



GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH: A
ADMINISTRATION AND MANAGEMENT
Volume 18 Issue 8 Version 1.0 Year 2018
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4588 & Print ISSN: 0975-5853

Management International Orientation, Dynamic Capabilities, Collaboration, ICT usage and Internationalization of Higher Education Institutions

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GJMBR-A Classification: JEL Code: M19



Strictly as per the compliance and regulations of:



RESEARCH | DIVERSITY | ETHICS

Management International Orientation, Dynamic Capabilities, Collaboration, ICT usage and Internationalization of Higher Education Institutions

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Abstract- The paper seeks to propose a conceptual framework that could explain the Internationalization of Higher Education Institutions (IHEIs). It seeks to explore relationships that could be tested in an empirical study trying to understand the phenomenon of IHEIs. It suggests that Management International Orientation (MIO) could have a significant effect on IHEIs and that this relationship is mediated by Dynamic Capabilities (DC). It also advocates that the MIO affects the level of collaborations that a university is capable of engaging in. Through collaboration, an institution improves its dynamic capabilities thus positively affecting its internationalization process. The study recommends future researchers to empirically test these effects and relationships amongst Higher Education Institutions (HEIs).

I. INTRODUCTION

Many scholars consider Internationalization of Higher Education Institutions (IHEIs) as a process that is transforming postsecondary education institutions (Knight 1994; Knight & De Wit 1997). Altbach & Knight (2007) defines IHEIs by focusing on the policies and practices of the academic system, institutions, and individuals to survive in the globalized environment. Knight (1999) identifies the policies as those that are aimed at integrating and sustaining the international dimension into the primary mission and functions of the institution. She further identifies the activities involved in IHEIs as; student exchange, joint and double programmes, recruitment of international students, employing foreign staff, conducting cross-border research programmes and managing overseas franchises of the institutions. More still Teichler (2004) observes that IHEIs is often explained in terms of physical movement of staff and students, academic collaboration and knowledge transfer as well as global education and address an influx of cross border activities of HEIs. De Wit et al. (2005) define IHEIs as the multiple programs, activities and services that fall in the realm of international studies, international exchange programs and technical cooperation.

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Thune and Well-Strand (2005) define IHEIs as strategies undertaken by HEIs to expand higher education provision and ideas across national boundaries. Citing Porter (1990), Thune & Well-Strand defined IHEIs as a process by which training, conducting of research and the reaching-out functions of a higher education institution become globally and cross-culturally compatible (Porter, 1990). The most used definition of the IHEIs is that it is the process of integrating an international and intercultural dimension into the functions of the institution that include training, knowledge creation and reach-out (Knight, 1994, Knight 2005; Knight & De Wit, 1997; Knight & Sehoole, 2013). However, Hawawini (2011) challenges Knight et al.'s definition as being narrow in its approach, he notes that IHEIs should not just aspire to infuse an international dimension into the teaching, research and service functions of the institution but rather it should seek to integrate the institution into the emerging global knowledge and learning network. Hawawini therefore posits that, IHEIs is the process of integrating the institution and its key stakeholders-its students, faculty, and staff-into a globalizing world. Altbach and Knight (2007) suggest IHEIs includes policies and practices undertaken by academic systems and institutions and even individuals to cope with the global academic environment. These policies and programs are designed by top management team of the HEI. Tandaki and Tremewan (2013) note that IHEIs can be understood as describing administrative university projects that relate to international flows of people, ideas and resources. The IHEIs is taken to be an emergent political project that is imagined, discussed and acted out by HEI administrators to each other as well as agents in and beyond the HEI; meaning that the rationale to internationalize does not emanate from the university alone but is also from other external parties.

The rest of this paper is structured as follows; the next section explores the theories that could underpin the study of IHEIs and explain it in relation with the variables; management team international orientation, collaboration, dynamic capabilities and ICT

usage. Literature then follows propositions for the relationships (hypotheses) that could be explored. Variable measurements are suggested although not in so much detail and ends with the conclusion and recommendation for future research.

