An Analysis of BRIC’s Performance: Economic Growth, Social Development and Future Challenges

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A thesis in fulfilment of the requirements for the degree of

Master of Philosophy

School of Management

UNSW Australia Business School

March 2016
Surname or Family name: Werle Rodrigues
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Abbreviation for degree as given in the University calendar: MPhil
School: Business
Faculty: Management
Title: An Analysis of BRIC's Performance: Economic Growth, Social Development and Future Challenges

Abstract 350 words maximum: (PLEASE TYPE)

The BRIC cluster, namely, Brazil, Russia, India and China, has been described as the fastest growing emerging economies in recent times. Their outstanding economic growth has led them to be included in the top ten wealth generating countries in the world. Together, they account for 40% of the total world population, one quarter of the planet’s land and 25% of gross domestic product (GDP) (Global Sherpa, 2016). Since being grouped as the BRIC cluster in 2001, their relationship has evolved, economic growth escalated and political ties strengthened. Given the differences, their performance as an economic cluster has been exceptional, and their political standing in the international arena, gained through their inter-country co-operation, quite unpredictable.

This study investigates the achievements of Brazil, Russia, India and China on economic, social and human capital development indicators. Specifically, the aims are to analyse the evolution of the BRIC cluster, investigate their economic performance, explore their social and human capital stages of development, identify gaps and gauge the challenges encountered by each of these countries for further development. The study involves an extensive review of the literature, materials sourced from the member countries, and strategic reports from high level national, regional, and international organizations as components of secondary data collection. Analysis of the knowledge and data gathered is based on sub-sets of key indicators, including total GPD evolution, GDP rates of growth, GDP per capital, human development performance (Human Development Index) and poverty rates.

BRIC’s performance on economic indicators has been deservedly celebrated, albeit to varying degrees. In contrast, performance on the social indicators has been more modest, with indications of poverty, inequality and poor management in areas of human development, although there are some signs of increasing investment in education where it was lacking. Doubt continues to exist about whether BRIC will be able to sustain its economic growth as a group or as individual countries, in addition to, concomitantly, improving human development levels. Evidence suggests signs of economic slowdown and that unsolved social and human capital development issues may have the potential to constrain future upward trends in these countries. Further studies are required to understand the ongoing internal and external dynamics of the BRIC cluster, emerging economic disruptions and the pace of development required to shift from developing to developed country status.

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Dedication
To my mother
Acknowledgements

Firstly, my deep gratitude goes to my family, especially my mother, brother and sister, for their unconditional and unrestricted love and support, and for their encouragement in the pursuit of my studies.

Secondly, to my supervisor, Professor Prem Ramburuth, I must acknowledge my abundant appreciation and abiding respect – for encouraging and believing in me, and for giving me the opportunity to learn and develop both professionally and personally. My special gratitude also goes to members of her team, Misha Pavelkova and Lucian Tan, for their support, motivation and assistance with my work.

Thirdly, I am grateful to the co-workers at the UNSW Vice-Chancellor’s Office for their words of incentive and encouragement.

Finally, I acknowledge the assistance of two kind and supportive proofreaders, Kylie Morrow and Paul Serov, who were so generous with their time and advice. Special thanks also to my friend Karyne Agapito.
List of publications and presentations emanating from the research:


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Chapter 1: Introduction

1.1. Emerging markets and global dynamics

Focus on the performance of ‘emerging economies’ has been rising in recent times, with researchers and experts seeking to capture their achievements and explain the developments. Becker (2014, p.1), for example, notes that “the global political-economic scene is fundamentally on the move” with a shift in sources of global wealth and influence. Lin and Rosenblatt (2012) have a similar perspective and point to changing trends in economic growth over the last decade. More specifically, they indicate that “the global economy has entered a period of multi-polar growth with large developing countries leading the way as the new and most dynamic growth poles” (Lin & Rosenblatt, 2012, p.2). Such achievements can be clearly observed when rates of economic growth are calculated. Specifically, in the last decade, the developing world contributed more than half of the global gross domestic product (GDP) growth, while the participation of the ‘Group of Seven’ (Canada, France, Germany, Italy, Japan, United Kingdom and United States) dramatically declined during the first decade of the twenty-first century (Lin & Rosenblatt, 2012).

In this context, the importance of four distinct emerging economies can be highlighted. They are Brazil, Russia, India, and China. Their impressive economic growth and combined performance provided the basis for the British economist Jim O’Neill (2001) to cluster the four countries under the label of ‘BRIC’, after he identified consistent trends in their outstanding economic performance. The BRIC countries have been consolidating their success and making their way to the top of international economic rankings, with researchers such as Biggemann and Fam (2011, p.1) describing them as “the best economic performers” in recent times. According to current World Bank (2014a) rankings, the BRIC countries are already amongst the top ten richest nations of the world. Combined, they account for 2.8 billion people (or 40%) of the world’s population, cover more than a quarter of the world’s land area over three continents, and account for more than 25% of global GDP (Global Sherpa, 2016). As a consequence of this accelerated economic growth, a number of researchers (e.g. Becker, 2014; Li, 2013; Lin & Rosenblatt, 2012, Wilson, Trivedi, Carlson & Ursúa, 2011) forecast that the BRIC countries would become the economic world leaders in coming years.
The BRIC cluster has attracted the attention of researchers who have sought to explore and interpret their wealth creation. For instance, Thakur (2014) examines the magnitude of these countries’ progress, and draws attention to the fact that countries such as China and India have doubled their economic output in less than 20 years, a result which took the United Kingdom 150 years and United States 50 years to reach. Lin and Rosenblatt (2012) emphasise BRIC’s growing share in the world economy, which has been mirrored by a decline in the economies of the richest developed countries (i.e. Group of Seven). Furthermore, based on GDP as an indicator, the global economic performance of the BRIC cluster has accelerated significantly since 2000 (IBGE, 2014). Between 2000 and 2013, China accounted for almost 25% of the global GDP rise, followed by India with 5.8%, Brazil with 3.1%, and Russia with 1.8% (Lin & Rosenblatt, 2012). These impressive results provided evidence for researchers such as Lin and Rosenblatt (2012) to place much emphasis on what was seen as a shift of global wealth from the traditional Group of Seven towards the BRIC countries. A similar line of argument, regarding the transition of global wealth, was presented by Das (2009), Carmody (2013) and evidenced by the International Monetary Fund (IMF, 2013). Nevertheless, despite these achievements, their ongoing and sustainable performance will need to be monitored, especially as financial circumstances and rates of development change, and disruption occurs in an increasingly uncertain economic environment.

Together with the growing economic power, Brazil, Russia, India and China have increasing aspirations in the political arena. Evidence provided by researchers, for example, Armijo and Roberts (2014), Castro (2012), and Chin (2014), suggests that the countries have made significant efforts to consolidate their relationships and develop a formal agenda to set clearer directions for the cluster. After the first official gathering in 2006, a series of meetings followed between BRIC officials, foreign ministers, ambassadors and bankers. These meetings became increasingly frequent (Roberts, 2011) and resulted in the first formal BRIC summit in Russia in 2009, and the release of its first group statement.

In 2011, South Africa was invited to join the group which was then updated from BRIC to BRICS. However, this study focuses on the original cluster, Brazil, Russia, India and China. Nevertheless, at times reference will be made to the BRICS cluster where South Africa has been involved. Several arguments justify the exclusion of South Africa
from this study. To begin with, the motives for including South Africa in the bloc are different from the initial reasons for the formation of the cluster in 2001 by O’Neill (i.e. high performing economic trends). O’Neill himself disapproves of the “S” being added to the acronym, arguing (Naidoo, 2012; Spector, 2015) that South Africa does not belong to the cluster because of its relatively small economic magnitude in comparison to the other nations. O’Neill was categorical in concluding that the inclusion of South Africa had ‘somewhat weakened the group’s power” (Naidoo, 2012). In the same way that O’Neill had not predicted the addition of South Africa into the cluster he had created, he also was unable to foresee that the initial four countries would act as a significant political force. It has been an unexpected political outcome that caught many by surprise, including O’Neill who commented (“South Africa an economic powerhouse?”, 2011): “who would have ever dreamt that there would be a BRIC political club? It certainly isn’t something that I ever imagined.” Another reason for restricting the analysis of this study to the four original members is that, in the majority of international economic forecasts, South Africa is not considered to be an economic powerhouse, now or in the future. Recent data (Mançellari, 2016) confirms South Africa as being one of the weakest economic performers in Sub-Saharan Africa. In fact, while the GDP rate of growth in South Africa is expected to reach 1.1% in 2016, the estimated expansion for countries such Nigeria, Angola and Kenya is much higher with increases of 4.6%, 3.5% and 6.1% respectively (Mançellari, 2016).

Despite BRIC progressing to the top of international economic rankings, it should be noted that some scholars are less convinced about the status of the member countries (Pant, 2013; Sharma, 2012). These scholars are highly skeptical, with criticism based on there being no precedent where such diverse countries cooperate to form an economic group. If we were to consider geographic, historical, political and cultural factors, it would be almost impossible to conceptualise Brazil, Russia, India, and China as a cohesive group. In fact, Sinha and Dorschner (2010, p. 88) declare that these countries are “quite dissimilar, do not share common political interests, and are not a natural trading bloc.” Other scholars (e.g. Becker, 2014; Li, Gorshkov, Scalon & Sharma, 2013; Pant, 2013) advocate that the BRIC countries have no common identity, and emphasise the broad dissimilarities in their history, political systems, economic profile and cultures.

In contrast, some researchers (e.g. Armijo & Roberts, 2014; Tudoroiu, 2012; Roberts, 2011) theorise that, in overcoming their historical, political, social and cultural differences, the BRIC countries have devised a common goal in the international arena, which is to increase their influence and move from a unipolar world order to a multipolar one. Given their economic power, it has been acknowledged as “unsurpri-
sing” (Roberts, 2011) that the BRIC countries would attempt to increase their influence in forums of international negotiation, with researchers such as Carmody (2013, p. 5) noting that the rise of BRIC is “fundamentally reshaping global governance and geopolitics”. These have been major developments for a cluster of ‘emerging economies, also identified as ‘developing countries’. The similarities, differences and aspirations of this bloc will be further explored in the context of this thesis.

There are also significant concerns that will be explored in the thesis, the most important being that, in contrast to the high impacting economic achievements of BRIC, social progress in these countries has lagged behind. Notably, BRIC countries have generally performed poorly and progressed slowly in comparison to many other countries with regard to human development, as indicated by the United Nations Human Development Index (UN, 2014). Several researchers have identified a number of areas of concern. Examples of the common issues facing the BRIC countries are high levels of income inequality and poverty (Elizaga, 2011; Epikhina, 2013; Sharma, 2012) and insufficient investment in key human development areas such as education and health (Awan, 2012; Leahy 2014; Yuan, 2011). More specifically, high poverty rates, poor infrastructure, ineffective use of resources, inadequate health services, unequal income distribution and social inequity are some of the issues yet to be effectively addressed across the BRIC.

It seems that, whilst the BRIC countries have been building significant external levels of economic power, they have less effectively managed a range of internal issues, especially social problems which could negatively impact further sustainable economic growth and social development. For this reason, researchers such as Haub (2012) are cautious and suggest that the BRIC countries are not in a position to be classified any further as developed economies, arguing that more has to be done to ensure sustained economic growth and progress on other dimensions. Other researchers, for example, Szirmai (2005) and Elizaga (2011), have signalled that the low standards of living of a considerable section of the population in the developing countries are one of the key impediments to these countries reaching developed status.

One complex challenge for these BRIC countries is how to ensure that economic growth and human development occur concomitantly. At the moment, the considerable disparity in the current status of performance in both dimensions is clearly evident. In this context, there is speculation about the type of strategies these countries could adopt to elevate their performance on both fronts. A possible approach could be for BRIC to now turn its focus to the human capital aspect of development, having performed well on the economic aspect. As widely evidenced in the literature (e.g. Barro,
improvements in the human capital domain are known to have positive and high impact on economic prosperity and social development. Hence the relevance of exploring strategies implemented in other countries to build people’s capabilities, knowledge and skills, becomes an important consideration.

The importance of the ‘human capital’ aspect as a key component of progress and development was identified much earlier by Adam Smith (1776) when seeking to devise approaches to manage the demand for new human capabilities to cater for the Industrial Revolution (circa 1760-1830). Smith’s contributions were revisited later by Mincer (1958), Schultz, (1961) and Becker (1964) who became the pioneers of human capital theory. Their work was the starting point for establishing correlations between improvements in education and health and increase in individual and national prosperity (e.g. Ashton & Green, 1996; Barro, 2013; Chirwa & Matita, 2009; OECD, 2001), and have become important for understanding progress in the developing countries. Investment in education as a major contributor to overall progress has been highlighted by other researchers such as Anand and Ravallion (1993) and Baldacci, Clements, Gupta and Cui (2004).

Accepting the principle that economic growth is not a synonym for economic development (Brinkman, 1995; Elliott, 2006; Szirmai, 2005), but an essential part of the development strategy, this thesis aims to investigate the interrelationships of economic growth and social development using the perspective of human capital development. Human capital, the core of which is education and health, was selected to provide the lens for this current analysis as investment in human capital development has the power to influence both economic growth and social development. Numerous studies (Ashton & Green, 1996; Becker, 1964; Hanushek & Woessmann, 2008; Ogunade, 2011) and influential reports (OECD, 2001 & 2015; World Economic Forum, 2013) have supported this position. The strong support for this perspective is clearly articulated by the OECD (2015, p.15) which asserts that “a main transmission mechanism between inequality and growth is human capital investment”. Similarly, the World Economic Forum (2013, p.v) affirms that human capital is “the key for the future of any country and any institution” and the core factor for long term economic success.

1.2. Focus and aims

The focus of this study is to explore the factors that led to the formulation of the BRIC cluster, investigate its current economic and social performances on a set of macro level indicators, and determine whether it has lived up to expectations. The study will
also seek to identify the constraints and challenges to be addressed by these countries, on their journey to being more all-rounded in their development and sustained in their progress.

More specifically, this study will:

- investigate the formation of the BRIC cluster, the criteria by which it had been defined, as well as commonalities and differences in goals and aspirations;
- examine the current economic status of BRIC members, including their performance on international economic indicators and rankings;
- examine the current performance of BRIC members on social indicators, evaluating aspects such as human development and poverty levels;
- provide comparative analyses of BRIC’s performances on a range of indicators to understand performance in relation to each other;
- explore possible constraints and challenges facing the BRIC cluster in terms of both the sustainability of their trajectories and changing economic environments.

Although there has been considerable attention directed to studies about ‘emerging markets’ (e.g. Becker, 2014; Müller, 2011; Petrick & Juntivasarakij, 2011), and in particular the BRIC cluster, there are still many issues to be investigated and understood. Several economic, political and social issues have been overlooked in the academic literature, with a clear gap in the availability of substantial comparative analyses of performance and achievements across BRIC. One of the challenges faced when undertaking comparative studies is the complexity in managing common assumptions and real differences, in this instance the distinctly different social, historical, political, and geographical realities of Brazil, Russia, India and China. The current study embraces this challenge, as is evident in the analyses of data, presentation of comparative information and the discussion that follows. Based on the aims of the study, research questions have been devised and are presented in Chapter 3.

Chapter 3 also provides a discussion of the research methodology which adopts a qualitative method of investigation, based on an extensive review of the literature. Given the relative ‘newness’ of empirical studies relating to emerging economies, there is limited availability of empirical and exploratory studies relating to emerging economies. Nevertheless, the study has included analysis of the extant empirical literature, and explored and included strategic reports from national, regional and international organisations, as well as country-specific information gathered from each of the BRIC countries. Secondary data gathered has been analysed on the basis of sub-sets of key economic and social indicators, such as economic performance and GDP (Heinz & Tomenendal,
2012; Müller, 2011); global growth (Das, 2009; Lin & Rosenblatt, 2012); human development (UN, 2014); poverty and income inequality (Das & Das, 2013; Guangjin, 2013; Khondker, 2011); and human capital (Ardichvili, Zavyalova, & Minina, 2012; Awan, 2012; World Economic Forum, 2013). Comparative analyses have been conducted and reported across these indicators. Given the dearth in the literature on ‘emerging economies’ and BRIC, it is hoped that the findings of this study will contribute to the literature on the BRIC countries, as well as extend understanding of developing countries, their social and economic performance, constraints to advancement, and strategies implemented to address the challenges to their upward trajectories.

