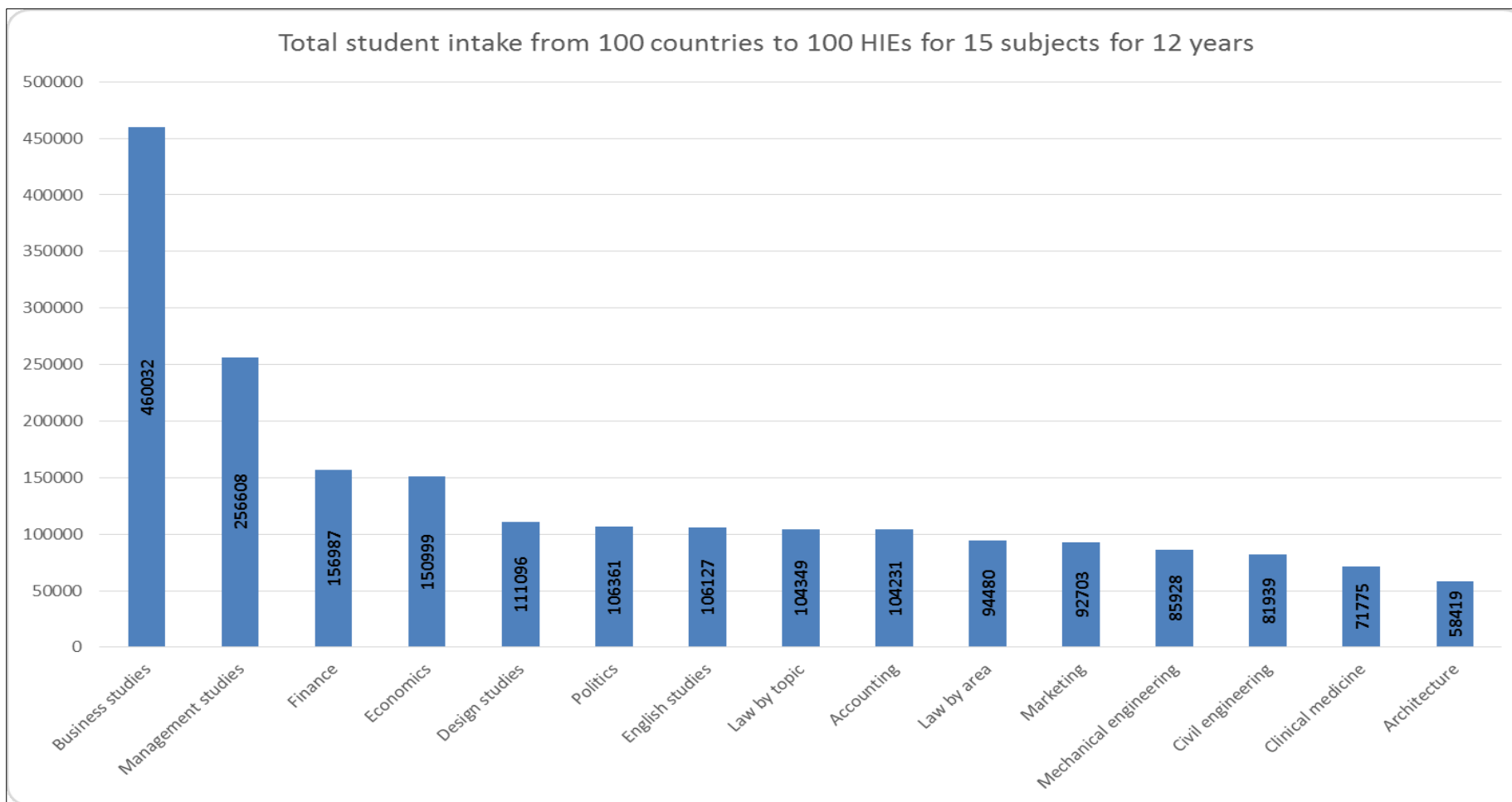
APPENDIX 5 ANNUAL STUDENT RECRUITMENT FROM SOUTH AMERICA FOR 12 YEARS



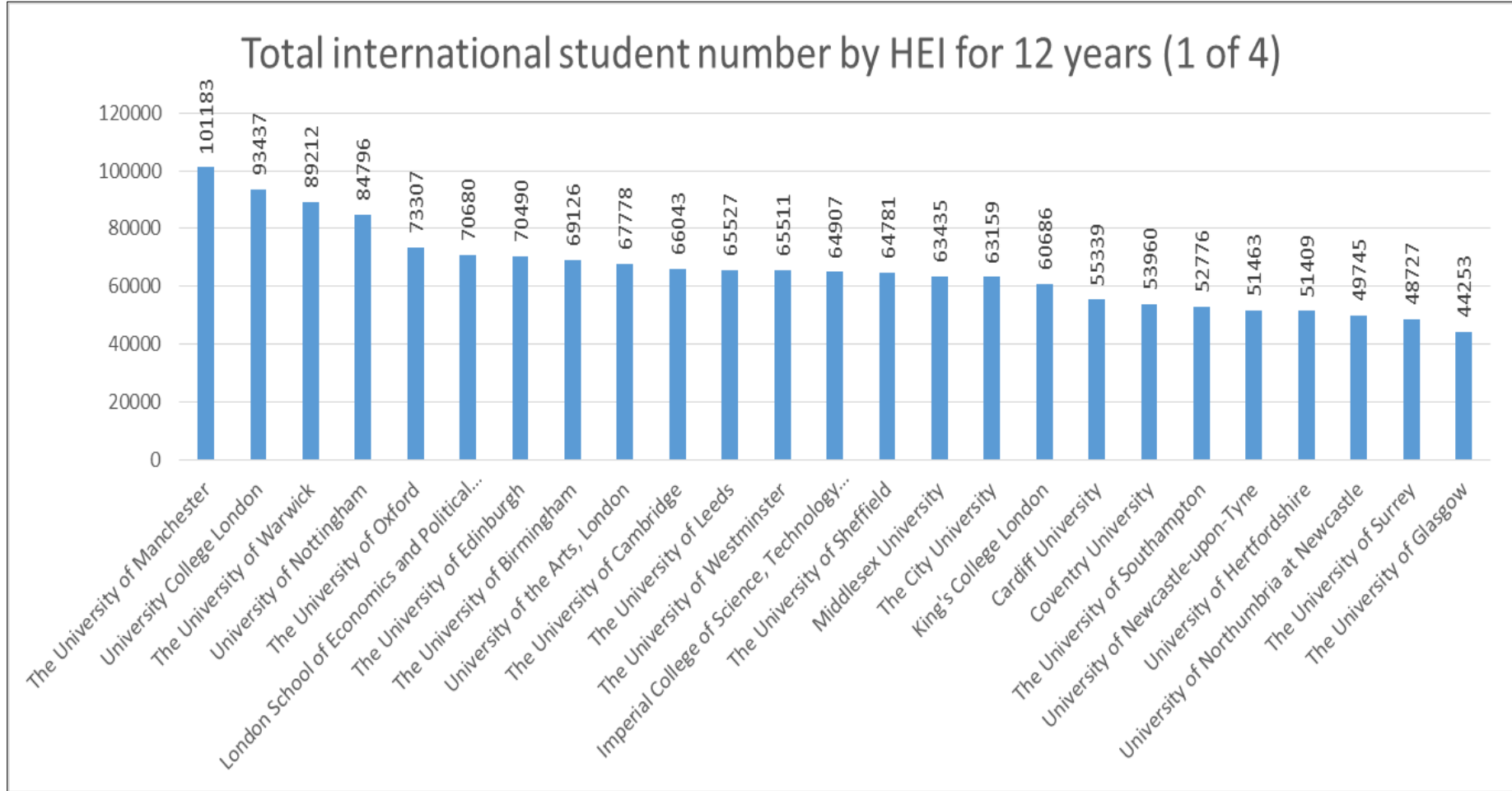
APPENDIX 6 ANNUAL STUDENT RECRUITMENT FROM AUSTRALASIA FOR 12 YEARS



APPENDIX 7 ANNUAL STUDENT INTAKE FOR 15 SUBJECTS FOR 12 YEARS

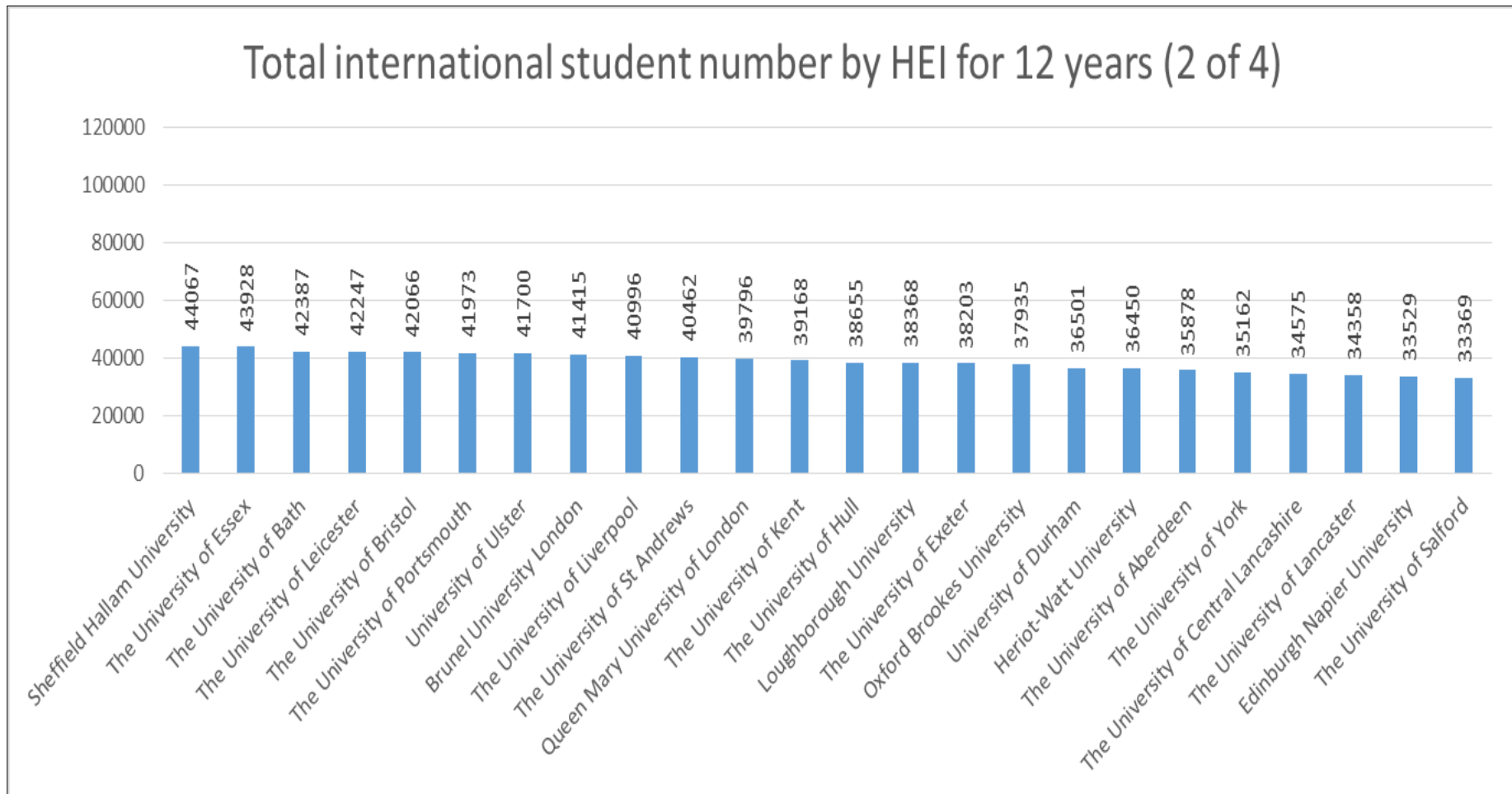


APPENDIX 8 SUBJECT WISE TOTAL STUDENT INTAKE FOR 12 YEARS



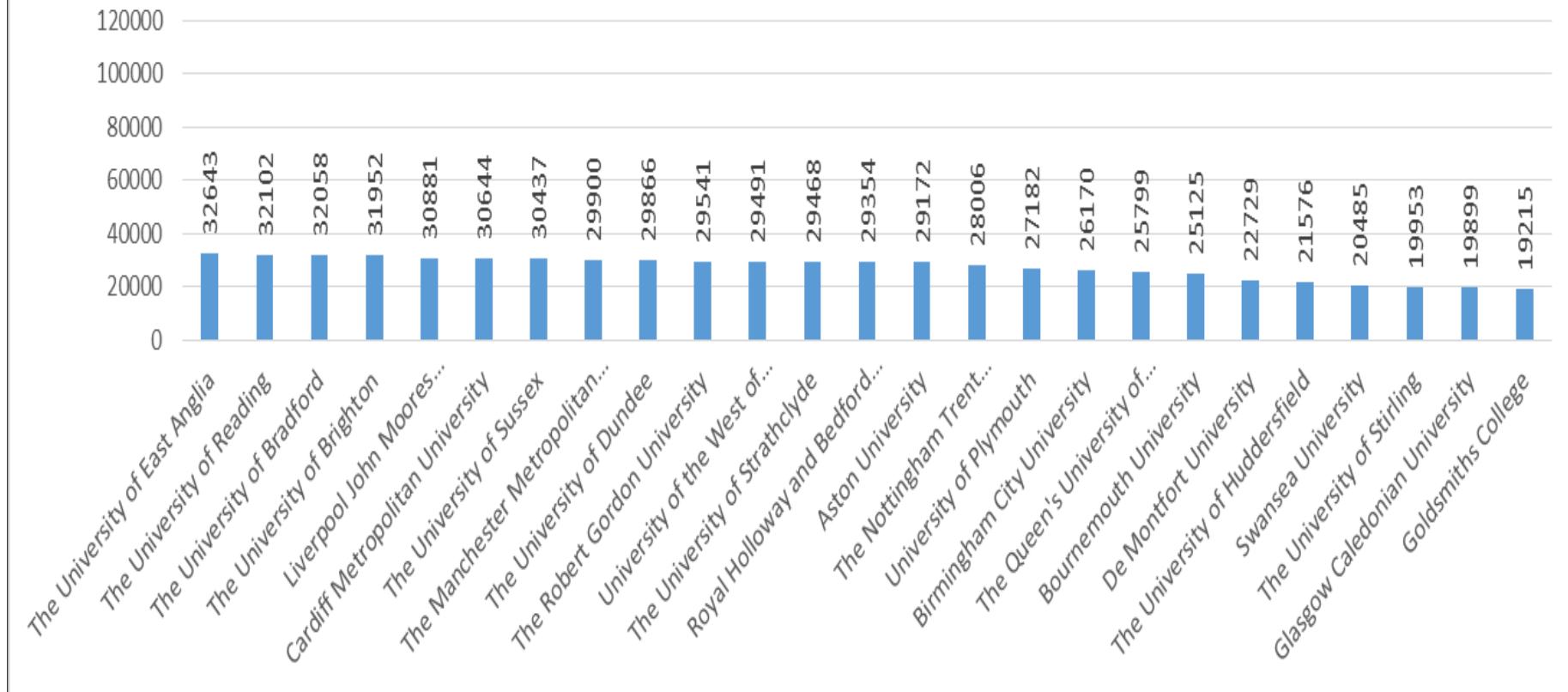
APPENDIX 9 TOTAL INTERNATIONAL STUDENT INTAKE FOR 12 YEARS, HEIS WISE (1 OF 4)

