

Business Development Frameworks for Establishing Innovative Born-Global Firms in Nigeria and Sub-Sahara Africa

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Abstract: This conceptual paper explores different approaches for establishing born-global firms (BGFs) in developed and developing countries, with a special focus on Nigeria and Sub-Sahara Africa. It reviews the key constructs and frameworks that underpin new business development in born-global firms. Examples of these constructs are business development, dynamic capabilities, innovation, collaboration, entrepreneurship, and organisational learning. The research is important because of the relative lack of BGFs (Google, Amazon, Alibaba, and Facebook, for example) in Sub-Sahara Africa, compared to other parts of the world. Moreover, the frameworks for BGF new business development can be applied in subtly different ways in developed and developing country contexts. For example, BGFs in developed countries focus on niche products and services with breakthrough innovation, whilst those in developing countries, because of limited resources and capabilities, focus on underserved and mass markets, which do not require high level resources and capabilities. Realistic hypothetical examples of BGFs which directly underpin Nigerian and Sub-Sahara African higher education and economic development are used to illustrate the BGF business development constructs.

Keywords: Born global-firms, Worldhero 3E.com, Afrimarket.com, Business development, Innovation, Dynamic capabilities, Entrepreneurship, Higher education, Economic development.

1. INTRODUCTION

Born-global firms (BGFs) are defined as companies that seek superior global performance from early stages in their development, for example Facebook, Apple, WhatsApp, Snapchat, Google and Uber [1-4]. Knight and Cavusgil [5] describe BGFs as companies that export twenty-five per cent or more of their products within the first three to six years of their foundation. Modern BGFs such as mentioned above use internet-based integrated business models to achieve high global reach from inception. Traditional BGFs are identified as companies that export their products to international markets within two years of establishment [6-8].

However, modern BGFs which primarily use the internet to distribute their offerings deliver these offerings globally from inception, since the offerings are immediately accessible to consumers and clients in different parts of the world. Also, start-ups that develop unique products or services from a global customer perspective are more likely to have a high degree of uptake of their products or services in global markets, early on from their founding, through cyber-mediated internationalisation.

The core research problem addressed in this paper is the fact that despite the overwhelming success of

BGFs, such as mentioned above, in creating thousands of jobs and growing the economies of countries in which they are based, there are relatively few, if any, of these companies in Nigeria and Sub-Sahara Africa. Ironically, these countries have teeming populations of unemployed youths and graduates, a situation which is exacerbated by continuing economic challenges related to decrease in revenues earned from commodities, oil and gas, for example [9]. Moreover, lack of innovations in higher education in these countries produces graduates who are almost unemployable in terms of requisite modern graduate skills [10, 11]). The paper, therefore, explores how existing frameworks that support innovation and new business development in BGFs can be adapted to Nigeria, Sub-Sahara African, and similar developing countries which lack the presence of BGFs. It turns out that since BGFs are from start typically SMES with a DNA for accelerated internationalisation, the BGF frameworks also support innovative start-ups and small-scale enterprises (SMEs) in these countries. This is strategically important to the government of developing (and developed) countries, Ezepeue and Ochinanwata [12]. It is noteworthy that there are no traceable studies which address these specific perspectives of BGF internationalisation in these climes.

Madsen and Servais [13] identify several factors that promote BGFs' growth. These factors are associated with entrepreneurial orientation, international market mind-set, and highly innovative

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and creative skills. Knight and Cavusgil [5] argue that time and speed differentiate BGFs from other traditional small new ventures. Hence, this paper addresses these factors in the context of developing countries seeking to nurture successful start-ups, SMEs and BGFs, which are managed by highly skilled and entrepreneurial academics, students, and graduates.

As noted above, whereas there is a wide range of studies on these enablers of BGF development and growth [1, 6, 13-15], there are no known research on BGFs in developed countries. More importantly, there is no study that integrates developed and developing country perspectives to provide a more holistic understanding of how proven BGF business strategies in developed countries can be contextualised in developing countries, in a way that will help indigenous entrepreneurs in these countries to establish successful BGFs. This paper fills these gaps in knowledge, by using 'realistic hypothetical examples of BGFs which directly underpin Nigerian and Sub-Sahara African higher education and economic development' to illustrate how the above mentioned BGF business development constructs can be adapted to these contexts.

The specific research questions explored in the paper are: 1) What are the BGF characteristics compared to traditional firms (TFs)? 2) How can these characteristics be enshrined in developing countries like Nigeria, in a way that facilitates a pervasive and innovative entrepreneurial culture among academics and graduates? By answering these questions, the paper provides new insights on the process of creating BGFs and international new ventures (INVs) in developing countries, especially Nigeria and Sub-Sahara Africa where there are no home-grown BGFs.

The rest of the paper is as follows. Section 2 discusses pertinent developing country contexts using Nigeria and Sub-Sahara Africa as focal points. Section 3 presents the theoretical background on BGF business development in developed and developing country contexts. These include BGF characteristics, new business development, innovation, dynamic capabilities, and open collaboration. Section 4 applies these constructs to case study BGFs in higher education research and traditional enterprise development, which will be based in Nigeria and Sub-Sahara Africa, but have a global reach. Section 5 concludes the paper with notes on related policy implications.

2. PERTINENT DEVELOPING COUNTRY CONTEXTS

Some Notes on SME Policy for Entrepreneurship Development in Nigeria

This section discusses current economic challenges in Nigeria. It also summarises some critical questions and problems of higher education (HE) in Nigeria and Africa, which motivate the need to create innovative BGFs that will help to reskill their academics, students and professionals, to make them more entrepreneurial and employable. By way of brief notes on Nigerian Government's 'SME policy for entrepreneurship development', Ezepue and Ochinanwata [12] state as follows:

'The Central Bank of Nigeria (CBN) earmarks over 1trn Nigerian Naira (N) to promote lending to the real sector of the Nigerian economy, in order to 'stimulate economic activities in the country'. Using the exchange rate of 1 GBP (£) to 450 Nigerian Naira (N) whilst writing this paper, this sum is about £2.2bn. The term 'real sector' loosely refers to non-oil and non-financial sectors of the economy, and generally includes start-ups, micro, small-medium scale enterprises (MSMEs). These largely constitute the informal sector of the economy. The money was to be allocated to the following social interventions: N300bn (£0.67bn) Real Sector Support Facility (RSSF); N220bn (£0.49bn) Micro, Small and Medium Enterprises Development Fund; N213bn (£0.47bn) Nigeria Electricity Market Stabilisation Fund; N500bn (£1.11bn) Non-Oil Export Stimulation Facility; and N75bn (£0.17bn) Nigeria Incentive Based Risk Sharing for Agricultural Lending. These interventions aim to 'provide operators in the real sector long-term (e.g. 10-15 year) single-interest loans of between 6-9 percent with alternative collaterals. This is because Nigerian banks charge between 15 and 20 percent interests which are excessive for start-ups. Expected outcomes from these interventions include economic growth, related GDP growth, increased exports, and significant job creation, affordances that are even more urgent given that Nigeria's foreign reserve had fallen to \$28bn compared to \$3.3trn for China, for example'.