1.3. Thesis structure

The remainder of this thesis is organised as follows:

- Chapter 2 comprises a review of the relevant literature. It provides insights into the formation of the BRIC cluster and its economic performance and social development. It also focuses on human capital theory, which has provided the theoretical foundations for the measurement of BRIC’s performance.
- Chapter 3 outlines the research approach and methodology, including the study design, key data sources and data collection. It includes discussion of data analysis tools, namely, economic and social indicators used to measure dimensions of development.
- Chapter 4 presents a comparative analyses of the findings, and includes a discussion in relation to the performance of each member of the BRIC cluster on a set of targeted economic and social indicators.
- Chapter 5 summarises the major outputs and contributions of this study, outlining practical implications and suggesting future research directions.
Chapter 2: Literature Review

As mentioned in Chapter 1, the literature on ‘emerging economies’, in general, and BRIC (Brazil, Russia, India and China) in particular, is somewhat sparse, given the relative newness of the field of study. Nevertheless, this section seeks to review the extant academic literature, as well as high level international and regional reports from institutions such as the Organisation for Economic Co-Operation and Development (OECD) (1998, 2001, 2015) and United Nations (2014). These institutions monitor progress in developing countries and the consequences of investments in development. Overall, the literature review seeks to present differing perspectives and analyses of BRICS’s creation and economic performance; provide insights into areas of inherent mismatch between economic performance and social development; and identify appropriate measures of performance viewed through the lens of human capital theory. It also identifies gaps in the literature and indications of challenges facing BRIC in terms of its sustainable growth.

2.1. Defining emerging economies

The emerging market (or ‘emerging economy’) concept is yet to be explored in depth. It is used broadly in the literature and can be credited to the economist Antoine van Agtmael who developed the expression in 1981, when researching profitable markets while working at the International Financial Corporation of the World Bank (Kynge & Wheatley, 2015). Behind the design of this classification, Agtmael concluded that an ‘emerging market’ is a country experiencing accelerated economic growth, as well as embracing developed country (Western) values, creating institutions and maintaining political stability (Bremmer, 2014). As analysed by Bremmer (2014), emerging markets have become the place to invest, where the investors often accept higher risks and aim for higher results, in spite of the political immaturity of many of these nations, although some commentators note that confidence in such investment may have been shaken in recent times (Foroohar, 2015; Zehorai, 2016).

Other researchers, for example El-Erian (2015), argue that the expression seems to no longer be able to capture all the available possibilities for the investors, due to wide variability among the countries which are included in this category. The term has been employed widely and freely, with even the United States being sometimes called an emerging market by the creator of the expression. Not surprisingly, what is essential, is what Agtmael defines as the opportunity of investment (Zweig, 2013), in other words,
where more profits can be generated. According to Agtmael (Zweig, 2013), the reason why the US has been considered an emerging market is because of the fact that the US economy is recovering from the crisis that originated in the country creating profitable markets for investors.

Despite such debates, the term 'emerging market' was adopted by the IMF (2015) and is the basis for its World Economic Outlook (WEO) which has become an invaluable source of information for understanding the context of emerging markets. In brief, the WEO is a biannual survey which combines short and medium term projections of macroeconomic indicators (such GDP and inflation) referent to 189 countries. In the WEO, the IMF divides countries into two basic groups: advanced economies and emerging market/developing economies. In this division (IMF, 2015), the advanced economies group has 34 countries including major advanced economies (Group of Seven: United States, United Kingdom, Japan, Germany, France, Italy, and Canada), other developed markets and the European Union. Simplistically, all the other countries belong to the emerging market and developing economies category. The IMF (2015) notes that the categorisation is not based on strict criteria but instead has evolved over time with the objective of facilitating access to meaningful and well organised data. Even though the criteria are not strict, the IMF (2015), in creating its data, essentially reviews three aspects: per capita income level, export diversification profile and degree of integration into the global financial system. The WEO classification is broadly adopted in scientific investigations.

Similar debates involving definition of concepts and undefined terminology are present in the international relations literature. In analysis related to the international political context, emerging economies like BRIC have been frequently described as ‘emerging powers’ or ‘rising powers’ (Armijo & Roberts, 2014; Chin, 2013; Cox, 2012). Hart and Jones (2010) note that there is no consolidated definition about what an ‘emerging power’ or ‘rising power’ is. They do, however, provide some indication of what a ‘rising power’ could constitute and specify three basic features: growing economic power, rising claims for international redefinition of influence, and increasing pressure for a multipolar world. If these three aspects are the criteria to be fulfilled by a country in order to be classified as a rising power, then the four BRIC countries ably satisfy these requirements.

To fully discuss the concepts of emerging markets, developing countries or rising powers is beyond the scope of this study. It is generally accepted in the literature that the terminologies ‘emerging markets’ and developing economies’ are considered to be synonymous, and the BRIC countries will be considered as part of this category.
2.2. Conceptualisation of BRIC

Brazil, Russia, India and China are frequently analysed in the context of the emerging markets or the developing countries category. This was exactly the circumstances of the cluster’s creation. It was when searching for potential markets for future investments that the British economist, Jim O’Neill (2001), from Goldman Sachs, wrote a report identifying Brazil, Russia, India and China as having been performing at high levels economically. At that stage, when comparatively evaluating economic outcomes from the Group of Seven with these four large emerging economies (BRIC), O’Neill acknowledged that ‘incorporating’ the four emerging economies into a Group of Seven style cluster “might not be straightforward’ considering their economic, social and political differences (O’Neill, 2001, p.10). Despite the dissimilarities, the economist was able to capture that which many are still reluctant to notice, i.e. that the “relative positions of key countries in the world economy are changing” (O’Neill, 2001, p.6), especially amongst the emerging economies. This was the birth of BRIC.

New projections from a second Goldman Sachs report (Wilson & Purushothaman, 2003) drew even more attention to these emerging markets. The predictions were “startling”, claiming that by 2040 the BRIC economies together would be larger than the Group of Six (USA, Japan, UK, Germany, France and Italy) (Wilson & Purushothaman, 2003, p.2). If the predictions were to be reviewed, even with the current slowdown in economic growth, BRIC would be larger than the Group of Six earlier than the forecast date (i.e. 2040). In addition to the initial economic growth predictions, Wilson and Purushothaman (2003) have also identified four key conditions required to facilitate the continuous wealth generation for this group of countries. Firstly, they stressed the necessity of “macro stability” to provide a suitable environment to attract investments. Secondly, efficient legal, financial, health and education institutions were necessary for a well functioning economic system. Thirdly, “openness” to trade and foreign direct investment (FDI) granting access to imported goods, technology and their huge markets was highly relevant. The researchers also noted the positive relationship between levels of schooling and growth, whereby higher levels of “education” would overcome possible shortages of qualified workers who are essential to economic development.

The literature reveals that it did not take long for these four countries, namely BRIC, to realise their potential as a ‘bloc’ and to seek to formalise their relationship. In seeking to understand how BRIC evolved, Roberts (2011) suggests that it was the astuteness of Russian diplomacy which brought together the foreign ministers of these four countries for their first official meeting in 2006. She argues that it was in their interest to do
so and views Russia as a peer outlier in the BRIC’s group, a country in demographic decline, commanding a large nuclear power, already a permanent member of the United Nations Security Council and “hardly a parvenue” (Roberts, 2011, p. 4). A similar view about Russia is expressed by the French researcher Laidi (2012), who argues that this country’s presence in the emerging markets group should be considered “atypical”. In Laidi’s argument (2012, p.619) Russia is not a rising power, “but rather a former superpower eager to regain a part of the political status it lost in the aftermath of the Cold War”.

Yet another scholar who questions Russia’s classification as an emerging power is MacFarlane (2006). He suggests that Russia’s international policy was to seek to join forces with other actors which were growing in the international scene. In this context, Russia’s goals were to “reverse the substantial decline of the 1980’s and 1990’s and to lay the internal basis for a return real status as a great power” (MacFarlane, 2006, p. 56). Hence, to Brazil, China and India, Russia shows the capacity to use ‘soft power’ in promoting a considerable change in the traditional Kremlin’s reputation of being a ‘hard power’ and coercive dominant force. Roberts (2011, p.4) also highlights the Kremlin’s efforts as an example of Russia’s abilities for “acting as a team-player in an innovative network, making reasonable demands to reform the international intuitions while engaging in peer learning”. Roberts (2011) contends that this was the first time in Russian history that military priorities have been overtaken by economic priorities in the state agenda. The concretisation of Russian diplomatic efforts was consolidated in June 2009, when the state leaders of the four BRIC gathered in Yekaterinburg (Russia) for the first official cluster meeting. In addition to the assembly, the first combined official summit was also launched on that date (Becker, 2014). Since then, annual governmental leaders meetings and conjoint summits have occurred: in Brazil (2010), China (2011), India (2012), South Africa (2013), Brazil (2014) and the last was back in Russia (2015) (Li, 2013; Tudoroiu, 2012; Scott, 2015).

These summits have had important consequences, resulting in strategically orchestrated actions and rising demands for international political influence as pointed out by researches such Chin (2013), Glosny (2010), Roberts (2011), Vestergaard and Wade (2013). These researchers note BRIC’s increasing pressure for more decision power towards the emerging economies in intentional forums such as the World Bank, IMF or Group of Twenty. Researchers have different interpretations about this cluster’s aspirations. Laidi (2012, p.614), for example, sees their objective as being to “erode the Western hegemonic claims.” Others, such as Hart and Jones (2010, p.66), interpret the international orchestrated actions as calling for more “pluralistic or multipolar conceptions” in the world order context. The debate continues and more investigation is re-
quired to explore the dynamic changes in the international arena with the conjoined actions of the BRIC countries.

2.2.1. Alternate perspectives to BRIC’s formulation

The BRIC countries may have caught the attention of researchers (e.g. Banerjee, 2015; Becker, 2014) who acknowledge their economic performance as the highest among emerging markets. As mentioned previously, the BRIC acronym was created 15 years ago when O’Neill (2001) noticed the impressive rates of GPD growth of these four emerging markets at that time. However, the creation of BRIC is questioned by many scholars. Some, such as Armijo (2007), Tudoroiu (2012) and Pant (2013) contend that a definitive conceptualisation of BRIC is still missing, and that it is a necessary prerequisite that the group moves beyond rhetoric and a loose structure. There is still no consensus in the literature about the definition of BRIC, and scholars such as Becker (2014), Pant (2013) and Li et al. (2013) contend that the BRIC countries have no common identity. They point out that the differences, such as their history, political principles and systems, economic profiles, and culture, present a barrier to further inter-state cooperation. Commentators such as Pant (2013, p.91), go as far as to label the group as “The BRIC Fallacy”, asserting that, despite their initial economic success, the group “has begun to lose much of its sheen,” whilst economists such as Sharma (2012) suggests that the economic growth rates in the BRIC countries is falling significantly with implications for their future performance. Pant (2013) goes further and contends that these differences will undermine the group, for example, when engaging in consensus decision making, given their differing political ideologies. On a lighter note, Li (2013, p. xvi) uses interesting imagery to describe the differing profiles of the BRIC countries, with Brazil being referred to as the “world’s raw material base”, Russia as “the world’s gas station”, India as “the world’s office”, and China as “the world’s factory!”

In addition, the countries themselves are vastly different, geographically, historically, politically and culturally and some point to these differences as being obstacles to further integration (Armijo, 2007; Pant, 2013; Tudoroiu, 2012). For instance, their political systems are diverse with two democracies (Brazil and India) and two autocratic systems (Russia and China). Economically, Brazil and Russia’s exportation portfolio is greatly dependent on raw materials, agriculture and oil, respectively. China is focused on manufacturing, while India exports IT services (Li, 2013). Culturally, they are also highly diverse, and include two of the oldest civilisations in the world (India and China). In contrast, whilst some highlighted others differences, other saw similarities amongst BRIC. For example, Tudoroiu (2012) emphasises common features including large populations that geographically dominate in their region; the largest economies
amongst emerging nations; recognition as leaders in their regions, and being mostly non-aligned countries with a determination to have an impact on world affairs. As can be seen in Table 1, China and India are by far the most populous countries in the world with over a one billion people each, while Brazil has less than one-sixth of each of these countries total population (201 million), and Russia being much smaller, with equivalent of 70% of the Brazilian total (143 million). In relation to land mass, the least populous country of the cluster (Russia) has the biggest territory, followed by China, Brazil and India.

<table>
<thead>
<tr>
<th>Population (million)</th>
<th>Area of territory (1 000 sq. km)</th>
<th>Geographic location</th>
<th>Political system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>201</td>
<td>8 516</td>
<td>South America</td>
</tr>
<tr>
<td>Russia</td>
<td>143.3</td>
<td>17 098</td>
<td>Europe</td>
</tr>
<tr>
<td>India</td>
<td>1 224.1</td>
<td>3 287</td>
<td>South Asia</td>
</tr>
<tr>
<td>China</td>
<td>1 357.4</td>
<td>9 600</td>
<td>East Asia</td>
</tr>
</tbody>
</table>


An alternative and challenging view put forward by Thakur (2014) is that these four countries are heterogeneous, representing the common interests of countries in the emerging economies category. He noted that:

It is precisely the attributes that make them atypical - size of population, GDP, military power, diplomatic reach, intellectual infrastructure - that give them the capacity to represent the views, interests, and concerns of the typical developing countries in international forums like the UN. (Thakur, 2014, p.1795)

Similarly, Tudoroiu (2012, p. 34) emphasises the political benefits of the group which perhaps is one of the most important factors that brings them together. Combining their efforts seem necessary to gain relevance in the international context. Tudoroiu (2012, p. 34) notes that it is the "conviction that the first step of their joint strategy should be the demand for more influence and decision power in international economic and financial institutions" (Tudoroiu, 2012, p. 34).
Clearly, there are mixed views on the conceptualisation of the BRIC cluster, on its purpose and its real and perceived agenda. Perhaps studies such the current investigation (and others) will serve to shed more light on the relevance and conceptualisation of BRIC. Despite the criticism that BRIC as an influential group lacks definition and cohesion (Armijo, 2007; Pant, 2013; Tudoroiu, 2012), there is evidence to suggest that the countries have made significant efforts to consolidate their actions and gain influence.

### 2.2.2. Human development and BRIC

In reviewing the literature on BRIC and emerging economies, one soon becomes aware of an important missing element in BRIC’s advancements (i.e. that progress on the social dimension lags far behind the economic success). It is essential to recognise that the social constraints can negatively impact or increase the difficulty of reaching economic growth (Becker, 2014; Li et al. 2013). One example of a possible problem is that political instability, as a result of high income inequality, as Banerjee (2015) explains, can scare international investors. Another issue pointed out by Das and Das (2013) that is often evident in developing countries is corruption, which creates obstacles for wealth creation. Societies with weak institutions, poorly trained personnel and lack of transparency are some of the aspects identified by Das and Das (2013) as impacting negatively on the development process in some emerging markets.

Moreover, the economic and social aspects overlap and reinforce each other. For example, the analyses of poverty levels are generally connected to the investigations of income inequality because, as noted by Sharma (2013, p.460), they are like “the two sides of the same coin”. Costa and Scalon (2013) express a similar opinion, contending that income inequality goes far beyond the extension of the economic context, that its origins, consequences and interconnections cannot be reduced to simplistic monetary analysis. This is exactly the focus of enquiries of different researchers, each addressing one aspect of the same enormous issue. For example Heinz & Tomenendal (2012) point to the small size of the GDP per capita in the BRIC countries, which is a clear economic construct that has flow-on social consequences for many in the population including low buying power and reduced chances to access better dwelling and services such as health and education.

Combined with wealth inequality is poverty, as evidenced in studies in this area (Das & Das, 2013; Li et al., 2013). A challenge faced in investigating issues of poverty and inequality in developing countries is the ability to gather data coherently and methodologically enabling the development of more precise comparative analyses across countries, as pointed out by Sharma (2013) and Guangjin (2013). In addition, uncovering
the exact number of people living in poverty in the emerging economies, generally, and in the BRIC countries specifically, has proven to be difficult, although it is known the BRIC countries are home to 50% of the poorest people in the world (Mújica, Vásquez, Duarte, Escalante, Molina & Junior, 2014). Clearly, social and human development factors are a major issue for these countries. Elaborating solutions to address challenges like these is not a simple task, particularly in the case of the BRIC countries, such previously noted, with so different societies with specific history, political system, religion and culture (Das & Das, 2013). If the BRIC plan is to make a major and positive impact with its economic rise in the global markets (Thakur, 2014), then it need to recognise that internal deficits will also have to be addressed.