Total international student number by HEI for 12 years (2 of 4)



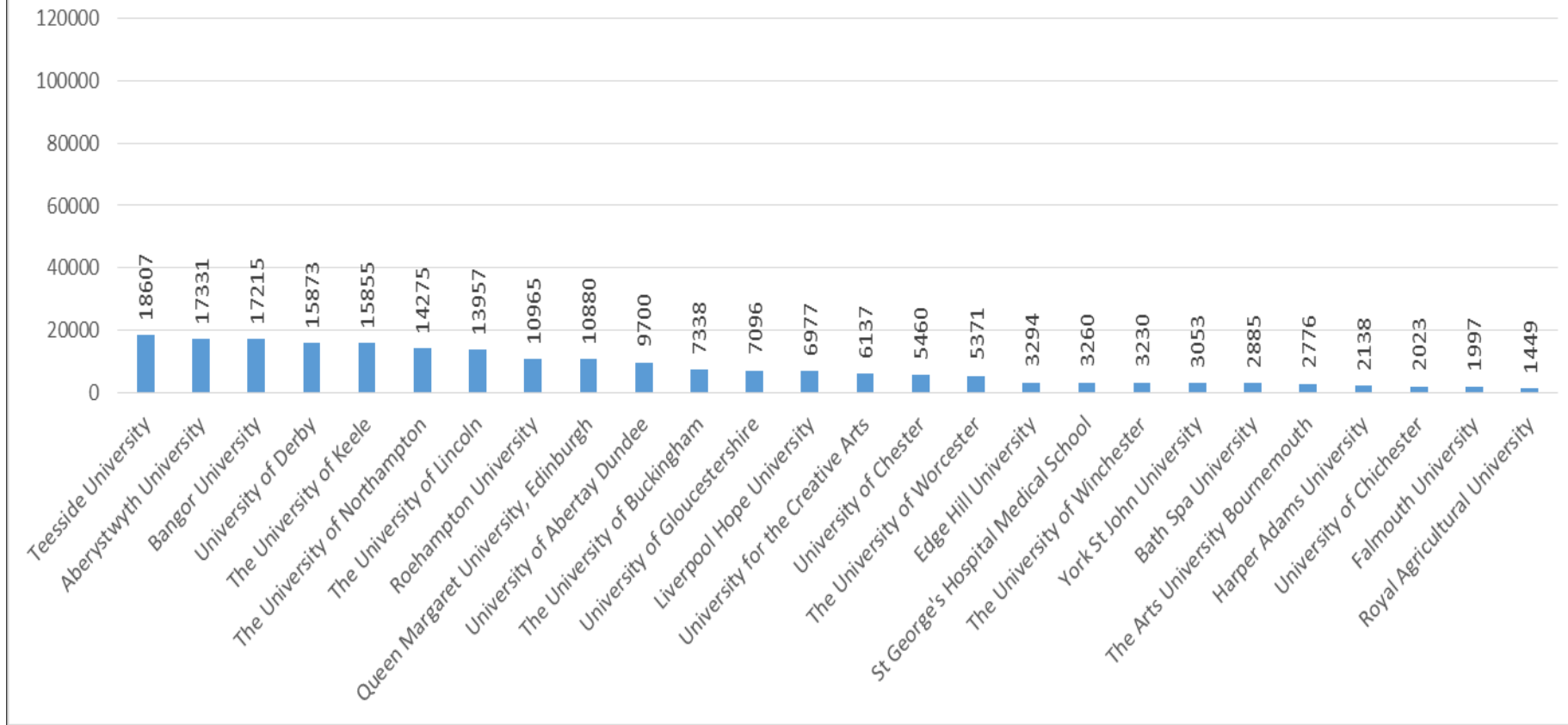
APPENDIX 10 TOTAL INTERNATIONAL STUDENT INTAKE FOR 12 YEARS, HEIS WISE (2 OF 4)

Total international student number by HEI for 12 years (3 of 4)



APPENDIX 11 TOTAL INTERNATIONAL STUDENT INTAKE FOR 12 YEARS, HEIS WISE (3 OF 4)

Total international student number by HEI for 12 years (4 of 4)





















































APPENDIX 12 TOTAL INTERNATIONAL STUDENT INTAKE FOR 12 YEARS, HEIS WISE (4 OF 4)

The total number of incoming international students by country of origin and trend for 12 years

Country	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	trend	12 yr total
China	33838	45359	49395	46974	45855	43532	47095	56998	67329	78717	83789	87895		686776
India	11945	13735	15402	17728	21832	25874	34077	38500	39088	29898	22384	19750		290213
USA	10830	12546	13399	13701	14669	13905	14112	15068	15557	16333	16233	16485		172838
Malaysia	11236	11141	10699	10672	11052	11736	12698	14061	13902	14543	15015	16635		153390
Nigeria	4370	5626	7662	8876	10230	11786	14382	16678	17585	17620	17397	18020		150232
Hong_Kong	9700	10213	10403	9140	9308	9364	9599	9947	10439	11334	13064	14725		127236
Pakistan	2967	4202	6172	7390	8633	9302	9609	9819	10184	8820	7184	6667		90949
Saudi_Arabia	1714	1944	2173	2437	2892	3533	5221	8342	10268	9859	9439	9062		66884
Canada	3197	3552	3844	4278	4548	5005	5347	5581	5907	6115	6188	6352		59914
Taiwan	4931	5153	5229	5408	5938	5598	5242	5073	4623	4379	4137	3965		59676
Thailand	3077	3358	3494	3786	4082	4181	4677	5507	5944	6236	6178	6338		56858
Japan	5830	5906	5660	5699	5208	4468	3876	3482	3348	3243	3186	3221		53127
Singapore	4077	3708	3436	3136	3024	2898	3186	3776	4456	5291	6019	6788		49795
Korea	2763	3171	3497	3693	3912	4031	4274	4389	4581	4561	4611	4780		48263
Norway	3547	3498	3186	2926	2878	2721	2933	3325	3878	4444	4896	5221		43453
Bangladesh	1431	1628	1833	2103	2536	2817	3490	4178	4084	3825	4215	4886		37026
Sri_Lanka	1948	2153	2300	2652	2867	3134	3553	4022	4176	3600	2956	2511		35872
Russia	1646	1768	1865	2050	2427	2652	2954	3248	3404	3653	3687	3981		33335
Turkey	1587	1765	1702	1879	1993	2370	2680	3132	3351	3349	3337	3334		30479
Kenya	2845	2968	2846	2762	2609	2429	2392	2421	2284	2245	2176	2159		30136
UAE	1333	1555	1730	1975	2102	2313	2702	2992	3016	3101	3060	3283		29162
Iran	992	1240	1521	1767	2193	2398	2850	3186	3486	3401	2665	2090		27789
Vietnam	354	673	1062	1377	1589	1789	2060	2531	3218	3784	4070	4251		26758
Ghana	2033	2647	2787	2655	2436	2236	2033	1898	1779	1881	1980	1712		26077
Switzerland	1267	1413	1430	1586	1792	1895	2083	2283	2492	2693	2862	3101		24897

Country	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	trend	12 yr total
Zimbabwe	2872	2677	2594	2582	2387	2026	1738	1424	1218	1066	952	970		22506
Libya	1184	983	1085	1004	1496	1624	2112	2880	2650	1764	1393	1662		19837
Australia	1316	1400	1491	1509	1630	1610	1650	1679	1678	1812	1882	1972		19629
Mauritius	1541	1592	1590	1720	1829	1702	1656	1576	1508	1483	1448	1381		19026
Mexico	1654	1665	1516	1372	1312	1303	1327	1366	1462	1553	1586	1711		17827
Brunei	716	722	773	904	1170	1499	1688	1915	2056	2260	2105	1932		17740
South_Africa	1159	1310	1440	1467	1585	1542	1586	1554	1428	1349	1230	1224		16874
Kuwait	608	744	820	912	1096	1251	1554	1652	1722	1835	1827	2147		16168
Oman	1831	1391	1079	1033	1223	1203	1228	1213	1177	1210	1466	1960		16014
Brazil	1010	986	994	1037	1174	1268	1372	1314	1356	1338	1658	2322		15829
Jordan	954	1050	1169	1220	1331	1287	1331	1361	1354	1405	1391	1440		15293
Indonesia	997	975	1024	1038	985	924	1028	1156	1286	1451	1667	2175		14706
Kazakhstan	254	286	323	412	838	1177	1549	2085	2179	2026	1733	1616		14478
Egypt	700	645	674	829	1083	1396	1440	1416	1141	1163	1218	1420		13125
Philippines	653	750	941	922	796	665	1093	1845	1800	1380	897	779		12521
Bahrain	743	845	927	949	892	979	991	1052	1044	1120	1209	1240		11991
Tanzania	936	984	930	940	985	988	1116	1125	1005	889	753	807		11458
Nepal	308	372	427	477	594	646	693	1136	1512	1625	1715	1751		11256
Qatar	313	397	485	483	566	702	952	1070	1142	1259	1469	1827		10665
Uganda	776	833	823	806	834	920	1038	966	902	849	766	777		10290
Iraq	87	116	165	227	302	555	652	784	761	1283	1847	2417		9196
Trinidad_Tobago	662	654	739	805	835	835	835	889	791	729	652	604		9030
Israel	1315	1153	946	763	733	617	612	569	594	511	504	509		8826
Colombia	372	451	424	426	492	557	692	826	950	926	951	1008		8075
Gibraltar	694	678	611	600	620	618	614	627	666	683	728	791		7930

Country	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	trend	12 yr total
Botswana	642	658	657	612	598	591	710	669	625	580	626	539		7507
Ukraine	459	470	494	451	453	494	536	606	669	826	907	1038		7403
Lebanon	475	500	515	570	598	558	537	541	585	680	663	819		7041
Jamaica	850	942	897	798	738	632	550	415	333	274	260	237		6926
Zambia	494	504	505	564	554	631	643	606	545	546	518	510		6620
New Zealand	468	502	509	511	494	512	481	512	527	507	499	510		6032
Syria	328	386	412	400	469	528	532	605	618	669	529	380		5856
Cameroon	242	275	341	389	436	530	484	503	531	621	608	608		5568
Chile	254	245	267	312	331	369	392	492	561	681	661	757		5322
Malawi	315	378	404	417	544	531	494	467	438	359	316	263		4926
Barbados	380	438	448	446	381	341	322	306	303	294	285	261		4205
Algeria	398	409	509	432	430	335	261	240	190	185	181	234		3804
Bermuda	172	174	184	206	210	235	334	395	482	489	478	435		3794
Sudan	312	316	301	268	301	347	352	357	324	339	277	282		3776
Azerbaijan	70	79	83	129	157	178	222	302	446	578	648	787		3679
Venezuela	274	295	267	275	311	310	328	293	311	314	288	297		3563
Gambia	291	291	322	352	341	333	349	310	294	231	197	201		3512
Iceland	262	285	316	317	346	340	370	292	251	196	215	209		3399
Argentina	415	392	316	284	288	256	210	221	238	212	190	184		3206
Morocco	139	160	164	179	186	208	237	267	300	338	406	526		3110
Angola	159	163	187	198	249	286	332	319	304	261	275	303		3036
Burma	160	180	190	229	242	235	231	267	266	299	323	350		2972
Peru	186	213	202	217	201	211	246	244	246	271	250	259		2746
Albania	177	177	228	202	228	227	242	213	234	251	254	247		2680
Macao	94	101	140	158	199	165	207	255	267	324	346	404		2660

Country	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	trend	12 yr total
Ethiopia	193	232	202	215	211	218	219	205	210	196	199	187		2487
Sierra_Leone	210	212	267	238	247	242	221	204	181	148	128	123		2421
Bahamas	162	213	228	227	226	232	225	193	180	176	159	170		2391
Yemen	171	453	223	155	187	164	139	137	151	131	121	113		2145
Georgia	66	72	73	106	134	173	177	265	267	253	225	227		2038
Afghanistan	48	89	95	104	137	137	144	201	176	211	225	223		1790
Uzbekistan	154	147	145	126	117	131	156	195	172	139	129	174		1785
Maldives	101	109	142	150	181	146	156	144	132	134	126	163		1684
Belarus	73	86	112	116	135	156	149	151	162	173	187	170		1670
St_Lucia	172	170	169	186	148	148	156	127	108	94	79	64		1621
Seychelles	176	188	197	169	155	129	113	105	114	101	87	84		1618
Cayman_Islan	64	102	111	95	118	142	138	121	118	157	200	226		1592
British_Virgin	34	47	49	57	110	115	154	159	158	191	185	184		1443
Mongolia	71	71	74	85	104	108	134	176	147	139	138	154		1401
Ecuador	71	82	94	77	91	96	92	103	102	135	149	288		1380
Macedonia	67	86	86	97	97	89	108	116	106	110	100	85		1147
Rwanda	65	75	68	77	82	91	112	90	99	84	108	148		1099
Somalia	53	86	95	124	114	110	110	100	75	66	75	48		1056
Ivory_Coast	77	100	101	109	118	106	100	90	59	61	54	58		1033
Moldova	56	63	61	74	79	76	87	108	114	111	94	91		1014
Tunisia	59	65	61	69	96	95	98	95	82	79	94	117		1010
Namibia	60	69	68	106	99	91	76	66	89	92	95	92		1003
Bosnia_Herzeg	109	96	102	91	79	101	99	72	66	58	57	60		990
Guyana	72	82	95	110	110	99	99	68	66	57	45	50		953
Armenia	36	33	39	51	70	54	69	74	101	98	145	152		922