Also, 'Nigeria's Presidency budgets N500bn (£1.11bn) social welfare programmes' aimed at creating: 500,000 direct jobs, 'which will see unemployed graduates being trained and deployed as volunteer teachers in their communities, while prospecting for jobs in their chosen professions'. Other interventions include: training 370,000 non-graduate

youths in different skills and vocational programmes; giving MSMEs soft loans of N60,000 (£133) each to 1m Nigerians (small-scale traders, artisans and market women) through the Nigerian Bank of Industry; and a free education to 100,000 Science, Technology, Engineering and Mathematics (STEM) students.

'The key rationale for these MSME interventions is to create jobs and enhance the capacity of the informal sector of the economy (that is individuals, civil society, and the private sector apart from government and financial services sectors) to grow the economy and enhance the overall economic development of Nigeria'.

'In addition to poor access to finance, a key 'financing start-ups and workforce development' problem in Nigeria is lack of industry-facing business management and apprenticeship skills which will enable MSMEs to successfully benefit from the above mentioned funding schemes'.

Ezepue and Ochinanwata [9] suggest that the following research and enterprise development (RED) initiatives will address these needs:

- 'an online Skills for Students, Graduates and Start-Ups (SSGS), which can provide opportunities for Nigerian graduates to acquire generic, entrepreneurship, enterprise, and employability skills;
- an innovative Nigerian Renewable Energy Research and Consulting firm, which can roll out solar houses and model solar villages as solutions to current energy-mix problems in the country;
- a challenger Nigerian Research and Enterprise Development Bank [Ochinanwata and Ezepue, 16], which will fill the current gaps in MSME financing in Nigeria;
- a Capital Management firm, which will use advanced research in statistics, big data analytics, applied economics, stock market analysis, and financial mathematics, to provide world-class investment management services to start-ups, MSMEs and mature firms; and
- a Centre for Advanced Research and Enterprise Development (CEfARED), which will deepen theoretical and practical expertise on these initiatives, in collaboration with researchers and professionals in academia, industry and

government'. This centre will support the translation of research results from higher educational institutions into practice, through business incubator schemes, technology and services spin-offs'.

To benefit key stakeholders in Nigeria, given its immense population of about 180 million people and more than 170 nationally approved universities and polytechnics, for instance, the initiatives should be structured as innovative BGFs which use internet and social media to disseminate their offerings. This way, the initiatives are realistic hypothetical case studies that could be used to illustrate the workings of BGF business development constructs explored in this paper. Before we do this, it is important to further examine the challenges of higher education in Nigeria and Africa which the BGFs should address.

Illustrative Case Studies Used in this Paper

WORLDHERO 3E.com

The above mentioned Centre for Advanced Research and Enterprise Development (CEfARED) will transform higher education research and practices in Nigeria and Sub-Sahara Africa, if it supports higher education institutions (HEIs) to train academics and students who are innovative in their research, teaching and learning, deeply entrepreneurial (understand entrepreneurship principles), enterprising (establish social or for-profit enterprises as spin-offs from their research), and employable. We refer to these skills as 3E skills. We form a hypothetical case study BGF for this paper around these skills by calling such a firm WORLDHERO 3E.com. Here, WORLDHERO stands for World Higher Education and Research Observatory, which globally internationalises similar offerings in The African Higher Education and Research Observatory (AFRIHERO UK, www.afrihero.org.uk).

Hence, WORLDHERO 3E will serve as a platform that enables academics, students, and professionals in the private and public sectors of an economy to engage in the five research and enterprise development initiatives listed above. Following Ezepue [11]'s discussion of some seven key challenges in African higher education, the WORLDHERO 3E case study will address such challenges through activities listed in column 4 of Table 1 below.

Afrimarket.com

Ezepue and Ochinanwata [9, 12] stress that two key gaps in knowledge of BGF business model

Table 1: A Summary Matrix of Identified Challenges in African HE and Indicative BGF Solutions

No.	Challenges	Description	Indicative responses
1	Faculty shortage and development	Acute shortage of teaching faculty and world class research scholars, especially senior faculty at PhD level	National and Continental Doctoral Training Centres and Colloquia (DTCC), using pooled expertise to train world-leading PhDs who can engage in the above initiatives
2	Governance, leadership and management	Weak leadership, management and governance due to inefficiencies, underutilized facilities, duplicative programmes, management, and partnership	Specialist online and face-to-face training on strong institutional leadership, management, governance, and resource efficiencies
3	Problems of quality and relevance	Mismatch between curricula and labour market requirements, education obsolete and disconnected from the economy, over-emphasis on theory and less on practice	Focus on 3E education imbued with radical innovations in research, teaching, learning, assessments, consulting and community service (RETLACCS Innovations)
4	Weak research and innovation capacities	Inadequate research facilities; poor translation of knowledge to practice through adaptation, innovation and problem solving; low impact of HE research on national innovation systems and productivity	Training workshops on research-teaching excellence, innovative high-impact research topics, pervasive 3E skills; addressing national economic and global sustainable development goals (SDGs) through RETLACCS innovations) (cf. Ezepue and Ojo, 2012 in Ezepue [11])
5	Financial austerity and lack of capacity for diversification	Lack of adequate finance, competing public service priorities; weak support from international community; need to diversify revenues, but very limited experience; poor competitiveness in knowledge generation and adaptation; poor integration in global knowledge systems	Enabling HEIs to operate entrepreneurially through value-adding 3E and RETLACCS innovations means that academics, students, and industry-government collaborators, can generate enough funds and diversify their programmes, products and services competitively and globally
6	Poor physical facilities and infrastructure	Little or no infrastructure improvements in the last few decades; widely deficient learning infrastructure e.g. internet access, library, textbooks, equipment, laboratories	Same strategies as noted above apply. For textbooks and research monographs, training Nigerian and African author syndicates, by disciplinary clusters, on 3E good practices for writing world-leading learning resources, with a good mixture of local and international examples and case studies
7	Inability to meet increasing demand for access and equity	Too many students seeking admissions compared to available HE capacities; small graduate level (MSc and PhD) enrolments, especially in core STEM and health fields vital for science-based innovation and national competitiveness, with less than 30% of Sub-Saharan African students in agriculture, health sciences and STEM subjects	Developing innovative RETLACCS learning strategies suitable for large classes; partnering with HEIs to create Massively Open Online Courses (MOOCs), roll out deep theory-deep praxis courses, certificates, undergraduate and postgraduate degrees; special focus on health sciences, STEM subjects, quantitative business disciplines, for instance

development in developing countries are: a) need to use socio-culturally contextualised integrated business modelling principles in these contexts, and b) lack of research-informed African e-market places that will replicate successes achieved by the likes of Google, Microsoft, Amazon and Alibaba in Nigeria, Africa and developing countries generally. These perspectives have not been researched in light of BGF dynamics, except in internationalisation-focused research. To cover the b) focus of these identified gaps in this paper, we use an additional case study BGF, Afrimarket.com, to explicate the selected BGF constructs alongside WORLDHERO 3E. The twin case study approach therefore straddles the academic and industry domains of BGF business development in Nigeria and Sub-Saharan Africa. Insights from the case studies can be applied to similar start-ups in these contexts.