There is much discussion in the literature related to how to promote simultaneously achieve economic and social development across the emerging market societies, as is evident in the work of researchers such as Mújica et al. (2014) and Ardichvili, Zavyalova and Minina (2012). Awan (2012), Josh and Yu (2014) and Yuan (2011) focus specifically on access to health and education and the quality of these services for the people in the BRIC countries. Findings in these studies point to the challenges and constraints to be addressed by the developing countries, and advocate for increased investment in human capital development studies. The work of Ardichvili et al. (2012), Awan (2012) and Yuan (2011) are of particular relevance to this study with suggestions firstly, for in-depth data gathering for comparative understanding of the current human capital development stages in each BRIC country; and secondly, to explore the national human resources policies in practice in these four countries.

These researchers have also sought forecast possible constraints and challenges to be faced by the BRIC in working towards further progress. In their studies, several issues were identified, such as insufficient or inappropriate distribution of resources for education (Adichvili et al., 2012; Yuan, 2011); mismatches between skills and jobs (Awan, 2012); inappropriate training systems which were unable to address the countries’ demands (Yuan, 2011); and lack of comprehensive long term human capital development strategies (Adichvili et al., 2012). Recommendations for on-going improvement in human capital development and warnings of possible limitations to future economic growth were made. These economic, social and human capital aspects and their interconnections will be further discussed in Chapter 4.
2.3. Human capital theory

2.3.1. Origins and concept of human capital

The idea of investigating the role of people creating economic progress for a country is important for this study. The notion goes back to Adam Smith (1776) (as cited by Butler, 2011) who drew attention to the role of education and training in developing skills, knowledge and abilities of a person and its impacts on individual wages and national wealth. His work was revisited 200 years later when it was further explored in late the 1950s and early 1960s by scholars such as Mincer (1958), Schultz (1961) and Becker (1964). Their work continues to influence theory developments in relation to the link between economic growth and education, training and human capital development.

Original studies by Mincer (1958) demonstrated the impact of individual income inequality, and established a positive correlation between personal investments in training the acquisition of higher wages. Subsequently, the work was further developed by Schultz (1961) who established that skills and knowledge acquired by a person are a form of capital resulting from conscious investment. This was the genesis of the human capital concept and has been extended to a theory of Human Capital development that is highly relevant in emerging economies, including BRIC (Boarini, D’Ercole & Lui, 2012; Kwon, 2009). In his analysis, Schultz (1961) proposed that the “nonhuman capital” factors (e.g. land and natural resources) were unable to provide sufficient explanations for the accelerated increase of countries’ prosperity after the Second World War. As a result, the justification for the nations’ growth could be explained when the aggregated of people’s abilities were added into the equation as the key element fostering the fast rates of growth evidenced by the Western societies (Hanushek, 2013; Ogunnade, 2011; Schultz, 1961).

Further propositions were made by Becker (1964) who empirically proved that workers with more education tended to have higher wages than those with lower levels of education and/or training. He also contended that people decide to invest in education based on expected returns on their investment. For example, some people will be willing to direct more effort and resources towards a profession which has expected higher earnings. Becker (1964) also suggested that workers were concerned about increasing their well-being which later evolved to the idea of what is currently considered as non-monetary benefits of human capital development.

The theoretical foundations of human capital theory and principles are relevant to this study in the context of human and social development in emerging economies. The relevance is also clear in the work of high level organisations such as the OECD, which
in addition to supplying datasets, has analysed the role of human capital in several publications, and included the development of its own conception of human capital. In 1998 (p.9), the OECD defined human capital as “the knowledge, skills, competences and other attributes embodied in individuals that are relevant to economic activity”. Subsequently, this definition was updated (OECD, 2001, p.18) to “the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being.”

Several studies (e.g. Cohen & Soto, 2007; Hanushek, 2013; Ogunade, 2011) have investigated the role of human capital in a country’s trajectory and what could be implemented to maximise positive social and economic results. In regional studies, such as in Latin America, Hanushek & Woessmann (2012), demonstrate the interrelation between poor skills acquisition (even with high levels of school attainment) and low economic growth. In a similar line of investigation, Ogunade (2011) emphasised the role of basic education in the developing countries as a prerequisite for the development of any training or skills program. In yet another perspective, Baldacci et al. (2004) identified poor governmental administration as the main factor of ineffectively used resources directed to human capital development.

2.3.2. Human capital studies and development

From its beginning, human capital theory has developed in two broad pathways of investigation: micro (or individual) and macro (or aggregated) levels of enquiries. As explained by Kwon (2009), individual level studies are embedded in the precept that a person bears the costs of training (such as direct fees and opportunity cost time) aiming for higher future earnings from personal efforts. This correlation was mathematically proved by Mincer (1958), who created a model of earnings distributions which is still used today, often being referred to as the ‘Mincerian earnings function’. Several scholars have adopted Mincer’s model and were able to recognise a positive correlation between personal investments in training and increase of individual wages. For example, Dearden, McIntosh, Myck and Vignoles (2002) have identified the linkage between education investments and wages in Great Britain. Psacharopoulos and Patrinos (2002), Bennell (1996; 1998) conducted investigations and achieved similar results for Sub-Saharan Africa, Asia and the Latina America regions. Chirwa and Matita (2009), using Mincer’s model, empirically proved that, on average, an additional year of formal education increased workers’ life time earnings by 10% in Malawi. Considering these findings, it becomes essential to analyse the levels of income available for populations in all emerging markets including BRIC. The literature also raises the question of how
governments assist low socio-economic background groups to acquire skills and abilities which will lead to better salaries and their countries’ prosperity.

In a broader perspective, aggregated level studies aim to understand the role of the human component in the creation of countries’ wealth. As established in initial enquiries (Becker, 1964; Schultz, 1961), human capital is based on two essential pillars - education and health. The majority of the literature related to human capital development tends to focus on education, with a clear lack of empirical studies investigating the impact of health as pointed out by Baldacci et al. (2004) and Barro (2013). It seems that this imbalance has its reasons. Scholars such as Jack and Lewis (2009) argue that the connection between health and economic growth is methodologically complicated and difficult to establish because there are no clear measurements for health and evidence of the causal relationship of health-economic growth. According to them, investments in education have greater impact on social indicators than results from health expenditures, although, resources directed to health have immediate positive effect in growth, while the impact of education spending has a time lag of between five to fifteen years on social and economic indicators (Baldacci et al., 2004).

Exploration of the literature seems to indicate that education has become accepted as the key driver of human capital development (Ashton & Green, 1996; Baldacci et al. 2004; Hanushek, 2013). With its benefits having a cyclical effect, a more educated person is likely to increase her/his wages, thereby having a higher income available to consume services and goods and, in turn, positively impacting on the country’s economy. For this reason it becomes essential to investigate, understand, and provide insights into human capital development and strategies implemented by emerging economies, identifying what needs to be accomplished to be able to reach the appropriate human development stage. To explore what are the strategies and possible challenges of human capital development, it is suitable to start investigating the stage of human capital development within these economies. Human capital theory has provided several constructs for developing tools to measure aspects of human capital development and related issues. These will be briefly discussed in the sections to follow.

### 2.3.3. Human capital and measurement

Considerable effort has been directed to create appropriate measurements of human capital within a country (e.g. Keeley, 2007; OECD, 2001; World Economic Forum, 2013). Several frameworks have been developed along two major distinct pathways: a monetary measurement approach and an indicators-based approach (Boarini et al., 2012). This thesis uses the indicators-based approach as the basis for analysis. Nevertheless, for the purpose of the discussion, the monetary measures approaches are
briefly covered below, with the goal of providing a more complete overview of what is available.

a) Monetary measurement approach
As described by Boarini et al. (2012), there are three subcategories of monetary measurement of human capital: indirect or residual, cost-based, and income-based. These three groups will be briefly discussed below, to indicate how differently this approach is conceptualised from the indicators-based approach.

• Indirect or residual: this approach has been used in some World Bank studies (e.g. 2006, 2011a; Ferreira & Hamilton, 2010) to investigate the reasons for growth of national wealth. In this perspective, human capital is considered an “intangible capital residual” (World Bank, 2006; p.87), and its aggregated national stock is calculated by the difference between the expected countries’ future discounted value of consumption and the total of the tangible capital (e.g. natural resources and industrial production).

• Cost-based: this approach measures the stock of a countries’ human capital. Researchers using this approach base their assumption on the fact that individuals, companies and governments decide to invest in human capital improvements (e.g. Baldacci et.al, 2004; Schultz, 1961). Hence, adding personal, companies and governmental costs of training provide an indirect insight about what is the human capital status in a country.

• Income-based: this approach aims to measure human capital stock by forecasting expected earnings over a workers’ lifetime (e.g. Graham & Webb, 1979; Fraumeni, 2009). In this category, the focus is on the earning power of each individual in a context of market value. In this perspective, every worker’s payment is a result of the demand and supply of skills in the work market (Boarini et al., 2012).

b) Indicators-based measurement approach
To establish the causality between human capital development and economic progress, different indicators have been tested, eventually used as a single proxy or mixed in the indicators-based approach to reach the human capital stock. For example, some investigations included adult literacy (e.g. Romer, 1990), school enrolment ratio (e.g. Barro & Lee, 1993; Mankiw, Romer & Weil, 1992), average of years of schooling and, more recently, schooling quality tests results, to try to estimate the stock of human capital within a country (e.g. Temple, 1999; Barro, 2001). All these factors have relevance to investigating human capital and its developments in the emerging economies,
including BRIC. In addition, other studies adopted dashboards of indicators such as labor market outputs, investments and quality achieved (e.g. OECD, 2001; World Economic Forum, 2013).

Figure 1 below (adapted from Boarini et al., 2012; and Kwon, 2009), presents an overview of one effort to capture key factors that could be included in human capital measurement. It also identifies the types of approaches linked to each sub-set of potential human development indicators.

There are, however, several concerns about what are appropriate forms of measurements in human development, with many acknowledging the drawbacks of trying to quantify human capital because of the complexity of this task. One of the issues when developing comparative analysis is the unreliability of the data. WoBmann (2003) notes that there are still considerable imprecisions and errors from data recording and decisions when choosing the wrong proxies to relate with human capital development. More than a problem of data entry, Boarini et al. (2012, p. 23) posit that the measurement issues rely on the "multi-faceted nature of human capital" which is influenced by several different interconnected benefits, making "impossible" the identification of a single direct form of quantification. The heterogeneity is even higher among emerging markets, as previously noted, increasing the challenges to create a suitable measurement tool. Kwon’s (2009) suggests a new approach of measurement of human development that includes a focus on quantitative growth and qualitative progress. He supports the belief of other researchers (e.g. Villa 2000) that most of the current options of
measurement are able to capture the monetary benefits of human capital development, meanwhile discrediting the non-monetary improvements (e.g. better parenthood, family planning, health food consumption and social engagement). The non-monetary consequences of human capital development are also defended by Schuller (2001), who claimed that human capital should be understood in a social context, where people dedicate effort to obtain more skills and qualifications that will flourish in a group environment, not in isolation.

2.4. Contribution of international organisations

Several researchers (e.g. Barro, 2013; Hanushek, 2013; Keeley, 2007) have highlighted the essential role of human capital as a driver of economic growth and social development as previously mentioned. Nevertheless, it is critical to emphasise the efforts made by international institutions, such as the OECD and United Nations, in collecting and providing a variety of statistical data and reports, which enable international comparative analysis. They have devised and contributed several performance indicators that are highly relevant to measuring human development on many dimensions in emerging markets. Smith (2008) notes that the types of macro data (e.g. income, education, health, well-being and environment related indicators) are still poorly explored in the social sciences literature. Some examples of recent reports are the 2012 Survey of Adult Skills and the Programme for International Student Assessment (PISA), also published in 2009, 2006, 2003 and 2000 (OECD, 2016). The ‘Education at a Glance’ (2014) series also provides updates about the social outcomes of education, investments, access to training and labor market developments permitting a wide view of improvements in these areas (Boarinni et al., 2012; Kwon, 2009). However, reports from organisations such as the OECD (2014) have indicated that increasing levels of education have not necessarily resulted in a more inclusive society in the OECD countries. They conclude that “education can lift people out of poverty and social exclusion, but in order to do so educational attainment has to translate into social mobility” (OECD, 2014, p.14).

The attempts to measure and understand human capital development is the focus of other key entities such as the World Economic Forum and its report, “The Human Capital Report” (2013). The report presents a Human Capital Index (HCI) that includes the performance of 122 countries. The index synthesises information on a total of 51 indicators divided on four pillars: education (12 indicators), health and wellness (14), workforce and employment (16) and enabling environment (9). The report’s findings present the first “holistic” attempt to comparatively measure human capital within and across countries (World Economic Forum, 2013, p. 30). The World Economic Forum (2013, p.
3) recognises that human capital is an essential component to promote “short term stability as well as long term growth, prosperity and competitiveness of nations”.

Reports from such high level organisations and forums (OECD, 2015; United Nations, 2014; World Economic Forum, 2013) indicate that investment in people generates positive societal effects. With a focus on the more monetary perspective, the World Economic Forum (2013) highlights the notion that human capital is the key for long term economic progress. Adopting a more generalist approach, the United Nations (2014) advances the notion that universal access to basic social needs such as health, education, sanitation and public safety should be ensured by suitable policies and resources, with special attention directed to the needs of the poor and vulnerable. It (United Nations, 2014, p.36) contends that “chronic inequality” is responsible for “eroding” further development. Similarly, the OECD advocates that, in addition to fostering economic prosperity, human capital is the key bridge to promote reduction of income inequality and address social constraints, noting that:

A main transmission mechanism between inequality and growth is human capital investment. While there is a gap in education outcomes across individuals with different socio-economic backgrounds, the gap widens in high-inequality countries as people in disadvantaged struggle to access quality education. (OECD, 2015, p.15).

2.5. Gaps in the literature

In reviewing the literature it is evident that several economic, political and social issues related to emerging economies and their development, have been overlooked with a lack of more comparative analyses and insights into performance across countries, especially in relation to emerging economies and the BRIC cluster. A possible reason for the reduced number of macro comparative studies could be related to the complexity of measuring factors or progress in human development and differentiating between common assumptions and highly distinct social, historic and political realities in different countries. The current study embraces this challenge, aiming to seek deeper understanding relating to emerging economies, and in particular the BRIC cluster.

It could be argued that studies investigating in the BRIC cluster and their potential are in their infancy. A major factor contributing to the limited availability of literature could be that the BRIC group phenomenon is no older than 15 years and, consequently, the understanding developed until now is limited. Furthermore, studies have tended to focus mainly on BRIC’s economic achievements and less on aspects of social and human capital development, which, as demonstrated in the literature review, are closely
linked. Opportunities for examining the inter-relationship between economic and social development (inclusive of human capital theory) and contributing to extended understanding and new knowledge exist, specifically in the emerging markets context. Furthermore, specific comparative studies including Brazil, Russia, India and China, a high performing cluster of emerging economies on economic measures, are relatively rare, as are studies of human capital development and the societal impacts. Researchers (Armijo, 2007; Tudoroiu, 2012; Pant, 2013) suggest the need for more insights into how the potential of this cluster could be also further explored and more clearly assessed.

Many questions are still unanswered about BRIC and its performance and development. Some of the knowledge gaps and possible questions to be explored in the context of emerging markets could include: How could these emerging economies sustain their successful performance with the current economic models employed? Considering their diversity, how they can improve their relationship and enhance cooperation? Will the BRIC cluster be able to improve social and economic infrastructure and provide universal access to basic social needs? Strategically, are these countries investing in their people to ensure appropriate levels of human development and future prosperity? Given the current economic crises they are facing, including negative or small growth, what are the best strategies to be adopted to ensure on-going progress and sustainable growth? These and many other such questions relating to the performance of BRIC are yet to be fully answered.
Chapter 3: Methodology

3.1. Research questions

Brazil, Russia, India and China have demonstrated outstanding economic growth in recent times, attracting attention of investors, media and more recently, researchers. Grouped as the BRIC cluster, these countries have been celebrated as the most successful achievers in the emerging countries. In contrast to the economic accelerated progress, however, advancements in social development have been slower. Poverty, income inequality, access to health and education are some examples of issues impacting these countries people and their ability to commit to the progress of the national economy. Given this context, the purpose of this study is to investigate the current stage of development of the BRIC countries on economic, social and human capital indication. In addition, it will comment on the evolution of the cluster and identifies possible constraints for development.