APPENDIX 13 LIST OF COUNTRIES INCLUDED IN THE STUDY FROM PANEL DATA

ASIA (36)			NON-EU EUROPE (16)	
Afghanistan	Kuwait	Japan	Albania	Kazakhstan
Bahrain	Lebanon	Jordan	Armenia	Macedonia
Bangladesh	Macao	Korea	Azerbaijan	Moldova
Brunei	Malaysia	Singapore	Belarus	Norway
Burma	Maldives	Sri Lanka	Bosnia-Herzegovina	Russia
China	Mongolia	Syria	Georgia	Switzerland
Hong Kong	Nepal	Taiwan	Gibraltar	Turkey
India	Oman	Thailand	Iceland	Ukraine
Indonesia	Pakistan	UAE		
Iran	Philippines	Uzbekistan	AUSTRALASIA(2)	
Iraq	Qatar	Vietnam	Australia	
Israel	Saudi Arabia	Yemen	New Zealand	
AFRICA (27)			NORTH AMERICA (8)	
Algeria	Namibia			
Angola	Nigeria			
Botswana	Rwanda	USA		
Cameroon	Seychelles	Bahamas		
Egypt	Sierra Leone	Barbados		
Ethiopia	Somalia	Canada		
Gambia	South Africa	Jamaica		
Ghana	Sudan	Mexico		
Ivory Coast	Tanzania	Saint Lucia		
Kenya	Tunisia	Trinidad Tobago		
Libya	Uganda			
Malawi	Zambia			
Mauritius	Zimbabwe			
Morocco				
			SOUTH AMERICA (11)	
			Argentina	
			Bermuda	
			Brazil	
			British virgin Islands	
			Cayman Islands	
			Chile	
			Colombia	
			Ecuador	
			Guyana	
			Peru	
			Venezuela	

APPENDIX 14 THE LETTER OF CONSENT FOR THE SURVEY DATA



A Letter for Negotiating Access

I am a Doctoral student at the Manchester Metropolitan University, conducting a study that investigates the internationalisation of the UK Higher Education Institutions (UK HEIs). The aim of this research is to investigate how the top management teams at the UK HEIs influence the operational teams involved in the realisation of this process.

This study will make an important contribution to the development of theory (dynamic capabilities and organisational routines). In doing so, the research will inform and explain why and how the UK HEIs internationalise. This study aims to investigate how and why managerial dynamic capabilities are deployed and how they influence organisational routines in the process of internationalisation. For this reason, all of the UK HEIs are invited to take part in this survey.

This letter serves as a request to the persons in charge of internationalisation to spare few minutes of their precious time to help me with this research project.

Your views as a practitioner will be an invaluable source of information to support the study. The research will involve filling an online survey, the link is attached. The survey should take no longer than 10-15 minutes. If you wish, I will keep you informed about the findings. By filling this online survey, you give your consent for me to use the information for the PhD research and any subsequent research. The recorded responses will be exported into the SPSS. You can rest assured that the data will be handled and processed by the Manchester Metropolitan University's licenced computers and software. Data will be stored and processed in accordance with the Data Protection Act 1998 (DPA) and at any time you can ask me to exclude your responses. Respondents' names will not be published for this PhD thesis or any subsequent research.

This survey is produced using Qualtrics (licensed software by the Manchester Metropolitan University) it is virus free. You can rest assured that any email communication between you and myself is scanned by antivirus Endpoint Security and Control and is free from virus.

You can open the survey by clicking the link below or copy and paste it in the web browser.

https://mmubusiness.az1.qualtrics.com/SE/?SID=SV_0Bab6yDwFohgCkl

If you have any concerns or questions, please feel free to get in touch with me. Your help on this matter is greatly appreciated.

Yours sincerely

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APPENDIX 15 A COMPLETE SAMPLE SURVEY

1. University name

1.1. Approximate year the university was founded

2. Total student population at my university is (please click one tab to make selection)

Under 10000 10001-20000 20001-30000 30001-40000 40000-above

2.1. Non-UK/EU students expressed as percentage of total student population

Under 10 % 11-20% 21-30% 31-40% 40%-above

3. Total academic faculty at my university (please click one tab to make selection)

Under 1000 1001-2000 2001-3000 3001-4000 4001-above

3.1. Non-UK/EU ethnic background faculty expressed as percentage of total faculty

Under 10 % 11-20 % 21-30 % 31-40 % 40-above %

4. Total number of degree programs (UG, PG, Doctorate) at my university (please click one tab to make selection)

Under 500 501-1000 1001-1500 1501-2000 1501-above

5. My university's strategic focus is on delivering the following programs (Please select one or more)

Employment and skills focused teaching Research informed teaching Research led teaching Other

6. My university's international strategy is driven by (1 is less important and 5 is most important)

1 2 3 4 5

Not Applicable

	1	2	3	4	5	Not Applicable
Cultural change						<input type="checkbox"/>
Faculty mobility						<input type="checkbox"/>
Government intervention, regulatory and legal environment						<input type="checkbox"/>
Communication with partner institutions						<input type="checkbox"/>
Coordination across and within faculties						<input type="checkbox"/>
Student mobility						<input type="checkbox"/>
Immigration and student visa policy						<input type="checkbox"/>
Due diligence						<input type="checkbox"/>
Protection of intellectual property rights						<input type="checkbox"/>
Internal resistance to change						<input type="checkbox"/>
Internal policies and procedures						<input type="checkbox"/>
other						<input type="checkbox"/>
Repatriation of funds from TNE activity						<input type="checkbox"/>

Overseas Ministry of Education approval	<input type="checkbox"/>
Managing tax liability	<input type="checkbox"/>
QAA requirements	<input type="checkbox"/>

10. My university has number of international partnerships (Transnational education, student and staff mobility and research) in the following geographical areas

	0-9	10-19	20-29	30-39	40-above	Not Applicable
EU	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Americas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Asia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Africa	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Oceania	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. My university's first international partnership was established in the following geographical areas

	1-4 years ago	5-9 years ago	10-14 years ago	15-19 years ago	20 and over years ago	Not Applicable
EU	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Americas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Asia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Africa	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Oceania	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. My university's most recent international partnership was formed in the following geographical areas

	less than one year ago	two years ago	three years ago	four years ago	five or more years ago	Not Applicable
EU	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Americas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Asia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Africa	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Oceania	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. My university's internationalisation strategy is demonstrated through the following mechanisms (please click one or more tabs to make your selection)

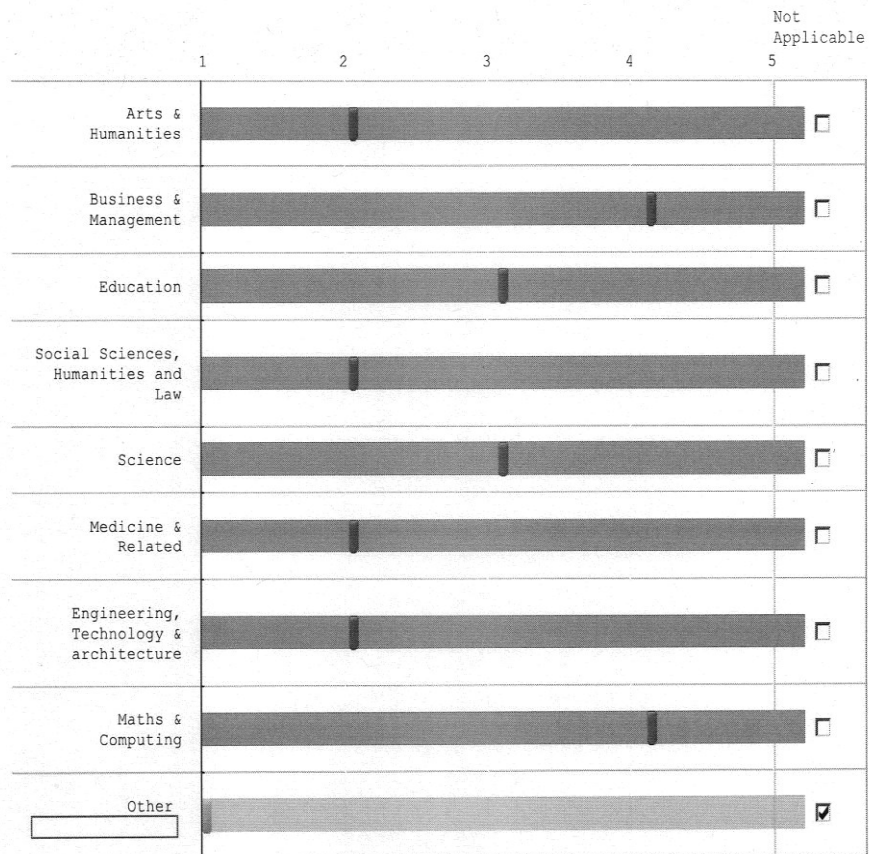
- Distributed learning and on line provision
- Dual award
-

- Joint delivery, partner campus, single award
- Off shore campus
- Off shore campus /joint operation with partner
- Articulation (domestic and overseas e,g. 2+2, 3+1+1, etc.)
- Validation of partner award
- Licensing (partner delivering Home university award)
- Student mobility
- Staff mobility
- International research collaboration

14. My university offers a range of degree programs overseas (please click one or more tabs to make your selection

Undergraduate Post graduate taught Post graduate research

15. The popularity of the programs for my university in international markets (1 least popular, 5 most popular)






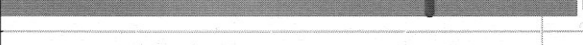
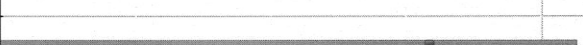

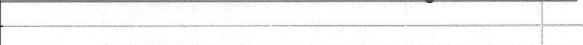






16. My university's internationalisation strategy aims to achieve (1, least important, 5, most important)

	1	2	3	4	5	Not Applicable
International student recruitment sustainable growth						<input type="checkbox"/>
Competitive advantage						<input type="checkbox"/>
Innovative teaching and learning						<input type="checkbox"/>
Collaborative research						<input type="checkbox"/>
Diversify student profile						<input type="checkbox"/>
Improve students' experience through international exchange						<input type="checkbox"/>
Improve / enhance management practices						<input type="checkbox"/>
Enhance faculty's international profile						<input type="checkbox"/>
Improve research impact / research clusters						<input type="checkbox"/>
Attract international university partners						<input type="checkbox"/>
Learning from international universities						<input type="checkbox"/>

Leverage international ranking and reputation		<input type="checkbox"/>
Leverage institutional strengths		<input type="checkbox"/>
Diversify funding sources and spread financial risk		<input type="checkbox"/>
Develop collaborative research groups		<input type="checkbox"/>
International work-ready graduates		<input type="checkbox"/>

17. For my university's internationalization strategy, the most challenging areas are the following (1, least challenging, 5 most challenging)

	1	2	3	4	5	Not Applicable
Sufficient qualified faculty						<input type="checkbox"/>
Sufficient facilities for students (lecture theaters, access to computers)						<input type="checkbox"/>
Capacity for faculty research						<input type="checkbox"/>
Managerial experience and skills (i.e. for programme management)						<input type="checkbox"/>
University experience / history in internationalisation						<input type="checkbox"/>

Changes in organisational routines, practices and policies		<input type="checkbox"/>
Change in internal structures, processes and systems		<input type="checkbox"/>
Sufficient staff experience / history of internationalisation		<input type="checkbox"/>
Readiness for change		<input type="checkbox"/>
Lack of experience about internationalisation		<input type="checkbox"/>
Internationalisation of the curriculum		<input type="checkbox"/>
Breaking away from existing routines		<input type="checkbox"/>
Continuous improvement		<input type="checkbox"/>
Recruitment of international staff		<input type="checkbox"/>
Changes to the faculty's workload model		<input type="checkbox"/>
Local and international political environment		<input type="checkbox"/>
Risk averse culture		<input type="checkbox"/>
Limited faculty motivation to engage in international activities		<input type="checkbox"/>

18. Please comment on the major issues related to UK HE internationalisation and competitiveness (e.g. difficulties, challenges and opportunities)

19. Based on the above evaluations, please select one or more that best explain dynamic capabilities (Please select all that apply)

- A mechanism for managerial intervention
- A means for maintaining fluidity / continuous change
- A means of making radical or discontinuous change
- An ability to sense and seize opportunities
- Reconcile internal organisational inertia (internal bias, barrier, reluctance and attitude towards change)
- Other

20. This section is about the person who completes this questionnaire, please state your position at the university

[REDACTED]

APPENDIX 16 THE LETTER OF CONSENT FOR THE INTERVIEW DATA



A Letter for Negotiating Access

RESEARCH

I am a Doctoral student at the Manchester Metropolitan University business school, conducting a study that investigates the internationalisation of the UK Higher Education Institutions (UK HEIs). The aim of this research is to investigate how the top management teams at the UK HEIs sense the need to internationalise and how they influence the operational teams that are involved in the realisation of this process.

The study will make an important contribution to the development of theory (dynamic capabilities and organisational routines in strategic management). In doing so, the research will inform and explain why and how the UK HEIs internationalise. This study aims to investigate how managerial dynamic capabilities influence organisational routines in the process of internationalisation.