3. CONCEPTUAL FRAMEWORK FOR BGF NEW BUSINESS DEVELOPMENT IN DEVELOPED AND DEVELOPING COUNTRY CONTEXTS

Ezepue and Ochinawata [12] discuss in some detail a number of constructs and key conceptual frameworks commonly encountered in business development literature. These include: strategic planning; integrated business modelling and planning; innovation and adaptation characteristics of BGFs; cyber-mediated internationalisation; international new ventures (INVs); e-commerce; web innovation, social media and business networks; 'network perspective and internationalisation of SMEs' [17]; new business development; dynamic capabilities; customer understanding; entrepreneurial orientation and PESTEL (political, economic, social, technological,

environmental, and legal) drivers of business success; flexibility and autonomy in new business development; theories of growth and profitability. Some of these considerations are common to all types of businesses, but have subtle differences in the way they are enacted in BGFs, because of the profound roles of the internet, e-commerce and use of social media in such firms, and consequent early and accelerated internationalisation of BGFs, compared to traditional firms (TFs).

In a conceptual paper such as this paper, it is infeasible to cover all these constructs in any meaningful detail. We, therefore, select some of them that more strongly underpin BGF business development practices, and discuss how they address the specific research questions posed in the introduction to the paper. For this, we explicate related gaps in knowledge of differing characteristics of BGFs and TFs (RQ 1), non-existence of home-grown BGFs in Nigeria, Sub-Sahara Africa, and developing countries, and how to overcome it (RQ 2). The selected constructs include BGF new business development; need for flexibility and autonomy in BGF new business development, BGF business model innovation; dynamic capabilities and BGF open collaboration.

This choice of constructs is supported by Ezepue and Ochinanwata [10]'s elucidation of a hierarchy of primary and auxiliary conceptual frameworks that embody their more detailed coverage of these ideas, namely: integrated business modelling, BGFs, cyber-mediated internationalisation, and e-commerce (for the

primary conceptual frameworks); and entrepreneurial orientation, social and business network, innovation theory, and dynamic capabilities (for the auxiliary conceptual frameworks). As we explore these constructs in light of RQs 1 and 2, we use the other constructs as descriptive devices, as appropriate. Future work on BGF business development in Nigeria and Sub-Sahara Africa will apply the fuller range of constructs enunciated in Ezepue and Ochinanwata [10] to WORLDHERO 3E BGFs.

Explicating the Selected Constructs

Figure 1 depicts a conceptual framework for creating and capturing BGF opportunities in developed and developing country perspectives. The constructs in the first two boxes on the left hand side are the most fundamental mechanisms for establishing BGFs in developed and developing country business environments.

Dynamic Capabilities in BGFs New Business Development

Teece, Pisano, and Shuen [18, p. 516] define dynamic capabilities as ‘the firm’s ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments’. Establishing BGFs requires resource-based and dynamic capabilities [1, 19]. BGFs acquire these types of resources through their founders’ core competences that enable them to use internal and

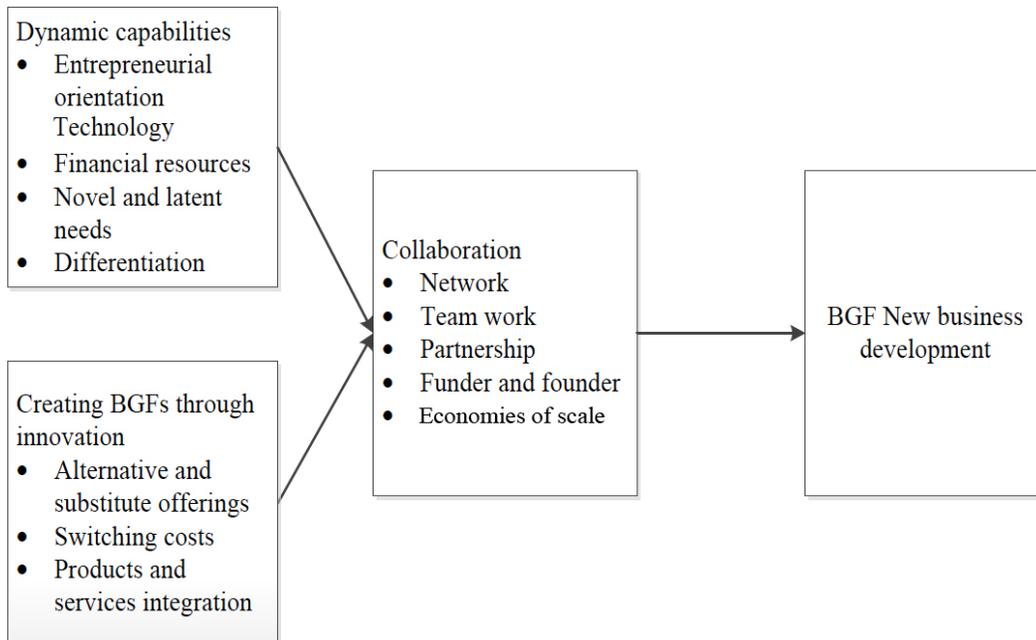


Figure 1: Characteristics of BGF in developed and developing countries (Source: the authors).

external resources from multiple partners. The core competences and knowledge of BGFs are not only from founders but also come from employees, especially where these employees behave entrepreneurially. This trait is better developed when students and graduates are trained on more than technical academic skills that include corporate academic and 3E skills. This requires deep as opposed to shallow pedagogies and learning, with a focus on problem-based learning, creative problem solving, and relentless application of disciplinary knowledge in real-world contexts, Ezepue [11].

However, many new businesses in Sub-Sahara Africa lack this kind of education, for which reason 3E BGFs are fundamental in Nigeria, Africa, and developing countries. Experience with Nigerian academics show that a majority of them mainly publish academic papers to get promoted without adequate industry collaborations that nurture these skills for transfer to students they teach and supervise.

Dynamic capabilities expand the current understanding of BGF new business development in developed and developing countries. They allow firms to acquire tangible and intangible resources when establishing new firms and new offerings; some of these resources are linked to competitive advantages which exist locally, nationally and regionally [18, 20, 21]. Tangible resources include ICT facilities, stable high-speed internet, affordable energy, trained manpower, R & D resources, and existence of business platforms, for example knowledge exchange networks of conferences, symposia, seminars, workshops, policy think-tanks, strategy roundtables, and breakfasts. Intangible resources include brand image, specialist experiences and skills for work available in knowledge intensive areas, such as the talent pool in Silicon Valley which underpin US's dominance in technology-based firms.

To develop a WORLDHERO 3E Publishing BGF, for example, we will need such capabilities as the expertise of academics, graduate students, and professionals, in different countries and regions from which we convene academia-industry-government author syndicates in respective disciplinary clusters. This will enable deep theoretical coverage of technical subject matter knowledge, which is continually enhanced with local and international case studies of innovative companies and real-life projects. These capabilities will be dynamically maintained with an army of graduate students who are trained in the art-

science of using corporate academic knowledge to blend theory and practice. For this, they can use eclectic information including street stories researched from different sources, cutting-edge journals, conference proceedings, surveys, news media and blogs, webinars, and professional magazines. This way, existing case studies are updated or replaced with better ones in different editions of texts and research monographs produced.

For the Nigerian-African home-grown internet marketplace, Afrimarket.com, dynamic capabilities of similarly trained workforce will be used, including a ready pool of unemployed graduates who can handle website development, customer research, investment analysis, and marketing campaigns. Management will explore unique capabilities that locally accessible labour can provide and specific ways to motivate them to deliver superior performance in the different business functions.