Based on the above purpose of the study, the research questions guiding the investigation are as follows:

1. What are the main features of the BRIC cluster, and how has it evolved to become an ‘outstanding’ cluster of the emerging economies?
2. How are the BRIC countries performing on economic indicators and what are their trajectories in the global arena?
3. How are the BRIC countries performing on issues of social development and how do they rank on targeted human development indicators?
4. What are the trends in comparative performance across the BRIC countries and their levels of achievement in relation to each other?
5. What are the challenges facing the BRIC countries and how can they ensure the sustainability of their trajectories and development, in changing economic environments?

3.2. Research method

The study used secondary data collection and analysis as its key method of research. This involved an extensive review of literature, materials sourced from the member countries and strategic reports from high level regional and internationally recognised...
organisations as components of secondary data collection. The use of secondary data analysis has been proclaimed by several scholars as an effective tool to address research questions in a range of different fields of investigation. For example, Brewer, (2007) notes that researchers have been adopting secondary data analysis in education, business and social studies more frequently. Furthermore, Johnston (2014, p.619) reinforces the advantages of the secondary data analysis in terms of reduction of time and resources, concluding that this is "a method of which the time has come". The use of secondary data analysis in this study is supported by researchers such as Hakim (1982, p.1) who stress the value of secondary data analysis and suggest that there is not much difference between the outcomes of the different methodologies and no need for "any further analysis of existing dataset which presents interpretations, conclusions or knowledge additional to, or different from, those presented in the first report on the inquiry as a whole and its main results."

In addition to maximising the use of time and reduce costs which are normally high in primary data analysis, Smith, Ayanian, Covinski, London, McCarthy, Wee and Steinman (2011) defend secondary data collection as being particularly beneficial to early career researchers who are less experienced, but who could successfully address highly complex queries with the support of secondary data analysis. Moreover, extra advantages are pointed out by Smith et al. (2011) who conclude that secondary datasets allow access to large sample sizes, providing relevant measures and longitudinal information which could be the basis for analysing high impact social and economic questions. It should be noted that undertaking secondary data analysis implies using the same principles of adopting primary data (Smith et al., 2011). These include developing a clear research question, selecting an appropriated study sample and measures, as well as embracing a critical analytic approach. In summary, secondary dataset analysis has the advantage of accessing outcomes that could be difficult to achieve when using primary data collection.

Nevertheless, there are limitations to this approach as acknowledged by Brewer (2007) and Devine (2003). Brewer (2007) acknowledges the fact that the researcher has not been engaged in the collection of the data, and may lack the control over how this process has been undertaken. Devine (2003) identifies another limitation in that existing datasets were created to attend to a set of different research questions; consequently, particular new inquiries could not be appropriately explored due to a lack of information. Brewer (2007) identifies flexibility and the ability of the investigator to adjust the research questions to the datasets available and suggests that this could provide an adequate answer to the problem raised by Devine (2003). To mitigate the risks of non-matching questions/answers Smith et al. (2011) recommends that the re-
searcher should be acquainted with the selected dataset, being familiar with the strengths and weaknesses of the provided information. In Johnston's opinion (2014), it is essential to understand the methodology employed during the data collection of the secondary dataset chosen for analysis.

Particularly in relation to emerging economies, the use of secondary data analyses is pertinent to research because: (1) empirical research is limited given the relative newness of the field; (2) relevant data is available from investigations and reports by high ranking international organisations such as the United Nations (UN, 2014) and the World Bank (2014a, 2014b); and considering the aim of this research is to study country aggregated level performance, consequently, (3) examining macro-level data is the logical pathway of investigation. Hence, two major indicators were selected to analyse the economic and social level of performance of the BRIC cluster. Firstly, data of Gross Domestic Product (GDP) is overviewed permitting a summary of the economic status of each country. Secondly, to understand the current societal level and constraints, figures from the Human Development Index (HDI), Gini Index and poverty levels are explored. Thirdly, the Human Capital Index (HCI) and levels of public investments in health and education are examined providing data to evaluate trends and development patterns in these countries. Information on these economic and social macro-level indicators which are used in the study is presented below:

**Gross Domestic Product (GDP)**
The Gross Domestic Product (GDP) has been an essential measure of prosperity since the end of the Second World War. As explained by Barnes (2015), the GDP is an aggregate measure which combines all the economic outputs of a country permitting us to observe how healthy an economy is. It estimates the total value of services transacted and goods produced in a particular timeframe. Normally, the indicator is presented quarterly but often studies investigate on an annual basis. Moreover, Barnes (2015) adds that the GDP is an indispensable measure of economic activity closely observed by investors aiming to identify the most profitable markets. For the purpose of this study, data was gathered from the IBGE (2014) and World Bank (2014a).

**Human Development Index (HDI)**
The HDI is a summary measure of average achievement in essential dimensions of human development as described by United Nations (2014). Development of the Index is based on three key components: a long and healthy life, being knowledgeable and having a reasonable standard of living. Each of these three elements is assessed using different measures. The health component is evaluated by life expectancy at birth. The education component combines measures of mean years of adult schooling aged 25 and expected years of schooling for children of school entering age. The standard of
living component is assessed by the analysis of gross national income per capita. The HDI was launched in 1990, and since then; annually the HDI provides an overview of the human development progress around the world. The 2014 edition analysed the evolution in 187 countries, including the category of emerging economies.

**Gini Index**

The Gini Index (or Gini coefficient) measures how the wealth in a country is distributed amongst its population as explained by the World Bank (2013) - the more equal the income distribution is, the lower the Gini coefficient. In contrast, the higher the index, the more unequal is the country’s distribution. Thus, a Gini Index of zero represents perfect equality, while an index of 100 implies complete inequality. It is interesting to note that countries which have a generally low income, for example in Sub-Saharan Africa, can present a low Gini as a consequence of small disparity between higher and lower income groups and large numbers of low income earners. Lamb (2012) details the mathematics behind the terminology explaining that the statistical calculation of the Gini coefficient plots the cumulative percentage of total income received against the number of recipients, from the lower to the higher levels (Lorenz curve). Then, the Gini Index estimates the area between a Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. For this study the Gini Index utilised was produced by the World Bank (2013).

**Human Capital Index (HCI)**

The Human Capital Index (HCI) is one of the most recent attempts to measure the stage of human capital around the globe. The index was created by the World Economic Forum (2013) in an attempt to classify the human capital stage of development in 122 countries. The index synthesises information from a total of 51 indicators, divided into four pillars: education (12 indicators), health and wellness (14), workforce and employment (16) and enabling environment (9). The report claims to present the first ‘holistic’ attempt to comparatively measure human capital within a country (World Economic Forum, 2013, p. 30). The World Economic Forum (2013, p.3) recognises that human capital is an essential component to promote “short term stability as well as long term growth, prosperity and competitiveness of nations”. Each of the key pillars for the HCI and its components are listed below.

**Education category:** comprises three sub-aspects of primary, secondary and tertiary levels:
- access
- quality
- attainment
Health and wellness group: combines the analyses of several socio-cultural components in the four sub-cATEGORIES below:
• survival: infant mortality, life expectancy and survival gender gap;
• health: levels of obesity, unhealthy life years, number of deaths from non-communicable diseases (e.g. heart attack, stroke and cancer) and its business impact;
• well-being: rate of stress and depression;
• services: access to water, sanitation and healthcare quality.

Workforce and employment: gathers datasets which measure skills, talent and experiences of the labor force, detailed below:
• participation: labor force participation rate, unemployment rate and economic participation gap;
• talent: country capacity to attract and retain talent, pay related to productivity, firm level of technology absorption, capacity for innovation and scientific and technical journal production;
• training: staff training and training services.

Enabling environment: tries to capture the environmental level in each country permitting the full development of the human capital capabilities. Four sub-groups are examined:
• infrastructure: quality of internal transport, mobile and internet users;
• collaboration: state of cluster development and business and universities research and development collaboration;
• legal framework: Doing Business Index, social safety and intellectual property regulations;
• social mobility.

3.3. Data analysis

Once data on the indicators were collected, macro-level comparative analyses were conducted on the performance of the BRIC. To facilitate the interpretation of the collected material, the themes covered were divided into sub-sets of key economic and social indicators. The economic subset includes: total GDP evolution (IBGE, 2014), GPD per capita and rates of GDP growth, as well as the BRIC position on international economic rankings (World Bank, 2014a). The social subset contains data of Human Development Index (United Nations, 2014), life expectancy (IBGE, 2014), poverty rates and Gini coefficient for income inequality (World Bank, 2013; CIA, 2015). In addition, data from the Human Capital Index (World Economic Forum, 2013) is explored; and
trends of public investments on health and education were gathered and discussed aiming to understand the trajectory of human capital formation in these emerging economies. In addition to the current performance of BRIC, trends were explored aiming to identify gaps and target areas for improvement.

The analysis of these several measures is a clear effort to elaborate a more precise and holistic picture of the current progress and well-being of the BRIC countries. Recent studies (e.g. Bleys, 2012; Fleurbaey, 2009) identified that the traditional instrument used to estimate a country’s progress (GDP), is an inadequate metric to gauge all the aspects of a nation’s stage of development and people’s well-being. For example, D’Acci (2011) claims that better measures should be created to permit the investigation of both economic and societal progress. With the inexistence of a suitable tool, this research followed the suggestion of Fasolo, Galetto and Turina (2013) overviewing indicators such as the HDI and others as described above, in addition to the GDP. The approach of using a combined evaluation of different aggregated metrics seem in parallel with the evolution of the GDP is supported in the work of researchers such as Ardichvili et al. (2012), Awan (2012) and Yuan (2011), who specifically researched issues in BRIC.

Even though the debate continues about the validity of the GDP as a single measure of progress, this indicator is still relevant. Viewed in context, as developed in this research and used, with different metrics it can provide evidence in relevant situations and support the creation of knowledge and understanding beyond the economic domain. The utilisation of GDP and its impact on other categories of analysis has been acknowledged by D’Acci (2011), who highlights the positive relationship between GDP per capita and life expectancy. Although, several other factors also influence longevity, for example, lifestyle, levels of pollution, access to clean water and sanitation. Doubtless, an investigation aiming to evaluate a country’s performance level should combine alternative measures of analysis of societal well-being and progress.
Chapter 4: Findings and Discussion

The first decade of the 21st century witnessed the rise of many of the emerging economies, with some outstanding performers being grouped into the BRIC cluster. After a period of less than two decades these countries cannot be ignored. Higher world wealth creators, larger in population, with controversial social development, and demanding political international governance changes are some of the elements linked to these countries, and current realities which will be analysed in this chapter. The aim of this section is to understand how the group has been consolidating, evolving and building its identity in the international context. In addition, BRIC’s economic performance and reasons for accelerated growth, as well as its current social development levels are analysed. Furthermore, aspects such as poverty and income inequality are overviewed utilising an interrelated economic and social perspective. Finally, issues of current human capital development level are investigated and the extent to which each country’s economic and social performance is facilitated is discussed. Comparative insights are also provided.

4.1. BRIC’s evolution and impact

After seven BRIC summits, there is consensus among scholars (e.g. Chin, 2014; Müller, 2011; Armijo & Roberts, 2014) that the cluster has been aiming for more influence in the international decision arena. Details about the initial creation of BRIC, as a result of its outstanding economic performance, have been provided in the literature review in Chapter 2. The focus here, therefore, is that of impact. Perhaps the more immediate impact is that the creation of BRIC has led to a recognition of developing countries, more generally, and the BRIC countries more specifically, as potential players in the global financial environment. It seems that several interpretations of their aspiration for influence have emerged. An example of the divergent views is that of Laidi (2012, p. 615) who highlights the major objective of these countries as being a political one: “to erode Western hegemonic claims by protecting the principle which these claims are deemed to most threaten, namely the political sovereignty of states”. Another view is that of Hart and Jones (2010) who view BRIC’s intentions as the possibility of a rearrangement of the balance of power after the rise of the emerging markets, with these economically growing nations claiming more decision power. The most common perspective (Armijo & Roberts, 2014; Sinha & Dorschener, 2010; Tudoroiu, 2012)
seems to be that BRIC is shifting or seeking to create a shift to a multipolar world order with each country as a rational actor aiming to increase its influence (Armijo & Roberts, 2014). Expressed differently, in Roberts’ words (2011, p.5) BRIC “aspire(s) to be global rule-makers instead of rule-takers”. Such interpretations give BRIC a new found profile and status that suggests the acquiring of political influence.

The cluster itself has also expressed its own main focus. In the Agreement on the New Development Bank (2014), the BRIC countries divided their cooperation into two major streams: firstly, it aimed at “coordination in meetings and international organisations”, aiming to influence in the economic-financial and political governance contexts. Secondly, it aimed at the “development of an agenda for multisectorial cooperation among the members” (Agreement on the New Development Bank, 2014). This cooperation is evident in the actions of the member countries when BRICS recently consolidated the creation of its own development bank, called the New Development Bank (NDB), and a Contingency Reserves Arrangement (CRA) which is further explored in the next section. In the political domain, the countries acknowledge the aim for non-confrontation among the peers or any other countries, and being open to constructive cooperation with others (Agreement on the New Development Bank, 2014). In an intra-cluster perspective, the cooperation and collective efforts have expanded to several fields such as agriculture, health, education, science and technology, intellectual property and tourism.

There are also opportunities related to human capital development fostering initiatives in the areas of education and health. Enabling these possibilities is the fact that the four BRIC members have several similar issues to address and could develop mutually beneficial initiatives. Cooperation among these countries had already been suggested by Buss, Ferreira and Hoirisch (2014) and leaders such as the general UNESCO director, Irina Bokova (2014). It is encouraging to note that recent diplomatic steps have been undertaken to enhance collaborations in both fields.

It is also encouraging to note the more specific actions that have been undertaken by the member countries of BRIC that move beyond the economic domain. The efforts to increase intra-BRICS cooperation in education started to gain form in November 2013, with a meeting of the Ministers of Education from these countries and UNESCO with the discussion of strategies and opportunities for collaboration, with agreement to create a more permanent mechanism of cooperation with the help of UNESCO. More precisely, the countries aim to work together and strengthen relations between BRICS universities, create partnerships to exchange knowledge in technical and vocational education and training, in addition to mutual recognition and transferability of the qualifica-
tion between the cluster members, as well as collectively work to improve the quality of the learning outcomes (Lee, 2013). Current UNESCO (2014a) data shows that one in three students in the world lives in one of the BRICS countries which highlights the importance of such initiatives being launched (including with developed economies).

The general UNESCO director, Irina Bokova (2014) is of the view that the “BRICS countries’ investment in education will change the world”. According to her, the cluster members can build a solid foundation for growth by working together. She points out that in their Sixth Summit (2014) “the BRICS nations confirmed their resolve to become the world’s new global economic powerhouse and leading architect of the international development agenda”. The pathway to achieve economic and social improvements via education, in Bokova’s opinion, is combining the know-how they have accumulated and then developing the capacity to innovate. Considering that each of the BRICS members is at a different stage and have a particular trajectory of development, it will be interesting to witness how these countries will effectively enhance cooperation, what type of knowledge they will share and how each of them will adopt and operationalise the shared expertise.

Initial steps have been already taken after meeting between the BRICS Ministers of Education and UNESCO in November 2014, UNESCO (2014b) released a document called “BRICS Building Education for the Future - Recommendations for Cooperation”. The document brings 12 recommendations for cooperation and a call to strengthen education systems for quality and equity. Among the recommendations are suggestions to share knowledge of governance and financing mechanisms; design and implement national assessment; consolidate and improve education data available; manage expansion of higher education ensuring access to low income groups and education needs from women; facilitate student, staff and teaching personnel mobility and creating approaches to establish cross-border recognition of qualifications.

However, intended collaborations and engagement in the health sector have not yet emerged as concrete actions. Although diplomatic proximity in the health area officially has been commenced at State Health Ministers meetings (2011, in Beijing, and 2013, in Delhi) with promises of cooperation; implementation actions are still lacking. This has led to researchers and commentators such as Buss et al. (2014) raising the question of whether such agreements will always be fulfilled, especially since mutual agreement and positive action can solve problems in the BRIC countries in public health, including the need for enhancing quality and coverage of services, improving access to medications and technologies and combating of communicable and non-communicable diseases.
It is also essential to consider that various social limitations, for instance, low levels of literacy, poor sanitation and unequal income distribution, which are reflected on each country’s health performance (Rodwin, 2015). Consequently, actions to address improvements in health indicators should not be restricted to medical treatment of diseases, but sustainably providing conditions to people to improve health and well-being. As Buss et al. (2014, p. 390) note - “there is the need and the opportunity for joint action of the BRICS in terms of the diplomacy of health reinforcing the whole process of sustainable development.” If BRICS are cooperating to address issues in education and health, it will be interesting to see if these collaborations could reach other developing countries outside of the cluster, and what would be the impact of these partnerships. Considering the cluster manages the recently created New Development Bank, which aims to collaborate on and support projects of development across all emerging economies, it will be relevant to observe the cooperation and agreements for development being built among developing economies, and the extent to which they will be financially supported and the level of success. All of these developments need to be further investigated.