This letter serves as a request to the person in charge of internationalisation to spare half an hour to 50 minutes to help me with this research project.

The participants' views on this issue are invaluable source of information to support this study. The research will involve a brief interview that will last for half an hour to fifty minutes. If you wish, I will keep you informed about the findings of this research. By agreeing to be interviewed, you give me consent to use the interview transcript for the PhD research and any subsequent research. The data will be handled and processed by the Manchester Metropolitan University's licenced computers and software. Data will be stored and processed in accordance with the Data Protection Act 1998 (DPA). At any time (before the thesis and subsequent research publication) you can ask me to exclude your responses. Participants' names will not be published for this PhD thesis or any subsequent research.

Yours sincerely

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APPENDIX 17 NVIVO SCREENSHOT

The screenshot displays the NVivo software interface. The top menu bar includes FILE, HOME, CREATE, DATA, ANALYZE, QUERY, EXPLORE, LAYOUT, and VIEW. Below the menu is a ribbon with various toolbars for workspace, item, clipboard, format, paragraph, styles, editing, and proofing.

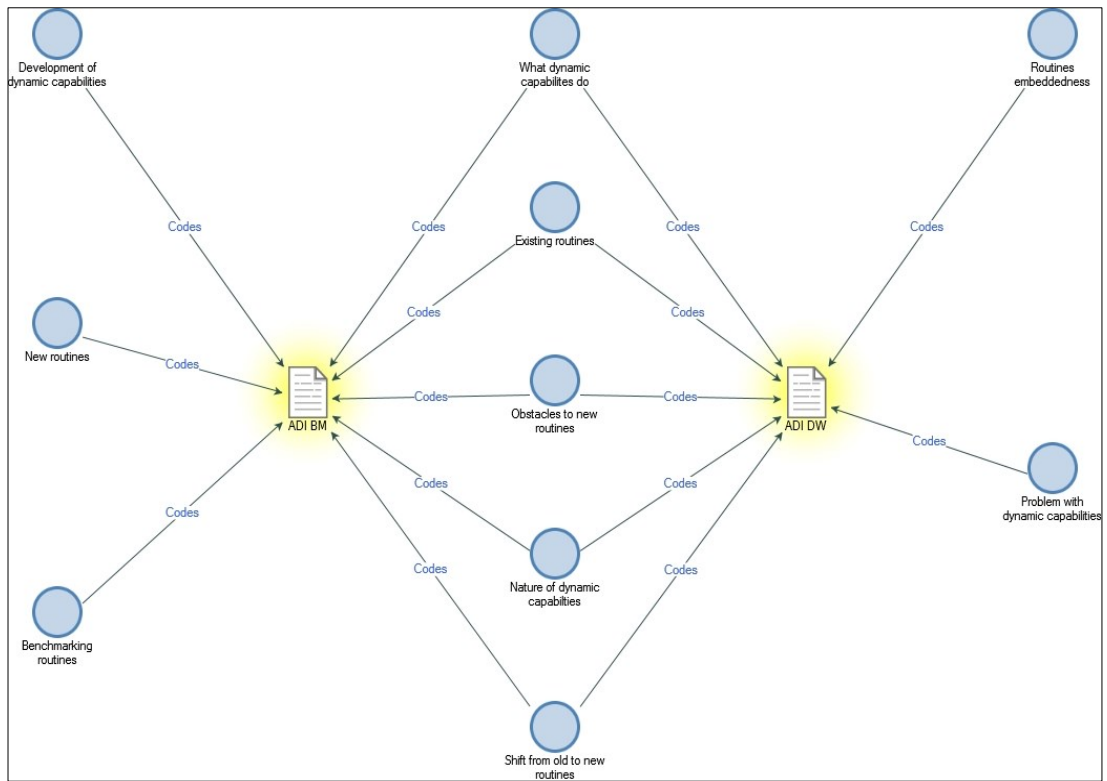
The main window shows the 'Sources' view with a search for 'Internals'. The search results are displayed in a table:

Name	Nodes	References	Created On	Created By
ADI SP		4	06/07/2015 21:24	IA
ADI DW		7	16 06/07/2015 21:22	IA
ADI BM		8	27 06/07/2015 21:22	IA
DVC		9	20 06/07/2015 21:23	IA
Director		32	06/07/2015 21:24	IA
ADI JL		10	21 06/07/2015 21:23	IA
Internaional partnerships officer		11	29 06/07/2015 21:23	IA
ADI KS		11	24 06/07/2015 21:23	IA
ADI KM		12	41 06/07/2015 21:23	IA

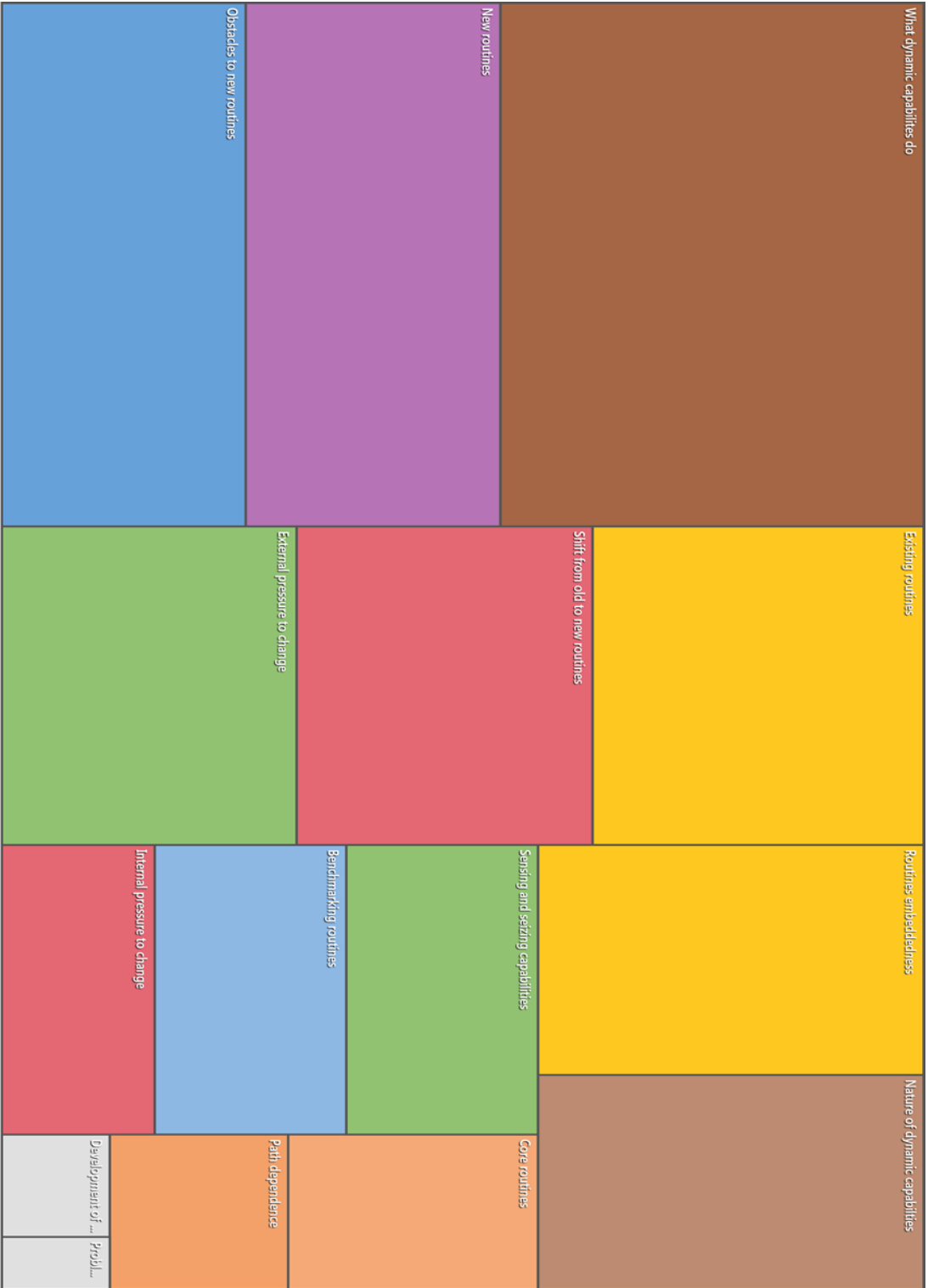
The left sidebar shows a navigation pane with 'Sources' selected, and other options like Nodes, Classifications, Collections, Queries, Reports, Maps, and Folders. The bottom of the interface shows a 'Sources' section with a list of sources.

APPENDIX 18 SOURCE SUMMARY: INTERVIEWS

Total Words in Source	Total Paragraphs	Number of Nodes Coding	Coded Percentage of	Number of Text References
Document				
Internals\\ADI BM				
2715	39	8	0.3392	27
Internals\\ADI PC				
3862	42	7	0.2612	22
Internals\\ADI DW				
3589	40	7	0.2496	16
Internals\\ADI JL				
3197	39	10	0.2560	21
Internals\\ADI KM				
3111	49	12	0.4885	41
Internals\\ADI KS				
3406	54	11	0.4048	24
Internals\\ADI SP				
2715	70	4	0.0710	4
Internals\\Director				
6476	102	9	0.3193	32
Internals\\DVC				
4084	47	9	0.2631	20
Internals\\International partnerships officer				
3815	51	11	0.3035	29



APPENDIX 19 COMPARATIVE EXAMPLE OF TWO INTERVIEWEES' CODING HIERARCHY



APPENDIX 20 INTERVIEW DATA, CODING SHARE OF THE NODES

APPENDIX 21 NODE SUMMARY: INTERVIEWS

Source Type	Number of Sources	Number of Codings	Number of Words Coded	Number of Paragraphs	Duration Coded
Node					
Nickname: Nodes\\Benchmarking routines					
Document	5	10	569	10	
Nickname: Nodes\\Core routines					
Document	4	7	307	7	
Nickname: Nodes\\Development of dynamic capabilities					
Document	1	2	69	2	
Nickname: Nodes\\Existing routines					
Document	7	19	1,098	19	
Nickname: Nodes\\External pressure to change					
Document	5	17	631	17	
Nickname: Nodes\\Internal pressure to change					
Document	6	8	342	9	
Nickname: Nodes\\Nature of dynamic capabilities					
Document	6	15	1,039	16	
Nickname: Nodes\\New routines					
Document	6	24	1,414	24	
Nickname: Nodes\\Obstacles to new routines					
Document	8	23	1,019	23	
Nickname: Nodes\\Path dependence					
Document	5	5	336	5	
Nickname: Nodes\\Problem with dynamic capabilities					
Document	1	1	70	1	
Nickname: Nodes\\Routines embeddedness					
Document	7	16	1,292	17	
Nickname: Nodes\\Sensing and seizing capabilities					
Document	5	10	929	10	
Nickname: Nodes\\Shift from old to new routines					
Document	6	17	1,015	18	

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

APPENDIX 23 NVIVO FULL INTERVIEW ANALYSIS (ANONYMISED)

Node

Nodes\\Benchmarking routines

Document

Internals\\ADI BM

No	Coverage	Number	Reference Coded	Modified On
	0.0868	4		
			1	IA 08/07/2015 00:27

I understand but for faculty like ours, there are some opportunities like for info coms and mass communications we have big market like the USA. The university has pretty much ignored that market for forever which in my

			2	IA 08/07/2015 00:28
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you also need that if you look at competitors that are more successful in particular; I use the university of X as kind of measuring stick. There are far ahead of us right now, but they also took their time and took a while for them to ramp up a lot of work to get where they are now. I mean, when I did came to this post, I came from

			3	IA 08/07/2015 00:39
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It is also down to paying our international agents commission as compares to what other universities are paying them. For example if an agent has three universities has pick from if one is paying them better than the other

			4	IA 08/07/2015 00:40
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Certain universities, like University of X where 25% student population is non UK/EU, they are particularly strong with American connections, which took them twenty or more year to build that success, financially very

Internals\\ADI JL

No	Coverage	Number	Reference Coded	Modified On
	0.0170	1		
			1	IA 09/07/2015 00:27

I mean outsourcing, we would arrange for the head of company X sourcing in Shanghai to do a Skype lecture, she would actually talk to the students about her sourcing practice, about how it works in Shanghai, that has

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

Internals\\ADI KM

No 0.0182 1

1 IA 09/07/2015 01:03

I think it is a benchmark for a lot of universities across the world, what usually happens is that international student population is about 15%, some have more than that, our aspiration, given where we are located in

Internals\\DVC

No 0.0210 2

1 IA 08/07/2015 01:43

there is something about recruitment and that particular strand has specific KPI and targets and it has approval from the committee. In 2025, it is 4-12% of international student body. Which is way below the sector average.

2 IA 08/07/2015 01:48

we have got University of X where students come in and they leave the region, with , some students do that but actually when you look at statistics, some 60% come coming from the region, 70-80% wants to stay in the

Internals\\International partnerships officer

No 0.0302 2

1 IA 08/07/2015 00:46

In order to be competitive as an institution we need to work internationally as everyone else is doing,

2 IA 08/07/2015 01:13

We are confident that we will see a big increase in our competitiveness. If you look at the league table, in the strategy document, there are competitor analysis we have graphs that show where are as compared to other universities. We are quite far off as compared to our competitors, we see rising up that chart. At the moment

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

Nodes\\Core routines

Document

Internals\\ADI JL

No	0.0065	1			
			1	IA	09/07/2015 00:32

I would say that most of our staff, because they come from global industry, they understand the need to internationalise

Internals\\ADI SP

No	0.0098	1			
			1	IA	09/07/2015 01:54

we have routine in terms of international committee that is routine, we have routine in terms of faculty internationalisation group we meet every two months

Internals\\Director

No	0.0217	1			
			1	IA	09/07/2015 01:31

Interesting comment. I think it depends on how you perceive work in those allocation models and how you actually perceive ... Well, no, how you perceive international. It is this idea of, "Well, is it anything different or is this just core activity that we should be doing?" and around saying, "Well, if it is research, then the research strategy, as a university to get to the top 50, it is not an internationalization strategy, we need to be doing ref-

Internals\\International partnerships officer

No	0.0290	4			
			1	IA	08/07/2015 00:51

for the director and me, it is a full time job, a routine activity. This is all that we do, we do not do anything else but this

			2	IA	08/07/2015 00:53
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In terms of implementing that we do some of the work, it is me more than him, as he is more strategic than I am so I do a lot operational stuff in terms of international partnerships

			3	IA	08/07/2015 00:53
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Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

there are people working on different strategic strands. We do the operational stuff and then completely separate to that we have university central support for this kind of things

4 IA 08/07/2015 00:55

Each faculty has an international person who is normally a senior academic who is responsible for implementing the strategy in their faculty

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

Nodes\\Development of dynamic capabilities

Document

Internals\\ADI BM

No	Coverage Number	Reference Coded	Modified On
	0.0242	2	
		1	IA 08/07/2015 00:19
we try to do is obviously work with the central team like in, our international office. Now that the strategy is in place, it took a while to get it off the ground.			
		2	IA 08/07/2015 00:20
we have had dips in international student recruitment over the past couple of years, which we really do want to address, that decline especially in the undergraduate level where we have been seeing more of dips.			