II. THEORETICAL UNDERPINNINGS

a) *Institutional Theory*

Institutional theory deals with how structural elements such as schemas, rules, norms, and routines arise, diffuse, get adopted, and adapted; the extent to which they are stable; and how they might change over time (Brock, 2012). Institutions are therefore a broad range of social, cultural, and legal rules and norms prevalent in society (Bass, Nicholson & Subrahmanian, 2013). Javernick-Will and Levitt (2010) define institutions as including regulative, normative, and cultural-cognitive elements that, together with associated activities and resources, provide stability and meaning to social life. Institutional theory helps in explaining information technology for development (ICT4D) and the role of ICT in effecting society change (Bass, Nicholson & Subrahmanian, 2013).

In this study, the institutional theory explains IHEIs which is a fundamental change in the behavior of traditional HEIs that never considered engaging in international engagements. Due to rigidities, hierarchies, rules, and government regulations in most HEIs, it is difficult for most of them to internationalize. Secondly, higher education exists within the context of the ethos, regulations, schemas, culture, and hierarchies of a given society in which HEIs are operating. Breaking through these institutions is a challenge for most higher education institutions.

Kostova, Roth & Dacin, (2008) note that internationalization brings forth the power of institutional change. In HEIs, institutional change tends to be as a result of the management team's approach in coming up with rules, regulations, and norms that govern the running of the HEI. The bureaucracies of HEIs and the rigidities therein, would not ordinarily cause them to internationalize unless the managers are oriented in such a manner to appreciate the internationalization phenomenon.

According to the institutional theory, organizations exist within a field which is composed of the firm and its association with the environment. The HEI shapes the environment; the institution is in turn shaped by the environment. The institutional field is the arena for power through which organizations display their influence (Hoffman, 1999), in which every firm is expected to have some influence. A typical HEI operates and interacts with other HEIs through collaboration and partnership arrangements. This interaction determines whether an educational institution would then be able to integrate itself in this environment which is global.

b) *Network Theory*

Network theory has been studied in internationalization of small and medium enterprises (SMEs) (Oviatt & McDougall, 1994; Evers & Knight, 2008). Networks relate to the interaction approach which focuses on the dyadic relationships between firms, the implication of these networks, result from the aggregation of these relationships (McNaughton, 1999). The network theory is increasingly gaining currency in the service sector. The debate on networks has rotated around the fact that firms that lack enough resources to engage in internationalization activities and therefore these partnerships provide such scarce resources and make them available for use (Manolova, Manev & Gyoshev, 2014). This impediment affects HEIs in developing countries because most HEIs are resource constrained due to limited public funding.

Tang (2011) notes that firms must develop and deploy relationships which can provide the specific opportunities, requisite resources for achieving the internationalization of institutions. In fact, Manolova et al. (2014) found that because of the risks and costs associated with internationalization, firms need to have a safety cushion of domestic financial networks that can sustain its foreign activities when operating far away from the home base. The HEIs in the same way ought to build relationships that facilitate them to internationalize. These, therefore have to be international collaborations that can provide opportunities for operating in the globalized and internationalized environment. However, caution must be taken by HEIs against unproductive and ineffective collaborative relationships.

The network theory builds on both social and business networks; in HEIs internationalization social networks are the dominant ones since most interactions are not necessarily transactional. HEIs are now participating in education exhibitions to connect with students and faculty from other countries. They provide an opportunity for networking especially building of social networks that are increasingly becoming a source of foreign market information and opportunities (Evers & Knight, 2008).

Networks can provide advice relating to internationalization, this advice contributes to the recipient firm's knowledge and capabilities, complementing and leveraging the knowledge resources that the firm already possesses (Cumming, Fischer & Peridis, 2011) in addition to financial resources that are necessary for engaging in international operations that would otherwise be in short supply for resource-constrained firms (Manolova, et al., 2014).

Networking favors the creation of academic discipline clubs in which academics can come together in specific academic disciplines and advance their scholarship (Donert et al., 2011). These academic clubs bring up people from different countries; can work together because they find commonalities that motivate

them collectively. Since most networks are non-hierarchical, they operate with a sense of collegiality, empowering those taking part to contribute for the common good and in the process, capabilities are generated. Donert et al. (2011) further add that networks fill a gap or help an institution to acquire a resource that never existed before the network and to find solutions for certain problems.