4.2. BRICS and the New Development Bank

BRICS, as with other emerging economies, has been unsuccessful in effectively promoting and increasing its influence at the traditional international forums such the World Bank, IMF and Group of Twenty, and in seeking to have more funds directed to what the cluster considers to be of high priority. Consequently, it is not surprising that the member countries would seek to create their own organisations to fulfil their needs and demands. The recent launch of the New Development Bank (NDB), also referred to as the BRICS Bank, and a financial agreement between the member countries (including South Africa, although it is not a focus of this study), the Contingent Reserve Arrangement (“The BRICS bank: an acronymic with capital”, 2014) is an indication of BRICS agenda of self direction and determination. It could also serve as an indication of further structured consolidation between the member countries and evidence of the cluster’s aspirations.

The engagement of all BRICS members is noticeable in the structural and operational arrangements made for the Bank. The headquarters has been set in Shanghai, with a regional office to be based in South Africa (Johannesburg). The first president is the Indian banker Kundapur Vaman Kamath, supported by a board of directors made up from the other member countries. The BRICS Bank is already in operation with the first loan released in April (2015) using the Chinese currency (“BRICS Bank’s 1st loan to be
issue in yuan", 2015). The Agreement on the New Development Bank (BRICS, 2015) presents what the peer leaders accorded to in relation to the newly launched institution. There are four main points, which not only explains the whats, whys and how the BRICS Bank will be operationalised, but also provides insights into the cluster’s aspirations in the international context. Firstly, the agreement re-emphasises the importance of targeted economic cooperation among the five group members. Secondly, it recognises the necessity of more resources being directed to infrastructure projects and sustainable development within BRICS as well as other emerging economies and developing countries. Thirdly, it demonstrates the necessity to create a new international financial institution engaged to supply resources for BRICS’ support and development aims. Fourthly, it expresses the desire of these countries to collaborate in the development of the international financial system, to promote economic and social development and include the emerging economies of the world.

The aim of promoting international engagement and collaborating with other developing nations beyond the BRICS context is made explicit in the goals of the BRICS Bank. Moreover, the purpose statement reinforces the desire to collaborate with the current endeavours which foster development instead of replacing them. As noted in the agreement (Agreement on the New Development Bank, 2015):

The purpose of the Bank shall be to mobilise resources for infrastructure and sustainable development projects in BRICS and other emerging economies and developing countries to complement the existing efforts of regional financial institutions for global growth and development.

According to the World Bank estimate (Desai & Vreeland, 2014), the infrastructure investments gap in developing countries has currently reached US$ 1 trillion. Data from Desai and Vreeland (2014) shows that the current levels of resources provided by the existing financial institutions are able to supply approximately 40% the required amount. Some examples of infrastructure deficits are transport, water and sewage, energy and telecommunications. Trying to fill part of this resources gap, the BRICS Bank will have available the total initial capital of US$ 100 billion, which will strengthen cooperation among the five countries, increase multilateral and regional financial development, and contribute to their goal of sustainable growth.

Together with the announcement of the BRICS Bank, the cluster also created the BRICS Contingency Reserve Arrangement (CRA). In total, the fund will operate with $100 billion and with the objective to combat currency crisis, thereby providing funds to cluster members under pressure with the payment balances. The BRICS CRA was capitalised as such: China provided $41 billion, Brazil, Russia and India with $18
billion each, and South Africa with $5 billion ("$100bn BRICS monetary fund to be operational in 30 days", 2015). The fund will work as an alternative to the IMF’s emergency lending. How the BRICS Bank and CRA will effectively operate, what countries and projects will be financed, what role are to be played in supporting other emerging economies are all still to be seen, analysed and understood. The level of success of this initiative will only be known at a later time and stage of implementation and could be the basis for further research.

4.3. Cohesion and consensus in BRIC

Notwithstanding the concrete progress, internal divergencies among the cluster peers have been identified in the literature as being possible impediments to further cooperation. Some speculate that the BRIC countries have difficulties reaching common positions. For example, Laidi (2012, p.615) contends that each of the BRIC members ‘adopt strictly national’, ‘defensive’ and therefore ‘contradictory’ positions. A consequence of the commitment to national interests is that engagement as an active group with firm solidarity is reduced. Sinha and Dorschner (2010) suggest that, if the cluster aims to have an impact on the current world order, the peers have to firstly agree on the common political goals to be pursued. It is a risk that requires close monitoring.

In the external context, for example at the World Bank and the IMF forums, there are indications that group actions and responses may not have always been so consensual or smooth. Armijo and Roberts (2014), Laidi (2012), Pant (2013) and Thakur (2014) suggest that the BRIC peers were unable to reach a consensus and support the same candidates to the leadership of the World Bank and the IMF in 2012. Laid (2012, p.624) argues that, if the emerging economies claimed more representation in the international governance forums, they failed to dismount the “implicit agreement whereby the IMF is placed under European control and the World Bank under the United States control.” Pant (2013) notes that the inability to support common representations to the World Bank and IMF acts as proof of inefficient cooperation. He asserts that “unless the BRICS can articulate a common vision on global issues, they will remain unable to see the global agenda and discourse” (Pant, 2013, p. 101).

Despite these setbacks, on another front, BRIC has been slightly more successful in increasing voting quota allocations in both the World Bank and IMF. Hart and Jones (2010) note that in 2008 and 2010, respectively, there were small redistributions of voting power in the World Bank towards emerging countries; firstly a 1.46% shift and, subsequently, a 3.13% shift. In the meanwhile, a 6% change along the same lines towards emerging economies was implemented in the IMF (Armijo & Roberts, 2014). Realisti-
cally, the emerging economies still have significantly lower levels of influence than the traditional developed economies at these institutions, even though some of the developing countries might have larger economies (Cox, 2012; Glosny, 2010, Hart & Jones, 2010). One example of this disproportionality of influence is the fact that the Chinese voting rights in the World Bank and IMF are smaller than the share of France and United Kingdom although China has a much larger economy (Glosny, 2010). The voting quota patterns and formulas for the World Bank and the IMF have been criticised by Armijo and Roberts (2014, p.516) as being “quite arbitrary”, creating precedents that countries “doggedly argue for allocation rules that favours themselves”. It seems that there has been a significant evolution in global economic growth and the distribution to the wealth across countries (developed and developing) since the end of the Second World War. But is also seems that the two major international economic governance structures have been unable to reflect these changes by reallocating decision-making power accordingly. Clearly the imbalance of powers persists and the conjoined developing economies’ claims have yet to be fully addressed and they need to be acknowledged as part of a global growth agenda.

It would be fair to say that not all efforts in the World Bank can be viewed as having been defeated in relation to the demands of the emerging economies. Vestergaard and Wade (2013), for example, scrutinised the process established by the developing countries to gain more power in World Bank decisions. They contend that the 2008-2010 voting reform of the World Bank is a “remarkable diplomatic achievement” (Vestergaard & Wade, 2013, p.161) for the emerging powers because it was the first time since its creation that there was a redistribution of the influence. Nevertheless, in contrast with what has been broadly proclaimed, the consequences of the recent movements are considerably modest with the high income countries maintaining control over more than 60% of the decision in the World Bank arena (Vestergaard & Wade, 2013). In conclusion, the results of this modest shift will impact not just on the country specific members, as hypothesised by Vestergaard and Wade (2013), but the institutions itself. “The World Bank missed an opportunity to bolster its representational legitimacy and strengthen the larger system of multilateral corporation that has taken half of a century to build” (Vestergaard & Wade, 2013, p.162).

Progress in this area for BRIC(S) has been slow, but Armijo and Roberts (2014) and Glosny (2010) remind us that, in addition to their conjoint efforts at the World Bank and IMF forums, the BRIC countries have also been coordinating their efforts and strengthening their positions to increase bargain power against Western countries such as in the Group of Twenty (G20) arena. Undoubtedly even considering skeptical opinions, BRIC has evolved from a financial acronym to an active international political and eco-
nomic bloc. Even if there is not complete agreement among the member countries, or-
chestrated and collaborative actions can be evidenced especially when representation
at international forums are undertaken. Similarly, the desire for more participation and
influence in global decisions is evidenced by the creation of BRICS own institution. De-
velopments that capture further the evolution of the cluster and its ‘clout’ are still to be
considered.

4.4. Economic performance and BRIC

4.4.1. Economic growth and GDP evolution

BRIC’s positive economic performance is undeniable when analyses of several GDP
indicators are conducted. Since 2000 (IBGE, 2014) the BRIC economies have been
growing sharply such as can be evidenced by the examination of each of these coun-
tries’ total GDP, GDP per capita, position of the countries’ in economic international
rankings, their aggregated GDP share in global comparison, as well as their annual
GDP growth. This section will report on the current stage of economic growth of the
cluster members, pointing out some of the reasons for their successful performance
and exploring some possible challenges in the way of further progress. BRIC’s eco-
nomic evolution of total GDP, for each country, has been accelerated since
2000 (IBGE, 2014) as indicated in Figure 2.

Figure 2: Total GDP Evolution (2000-2013)

Source: IBGE (2014)
As evidenced in Figure 2, China has made the most significant improvement, jumping from US$ 1.1 trillion to US$ 9.2 trillion in thirteen years. Researchers such as Biggemann & Fam (2011) and Das (2009) found that the Chinese achievements have been impressive. Figure 2 provides a comparative overview of the trajectory presented by the four BRIC members' wealth creation. In reviewing the data, it would be difficult not to notice that the Chinese economy is bigger than the other three group peers combined. Although Brazil, Russia and India have a smaller GDP than China, they are stronger when compared to other emerging economies. Brazil has become the second largest economy in the group, evolving from US$ 654 billion to US$ 2.2 trillion in the same period. Russia and India come close behind, Russia increasing its total GDP from US$ 260 billion to US$ 2.0 trillion, while India's total GDP grew from US$ 460 billion to US$ 1.8 trillion (IBGE, 2014, p.38). The robustness of their performance was impressive to Banerjee (2015) who classified the period 2001-2011 as a 'golden decade' of the emerging markets.

The different speed of wealth creation can also be observed when annual rates of growth are analysed (see Table 2).

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<td>India</td>
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<td>China</td>
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Source: Statistics of Russia (2015)

Comparatively, in the period 2000-2013, Brazil presented a relatively slow annual growth rate starting from 4.4% (2000), the slowest in the group. It experienced a modest rise to 7.6% (2010) and a sharp decrease in 2012, reaching a low at 1.8% in 2012 and a modest recovery in 2013 (2.6%). At no stage did it have the highest annual GDP growth in the cluster. Differently, Russia showed relatively strong GDP annual growth in 2000 (10%) and 2006 (8.2%) but experienced a constant downward trend between 2008-2013, dropping to a low at 1.3% (2013). In performance trends opposite to Russia, India had an upward trend with a starting point rate of 7.6% (2000), a strong increase reaching 16.3% (2006), some oscillation (2008) followed by a sharp rise to 20.2% at its peak (2010). Subsequently, the Indian economy dropped considerably
reaching a plateau at 13% (2012). In the case of the Chinese economy, its annual growth rate fluctuated from 8.4% (2000) increased to a peak at 12.7% (2006), fell to 9.6% (2008), again recovering and going up to 10.6% (2010), and subsequently dropping to 7.7% (2012 and 2013) remaining stable at this point.

The variation in GDP does raise questions about how this would impact on their collaborative performances given their differences. In addition, a general overview of these annual growth rates presented by the BRIC countries in the period 2000-2013 provides evidence of how diverse their economic growth has been. With the exception of Russia, Brazil, India and China presented a generally positive upward trend having some more accelerated peaks (India and China) and others with more modest performance (Brazil). Even with the positive trends, India had the most unstable trajectory with highly positive periods of growth and then subsequent reductions in the speed of progress. Overall, questions arise about how consistent are their pathways of growth considering the quite inconstant rates of performance, although, in general positive rates.

The growth of each country’s wealth can also be perceived when progressive data of annual per capita GDP is analysed in Figure 3 below.

As evidenced, Russia has performed better than the other peers jumping from US$ 1,772 to US$ 14,604 in the period 2000-2013. This income places Russia into the category of a ‘high income’ country by the World Bank (2014b) standards. Brazil presents currently the second best annual income per capita having lifted from US$ 3,716 to US
$11,171. The Chinese grew from US$ 949 to US$ 6,768. Both Brazil and China are classified as ‘upper middle income’ by the World Bank (2014b). The progress for India was also positive, but comparatively much more modest, rising from US$ 451 to US$ 1,518 (‘lower middle income’). Comparatively, India’s GDP per capita is ten times smaller than that of Russia, seven times smaller than that of Brazil, and four times smaller than that of China (World Bank, 2014b).

Irrefutable evidence from macro indicators shows that the BRIC countries have achieved economic growth and prosperity. Both, aggregate GDP and GDP per capita have improved in recent years across all BRIC countries. However, seen together, it is difficult to see how the prosperity captured by the macro indicators has spread across the population. In Müller’s evaluation (2011, p.1616), in terms of individual income, the BRIC countries have “much catching up to do”, with the conclusion that: “total economic growth has not always translated into people becoming wealthier”. As signalled by Heinz & Tommenendal (2012), the size of the BRIC internal market is small considering that people’s potential buying power is limited in comparison to the advanced economies. The consequences of an insignificant internal market harming future economic growth has been witnessed currently when the external demand has reduced its pace (Didier, Kose, Ohnsorge, Ye, 2015; Kochhar, 2013). Moreover, people’s reduced income impacts beyond economic prosperity, given that each person has a limited amount of income to ensure basic needs such as dwelling, health and education. The consequences for social impact is evident. The current performance of BRIC on the social indicators and the challenges to be addressed will be discussed further in this chapter.

4.4.2. Contribution to global growth

In terms of their global contribution, the BRIC countries have made significant increases to wealth in recent times (Lin & Rosenblatt, 2012; Müller, 2011). This rearrangement of prosperity in the international economic context is evident when statistics like rates of growth and world economic rankings are observed. As pointed out by Lin and Rosenblatt (2012), the contribution of BRIC countries to the global growth has enlarged since the 1980’s, with a peak between 2000 and 2010. In this period, China became the biggest contributor accounting for 23.4% of the global GDP rise, followed by India with a contribution of 5.8%, Brazil with 3.1%, and Russia with 1.8%. Combined data shows that developing countries were responsible for half of the global GDP growth in the first decade of the 21st century (Lin & Rosenblatt, 2012, p.14). In commenting on this changing pattern of wealth production, Lin & Rosenblatt (2012, p.13) note that “after a remarkable degree of Group of Seven dominance for an entire century, one decade of extraordinary growth has caused a dramatic shift in the balance of economic
power.” Data relative to 2013 shows more modest growing rates for Russia (1.3%) and Brazil (2.6%), but still significantly positive to India (13.6%) and China (7.7%). As emphasised by Kochhar (2013), each country is in a different development stage, consequently, levels of growth and challenges to be addressed are different. Table 3 provides a snapshot of their economic profiles.

Table 3: Comparative GDP and economic rankings (2013)

<table>
<thead>
<tr>
<th></th>
<th>Total GDP (trillion US$)</th>
<th>GDP global comparison</th>
<th>GDP growth rate (%)</th>
<th>GDP per capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>2.2</td>
<td>7th</td>
<td>2.6</td>
<td>11,171</td>
</tr>
<tr>
<td>Russia</td>
<td>2.0</td>
<td>8th</td>
<td>1.3</td>
<td>14,604</td>
</tr>
<tr>
<td>India</td>
<td>1.8</td>
<td>10th</td>
<td>13.6</td>
<td>1,518</td>
</tr>
<tr>
<td>China</td>
<td>9.2</td>
<td>2nd</td>
<td>7.7</td>
<td>6,768</td>
</tr>
</tbody>
</table>

Sources: IBGE (2014) and World Bank (2014a)

This considerable economic improvement has guaranteed these four countries places in the top of the ranks of the strongest economies in the world. According to the performance of 2013, all the BRIC countries figure among the wealthiest nations in the world. China was considered the second largest economy; Brazil ranked seventh position; Russia at eight and India tenth (World Bank, 2014a). China’s economic leadership is clearly evident in the data in Table 3, providing evidence for Pant (2013) to conclude that the Chinese economy is not only the second largest globally, but it is also larger than the economy of the BRIC group peers combined. Interestingly, although India ranks tenth and has the highest GDP growth rate (in 2013), it has the lowest GDP per capita of the cluster which is bound to impact on the living standards of its poorest citizens.