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

Nodes\\Existing routines

Document

Internals\\ADI BM

No	Coverage Number	Of Coding	Reference Coded	Modified On
	0.0732	5		
			1	IA 08/07/2015 00:23
most of our academics travel abroad for conferences and things, that also have been in the recent in research excellence framework returns				
			2	IA 08/07/2015 00:23
some of the regular activities that we do is to organise social events that brings together home student and we have introduced taster sessions for next academic year				
			3	IA 08/07/2015 00:26
Things were done on ad-hoc. There is certainly international group and that was all.				
			4	IA 08/07/2015 00:26
the way internationalisation happened was through personal connections and there was not much support from international office				
			5	IA 08/07/2015 00:31
One example is we have a Russian senior lecturer who has been here since the mid-nineties and the former head of this department did not gave her freedom about international and certainly did not encouraged her to go for it. She has lots of links in Russia but certainly was not encouraged to use those links, now we are getting				

No	Coverage Number	Of Coding	Reference Coded	Modified On
	0.0381	3		
			1	IA 08/07/2015 01:21
A lot of what I have done is ad hoc in terms of responding to things that comes to us or staff queries about what they should in terms of potential partnership it has been coming in from staff or from i				
			2	IA 08/07/2015 01:31
I think it probably would be an easy sell because and then what you are doing you are talking to people who want to do it and actually individuals in the departments are very good at working with their colleagues and				
			3	IA 08/07/2015 01:33
I think we did very well with the start of overseas students when they started to come into the country to study; there is a blip around 2003. It think there was a blip, I do not think that the university responded well enough to				

Internals\\ADI JL

No	Coverage Number	Of Coding
	0.0172	2

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

1 IA 09/07/2015 00:26

we have a huge industry network here, we provide up to 360-400 placements a year and a lot of those will be international

2 IA 09/07/2015 00:38

We have been designated by the Indian ministry of textile as centre of excellence for apparel for functional garments, which is very technical clothing. In the UK, it is the Bolton textile and we

Internals\\ADI KM

No 0.0304 2

1 IA 09/07/2015 00:50

Historically there have been tendency to develop relationships for ad hoc reasons because somebody here knows someone at another institution and that is the way it has worked. That is not always a bad thing, but

2 IA 09/07/2015 01:04

Before the PLs we have nominated individual in each school which could be PL or SL to do the work and how much allowance they had, what their roles were, that was determined by each individual academics school, who

Internals\\ADI KS

No 0.0857 3

1 IA 09/07/2015 01:10

we have been approached by certain ways by certain people because they are interested in our expertise so we are now developing that is slightly out of alignment from what they are expecting from us about early years of

2 IA 09/07/2015 01:11

The staff is working with several PhDs and they express interest to do that, once they are here, their executive groups want to work with us for school provision. So, there is potential for staff exchange, there is potential for

3 IA 09/07/2015 01:11

This is something that we have been looking for last two years, the particular example that I gave you. It is kind of, it coincided with the development of internationalisation strategy, people who have grown into new roles within that structure and have been working with us over a period of time. I think the two things have gone together, certainly we did not have this before, and this is relatively new. We have been involved in collaborative arrangement; we have had a connection in the United Arab Emirates, going back quite a few years

Internals\\Director

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

No	0.0123	1			
			1	IA	09/07/2015 01:41

I think my response is to say we operate in a culture where it is difficult to force people to do things. You need to do two things. You need to get people who are in leadership positions in faculties, making sure the message is going down, communicating or telling them that that's what has to happen. It is also around working across

Internals\DVC

No	0.0542	3			
			1	IA	08/07/2015 01:44

we have 500 law students being produced in Hong Kong every year for 20 years, which is interesting and one that we have never done anything with it. We never really exploited the alumni network, which must be significant now in very wealthy part of the world. We have never done anything with that. We have never gone

			2	IA	08/07/2015 01:49
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we have been concentrating on the home student base we have never paid enough attention to internationalisation

			3	IA	08/07/2015 01:51
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If you look, it is the strategic objective for 2017, now this new strategy has superseded that. The thing is about internationalisation, it was recognised that it is something important and targets were set and when I came in an looked at what was done, there was nothing in place that would support the delivery if KPI, deliver on implementation plan, so what we had to do was to put the structure in place. It is quite interesting since drive

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

Nodes\\External pressure to change

Document

Internals\\ADI JL

No	Coverage	Number	Reference Coded	Modified On
	0.0449	4		
		1	IA	09/07/2015 00:22
more importantly we internationalise because of our industry that we serve at Hollings which is apparel industry, tourism, hospitality are all global				
		2	IA	09/07/2015 00:23
there is a huge demand for our students and graduates, but they will no longer be working in the UK, they may work here but will be communication cross-culturally in global companies for most part. Even if they are in a				
		3	IA	09/07/2015 00:25
graduate destination will be across cross-cultures and cross-borders and we know that in order to make them employable we have to service that				
		4	IA	09/07/2015 00:26
we also believe that international collaboration is very enriching and that it provides the students with much better understanding of our global perspective of industry				

Internals\\ADI KM

No	Coverage	Number	Reference Coded	Modified On
	0.0592	5		
		1	IA	09/07/2015 00:40
I think a good modern university in higher education in the top of the game will have highest proportion, something about 15% is seen quality attribute among high performing universities				
		2	IA	09/07/2015 00:42
I think we try to attract high quality international students, it raises the quality of work done and I think for our own students it presents what we would expect from higher education experience				
		3	IA	09/07/2015 00:43
I think to have international students body is important and equally important to have international link with faculties overseas who can collaborate with us and we can develop our research at its best across range of				
		4	IA	09/07/2015 00:45
china is an important area for our centre for transport and environment, geographical system are couple of examples and there are a lot more. Europe in terms of funding bids. EU horizon 2020 and the collaboration that				
		5	IA	09/07/2015 01:02
in China there is push to get British students to get work placements and internship as it is good for our students and also adjusting to the needs of government				

Internals\\ADI KS

Coding Summary By Node: Interviews

Aggregate	Classification	Coverage	Number	Reference	Coded	Modified	On
		Of Coding	Number	Number	By		

No 0.0128 1
 1 IA 09/07/2015 01:08

There are kind of managerial exertations in terms of performance indicators which are laid in the policies and there is economic layer to that I think. And there is expectation for universities to engage in this nationally as

Internals\\Director

No 0.0287 4
 1 IA 09/07/2015 01:23

it is impossible to be a top 50 UK university if we don't internationalize.

2 IA 09/07/2015 01:23

we have a moral obligation to our students around that if we are training them to be graduates as world-class professionals, then how can you do that if you're not an internationalized university. Regardless of that, that if we're training people to be ready for a work force, whether that be the labour market in private or public

3 IA 09/07/2015 01:24

we have our research to be in the top 50 within the UK for that, then you have to be doing international, you have to be publishing to gain income from international sources, you have to be publishing ref papers, ref able

4 IA 09/07/2015 01:35

because of its changing its funding away from universities it is opening up a much broader market because of its funding policies. UK universities can no longer rely on UK government funding in the way that it could so it

Internals\\International partnerships officer

No 0.0192 3
 1 IA 08/07/2015 00:46

there is the demand from the market for this kind of thing that is driven by the market

2 IA 08/07/2015 00:49

we cannot expect for environment not to change for that long, we will have to take into account changes to meet the reality of particular time

3 IA 08/07/2015 00:50

I mean for example we might have chosen to work with a country which in five years will be too dangerous to work with as things change. In that case, we may need to review our strategy

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

Nodes\\Internal pressure to change

Document

Internals\\ADI JL

No	Coverage	Number	Reference	Coded	Modified On
	0.0144	2	1	IA	09/07/2015 00:22

The reason that we internationalise because the university demands it,

2	IA	09/07/2015 00:28
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I would say are pushing us quite hard, their internationalisation strategy is very ambitious, it covers a long period, quite hard to measure in short term. We are being pushed for the inside

Internals\\ADI KM

No	Coverage	Number	Reference	Coded	Modified On
	0.0079	1	1	IA	09/07/2015 00:44

I think research and knowledge is very interesting strand especially if we are going to hit our research objective to be in the top 50 by 2020

Internals\\ADI KS

No	Coverage	Number	Reference	Coded	Modified On
	0.0269	1	1	IA	09/07/2015 01:14

I think it is both international office and us. If you buy staff interest, things that come on and request funding opportunity or may be existing international partnership and opportunity come through there or it could be something that you are directed to do because of top line imperative from international office or DVC phone up

Internals\\ADI SP

No	Coverage	Number	Reference	Coded	Modified On
	0.0140	1	1	IA	09/07/2015 01:51

I think we should be preparing our students to be global citizens, if we are going to do that we need to prepare them through international flavour from student and staff experience and through programme design

Internals\\Director

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

No 0.0148 2

1 IA 09/07/2015 01:22

For me it is quite simple, the academic vision says we want to be in the top 50

2 IA 09/07/2015 01:23

we have a moral obligation to our students around that if we are training them to be graduates as world-class professionals, then how can you do that if you're not an internationalized university. Regardless of that, that if we're training people to be ready for a work force, whether that be the labour market in private or public

Internals\International partnerships officer

No 0.0124 1

1 IA 08/07/2015 00:46

we recently have new DVC, Mr X is the director of international and I was appointed. There is a big push internally to do more international work to bring in staff with experience with international portfolio so

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

Nodes\\Nature of dynamic capabilities

Document

Internals\\ADI BM

No 0.0432 4

1 IA 08/07/2015 00:28

new international strategy is very different, it is organised, and it gives direction to things and are planned with what I think are reasonable calls and in some ways it is even modest because the strategy is for ten years

2 IA 08/07/2015 00:35

To make international work, yes we want cooperation between centres and faculties and what everyone is doing. I think you want to keep a degree of common cause where the strategy would go

3 IA 08/07/2015 00:38

I know new VC is keen and interested for international as well

4 IA 08/07/2015 00:40

my view is you keep pushing at keep planning the strategy. Once this strategy is over, you start the next phase, you keep the momentum in building from the success your hopefully will achieve

Internals\\ADI DW

No 0.0164 2

1 IA 08/07/2015 01:22

In my strategy for this faculty, I have tried to develop a shared vision about where we are going and to get staff buying this idea

2 IA 08/07/2015 01:24

International office are developing their strategy about who they would want to partner with. I think it is that clash. International office are wanting us to pitch quite high and I understand that that is where should be

Internals\\ADI KM

No 0.1413 4

1 IA 09/07/2015 00:57

research and knowledge exchange, we select institution in terms of research work, so I would hope that we have sustainable relations with them and again some might drop off and some might develop new partnership

2 IA 09/07/2015 00:58

Coding Summary By Node: Interviews

Aggregate	Classification	Coverage	Number	Reference	Coded	Modified	On
		Of Coding	Number	Number	By		

In terms of student and staff experience, I think, to my mind in 2025, we would be able to offer opportunities for exchange, study and internship or placements overseas as a matter of course. At the moment there are not standards in place, but I think it should be leading institution here where very often the expectations to go

3 IA 09/07/2015 01:05

The likelihood is that it will take 5-10 years for us to be where we want to be realistically. For the first 5 years of strategy quite a lot of change, new developments that this team will see. I do not think that there is any danger that there will be inertia at the point, I hope faculty becomes steady in student and other strategic strands

4 IA 09/07/2015 01:06

What we have go at the moment is strategy which guide us for ten years, I would think that at mid-point around 2020 we will have experience of implementing precise policies to support the internationalisation strategy and will need or review, review targets as well. Although the strategy is till 2025, my feel is that we should review it quite significantly by 2020 just to see if it is still working and I think it will need senior management input and direction at that point to ensure that we are managing the development of the strategy

Internals\\ADI KS

No 0.0440 1

1 IA 09/07/2015 01:22

Is more top-down than it has to be, that is helpful. I would also think that there has to be room for bottom-up approach in the model. It probably is because the way this has been introduced because it feels as there is quite collaboration the way it is running through, it is not. The style the way the strategy is put in place, that is helpful in securing buying from variety of people across the university at different level. Although it is top-down, it

Internals\\DVC

No 0.0349 2

1 IA 08/07/2015 01:51

If you look, it is the strategic objective for 2017, now this new strategy has superseded that. The thing is about internationalisation, it was recognised that it is something important and targets were set and when I came in an looked at what was done, there was nothing in place that would support the delivery if KPI, deliver on

2 IA 08/07/2015 02:01

It is not easy but it is going to happen

Internals\\International partnerships officer

No 0.0240 2

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

1 IA 08/07/2015 00:59

This strategy went through every faculty before it was approved in detail, went through directors, executives and board of governors. It is not as if we just went to the board of governor and then forced onto every one.

2 IA 08/07/2015 01:15

a lot of things are happening, we just need the resources to allow us to achieve the set of objective together with someone who has the power to push for it. We really need to focus on the identified markets, that is what.