Turpin, Iredale & Crinnion (2002) point out that, increasing global competition has meant that innovation, marketing, standard setting, quality control and networking have become as important to universities as to firms. This means that HEIs operating in a liberalized education market would need network relationships and opportunities that can make them remain competitive and market-driven in a globalized environment.

c) *Resource based View Theory*

Resource Based View (RBV) theory helps in explaining the sustained competitive advantage (SCA) of a firm. It is based on the premise that in order for the firm to compete sustainably, it "must acquire and control valuable, rare, inimitable, and non substitutable (VRIN) resources and capabilities, plus have the organization in place that can absorb and apply" these resources (Kraaijenbrink, Spender and Groen, 2010).

Whereas RBV seeks to explain the SCA of firms, it can illuminate IHEIs since institutions that engage in internationalization are seen to have a higher Sustainable Competitive Advantage (SCA), the RBV considers that in addition to the VRIN resources, the firm must have dynamic capabilities that can sustain its SCA in the ever-changing environment. The environment in which HEI operates is quite dynamic and therefore requires such dynamic capabilities to operate and sustain its internationalization agenda.

Also, RBV theory seems to suggest that a firm's competitive position is determined by a firm's unique resources and its relationships. In studying collaborations about HEIs' internationalization, we are trying to explore how relationships develop through partnerships and facilitate HEI's internationalization.

Leiblein (2011) notes that differences in resources, factor market conditions, and organizational abilities at least partially explain performance differences among close competitors. He further observes that management has a role in leveraging, accessing, or developing scarce resources in a manner that allows business organizations to capture some the value that they create for a society. Based on the above observations, top management plays a role of giving the strategic direction of a firm; this strategic direction guides the institution's expansion and internationalization. In most HEIs, the management is responsible for mobilizing and organizing the scarce resources available to advance the global reach of the institution.

Differences (heterogeneity) in the resources owned by the firm partially explain the success of a given firm as opposed to other firms. There are HEIs that internationalize and those that appear not to engage in any international engagements. The difference between these institutions can be attributed to the variations in the nature and structure of resources that HEIs possess. Notably, competitive advantage is largely a function of an institution's ability to assemble uniquely and complementary sets of relational knowledge and resources" (Leiblein, 2011). These resources could be derived from different sources and through a combination of collaborative relationships. Barney, Ketchen & Wright (2011) note that heterogeneity in RBV comes out of two mechanisms; strategic resource acquisition in factor markets and internal resource accumulation. Acquisition of resource in strategic factor markets can be through strategic partnerships.. Heterogeneous human capital is a critical underlying mechanism for building dynamic capabilities. Human capital develops through skills, experiences and the orientations that human resources have.. In fact there are already concerns on how transnational entrepreneurs can access resources and capabilities by embedding themselves in multiple settings and actively shaping, modifying and reinforcing those domains, and what cognitive attributes they need to explore and exploit business opportunities in different international spaces (Barney et al., 2011). It is through these skills, experiences and orientations that managers and entrepreneurs can capabilities that can help them to explore new opportunities in new strategic markets (Barney, 2001).

Although RBV has not directly been studied in the perspective of the IHEIs, it is something that arouses interest in integrating it into this area. Ilieva, Beck & Waterstone (2014) note that internationalization is becoming one of the institutional strategies adopted by universities build a brand and position in a competitive market. This shows how market conditions are driving HEIs to internationalize to build SCA since internationalization gives an HEI an edge in the global market for higher education.

Das and Teng (2000) note that the usefulness and richness of the RBV theory demonstrates its applicability in a variety of strategy areas and point to the fact that, scholars are trying to apply it in various areas. Under the Resource-Based View, firms come into collaborations and partnerships because of imperfect mobility, imperfect inimitability, and imperfect substitutability of firm resources. It is these imperfections that sustain resource heterogeneity of resources necessary for sustained competitive advantage. It is, however, important to note that HEIs also have such variations in the way their resources are sustained. For example, research abilities are not consistently distributed in HEIs and at times knowledge as a

resource can be hard to imitate, and therefore as a way of HEIs obtaining these valuable resources for their growth, they engage in collaborations to tap into those capabilities resident in other institutions. In HEIs, resources such as institutional reputation are critical for internationalization and some HEIs would wish to partner with other international reputable higher education institutions in order to boost the quality of their services. Most higher education institutions in Africa are seeking collaborative opportunities with internationally reputable higher education institution to improve on their academic standing.