The consequences of this redistribution of economic power are still to be more comprehensively observed and investigated. Some theoretical perspectives have been developed, for example in the argument of Lin and Rosenblatt (2012, p. 2), who contend that “the global economy has entered a period of multi-polar growth with large developing countries leading the way.” They compared the BRIC countries’ substantial contribution to global wealth to that of the Group of Seven (United States, United Kingdom, Japan, Germany, France, Italy, and Canada) and found that the global economies of the Group of Seven declined from 45% to 37% between 2000-2013, in contrast to the
BRIC economies which nearly doubled. This considerable progress of the BRIC is a result of various internal and external factors.

### 4.4.3. Reasons of accelerated progress

**a) FDI inflow**

Several factors explain the impressive expansion of the four BRIC economies in the first decade of the twenty first century. A large part of the growth has been attributed to the attraction of huge volumes of foreign direct investment (FDI) as pointed out Müller (2011). In his argument, “savvy investors” from developed economies entered these emerging markets interested in maximising their profits in a promising environment (Müller, 2011, p.1619).

In Sharma and Joshi's (2015) evaluation, developing countries have low levels of internal savings which makes them rely largely on foreign investments to finance their investments. This strategy has been adopted since the 2000’s, after a period of commercial bank lending which has ‘dried up’ (Sharma & Joshi, 2015, p.45). To attract external resources several internal investments policies were changed. In summary, attracting foreign capital was the solution embraced by the developing countries avoiding the risk of undertaking loans (Sharma & Joshi, 2015).

Heinz and Tomenendal (2012) also supported the thesis of FDI inflows fostering emerging economies, claiming that market growth is a determinant of market attractiveness. Heinz and Tomenendal (2012) have drawn attention alerted to the risks relating to FDI investments which is a volatile capital source, consequently there is no solid base for medium to long term growth. In Heinz and Tomenendal’s (2012) predictions, once the profit margins decelerate in emerging economies, international companies tend to migrate to more promising markets, often returning to advanced economies which have a more stable environment. Developing economies could be highly vulnerable in a context of international crises and instability.

**b) International trade**

Another reason for the economic prosperity has been the rising presence of BRIC in international trade. As estimated by Castro (2012), the global level of international trade has increased more than five times since 1999, and BRIC’s share has nearly double in a decade. In analysing the volume of exports attributed to each of the BRIC countries, we note that it is diverse in both size (volume) and portfolio (product). In terms of size, the volume of exports of goods and services is somewhat similar be-
tween Russia (29% of total GDP), China (27%) and India (24%), with Brazil being the outlier (at 13%) (World Bank, 2014b).

In terms of the product and service portfolio, the BRIC countries display different profiles (Gouvea, Mahto & Montoya, 2013). In Brazil, for example, technological products account for 14% of total exports and goods & services account for 10% of total trade. In Russia, technological products account for 9% and goods & services 29%; and in India, technological products account for 9% and goods & services 18%. China again is the leader with the export of technological products at 31% and goods & services at 29%. Researchers (Gouvea et al., 2013) assert that China has been adopting a more aggressive strategy than its group peers in diversifying its export portfolio; and Lin and Rosenblatt (2012) contend that, not only has China been increasing export size and portfolio, but also strategically expanding its commercial partners. These strategies may benefit others in the BRIC cluster and create increased opportunities for international trade.

In addition Kochhar (2013) and Banerjee (2015) point to the role of commodity prices providing a sustainable positive output for exporters of primary products. As estimated by Banerjee (2015), between 2003-2008, the average commodity prices average rose 75% in comparison to the previous five years. Particularly in the BRIC cluster, the sharp increase value of commodities was beneficial to Brazil and Russia, both economies with a large percentage of natural resources and primary goods in the exports portfolio. As a result, some scholars (e.g. Gouvea et al., 2013; Müller, 2011) considered Brazil and Russia to be overdependent on natural resources exports, creating several balance sheets constraints as a consequence of the oscillation of international prices.

Moreover, Lin and Rosenblatt (2012) note considerable increases in the South-South interactions. By 2012 levels of trade between emerging markets has reached 30% of the global total, jumping from less than 15% in 1960 (Lin & Rosenblatt, 2012). Meanwhile, the interactions North-South have also been modified. As described by Petrick and Juntiwasarakij (2011), several innovations from emerging markets are finding their way into advanced economic markets. Some examples of products, process or services created in emerging countries that are exported to advanced countries included scientific knowledge of biofuel production and aircrafts developed in Brazil; healthcare services provided in India which attract patients from developed world and the Microfinance pioneered in Bangladesh (Petrick & Juntiwasarakij, 2011). In this changing dynamic context, when overviewing the current trading engagements, questions arise about the validity of the traditional international division of labor with the developed
economies exporting highly technological items and emerging markets supplying commodities. Certainly more investigation about trading and diversification is required to further explore the international business trends in relation to the BRIC cluster, South-South and South-North interactions.

c) Internal reforms
FDI inflow or international trade would not have been possible without a set of internal reforms undertaken by each BRIC member in previous decades. Specific to each country, the measures were able to prepare each nation’s landscape, resulting in the observed accelerated creation of wealth. Banerjee (2015) notes that such actions have led to the emerging economies becoming more internationally engaged. Every peer implemented its reforms in different periods. The adjustments started in the late 1970’s in China, when leader Deng Xiaoping decided to move his country from a closed economy towards free market. Similarly, in the 1990’s, India withdrew the ‘License Raj’, a set of regulations and licenses required by the private initiative to operate in the country, signalling its openness to do business. In the early 1990’s, Russia experienced its biggest transition, with the dissolution of the Soviet Union and, consequently, changes from a close d into a open market. In 1994, Brazil introduced adjustments with the implementation of the “Plano Real”, when the country’s currency was replaced, inflation stabilised and several state-owned companies were privatised.

Skepticism has been expressed about how beneficial these adjustments undertaken by the BRIC countries have been. Questions have also arisen in relation to the outcomes of advice which has been ‘imposed’ on emerging economies in exchange for financial help. Fulfilling requested conditions to gain support may not be the best long term option for developing countries. As evidenced by Thakur (2014, p.1802) “rich nations and the international financial institutions they control have provided contradictory advice to poor states, despite the fact that no significant economy has ever developed successfully via free trade and deregulation from the beginning”. The full impacts of each BRIC country internal reforms are still to be fully understood, and is discussed further in 4.5.

4.5. Social indicators and BRIC performance
Different from the exceptional and positive economic evolution, the BRIC countries have been progressing slowly on their social evolution. The Human Development Index (HDI) was the tool selected to understand these countries advancements. The HDI annually provides a summary measurement which enables assessment of long-term human progress looking at measures of income, education and health. The index was
created in 1990 by the United Nations (UN) as an alternative to the GDP measure, broadening the societal comprehension beyond the economic dominance (UN, 2014). The UN recognises the importance of financial progress reinforcing the reasons why it should be continuous. “Economic growth is important, not for itself but for what it enables a country and people to do with the resources generated” (UN, 2014, p.26).

While in the economic context, as previously discussed, the four BRIC countries have earned a place in the top 10 wealthy nations in the world, the reality is quite different in relation to the social domain. Table 4 below provides a brief summary of comparative data on social indicators and includes measurement on the HDI Index (United Nations, 2014). The data indicates that Russia is best positioned on the HDI with a ranking of 57th in the world, followed by Brazil (79th), China (91st) and India (135th). Comparatively, it could be argued that Russia is closer to the social conditions of developed nations, followed by Brazil and China. India is an outlier in the cluster (UNESCO, 2014a) with an HDI ranking closer to countries in Sub-Saharan African. It should be noted that the 2014 HDI ranks 187 countries.

Table 4: HDI and selected social indicators (2013)

<table>
<thead>
<tr>
<th></th>
<th>Human Development Index</th>
<th>Population (million)</th>
<th>Urban population</th>
<th>Life expectancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>79</td>
<td>201</td>
<td>85%</td>
<td>74</td>
</tr>
<tr>
<td>Russia</td>
<td>57</td>
<td>143.3</td>
<td>74%</td>
<td>70</td>
</tr>
<tr>
<td>India</td>
<td>135</td>
<td>1 224.1</td>
<td>30%</td>
<td>66</td>
</tr>
<tr>
<td>China</td>
<td>91</td>
<td>1 357.4</td>
<td>54%</td>
<td>74.8</td>
</tr>
</tbody>
</table>

Sources: IBGE (2014), World Bank (2014b) and United Nations (2014)

Their poor performance on the HDI uncovers social issues that demand attention. As identified in the literature and as presented in Table 4, several social development aspects are still to be addressed. These include poverty and unequal income distribution (Chibba, 2011; Sharma, 2013); inadequate resources to address health concerns (Alan, 2012; Josh & Yu, 2014; Leahy, 2014) and insufficient investment in education (Ardichvili et al. 2012; Yuan, 2011). Some scholars contend that the difficulties encountered in effectively addressing social issues (like poverty and income inequality) are linked to the recent reforms undertook by the BRIC countries. The doubts relate to the social and economic consequences of the liberalisation, de-regulating policies and reduction of the government presence in society. For example, Das and Das (2013, p.
33) conclude that “clearly, macroeconomic flexibility in a market-driven environment is not the best recipe for growth and stability for poverty reduction.”

4.5.1. Poverty and income distribution

A more precise indication of the living conditions in BRIC countries emerges when poverty levels are compared as in Table 5 below.

<table>
<thead>
<tr>
<th></th>
<th>Poverty rates</th>
<th>Gini coefficient</th>
<th>Income inequality ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>6%</td>
<td>54.7</td>
<td>17</td>
</tr>
<tr>
<td>Russia</td>
<td>11%</td>
<td>40.1</td>
<td>54</td>
</tr>
<tr>
<td>India</td>
<td>32.7%</td>
<td>33.9</td>
<td>101</td>
</tr>
<tr>
<td>China</td>
<td>11.8%</td>
<td>42.1</td>
<td>28</td>
</tr>
</tbody>
</table>

Sources: IBGE (2014), World Bank (2013) and CIA (2015)

In interpreting the data, India emerges as having the highest level of poverty compared to its BRIC peers with almost one-third of its population (32.7%) living below US$1.25 a day (World Bank, 2014b). China is second in performance on this indicator, with around 11.8% of its population considered living in poverty, followed closely by Russia (11%). Brazil leads the group on this indicator with a 6% poverty rate (World Bank, 2014b). Though the comparative numbers are revealing as to the state of social development, the differences become far more significant when compared in real terms. India has more than five times the number of people living in poverty than Brazil, and close to double that of China and Russia. But interpreting the data becomes more complex when reviewing in relation to income inequality ranking and conflicting trends emerge.

The US Central Intelligence Agency (CIA, 2015) classified global inequality based on the Gini coefficient. Based on the data in Table 5, trends show that despite having the lowest poverty rate, Brazil is one of the most unequal countries in the world, with a Gini coefficient of 54.7 and an income inequality ranking of 17. This is followed by China with a Gini Index of 42.1 and a slightly rank as 28th in income inequality. Russia has the third highest Gini coefficient of the group (40.1) and also comparatively lower income inequality rank (54). India has the lowest Gini coefficient of the group (33.9) and, consequently, is the less unequal in income distribution (101). When interpreting the data, it is essential to exercise caution as statistics without proper interpretation and
context can mask realities (Lamb, 2012). In this instance, although India has the lowest Gini coefficient and, as a result, lowest income inequality, in terms of wealth distribution among its people, the poverty statistics indicate that one-third of India’s population (32.7%) live in poverty and suffer the consequent social issues which are hidden in the Gini data. In the case of Brazil, Gini data and its position on the income inequality ranking, shows the enormous gap between high and lower income people in the country.

Living conditions are also reflected in life expectancy rates, with India ranked lowest amongst the BRIC nations (66 years), while the others have life expectancy rates of 70 (Russia), 74 (Brazil) and 75 (China) (IBGE 2014). The intersection between poverty levels, life expectancy rates and social well-being is evident, as is the need for effective government intervention for improvements. Some members of BRIC have responded better than others in addressing issues identified on a range of social indicators in recent times. The country specific examples discussed below provide brief insights.

**Brazil** has sought to alleviate poverty with the introduction of the “Bolsa Família” (Family Grant) initiative (United Nations, 2014; OECD, 2014). In a program introduced to reduce poverty and income inequality, the federal government has transferred cash to poor families on condition that children maintain appropriate levels of school attendance and undertake regular health checks. As suggested by Tepperman (2016) for a poor family, a small sum makes a considerable difference. Each registered family receives $65 a month on average. A total of 50 million people, 25% of the total country’s population are benefited by the program. Data provided by the Minister of Social Development and Fight Against Hunger indicates that the annual cost of the project reaches less than half a percent of the total country GDP (0.46%) (Campello as cited in Tepperman, 2016). Internationally, the initiative has been recognised by the World Bank (2014b) as being highly effective, with Brazil’s rate of poverty being the lowest in the BRIC cluster (6%) and indicative of success. The program has become an international model already copied by more than 60 different countries.

Despite the recent achievements against poverty, Brazil has a lot to improve when income inequality is considered, as the country has been identified as one of the most unequal in the world (Costa & Scalon, 2013; Mújica et al., 2014). Calculations from Das and Das (2013) show that in terms of wealth ratios, 20% richest Brazilians own 33 times that of the poorest 20% in the population. Several scholars have investigated the issue of income inequality in Brazil highlight different perspectives and problems. For example, Costa and Scalon (2013) affirm that the inappropriate distribution of wealth in Brazil reflects the class structure of the country, where unequal opportunities lead to reproduction of the inequality pattern and small changes in social mobility. Elizaga’s
content that do not go far enough and simply aim at containment of the problem rather than comprehensive reform. Das and Das (2013) confirm that the income inequality in Brazil is very high and lay the blame with entrenched historical and regional origins.

Brazil’s persistent income inequality can be evidenced by the poor performance in the Gini coefficient (54.7) when compared to the other BRIC countries. Even India (33.9), which has one third part of its population below the poverty line, is identified as less unequal than Brazil. Mújica et al. (2014) note that Brazil was the only country of the BRIC cluster where income inequality has declined in the 2000’s, but others (e.g. Eligaza, 2011) also note that there are no real reasons for celebration considering that Brazil’s Gini coefficient had a small reduction from a considerably high value. To provide an indication of the size of the problem, in 1990, the Brazilian Gini coefficient reached 60.4 dropping to 52.7 in 2010. Brazil, it seems, has much work to be done in improving income inequality if social and economic progress is to continue. Compared to its peers in BRIC, it presents the worst performance on this indicator.

**Russia** has been confronted by some challenges in relation to human development, poverty and income inequality in recent times. As indicated by Ardichvili et al. (2012), when the HDI was launched in 1990, Russia was among the 25 countries with highest levels of development in the world. Immediately after, with the collapse of the Soviet Union (1991), Russia’s performance on the HDI sharply declined and, subsequently rose to a medium level. Indications are performance has been highly unstable leading researchers (e.g. Ardichvili et al., 2012, p. 227) to categorise Russian progress on the HDI as having “wildly fluctuated”. The results in the HDI were able to capture the instability of the transitioning years between the communist political regime (a closed market system) into the capitalist regime (with an open market system). In the opinion of Das and Das (2013, p.22) “the consolidation of capitalism in Russia during the 1990s was difficult, but the reform initiatives ultimately succeed in stabilising prices and restoring economic growth”. They note that figures on the HDI are reflective of realities such as the increase in poverty levels in Russia from 2% to 50% respectively, immediately before and after the disintegration of the communist regime, and the doubling of the income inequality levels in the same period.

Whilst Russia ranks second on the poverty scale (11%) in BRIC, like Brazil, it has high levels of income inequality with a Gini coefficient of 40.1 (UN, 2014, World Bank, 2013). In Epikhina’s (2013) recent evaluations, since the 1990’s, the poorest in Russia have been losing income and the rich gaining it at an increasing pace, a perspective reinforced by reports in the Borgen project (2014) on ‘poverty in Russian’. Epikhina
(2013, p. 452) identifies a worsening situation in income distribution in the last few years, noting that “the poorest 10% of the population get no more than 5% - 6% of the entire per capita aggregate income and the richest 10% get almost half of it”.