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

Nodes\\New routines

Document

Internals\\ADI BM

No	Coverage Number	Of Coding	Reference Coded	Modified On
	0.0524	5		
			1	IA 08/07/2015 00:21
Some of the things we are doing in addition to traditionally to enrol student onto our MA and BA degrees is running things like summer schools				
			2	IA 08/07/2015 00:25
I started in November X. Internationalisation is not high priority at the university, vast majority of students are going to be local students, it was in the last couple of years there is renewed interest in terms of				
			3	IA 08/07/2015 00:30
Part of it is trying to convince them that world had shifted and changed and we need to be up in our game if we want to be competitive and keep our jobs at the end of the day				
			4	IA 08/07/2015 00:37
we need to move away from the idea that are just a regional university, this is very much engrained, and this is understandable				
			5	IA 08/07/2015 00:41
The change is a slow process embedding into the faculty				

Internals\\ADI JL

No	Coverage Number	Of Coding	Reference Coded	Modified On
	0.0323	2		
			1	IA 09/07/2015 00:25
We also have to use international case studies, we need to be sure that our graduates will understand the global nature of business they are going to enter and they will also be able to work in international environment				
			2	IA 09/07/2015 00:35
International office have said to us that we want to develop partnership in China; the first one we could not see opportunities for us. Recently the DVC went to China to X, it is very prestigious, and we are now developing				

Internals\\ADI KM

No	Coverage Number	Of Coding	Reference Coded	Modified On
	0.1863	7		
			1	IA 09/07/2015 00:48

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

our recent work in china we are looking to establish not just articulation agreement but also work with institution where have research fit so that we have reason to go to China which is not purely student

2 IA 09/07/2015 00:49

it is relatively new. We are working with i strategy for two reasons. First, we get the intelligence about the institutions that we should be working with that is based on the intelligence by i they may already be linked

3 IA 09/07/2015 00:56

I think we will develop strong develop strong relationships with those bodies and we will be working with instititon that have rather stable student number coming in. what that will mean is that our support systems here for international students will be geared up for those transitions and the experience will be achievable and

4 IA 09/07/2015 00:58

In terms of student and staff experience, I think, to my mind in 2025, we would be able to offer opportunities for exchange, study and internship or placements overseas as a matter of course. At the moment there are not standards in place, but I think it should be leading institution here where very often the expectations to go

5 IA 09/07/2015 00:59

First of all I think we are going to get all staff to travel, I think what we should reasonably expect is the numbers will increase that we are basically low in terms of staff mobility. I think there is likelihood of the potential of staff mobility will increase as gradually move towards achieving research objectives where international

6 IA 09/07/2015 01:01

In our strategic plan, we have been granted four PLs to supports me in my role and those PLs have half time role for their normal duties they are in half time role in developing international activities. They are four because there are four academic schools and we have a PL in each of the academic school that has got some

7 IA 09/07/2015 01:04

The structure we are moving towards is to have associate team overseeing the work of four PLs in each of the academic school and in each one of those school PL is the focal point for international activity within that school. So, we are trying to extend internationalisation work to a wider group of people not just getting it done be PLs, it has got to be go right into the hearts of each subject grouping and embedding it their routines. What

Internals\ADI KS

No 0.0519 1

1 IA 09/07/2015 01:11

This is something that we have been looking for last two years, the particular example that I gave you. It is kind of, it coincided with the development of internationalisation strategy, people who have grown into new roles within that structure and have been working with us over a period of time. I think the two things have gone together, certainly we did not have this before, and this is relatively new. We have been involved in collaborative arrangement; we have had a connection in the United Arab Emirates, going back quite a few years

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

Internals\DVC

No 0.0408 4

1 IA 08/07/2015 01:42

So as a university, as with all other universities that is about recruitment because we need to bring students from abroad, most universities do it for money, we are not doing that. We assume that everything covers its cost, if we can bring in money that is fine. That is not the drive for us, for us the drive is about ensuring that we

2 IA 08/07/2015 01:45

Therefore, we do need to develop our TNE activities where students get our awards but in overseas locations.

3 IA 08/07/2015 01:47

The last strand is about staff, we need to ensure that all of our staff has international experience.

4 IA 08/07/2015 01:48

the thing is they would never leave the region in the first place, how we can ensure that they have life changing experience, it is about sending them overseas, and once they come back they have different experience that

Internals\International partnerships officer

No 0.0555 5

1 IA 08/07/2015 00:42

what we are trying to do is internationalising the whole university across the board rather than just focusing on recruiting

2 IA 08/07/2015 00:48

each faculty has developed its own international strategy that we have worked together with them in the development phase. Each of the faculty works towards overarching university wide strategy

3 IA 08/07/2015 00:49

We wouldn't be reviewing any time soon, as it has just got approved but I don't know exactly maybe in couple of year time to make it fit for purpose

4 IA 08/07/2015 01:04

we have been asked to work with the college of African wildlife management in Tanzania, if we want to do that we will really have to go to Tanzania and Nigeria and Ghana

5 IA 08/07/2015 01:15

My job did not exist before, nobody was doing this job. X's predecessor was primarily focused on focused in recruitment; she did not do the other things. We didn't had anyone at DVC's level, who have changed the things. We can change things, we are good institution, a lot of things are happening, we just need the resources

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

Nodes\\Obstacles to new routines

Document

Internals\\ADI BM

No	Coverage	Number	Reference	Coded	Modified On
	0.0351	4			
			1	IA	08/07/2015 00:24
We have been active trying to promote our students to go out more on exchange that has not always been easy, they do not want to take advantage of that opportunity to go abroad.					
			2	IA	08/07/2015 00:29
For any large organisation, it is difficult in term of introducing change; it is the question is about how you get staff buying this idea.					
			3	IA	08/07/2015 00:33
yes, you can break a routine eventually but it really comes down to how flexible is staff.					
			4	IA	08/07/2015 00:39
we have to look at domestic issues, immigration concerns and further restrictions on immigration come in that creates a problem obviously.					

Internals\\ADI DW

No	Coverage	Number	Reference	Coded	Modified On
	0.0433	4			
			1	IA	08/07/2015 01:20
The department has to take priority, you have students and staffing issues and since I have internationalisation, I cannot spend as much time as I would like to.					
			2	IA	08/07/2015 01:34
a lot of students came in we did spend more time with them, we had additional research seminars, we did some orientation activities, extra language support and now could not maintain that spend because we are not.					
			3	IA	08/07/2015 01:37
we do not have the room and that is one of the reasons why I am not actually necessarily pushing the acquisition strategy of i because we do not the room.					
			4	IA	08/07/2015 01:38
if we have a good potential partner that is promising and is big, we will have discussion in the executive group. If that potential partner, we would always have to look to bring in new staff in to cover it because we do not.					

Internals\\ADI JL

No	Coverage	Number	Reference	Coded	Modified On
	0.0520	4			
			1	IA	09/07/2015 00:28

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

Our share of international students have dropped in the last ten years, I used to lead master's programme, when I took that over, I would say that about 70% of our students were international including European. Now

2 IA 09/07/2015 00:35

we have not had success in getting students from the US. They say we will not provide accommodation for visiting students, and most American parents would not send their children on the off chance that when arrive

3 IA 09/07/2015 00:37

India has been much more difficult because the university is very risk averse; I am saying that it is a bad thing; it is difficult thing because India for us is a key market and we see a huge market for apparel industry

4 IA 09/07/2015 00:39

i they have KPIs for study abroad; we do not have sufficient resources and funding for student.

Internals\\ADI KM

No 0.0256 2

1 IA 09/07/2015 00:55

It is very difficult to predict about what will happen as we have quite strong influences from the government in terms of visa, it is hard to speak with confidence about what will happen

2 IA 09/07/2015 01:00

I think there is some inertia and resistance to change about from staff who are very well established here, not they are doing a bad job, in terms of expectation they probably see their job as coming to delivering teaching

Internals\\ADI KS

No 0.0175 1

1 IA 09/07/2015 01:20

We already have people knocking on our doors and we have to turn them away because we don't have the capacity that is an issue. So, there needs to be more subtle understanding of where different faculties are as a

Internals\\Director

No 0.0194 2

1 IA 09/07/2015 01:34

When the government makes it harder and brings in immigration control that is fundamentally targeted at less reputable colleges, it is fundamentally impacting the attractiveness of the UK and of UK universities to be able

2 IA 09/07/2015 01:41

I think my response is to say we operate in a culture where it is difficult to force people to do things. You need to do two things. You need to get people who are in leadership positions in faculties, making sure the message is going down, communicating or telling them that that's what has to happen. It is also around working across

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

Internals\\DVC

No	Coverage Number	Of Coding	Reference Coded	Modified On
	0.0332	3		
			1	IA 08/07/2015 02:00
it is about raising awareness and including those other staff and actually there is huge what I call psychological operation to change attitude and behaviours. So, it is changing attitudes and behaviours particularly of those				
			2	IA 08/07/2015 02:02
One of the blocking point is always the process of ensuring the due diligence, they are robust partners so it is fine with the large universities and it is not so fine with small private ones				
			3	IA 08/07/2015 02:20
the UK visa has set very negative image of the UK, which actually is not true. So we have to overcome attitudes and behaviours that are build up by a combination of UKBA and the way the media makes the story				

Internals\\International partnerships officer

No	Coverage Number	Of Coding	Reference Coded	Modified On
	0.0489	3		
			1	IA 08/07/2015 00:58
there are some people who don't like international recruitment and say that we should focus on British students. I think they are in minority, the majority are welcoming this new move and they agree what is in the				
			2	IA 08/07/2015 01:06
We were looking recently, that did not go ahead, to develop a dual degree with a overseas institution to being students here. One of the issue was to house those five hundred students, where we are going to put them. It				
			3	IA 08/07/2015 01:07
If we recruit lots of students, where are we going to put them. At the moment we are not position to do anything, it is a nice problem to have, we are not currently in the position. We do send people from the international office, it is expensive and time consuming, staff time that requires cover. The biggest cost is the				

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

Nodes\\Path dependence

Document

Internals\\ADI KM

No	0.0144	1			
			1	IA	09/07/2015 00:46

I think there has been some historical activity where, for example, engineering has been quite a strong area for recruitment for international students, so that has come quite naturally and relationships are developed with

Internals\\ADI KS

No	0.0134	1			
			1	IA	09/07/2015 01:08

I was dependant of a X personnel, I have always been quite open and brought up in various location travelling the world. I have kind of personal interest in internationalisation perspective about where I come from and it is

Internals\\Director

No	0.0124	1			
			1	IA	09/07/2015 01:34

My whole career. I graduated and then I live overseas teaching English in places like China and Kazakhstan and then came back and worked for a private education company. Since 2001 I have worked in universities in international, that started off as international recruitment, which is 2001 is what universities did. My career has

Internals\\DVC

No	0.0168	1			
			1	IA	08/07/2015 01:49

I arrived a year ago in July 2013, and picked up due to my experience in internationalisation, picked up the agenda, and championed it, new initiatives need sponsorship. We then appointed new international director

Internals\\International partnerships officer

No	0.0325	1			
			1	IA	08/07/2015 00:57

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

I used to work the university of X before I came here two years ago, before that I was there for four year in the international office where I was doing the same kind of thing. I then went to X university, I have done this at various level for about ten year now. Mr. X has previously at X, X and X, he came here as the director of the international office from Y. He has a lot experience. DMC likewise was deputy vice chancellor at the X

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

Nodes\\Problem with dynamic capabilities

Document

Internals\\ADI DW

No	0.0196	1			
			1	IA	08/07/2015 01:36

The thing that I am struggling with is that if everything used to be in department and now a lot of it is centralised it does not appear to me if the departments and faculties have gained any benefit from there being

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

Nodes\\Routines embeddedness

Document

Internals\\ADI DW

No	Coverage Number	Of Coding	Reference Coded	Modified On
	0.0782	3		
			1	IA 08/07/2015 01:22

I am meeting this afternoon to set this in motion to set regular meetings to have regular meeting.

			2	IA 08/07/2015 01:30
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My idea is to integrate international within the departments more and I think that we have to make it work that somebody who represents international from each department and we have got that. We established who those people are and we now need to start meeting together because my take on it is that if we get the buying

			3	IA 08/07/2015 01:40
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That is a good point, I would not want it to be ad hoc, be integrated into the faculty because one of the key strategic strands is about staff experience and internationalisation of curriculum. I think internationalisation has to be embedded into what everybody does, I do not think it should be something stand alone, outside of faculty activity, so I want these programmes to be embedded, you want the students here to be part of this culture and I do not think it is good to have things outside faculty. So, if we have the resources, it could be embedded

Internals\\ADI JL

No	Coverage Number	Of Coding	Reference Coded	Modified On
	0.0027	1		
			1	IA 09/07/2015 00:25

we have to embed internationalisation in curriculum

Internals\\ADI KM

No	Coverage Number	Of Coding	Reference Coded	Modified On
	0.0897	2		
			1	IA 09/07/2015 00:58

In terms of student and staff experience, I think, to my mind in 2025, we would be able to offer opportunities for exchange, study and internship or placements overseas as a matter of course. At the moment there are not standards in place, but I think it should be leading institution here where very often the expectations to go

			2	IA 09/07/2015 01:06
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What we have go at the moment is strategy which guide us for ten years, I would think that at mid-point around 2020 we will have experience of implementing precise policies to support the internationalisation

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

strategy and will need or review, review targets as well. Although the strategy is till 2025, my feel is that we should review it quite significantly by 202 just to see if it is still working and I think it will need senior management input and direction at that point to ensure that we are managing the development of the strategy

Internals\\ADI KS

No	Coverage Number	Of Coding	Reference Coded	Modified On
	0.0556	2		
			1	IA 09/07/2015 01:18

An important thing for us is to align different innovation into one if that makes sense. I would rather internationalisation was part and parcel of other kind of things that we do, and it is not a bolt on activity, I rather have it as something that we all would do, it is no bolt on, it is not additional. It is not going to be like for

			2	IA 09/07/2015 01:21
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I don't know, it is that difficult. How things become embedded into everyday process for those kind of things, there is always a gulf between top line figure you area given and between the process, I think there is a lot more work to be done across top policy alignment looking at differentiation between faculties because those

Internals\\Director

No	Coverage Number	Of Coding	Reference Coded	Modified On
	0.0316	2		
			1	IA 09/07/2015 01:32

I think that's something that we are working through at the moment. I think we've got to stop seeing it as additional activity and seeing it as core activity and strategic decisions that we make. I appreciate that's very different at an individual level as an academic who's got a massive teaching load, who's got marketing to do,

			2	IA 09/07/2015 01:42
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One of the things we want to be doing, one of the things we haven't got in place and one of the things we want to be doing is around, certainly, the Associate Deans International. I actually think it is a level below the PL role, getting that network of people together, sharing their ideas and leading through best practice. Again, we kind of talked about it, facilitating something the way that kind of stuff that I think is our position to do, I see it

Internals\\DVC

No	Coverage Number	Of Coding	Reference Coded	Modified On
	0.0535	3		
			1	IA 08/07/2015 01:50

As part of the process, we drafted our internationalisation strategy we want to bring in staff to workshops in order to get ideas about what we are doing now and where we should be in 2020, what is the vision, what should we look like in 2020 and then what they think they could contribute. From that, we then put together

			2	IA 08/07/2015 01:52
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Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

Part of it is about leadership motivation, we have structures in place. I champion it and so do the director of international work closely together and drive the whole thing forward, so there is that. The second aspect is having the right structures in place, so we have an international strategy committee, on which all the

3 IA 08/07/2015 01:59

Before, if staff wanted to do something and ran with it and they did not have any champion it to say do more, most of the staff did their own work. We are now trying to get into the workload model, which would mean

Internals\International partnerships officer

No 0.0174 3

1 IA 08/07/2015 01:01

What we really need to do is to embed the processes in; we need to get our own process and structures in place

2 IA 08/07/2015 01:02

All that has to be first, as the strategy states that in the first couple of year it is around making internally in a fit state to do business internationally

3 IA 08/07/2015 01:02

we are working on, like changing our regulations, investing in new information technology systems.