d) *Management Team International Orientation and Internationalization of Higher Education Institutions*

Management team through their international orientation contributes to the IHEIs. Senior staff and administrators of universities have a role to play in creating internationalization of HEIs through positioning and focusing local institutions to actively participate in the process of integrating into foreign markets and being active actors in a globalized market. They can cause HEIs to engage in social networks, international research activities, and international consortia. These activities would, in the long run, materialize into international student recruitment, student mobility/exchange programmes, curriculum sharing and other related international activities (Tadaki and Tremewan, 2013). Soderqvist (2007) noted that internationalization with its foreign language competence requirement and multiculturalism ideal could be a challenge to many directors of institutions as they have to prepare themselves as well as their employees for the change process of engaging in internationalization and of building international networks. Kauer, Prinzessinzü Waldeck, & Schäffer, (2007) note that top management plays a critical role in effecting change since they are in charge of strategic decision making, in fact, top management team influences organizational performance. Although the upper echelon characteristics such as age and tenure have been studied to explain strategic outcomes such as performance, less attention has been paid towards their orientation especially their international orientation about tradition change process such as internationalization.

Tadaki and Tremewan (2013) observe that there is ample space in HEIs for senior staff, faculty, and leaders to contribute and define what internationalization is and will become amongst HEIs. They further note that without the active engagement of senior members of the faculty in developing the vision of internationalization, internationalization practices may develop along 'default' neoliberal lines which would make it difficult to realize the benefits of international engagement. This means that leaders in HEIs need to understand and track the broadest global trends in higher education, at the same time attend effectively to the unique needs and aspirations of their particular institutions, local

communities, and regional or national contexts. (Rumbley, Altbach & Reisberg, 2012).

Opp and Gosetti (2014) in a study on community colleges in the United States established that involvement of administrators in colleges is critical to the success of the internationalization agenda. This is not only for their human, financial and symbolic support, but also for them to motivate others to appreciate the value of internationalization in the colleges and to make initiatives that would promote internationalization. Also the institutions' administrators are the vision bearers of the institutions they head, and they are critical in; appropriating resources that can be used in the internationalization programmes, mobilizing other stakeholders and explaining the benefits of internationalization to these stakeholders. Top management is influential in mobilizing faculty to integrate global perspectives into the curriculum. It is management that decides whether the institution joins collaboration or a consortium that is aimed at promoting IHEIs.

Top management must also be involved in the IHEIs institutions because the process is risky and requires management to make the hard decisions involved in engaging international partners. This engagement demands more commitment, travel and many times the head of the institution may have to be part of these activities (Hawawini, 2011). Lorkhe, Franklin, and Kothari studied the relationship between top management international orientation and export performance of the small and medium enterprise and found out that MIO had a significant positive association with the export performance of the firm. Since export performance is a measure of internationalization of a manufacturing firm; it can be construed that MIO has a significant relationship with [the internationalization] of HEIs. The experience of top team managers, their interest in internationalization agenda are indicators of their orientation towards internationalization phenomenon in HEIs.

It is evident from the above definitions that management in an education institution affects IHEIs because they are critical in formulating policies, designing programs and coming up with activities that facilitate the integration and sustaining of the international dimension of higher education into the functions of the institution. Therefore top team international orientation is critical in the IHEIs. Top management team cohesion has been found to enhance organization performance. In a simulation study, Michalisin, Karau & Tangpong (2004) found out that cohesion improved industry performance in an airline industry. It is, however, imperative to note that team cohesion only occurs where team members have similar experiences, skills, and aspirations. This paper therefore suggests that:

The more an institution's management team is internationally oriented, the more internationalized the Institution will be.

e) *Dynamic Capabilities and Internationalization of Higher Education Institutions*