The income inequality in Russia has several reasons. Investigation from Das and Das (2013) concluded that broad wages disparities, variations which are also present in the public sector, are the main reason of the persistent income gaps in Russia. This imbalance, combined with the political reality, supports the argument of the researchers that “wages in the Russian public sector depends of generosity of local budgets, specific positions of heads of budget organisations in local elites, and access to non-budget funds” (Das & Das, 2013, p.24). In addition, regional socioeconomic conditions also have a high impact on access to wealth. Das and Das (2013) note that people have three times more chances of being poor, if they live in a region of the North Caucasus, South Siberia or Central Russia, than if they live in Moscow city or in Tyumen Oblast.

The findings in this study reveal that there are doubts about the measures utilised to combat poverty and inequality in Russia, and skepticism about the effectiveness and consistency of national policies. For example, Epikhina (2013) recognises the existence of a government social benefits contribution to assist the poor, but suggests that this does not go far enough to reduce poverty or redress the unequal income distribution. Suggestions for possible improvement from the World Bank (2011b), recommends that better wages and structural improvements are necessary in Russia, for improved living standards and for the Russian health system because the country is about to face a rapidly ageing population which will increase the demand for services. Furthermore, with an increasingly elderly population, there is a parallel reduction in the existence of an economically active workforce, less earning capacity and growing pressure over the pension system, leading to possible increase in both inequality and poverty (World Bank, 2011b). As with the other members of BRIC, there is much work to be done in the area of social and human development issues.

**India** has the highest level of poverty compared to its BRIC peers, with almost one third part of its population (32.7%) living below US$1.25 a day, with the most vulnerable being women and children concentrated in rural areas (United Nations, 2014; World Bank, 2014b). Das and Das (2013) contend that, since the 1991 liberal economic reforms which progressively integrated the country into the global market, India has been reducing the speed of improvements in poverty reduction. They conclude that this slowdown is a consequence of inadequacies in the economic growth process, with a lack of structural changes and reduction of public expenditure by the central government.
These contextual factors have led to India being in one of the lowest ranked positions in the globally implemented HDI (135th), with low life expectancy rates (66 years). Much of the country’s population lacks basic sanitation, electricity, access to health and education. Mújica et. al (2014) estimate that half of the Indian population still defecates in the open. Das and Das (2013) point to other socio cultural factors such caste, religion and level of education, all of which impact on earning capacity, poverty and well-being.

Poverty and income inequality are closely related and the implications are clearly evident in India. Sharma (2013) suggests that unemployment and underemployment are the main causes of income inequality in India where the Gini coefficient reaches 33.9. The problems are aggravated in rural areas because of the dependency on agriculture which is highly affected by weather conditions such droughts and monsoons. If crops production is uncertain, then transport of the harvest is a challenge too. Several infrastructure constraints, which profoundly impact each society, are evident in India and in the other BRIC countries as well. For Becker (2014), factors that create a bottleneck to progress and influence the socioeconomic scene in India, include the fact that a great part of the country comprises agricultural villages, based on subsistence production and marginally integrated into the national or international markets. The consequences of this situation could only exacerbate the low economic contribution, low earning capacity and low market potential for the massive regional population of India.

The Indian government has adopted strategies to boost employment and wages in rural areas, and provide food with subsided prices (National Food Security Act) since July 2013, with the subsided products program reaching 67% of the population (OECD, 2014). However, such actions fall far short of the strategies required to improve income distribution in India. Another problem is the fragmented governmental social protection system is just able to reach certain regions and particular population groups but misses most others (OECD, 2011). As several of the indicators have demonstrated, India has a long way to go to achieve beneficial social outcomes for its population. Sharma (2013, p. 469) highlights the plight of the poor and contends that official indicators “underestimated the intensity of the poverty”, and therefore underestimates the extent of the work to be done for improvement and opportunities to contribute. In addition, Das and Das (2013) highlight the difficulties with coverage and compatibility of data permitting measures of poverty in India, this methods constraining and even probably shielding a much worse reality.
China has been successful in reducing poverty, while it has not been as effective in reducing income inequality and distribution. Figures in the HDI report (United Nations, 2014) indicate that the growth of consumption levels of the poorest 40% of the Chinese population is positive, but it has been growing at a slower rate than that of the rest of the population. Compared to the other BRIC countries, such as Russia and India, China had been able to achieve substantial economic growth but has seen a rise in wealth inequality. The Chinese Gini coefficient is 42.1 (World Bank, 2013), which is high when compared to Russia (40.1) and India (33.9). However, it is still better than Brazil (54.7). Guangjin (2013, p. 496) asserts that “the income inequality shows that only the highest income group has been continuously adding to their share of the total income, while the share of all other groups has been declining”, especially in rural and regional areas.

Similar to Brazil, China also implemented a cash transfer program to address poverty and try to reduce income inequality. The program is called “Dibao”, started on an experimental basis in Shanghai in 1993, then expanded to the whole country in 2007. As highlighted by the OECD (2011), the Dibao objective was to provide complementary income to workers who had been laid off by state-owner enterprises during the restructuring process. The program is financed by the federal government and municipalities supplying the gap amount between per capita household income and the local minimum wages. Analysis of OECD data (2011) points out that often the benefit fails to reach the majority of the poor households and the amount supplied is insufficient to cover basic needs. Some reasons for the inefficient results were identified by OECD (2011) as dealing with bureaucracy to apply for the benefit, the structure of the program which excludes internal migrants, and lack of funds from local governments.

There are mixed opinions in relation to the reduction of income inequality and poverty in China. On the one hand, reports (UN, 2014) show evidence of the rise of income inequality in China; on the other hand, researchers (Khondker, 2011) point to overall reduction of poverty achieved through neoliberal policies and strategic market initiatives. Santana, Rebelatto, Perico and Mariano (2014, p. 267) take the middle ground, asserting that the reduction of poverty in China is “coupled with economic growth”. All three perspectives are relevant when analysing the complexities of China’s social development indicators. There are government initiatives in place to address poverty and income distribution, for example, “increasing the transfer of payments to rural areas, to the West, and to disadvantageous groups and it (the government) has committed to the improvement of the social security system” (Guangjin, 2013, p. 498). Overall, many social concerns need to be addressed in China, along with the other BRIC members and emerging economies. A relevant question for these countries is how to maintain economic growth, but also foster social development for both well-being and economic
benefit. Clearly the BRIC countries and developing economies in general, should be able to maximise the benefits of the current wealth created and work towards a more sustainable development trajectory.

4.6. Human capital development and BRIC

To explore the current stage and future challenges of human capital development within the BRIC countries, this study uses two basic tools. Firstly, we overview the cluster performance indicators in the Human Capital Index (HCI) created by the World Economic Forum (2013). Secondly, we examine macro-level public investment trends in health and education which are the traditional basic pillars of human capital development and improvements. The aspiration is to explore how these four emerging economies are addressing the challenges of building human capabilities which would revert into economic progress and social development, and identify the main constraints to achieving high levels of development and progress in BRIC.

4.6.1. BRIC’s Human Capital Index performance

An overview of the position of the BRIC countries in the Human Capital Index (HCI) (World Economic Forum, 2013) indicates that they have a lot to improve in the human capital field. In the ranking, comparative to the other cluster members (see Table 6 below), China has the highest position in the HCI (43th out of 122 countries), followed by Russia (51th), Brazil (57th) with India far behind (78th). Considering this classification, with China being the first in the cluster, as well as the most economic successful of the group, it permits us to theorise that the initiatives of China to improve human capabilities may have already been positively impacting on economic results. The HCI combines several indicators from four broad pillars: education, health and well-being, workforce and employment and enabling environment. Details of these subgroups of factors are presented in the Methodology section (Chapter 3) of the thesis. Further studies are required to deepen the understanding of these interrelations and effectively establish the connection between human capital and economic growth in the context of emerging economies. Given that the HCI is a recent initiative, no previous data is available to longitudinally compare how the countries have evolved in the ranking.

An overview of the individual positions of the BRIC nations in each of the subgroups in of the HCI in Table 6 shows a great disparity of results. This is particularly in the education and health and wellness categories, where their poor performance raises concerns. In the education category, Russia is the highest ranked (41th) among the other BRIC countries, followed by China (58th), India (63th) and Brazil (88th). Analysing this
dataset, it seems intriguing that Brazil, which presents a higher human development score, ranks lower than India in the education component of the HCI. These numbers indicate a complex methodological reality. The quality aspect of the education category is based on an opinion survey organised by the World Economic Forum (2013). Hence, several doubts about how the implemented tool could fully capture the quality of the education in a country are inevitable. This methodological path highlights how complicated and risky it is to compare aspects which still lack precise and universal tools of measurement, such as is the case of education quality.

<table>
<thead>
<tr>
<th></th>
<th>HCI overall</th>
<th>Education</th>
<th>Health and wellness</th>
<th>Workforce and employment</th>
<th>Enabling environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>57</td>
<td>88</td>
<td>49</td>
<td>45</td>
<td>52</td>
</tr>
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An alternate approach to enquiring about quality of education could be the Programme for International Student Assessment (PISA), developed by the OECD, which requires that 15 year-old students undertake a knowledge test of science, mathematics and reading. However, the BRIC cluster is not included in this program. The last PISA round was in 2012, when Brazil and Russia participated in the assessment as guests, but not India and China, making it impossible for comparisons on this the OECD tool for measurement. In summary, an efficient comparative tool to permit evaluation of quality in education is required. Maybe the expansion of the PISA assessment could be one possible solution.

Various challenges for BRIC arise in analysing the health and wellness pillar. In this sub-group, India has the lowest performance rank (112th) which could be attributed to low life expectancy in the country and lack of infrastructure such as access to water and sanitation, also captured by the HCI and discussed previously in the literature (Mújica et al., 2014). In contrast, Brazil ranks first among the BRIC peers (49th), perhaps as a consequence of the reduction of levels of child malnutrition and infant mortality via national immunisations campaigns required by the cash transfer program, Bolsa Família (Tepperman, 2016). China and Russia rank closer in this category, in the
65th and 62nd positions respectively. Both countries face ageing populations, as pointed out by Ardichvili et al. (2012), accompanied by criticisms related to low levels of investment in health and the needs of the population - a question which will be further explored in the next section.

In the workforce and employment pillar, there is room for improvement within all of the BRIC countries. China presents by far the strongest position in this sub-group (26th); Brazil is next (45th), followed by India (49th) and Russia (66th). The leadership of the group by China could be attributed to several efforts such as dedication to innovation and increasing the country’s presence in the scientific production environment. Strong evidence of the Chinese attempts to expand its training agenda is reflected in the growing number of engineers and scientific professionals being trained, in parallel to the increase in investment in academic infrastructure, private-public partnerships, university education and internship initiatives (Awan, 2012). In the case of Brazil and India, both countries have similar problems in relation to workforce and employment, with a great share of informal jobs, such as in the agriculture sector in India, as described Banerjee (2015). Russia also has a different scenario in relation to the workforce, with the country losing highly qualified workers after the collapse of the Soviet Union. As noted by Awan (2012), qualified professionals tend to immigrate to developed countries where better wages are offered.

The category of an ‘enabling environment’ for the development of human capital also captures a complex reality and presents challenges for the BRIC cluster. The group performs rather poorly with China reaching the highest rank among its peers (47th), with Brazil next (52th), followed by Russia (63th) and India (67th). Numerous concerns could be raised as possible causes of the low position in this sub-ranking. Ardichvili et al. (2012) note that every country has its human capital development issues to deal with, including the social stratification and internal dynamics that interfere with development and progress. In Brazil, racial discrimination is a strongly existing issue, there is the caste system in India, and higher/lower income groups in Russia or urban/rural group divisions in China. Another area assessed by the enabling environment pillar relates to how easy is to do business in a country, i.e. what are the legal frameworks and the protection of intellectual property mechanisms. These aspects were previously evaluated by Gryczka (2010) in the BRIC’s context, who pointed out that property protection issues (China and India), poor infrastructure (Russia and India) and high levels of corruption and bureaucracy (all BRIC countries) are obstacles to business expansion and human capital progress.
4.6.2. Health investment trends

Traditionally, human capital has two basic components: health and education, both aspects influencing economic and social performances. Indeed, to examine a country’s trend in investments in health and education enables elaboration of insights into each nation’s priorities and strategic decisions. As demonstrated by the Human Capital Index, Human Development Index and also economic measures, the health and well-being of a nation’s people is closely linked to their success as a nation. Below, a brief discussion examines the main public expenditure on health in each of the BRIC countries and their impact.

Brazil’s public investment in health has risen from 3.9% in 2000 to 5% of its total GDP in 2012 (IBGE, 2014) (Figure 4). This increasing investment has seen life expectancy rates reach 74 years and child mortality rates decrease. Brazil is the strongest performer on this indicator in BRIC. Leahy (2014), however, notes that the public health system in Brazil is ‘struggling’, with many issues to be addressed including the inadequate number of hospital beds, shortage of qualified doctors, and low quality of the services provided. Current developments related to the spread of the Zika virus, which is associated to the birth defect of microcephaly, also has raised concerns about the quality of public health in the country. Evidence (Cuadros, 2016) suggests that factors such as poor prenatal care, unprepared staff and inadequate services for children with disabilities are just some examples of the issues.

![Figure 4: BRIC public investments in health (2000-2012)](image)

*Source: IBGE (2014)*
Russia’s public investment in health has increased from 2.1% in 2000 to 4.3% in 2010, dropping to 3.7% in 2012 (IBGE, 2014). It has sought to maintain some stability in investment in health, with life expectancy rates at 70 years and the child mortality at 8.2, making it a middle level BRIC performer. Comparative data presented by Rodwin (2015) shows that Russia spends considerably less than other European Union countries on health, which translated in some of the lowest ranking on the health indicators. Criticisms in the World Bank report (2011b, p. 20) suggest that Russia’s investment in health is still “comparatively low and inefficient”.

India is the lowest investor in public health among the BRIC countries, as indicated in Figure 4 above. It had dedicated just 1.4% of total GDP to public health expenditure in 2012, rising slightly from 1.2% in 2000 (IBGE, 2014). The consequence of this poor investment is reflected in the living standards of a large section the population, with India’s life expectancy rate at 66 years. The results of low investments were captured by the relatively low rankings in the HDI and HCI. In addition to the insufficient funds directed to health, Rodwin (2015) points out that India fails to provide minimum sanitation structure across the country with more than half of households without toilets and circa of 200 million people without access to safe drinkable water. Researchers (Awan, 2012) draw attention to the widespread evidence of nutritional deprivation in low income households and associated health conditions including anaemia and being underweight, especially amongst women and children. In contrast, the wealthy enjoy world class standards of health care. Increased government investment in health is essential to ensure improvements in living standards and life opportunities.

China’s investment in public health has been the highest amongst its BRIC peers, rising from 4.6% in 2000 to 5.4 % of its total GDP in 2012 (IBGE, 2014). Life expectancy is at 74.8 years and child mortality 10.3. Despite being the leader in health investment in BRIC, there are concerns (Josh & Yu, 2014) that China’s recent economic growth is not reflected in increases in public health investments. These researchers point to the link between health and political leadership in China noting that earlier “Chinese political leaders initially championed an egalitarian development ideology and invested heavily in public health” but seem to have turned away from the ideology in the 1980s, but have since returned to the commitment in the 2000s (Josh & Yu, 2014, p. 73). In the Rodwin’s evaluation (2015) the Chinese central government has been reducing the support to health while fostering private care provider’s expansion penalising low level income population, particularly elderly and disadvantageous groups. The impacts can be seen in Figure 4 above, with more investigation needed to look at longer term outcomes of the health investments.
4.6.3. Education investment trends

Combined with health, education is also essential to build human capabilities in a country, generating economic growth and social development. Increasingly, the BRIC countries are directing more resources to education, recognising that a well-developed and trained workforce is a major requirement for human capital progress, which generates economic growth and social development. Figure 5 below provides an insight into the level of investment in education by each of the BRIC countries.