As we mentioned elsewhere in this paper, it is important for individuals and entrepreneurs in developing countries, especially in Nigeria and Sub-Sahara Africa, to acquire dynamic capabilities, by collaborating with international and local firms [22], rapid internationalisation [23, 24], information and resource sharing [25, 26]. Again, such collaborations are easier to structure through 3E knowledge platforms which link knowledge workers in different parts of the world through online forums, business and social networks, and multiple marketing platforms. The question is: why are higher education academics and students not properly trained in this way, to be theoretically rigorous and societally vigorous in deploying the knowledge gained, not in only employer organisations, but also in self-employment? In other words, has the traditional model of higher education failed learners and knowledge workers in these contexts?

Networks enable firms to collaborate and achieve new business development (NBD) and firm growth [26]. However, collaboration may have advantage or disadvantage to collaborating firms, when the collaborating firms are not strategically similar or have conflicting interests and processes. BGF collaborations are mainly enacted through the internet which enables strategic and operational interests to be digitally piloted at minimal costs to both firms. The extra functionality offered by such a BGF platform is the speed at which ideas are exchanged across the different collaborating entities, using the platform as a 'digital nervous system'

[27]. Imagine, for example, the kind of on- and off-line collaborations between two or more universities and industry partners within the above mentioned WORLDHERO 3E Nigerian Centre for Advanced Research and Enterprise Development (CEfARED). By piloting such collaborations on selected projects, the partners will learn to work together increasingly more successfully. If this is not possible, they will not grow the partnership any further.

However, the above insights vary over time depending on the nature of a given business environment [28]. Location can have a marked impact on the observed occurrence of important organisational behaviours [29]; the Silicon Valley technology giants come to mind here. Environmental context influences how firms acquire resources and capabilities and choose innovative or adaptive strategies. Mowday and Sutton [30] "describe context as consisting of constraints versus opportunities for behaviour, proximal versus distal stimuli, and similarity versus dissimilarity among organisational members". An example is when we reflect on how these environmental influences apply to the 3E CEfARED and partner organisations mentioned above.

To reiterate these insights, the CEfARED could require community of disciplinary experts in great universities such as the University of Nigeria Nsukka, University of Ibadan, University of Lagos, and Obafemi Awolowo University Ile Ife, to be connected through strategic projects and joint research supervision, for example. Over time, the dynamic capabilities which the collaborators bring to the Centre will change as some retire and others come into prominence. Hence, a database of these experts should be maintained and grown and the members' skills continually updated with cutting edge training, conferences, symposia and workshops. Similar considerations apply to the communities of senior management, staff, customers, and stakeholders who interact through the Afrimart.com BGF.

Also, business environment determines whether entrepreneurs will choose to develop a novel offering or enhance existing offerings. Kafouros *et al.* [31] state that firms that operate in highly developed countries have more opportunity to innovate and internationalise their offerings, for example tech giants in Silicon Valley. Such enabling business environments help individuals and firms to learn from different business activities, and develop novel products and services [32, 33]. This is not the case with developing countries, for example

Nigeria and Sub-Saharan Africa, where most individuals are not exposed to international business activities. Therefore, there is need for policy-makers in developing countries to encourage and attract international enterprises that enable domestic companies to innovate and internationalise their activities. This need is more directly served by the creation of home-grown BGFs like WORLDHERO 3E.com and Afrimarket.com, given their capacity to catalyse growth and create thousands of jobs.

Establishing BGFs in these types of environments requires a combination of emergent and existing business strategies [9]. BGFs need to adopt emergent business strategies in highly dynamic environments and align them to local socio-cultural factors, as they develop new products and markets [34]. Adopting innovative strategies without such adaptations could be harmful [35]. Therefore, there is a need for creativity when building BGFs in developing countries using innovative strategies from developed countries. For example, in adopting international best practices from the likes of Oxbridge, Warwick, Sheffield Hallam UK, Harvard, MIT, Yale, Princeton, Berkeley and Phoenix universities, WORLDHERO 3E.com must creatively adapt their offerings to the specific contexts of developing countries. For this, the organisation must conduct detailed SWOT-PESTEL-based, related strategic management and marketing analyses, within a business model canvas that consists of nine standard elements which are explored in Osterwalder and Pigneur [36]. These elements are Key Partners, Key Activities, Value Propositions, Customer Relationships, Customer Segments, Key Resources, Channels, Cost Structure, and Revenue Streams [see also Ezepeue and Ochianwata, 16, p. 83]. We now explore specific components of dynamic capabilities in the first left-hand box in Figure 1.

It is clear, for instance, that there are immense concentrations of entrepreneurial talent in Silicon Valley, which are nurtured by such Ivy League US universities as Stanford, MIT, Harvard and Berkeley. The technology skills and innovation pools in the area are deep, same as financial resources provided by the technology giants (Google, Apple, Cisco, Facebook) who inhabit the Valley. This depth of innovations, novel and latent needs, as well as the Galapagos island of differentiated stakeholder needs is supported by an army of computer programmers, techpreneurs, and customers in the Valley. This is the kind of entrepreneurial ecosystem envisaged in Nigeria and Sub-Sahara Africa, through the phalanx of

WORLDHERO 3E BGFs indicated in this paper. These BGFs hinted in column 4 of Table 1 constitute an illustrative e-Silicon Valley of boundary-crossing research, teaching, learning, assessment, consulting and community service (RETLACCS) innovation entities. These entities interact through the internet, and in partner higher educational institutional, industry and government sites, to create world-class offerings that resolve challenging societal needs.

The constructs in the second box to the left are important for establishing such BGFs as WORKLDHERO 3E and Afrimarket.com in developing countries. This is because alternative offerings that satisfy the benefitting stakeholders in the countries are needed. Examples of these offerings are: leading textbooks that use a balance of local and international examples and case studies, are affordable especially in easy-to-access electronic and hard copies; and learning strategies and resources that are suitable for larger classes, compared to developed countries. As this example shows, cost effectiveness is key to getting consumers of such BGFs to switch their loyalties from competing firms to the BGFs. When academics, students and professionals affiliated to a proposed system of online WORLDHERO 3E Research and Enterprise Universities, use top-of-the range learning resources produced by global pools of expert academics and industry professionals who collaborate through the internet, at fractions of costs involved in attending traditional universities in departments that may be severely understaffed, they know they are benefitting from cost and quality advantages.

The flexibility and convenience of online learning means that the students can combine work-based learning with continual skills training on the web and during intensive summer schools, conferences and workshops, in ways that are currently not implemented in traditional higher education in Nigeria, for example. This goal is more readily achieved if the WORLDHERO 3E academics and guest lecturers are first reskilled as corporate academics (CAs), through intense training on core CA Model systems, including the enactment of disciplinary knowledge as entrepreneurship, enterprise, and employability (3E) education enablers, [11, p. 450-455].

The central box of elements in the figure is particularly crucial for establishing BGFs in developing countries. To successfully establish BGFs in Sub-Saharan Africa requires academics, professionals and entrepreneurs to engage in all forms of networks [16].

This is because strategic networks are "stable inter-organisational ties' which are strategically important to participating firms [37, p. 203]. Take for example the proposed WORLDHERO 3E system of Research and Enterprise Universities – it requires networks of: partner universities; academics and students; advanced research institutes; industry-relevant research groups; research consortia which enable experts in cognate disciplines to collaborate across the HEI-industry-government divides; private sector organisations; government ministries, departments and agencies (MDAs); centres of entrepreneurial studies in higher educational institutions (HEIs), which are mandatory in Nigerian universities and polytechnics; benefitting customers, clients, stakeholders and funders; and alumni networks; see more details on this web of networks in Ezepue [11].