Capabilities are the socially complex processes that determine the efficiency and effectiveness by which organizations can transform inputs (resources) into outputs (Collis, 1994). Teece (2014) defines the capability of an enterprise as "a set of current or potential activities that utilize the firm's productive resources to make and deliver goods and services." He distinguishes between ordinary and dynamic capabilities. Ordinary capabilities involve the performance of administrative, operational, and governance-related functions that are (technically) necessary to accomplish tasks. On the other hand, dynamic capabilities involve higher-level activities that can enable an enterprise to direct its ordinary activities toward high-payoff endeavors. It requires managing or orchestrating, the firm's resources to address and shape rapidly changing business environments. Capabilities can further be defined as the ability of the firm to explore and utilize assets via organizational routines to complete its targets (Amit & Schoemaker, 1993). Schilke (2014) explores first order and second order capabilities. He defines first order capabilities as routines that reconfigure the organizational resource base (these are what Teece (2014) identifies as ordinary capabilities) and second-order dynamic capabilities as routines that reconfigure first-order dynamic capabilities, but he notes that there is lack of understanding on how first order and second order capabilities intertwine. For example, he observes that the firm's ability to manage collaboration or a strategic alliance is a first order capability and the ability to learn from the routines of managing strategic alliances is an example of second order capability. In understanding HEI internationalization, the ability to build and sustain collaboration engagements is a first order capability, but the ability to learn from the collaborations to internationalize is a second order capability.

Capabilities are therefore the capacity of a firm/organization to deploy resources to perform a particular task. These capabilities in most cases are intangible and invisible to the observer but obtained through interactions within the organization and its environment. (Peters, Hofstetter & Hoffmann, 2011). Teece (2014) notes that ordinary capabilities are a combination of (1) skilled personnel, including, under certain circumstances, independent contractors; (2) facilities and equipment; (3) processes and routines, including any supporting technical manuals; and (4) the administrative coordination. Dynamic capabilities also deal with the knowledge that is within the firm about its environment and especially the knowledge that helps the firm to compete favorably within the environment.

This knowledge capability is not static; it evolves and thus alludes to an organization's ability to continuously develop new knowledge that is at par with the changing environment. Dynamic capabilities are the organizational and strategic routines by which managers alter their firms' resource base by acquiring, shedding, integrating and recombining resources to generate new value-creating strategies. Dynamic capabilities also help an organization to adjust to the ever-changing environment. Indeed, research on capabilities focuses on dynamic capabilities and is concerned with how firms build and adapt their resource base to maximize organizational fit with the environment (Schilke, 2014). Dynamic capabilities are not acquired from the factor markets, but rather developed internally.

The HEIs operate in an ever-changing political, economic and social environment that requires organizations to develop capabilities to be able to survive the turbulence therein (Sapienza, Autio, George and Zahra, 2005). Through accumulated experience in the foreign market, higher education institutions develop capabilities for internationalization. The firm gains local market knowledge and obtains capabilities to deal with the foreign context. These capabilities, in turn, enable a HEI to engage in programmes, activities and design policies that would facilitate internationalization.

According to Teece, Pisano, and Shuen, (1997), a firm needs dynamic capabilities which are the capabilities to integrate, build and reconfigure both internal and external capabilities to fit in the changing environment, this dynamism helps in meeting organizations objectives. The HEI must then have these dynamic capabilities to cope with the risks associated with operating in an international environment. Teece (2014) further notes that dynamic capabilities demand both an external (outside the organization) and internal orientation by management. He observes that organizations and managers can learn from different geographies. Managers of HEIs need skills and experiences to manage these institutions both internally and externally. The external environment of an HEI is far-reaching and includes the international environment from which the institution draws its faculty and students.