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

Nodes\\Sensing and seizing capabilities

Document

Internals\\ADI KM

No	Coverage	Number	Reference	Coded	Modified On
	0.0658	3			
			1	IA	09/07/2015 00:48
our recent work in china we are looking to establish not just articulation agreement but also work with institution where have research fit so that we have reason to go to China which is not purely student					
			2	IA	09/07/2015 00:57
research and knowledge exchange, we select institution in terms of research work, so I would hope that we have sustainable relations with them and again some might drop off and some might develop new partnership					
			3	IA	09/07/2015 01:05
The likelihood is that it will take 5-10 years for us to be where we want to be realistically. For the farthest 5 years of strategy quite a lot of change, new developments that this team will see. I do not think that there is any danger that there will be inertia at the point, I hope faculty becomes steady in student and other strategic					

Internals\\ADI KS

No	Coverage	Number	Reference	Coded	Modified On
	0.0440	1			
			1	IA	09/07/2015 01:22
Is more top-down than it has to be, that is helpful. I would also think that there has to be room for bottom-up approach in the model. It probably is because the way this has been introduced because it feels as there is quite collaboration the way it is running through, it is not. The style the way the strategy is put in place, that is helpful in securing buying from variety of people across the university at different level. Although it is top-down, it					

Internals\\ADI SP

No	Coverage	Number	Reference	Coded	Modified On
	0.0174	1			
			1	IA	09/07/2015 01:55
So those things are routines, mostly it is opportunistic, so we get opportunities from the international office or opportunities from our colleagues then we build on them. Long term I do not think it will be like that, it will					
	0.0650	4			
			1	IA	09/07/2015 01:28
in terms of the strategy with the five point plan, then we talk about our focusing so we said, "Look, these are the markets where we're going to prioritize our activity." So recognizing that, actually, this is where these					

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

2 IA 09/07/2015 01:30

Then, in the main areas such as China, Europe, etc., that have country strategies which then underpin and say, "This is how we're going to focus our activity." It is about getting people that guide to what it is we want to do and stopping them going off. It is not about locking down things, it is about saying, "We have minimal resources; we need to maximize the bang for our buck so let's focus our activities." Faculties then have their

3 IA 09/07/2015 01:36

It was about the balance between its potential to deliver and its delivery now, and that taking into broad, looking at the whole variety of sources across the five strands to come up with that list. There was a point scale used. Then we've also got it maxed out with faculty, then that recognize, that say someone will have a lot more opportunities in the USA, but actually going into China isn't that opportune for them. It also looks at where

4 IA 09/07/2015 01:50

because some people you're not going to change. It is about saying, "Right, who are the people that you can work with? Who can you generate leverage and change with?" then it is about shouting about what you're doing and about people going, "Oh, hang on, this is happening. This is possible." I think that's the way to

Internals\\DVC

No 0.0203 1

1 IA 08/07/2015 01:46

One of the things is to look into national scholarships so for example, in two emerging economies, we are not in those markets now, and we will miss the boat. Vietnam is one, they have national PhD scholarship for their staff in their universities funded by the world bank, which essentially are about providing opportunities for their staff

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

Nodes\\Shift from old to new routines

Document

Internals\\ADI BM

No	Coverage	Of Coding	Reference Coded	Modified On
	0.0116	1		
		1	IA	08/07/2015 00:34

we are good at self-starting and I would find reasonably quick about what works and what does not. If something does not work it needs to be changed. pattern of what we are doing

Internals\\ADI DW

No	Coverage	Of Coding	Reference Coded	Modified On
	0.0439	2		
		1	IA	08/07/2015 01:25

If we have already got established relationship, I think it is worthwhile development, because the resources to develop this relationship would be minimal, if you spend a lot of money recruiting. It is like any business, it is much cheaper to keep the contact that we have and upsell and cross sell rather than thinking that they are not

		2	IA	08/07/2015 01:27
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This is where structure needs to come in place, at the moment we are kind of working moving from what used to happy to what I would like to see happening. What used to happen was international was a kind of discrete

Internals\\ADI JL

No	Coverage	Of Coding	Reference Coded	Modified On
	0.0342	2		
		1	IA	09/07/2015 00:32

We now have all the job description has the requirement to travel, so any body that we take on has to agree that s/he will be willing to travel as a part of their job role. It is not to say that will, they should be able to travel

		2	IA	09/07/2015 00:38
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In terms of what we are doing currently, each program has an international project for second year, every student can engage in international collaboration. We have a lot of contacts, partnerships with other

Internals\\ADI KM

No	Coverage	Of Coding	Reference Coded	Modified On
	0.1181	5		
		1	IA	09/07/2015 00:48

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

our recent work in china we are looking to establish not just articulation agreement but also work with institution where have research fit so that we have reason to go to China which is not purely student

2 IA 09/07/2015 00:56

I think we will develop strong develop strong relationships with those bodies and we will be working with institution that have rather stable student number coming in. what that will mean is that our support systems here for international students will be geared up for those transitions and the experience will be achievable and

3 IA 09/07/2015 00:57

research and knowledge exchange, we select institution in terms of research work, so I would hope that we have sustainable relations with them and again some might drop off and some might develop new partnership

4 IA 09/07/2015 00:58

In terms of student and staff experience, I think, to my mind in 2025, we would be able to offer opportunities for exchange, study and internship or placements overseas as a matter of course. At the moment there are not standards in place, but I think it should be leading institution here where very often the expectations to go

5 IA 09/07/2015 00:59

First of all I think we are going to get all staff to travel, I think what we should reasonably expect is the numbers will increase that we are basically low in terms of staff mobility. I think there is likelihood of the potential of staff mobility will increase as gradually move towards achieving research objectives where international

Internals\\ADI KS

No 0.0652 3

1 IA 09/07/2015 01:14

I think it is both international office and us. If you buy staff interest, things that come on and request funding opportunity or may be existing international partnership and opportunity come through there or it could be something that you are directed to do because of top line imperative from international office or Myszka phone

2 IA 09/07/2015 01:15

We already have some staff development workshops in reaction to assist the faculty's international group, we use the X centre, the people from there talked to staff from education and health to internationalise the

3 IA 09/07/2015 01:17

We have new faculty structure that is put in place because new principle lecturer with international remit for each department that is still to unfold, We have name, structures in place and now we are going to have this new faculty international group who will meet and they will be talking about he operationalization through

Internals\\International partnerships officer

No 0.0319 4

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By
	1	IA	08/07/2015 00:44
The world is becoming increasingly global. If students are to be in the competitive job market, this has to be reflected in our students have to reflect the fact that we are university of world-class professionals			
	2	IA	08/07/2015 00:47
We had an internationalisation strategy couple of years ago before I started here but it was not very deep in the level of detail and, now we have new strategy, it is improved and approved by the board of governors in March.			
	3	IA	08/07/2015 00:54
we have eight faculties here at the , each of them is implementing the international strategy in their faculty			
	4	IA	08/07/2015 01:04
There are many opportunities there, it is difficult not to be distracted,			

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

Nodes\\What dynamic capabilities do

Document

Internals\\ADI BM

No	Coverage Number	Reference Coded	Modified On
	0.0260	2	
		1	IA 08/07/2015 00:20

we have had dips in international student recruitment over the past couple of years, which we really do want to address that decline especially in the undergraduate level where we have been seeing more of dips

		2	IA 08/07/2015 00:36
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The key thing is marketing, how we market ourselves abroad, my sense is that we don't necessarily have the international marketing experience we are bringing in new people that might change

Internals\\ADI DW

No	Coverage Number	Reference Coded	Modified On
	0.0099	1	
		1	IA 08/07/2015 01:26

I use those targets and I have applied them into the business school, I think they probably are achievable but I think we need to have the structures in place and I think we need more resources

Internals\\ADI JL

No	Coverage Number	Reference Coded	Modified On
	0.0549	2	
		1	IA 09/07/2015 00:31

We have a lot of international partnerships, when I took on the international role, we actually rationalised a lot of those. We had huge amount of paperwork with other universities and never did anything with them, we just had MOUs and we did not actually do anything with the partnerships, say someone visited a university in China and signed an MOU and found that it was not what we needed. We decided that we needed to have a list of

		2	IA 09/07/2015 00:35
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International office have said to us that we want to develop partnership in China; the first one we could not see opportunities for us. Recently the DVC went to China to X, it is very prestigious, and we are now developing

Internals\\ADI KM

No	Coverage Number	Reference Coded	Modified On
	0.1991	8	
		1	IA 09/07/2015 00:47

Now we have to move to situation where we more actively manage our relationships and make use of central resources to support that, for example, we have identified key market where we can work in terms of particularly student recruitment in China, India and Malaysia and we are actively working in those market and

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By
	2	IA	09/07/2015 00:48
our recent work in china we are looking to establish not just articulation agreement but also work with institution where have research fit so that we have reason to go to China which is not purely student			
	3	IA	09/07/2015 00:50
resources are limited, we cannot support every single international development in international activities, and therefore we need to work with international office strategic points			
	4	IA	09/07/2015 00:56
I think we will develop strong develop strong relationships with those bodies and we will be working with instition that have rather stable student number coming in. what that will mean is that our support systems here for international students will be geared up for those transitions and the experience will be achievable and			
	5	IA	09/07/2015 00:57
research and knowledge exchange, we select institution in terms of research work, so I would hope that we have sustainable relations with them and again some might drop off and some might develop new partnership			
	6	IA	09/07/2015 00:58
In terms of student and staff experience, I think, to my mind in 2025, we would be able to offer opportunities for exchange, study and internship or placements overseas as a matter of course. At the moment there are not standards in place, but I think it should be leading institution here where very often the expectations to go			
	7	IA	09/07/2015 01:01
In our strategic plan, we have been granted four PLs to supports me in my role and those PLs have half time role for their normal duties they are in half time role in developing international activities. They are four because there are four academic schools and we have a PL in each of the academic school that has got some			
	8	IA	09/07/2015 01:04
The structure we are moving towards is to have associate team overseeing the work of four PLs in each of the academic school and in each one of those school PL is the focal point for international activity within that school. So, we are trying to extend internationalisation work to a wider group of people not just getting it done be PLs, it has got to be go right into the hearts of each subject grouping and embedding it their routines. What			

Internals\\ADI KS

No 0.1933 9

	1	IA	09/07/2015 01:09
for our faculty, we are following obviously the universities' strategic strand that exists at the moment. We are following the KPIs along those strategies, our vision at the moment is to try and fulfil key bits of that strategy			
	2	IA	09/07/2015 01:10
it is very important for us aligning with the university's strategies, so it is about alignment, it is about strategic vision how we can marry that with the university provision as a whole			
	3	IA	09/07/2015 01:13

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

in terms of staff appointment for last 2-3 year we have probably five or six new people bringing in more international perspective I think and that is helpful. I think, we are more conscious of looking at internationalisation as part of staff appointment process, not just in terms of appointing someone with, but

4 IA 09/07/2015 01:13

We have now reinstated the international group with all these principle lecturers sitting in that room, we are yet to meet formally and I am hoping that will raise the whole level of understanding and operational capability within each of that department because we have put a key internationalisation role with principle lecturer

5 IA 09/07/2015 01:14

That will help us to address key areas and help us to address ways that are more strategic given the structure imperative that we have put in place

6 IA 09/07/2015 01:15

We already have some staff development workshops in reaction to assist the faculty's international group, we use the CELT centre, the people from there talked to staff from education and health to internationalise the

7 IA 09/07/2015 01:18

An important thins for us is to align different innovation into one if that makes sense. I would rather internationalisation was part and parcel of other kind of things that we do, and it is not a bolt on activity, I rather have it as something that we all would do, it is no bolt on, it is not additional. It is not going to be like for

8 IA 09/07/2015 01:19

I would like it to be integrated with the way in which people see the task that needs to undertake. We need to build in the support for international students and that needs ot be considered, in that sense I might say yes internationalisation should be thought of as a whole when we are looking at the needs because we know that