Interactions amongst the eight faces of a business model which these stakeholders belong to (senior executives of companies and HEIs, intrapreneurs, entrepreneurs, investors, consultants, designers, conscientious social entrepreneurs, academics and students) are facilitated by a system of knowledge exchange platforms organised by WORLDHERO 3E, Ezepue and Ochinanwata [10, p. 114]. These platforms include advanced institutes, annual and biennial conferences, symposia and workshops, summer schools and skills retreats, roundtables, webinars, industry awareness studies and tours, and Global 3E Publishing of leading journals and textbooks, Ezepue [11]. These networks of partners and platforms hinge on proactive team work among funders and founders of the BGFs, and generate economies of scale which are uncommon in traditional higher educational institutions, particularly in Nigeria and Sub-Saharan Africa. In a sense, the WORLDHERO 3E system is a novel experiment in vigorous execution of higher education as a gown-and-town ecosystem of Triple Helix collaborations among stakeholders in academia, industry and government.

New Business Development in BGFs

Business development refers to the tasks and processes concerning analytical preparation of potential growth opportunities, the support and monitoring of the implementation of growth opportunities [38, p. 26]. Identifying business opportunity and entering new market is a core strategy for creating long term-term advantage and profitable growth. New business development (NBD) and profitable growth depend on a firm's resource-base,

and a SWOT (strengths, weaknesses, opportunities, and threats) analysis of those businesses [17, 39, 40]

Traditionally, forming strategic alliances with other companies is a way firms may achieve dynamic capabilities and profitable growth in new business development. This is more important for firms in developing countries that are eager to develop products and services that seek early international markets from inception. Beyond such traditional firms, BGFs are structured from inception to draw dynamic capabilities more flexibly from e-commerce platforms, social media, and web-based innovations than TFs.

For example, to be successful in university-industry-government collaborations, African-based WORLDHERO 3E BGFs should form strong research, teaching and learning partnerships with HEIs in Nigeria and Africa, professionals in different industry sectors which provide real-life projects, and government ministries, departments and agencies which fund and benefit from the skilled labour trained on such projects. A WORLDHERO 3E Publishing BGF could partner with established publishing firms in niche areas of innovative publishing that deliver superior customer benefits to academics, students and professionals in different parts of the world, in ways that established publishing firms may not easily do, Ezepue [11].

Business development has received little attention in strategic management studies, unlike other aspects of business strategies. However, its components include market expansion, product development, business diversification, and customer acquisition [41-43]. Most business development activities fall under the four business growth strategies of Ansoff's product/market matrix, used by executives, senior managers and marketers: market penetration, product development, market development, and diversification [44, 45]. Clearly, the above mentioned nine elements of the business model canvas inform these growth strategies in a way that is sensitive to different customer segments.

Individuals and firms can create new businesses by continuously being open to new ideas, new people, and changes. Having multi-disciplinary team members are essential to BGFs' new business development. For example, Google is an internet giant search engine and its business model focuses on e-business, but the company has begun to develop a prototype of self-driving cars. To support the above point, flexibility literature argues the need to reposition businesses in a

market with new strategies to meet new customer preferences [46]. Flexibility enables companies to satisfy existing customers' needs and develop new markets and products from customer preferences [47, 48]. This is indeed how BGFs achieve subsequent profitable growth and maintain competitive advantage overtime.

Consider, for example, WORLDHERO 3E PhD students supervised by carefully selected academics from different universities in Doctoral Training Centres. This access to pooled disciplinary expertise facilitates more deeply conceived, innovative, big, hilarious and ambitious goal-directed (BHAG) topics, which single supervisors or relatively inexperienced ones in a particular institution cannot support the same way. For this, openness to new ideas happens naturally through coordinated meetings and research conferences amongst the collaborating supervisors, their PhD students, and underpinning academic communities, which are linked to enabling research consortia. For instance, the African Higher Education and Research Observatory (Afrihero, www.afrihero.org.uk), an African arm of WORLDHERO 3E, convenes a Nigerian Mathematics Finance Statistics and Economics Research Consortium (NIMFSERC), which supports a series of research methods conferences and the 1st International Symposium in Mathematical and Statistical Finance, held at the University of Ibadan, 1-3 September 2015, Ezepue (2016) [11]. The NIMFSERC also groups academics in these fields into local Mathematical Sciences Research Groups (MSRGs) in different universities to enshrine a culture of multidisciplinary research [11, p. 450-451].

As mentioned elsewhere in this paper, to establish BGFs in developing countries requires an adaptation of tested strategies in developed countries to specific countries' social cultural influences and business environments. Figure 2 below depicts BGFs' new business development in developed and developing country contexts.

The first two parts of the framework cover the business model elements that are applicable in new business development for traditional firms and BGFs, with a main focus on BGFs. Traditional firms mainly have their new business development within original industries they operate in, and use their existing business model to manage the new companies. Because of this, the spin-off company will have less autonomy. This approach may restrict spin-off companies from achieving their growth potential