Brock (2012), notes that successful internationalization requires a unique set of capabilities. These capabilities could range from experiential knowledge (which is the knowledge accumulated concerning international operations) to unique skills that an internationalizing firm is using to manage global operations. Experiential knowledge is now being seen as a key capability for the internationalizing firm as it is associated with making informed decisions. Skills of managing a big enterprise, management acquire skills of integrating different expertise, building organizational efficiencies, and redesigning organizational structures and in so doing acquire a new set of capabilities such as market selection, cultural, political, and legal

integration within the prevailing institutional context. Thus we suggest that;

An institution's dynamic capabilities are associated with its level of internationalization

f) *Management International Orientation and Dynamic Capabilities*

According to Leiblein (2011), managerial policies and practices foster the development of dynamic capabilities. This focus is evident by considering how three particular forms of managerial discretion; resource allocation policies, organization structure, and managerial cognition or decision making processes.. Management, therefore, has a role in influencing how resources are deployed both in the short and long run, through how it organizes, deploys and makes decisions relating to resource use. This ingenuity is what results in the dynamic capabilities of a firm. Deciding to utilize resources (whether human, financial or technological) to international operations is dependent on the orientation of management and how they appreciate international engagements. Teece (2014) also underscores the role of managers in realizing dynamic capabilities; he notes that managers are responsible for the allocation of resources within an organization as the price does in the free market environment. He observes that without managers sensing, seizing and transforming ordinary capabilities into dynamic capabilities, the dynamic capability debate would not achieve any organizational outcome.

He asserts that transformative sales experience in one market segment enables successful entry into new market niches and that policies designed to improve learning mechanisms (e.g., experience accumulation, knowledge articulation, and knowledge codification) are critical to the formation of dynamic capabilities because when managers acquire experience in a given market, they develop abilities to effectively engage in that market. The paper therefore suggests that;

Managers' international orientation affects an HEI's dynamic capabilities

g) *Collaboration and Internationalization of Higher Education Institutions*

Collaboration has been defined differently by different people; Kezar (2005) defines it as the process that entails an interactive process (relationship over a period and that the interactive parties/groups develop shared rules, norms, and structures which often become their basis for working together. Tsasis (2009) on the other hand defines collaborative relationships as relationships that represent an inter-organizational effort to address mutual benefits or common interests among organizations through a process of information exchange and resource sharing. Kezar (2005) further argues that collaboration can be

internal or external. It can also be formal (corporate alliance) or informal collaboration (Goddard, Goddard and Tschannen-Moran, 2007). Corporate alliance involves stages which include; negotiations (that entail working out joint expectations, building trust and bargaining), commitment in which an agreement is reached based on the obligations and rules for future action and execution where systems are put in place to make collaboration happen. For it to happen, the top management team has to be involved in making commitments and guaranteeing future action and execution.

Collaborations present opportunities for HEIs to come together to pool resources that would facilitate the advancement of knowledge and sharing of ideas globally. In the manufacturing sector, firms that are strategically vulnerable and with fewer resources are likely to seek for collaborative engagements. Majority of HEIs in Africa are strategically vulnerable due to weak systems and structures. Further still, the inadequate funding for public HEIs from their governments and founders of private universities who consider universities as sources of profit, make collaboration an endearing phenomenon for HEIs in most of the developing world and Africa as a region (Das and Teng, 2000). Das and Teng, seem to suggest that in the current technologically driven world, characterized by speed, the key to success lies in the collaborative advantage derived from partnerships amongst different firms.

The IHEIs has for long been seen as a cooperative effort that happens through some activities such as student exchange programmes, collaborative research activities, joint academic programmes run by two or more institutions (Thune & Welle-Strand, 2005). Collaboration presents some benefits to organizations including improving efficiency and effectiveness. Higher education institutions especially those in the developing world occasionally find the cost of internationalization prohibitively high due to less funding they receive. Collaboration according to Hawawini (2007) is a cost-effective method for such institutions to engage in international engagements and activities.

Collaboration has been studied in the education before, Goddard, Goddard, and Tschannen-Moran, (2007) found that teacher collaboration in the curriculum has a positive correlation with pupil performance. Also professional discourse helps teachers enhance their pedagogical skills and experiential knowledge to improve instruction. Donert, Hay, Theobald, Valiunaite & Wakefield, (2011), assert that collaboration is crucial for the future of geographical education and that through cross-disciplinary and inter-institutional activities, there is knowledge creation and co-generation that universities, non-governmental institutions and associations as well as the industry can benefit.