![Figure 5: BRIC public investments in education (2000-2012)](source: IBGE (2014))

In comparisons across BRIC, Brazil has been a consistent investor in education (Figure 5). The government invested 5.3% of its total GDP in education in 2012, increasing its commitment from 4.8% in 2000 (IBGE, 2014). It has taken a strategic approach to transitioning to a knowledge-based economy and introduced a series of educational initiatives to support the transition. Examples include the National Plan for Vocational Learning (PLANFOR), Fund for Support of Development of Basic Education (FUDEN), and Literacy for Adult and other such initiatives (Ardichvili et al., 2012). It has reaped the benefits. Sandoval (2012, p.11) suggests that Brazil’s education system is well-endowed and “does not suffer severely from a lack of funding”, but where there is room for improvement is in the “mismanagement of resources”. Brazil can do better it seems, by leveraging the competitive advantage it has in having a well-supported education.
system. Sandoval (2012) suggests that improvements in the quality of the education in Brazil will have flow on effects on the workforce and economic growth.

As on other social indicators, Russia’s public investments in education has fluctuated in the past 12 years, climbing up from 2.9% to 4.6%, then dropping back to 4.1% in 2012 (IBGE, 2014). However, Russia has other education achievements that have had a significant impact, namely that almost 96% of the Russian adult population has completed secondary school (Yuan, 2011). At the same time, Awan (2012, p.210) refers to the concept of “mismatching” present in Russia, that is, when highly educated workers, trained during the strategic planning for the economy, cannot find suitable employment positions. This is indeed a challenge to be worked through.

The public investment in education in India is the lowest in the BRIC cluster, having only just gone beyond the 3.1% mark of total GDP in 2012 as indicated in Figure 5 (IBGE, 2014). There has been little movement in public investment in education over the last 12 years. The low investment becomes even more urgent to address, when we observe that one-third of the population of India is under 15 years old and require education. It is, by far, the country with the largest number of people to be trained (IBGE, 2014, p. 21). Ardichvili et al. (2012, p. 226) identify three other factors influencing education opportunities and development in India: stratification and poverty, levels of literacy, and structural imbalances in vocational and professional education. Education will enhance the quality and capabilities of the workforce required for sustained economic development and performance.

China has demonstrated the steepest trajectory when it comes to investing in education, with public investments of 4.3% of total GDP in 2012, rising from 2.9% in 2000 and 3.6% in 2010 (IBGE, 2014). Researchers such as Yuan (2011, p. 194-195) remind us that China undertook several educational reforms in the 1980s and early 1990s, including expansion of enrolment numbers, opening the door to overseas education students, inviting international institutions to collaborate in China, attracting the best and brightest academics and professionals and the most talented in industry, initiatives that previously had not been available.

It is evident that, with the exception of India, the BRIC countries have increased investments in education in recent years. There is recognition that an educated and well trained force is essential to sustain a strong economy and social progress. Researchers such as Yuan (2011, p.195) defend any public spending on education and advocate that “more public budget should be applied to education in order to enhance long-term economic growth”. Others (Awan, 2012; Sandoval, 2012) have commented
on the lack of strategic alignment of education programs undertaken with human capability needs in the emerging economics, including BRIC. They question the efficient use of these investments, the accelerated number of enrolments (mainly at tertiary level), and the lack of quality control in relation to the training being provided. These are valid concerns and provide challenges to be managed in the BRIC countries.

4.7. Economic and social challenges

Despite its recent economic achievements, BRIC will, without doubt, confront challenges, constraints and environmental threats which it will need to manage to avoid risks to its economic performance. Some of the issues have already been explored and others are yet to be investigated. Heinz and Tommenendal (2012) predicted that the celebrated FDI will be reallocated from emerging markets into more profitable locations if market growth rates start to decelerate in the BRIC countries. The thesis of volatility of capital was proved by Didier et al. (2015) who recorded that investment growth has dropped from double-digits in 2010 to 5% in 2014.

Sharma and Joshi (2015) aptly note that the growth of macro-economic indicators of a country has an essential role in magnetising foreign investments, but the growth required also includes how much the total wealth overspread to their population. The division of the wealth created seems to be a chronic issue in the BRIC. This can be verified by the low GPD per capita and, consequently, small aggregated internal market in each of these countries (Heinz & Tommenendal, 2012; Kochhar, 2013). Given the low rates of income per capita in the developing countries, compared to those in advanced economies, there are potential consequences for the buying power in local BRIC markets. In addition, high levels of income inequality also contributed to the restricted access to health, education and general well-being of people.

Since 2010, the pace of growth in emerging markets has reduced, with a gradual improvement in the advanced economies. Speculation (Banerjee, 2015; Didier et al., 2015; Kochhar, 2013) about the reasons behind the slowdown vary from cyclical (e.g. weak external demand and reduction of commodity prices) to structural factors (e.g. inappropriate models of growth, rigidity of labor market). The IMF (2013) details the reasons for deterioration of growth rates as a consequence of several other factors, including the BRIC countries’ reliance on past economic growth models (e.g. in China and Russia); heavy reliance on the migration of labor force from the countryside to urban areas (e.g. China); changing demographics and potential reduction of labor markets (e.g. China and Russia); lack of adequate infrastructure such as transport and en-
nergy networks (e.g. Russia and India); and overdependence on commodities exports – all potentially contributing to weak business environments and diminishing opportunities for economic growth. Although the speed reduced, emerging economies were still the leaders of economic growth accounting for 60% of the global improvements during 2010-2014 (Didier et al., 2015).

Yet another challenge to BRIC is the increasing trend in corruption and bureaucracy. Gouvea, Montoya and Walsh (2013) contend that economic growth tends to reduce corruption but bureaucratisation increases it. They suggest that the rise of bureaucratisation in BRIC in recent years has seen a parallel increase in corruption trends. Transparency International (2013) provides more specific insights through its ranking of 177 countries on the Corruption Perceptions Index. It ranks Brazil at 72 (identified as the least corrupt in BRIC), followed by China at 80, with India and Russia lagging behind at 123 and 127 respectively. These are not high rankings and are indicative of the levels of corruption in BRIC and the potential problems when doing business with and in these countries.

In addition, there are concerns about the lack of effective strategies to address issues of bureaucracy and corruption and government inefficiency in implementing anti-corruption laws (Gouvea et al. 2013). In Brazil, corruption has been related mainly to government investments, often funds not reaching their destination. Public money is lost in cases related to public companies such as the biggest national oil company Petrobras, there is overpricing for services and products bought by government, and distribution of jobs is not always transparent. Research from Brazil’s Accounting General Office audit of 15,000 public contracts show that 80% of them had irregularities (Cabral & Diniz, 2011). In Russia, the legal system has not been dealing with corruption efficiently (Gouvea et al. 2013) which creates a sense that corruption has not been taken seriously. Culturally, Russia maintains the corruption levels because the exchange of favours is a normal and socially accepted practice. Corruption is also linked with culture and relationships in India, where the incentives of forgiveness and the avoidance of punishments exists (Tummala, 2009). In China the existence of a single political party and no free press make it difficult to obtain clear perceptions of the levels of corruption in the country. The cultural tradition of guanxi, change of mutual favours, is also another element which tends to perpetuate corruption. The implications of corruption in BRIC as a cluster need to be further explored.
Chapter 5: Conclusions

It would be true to say that the recent economic performance of the BRIC has, for the first time, brought the developing countries to the attention of the world. Given this context, this study aimed to provide insights into the world’s recently identified fastest growing emerging economies - Brazil, Russia, India, and China (BRIC). The study sought to identify and share insights into the performance of the BRIC countries, to explore their cooperation as a cluster, to understand the nature of their economic and social achievements and the extent of their success, and to understand the challenges and constraints they have confronted. The study also sought to predict further challenges to be addressed and suggest future directions for research. The research provided an opportunity to engage in an exploratory study in a relatively new and highly relevant research area and identify areas for more in-depth investigation.

Abstractly clustered together at the beginning of the twenty first century, Brazil, Russia, India and China astutely embraced the opportunity to build an international political alliance which strategically enabled them to exert global influence through their collaborative efforts as a bloc. The cluster has emerged as the most powerful group of the developing countries with proof of its strategically orchestrated actions being observed in international governance forums like the International Monetary Fund, Group of Twenty or World Bank. Interestingly enough, the BRIC coalition is so atypical, with a lack of previous theoretical models, fostering ongoing debates about its conceptualisation as a group, and possessing such differing political, social and cultural systems. More than a terminological discussion, researchers have argued about the goals of the group in the international context and have yet to agree. The predominant view states that these countries seek a multipolar world order with the opinions of the developing countries being considered. Researches such as Chin (2014) and Armijo and Roberts (2014) support this thesis emphasising the rising global importance of the BRIC countries. Arguably, others like Cox (2012) and Pant (2013) question the existence of the cluster, also pointing out that these countries are far from effectively gaining space in international leadership.

Further to the criticism referent to the cluster’s international ambitions, some researchers raised concerns pointing out the enormous geographic, cultural, historical and political heterogeneity among the BRIC countries which create barriers for pro-
found engagement (e.g. Armijo, 20007; Pant, 2013). For example, Sinha and Dorschner (2010) concluded that the BRIC countries are not even a natural trading bloc which leads to fragility in the linkages. Conversely, according to Thakur (2014), the heterogeneity present in Brazil, Russia, India and China is exactly what makes them highly representative of the developing countries reality and diversity. Being so diverse legitimises the BRIC cluster claims when representing the emerging economies at international forums.

Despite skepticism, the four BRIC countries are working together to consolidate their relationships, develop a common agenda and enhance cooperation. Several meetings among ambassadors, ministers and other governmental representatives, as well as seven conjoint summits involving the state leaders evidence these efforts. The highlight of the cooperation has been the creation of the New Development Bank in 2014, also referred to as the BRICS Bank (“The BRICS bank”, 2014), and its launch in Shanghai in July 2015 with funding of $100 billion (“$100bn BRICS monetary fund to be operational in 30 days”, 2015) to support emerging economies and their development initiatives is a practical manifestation of this collaboration. More than just cooperate with each other, the BRIC cluster claims to expand its support to other developing economies via its BRICS Bank. The impact of this new institution in the international context is still to be witnessed. Worldwide, their strong collaborative presence on the world economic and political stages has been established.

Like the rising political claims, which are a consequence of the wealth creation, the economic presence of the BRIC cluster should not be disregarded. Economic evidence shows that BRIC has been outstanding in its achievements, ranking in the top ten countries in terms of global GDP (China 2nd, Brazil 7th, Russia 8th, India 10th), overtaking at times some of the advanced economies (IBGE, 2014; World Bank, 2014a). It has lifted total and per capita GDP in each of its countries, albeit to varying degrees, contributed to global trade (Castro, 2012) and global production of wealth (Lin & Rosenblatt, 2012). In particular, the case of China’s economic rise has been phenomenal (Marmolejo, 2012; Li, 2013), and the performance of others in BRIC impressive. A variety of reasons were indicated as the main factors to the accelerated progress, such as high volumes of FDI inflows and growing presence in international trading with each country presenting a specific portfolio. Both of these international engagement aspects are also the outcome of internal reforms undertaken by each BRIC member since the late 1970’s, creating the legal and political internal environment for fostering international linkages.
Despite the positive results from the previous decade, several doubts arise about whether the BRIC countries will be able to maintain their performance. Current data on economic growth points to a considerable deceleration of progress. Cyclical and structural factors are behind the economic slowdown as mentioned by scholars like Banerjee (2015) and Kochhar (2013). Ironically, some of the same components which contributed to the rapid growth, during the first decade of the century, are influencing the current decline in the wealth creation. Firstly, the previously celebrated FDI is now migrating to advanced economies considering the current instability in the developing markets and the recovery of the advanced markets. Secondly, the international demand for manufactured products has reduced in parallel with the plunge of commodity prices. Thus the international context currently seems to be not so favourable to the BRIC countries economic expansion.

If the external factors are presenting constraints to BRIC’s progress, the internal scenario of each country is potentially even more challenging. The problems have been captured by the low performance on the Human Development Index, Human Capital Index, absurd rates of income inequality evidenced by the Gini Index and GDP per capita, as well as high levels of poverty that are still present. The much slower pace of achievement in these areas suggests that, while the four BRIC countries may celebrate being among the top ten wealthy nations in the world, they have less reason to celebrate in relation to achievements in social and human capital development and progress in advancing their nations on these dimensions. An overview of their performance in these areas raises a number of doubts about their progress. The HDI (United Nations, 2014) indicates that Russia is best positioned with a ranking of 57th compared to Brazil (79th), China (91st) and India (135th out of 187 countries). Russia is the only country which could be compared to advanced economies in levels of social development. In contrast, India is similarly ranked with the poorest countries in the world. When reduction of poverty was analysed, each country used particular tools and presented different results. While China and Brazil have progressed, in India poverty is still pervasive, especially widespread in rural areas where 70% of its population is concentrated. An analysis of the GDP per capita shows how unequal the countries are and how the wealth recently produced has not reached all their people. Despite the measures adopted to combat poverty and income inequality, some with better results than others, there are still problems to be addressed.

Modest social progress could be related to low investment in social improvements such as health and education which are essential to build human capital development and influence social and economic progress. Clearly those BRIC countries (for example, Brazil and China) which invested more in health and education, have reaped the bene-
fits of sound infrastructure, higher life expectancy rates and increasingly higher living standards for its citizens. Countries which fluctuated in their social investment (for example, Russia) tended to fluctuate in their achievements (Ardichvili et al., 2012). Countries (for example, India) with the lowest levels of social investment have not been able to move as quickly as the others (Awan, 2012; Yuan, 2011) and are lowest on the life expectancy ranking, highest on the poverty ranking, and display the highest level of inequity in income distribution and education. Beyond doubt, the BRIC countries have more room for improvement in developing their large populations as active workforces and potential internal markets with buying power.

There is also evidence to suggest that several other issues need to be addressed by each of the four BRIC countries, including high levels of corruption, bureaucracy and governmental inefficiency in the use and management of public funding. In a business environment, the impact of poor practice has resulted in the reduction of power to attract new investments and low competitiveness maintaining the cycle of distribution of political favours, slow and debilitated legal systems and often deviation of public money towards feeding these systems. Another core question relates to fostering scientific production, its intellectual property protection and transference from scientific institutions into the market. As discussed by Gouvea et al. (2013), the emerging economies should be aware of the necessity of creating a propitious business environment which contributes to the development of their countries as strong knowledge nations.

To address social issues like the ones to be faced by the BRIC, numerous structural reforms and investments should be implemented, including the development of clean energy supplies, flexibility of the job market, to be recognised and also covered by social benefits. Better education and health systems over the four BRIC are also necessary, special to contemplate the poorest is also required. Even changing the current development model could be necessary. For example, in China presents a manufactured lead economic base, while Brazil and Russia are highly dependent on primary exports and in India great share of population is dedicated to agriculture for subsistence. It seems clear with the recent economic growth slowdown, which unaddressed economic and social issues could negatively impact in their further development.

In summary, this research has contributed to the understanding of the current social and economic performance of the BRIC cluster. The study has commenced a complex and more advanced exploration of several aspects which were previously not considered or poorly explored. For example, different demographic pyramids for each country should have considerable impact over public investment decisions, explorations of cultural aspects impacting in business development or imbricate social structure permeat-
ing political decisions and leading to economic resolutions. In addition, analysis could be deepened according to each theme. In this case, for instance, reasons for economic slowdown and possible solutions could be further investigated or other social constraints and their possible solutions studied. In general, the research fulfils the aspiration of elaborating on an initial overview of the BRIC countries covering some of the essential social and economic aspects.

5.1. Limitations of the study

There are a few limitations to the study. Firstly, it was focused on a small and selected group of developing countries which were identified because of their economic performance in recent times (BRIC). However, there may be other developing countries / emerging economies performing extremely well in the current economic environment and could be included in future studies. Future research will be able to identify and investigate these new high-performing emerging economies. Secondly, this was an exploratory study based on secondary data collection and analysis. More in-depth studies are required to further explore the issues identified and omitted in this study. Thirdly, in terms of methodology, whilst secondary data collection was appropriate for this exploratory study, research incorporating primary data collection, using qualitative and/or quantitative methodologies, may provide further insights into the dynamics of emerging economies. Fourthly, the indicators used in this research are in their relatively early stage of use (e.g. Human Capital Index) and need to be further refined, so that the data collected could be more granular and insights into performance on targeted indicators more comprehensive.

5.2. Future directions

A variety of questions are still to be explored in relation to emerging economies and BRIC’s ongoing development and sustainability should continue to be observed. This could form the foundation for future research directions in this area, especially since many are of the opinion that, despite its recent economic achievements, BRIC is yet to show its full potential. Individual country specific case studies on each or any of the BRIC countries to capture their growth, development and trajectory may also be of interest in future research.

It is hoped that further studies would extend the scope and include other high performing emerging countries or those with potential in terms of their economic evolution and contribution to global wealth, as well as advancements in their social development.
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