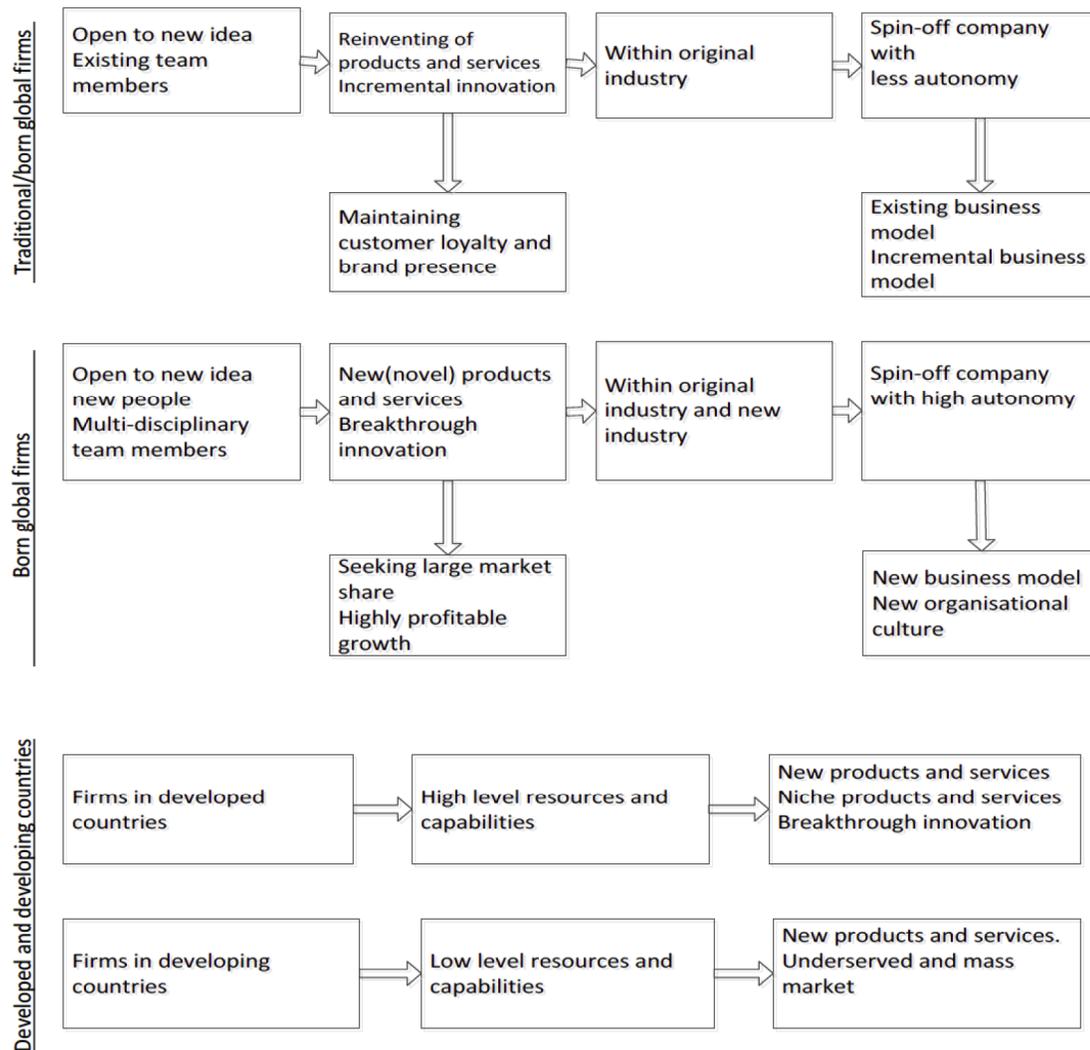


Figure 2: A framework for BGF new business development in developed and developing countries context (Source: the authors).

because they lack sufficient control of their organisational culture and learning. BGFs typically take a different approach; they develop new businesses within new industry and original industry sectors they operate. Hence, they manage the new businesses with a new business model. Therefore, the spin-off companies have high autonomy which allows them to develop their own culture and learning and succeed in diverse business environments.

A simple example of this autonomy is the fact that new BGFs spun off from PhD research conducted in the Statistics, Information Modelling and Financial Mathematics (SIMFIM) Research Group, Sheffield Hallam University, UK, led by the first author of this paper, WORLDHERO 3E affiliate universities, and supported by multidisciplinary Doctoral Training Centres and Colloquia (DTCCs), are independently managed by a pool of supervisors, the PhD students,

and collaborating 3E industry professionals from different sectors of the economy in which the topics are enmeshed. These sectors include banking and financial services, energy (electricity, renewable energy, oil and gas), higher education with disciplinary research linked to 3E and RETLACCS innovations, data science and e-commerce, business and finance generally, and STEM-based research and enterprise development. This approach is so different from traditional university research groups that the traditional term *Research Themes* is replaced with *Research and Enterprise Development Clusters* in the SIMFIM group. This approach emphasises corporate academic research that almost always translates to academic spin-offs of the Silicon Valley mould.

A 3E example is the fact that the second author's PhD research on integrated business modelling for innovation and profitable growth in BGFs is at the time

of writing this paper spun off into an International Business Development BGF (IBDEV.com). On completion of the research, the researcher will manage this firm within his corporate academic career, as a living laboratory for intensely interrogating his research on business model and services innovations, as applied to different private sector and public services settings. Such a capacity will enhance further training of other researchers and business students far more than is possible in traditional business schools. For example, graduates from such dynamic environment will be immersed in theory and practice of business modelling using emerging graduate research results and continual applications of such research results in IBDEV projects.

Of particular importance for developing new businesses in developed and developing countries are the two sets of constructs in the lower half of Figure 2. Because firms in developed countries have high level resources and capabilities, they will be able to develop more novel products and services, in contrast to firms in developing countries that have low level resources and capabilities. These types of firms equally develop new offerings, but mainly focus on underserved and mass market.

Some Notes on Flexibility and Autonomy in BGF New Business Development (NBD)

Flexibility is particularly required in managing agile BGFs given the dynamic nature of web-enabled business models which are subject to shifts in customer needs and sentiments. In other words, innovative frameworks for establishing BGFs such as explored in this paper must have in-built flexibility, present and disseminate ideas timely, react quickly to challenging problems which need research-based solutions, and provide training, staff development and consulting services to different clients and stakeholders in appropriate formats.

A high degree of flexibility and autonomy in new business development enhances the exploitation of existing and new knowledge by companies [43, 49-51]. This is even more important for BGFs that create diverse products and services in distinct industry sectors such as high-tech industry, and specialised e-markets. Such BGFs can be spun off from parent companies following which they use e-capabilities to more quickly develop their own culture based on the unique customer preferences they serve. This degree of autonomy is comparably lower in traditional firms (TFs) and higher in BGFs.

Moreover, a parent company can also learn better strategies from a spin-off which succeeds more than was expected, and vice versa [49, 52]. Hence, traditional universities will learn to innovate their base offerings through partnerships with more innovative WORLD 3E BGFs, engaged in cyber-mediated RETLACCS innovations, to scales that are not known in traditional Nigerian and Sub-Sahara African universities. Similarly, through continual customer and client education, organisations that collaborate with Afrimarket.com will become increasingly innovative in their supply chains, product quality, cost and performance management.

Recent studies indicate that firms are likely to invest in market opportunities that are within the firms' knowledge and skills [53, 54]. BGFs may not follow this approach because they develop novel products and services for underserved markets, and markets for which it is simply easier to adapt existing offerings globally. Diversifying into a new market is quite challenging but likely to yield superior performance and profitable growth due to reduced competition. In high technology industries, BGFs may need to adopt a differentiation strategy, because BGFs' success depends on unique business model and service characteristics, recourse-base and dynamic capabilities [2, 7, 20]

In all, the extent to which BGFs apply different core competences depends on insights gleaned from detailed business modelling using the nine elements of the business model canvas (mentioned earlier but not pursued further in this paper), and the underpinning SWOT and PESTEL environmental scanning analyses.

BGF Business Innovation

Again, as depicted in the second column of Figure 2, BGFs and TFs use inventing and reinventing strategies to create innovative products and services. These strategies include differentiation, low-costs, market expansion, underserved markets, latent needs, and switching costs. Inventing or reinventing BGFs can be revolutionary or incremental. The incremental process differentiates existing offerings in an industry by providing alternative products and services in a unique way. For example, Google is a giant internet search engine, but Facebook provides alternative search that enables individuals to search and identify friends and family around the globe. These types of firms focus more on learning what customers want and adapting to changing business environments warranted

by these needs and preferences. Thus they perfect existing products and services that provide novel value propositions [55]. For example, individuals and entrepreneurs in developing countries need to rethink how to create alternative and substitute products and services that already exist elsewhere, and contextualise the offerings to socio-cultural factors in their business environments, to effectively and efficiently satisfy unmet customer needs in those business environments. For example, recall the 3E examples provided above in the higher education sector.

As part of their innovation strategies, BGFs create high and low switching costs to have competitive edge over existing offerings (see column 1 of Figure 1). BGF switching costs rely on identifying what is missing in existing offerings to make them more affordable. This notion is opposed to traditional approach that usually discourages customers from switching to rival's product or service. For example, "many cellular phone carriers charge very high fees for cancelling a contract" to discourage customers from switching to more desirable products. However, high and low switching costs can occur in both TFs and BGFs.

Apple was not the first company that developed MP3 player, smart phone, and tablets, but Apple gained large market shares on smart phones and tablets by defining switching costs. Although BGF products and services are usually novel in meeting customer needs more conveniently through mobile and internet access, this insight shows that being first to market may not necessarily mean that a company will achieve long-term sustainability and profitable growth. From an evolutionary economics perspective, innovation strategies underpin organisational capabilities that give firms ability to create new knowledge [20, 56]. The fascinating thing about BGFs is that they integrate their products with other companies' products and services to offer customers a wide range of complementary offerings.