Genao (2014) in a study on collaboration in the education sector notes that collaboration can be both

internal and external collaboration. It is internal when it involves partnerships between departments or individuals in the same organization. It is external when it involves players outside the organization. Kezar (2005) highlights the benefits of organizational collaboration as; efficiency, effectiveness, and perhaps the most important for higher education institutions is that collaboration enhances student learning. However, Tadaki and Tremewan (2013), caution that universities will increasingly have to make decisions about which collaborations and international relationships are worth building, and why they need to pursue particular collaborations because not all partnerships and collaborations that universities engage in are beneficial and would enable the universities to internationalize.

Turpin, Iredale & Crinnion (2002), point out that increasing global competition has meant that innovation, marketing, standard setting, quality control and networking have become as important to universities as to firms. Also relationships between academic disciplines, universities and their markets are undergoing a radical transformation as collaborative relationships are increasingly emerging not only amongst universities, universities and industry enterprises but also international institutions that support IHEIs. Thus we, propose that;

International Collaboration Improves an Institution's Dynamic Capabilities

h) Information Communication Technology Usage and Internationalization of Higher Education Institutions

Information Communication Technology usage in education originates from the 1990s which was a decade of computer communications and information access particularly so because during this period there was increased use in the use of internet-based services such as electronic mail and the World Wide Web (WWW) (Noor-UI-Amin, 2013). Rodrigo (2003) established that ICT usage in education falls in three categories ; ICT as a subject matter of study, ICT as a support tool and ICT as a transformative agent (as a catalyst for transformation). The ICT as a subject in education entails learners studying about computers, their use, and programming. It intends to develop computer use skills in which learners develop competencies of using computers, their software and programmes. The ICT as a support tool in respect to facilitating learning, it involves preparation of teaching materials, using computers to demonstrate to students and easing communication between the learners and the teachers. On the other hand, ICT as a transformative agents looks at the revolutionizing power of ICT in education; for example facilitating long-distance education, an online interface between learners and facilitators, introducing new interfaces between learner and teacher through video conferencing among others. In the study of ICT as a catalyst for change in the international perspective, the

role of ICT in reaching out to learners in the dispersed environment including across a country's border is of paramount interest. Therefore, ICT becomes a transformative agent in providing international education.

Regarding IHEIs, first, with ICT usage, news about internationalization moves fast across borders. Indeed, where there is internet access, information about developments in the IHEIs in part of the world moves instantly to the rest of the world (Rumbley et al., 2012). According to Altbach and Knight (2007) the key drivers of internationalization of HEIs include among others; the advancement in ICT, increases global movement of workers and liberalization of economies that promotes, the knowledge society, private investment and decreased public support for education, and the growing importance of lifelong learning. The international dimension of higher education is, therefore, becoming increasingly important and, at the same time, more intricate to understand (Altbach & Knight 2007, p. 298). The ICT provides solutions to these factors and offers solutions of these challenges. . Scholars, learners, workers, and investors today more than ever can keep in touch via email and online platforms such as social networking sites. There is a lot of information sharing between learners, educators and researchers. The use of ICT in IHEIs is due to advancements in information technologies and the dramatic upswing in recent years of the coverage about international education issues. Thune & Welle-Strand (2005) found that the impact of ICT in internationalization processes is indirect and tied to routine activities in teaching, administration and research rather than being a driving force of internationalization. It is the usage of ICT in teaching, research, and administration that contributes to the IHEIs. Mazzarol (1998) observes that ICT is one of the critical factors in the marketing of education services because it provides an additional mechanism of providing the education services through conducting of online courses.

Whereas student mobility is generally considered to constitute IHEIs, ICT is the main factor in expanding internationalization of education; in fact, it is the likely substitute of student mobility. It eliminates geographical barriers and allows learners to log on from any part of the world and as such ICT promotes the international dimension of education (Noor-UI-Amin, 2013).

In a case study on a Norwegian private university, Thune & Welle-Strand (2005) found that 50% of their respondents believe that ICT was a critical factor for IHEIs, while 50% thought that ICT is not an important element factor in the IHEIs. This dichotomy in opinion represents the lack of clarity on the role of ICT in the internationalization process of HEIs. Those that support the role of ICT in the internationalization of HE do so based on the fact that ICT facilitates collaboration between academics internationally, recruitment of

international students and facilitating rapid and real-time communication. On the other hand, those opposed to ICT, seem to suggest that the un-standardized nature of education somehow hinders its mass production and of course its provision over standard information communication platforms. Secondly, they argue that knowledge grows through experience and within cultural perspective; therefore providing education internationally using ICT can hardly achieve this. Nonetheless, ICT cannot be disengaged from today's HEI whether in promoting internationalization or availing education locally.