9 IA 09/07/2015 01:22

Is more top-down than it has to be, that is helpful. I would also think that there has to be room for bottom-up approach in the model. It probably is because the way this has been introduced because it feels as there is quite collaboration the way it is running through, it is not. The style the way the strategy is put in place, that is helpful in securing buying from variety of people across the university at different level. Although it is top-down, it

Internals\\ADI SP

No 0.0297 1

1 IA 09/07/2015 01:53

The way we operationalise is that we have principle lecturer whose role is to look at the internationalisation and he is the facilitator for our staff. That facilitation could be for any of the strategic strands, so for instance if a programme or module lead is interested in linking with other, another country for provision of they want to

Internals\\Director

No 0.1829 15

1 IA 09/07/2015 01:25

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number Of Coding	Reference Coded Number By	Modified On
I think that, in terms of how you do it, I think first of all it is about ensuring that there is strategic cover for it and that it is very clearly positioned that it is about the achievement of the academic vision. Once the academic vision was put in place, then we very much linked the idea of internationalization to that. It is about making sure there is an interconnectedness within the messaging and within the strategies. Then it is about then saying	2	IA	09/07/2015 01:25
It is about ensuring that it is everywhere in all the internal communication channels.	3	IA	09/07/2015 01:26
We need to focus our activity and get multiple bangs for our buck." One of the key aspects to delivering what the strategy is about, in terms of operationalization, is about working with partners overseas and saying, "How	4	IA	09/07/2015 01:27
What we did in our five point plan was to try and say, and with the vision say, that's research, that's teaching so that links it to the academic vision." but then also having a very clear five point plan which is where we link	5	IA	09/07/2015 01:28
in terms of the strategy with the five point plan, then we talk about our focusing so we said, "Look, these are the markets where we're going to prioritize our activity." So recognizing that, actually, this is where these	6	IA	09/07/2015 01:30
Then, in the main areas such as China, Europe, etc., that have country strategies which then underpin and say, "This is how we're going to focus our activity." It is about getting people that guide to what it is we want to do and stopping them going off. It is not about locking down things, it is about saying, "We have minimal resources; we need to maximize the bang for our buck so let's focus our activities." Faculties then have their	7	IA	09/07/2015 01:36
I was appointed and the first thing I had to do was to deliver an internationalization strategy, which we did and got approved in six months, that was going out listening to people. We ran workshops that were across the	8	IA	09/07/2015 01:37
We put all of that into the strategy and we then went out and set the KPIs for the faculties for recruitment and scaled them year on year, then that was wrapped up into the strategy and the business case, etc, from there. We will then, although we don't have them set right now, we will have review points of the internationalization strategy. 10 years is a long time for anything internationally so what we need to do is we will have review points	9	IA	09/07/2015 01:38
Our role is to give advice and guidance. It is also our role to put in policies, processes, and assistance in order to be able to make it happen. For example, it is not a specific part of the strategy, but it is kind of a subset, it is summer schools, this is a great way of being able to raise profile with partners, etc, basically saying, "Right. We	10	IA	09/07/2015 01:38

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

It is also about then putting in strategies/operational plans for recruitment, study abroad, and transnational education, and about them, again, linking into those operational plans that we talked about for the strand

11 IA 09/07/2015 01:43

it is about us trying to advise them on what they may think work, but often they know their faculties better than we do. It is about that discussion and negotiation with them, giving advice, and putting in initial resources, then seeing if we can get things going, then proving they work, and then bringing in more resources. Look at the ~~way back to the work allocation model, which is a thing I don't really think is a good thing to talk about because~~

12 IA 09/07/2015 01:45

The stuff If we then change to a more research intense university, then the profile is going to change and it is about ~~then ground saving. It is about people understanding~~

13 IA 09/07/2015 01:46

If we're a top 50 university, we're going to have a very different profile, a very different balance. Possibly are we going to expand the university to include international students? No because the last thing we want is more

14 IA 09/07/2015 01:47

For us, at the moment right now, it is about getting traction in the strategy and it is about getting buy in around a level of people within the Associate Dean International, a group of people like the PLs who are going to deliver

15 IA 09/07/2015 01:50

because some people you're not going to change. It is about saying, "Right, who are the people that you can work with? Who can you generate leverage and change with?" then it is about shouting about what you're doing and about people going, "Oh, hang on, this is happening. This is possible." I think that's the way to

Internals\\DVC

No 0.0137 1

1 IA 08/07/2015 02:04

We have a strategic planning in process and we have a process of looking at the business, and this is of strategic importance to the university. It has been taken through the committee, have a gradual investment overtime, it

Internals\\International partnerships officer

No 0.0145 1

1 IA 08/07/2015 00:55

We in the central services work very closely with those international people to know and to implement strategy in their faculty, so we are leading as a group of us under X, we are leading from the central unit and working

Coding Summary By Node: Interviews

Aggregate Classification	Coverage Number	Reference Coded	Modified On
	Of Coding	Number	By

Country	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	12 Y change
Algeria	398	409	509	432	430	335	261	240	190	185	181	234	-41%
Angola	159	163	187	198	249	286	332	319	304	261	275	303	91%
Botswana	642	658	657	612	598	591	710	669	625	580	626	539	-16%
Cameroon	242	275	341	389	436	530	484	503	531	621	608	608	151%
Egypt	700	645	674	829	1083	1396	1440	1416	1141	1163	1218	1420	103%
Ethiopia	193	232	202	215	211	218	219	205	210	196	199	187	-3%
Gambia	291	291	322	352	341	333	349	310	294	231	197	201	-31%
Ghana	2033	2647	2787	2655	2436	2236	2033	1898	1779	1881	1980	1712	-16%
Ivory Coast	77	100	101	109	118	106	100	90	59	61	54	58	-25%
Kenya	2845	2968	2846	2762	2609	2429	2392	2421	2284	2245	2176	2159	-24%
Libya	1184	983	1085	1004	1496	1624	2112	2880	2650	1764	1393	1662	40%
Malawi	315	378	404	417	544	531	494	467	438	359	316	263	-17%
Mauritius	1541	1592	1590	1720	1829	1702	1656	1576	1508	1483	1448	1381	-10%
Morocco	139	160	164	179	186	208	237	267	300	338	406	526	278%
Namibia	60	69	68	106	99	91	76	66	89	92	95	92	53%
Nigeria	4370	5626	7662	8876	10230	11786	14382	16678	17585	17620	17397	18020	312%
Rwanda	65	75	68	77	82	91	112	90	99	84	108	148	128%
Seychelles	176	188	197	169	155	129	113	105	114	101	87	84	-52%
S Leone	210	212	267	238	247	242	221	204	181	148	128	123	-41%
Somalia	53	86	95	124	114	110	110	100	75	66	75	48	-9%
S Africa	1159	1310	1440	1467	1585	1542	1586	1554	1428	1349	1230	1224	6%
Sudan	312	316	301	268	301	347	352	357	324	339	277	282	-10%
Tanzania	936	984	930	940	985	988	1116	1125	1005	889	753	807	-14%
Tunisia	59	65	61	69	96	95	98	95	82	79	94	117	98%
Uganda	776	833	823	806	834	920	1038	966	902	849	766	777	0%
Zambia	494	504	505	564	554	631	643	606	545	546	518	510	3%
Zimbabwe	2872	2677	2594	2582	2387	2026	1738	1424	1218	1066	952	970	-66%

Country	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	12 Y change
Albania	177	177	228	202	228	227	242	213	234	251	254	247	40%
Armenia	36	33	39	51	70	54	69	74	101	98	145	152	322%
Azerbaijan	70	79	83	129	157	178	222	302	446	578	648	787	1024%
Belarus	73	86	112	116	135	156	149	151	162	173	187	170	133%
Bosnia	109	96	102	91	79	101	99	72	66	58	57	60	-45%
Georgia	66	72	73	106	134	173	177	265	267	253	225	227	244%
Gibraltar	694	678	611	600	620	618	614	627	666	683	728	791	14%
Iceland	262	285	316	317	346	340	370	292	251	196	215	209	-20%
Kazakhstan	254	286	323	412	838	1177	1549	2085	2179	2026	1733	1616	536%
Macedonia	67	86	86	97	97	89	108	116	106	110	100	85	27%
Moldova	56	63	61	74	79	76	87	108	114	111	94	91	63%
Norway	3547	3498	3186	2926	2878	2721	2933	3325	3878	4444	4896	5221	47%
Russia	1646	1768	1865	2050	2427	2652	2954	3248	3404	3653	3687	3981	142%
Switzerland	1267	1413	1430	1586	1792	1895	2083	2283	2492	2693	2862	3101	145%
Turkey	1587	1765	1702	1879	1993	2370	2680	3132	3351	3349	3337	3334	110%
Ukraine	459	470	494	451	453	494	536	606	669	826	907	1038	126%

Country	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	12 Y change
Afghanistan	48	89	95	104	137	137	144	201	176	211	225	223	365%
Bahrain	743	845	927	949	892	979	991	1052	1044	1120	1209	1240	67%
Bangladesh	1431	1628	1833	2103	2536	2817	3490	4178	4084	3825	4215	4886	241%
Brunei	716	722	773	904	1170	1499	1688	1915	2056	2260	2105	1932	170%
Burma	160	180	190	229	242	235	231	267	266	299	323	350	119%
China	33838	45359	49395	46974	45855	43532	47095	56998	67329	78717	83789	87895	160%
Hong Kong	9700	10213	10403	9140	9308	9364	9599	9947	10439	11334	13064	14725	52%
India	11945	13735	15402	17728	21832	25874	34077	38500	39088	29898	22384	19750	65%
Indonesia	997	975	1024	1038	985	924	1028	1156	1286	1451	1667	2175	118%
Iran	992	1240	1521	1767	2193	2398	2850	3186	3486	3401	2665	2090	111%
Iraq	87	116	165	227	302	555	652	784	761	1283	1847	2417	2678%
Israel	1315	1153	946	763	733	617	612	569	594	511	504	509	-61%
Japan	5830	5906	5660	5699	5208	4468	3876	3482	3348	3243	3186	3221	-45%
Jordan	954	1050	1169	1220	1331	1287	1331	1361	1354	1405	1391	1440	51%
Korea	2763	3171	3497	3693	3912	4031	4274	4389	4581	4561	4611	4780	73%
Kuwait	608	744	820	912	1096	1251	1554	1652	1722	1835	1827	2147	253%
Lebanon	475	500	515	570	598	558	537	541	585	680	663	819	72%
Macao	94	101	140	158	199	165	207	255	267	324	346	404	330%
Malaysia	11236	11141	10699	10672	11052	11736	12698	14061	13902	14543	15015	16635	48%
Maldives	101	109	142	150	181	146	156	144	132	134	126	163	61%
Mongolia	71	71	74	85	104	108	134	176	147	139	138	154	117%
Nepal	308	372	427	477	594	646	693	1136	1512	1625	1715	1751	469%
Oman	1831	1391	1079	1033	1223	1203	1228	1213	1177	1210	1466	1960	7%
Pakistan	2967	4202	6172	7390	8633	9302	9609	9819	10184	8820	7184	6667	125%
Philippines	653	750	941	922	796	665	1093	1845	1800	1380	897	779	19%
Qatar	313	397	485	483	566	702	952	1070	1142	1259	1469	1827	484%
Saudi	1714	1944	2173	2437	2892	3533	5221	8342	10268	9859	9439	9062	429%

Singapore	4077	3708	3436	3136	3024	2898	3186	3776	4456	5291	6019	6788	66%
Sri Lanka	1948	2153	2300	2652	2867	3134	3553	4022	4176	3600	2956	2511	29%
Syria	328	386	412	400	469	528	532	605	618	669	529	380	16%
Taiwan	4931	5153	5229	5408	5938	5598	5242	5073	4623	4379	4137	3965	-20%
Thailand	3077	3358	3494	3786	4082	4181	4677	5507	5944	6236	6178	6338	106%
UAE	1333	1555	1730	1975	2102	2313	2702	2992	3016	3101	3060	3283	146%
Uzbekistan	154	147	145	126	117	131	156	195	172	139	129	174	13%
Vietnam	354	673	1062	1377	1589	1789	2060	2531	3218	3784	4070	4251	1101%
Yemen	171	453	223	155	187	164	139	137	151	131	121	113	-34%

Country	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	12 Y change
USA	10830	12546	13399	13701	14669	13905	14112	15068	15557	16333	16233	16485	52%
Bahamas	162	213	228	227	226	232	225	193	180	176	159	170	5%
Barbados	380	438	448	446	381	341	322	306	303	294	285	261	-31%
Canada	3197	3552	3844	4278	4548	5005	5347	5581	5907	6115	6188	6352	99%
Jamaica	850	942	897	798	738	632	550	415	333	274	260	237	-72%
Mexico	1654	1665	1516	1372	1312	1303	1327	1366	1462	1553	1586	1711	3%
St Lucia	172	170	169	186	148	148	156	127	108	94	79	64	-63%
Trinidad	662	654	739	805	835	835	835	889	791	729	652	604	-9%

Country	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	12 Y change
Argentina	415	392	316	284	288	256	210	221	238	212	190	184	-56%
Bermuda	172	174	184	206	210	235	334	395	482	489	478	435	153%
Brazil	1010	986	994	1037	1174	1268	1372	1314	1356	1338	1658	2322	130%
British V Isl	34	47	49	57	110	115	154	159	158	191	185	184	441%
Cayman Isl	64	102	111	95	118	142	138	121	118	157	200	226	253%
Chile	254	245	267	312	331	369	392	492	561	681	661	757	198%
Colombia	372	451	424	426	492	557	692	826	950	926	951	1008	171%
Ecuador	71	82	94	77	91	96	92	103	102	135	149	288	306%
Guyana	72	82	95	110	110	99	99	68	66	57	45	50	-31%
Peru	186	213	202	217	201	211	246	244	246	271	250	259	39%
Venezuela	274	295	267	275	311	310	328	293	311	314	288	297	8%

Country	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	12 Y change
Australia	1316	1400	1491	1509	1630	1610	1650	1679	1678	1812	1882	1972	50%
N Zealand	468	502	509	511	494	512	481	512	527	507	499	510	9%