BGFs focus mainly on reinventing, switching costs, and innovation rather than adaptation. For example, WhatsApp messaging is somehow gradually replacing traditional SMS at much lower costs with better customer experience. However, WhatsApp and SMS seem to be similar but are different on how customers use them. "Innovation is particularly the domain of entrepreneurs, whose function is to transform the patterns of production by exploiting an innovation or more generally an untried technological possibility for

producing a new commodity or producing an old one in a new way, or by opening up a new outlet for products and so forth" [2, 57, p. 126].

Further Perspectives on BGF Open Collaboration

Strategic alliance encompasses a diversity of collaborative forms: supplier-buyer partnership, outsourcing agreements, technical collaboration, joint research projects, shared new product development, shared manufacturing agreements, cross-selling arrangements, and franchising [58]. These forms of partnership enable BGFs and new ventures to acquire all types of resources from existing firms and achieve their goals within a short time. BGF collaborations can take shape in different dimensions as illustrated in Figure 3 below. External resources and collaboration can increase a firm's internal capabilities [52, 59] However, it can create negative impact if collaborating partners do not contribute adequate resources as agreed [21].

Based on the above insights, technological capabilities may no longer be a barrier for establishing BGFs and international new ventures (INVs) in developing countries like Nigeria and other Sub-Sahara African countries, because they can benefit from other companies' resources to achieve their goals. Collaboration is needed in all types of companies because firms possess different capabilities; it therefore offers firms competitive advantage which they do not have initially [60]. Think, for instance, about how different academics and students can acquire new skills sets from their 3E collaborators.

Figure 3 below depicts how BGFs and other innovative firms can take advantage of each other's resources. A, B, C and D in the figure represent different companies. This is more important for firms in developing countries that have unique value propositions, but do not have either financial or technology capabilities to develop such products and services. For example, company A might have advanced technologies and strong research and development (R&D) team, but needs novel value propositions (latent ideas) from company B to fulfil customers' unmet needs. These insights are more important in developing countries, where many new businesses suffer a "liability of newness during the first year of establishment [61-63]. The A, B, C and D companies will struggle to achieve their goals without having all the above capabilities in each company. BGFs and many great companies succeed by using their internal and other companies' capabilities.

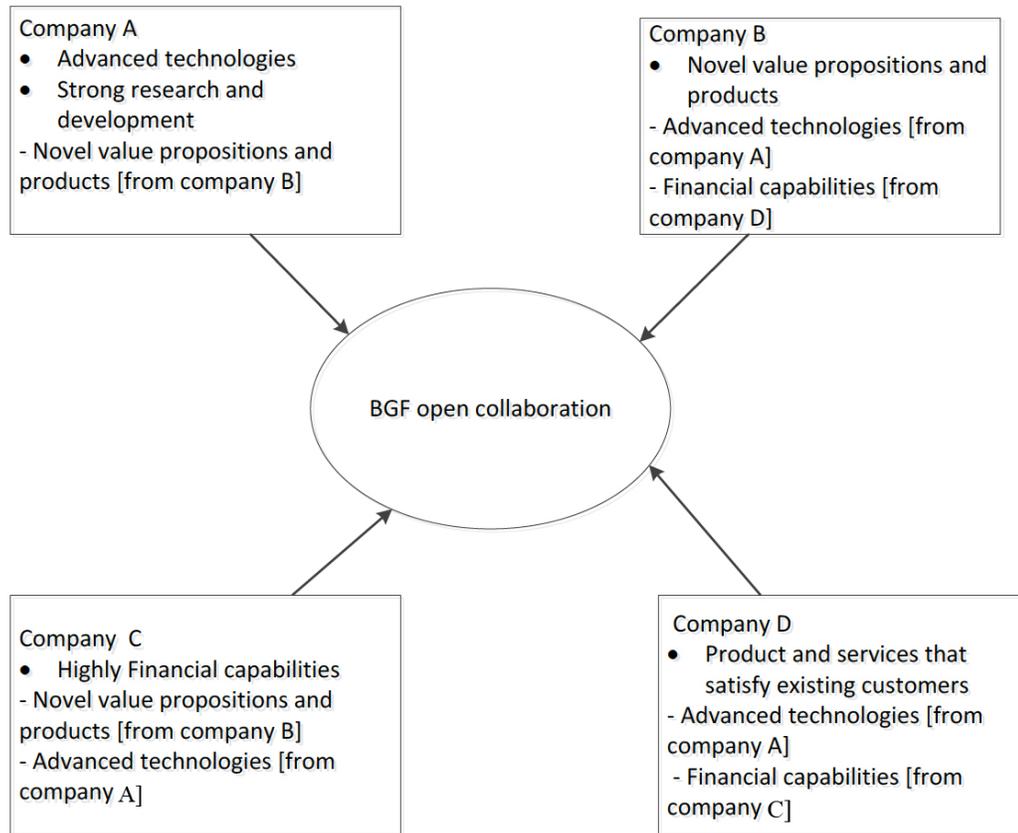


Figure 3: Characteristics of BGF open collaboration (Source: Authors).

Collaboration creates locus of innovation in high-and-low-technology industries [40], facilitates organisational learning [60], and enhances economic performance and cost sharing [64]. It reduces the cost of conducting research and development (R&D), and maximises the potential for improvement in productivity and synergy between internal and external innovations [40]. These collaborations enable BGFs to use external and internal ideas to create and improve their offerings. BGFs collaborate with many companies that have different capabilities such as manufacturers, service providers, and technologically advanced companies. For example, Google is using different auto companies to develop its self-driving car; these include the Toyota Prius and Lexus, the Audi TT, and equipment from Bosch and ZF Lenksysteme, which are assembled by Roush Enterprise.

These types of collaboration are more important in Africa and similar developing countries, to enable individuals and entrepreneurs acquire tangible and intangible resources to establish BGFs and INVs. Studies have shown that foreign co-owned African based-firms develop products and services that internationalise more successfully, compared to those firms without foreign co-ownership and investment [65].

Moreover, technologies transferred from foreign companies enable African firms to develop and internationalise their offerings [66, 67]. It has been suggested that entrepreneurs in many developing countries lack the capability to establish business networks, which limits them from taking advantage of globalisation and international business opportunities [16].

To apply the above constructs to WORLDHERO 3E, for example, the firm will form online partnerships with other higher educational institutions and companies, which will enable it to benefit from the characteristics of BGF open collaboration listed in Figure 3. It could, for instance, partner with Microsoft, Pearson Education, John Wiley and Elsevier publishers, in addition to traditional HEIs.

4. SUMMARY OF HYPOTHETICAL BGF CHARACTERISTICS AND CASE APPLICATIONS

In this section, we use Table 2 below to summarise those characteristics of BGFs that recommend them highly for development in Nigeria and similar developing countries, especially those in Sub-Saharan Africa [9, p. 44-46].