IHEIs increases with increase in the usage of ICT.

III. MEASUREMENT OF VARIABLES

a) *Internationalization of Higher Education Institutions*

Internationalization of HEIs could be measured using Knight (1999) and Ryan (2002). In their studies, they measured IHEIs using a multi-item measure. They considered the number of foreign students enrolled in the institution specifically considering the percentage of foreign students. They also considered the recruitment of international staff and their number, the number of those who are internationally oriented, student mobility through exchange programs, teaching students from different locations, joint lecturing, operating branch campuses abroad, the language of instruction, and franchising of programmes to other foreign universities. Thune and Welle-Strand (2005) also considered internationalization by looking at enrolment of both staff and students, the mobility of staff, the kind of resources that the university is using, and use of international teaching materials.

b) *Management International Orientation*

Management's international orientation has been studied by Tadaki and Tremewan, (2013) in their study they considered management's international experience and exposure, their expertise and the skills they have acquired in managing internationalization strategy. In addition, Lorkhe, Franklin and Kothari (undated) studied and measured management team international orientation by looking at international work experience, the experience of living abroad, and foreign language proficiency. Opp and Gosetti (2014) consider experience of the managers, their interest in internationalization and their willingness to commit someone to manage international affairs as being critical in the internationalization agenda.

c) *Information Communication and Technology usage*

Thune and Welle-Strand (2005) in a case study of the use of ICT in IHEIs institution in Europe, measured ICT use by looking at the use of internet conferencing technologies, joint lecturing through video conferencing and the integration of ICT in distance education. The usage of ICT in the IHEIs has also been studied by looking at ICT as a support tool in international activities

of HEI, in this they considered how internet and e-mail are being used to correspond with students, in the delivery of term papers, posting of information especially those at foreign. The application of ICT as a channel of distribution and communication in HEIs is measured based on the intensity of e-learning as a learning tool for students abroad and those in subsidiaries of the universities.

Furthermore, ICT has also been measured by considering how it is used in the marketing of the education institutions (Donert et al., 2011). By understanding that ICT is important for the mobility of students and for the recruitment of international students, Donert et al., (2011) measured ICT usage by considering whether foreign students can apply and register online, use of ICT to introduce international perspectives in home campus activities, use of ICT in managing international partners and network administration for student exchanges.

d) *Collaboration*

Collaboration can be measured by the number of collaboration arrangements that the university has with (1) the industry outside the country, (2) with other universities outside the country and (3) with other foreign organizations or institutions. It can also be measured by assessing the depth of the collaboration with these international stakeholders (Genao, 2014).

e) *Dynamic Capabilities*

Dynamic capabilities would be measured according to guidelines by Teece (2014) on ordinary dynamic capabilities. The study would therefore consider whether an HEI has skilled personnel that can handle internationalization process, whether the institution has facilities and equipment that can facilitate for example the welfare of international students and staff and ensure a descent education environment for both international staff and students. Processes and routines of HEIs could be evaluated especially on how these processes and routines fit with internationalization activities such as recruiting, registering and maintaining foreign students, faculty and partners. Teece (2014) suggests an examination of rules to international students and staff and examine how those rules assist in handling international partners.

IV. CONCLUSION AND RECOMMENDATIONS

This paper has tried to evaluate the conceptualization of the variables; IHEIs, management team international orientation, dynamic capabilities, collaboration and ICT usage. It highlighted the relationships that exist between these variables as per extant literature and the prevailing conceptualization in the literature with the aim of developing a conceptual model that seek to explain the IHEIs. The theories reviewed seem to give a purview of explanations need for the study of IHEIs. The outcomes of this literature-

based study are suggestions that seek to explain the IHEIs and some of prepositions that would help such an explanation. The paper recommends that future researchers could consider conducting empirical research that could provide empirical evidence and test the suggested relationships and effects.

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