Table 2: Differences and Similarities between BGFs and TFs (Source: the Authors)

Functions of business	Traditional Firms (TFs)	Born-Global Firms (BGFs)
Business planning	Formal business planning More holistic planning	Emergent business planning which track dynamic changes in customer preferences through real-time feedback loops
Business model	Waterfall business model One size fit all (one business model for different unrelated products and services) Incremental business model Reinventing business model	Multiple-sided business models Long tail business model which extend offerings to niche markets and offerings locally and internationally Integrated business model covering 9 elements of the business model canvas Provisional (trial and error) business model Testing and validating Innovation business models Highly flexible business models
Customer focus	Domestic and regional customer focus Enhancing existing value proposition Differentiation One CRM for every segments	Global customer focus Differentiation (leading edge technological products) Separate CRM for different customer segments
Products and Services Development	Develop products and services merely on assumption Mass markets products and markets perfection Single market at a time Less sophisticated market	Develop products and services from customers' expectation Niche products Mass markets Novel products and market Products and services customised
Entrepreneurship orientation	Entrepreneurial orientation Domestic markets mind-set Non-risk taking (focus in domestic markets) Experience management team	International entrepreneurial orientation International markets mind-set Risk taking (focus in domestic and international markets) Experience in different markets environments
Networking Capability	Limited network use of social and business networks	High level of information and communication More active use of social and business network
Channel	Less distribution channels	Leveraging many distribution channels in different countries
Innovation	Incremental innovation Adapting existing practice Replication products and services Investment in various technology	Breakthrough innovation Radical innovation Investment in advanced technology
Capabilities	High tangible and low intangible resources Team members' collaboration	Strong innovative culture Team member collaboration Unique knowledge and background
Marketing and branding	Single marketing activities Late web presence Brand relevance Marketing only products and services Corporate social responsibility (CSR) Focus on few P of marketing mix	Integrating key marketing activities Early web presence Brand relevance Brand preferences Marketing category and subcategory Marketing education Focus on entire 7P's of the marketing mix
e-commerce	Use for exchange of goods and services To engage and acquire customer To meet customers' needs Competitive advantage Taking advantage of domestic market	Use for exchange of goods and services Use for innovative activities to develop and modify products and services To engage and acquire customer To meet customers' needs Competitive advantage Global markets advantage

(Table 2). Continued.

Functions of business	Traditional Firms (TFs)	Born-Global Firms (BGFs)
Profitable growth	Stages of growth process Linear growth patterns Pursuing either growth first then profits Pursue large market share in home countries, or nearby countries	Pursue growth and profits simultaneously pursue profitable growth in different industry sectors Pursue large market share in different countries
New business development	Novel products and services Systematically approach Enhance or improve existing products and services Less or non-autonomy on new products and services Steak on conventional business line and industry	Novel products and services Latent needs Flexibility Enhance existing products and services Complement existing products and services Early market leadership High degree autonomy on non-related new products and services Diversifying into new industries
Internationalisation	Gradual process by targeting one market at a time Engage with nearby geographical markets Direct selling (through internet)	Rapid internationalisation by targeting numerous countries simultaneously Engaging with different distribution channels globally Direct selling (through internet) Pursue exponential growth through cyber-mediated internationalisation, social media, real-time customer learning/user feedback

Column 3 of the table recalls the BGF characteristics we discussed in our case study BGFs (WORLDHERO 3E and Afrimarket.com) in this paper. These insights relate to RQ 1 on defining BGF characteristics and support future research on related BGFs which the paper foreshadows.

5. CONCLUSION AND POLICY IMPLICATIONS

This paper explored the process of creating BGF business opportunities in developed and developing country contexts with a special focus on Nigeria, Sub-Saharan Africa and developing countries, which lack home-grown BGFs like google, Apple, Facebook, Alibaba, and Microsoft. The two main research questions explored in the paper are: 1) what are the characteristics of born-global firms in developed countries? 2) How can these characteristics be replicated in developing countries? The characteristics were summarised in column 3 of Table 2 above.

The paper reviewed the key BGF business development constructs and proposed three important conceptual frameworks that bring these constructs together. Examples of these constructs are business development, innovation, dynamic capabilities, and collaboration. Given the relative lack of BGFs in developing countries as opposed to developed countries, the paper offers new insights on how

individuals and entrepreneurs can approach BGF business development in their various contexts, especially in developing countries. Pertinent developing country perspectives which motivate the paper were examined in Section 2 using Nigeria and Sub-Saharan Africa as focal points. These perspectives justified our choice of WORLFHEERO 3E.com and Afrimarket.com as illustrative case studies for explicating selected BGF constructs.

Using Figure 1, the paper discussed useful strategies for developing market opportunities in the early and subsequent stages of BGFs. These strategies include: dynamic capabilities (entrepreneurial orientation, technology, financial resources, novel and latent needs, differentiation); creating BGFs through innovation, alternative and substitute offerings, switching costs, products and services integration; collaboration (networks, team work, partnerships, funder and founder collaboration); and economies of scale.

The combined strategies from Figures 1 and 2 and Table 2 above which summarise the differentiating characteristics of traditional firms versus BGFs, show how BGF business development strategies could be adopted in developed versus developing country contexts. For example, BGFs in developed countries could focus attention on niche products and services

with breakthrough innovation, whilst those in developing countries, because of limited resources and capabilities, could focus on underserved and mass markets which will not require high level resources and capabilities.

Additionally, Figure 3 illustrates how firms can collaborate with others to use external resources from those companies to achieve their goals and missions. Also, the paper applied these BGF insights to chosen case study BGFs in higher education and business – WORLDHERO 3E.com and Afrimarket.com. Finally, in a more direct answer to RQ1 on BGF characteristics, the paper summarised these key characteristics in column 3 of Table 2.

This is the first time these four conceptual frameworks have been explored in this way to theoretically elucidate enabling strategies and entrepreneurial capabilities for successfully establishing and growing BGFs in developed and developing countries context, with a main focus on Nigeria and Sub-Sahara Africa. Practically, the paper particularly discussed how individuals and entrepreneurs can develop these capabilities, since a company's innovative potential depends on employees' imagination, intelligence and creativity [68, 69]. Again, these capabilities will enable entrepreneurs and firms to achieve both radical and incremental innovation in developing countries. Particular attention was paid in the body of the paper to the nature of incremental and radical innovations in research, teaching, learning, assessments, consulting and community services (RETLACCS innovations) which the 3E systems and the underpinning corporate academic model (CA Model ©) engenders in the training of academics, students, and professionals in developing countries, far more potently that is possible using traditional curricula. The rationale for these innovations is to address the contextual socio-economic challenges facing those countries, Nigerian examples of which were stated in the introductory section of the paper. A thesis point here is the kind of graduate research which these innovations support in the SIMFIM-WORLDHERO 3E corporate academic PhD topics that are structured to almost always lead to high-impact spin-offs of the Silicon-Valley moulds.

In addition to these theoretical and practical affordances, the paper offers new pathways for using BGF thinking to innovate the research, teaching and learning of academic disciplines that imbibe such ways. This will be by way of more real-world facing case

studies taken straight from ongoing stakeholder projects conducted in such BGFs as the IBDEV, enabling students to work as research interns on those projects and interface with the stakeholders, which is in effect a living learning laboratory.

Follow-on studies will apply these ideas to creating innovative BGFs in key industry sectors in Nigeria and Sub-Sahara Africa, for example higher education, banking and finance, healthcare system, and the public sector. This is an immensely useful prospect, considering the fact that the Nigerian public sector is made up of well over 53 ministries, departments and agencies at the time of writing this paper [9, 11].

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